Cincinnati State
Technical and Community College

CATALOG 1994 – 95

1994 - 1995
Cincinnati State
Technical and Community College
Catalog/Handbook

Contents

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Cincinnati State Technical and Community College does not discriminate on the basis of race, age, color, handicap, sexual orientation, national origin or gender in the admission of students or in any activity conducted by Cincinnati State.

Cincinnati State Technical and Community College is an equal opportunity institution.

Parts or all of this catalog as well as any admissions materials will be provided on tape to disabled individuals upon request.

Cincinnati State
Technical and Community College
3520 Central Parkway
Cincinnati, Ohio 45223
(513) 569-1500
Admissions Office 861-7700

Cincinnati State
Technical and Community College

DIRECTORY

Cincinnati State
Technical and Community College

DIRECTORY

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Steam Firemen ..... Denim Bledsoe
..... Lewis Graham
..... Eugene Thrasher
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Assistant Dean, Cooperative Education .....

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..... Rick Sefton
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..... Robert Van Horn
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Program Chair ..... Verale Phillips
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..... Stewart Bonem
..... Carolyn Davidson
..... Paul Davis
..... Jim Macke
..... Richard McLeish
..... Walt Wyatt
Chef & Hotel-Restaurant Technologies
Program Chair ..... Rich Hendrix
..... John Kinsella
..... Jim Myatt
..... Jeffrey Sheldon
Graphic Communications &
Flexographic Communications Technologies
Program Chair ..... Al Leicht
..... Gary Walton
..... Jack Wilson
Landscape Horticulture Technology
Program Chair ..... Claire Ehrlinger
..... Ben Wright
Managerial Accounting Technology
Program Chair ..... Linda Schaffeld
..... Dan Cayse
..... Michele Cooney
..... Leonard Penn
..... Judith Schimpf
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Program Chair ..... TaFrinda Bates
Property Management & Real Estate Technologies
.....Peggy Harrier

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Clerical Assistants ..... Linda Gibbons
..... Todd Ingram
..... Pat Robbins
..... Carla Wermuth
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Student Development/Retention Specialist
..... Andrea Feld-Brockett
Assistant Dean, Cooperative Education &
Graduate Placement ..... Monica Posey
Assistant Dean, Facilities & Extended Services ..... Gary Graff
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Lab Technician ..... Steven Wells
Aviation Maintenance Technology
Program Chair ..... James Schmid
Co-op Coordinator ..... Jerri Thomas
Instructors ..... Vince DeVol
..... Eric Kornau
..... Ed Weichold
Biomedical Electronics Engineering Technology
Program Chair ..... Steve Yelton, P.E.
Co-op Coordinator ..... Sue Dolan
Civil Engineering Technology
Program Chair .....
Co-op Coordinators ..... J. Terry Brown
..... Roger Schaller
Instructors ..... Tom Burns, P.E.
..... John Buttelwerth
..... James Decker, P.S.
..... Paul DeNu, P.S.
..... Elias Feghali
..... Ann Gunkel
Computer Engineering Technology
Program Chair ..... Gary Webster, P.E.
Co-op Coordinator ..... Sue Dolan
Instructor ..... Bob McLain, P.E.
Electro-Mechanical Engineering Technology
Program Chair ..... Ray DiPilla
Co-op Coordinator ..... Roger Schaller
Instructors ..... Robert Romano
..... Paul Weingartner
Electronics Engineering Technology
Program Chair ..... Steve Yelton, P.E.
Co-op Coordinator ..... Sue Dolan
Instructors ..... Mike Carroll
..... Robert Lamey
..... Billy Mullins
Laser Electro-Optics Engineering Technology
Program Chair ..... Prem Batra, Ph.D.
Co-op Coordinator ..... Roger Schaller
Instructor ..... David Simmermon
Manufacturing Engineering Technology
Program Chair ..... Judd James
Co-op Coordinator ..... Jerri Thomas
Instructor ..... Larry Reuss
Mechanical Engineering Technology
Program Chair ..... Donald Youngpeter, P.E.
Co-op Coordinator ..... Jerri Thomas
Instructors ..... Mike DeVore, P.E.
..... David Smith
..... Kenneth Stoll
Pre-Technology Studies-Engineering Technologies
Program Coordinator ..... Eileen English

Productivity Improvement Center
Coordinator of Industry Training ..... Chuck Jonas
Instructor ..... Clifford Schulte, P.E., P.S.
Trainers ..... Brian Canteel, CET
..... Ed Carter
..... Jack Gibbs
..... Ron Heineman
..... T. Scott Thacker
Clerical Assistant ..... Todd Ingram

Health Technologies

Dean ..... Thomas Kober
Executive Assistant ..... Cheri Furlong
Assistant Dean ..... Marianne Krismer
Assistant Dean / Nursing Program ..... Brenda Heck
Clerical Assistants ..... Karen Dill
..... Kelly McCreadie
..... Tonya Meade
..... Jo-Ann Simon
HCOP Coordinator ..... Bessie Pitts
Pre-Tech Advisors ..... Athealia Bell
..... Susan Marcotte
Central Service Technology ..... Wanda Dantzler
Dietary Management Certificate ..... Eileen Coffe-Findlay
Dietetic Technology
Program Chair ..... Sharman Willmore
Instructor ..... Charalee Allen
Electrocardiography Technology ..... Tom Stormer
Health Unit Coordinator ..... Daphne Robinson
Medical Assistant Technology
Program Chair .....Olivia Watts
Instructor ..... Nancy Walters
Medical Laboratory Technology
Program Chair ..... Carolyn Laemmle
Instructors ..... Janelle Gohn
..... Larry Suddendorf
Health Information Management
(formerly Medical Record Technology)
Program Chair ..... Gail Smith
Instructors ..... Sherri Mallett
..... Sandy Speller
Nursing Program
Director ..... Brenda Heck
Program Chair ..... Alice Palmer
NUR First Year Coordinator ..... Judith Faessler
NUR Second Year Coordinator ..... Joanne Johnson
NURP Coordinator ..... Jerelen Hancox
Instructors ..... Mary Burns
..... Janice Curry
..... Florence Donohue
..... Sue Guntzelman
..... Christopher Heather
..... Roberta Hochmuth
..... Debra Hying
..... Pat Morganroth
..... Margaret Swinford
..... Dorothy Varchol
..... Elizabeth von Volborth
..... Jill Yust
..... Suzanne Zellner
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Program Chair ..... Anne Zobay
Instructor ..... Cindy Kief
Respiratory Care Technology
Program Chair ..... Debra Lierl

Instructors ..... David Skopin
..... Tom Stormer
Surgical Technology
Program Chair .....Judith Spraley
Instructor ..... Wanda Dantzler
Life Science Instructors
Program Chair .....Robert Eveslage
Instructors ..... Ron Davidson
..... Bev Evert
..... Jude Norton
Lab Manager ..... John Szasz

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Dean ..... Catherine Rahmes
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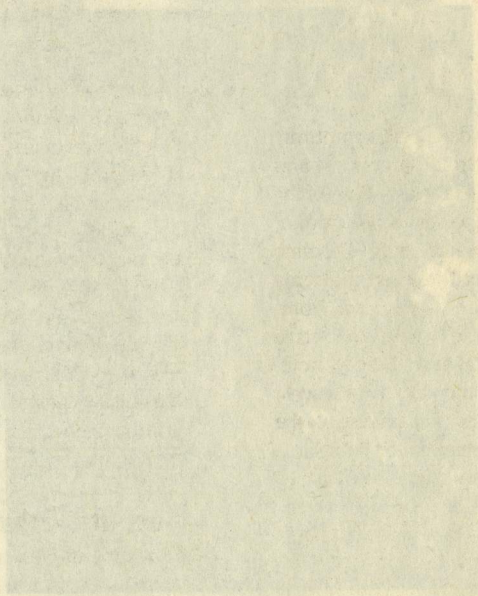
Assistant Dean ..... James Marcotte
Executive Assistant .....
Clerical Assistant ..... Donna Fath
Coordinator, Industry Training ..... Samuel Rowe
Writing Center Manager ..... John Battistone
Laboratory Technician ..... Dorothy Mann
Laboratory Technician ..... Gail Quinlan
Technical Writing and Editing Technology
Program Director ..... Pam Ecker
Scientific Laboratory Technology
Program Chair ..... Martha Brosz
Chemistry
Chair ..... James Bronstrup
Faculty ..... Martha Brosz
..... Robert Moon
English Composition and Oral Communications
Chair ..... Joyce Kindle
Faculty ..... John Battistone
..... Pam Ecker
..... Marcus Green
..... Christine Heilman
..... Mary Lee Howes
..... Michael Jones
..... Paul Olubas
..... Alyce Rieck
..... Kim Ziegel
Mathematics and Computer Programming
Chair ..... William Tulloss
Faculty ..... James Farrer
..... Jan Hoeweler
..... Terrence Huge, CQE, CRE
..... Joan Jackson
..... Lawrence Pucke
..... Richard Swanson
..... William Wunderlich
Physics
Chair ..... Rodney Rupp
Instructors ..... Debra Barrett
..... Thomas Stark
..... Edward Sunderhaus
Social Sciences
Chair ..... Marcha Hunley-Belanger
Faculty ..... Crystal Bossard
..... Mary C. Boswell
..... Pamela Chaney-Land
..... James Hassan
..... Timothy Nolan
..... Lawrence Ziegler
Developmental Education
Clerical Assistant ..... Annette Dismukes
Para-Professional ..... Debbie Greenlee
Funded Programs Specialist ..... Soni Hill
Instructors ..... Laura Attenborough
..... Joan Brand
..... Cheryl Cummings
..... Thomas Grogan
..... Linda Knepp
..... Hope Lieberman
..... James Marcotte
..... Paul Olubas

Cincinnati State
Technical and Community College

GENERAL INFORMATION



Cincinnati State Technical and Community College

On July 27, 1993, the Board of Trustees of Cincinnati Technical College voted to convert CTC to a state community college as recommended by the Ohio Board of Regents and the Managing for the Future Task Force.

In February 1994, Cincinnati Technical College submitted a *Proposal for the Change of Status of Cincinnati Technical College.* In March 1994, the Ohio Board of Regents created the Cincinnati State Community College District, enabling the Cincinnati Technical College District Board of Trustees to develop a transitional agreement and the *Operating Plan* for Cincinnati State Technical and Community College. In April 1994, the transitional agreement was prepared and submitted to the Ohio Board of Regents for its review and approval. In the Summer of 1994, the Ohio Board of Regents approved the *Operating Plan of Cincinnati State Technical and Community College* and awarded the charter for the new college.

Mission

We believe that Cincinnati State Technical and Community College makes an important contribution to the technical and educational status, economic growth, and social well-being of the Tri-State Area. We believe that to continue to serve the community the College must be willing to modify, adapt, and create technical and transfer programs that meet the ever-changing needs of students, business, industry and the professional community. We believe that it is the College's role to help students to learn to think independently, to value logical and tested conclusions, to develop problem solving abilities, to communicate well, and to function effectively with other people. We believe in the dignity and worth of the individual and therefore provide educational opportunities for students regardless of age, economic or social background, or enrollment status. We believe that for continued growth we must display the ability to be creative, to look to the future as well as the past, to strive for excellence, and to exhibit leadership in the expansion of knowledge and skills through the achievements of the faculty and the students. We hope to develop in our students the desire to continue their education throughout their lives.

The College's principal concern is its students. This concern is reflected primarily through offering programs of substantial quality with the expectation that students will achieve a high level of competence and understanding in an atmosphere of positive engagement and mutual respect. In order to maintain this atmosphere, the College offers opportunities for students to achieve understanding and appreciation of their own culture and those of others in an environment that recognizes and values the cultural diversity of the College population and the community.

The College has a vital and distinctive mission to perform in addressing the educational and economic needs of the Tri-State Area. The College seeks to implement its philosophy by providing:

A. Education featuring a combination of theory and practice primarily through appropriate classroom, laboratory, and cooperative/clinical education experiences.
B. Technical, Arts, and Science Associate degree programs that lead to entry or advanced level employment and/or transfer to a Bachelor's degree program.
C. Certificate programs, specialized training, and adult continuing education opportunities of less than one-year duration.
D. Services and educational experiences to assist students in determining and reaching their educational objectives.
E. Opportunities for students to develop the skills needed to enter and succeed in the College's education programs.
F. Technical, science, arts, and general education courses that can be applied toward four-year degree programs.

The College endeavors to provide leadership and services in the promotion of technical, arts, science, and cooperative education.

Board of Trustees

Cincinnati State Technical and Community College is governed by a nine-member board of trustees. All are appointed by the Governor of the State of Ohio.

The Cincinnati State Technical and Community College Board of Trustees normally meets on the fourth Tuesday of the month. Traditionally, no meetings are held in July or December. Special meetings may be called as situations dictate.

Cooperative Education

Cincinnati State's distinctive plan of cooperative education offers the soundest possible approach to education. The classroom can provide valuable theory and laboratory experience, but it cannot duplicate an actual work environment. Many Cincinnati State students participate in cooperative employment at regular intervals. The practical training they receive through cooperative education enriches their academic experience.

In 1994-95, the College will offer 46 associate degree programs and majors and fifteen certificate programs. Each technical program was developed to meet a specific need in local business or industry. The need was demonstrated through formal or informal feasibility studies, and is supported by the counsel of an advisory committee which represents the potential employers of these trained technicians.

Benefits of the Cooperative Education Plan

Cincinnati State has developed a cooperative education program that combines academics with regular intervals of meaningful work experience. The program has these benefits for the student, the College and the community.

Benefits for the Student

1. Educational Growth - Students supplement what they learn in class with "real life" work experience. These two learning situations complement each other.
2. Career Clarification - Class work and on-the-job experience help students focus on particular career areas and decide if those areas are appropriate for them.
3. Social and Emotional Growth - Students develop maturity by taking responsible positions in the business world, with support and guidance to ensure that learning takes place.
4. Financial Gain - Students are able to earn money while they gain work experience. The money earned helps many students to finance their education. Also, the work experience the student receives leads to opportunities for promotions and pay increases after graduation.

Benefits for the College

1. Understanding area employment needs - As College personnel work to establish cooperative education jobs and place graduates, the College becomes more aware of the area's employment needs.

2. Utilization of the college facilities - Because students alternate terms spent on-campus, the College is able to increase its student capacity and make more efficient year-round use of the college facilities.
3. Employer involvement - Employers become directly involved in the educational process of the College through cooperative education. They also share in the cost of education by providing on-the-job training.
4. Faculty awareness - Faculty members keep informed about activities in their fields through their contacts with business and industry.

Benefits for the Community

1. Trained technicians - The College's programs provide a work force of trained, experienced graduates for the community. This helps make the community more attractive for business development.
2. Employment screening - Employers have the opportunity to observe students and to evaluate their suitability for full-time employment before they make the commitment to hire full-time personnel.
3. Economic gain - The increased earning potential of the College's graduates benefits the community through productivity increased, taxes paid and contributions made.
4. Citizen productivity - Graduates enter the work force with well-clarified career goals and experience which allow them to be more productive and motivated workers.

History of Cincinnati State Technical and Community College

Because a shortage of technicians existed in the area, the Cincinnati Board of Education established the Cincinnati Cooperative School of Technology, a two-year institute for high school graduates, in 1966. The function of the school was to train technicians in a program combining college-level classroom instruction and cooperative work experience.

Since all technical education programs in Ohio were to come under the authority of the Board of Regents, the Cincinnati Board of Education proposed in April, 1969 that the Regents establish a Cincinnati Technical Institute District and approve CCST as the nucleus of the technical institute to serve that district. These proposals were approved by the Regents in May, 1969.

The Board of Trustees of the new district — two appointed by the Governor and five elected by the Cincinnati Board of Education — held their organizational meeting on September 15, 1969. At that meeting they appointed the President of the Institute, and approved the Institute operating plan and associate degree programs. They also changed the name of the school to Cincinnati Technical Institute, to conform with the designations of other institutes in the state.

In June, 1970, the Board of Trustees of the Institute entered into a contract with the Cincinnati Board of Education to purchase the Courter Technical High School property, where the College is located, for $8.4 million.

In 1972 the name of the Institute was changed to Cincinnati Technical College, in accordance with state statute. On June 27, 1974, the phase-out of the high school was completed and the College made the final payment to the Cincinnati Public Schools.

In its twenty-five years as a state college, Cincinnati State has experienced tremendous growth. The first year, 1969, saw an enrollment of 651 students. Last year the College enrolled 5600 students in 44 degree and twelve certificate programs and options, had a staff of 350 plus over 150 part-time instructors, and had 600 co-op employers.

While the College has experienced a high growth rate, efforts have also been made to offer the highest quality of instruction available. Many awards and citations have been received attesting to the excellence of the College faculty and students. For example, the College has been honored by the Ohio Board of Regents through its Program Excellence Awards. This state-wide competition is open to all undergraduate programs offered at public colleges and universities. The College received awards for the Civil Engineering Technology Program in 1984, the Electro-Mechanical Engineering Technology Program in 1986, the Dietetics Program in 1988, and the Laser Electro-Optics Program in 1990. In 1993, the College received national media recognition for its cooperative education and retraining programs.

The Cincinnati Technical College Board of Trustees voted to convert CTC to a state community college on July 27, 1993. The College submitted and received approval for a change of status from the Ohio Board of Regents. In March 1994, the Regents created the Cincinnati State Technical and Community College District, enabling the College to develop an operating plan for the state community college. The Ohio Board of Regents approved the operating plan and awarded the charter for Cincinnati State Technical and Community College effective September 1, 1994.

Accreditations & Memberships

Ohio Board of Regents
Division of Vocational Education, State Department of Education
North Central Association of Colleges and Schools
Landscape Contractors of America
FAA - Approved Aircraft Maintenance Technician School
Member of the American Society of Allied Health Professions
Member of Cooperative Education Association
Member of American Technical Education Association
Member of American Association of Community Colleges
Member of National Junior College Athletic Association
Member of Ohio Association of Community Colleges
National League for Nursing
American Culinary Federation Educational Institute
Technology Accreditation Commission of the Accreditation Board for Engineering and Technology

Greater Cincinnati Consortium of Colleges and Universities

Thirteen institutions of higher learning in the Cincinnati area, including Cincinnati State Technical and Community College, are members of the Greater Cincinnati Consortium of Colleges and Universities. Among the benefits of the Consortium are that regularly enrolled full-time students of one institution, under certain conditions, may register for credit in courses offered by other Consortium institutions in which no instruction is available at their own institution. Contact the Registrar's Office for information.

Members of the Consortium are the Art Academy of Cincinnati, The Athenaeum of Ohio, Chatfield College, Cincinnati Bible College & Seminary, Cincinnati State, College of Mount St. Joseph, Hebrew Union College — Jewish Institute of Religion, Miami University, Northern Kentucky University, Thomas More College, University of Cincinnati, Wilmington College, and Xavier University.

The Consortium's office and executive director are located on the Cincinnati State campus.

Reserve Officers Training Corps

Cincinnati State Technical and Community College has a cross-enrollment agreement with the Army and Air Force ROTC at the University of Cincinnati.

Army and Air Force personnel teach the General Military Training (GMT) course classes. Enrollment in these classes entails no service obligation. Books for these courses and uniforms are provided free to the student.

The student attends ROTC classes and drill periods on the University of Cincinnati campus while attending academic classes at Cincinnati State.

Details may be obtained from the Veterans Affairs Office, room 157 at Cincinnati State Technical and Community College.

Cincinnati State
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ADMISSIONS & FEES

Cincinnati State
Technical and Community College

ADMISSIONS & FEES

Admissions Information

Students who are high school graduates or have a high school equivalence (GED) are eligible for admission to Cincinnati State Technical and Community College. Students must submit an application for admission, submit high school or GED transcripts (and college transcripts if applicable), attend a Success Seminar, and complete the ASSET placement test.

Students will then be admitted into a degree program. Some admitted students may be recommended to participate in prerequisite or developmental education courses. All placements are based on a review of ASSET placement test scores and high school (or GED) and college transcripts. All admissions placements will lead to an associate degree or certificate.

Prerequisite or developmental education courses enable the student to develop or strengthen important academic skills by taking prescribed classes. A class schedule is designed to enhance the student's academic success and is based on the student's goal, a review of placement test scores, high school and/or college transcripts, and an academic advising session. Students must complete all prerequisite or developmental education courses in five terms or one calendar year.

It has always been the policy to consider students admitted into degree programs as regular students enrolled in an eligible program for the purpose of receiving a degree or certificate.

Graduation Rate Information: Graduation rate information is available in the Admissions and Counseling Office, room 161.

Application for Admission

To apply, follow these steps carefully:

1. The applicant should complete an application and return it to Cincinnati State Technical and Community College.
2. Applicants should have a copy of their high school transcript and college transcript, if applicable, sent directly to the College's Admission Records Office. (With a GED, the applicant should submit a copy of scores.)
3. All applicants are required to attend a Success Seminar, which includes the ASSET test. (See schedule below.)

NOTE:

- Apply early! Each year some programs are filled. (Applicants for these filled programs may be placed on a waiting list.)
- A $10 admissions fee will be charged on the student's first registration bill. Cincinnati State does not charge an application fee.
- For admission to Cincinnati State certificate and degree programs, applicants must have a high school diploma or GED.
- Admitted students who have not enrolled for 5 consecutive terms must reapply for admissions and pay a $10 fee. Students reapplying for admissions five (5) years after their prior admissions date will need to resubmit an application and transcripts, and retest. Admissions documents are maintained for five (5) years after the initial admissions date. The $10 admissions fee will be charged on the first registration bill.
- Admissions applications are valid for one year.
- Admitted students will have one year to register for classes as admitted students.

International Applications

International applicants must submit the following:

1. Admissions application
2. Submit a high school transcript and college transcript (if applicable) to the college
3. Applicants not in the U.S.A. **must** submit TOEFL examination results.
4. Submit a completed Cincinnati State Declaration and Certification of Finances form.
5. Submit an Advance Deposit Fee of $3,500. This deposit fee will be credited to the student's account and used for the payment of tuition, fees and books. The Advance Deposit Fee covers approximately 2 1/2 terms of tuition. All other expenses—room, board, transportation and incidentals must be paid for by the student.

All of the above steps must be completed **before** a Certificate of Eligibility (Form I-20) will be authorized. In order to facilitate enrollment, an International Student should contact the International Student Advisor.

A $10 admissions fee will be charged on the first registration bill. Cincinnati State does not charge an application fee.

Success Seminars

All applicants for admission to certificate or degree programs at Cincinnati State Technical and Community College must attend a Success Seminar. The Success Seminar consists of an orientation to the College, assessment of skills, and advisement on courses and services needed by students to begin their college careers successfully.

The ASSET orientation, assessment and advising system developed by the American College Testing Service (ACT) is used in the Success Seminar.

Success Seminar Schedule

Tuesday	12:30 p.m. - 3:30 p.m.
Wednesday	6:30 p.m. - 9:30 p.m
First Saturday of Each Month	9:00 a.m. - 12:00 Noon

Excludes: December 27 & 28, 1994 and holidays and holiday weekends.

NOTE:

On Tuesdays, a student can attend the College Information Session at 9:00 a.m., the Success Seminar from 12:30 to 3:30 p.m. and continue with the Financial Aid Seminar at 3:45 p.m. In just one day you can successfully begin your college career and have lunch on us in the Cincinnati State cafeteria.

Cincinnati State Technical and Community College High School Junior-Senior Student Post-Secondary Enrollment Options Program

Guidelines

The purpose of the Post-Secondary Enrollment Options Program is to provide high school juniors and seniors who are intellectually and socially capable of doing college work with an additional education option. The program is intended to complement rather than replace the high school curriculum designed for collegiate preparation. These guidelines shall relate to students identified by high school counselors as potential participants in the program.

I. High school counselors must advise students and parents of the advantages and disadvantages of participation in the program prior to a student's application for entry into the program. In addition, high school counselors are responsible for explaining the equivalency, or lack of equivalency, of a given course at Cincinnati State Technical and Community College for meeting high school graduation requirements.

II. Any eligible student who wishes to enter Cincinnati State for college and/or high school credit must:
   1. Submit a High School Options Program application to the college. This must be accompanied by a letter of recommendation from the high school counselor attesting to the student's academic and social readiness to enter college courses.
   2. Take the ASSET test and place at college level in all areas.
   3. Attend a mandatory orientation and enrollment session the Wednesday before the start of the term in which the student wishes to enroll. Parents are encouraged to attend with the student.
   4. Agree to adhere to the college-wide discipline policy as well as the individual policies of each instructor.

III. Courses normally available to the student at the student's high school, i.e., English, Basic Chemistry, Basic Biology, or Basic Physics may not be taken for high school credit at Cincinnati State during the regular high school year.

IV. Admission to programs will follow the same process as required of all applicants. In the case of high draw programs, the high school student will be placed on the waiting list in the same manner as all other applicants.

V. Students who are taking courses for college credit will be accommodated in classes at the time they register and pay for the class. All course prerequisites must be met.

VI. Students taking courses for high school Carnegie units credit may be enrolled only after all other students have been given priority. These students will be accommodated as space is available.

VII. High school students will be held to the same academic standards and must maintain the same grade point average as any other student at Cincinnati State Technical and Community College.

For additional information and/or application contact Gabriele Boeckermann, (513) 569-1550.

Financial Information

Student Expenses

The Ohio Board of Regents provides a student subsidy to Cincinnati State Technical and Community College for each Ohio resident enrolled. The amount received from the Regents is less than one-half of the College's operating costs. An additional nine percent is provided by the State Department of Education, Division of Vocational Education. The balance must come from tuition payments and other sources. Out-of-state residents pay the highest amount of tuition since the College receives no Regents' subsidy for their instruction. (See the end of this section for complete explanation of residency determination.)

Schedule of Fees*

Cincinnati State Technical and Community College continues to maintain affordable tuition rates in the Greater Cincinnati area.

Tuition Fees (per term)

	Ohio Resident	Non-resident
Tuition fee per credit hour (1 to 14 hours inclusive and each hour in excess of 15 hours)	$57	$110
Comprehensive tuition fee (15 hours)	$798	$1,540

Tuition fee includes instructional fee, general fee, and other non-instructional services to the students. Non-resident fee includes a non-resident surcharge.

Miscellaneous Fees

Admissions Fee (payable at first registration)	$10
Advanced Standing Credit Fee	$57
Non-Resident Surcharge (per credit hour)	$53
Late Registration Fees:	
(first day of the term)	$10
(second day of the term)	$20
(third day of the term and thereafter)	$30
Tuition Installment Payment Plan (TIPP) Fee	$30
Laboratory Fee	varies per course
Student I.D. Card	$ 1
Registration Fee (per term)	$ 5
Transcript Fee	$ 3
Returned Check Fee	$20

Parking Fees

Parking Garage Permit (per term, daytime)	$50
Upper Lot Vehicle Parking Permit (per term, daytime)	$61
Lower Lot Vehicle Parking Permit (daytime)	$1.10
Evening Parking Permit Upper & Lower Lots and Parking Garage (per term)	$15
Handicap Student Parking Permit (per term):	
(full-time student, daytime)	$42
(part-time student, daytime)	$21
(evenings)	$15
Replacement Permit	$ 5

* Subject to change at the discretion of the College.

Fees are non-refundable other than the Instructional Fee.

Cooperative Education Employment

Please refer to the specific curriculum to determine exact co-op credits required. Charges for co-op credit must be paid in advance on the established registration date.

Books and Supplies

The cost of books and supplies can vary greatly from term to term. Also, different programs have different requirements. Students in the engineering technologies, for example, generally will spend more on supplies and equipment than the business oriented programs.

The first school term usually is the most expensive one as students purchase books and supplies at that time that they also use in later terms. The average expense for books and supplies is $250 per term.

Senior Citizens

Senior citizens may register tuition free to audit courses as space is available after the pre-enrollment bill period. Senior citizens must pay the registration, lab and out-of-state fees, if applicable. Regular tuition will be charged to those senior citizens who wish to receive credit for the courses. They must pay tuition as well as fees for all non-credit courses. (An eligible senior citizen is one who is sixty years of age or older.)

Tuition Installment Payment Plan (T.I.P.P.)

The T.I.P.P. program is a partial payment plan that allows full-time students to pay their tuition/registration expenses in two installments. The T.I.P.P. guidelines are as follows:

- full-time registration (minimum of 12 credit hours or co-op registration).
- minimum downpayment of one-half of the registration

bill due prior to the start of the term (cash, check, or credit card, financial aid are acceptable forms of downpayment).
- payment of T.I.P.P. processing fee (by cash, check, or credit card) in addition to the downpayment.
- promissory note is signed by the student at the Cashier window for the unpaid portion of the registration bill.
- picture I.D. is required.
- the unpaid T.I.P.P. balance is due in-full by the fifth week of the term it is financing. Future registrations are disallowed until the T.I.P.P. balance is fully paid.

Refund of Tuition Charges

Students withdrawing from (dropping) classes for any reason may receive a refund for the amount of academic fees attributable to the dropped class. The amount of the refund is based upon the date of withdrawal (drop) and calculated according to the College's published refund schedule. Refunds are disbursed to the student or/and a third party payor. Refund checks are mailed to students during the third week of the term.

1. Requests for refunds will be considered only if the student completes and signs the official College drop/add class form. The student shall deliver the completed form to the Registrar Office. The official date of withdrawal (drop) is the date of entry of the form by the Registrar Office.
2. The Admissions fee is not refundable.
3. The following fees are not refundable unless the College cancels all classes the student registers for:
   Registration fee
   T.I.P.P. fee
   Late registration/payment fee
4. The College's refund schedule is as follows:
   Refunds for dropped classes processed in the Registrar Office before the first day of the term are calculated at a rate of 100% refund of the in or out-of-state tuition fee and lab fee for the dropped class.
   Refunds for dropped classes processed in the Registrar Office from the first day of the term through the seventh calendar day of the term will be calculated at a rate of 80% refund of the in or out-of-state tuition fee and lab fee only for the dropped class.
   Refunds for dropped classes processed in the Registrar Office within eight to fourteen calendar days from the first day of the term are calculated at a rate of 60% refund of the in or out-of-state tuition fee and lab fee for the dropped class.
5. Course cancellation: A refund of 100% will be made to a student who has registered for courses that have been cancelled by the College (if the student does not change to another course).
6. Refunds for students whose registration bill was paid by third-party funding (financial aid, agency, T.I.P.P.) are applied toward reimbursing the third-party before any disbursement to the student.
7. If a student owes a financial obligation to the College, the refund will be applied toward payment of the balance due before any disbursement to the student.
8. Students who do not follow the established dropped-class procedures of the College will not be eligible for a refund.
9. Students who have questions concerning refunds may direct those questions to the College Cashier Office.

CINCINNATI STATE TECHNICAL AND COMMUNITY COLLEGE RESERVES THE RIGHT TO REVISE THIS STATEMENT OF TUITION REFUNDS AT ANY TIME.

Ohio Residency

Residency determination of students at Cincinnati State Technical and Community College will be made in accordance with the Ohio Board of Regents' Residency Rule and Guidelines 3333-1-10, Ohio Student Residency for State Subsidy and Tuition Surcharge Purposes. A copy of these guidelines is on file in the Registrar's Office.

A review of residency will be made upon request and with proper documentation. A Residency Review form is available in the Registrar's Office.

Tuition Reciprocity for Northern Kentucky Residents

Cincinnati State Technical and Community College does not charge out-of-state tuition add-ons to residents of Boone, Bracken, Campbell, Carroll, Gallatin, Grant, Kenton, and Pendleton Counties in Kentucky who are admitted and enroll in most Cincinnati State associate degree programs. To be admitted a student must submit an admissions application, have high school and college (if applicable) transcripts mailed to Cincinnati State, and attend a Success Seminar. Associate degree programs which are also offered at Northern Kentucky University are excluded from this tuition reciprocity agreement, namely nursing and respiratory care and all certificate programs.

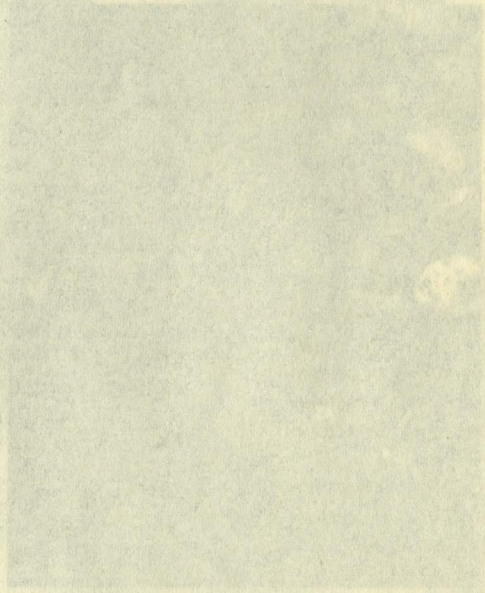
This same reciprocity agreement enables graduates of Cincinnati State who are residents of Butler, Clermont, Hamilton, and Warren Counties in Ohio to enroll in certain baccalaureate degree programs at Northern Kentucky University and pay Kentucky resident tuition rates. Graduates must satisfy all NKU regular transfer admissions requirements, including any requirements of the specific baccalaureate program.

Indiana Space Grant

Indiana students residing in Dearborn, Franklin, Jefferson, Ohio, Ripley or Switzerland County are eligible for tuition assistance from the Indiana Contract for Space Grant Program. Information and eligibility guidelines are available in the Cincinnati State Financial Aid Office.

Cincinnati State
Technical and Community College

ACADEMICS, POLICIES & PROCEDURES



Equal Opportunity

Cincinnati State Technical and Community College is committed to a policy of equal educational opportunities for all persons regardless of race, sex, age, handicap, or national origin. This policy is adopted as a matter of law and as a matter of educational policy consistent with the goals and purposes of the College.

The College also adheres to a policy of equal employment opportunity and affirmative action to end any illegal pattern of discrimination and to overcome the effects of past discrimination.

Cooperative Education Program Policies

The cooperative education program is an integral part of Cincinnati State's past growth, current strength, and continued success. The College's commitment to cooperative education is reflected in the curriculums of most of the associate degree programs.

Cooperative Education Requirements

Cincinnati State Technical and Community College values the cooperative education experience, but each division establishes its own policies regarding how the student may fulfill co-op requirements.

Students should refer to the academic division sections of this catalog for specific information on how the divisions expect students to meet cooperative education requirements.

Meeting Academic Eligibility Requirements

To be eligible for placement in cooperative education employment (or clinical experience/directed practice), a student must maintain the required grade point average as stated in the College catalog (see "Academic Probation and Dismissal" in this section of the Catalog). The student must also demonstrate satisfactory proficiency in core or other required courses.

A student who does not maintain the required GPA will not be eligible for cooperative education or clinical experience/directed practice without the permission of the program coordinator.

Any student registered for cooperative education credit will be considered a full-time student during that term, regardless of the total number of credit hours being taken.

Refer to the division sections of the catalog for additional requirements.

Obtaining Cooperative Education Assignments

The College has been quite successful in placing most students in cooperative education jobs; however, there is no absolute guarantee of initial or continuing employment. The employer is solely responsible for decisions about hiring, retention, dismissal, promotion or demotion of a cooperative education student. Initial and continuing employment depends on the skills, aptitudes, and behaviors the individual student offers to each potential employer.

Co-op Registration Policy

1. No student may report to his or her co-op job until he or she has registered and paid for co-op.
2. A student failing to register for co-op will not be eligible to receive co-op credit for that term.
3. Employers of co-op students who fail to register for co-op will be notified by the coordinator that the student no longer has co-op status. The employer may allow the student to continue working for them as a full time employee or the employer may choose to terminate the student at that time. This decision will be made by the employer.

Withdrawal From Co-op/Clinical Experience

If a student is removed from a cooperative education or clinical experience course due to unsatisfactory performance, and the student subsequently withdraws from that course, the faculty member responsible for the course, with the approval of the division dean, may remove the "W" and assign a grade of "U" or "F."

Other Academic Policies

Grades and Credit Earned

Grading System

The following system is used to record student achievement or status in courses:

Grade	Explanation	Grade Point Value Per Credit Hour
A	Superior	4
B	Good	3
C	Average	2
D	Poor	1
F	Failing	0
V	Unofficial Withdrawal	0
W	Withdrawal (Official)	Not Computed
AC	Advanced Placement Program Credit	Not Computed
CL	CLEP Credit	Not Computed
EC	Cincinnati State Proficiency Examination Credit	Not Computed
EX	Work Experience Credit	Not Computed
I	Incomplete	Not Computed
IP	In Progress	Not Computed
K	Transfer Credit	Not Computed
N	No Grade Reported	Not Computed
S	Satisfactory	Not Computed
U	Unsatisfactory	Not Computed
UX	Audit Unsatisfactory	Not Computed
VO	Vocational Teacher Referral Credit	Not Computed
X	Audit	Not Computed

Calculation of Grade Point Average (GPA)

The College maintains two grade point averages (GPA) for each student.

The cumulative GPA is calculated as the total quality points earned (Grade Point Value Per Credit Hour, listed above) divided by the total credit hours attempted for all courses taken at the College.

The program GPA is calculated as the total quality points earned (Grade Point Value Per Credit Hour, listed above) divided by the total credit hours attempted for all courses listed in the student's current audit curriculum.

The audit curriculum is the list of requirements the student must complete in order to earn a degree or certificate.

Developmental Education courses that begin with "00" course numbers are not included in GPA calculations.

Repeated Course

If a course is repeated, only the highest grade is computed in the calculation of the GPA. If a student earns the same grade upon repeating a course, only one grade will be computed in the calculation of the GPA. The original course grade will continue to be shown on the transcript even though it is not calculated in the GPA.

Incomplete (I)

When unusual circumstances prevent a student from completing course requirements during the term in which the student is enrolled, the student may contract with the instructor to record a grade of "I" (Incomplete) until the final grade may be established. A grade of "I" is awarded at the discretion of the instructor; timetables and requirements for the completion of the course are the instructor's prerogatives. If a final grade has not been established by the 25th instructional day of the following term, a grade of "F" will be automatically recorded.

In Progress (IP)

When unusual circumstances prevent a student of an individualized course or another IP-approved course from completing course requirements during the term in which the student is enrolled, the student may contract with the instructor to record a grade of "IP" (In Progress) until the final grade may be established. A grade of "IP" is awarded at the discretion of the instructor; timetables and requirements for the completion of the course are the instructor's prerogatives. If a final grade has not been established by the last day of the following term, a grade of "F" will be automatically recorded.

No Grade Reported (N)

An "N" grade is administratively assigned in those instances in which no final grades have been reported for the courses to the Registrar's Office.

Official Course Withdrawal (W)

A student who wishes to withdraw from a course may do so at any time through the 35th instructional day of a term and will receive a grade of "W" for the course. The student must complete a withdrawal form in the Registrar's Office. The date of the withdrawal will be the time/date stamped in the Registrar's Office. A "W" is not computed in the student's grade point average.

Discontinued Attendance/Vanished (V)

The "V" may be assigned by a faculty member as the final grade in a course if a student who has attended one or more class sessions discontinues attendance without officially withdrawing from the course. The "V" means that the instructor did not assign a letter grade which evaluates the student's work because the student did not complete enough class requirements to allow for appropriate evaluation. The "V" is computed as a zero (0) in the student's grade point average.

Audit (X)

Students who are interested in taking a course solely for the value of the instruction may register to audit the course. No college credit may be earned or later claimed for an audited course. Regular tuition is charged for courses being audited. Requirements for attendance, completion of assignments, and examinations are the prerogatives of the instructor of the course.

A student may not request a transfer from "credit" to "audit" or vice versa after completion of the second week of the term.

Unsatisfactory Audit (UX)

A grade of UX may be given if the student has not fulfilled predetermined requirements for attendance and completion of assignments as established by the instructor of the course.

Transfer of Credit (K)

Any student accepted and enrolled in a degree or certificate program may request a transfer of credits earned at other accredited institutions of post-secondary education listed by the American Council of Education. The student must request the previously-attended institution to forward directly to the Cincinnati State Dean of Admissions a transcript of academic record and an explanation sheet. Courses will be considered for transfer of credit if they are equivalent to those at Cincinnati State and if the student has received a grade of "C" or better. Transfer of credit decisions are subject to review by the student's program chairperson.

In situations where coursework is five years old or older, or where requisite skills may have been lost, courses previously taken at other institutions will be subject to review by the division faculty and dean. Those courses reviewed which do not meet current program requirements and standards will not count toward degree or certificate requirements.

A student who is accepted and enrolled in a degree or certificate program should contact the program chairperson to apply for credit transfer before the end of the first term at Cincinnati State. If transfer credit is to be applied to the first term, the student must make the request to the program chairperson before the end of the first week of the term.

After the Transfer of Credit Form is completed and is approved by the division dean, it will be processed and the student will receive a copy of the approved credits.

Advanced Standing Credit (AC, CL, EC, EX or VO)

Advanced standing credit means that a student receives credit for completing a Cincinnati State course or cooperative education requirement by using one of the methods listed below to demonstrate successful completion of appropriate prior academic and/or work experience. Advanced standing credit is available to students who have been accepted into a degree or certificate program.

Students seeking advanced standing credit must follow the college and divisional procedures described in the *Cincinnati State Student Guide to Advanced Standing Credit.* This publication is available in the Registrar's Office and in each academic division's main office.

The types of advanced standing credit are:

External Proficiency Examination, such as the Advanced Placement Program (AP) of the College Entrance Examination Board and the College Level Examination Program (CLEP). Credit is shown on the student's record as "AC" or "CL."

Internal Cincinnati State Proficiency Exam. Credit is shown on the student's record as "EC."

Credit Through Documented Valid Academic or Work Experience, including professional certification/licensing, and formal training programs. Credit is shown on the student's record as "EX."

Credit Through Senior Vocational Teacher Referral. Credit is shown on the student's record as "VO."

Some types of advanced standing credit are not available in some degree or certificate programs.

Students should make arrangements to apply for advanced standing credit as soon as possible after admission to a program.

Grade Reports

Grades are reported to the student at the current address on file with the Registrar's Office at the end of each term. It is the student's responsibility to check his or her grade report for accuracy. Any errors, discrepancies, omissions, should be reported in writing to the Registrar's Office. Concerns of students should be made within 30 days of the end of the term for which the grade report was issued.

Dean's List

Full-time students (those who complete academic courses totaling twelve or more credit hours) will qualify for Dean's List status if their cumulative GPA for the current term is 3.5 or greater, providing that they do not have a grade of I, IP, F, U, or V in their most recent academic term.

Part-time students (those who complete academic courses totaling fewer than twelve credit hours) who have a GPA for the current term and a cumulative GPA of 3.5 or greater will qualify for Dean's List status after completion of 12, 24, 36, 48, 60, 72, 84, and 96 academic credit hours. Part-time students will not qualify if they have a grade of I, IP, F, U, or V in their most recent academic term.

Academic Probation and Dismissal

"Academic Probation" means that a student who is seeking a degree or certificate has not maintained the required GPA. Such a student is given a period during which he or she has the opportunity to meet the required standards or be subject to academic dismissal from the College.

A full-time student (enrolled for 12 credit hours or more per term) shall be on academic probation when the student's term total grade point average is 1.0 or below.

A full-time or part-time student is considered to be on academic probation when the student's cumulative grade point average falls below one of the following levels:

Total Credit Hours Attempted	GPA
1 to 35	1.75
36 or more	2.00

A student designated as on academic probation is subject to the following conditions:

1. The student cannot enroll for more than twelve (12) credit hours or four (4) courses without the permission of the student's program chairperson/faculty advisor.

2. The student is not eligible to enroll for cooperative education or clinical experience/directed practice without the permission of the program coordinator.

The student who is placed on probation will be reevaluated after two additional terms in which credits are attempted. If the student's cumulative GPA is at or above the acceptable level, the student will be removed from probation. If the GPA is still below the acceptable level, the student is eligible for dismissal from the College.

The student will be notified by letter of pending dismissal. The student will be given an opportunity to arrange for a hearing to request an extension of the probationary period.

Admission Following Academic Dismissal

A student academically dismissed from the College will be eligible to apply for admission to a degree or certificate program one calendar year after the date of academic dismissal.

Academic Appeals Procedure

Cincinnati State Technical and Community College has adopted the following procedures to ensure that students with legitimate concerns about academic processes (hereafter called "academic appeals") can resolve these concerns equitably.

1. A student is expected to bring his or her academic appeal first to his or her faculty advisor (program chair or cooperative education coordinator).
2. If the concern cannot be settled at this level, the student is expected to bring his or her academic appeal to the division dean or the dean's designee (usually the Assistant Dean for Academics).
3. It is expected that most academic appeals will be resolved at the division level. However, if the concern cannot be resolved by the division dean, the student may continue the academic appeals process by meeting with an academic appeals panel. To initiate this process, the student must submit a written statement of the concern that is to be addressed, including pertinent documentation, to the Executive Assistant of Academic Affairs.
4. The academic appeals panel will be composed of one dean (excluding the dean of the division involved in the appeal), appointed by the College president; and two faculty members, appointed by the Faculty Senate. The designated dean will chair the panel, solicit appointment of the faculty representatives, convene meetings of the panel, and provide copies of necessary documentation to the other panel members. Documentation will include:
   a. The student's written statement and other material the student wishes to submit.
   b. A written summary of the disposition of the case at the division level, prepared by the division's dean.
   c. The student's transcript, or any other related materials the panel may wish to examine.
5. The chair will convene a meeting that includes the student, the members of the panel, and other participants the panel may choose to invite to the meeting. The student will have an opportunity to present his or her concern, and the panel members will have the opportunity to ask questions and seek clarification. If the panel determines there are issues involved which are not academic concerns, the panel will inform the student of appropriate measures to be taken.
6. The panel may, at its own discretion, refer the matter to the Academic Policies & Curriculum Committee (APCC) for advice and recommendations.
7. If the APCC is to be convened to review the appeal, the panel chair must ensure that all related documentation is submitted to the APCC chair one week prior to the APCC meeting. Any recommendations made by the APCC will be submitted to the academic appeals panel for consideration.
8. The academic appeals panel will forward a recommendation to the President (chief academic officer) of the College. The chief academic officer will make the final determination regarding the appeal and will notify the dean of the division involved in the appeal. That dean will communicate this determination to the student who initiated the appeal.

Administrative Withdrawal

A matriculated student who fails to enroll for five (5) consecutive terms will be administratively withdrawn. In such a case, the student must reapply for admission to a program and will be subject to re-evaluation and to any change of degree requirements during his or her absence. The re-admitting process is done in the Admissions Office.

Enrollment Status

Registration

Students must complete their enrollment and pay tuition and fees to be registered. This should be completed before the first day of classes to avoid a late fee. The schedule of registration dates is available in the Registrar's Office.

Students from Consortium institutions and Senior Citizens must register for classes after the pre-enrollment period for the term in which they wish to take classes at Cincinnati State.

Students who wish to add or register for a course which has met must have written approval of the instructor and the division dean.

Enrollment Verification

Students may submit enrollment verification request(s) to the Registrar's Office.

Enrollment status is determined by the official number of credit hours for which a student is enrolled each term. Enrollment status often is used to help determine eligibility for financial aid, veterans benefits, company and agency funding, and health benefits.

Students are responsible for knowing their enrollment status and understanding the impact of changing credit hours by the add/drop process.

Generally, Cincinnati State will define a student's enrollment as follows:

Full-Time Enrollment	12 or more credit hours or full-time cooperative education placement
3/4 Time Enrollment	9 - 10 - 11 credit hours
1/2 Time Enrollment	6 - 7 - 8 credit hours
Less than Half-Time Enrollment	5 or fewer credit hours

Completing More Than One Degree ("Double Major")

When a student is admitted to the College he or she is considered to be seeking only one academic degree or certificate. In some cases, students may seek to "double major" by pursuing another degree in an area that is closely related to their initial degree program.

To be considered for a "double major," a student must first be admitted to a degree program. (Students who are seeking a certificate rather than a degree are not eligible to apply for "double major" status.)

To be considered for a "double major," a student must apply for admission to the second program by completing a form available from the Registrar's Office. The academic division in which the student seeks the second major will determine whether the student is eligible to pursue the second major.

Students who are granted "double major" status are expected to consult regularly with their program advisor (or advisors) to ensure that they are making appropriate progress in their degree programs.

Students with questions or concerns about their academic status or goals should consult with their program advisor, or with the Admissions and Counseling Office.

Changing Degree Programs

Students who wish to transfer from one degree or certificate program to another must complete a Change of Degree Program form and submit it to the College Admissions Office.

Calculation of Program GPA for a Student Who Transfers to a New Degree Program - When a student transfers from one degree or certificate program to another, all courses attempted that apply to the new audit curriculum, with the exception of cooperative education courses, will automatically transfer to the new program. The new program's audit curriculum will serve as the basis for calculating the program grade point average.

Additional transfer of courses to the new program, including cooperative education courses, will be evaluated by the divisional faculty and dean on an individual basis.

Re-Admission to the College

Readmission After an Absence of One to Five Years

Former students who return to the College after an absence of one or more years, but less than five years, must follow the regular process for admission to a degree or certificate program.

Re-entering the same program - In situations where a student is *readmitted to a previously-attempted degree or certificate program,* the student must complete the current curriculum requirements of the degree or certificate program. However, all courses previously taken at Cincinnati State will appear on transcripts and will be calculated in the program grade point average.

Re-entering a different program - In situations where a student is *readmitted to the College in a degree or certificate program not previously attempted,* the student must complete the current curriculum requirements of the degree or certificate program. However, all courses previously taken at Cincinnati State will appear on transcripts and will be calculated in the cumulative grade point average.

Readmission After an Absence of Five or More Years

Former students who return after five years or more have the opportunity for a "fresh start" whether or not they were on academic probation or dismissal when they left Cincinnati State.

In situations where coursework is five years old or older, or where requisite skills may have been lost, previous coursework will be subject to review by the division faculty and dean. Those courses reviewed which do not meet current program requirements and standards, and for which students did not obtain a grade of "C" or better, will not count toward current certificate or degree requirements, and will not be calculated in current program grade point averages. However, all courses previously taken at Cincinnati State will appear on transcripts and will be calculated in the cumulative grade point average.

Academic Procedures

Scheduling of Classes

Weekday classes are scheduled to begin any time from 7:00 a.m. to 8:30 p.m. Some courses are regularly offered on Saturday

and occasionally a course will be offered on Sunday.

In the event of adverse conditions, it may be necessary to cancel some classes. The College will rarely close completely.

Local radio and television stations may begin announcing Cincinnati State's operating status as early as 6:15 a.m. on the day involved.

The status of the evening classes will be handled by a separate announcement in the afternoon.

Absences

Each student is expected to attend all classes as scheduled.

On cooperative education and clinical placements, the employer or supervisor may have specific guidelines regarding absences which the student must follow.

Make-Up

The privilege of making up missed assignments, quizzes, tests, exams, and other course activities is not automatic.

An instructor does not have to permit or grant make-up privileges.

Faculty Office Hours

All full-time College faculty maintain office hours. Students should check with each instructor, or the secretary in the instructor's office area, for appointments.

Children on Campus

Cincinnati State Technical and Community College strives to maintain an environment conducive to teaching and learning. Therefore, whenever children are brought to the campus they must remain with their parents, guardians, or caretakers in all areas of the College. Whether or not a child can be brought into a classroom will be at the discretion of each instructor.

If the College's campus security officers find any child left unattended, they will locate the parent/caretaker so that the child can be cared for properly. Above all else, the College wishes to insure the safety and well being of each child.

Transcripts

Upon completion of a Request for Transcript Form, which is available in the Registrar's Office, an official transcript of a student's Cincinnati State academic record will be forwarded to any person or institution designated by the student. A fee is charged for each transcript. Please allow a minimum of five working days for processing transcripts.

I.D. Cards

Each student is required to obtain a card identifying him or her as a student of Cincinnati State. The card should be carried at all times. It may be used for admission to certain social functions, the library, pool, gymnasium, for voting in campus elections, and for other purposes designated by the College administration, or various College departments and organizations. I.D. cards are not transferable and are to be presented to any College official upon request. The cost of the card is $1.00.

State of Ohio Policy for Institutional Transfer

The Ohio Board of Regents, following the directive of the Ohio General Assembly, has developed a new statewide policy to facilitate movement of students and transfer credits from one Ohio public college or university to another. The purpose of the State Policy is to avoid duplication of course requirements and to enhance student mobility throughout Ohio's higher education system. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to an independent institution are encouraged to check with the college or university of their choice regarding transfer agreements.

Transfer Module

The new Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a specific subset of the entire set of a college or university's general education requirements. The Transfer Module contains 54-60 quarter hours or 36-40 semester hours of specified course credits in English composition, mathematics, fine arts, humanities, social science, behavioral science, natural science, physical science, and interdisciplinary coursework. A transfer module completed at one college or university will automatically meet the requirements of the transfer module at the receiving institution, once the student is accepted. Students may be required, however, to meet additional general education requirements that are not included in the Transfer Module.

The Transfer Module courses at Cincinnati State Technical and Community College are listed beginning on page 50 in the academic divisions section of this Catalog.

Conditions for Transfer Admission

Students meeting the requirements of the Transfer Module are subject to the following conditions:

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module and either the Associate of Arts or the Associate of Science degrees. These students will be able to transfer all courses in which they received a passing grade of D or better. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module.
2. The policy also encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module with a grade of C or better in each course and 90 quarter hours or 60 semester hours. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module and only courses in which a C or better has been earned will transfer.
3. The policy encourages receiving institutions to admit on a non-preferential consideration basis students who complete the Transfer Module with a grade of C or better in each course and less than 90 quarter hours or 60 semester hours. These students will be able to transfer all courses in which they received a grade of C or better.

Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at that institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as native students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

Responsibilities of Students

In order to facilitate transfer with maximum applicability of

transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

Appeals Process

A multi-level, broad based appeal process is required to be in place at each institution. A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state level Articulation and Transfer Appeals Review Committee.

The Appeals Review Committee shall review and recommend to institutions the resolution of individual cases of appeal from transfer students who have exhausted all local appeal mechanisms concerning applicability of transfer credits at receiving institutions.

Cincinnati State Transfer Module Appeal Process

Should a student transferring into Cincinnati State be dissatisfied with the credit awarded as part of the transfer module program of the State of Ohio, an internal appeal process and an external appeal process are both available.

The internal appeal process must be utilized first. At Cincinnati State, the appropriate internal appeal process is that described by the College Academic Appeals Procedure, contained in this section of the Catalog.

The external appeal process may be utilized only after the internal appeal process has been completed and the student remains dissatisfied with the institution's judgement. The external appeal will be conducted by the Statewide Appeals Review Committee. More information on this process is available from the Ohio Board of Regents in Columbus, Ohio.

Graduation Requirements

To qualify for the associate degree, a student must be admitted to a degree program, fulfill the program requirements as identified in the audit curriculum, attain at least a 2.0 cumulative GPA, and petition to graduate.

As a part of the graduation requirements for the Associate of Applied Business, Associate of Applied Science, Associate of Individualized Study, and Associate of Technical Study degrees, a student must complete at least 21 credit hours in the communication skills/social sciences areas, distributed as follows:

- Communication Skills - 12 credits
  - 6 credits written communication
  - 3 credits technical writing or business communication
  - 3 credits oral communication
- Social/Behavioral Sciences - 9 credits, selected from at least two of these areas: psychology, economics, sociology, government relations, geography, history.

(Note: students may select courses from the Arts/Humanities areas as a substitute for one area of the Social/Behavioral Sciences, with prior approval of the program chair/advisor.)

As part of the graduation requirements for the Associate of Arts (AA) and Associate of Science (AS) degrees, a student must complete at least 70 or 71 credit hours distributed as follows:

- English Composition - 9 credits (both AA and AS)
- Mathematics - 4 credits (AA) or 8 credits (AS)
- Social/Behavioral Sciences - 18 credits (AA) or 15 credits (AS) including at least two of these areas: psychology, economics, sociology, government relations, geography, history
- Biological/Physical Sciences - 12 credits (AA) or 24 credits (AS), including a three-course or four-course sequence in one or two of these areas: biology, chemistry, physics
- Arts/Humanities - 27 credits (AA) or 15 credits (AS), including 3 credits oral communications (both AA and AS) and at least two of these other areas: literature, philosophy, fine arts, interdisciplinary studies

Students who complete the Associate of Arts or Associate of Science degree also will have completed the College's Transfer Module.

Residency Requirement

Any student seeking a degree or certificate at Cincinnati State Technical and Community College, except for those seeking the Associate of Technical Study degree or other special training programs, must complete at Cincinnati State at least 50 percent of the total non-co-op/non-clinical credit hours required by the program.

No more than 50 percent of the total non-co-op/non-clinical credit hours for a Cincinnati State degree or certificate may be earned through transfer of credits from another accredited institution of higher education, through advanced standing credit, or through a combination of both transfer credits and advanced standing credits.

In Associate of Technical Study programs, the residency requirement shall be determined jointly by program faculty and College administration.

Students who transfer to Cincinnati State from another accredited Ohio college or university with a completed Transfer Module are subject to the guidelines in the "State of Ohio Policy for Institutional Transfer" statement found elsewhere in this section of the Catalog.

Certificate Programs

To qualify for a certificate, a student must be admitted to a certificate program, fulfill the certificate program requirements as identified in the audit curriculum, attain at least a 2.0 cumulative GPA, and petition to graduate. The residency requirement for certificate-seeking students is the same as the requirement for degree-seeking students, as stated above.

Graduation Petition

A student must file a graduation petition in order to graduate. Any matriculated student may file a graduation petition when he or she has earned and/or transferred in a combined total of seventy (70) credit hours towards an associate degree and a combined

total of forty (40) credit hours towards a one-year certificate. A less than one year certificate shoul be turned in according to the schedule below and corresponsing with when the student will complete the certificate. The petition must be filed in the Registrar's Office twenty (20) weeks prior to the date of completed coursework.

Term*	Dates Petitions Accepted	Graduation Date
Summer 1994		
(6/27/94 - 8/29/94)	April 4 to April 29	August 29, 1994
Early Fall 1994		
(9/6/94 - 11/8/94)	June 6 to July 7	November 8, 1994
Late Fall 1994		
(11/14/94 - 1/26/95)	August 15 to September 20	January 26, 1995
Winter 1995		
(2/6/95 - 4/10/95)	October 25 to November 28	April 10, 1995
Spring 1995		
(4/17/95 - 6/19/95)	March 27 to May 1	June 19, 1995

***Term in which all coursework is completed.**

Participation in Commencement

Students may participate in the September commencement ceremonies if they have met the following requirements:

- The student has satisfactorily completed all requirements for a one-year certificate or degree and has not previously participated in a Cincinnati State graduation ceremony.
- The student needs to complete no more than nine credit hours (including co-op) and can complete all degree or certificate requirements during the Early Fall (September) term. (Students in this category will be noted in the commencement program as those who will complete their academic program as scheduled at the end of the Early Fall Term. These students will not be eligible for honors at commencement.) The student may participate in Commencement if:
  1. The student registers for all remaining courses by the close of the advance payment date and presents a paid registration receipt to the Registrar.
  2. The Registrar approves the student's participation.

Graduation Honors

Associate degree candidates who achieve a cumulative grade point average of 3.50 or higher for five terms will graduate with honors. Honors are classified as follows:

Cum Laude 3.50 - 3.79
Magna Cum Laude 3.80 - 3.89
Summa Cum Laude 3.90 - 4.00

Student Conduct Policy

(Ohio Administrative Code, Rule 3357: 4-1-100, Student Code of Conduct).

While it is impossible to write a code of conduct that takes into account every type of behavior, the Cincinnati State Technical and Community College Board of Trustees has adopted standards for student conduct which try to ensure that the College provides an environment in which all students, visitors, faculty and staff respectively can study and grow, visit, teach and conduct college business in a positive manner.

A. Generally, College jurisdiction and discipline shall be limited to conduct which occurs on College premises or which adversely affects the College Community and/or the pursuit of its objectives.

Any behavior contrary to civil law and/or behavior which interferes with the College's maintenance of order or its educational process is forbidden. Such behavior may result in disciplinary probation, suspension, dismissal, expulsion, withholding of transcripts or other appropriate action.

B. The decision as to whether a specific kind of behavior is a violation will rest with the College administration. Any student found to have committed the following (but not exclusive) examples of misconduct is subject to the disciplinary sanctions outlined in Article IV of the College's "Student Code of Conduct":

1. Acts of dishonesty, including but not limited to the following:
   a. Cheating, plagiarism, or other forms of academic dishonesty;
   b. Furnishing false information to any College official, faculty member or office;
   c. Forgery, alteration, or misuse of any College document, record, or instrument of identification;
   d. Tampering with the election of any College-recognized student organization.
2. Disruption or obstruction of teaching, research, administration, disciplinary proceedings, other College activities, including its public-service functions on or off campus, or other authorized non-College activities, when the act occurs on College premises.
3. Physical abuse, verbal abuse, threats, intimidation, harassment, coercion and/or other conduct which threatens or endangers the health or safety of any person.
4. Attempted or actual theft of and/or damage to property of the College or property of a member of the College Community or other personal or public property.
5. Hazing, defined as an act which endangers the mental or physical health or safety of a student, or which destroys or removes public or private property, for the purpose of initiation, admission into, affiliation with, or as a condition for continued membership in a group or organization.
6. Failure to comply with directions of College officials or law enforcement officers acting in performance of their duties and/or failure to identify oneself to these persons when requested to do so.
7. Unauthorized possession, duplication, or use of keys to any College premises or unauthorized entry to or use of College premises.
8. Violation of published College policies, rules, or regulations.
9. Violation of federal, state, or local law on College premises or at College-sponsored or supervised activities.
10. Use, possession or distribution of narcotic or other controlled substances except as expressly permitted by law.
11. Use, possession or distribution of alcoholic beverages except as expressly permitted by the law and College regulations, or public intoxication.
12. Illegal or unauthorized possession of firearms, explosives, other weapons, or dangerous chemicals on College premises.
13. Participation in a campus demonstration which disrupts the normal operations of the College and infringes on the rights of other members of the College Community; leading or inciting others to disrupt scheduled and/or normal activities within any campus building or area; intentional obstruction which unreasonably interferes with freedom of movement, either pedestrian or vehicular, on campus.
14. Obstruction of the free flow of pedestrian or vehicular traffic

on College premises or at College-sponsored or supervised functions.

15. Conduct which is disorderly, lewd, or indecent; breach of peace; or aiding, abetting, or procuring another person to breach the peace on College premises or at functions sponsored by, or participated in by the College.
16. Theft or other abuse of computer time, including but not limited to:
    a. Unauthorized entry into a file to use, read, or change the contents, or for any other purpose;
    b. Unauthorized transfer of a file;
    c. Unauthorized use of another individual's identification and password;
    d. Use of computing facilities to interfere with the work of another student, faculty member or College official;
    e. Use of computing facilities to send obscene or abusive messages;
    f. Use of computing facilities to interfere with normal operation of the College computing system.
17. Abuse of the Judicial System, including but not limited to:
    a. Failure to obey the summons of a judicial body or College official;
    b. Falsification, distortion, or misrepresentation of information before a judicial body;
    c. Disruption or interference with the orderly conduct of a judicial proceeding;
    d. Institution of a judicial proceeding knowingly without cause;
    e. Attempting to discourage an individual's proper participation in, or use of, the judicial system;
    f. Attempting to influence the impartiality of a member of a judicial body prior to, and/or during, and/or after a judicial proceeding;
    g. Harassment (verbal or physical) and/or intimidation of a member of a judicial body prior to, during and/or after a judicial proceeding;
    h. Failure to comply with the sanction(s) imposed under the Student Code;
    i. Influencing or attempting to influence another person to commit an abuse of the judicial system.

Effective: August 16, 1992
Promulgated under: Chapter 111.15 Ohio Revised Code.
Amplifies Chapter 3345.21 Ohio Revised Code.
Modifies Rules 3357.4-1-98 and 3357.4-52

Sexual Harassment

Cincinnati State Technical and Community College affirms its commitment to ensuring an environment for all employees and students which is fair, humane and respectful—an environment which supports and rewards employee and student performance on the basis of relevant considerations such as ability and effort. Behaviors which inappropriately assert sexuality as relevant to employee or student performance are damaging to this environment.

Title VII of the Civil Rights Act of 1969 and Title IX of the Educational Amendments of 1972 as interpreted by Federal Regulation prohibit sexual harassment.

Definition

Sexual favors may not be required explicitly or implicitly as a term or condition of an individual's employment or student status. The submission to or rejection of sexual favors may not be used as a basis for employment or educational decisions. Sexual conduct which has the purpose or effect of unnecessarily interfering with an individual's work or student performance or creating an intimidating, hostile or offensive working or educational environment is prohibited.

Such conduct may include:

- verbal harassment or abuse
- subtle pressure for sexual activity
- sexist remarks about a woman's or man's clothing, body, or sexual activities
- unnecessary touching, patting, or pinching
- leering or ogling of a woman's or man's body
- constant brushing against a woman's or man's body
- demanding sexual favors accompanied by implied or overt threats concerning one's job, grades, letters of recommendation, etc.
- physical assault

Substance Abuse Policy

Cincinnati State Technical and Community College prohibits the unlawful manufacture, possession, use or distribution of drugs on its property or as a part of its activities. Cincinnati State also prohibits the use or possession of alcoholic beverages on campus property except as authorized by campus policy. Students and staff may be accountable to both civil authorities and to the College administration for drug and alcohol related actions which are a violation of federal, state or local laws, or the College policy as stated below. In 1989, the College Board of Trustees approved a Drug Free Workplace policy found below.

Policy For Drug-Free Workplace: 89.49

The unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the Cincinnati State workplace. Employees who violate this prohibition will be subject to disciplinary action up to and including immediate discharge.

All employees are obligated to the terms of this policy and must notify their immediate supervisor of conviction for any criminal drug statute violation occurring in the workplace no later than five days after such conviction.

Each employee of the College will receive a written copy of this POLICY STATEMENT regarding a Drug-Free Workplace and will be notified that, as a condition of employment, he or she must abide by this POLICY STATEMENT and notify the employer of any criminal drug statute conviction for a violation occurring in the workplace not later than five days after such conviction.

Upon receiving notice that an employee who is engaged in the performance of a federal contract has had any criminal drug statute conviction for a violation occurring in the workplace, Cincinnati State will notify the federal contracting agency within ten days. The College will impose a sanction on, or require participation in a drug abuse assistance/rehabilitation program by the convicted employee.

Substance abuse is a serious problem in our society. In response to this problem, Cincinnati State offers the following educational activities and personal assistance to all members of the campus community.

- An annual distribution of this statement to all students and employees of the College.
- A Health/Wellness Table with a variety of information on substance abuse is available in the Cafeteria the first 3 days of each term.
- The Department of Athletics and Student Activities has an alcohol/drug education assistance program for athletes.

- Two College-wide workshops on issues dealing with substance abuse are held during each academic year.
- Information and literature on substance abuse is available in the Counseling Center, room 161.
- Students, as well as faculty and staff members who may have alcohol or other substance abuse problems, may receive confidential counseling and referral to appropriate community agencies from the counselors in the Counseling Center, room 161, or employees may contact the Office of Human Resources for assistance.

Early recognition, intervention and treatment for substance abuse is necessary to avoid detrimental effects to physical and mental health. Health risks associated with substance abuse include, but are not limited to:

- Physical dependence
- Psychological dependence
- Alterations in the body's immune system
- Digestive problems
- Liver complications
- Neuropsychological complications
- Nutritional deficiencies
- Certain cancers
- Cardiovascular complications
- Respiratory complications
- An increased risk of contracting AIDS
- Deterioration in learning ability, memory and judgment
- Placental transfer resulting in low birth weight, mental retardation, congenital malformation and neonatal addiction
- Moral deterioration
- Deterioration of personal relationships

Death may result from continued substance abuse.

Alcohol and the Law

You have a responsibility to follow the laws of your city, state and nation. If you fail to live up to that responsibility, you may face certain penalties. Some of the potential legal consequences of committing an alcohol related criminal offense are listed in this statement.

Underage Consumption, Purchasing or Possession of Alcohol

The legal drinking age in Ohio for consumption of an alcoholic beverage is 21 years old. Anyone purchasing, possessing or consuming alcohol prior to their 21st birthday is guilty of a first degree misdemeanor. The maximum penalties associated with this offense are 6 months imprisonment or a $1,000 fine or both. A 20-year-old student, therefore, risks being imprisoned and fined when he or she decides to drink alcohol.

Providing Alcohol to an Underage Person

A person who furnishes alcohol to an underage person is guilty of a first degree misdemeanor. The maximum penalties associated with this offense are 6 months imprisonment or $1,000 fine or both. A social host, therefore, risks being fined and imprisoned when he or she furnishes alcohol to a person he or she knows or should know is not 21 years of age.

Fake ID

Possession or display of a fictitious operators license is a first degree misdemeanor. The offense includes mere possession of a fictitious license or display of someone else's valid operators license. The maximum penalties for this offense are 6 months imprisonment or a $1000 fine or both. Moreover, if the fictitious operators license is utilized to purchase alcohol or enter an establishment that serves alcohol, the minimum fine must be at least $250 and the person displaying the fictitious operators license may have his or her valid operators license suspended for 3 years.

Driving Under the Influence of Alcohol or Drugs (DUI)

In Ohio, a person may not operate a motor vehicle if he or she is impaired by alcohol and/or drugs. The maximum penalties for operating a vehicle while under the influence are 6 months imprisonment (mandatory 3 days in jail) or a $1,000 fine or both. In addition, the operator must forfeit his or her driving privileges for 3 months.

Open Container

It is illegal to possess in public an open container of an alcoholic beverage. If convicted of this offense, the maximum penalty is a $100 fine. Consumption of alcohol in a motor vehicle is a fourth degree misdemeanor with maximum penalties of 30 days imprisonment or a $250 fine or both.

Disorderly Conduct

Disorderly conduct while intoxicated is a minor misdemeanor and carries a maximum penalty of a $100 fine. Disorderly conduct occurs when one recklessly causes inconvenience, annoyance or alarm to another due to offensive conduct.

Federal and State Penalties for Sale and Possession

The Federal Government decides if and how a drug should be controlled. Psychoactive (mind-altering) chemicals are categorized according to Schedule I-V. This schedule designates if the drug can be prescribed by a physician and under what conditions. Factors considered in this categorization include a drug's known and potential medical value, its potential for physical or psychological dependence, and risk, if any, to public health. Penalties for the illegal sale or distribution of a drug are established using the designation of Schedule I-V. If you have knowledge of a felony you must report it to a law enforcement official.

Schedule I drugs have a high potential for abuse with no medical use. Production of these drugs is controlled. Examples include heroin, methaqualone, all hallucinogens (except phencyclidine-PCP), marijuana and hashish. Tetrahydrocannabinol (THC), depending on its form, can also be a schedule II drug.

Schedule II drugs have a high potential for abuse, but have some medical uses. Production of these drugs is controlled. Examples include opium, morphine, codeine, some other narcotics, barbiturates, cocaine, amphetamines, and phencyclidine (PCP).

Federal and State of Ohio penalties for selling Schedule I and II drugs vary with the quantity of the drug. Additionally, if death or serious injury is associated with the sale and/or if it is a second offense, penalties are more severe. When establishing penalties for sale, marijuana and hashish are separated from this designation according to the schedule. The penalties, however, are similar to those set for Schedule I and II drugs.

The Federal penalty for first offense sale of small amounts of Schedule I and II drugs is "not less that 4 years/not more than 40 years; if death or serious injury, not less than 20 years/not more than life; fine of not more than $2 million individual/$5 million other than individual."

In the State of Ohio the penalty for "delivery, possession with intent to deliver, and manufacture" of less than 25 grams is "mandatory 1 to 20 years; up to $25,000 or life probation." The penalty for possession of less than 25 grams is "up to 4 years, or fined up to $25,000 or both." Both are a felony. Use is a misdemeanor which has a penalty of "up to 2 years, $2,000 fine or both."

Schedule III, IV and V drugs include those that most citizens would categorize as "prescription drugs." Schedule III drugs have some potential for abuse, but less than I and II. The potential for abuse of Schedule IV drugs is less than Schedule III, and Schedule V is less than IV. All Schedule III-V drugs have medical uses and

production is not controlled. Examples of these drugs include some narcotics, chloral hydrate (IV), barbiturates (III & IV), amphetamines (III), and other stimulants (III & IV).

The Federal penalty for first offense sale of a Schedule III drug is "Not more than 5 years; fine of not more than $250,000 individual/$1 million not individual." The Federal penalty for first offense sale of schedule IV drugs is "not more than 3 years." The fine is the same as for Schedule III drugs. The Federal penalty for first offense sale of Schedule V drugs is "not more than 1 year; fine of not more than $100,000 individual/$250,000 not individual."

Sale of some Schedule III drugs is a felony and has a State of Ohio penalty of "up to 7 years; or a fine up to $5,000; or both." State of Ohio penalty for sale of Schedule IV drugs is a felony and has a penalty of "up to 4 years; or a fine up to $2,000; or both." Sale of Schedule V drugs in the State of Ohio is also a felony and has a state penalty of "up to 2 years; or a fine up to $2,000; or both."

For further information on substance abuse and early intervention and treatment, contact the Counseling Center, room 161, (513) 569-1544, or the Office of Human Resource Services in room 177, (513) 569-1565.

Student Conduct Violations and Hearing Procedure

Ohio Administrative Code (O.A.C.) Rule 3357:4-1-100 Article IV, Judicial Policies.

A. Any member of the College community may file charges against any student for misconduct. Charges shall be prepared in writing and directed to the judicial advisor responsible for the administration of the College judicial system. Any charge should be submitted as soon as possible after the event takes place, preferably within forty-eight hours.

B. The judicial advisor may conduct an investigation to determine if the charges have merit and/or if they can be disposed of administratively by mutual consent of the parties involved on a basis acceptable to the judicial advisor. Such disposition shall be final and there shall be no subsequent proceedings. If the charges cannot be disposed of by mutual consent, the judicial advisor may later serve in the same matter as the judicial body or a member thereof.

C. All charges shall be presented to the accused student in written form. A time shall be set for a hearing, not less than five nor more than fifteen calendar days after the student has been notified. Maximum time limit for scheduling of hearings may be extended at the discretion of the judicial advisor.

D. Hearings shall be conducted by a judicial body according to the following guidelines:

(i) Hearings normally shall be conducted in private. At the request of the accused student, and subject to the discretion of the judicial advisor, a representative of the student press may be admitted, but shall not have the privilege of participating in the hearing.

(ii) Admission of any person to the hearing shall be at the discretion of the judicial body and/or its judicial advisor.

(iii) In hearings involving more than one accused student, the judicial advisor of the judicial body, in his/her discretion, may permit the hearings concerning each student to be conducted separately.

(iv) The complainant and the accused have the right to be assisted by any advisor they choose, at their own expense. The advisor may be an attorney. The complainant and/or the accused is responsible for presenting his or her case and, therefore, advisors are not permitted to speak or to participate directly in any hearing before a judicial body.

(v) The complainant, the accused and the judicial body shall have the privilege of presenting witnesses, subject to the right of cross examination by the judicial body.

(vi) Pertinent records, exhibits and written statements may be accepted as evidence for consideration by a judicial body at the discretion of the judicial body.

(vii) All procedural questions are subject to the final decision of the judicial advisor of the judicial body.

(viii) After the hearing, the judicial body shall determine (by majority vote if the judicial body consists of more than one person) whether the student has violated each section of the student code which the student is charged with violating.

(ix) The judicial body's determination shall be made on the basis of whether it is more likely than not that the accused student violated the student code.

E. There shall be a single verbatim record, such as a tape recording of all hearings before a judicial body. The record shall be the property of the College.

F. Except in the case of a student charged with failing to obey the summons of a judicial body or College official, no student may be found to have violated the student code solely because the student failed to appear before a judicial body. In all cases, the evidence in support of the charges shall be presented and considered.

Student Complaint Procedures

Cincinnati State Technical and Community College has established procedures to address the violation of the rights of students. A complete copy of the procedures can be obtained from the Office of Student Services. (Matters related to an appeal of academic decisions must first be handled through the Academic Appeals Procedure which is referred to elsewhere in this section of the Catalog.)

If a student feels that his or her rights have been, or are being, violated by another student or Cincinnati State staff, the following procedure is available:

Step 1 — The student should discuss the problem with his or her instructor or faculty advisor.

Step 2 — If the problem is not resolved at Step 1, a student complaint/referral form should be submitted to the Office of Student Services, room 159. A copy of the form shall be forwarded to the Dean or manager of the person against whom the complaint is made for resolution.

Step 3 — If the complaint is not resolved at Step 2, the complainant may request a fact-finding hearing under the provisions of 3357:4-52 through the office of the Dean of Student Services.

Release of Information

A student's record contains information which is classified as confidential or public. The following is considered public information and the College may exercise its discretion regarding the release of this information.

1. Name
2. Technology/Division
3. Full or Part Time Status
4. Date of Graduation and Degree/Certificate Granted.

Public information will be used for releases to newspapers, television and radio.

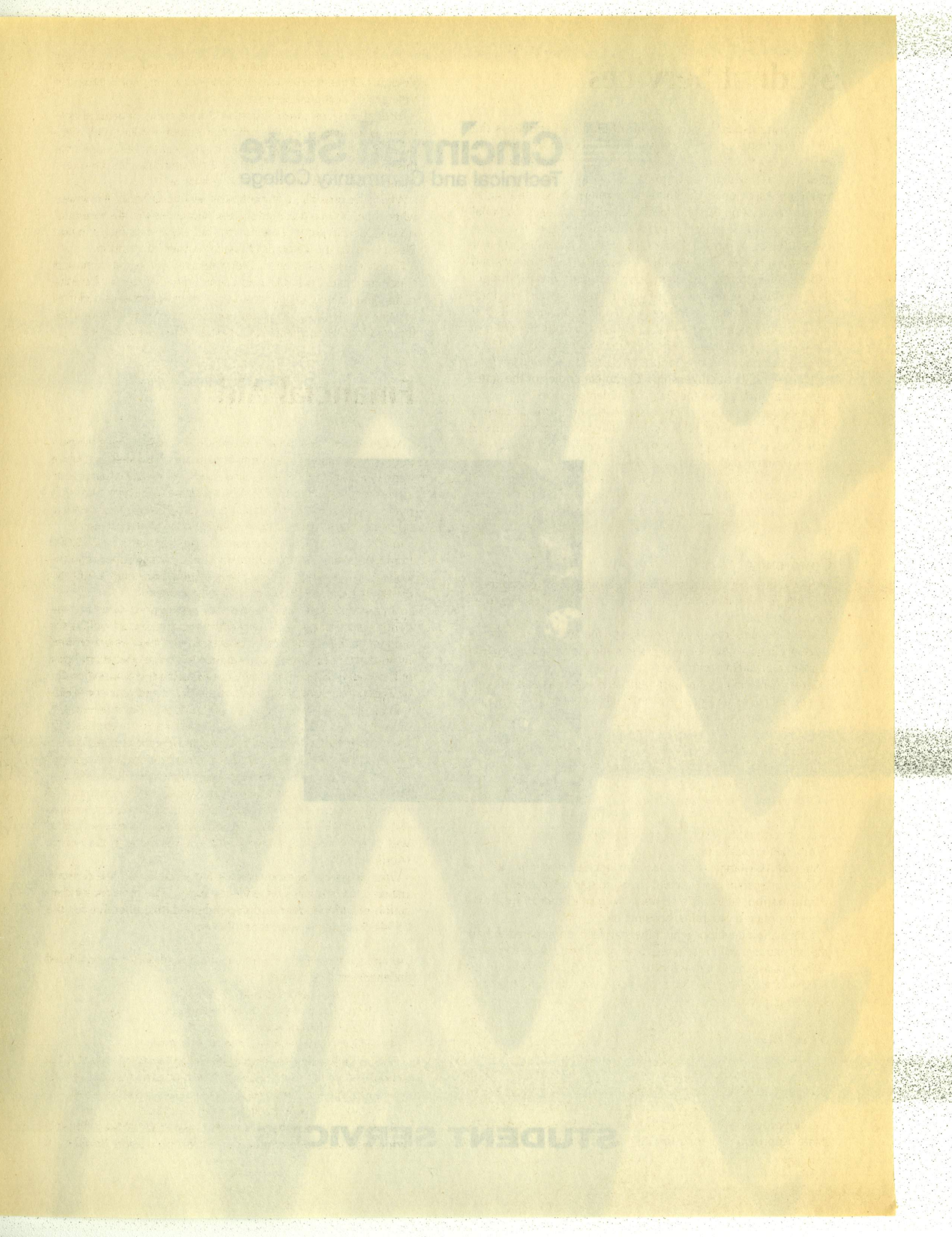
All other information is confidential and will be released only upon the receipt of written permission from the student for legitimate College purposes, or as otherwise required by law.

Photographs and/or films of students for promotional and

recruitment purposes are taken throughout the school year. Students who do not wish to be included in these visuals must inform the Director of Public Information prior to photographing and/or filming.

Cincinnati State
Technical and Community College

STUDENT SERVICES



Student Services

An important part of the mission of Student Services is the adherence to the principles of student rights and freedoms, as amplified by the "Joint Statement on Rights and Freedoms of Students," and which was formulated by representatives of the American Association of University Professors, United States Student Association, Association of American Colleges, National Association of Student Personnel Administrators, National Association for Women Educators, as well as a number of other professional bodies. These principles speak to the standards and responsibilities of the academic community to ensure student access to education; free discussion in the classroom; maintenance of student records; the freedom to form organizations that promote the common interests of students, and the freedom of inquiry and expression; student participation in institutional government; as well as expectations of student conduct, and the exercise of rights of citizenship. Complete copies of the statement are available from the Dean of Student Services.

Consequently, as a service to students and to the academic community, Cincinnati State Technical and Community College maintains a cadre of professional and support staff to help students in making meaningful decisions regarding admission to college, registering for classes, applying for financial aid, career and educational decision making, personal and social counseling as well as the participation in a variety of student activities and sports.

Counseling

The Counseling Center maintains a professional staff to assist students. All sessions are confidential and free of charge to all Cincinnati State students.

The following services are provided by the counseling staff:

Counseling — counsel students regarding personal, social, or academic problems or concerns.

Career Counseling — help students and potential students with career decisions and concerns through assessment, individual conferences and/or career development coursework, and workshops.

Admissions Advising — advise students regarding general admission; assist students in choosing programs, and refer students to program chairpersons.

Educational Transfer Counseling — assist students interested in continuing their education at other colleges or universities.

International Students — provide admissions, immigration and naturalization assistance.

Special Assistance — provide assistance to students with disabilities or special needs, and students in special programs.

Information — provide students with information regarding College policies, programs, housing, etc.

If a situation develops which the staff feels unprepared to handle, the student will be referred to an appropriate professional.

The Counseling Center is located in room 161. Office hours are 8:00 a.m. to 8:00 p.m. Monday through Thursday, and 8:00 a.m. to 5:00 p.m. on Friday.

Veterans

Cincinnati State Technical and Community College has a Veterans' Affairs Coordinator to aid persons attending school on V.A. benefits. The Veterans' Affairs coordinator will help students with official paperwork and information regarding benefits. All degree programs at Cincinnati State are fully approved by the State Approving Agency for Veterans Training. Upon being accepted by Cincinnati State, veterans should contact the Veterans Office for full information concerning application for Veterans' Educational Benefits.

Tutorial services can be arranged for veterans in need of academic assistance. The Department of Veteran's Affairs will reimburse the veteran for this cost. Fair and reasonable charges for this service will be determined by the Coordinator of Veterans' Affairs prior to approval of tutorial assistance.

Whenever possible, a student tutor will be utilized. However, when there is not a qualified student tutor available, the Veterans' Affairs Coordinator will attempt to find a qualified faculty tutor. Please contact the Veterans Office for further information.

The State Approving Agency for Veterans Training has approved Cincinnati State Technical and Community College for the education and training of veterans and all their dependents under all existing public laws. Inquiries concerning eligibility should be directed to the Coordinator of Veterans' Affairs in room 161.

Financial Aid

At Cincinnati State Technical and Community College the purpose of financial aid to students is to provide financial assistance to qualified students who, without such aid, would be unable to attend college. Financial Aid is a program whereby money is made available to eligible students to help them pay their educational costs such as: tuition, fees, books, transportation, etc.

In 1993-94, the College awarded approximately $3,638,000 from federal and state government funds, private donors and the College's own funds. These funds helped more than 3,000 students pay for their education at Cincinnati State.

Amounts of individual awards vary and depend upon the student's demonstrated and verified financial need, as well as the amount of funds available for distribution. "Need" is determined by subtracting the family contribution from the educational cost at Cincinnati State. The family contribution is estimated on the basis of the amount of income and assets, as well as a consideration of taxes and other expenses of the family. An independent, objective, nationally recognized method of analysis developed by the U.S. Department of Education, is used to evaluate the family's financial circumstances. The source of information is derived from the Free Application for Federal Student Aid (FAFSA). Students may obtain the FAFSA from high school counselors and from the Office of Student Financial Aid and Scholarships (OSFAS) at Cincinnati State. The financial aid award year begins with the Summer (June) term and extends through the Spring (April) term.

One category of questions on the FAFSA deals with the determination of the student's dependency status. The most recent definition of independent and dependent status, effective for the 1994-95 academic year, is as follows:

An applicant for 1994-95 financial aid funds will be considered **independent** if he or she:

1. Was born before January 1, 1971,
2. Is a veteran of the U.S. Armed Forces,
3. Is an orphan or ward of the court,
4. Has legal dependents other than a spouse.

The student will also be considered to be independent if the school documents that one of the following circumstances exists:

5. The student is married or is a graduate or professional student (beyond bachelor's degree status).

Students must mail the **accurately** completed FAFSA in the self-addressed envelope contained in the Application Booklet. It

takes approximately 4 to 6 weeks to process the FAFSA. Once the FAFSA has been processed, the evaluation and a copy of the information that was submitted by the family is sent directly to the OSFAS at Cincinnati State from the U.S. Department of Education.

A financial aid advisor will review the data from the U.S. Department of Education for completeness and will request any additional documentation from the family to verify the accuracy of the information. The documentation required is as follows:

1. The previous year's income tax forms (1040 or 1040EZ or 1040A).
2. Completed verification document (obtained from OSFAS at Cincinnati State).
3. An Ohio Instructional Grant (OIG) certificate. Beginning with the 1994-95 academic year, the FAFSA (Free Application for Federal Student Aid) will be used as the application for the Ohio Instructional Grant (OIG). Deadline for 1994-95 school year is September 1994. The student will receive a separate acknowledgement letter from the Ohio Student Aid Commission.
4. The Pell Grant Student Aid Report (SAR).
5. The evaluated FAFSA which the Department of Education sends to the OSFAS at Cincinnati State after the student has completed and submitted it to the Pell Processing Center.
6. The OSFAS institutional application for aid (obtained from the OSFAS at Cincinnati State).
7. Students must also apply for admission to Cincinnati State.
8. Financial Aid Transcripts (FAT) from each college or university previously attended, if applicable.

Deadlines

All Cincinnati State applications for financial aid should be completed by March 15 in order to receive full consideration for all forms of assistance. Applications completed after March 15 are not guaranteed any consideration for campus-based funds.

Campus-Based Funds (Allocated to institution by the federal government)

1. **Federal Perkins Loans** - ("Self-help" - **must** be repaid)
   a. Interest rate of 5%. Repayment begins nine months after graduation or termination of at least half-time (6 to 8 credit hours) attendance for new borrowers.
   b. Annual loan limits - (a) $4,000 for undergraduate students, (b) aggregate loan limit of $15,000.
   c. Repayment can be deferred or cancelled under certain circumstances.
   d. Priority must be given to students with exceptional financial need.
   e. Exit interviews required for students who withdraw or graduate.
2. **Federal College Work-Study** (CWS) ("Self-help" - non-repayable)
   a. Wages will be at least equal to the federal minimum wage.
   b. Students will be employed on-campus for a maximum of 20 hours per week.
   c. Students are paid bi-weekly through the College's payroll system. Time cards must be submitted in a timely fashion. Late time cards will cause a delay in payment. Proper student identification is required.
3. **Federal Supplemental Education Opportunity Grant (SEOG)** ("gift aid" - non-repayable)
   a. Available only to undergraduate students with exceptional financial need.
   b. For 1994-95 the awards will range from $100 to $800 per student.
   c. Must be enrolled at least half-time (6-8 credit hours). Priority is given to full-time students.

Other forms of aid awarded directly to the student are:

1. **Pell Grant** (awarded by the federal government)
   a. No repayment. (For undergraduates only)
   b. Less than half-time students are now eligible for Pell. Grants may also be awarded for half-time (6-8 credit hours), three-quarter time (9-11 credit hours), and full-time (12 credit hours or more).
   c. In the 1994-95 academic year, grants will range from $400 to $2,300.
   d. Students should bring their Student Aid Report (SAR) to the OSFAS at Cincinnati State as soon as it's received.
2. **Federal Subsidized/Unsubsidized Stafford Loan** (formerly "GSL")
   a. Interest Rate: (1) If the student has no outstanding loans under the Federal Family Education Loan Program and is borrowing a Federal Stafford Loan, the first disbursement of which is made on or after October 1, 1992, the loan's interest rate is variable and may change every July 1 but will never exceed 9 %. If the student meets these conditions the interest rate that applies to the loan until July 1, 1993, is 6.94%. (2) If the student already has Stafford Loans, the interest rate on the new loans will be the same as on the existing loans. If Federal Treasury Bill rates decline the student may be eligible for a rebate of interest.
   b. Must be enrolled at least half-time (6-8 credit hours)
   c. Must apply for a Pell Grant and demonstrate financial need.
   d. Annual loan limits disbursed on or after July 1, 1993 are as follows:
      $2,625 for first-year students
      $3,500 for second-year students
      $5,500 for undergraduate students who have completed 2 years
   e. An origination fee will be deducted by the lender before issuing the checks.
   f. Students must complete the first section of the loan application and submit it to the OSFAS at Cincinnati State. The OSFAS will complete the College's section before mailing to the lender.
   g. Students may obtain a Stafford Loan application from a savings and loan association, credit union, bank, or from the OSFAS at Cincinnati State.
   h. Loans are co-payable to Cincinnati State and the borrowers and are sent directly to the college.
   i. Students have up to 10 years to repay the loan.
3. **Federal Supplemental Loan for Students** (SLS)
   a. Must be repaid.
   b. Loans are made by lenders such as banks, credit unions and savings and loan associations.
   c. Variable interest rate is determined on June 30 for each academic year with a cap of 11%.
   d. Student does not have to demonstrate financial need.
   e. Must begin repaying both principal and interest within 60 days after the loan is disbursed unless the borrower is eligible for deferment.
   f. Checks are sent directly to the college.
   g. Eligible undergraduate students may borrow up to $4,000 per year for the first two years and up to $5,000 for students who have completed two years

of undergraduate study.

h. Obtain a determination of eligibility or ineligibility for a Pell Grant and Stafford Loan.

Effective January 1, 1991, the educational institution may not present to the student borrower for endorsement the first disbursement of his or her loan proceeds until 30 days after the borrower begins a course of study. This applies only to student borrowers who are entering their first year in a program of undergraduate study and who have not previously obtained a Federal Family Education Loan. This provision affects all subsidized Stafford, unsubsidized Stafford and SLS loans (regardless of the amount of the loan or the length of the period of enrollment) guaranteed for periods of enrollment beginning on or after January 1, 1991).

4. **Federal PLUS Loans**
   a. Must be repaid.
   b. Annual limit increased from $4,000 to cost of education minus other aid per dependent child.
   c. Loans are made by banks, credit unions, and savings and loan associations.
   d. Variable interest rate is determined prior to June 1 for each academic year with a cap of 10%.
   e. Student does not have to demonstrate financial need.
   f. Parents must begin repaying both principal and interest within 60 days after the last loan disbursement.
   g. Co-payable checks must be disbursed to Cincinnati State.
   h. Parents with an adverse credit history are not eligible.

State of Ohio Aid

Ohio Student Aid Commission

1. **Ohio Instructional Grant** (OIG) (State grant)
   a. Non-repayable grant.
   b. In the 1994-95 academic year the maximum adjusted family income is **$28,000** to be eligible.
   c. Must be an Ohio resident.
   d. Must carry a minimum of 12 credit hours and enroll in a **degree** program.
   e. Must apply by completing the FAFSA.
   f. The OIG can be used only for tuition and fees.
   g. Limited to 3 terms per year.
   h. Cannot be enrolled in a course of study leading to a degree in theology or a certificate program.

2. **Part-Time Instructional Grant Program**

New program offering grants to part-time undergraduate Ohio residents who meet eligibility criteria.

   a. Students must have financial need as determined by the Financial Aid Office (FAO). In determining financial need the institution should give special consideration to students who are single Heads-of-Household.
   b. The student must be enrolled in an undergraduate curriculum which leads to an Associate or Baccalaureate Degree.
   c. The student must be an Ohio Resident.

Awards will be made by the FAO in Late Fall term 1994 and students will be notified of awards made on their behalf.

3. **Ohio Academic Scholarship** (Ohio Aid)
   a. Non-repayable scholarship.
   b. Must be a high school senior at time of application. Must have taken ACT test. Must have a 3.0 GPA from sophomore year to first semester of senior year.
   c. $1,000 per year. A 4-year award.
   d. Must attend an Ohio institution for at least 12 credit hours per term.
4. **Ohio War Orphan Scholarship** (Ohio Aid)
   a. Non-repayable scholarship.
   b. Pays fees (**no** lab fees).
   c. Must be at least 16-21 years of age at time of application.
   d. For dependents of a veteran parent(s) who served in one of the conflicts and died, or were disabled during their period of service.
   e. Must be Ohio resident.
   f. Eligibility determined by Ohio Board of Regents.
   g. Awards cover cost of instructional and general fees for 4 years of study.
5. **Ohio National Guard Scholarship** (Ohio Aid)
   a. Non repayable scholarship.
   b. Scholarship pays 60% of student's fees.
   c. Student must enlist in National Guard for at least 6 years.
   d. Must be an Ohio resident for at least one year.
   e. Applications may be obtained from Adjutant General's Office.
   f. Covers instructional and general fees.

Additional information may be obtained from the following agencies:

1. For the **Ohio National Guard Scholarship**, write or call.
   State of Ohio
   Adjutant General Dept.
   Attention: AGOH/TG
   2825 W. Granville Road
   Columbus, Ohio 43235-2712
   Phone (614) 889-7032
2. For the **OIG, Ohio Academic Scholarship**, and the **Ohio War Orphans Scholarship**, write or call:
   Ohio Student Aid Commission
   309 East 4th St.
   P.O. Box 16610
   Columbus, Ohio 43266-0610
   Phone (614) 466-8716
3. Regarding the **Stafford Loan, PLUS Loan**, and the **SLS Loan**, write or call the particular lender.
4. Regarding the status of the **Pell Grant**, call (319) 337-5665.

In addition to the program-specific eligibility requirements, the following general eligibility requirements for the above-mentioned financial aid programs are:

General Eligibility Requirements

1. U.S. citizen or eligible non-citizen in the country "for other than temporary purpose."
2. Enrolled as a "regular" degree-seeking student.
3. Maintain satisfactory academic progress as defined by the college.
4. Cannot be in default on any federal loan (Perkins, Stafford/GSL, PLUS, SLS) received at any institution; cannot owe a refund or repayment of a Pell Grant, SEOG, or OIG award at any institution.
5. File with the institution a "Statement of Educational Purpose."
6. Demonstrate financial need as determined by an approved needs- analysis system.
7. Sign a statement of Selective Service registration compliance.

State of Indiana Aid

Indiana Contract for Spaces Grant — To be eligible for tuition assistance from the Indiana Contract Grant Program, students must:

1. Reside in one of the six Indiana counties: Dearborn, Franklin, Jefferson, Ohio, Ripley, or Switzerland.
2. Be accepted for admission to Cincinnati State and enrolled on a full or part-time basis in a program/technology leading to an associate degree or certificate. Students not accepted into a program/technology are not eligible.
3. Complete and return an Indiana Contract for Space Grant Application and a Cincinnati State Financial Aid Application to the Office of Student Financial Aid and Scholarships at Cincinnati State.
4. Students receiving Indiana Contract for Space Grant can also use their Indiana State Grant Award.
5. No other financial aid documents required, unless student is seeking other federal aid or Indiana State Grant. (Must complete the FAFSA and mark "yes" to #33, Section "G." The FAFSA must be postmarked no later than March 1, 1994.) Student's eligibility for the Indiana Contract for Spaces Program will be determined on a first-come first-served basis in accordance with the date and time that applications are received by the Office of Student Financial Aid and Scholarships. Waiting lists will be maintained for eligible students for whom Indiana Contract for Space Grant funds are not available. When funds do become available, they will be awarded to students on the waiting list in order of their application date for the program.

The Indiana Contract for Spaces Grant Program will be limited to 3 terms during an academic school year.

Institutional Aid Programs

Cincinnati State aid programs include academic and need-based scholarships and emergency student loans and grants.

1. **Cincinnati State Scholarship Program** — In 1980, the Cincinnati State Scholarship program was established by the Office of Development. The purpose of the program is to acknowledge and reward high academic achievement by helping deserving students remove some of the financial barriers they face while pursuing a technical education.Eligibility requirements include:
   a. Applicants must meet priority deadline of April 1.
   b. Applicants must be U.S. citizens.
   c. Applicants must be fully accepted and matriculated into a certificate or degree program.
   d. Applicants must have ranked in the upper 20% of their high school graduating class and/or have a minimum GPA of 3.0 on a 4.0 scale, or have earned a minimum of 12 credit hours at Cincinnati State with a minimum of 3.0 GPA and 3.0 core average if applicable.
   e. Need-based applicants must have on file in the Office of Student Financial Aid and Scholarships a Cincinnati State Financial Aid Application and a completed Free Application for Federal Student Aid (FAFSA).
2. **Emergency Aid Programs** — Cincinnati State acknowledges the concerns and needs for additional emergency student assistance programs. It is the College's policy to attempt to assist the student body in meeting educational costs which may delay enrollment.

A. **The Emergency Student Loan Program** is designed to serve as an institutional short-term loan with emphasis on repayment by the fifth week of the term. The program will provide emergency assistance for tuition and fees. For those students who meet eligibility requirements, awards will be made upon availability of funds. The maximum loan amount is the total cost of tuition.
   1. Student must be a U.S. citizen **born** in the U.S.
   2. Student must be enrolled at least half-time and accepted into an eligible program.
   3. Student must be making satisfactory progress as defined in Cincinnati State's catalog.
   4. Student must not be in default on a Perkins Loan (formerly NDSL), Stafford, SLS or PLUS Loan, or any institutional loan.

B. **Schell Loan Program** (Interest free)
   1. Student must be a U.S. citizen **born** in the U.S.
   2. Student must be enrolled at least half-time and accepted into an eligible program.
   3. Student must be making satisfactory progress as defined in Cincinnati State's catalog.
   4. Student must not be in default on a Perkins Loan (formerly NDSL), Stafford, SLS or PLUS Loan or any institutional loan.
   5. Must be 25 years of age or younger.
   6. Citizens of Ohio, Kentucky, West Virginia or adjoining states.
   7. Pays tuition and all institutional fees, books and supplies.
   8. Full tuition in-state $798; out-of-state $1540 (subject to change).
   9. Repayment is required at least by the end of the term in which the loan was sought in order to help aid other students who may, without this assistance, be unable to attend college.

C. **Schmidlapp Nursing Loan**
   1. Student must be a U.S. citizen **born** in the U.S.
   2. Student must be enrolled at least half-time and admitted into the Nursing program.
   3. Student must be making satisfactory progress as defined in Cincinnati State's catalog.
   4. Student must not be in default on a Perkins Loan (formerly NDSL), Stafford, SLS or PLUS Loan or any institutional loan.
   5. Must be 25 years of age or younger.
   6. Full tuition in-state $798; out-of-state $1540 (subject to change).
   7. Repayment is required at least by the end of the term in which the loan was sought in order to help aid other students who may, without this assistance, be unable to attend college.

ALL FINANCIAL AID RECIPIENTS MUST REAPPLY EACH YEAR.

Methods of Disbursement and Refund of Aid

The Financial Aid Office will authorize aid funds (excluding College Work-Study) to be charged to the appropriate fund control accounts by the Office of Finance and Business Affairs. This authorization takes place by the end of the fourth week of each term. The Office of Finance and Business Affairs will apply the authorized aid to the student's institutional charges with priority first given to tuition and fees. When all institutional charges have been paid, Cincinnati State's Office of Finance and Business Affairs will disburse the remaining balance of aid (excluding College Work-Study and OIG) directly to the student. The disbursement occurs on the first day of class and the Monday of the fifth week of the term. It is disbursed by check, and proper student identification is required by the Cashier.

Financial Aid Refund Policy (subject to change)

Since financial aid is expected to meet or help meet educational costs, any tuition and fee refund, up to the amount of financial aid received for that term, will be refunded to the Financial Aid Program(s) from which the student received assistance.

When figuring the amount of refunds to Title IV Programs at the time students withdraw, drop-out, or are expelled during the Institution's Refund Period, as stated in the College Catalog, the Institution must first determine the student's last enrolled date or the last recorded date of attendance, identify the aid sources that make-up the disbursement, and determine the amount the student received as cash disbursement for non-institutional costs. If that date exceeds the institutional refund period, no refund is required. Otherwise, the institution must perform the refund calculation. The formula is as follows:

Title IV Refund = (Amount of Refund) x Total amount of Title IV Aid - minus (CWS earnings) Awarded for payment period / Total Amount of aid - (CWS earnings) = Amount to be returned to Title IV accounts

Non-Title IV Refund = Amount of refund - Title IV refund

Refund = The term "refund" is used in regulations to refer specifically to refunds by institutions of payments made to them for institutional charges. Institutional charges at Cincinnati State are tuition and fees.

The portion of a refund allocated to a program may not exceed the amount a student received from that program.

Pro-rata refunds: The Federal Reauthorization Act of 1992 provides the opportunity for new students to reduce their federal financial aid liability. If, in the first term of enrollment, a student determines that college study is not appropriate, the student can fully withdraw from the College within the first twenty-five days of that term and be eligible for a pro-rata refund of tuition and fees. The College will return that refund to federal Title IV aid used by the student.

The Allocation Priority for Program Refunds

A. Title IV Programs
   First - Stafford
   Second - SLS/Plus
   Third - Perkins
   Fourth - SEOG
   Fifth - Pell

B. Non-Title IV Programs
   Sixth - Athletic Grants
   Seventh - State Grants
   Eighth - State Scholarships
   Ninth - Institutional Scholarships
   Tenth - Agency aid
   Eleventh - Student

Rights and Responsibilities Governing Receipt of Financial Aid

The following information is provided in compliance with federal regulations.

Student's Rights

1. All students have the right to know what financial aid programs are available at Cincinnati State, and the deadlines for submitting applications for each program.
2. Each student has the right to know how his or her need is determined (including tuition, books, fees, and personal expenses), and what resources are used in the calculation of need, and, if awarded, how the award has been "packaged," and how his or her aid will be distributed.
3. Each financial aid student has the right to know how much of his or her need has not been met by the College.
4. If not awarded, each student has the right to be notified by mail with the stated reason(s) for denial of aid.
5. Each financial aid student has the right to know what portion of his or her aid must be repaid, the interest rate, pay back procedures, and what portion is grant aid.
6. All students have the right to know the College's refund policy and how it affects their financial aid packages.
7. All students have the right to know what the College's Standards of Satisfactory Academic Progress policy is for applicants and recipients of financial aid.

Student's Responsibilities

1. All aid applicants have the responsibility of meeting application deadlines for filing, providing correct information on financial aid application forms, and returning all documentation, verification and corrections as requested by the Financial Aid Office.
2. Each student is responsible for reading, understanding and accepting responsibility for all agreements which are signed.
3. All financial aid recipients must notify the Financial Aid Office of any other resources, taxable or non-taxable income.
4. All financial aid recipients must notify the Financial Aid Office of any changes as they occur, including change of full- or part-time status, technology, family circumstances, address, etc.
5. All financial aid recipients are responsible for repayment of funds, if applicable, due to course(s) withdrawal.
6. All students who are awarded any type of loan are responsible for arranging pre-loan counseling, an entrance interview and exit interview. LOANS WILL BE ISSUED AFTER THE STUDENT SIGNS THE PROMISSORY NOTE.
7. All financial aid applicants and recipients have the responsibility of understanding and complying with the Cincinnati State Office of Student Financial Aid and Scholarships' Standards of Satisfactory Academic Progress.
8. All students must notify the Financial Aid Office if they are in default on a loan - Perkins (formerly NDSL), Stafford (formerly GSL), SLS and PLUS while in attendance at **ANY** postsecondary institution.

Cincinnati State Standards of Satisfactory Academic Progress

The Higher Education Act (HEA) of 1965, as amended by Congress in 1980, requires institutions of higher education to establish minimum Standards of Satisfactory Academic Progress (SSAP) for students receiving federal financial aid under the Title IV programs. Cincinnati State applies these standards to all institutionally-awarded funds including the College Work Study (CWS), Perkins loan, Pell Grant, Supplemental Educational Opportunity Grant (SEOG), Stafford loan (formerly GSL), SLS and PLUS loans.

The Ohio Board of Regents requires that a student who receives financial aid through a State of Ohio funded program must maintain Standards of Academic Progress considered by the institution as satisfactory toward receipt of the degree sought by the student. The Cincinnati State Financial Aid Office (FAO) applies these standards to the Ohio Academic Scholarship, Ohio Instructional

Grant (OIG), Ohio National Guard Scholarship, and the Ohio War Orphan Scholarship.

Standards of Satisfactory Academic Progress were established to encourage students to "successfully complete" courses for which financial aid is received and to "progress satisfactorily" toward degree completion. "Successful completion" of a course is defined as receiving one of the following grades: A, B, C, D, or S. The grade marks: F, W, V, I, IP, U, or N will not be considered as successful completion of a course.

The Office of Student Financial Aid is responsible for establishing and monitoring a standard of minimum acceptable progress for continuation of financial aid eligibility. The prior non-receipt of Title IV aid by a student is irrelevant to the determination of whether a student is maintaining satisfactory progress in his or her course of study. Students must make satisfactory progress toward a degree or certificate in order to be eligible for Title IV aid.

The standards limit the total number of terms in which a student may receive aid. Once the student has reached the maximum number of terms for assistance he or she is no longer eligible to receive financial aid. In addition, to meet the standards a student must satisfactorily complete a minimum number of credit hours that he or she attempted during the academic year. Satisfactory academic progress shall be monitored at the end of the completion of each academic year. Students who do not satisfactorily complete the required minimum number of credit hours per academic year will be suspended from eligibility for financial aid. Cincinnati State's SSAP incorporate the following two concepts:

QUALITATIVE STANDARDS - Each student is required to have a grade point average (GPA) which meets the following requirement:

Credit Levels	Total Cr. Hrs. Attempted	GPA
I	1 through 35	1.75
II	36 and over	2.00

If a student fails to successfully complete the required cumulative minimum credit hours by the end of a particular academic year, he or she will be suspended from eligibility for federal financial aid. A student who changes his or her major is still responsible for completing his or her degree or certificate in the maximum timeframe.

QUANTITATIVE STANDARDS - Each student is required to complete at least 60% of the credits for which he or she is registered.

If a student fails to maintain the required minimum GPA, or fails to successfully complete at least 60% of the credit hours in any academic term, he or she registered for, he or she will be placed on probation for receipt of aid.

INCOMPLETES & IN-PROGRESS - If a student receives a grade of "I" or "IP" he or she must submit a transcript to the FAO verifying successful completion before aid will be released for the next term.

REPEATED COURSES - If a student repeats a course because he or she failed it in a previous term or because the student wishes to improve a grade in the course, the credits may be included in the total number of credits the student is taking when determining enrollment status as long as the student is considered to be making satisfactory progress, and as long as the institution is allowing the student to receive credit for the repeated courses. However, the Financial Aid Office will pay for a repeated course and count it in the number of credit hours only once-a total of two times for any one course.

REMEDIAL COURSES (DEVELOPMENTAL EDUCATION COURSES) - Federal regulations state that the student must be enrolled in an eligible program leading to a certificate or degree. Until such time as a student is admitted to such a program, he or she would not be eligible for federal financial aid. Remedial courses required for admission to the program would, therefore, not constitute an eligible program.

If, on the other hand, a student is admitted to an eligible program, but is required to take remedial courses (or at the student's option) and is otherwise eligible, the remedial courses will not affect the student's eligibility for federal aid. However, regulations effective April 29, 1985 limit the student to one year (equivalent to 45 credit hours) of non-credit or reduced credit remedial work except for courses relating to English as a second language.

TRANSFER STUDENTS - The number of terms which a transfer student may be allowed to be eligible for financial aid will vary depending upon the total number of hours accepted for transfer to Cincinnati State. The number of credit hours transferred from other institutions during the period of matriculation at Cincinnati State will be included in the total number of credit hours and terms earned.

The Cincinnati State FAO's SSAP includes the student's total academic history. In order to receive aid, a student must be making SSAP regardless of whether he or she has previously received Title IV aid.

If a student completely withdraws and/or vanishes from all classes in a given term, financial aid will be terminated automatically at the end of that term.

If a student received all no-passing grades, he or she will be placed on probation. If the student repeats the next term with all no-passing grades, financial aid will be terminated automatically at the end of that second term.

REPAYMENT OF AID - It is the responsibility of each College student to be aware of the academic progress standards which must be maintained for a student's continued eligibility for receipt of financial assistance. Due to time restrictions, it is not always possible to notify a student on a timely basis that he or she is no longer eligible to receive aid. It is each student's responsibility to determine that he or she has met or not met the established standards. Any student who does not satisfactorily complete any credit hours in a particular term and subsequently secures the proceeds of financial assistance for which he or she is not eligible will be immediately notified and required to repay such funds to the financial aid account. Any student who owes a repayment to the Cincinnati State Financial Aid account is no longer eligible to receive financial assistance at Cincinnati State.

FINANCIAL AID APPEALS - All students have the right to appeal a suspension from eligibility for financial assistance. Appeals of probation status will not be considered. The financial aid appeals procedure is meant to be as simple as possible. If a student wishes to appeal the decision of suspension, he or she should obtain the student Financial Aid Appeals Form from the FAO. The student should explain on the appeal form why he or she was not able to complete the minimum number of credit hours or maintain the required minimum GPA. The appeal form should be submitted along with other supporting documents (doctor's statement, etc.).

It is the student's responsibility to provide any documentation that will verify or support his or her appeal. The completed appeal form should be submitted to the FAO within 14 days of notice of suspension. The Financial Aid Appeal Committee will review the appeal. The student will be notified of the action taken on the appeal within 15 working days, unless the appeal is submitted during a registration period. If submitted during a registration period, the student will be notified of the disposition within 15 working days after the next term begins. A student may appeal the committee's decision in writing to the Director of Student Financial Aid.

A student whose financial aid suspension status has been removed by the Director of Student Financial Aid is simply returned to good standing and must continue to abide by the stan-

dards established in this policy statement.

Any student whose financial aid suspension has been removed, via an appeal, is eligible for financial assistance. However, the financial aid awarded to that student upon reinstatement will be based solely upon the student's eligibility and upon funds available at that time.

Effective Spring (April) Term 1993, if a student attending **full-time** has completed 15 terms, all Title IV aid will be automatically and permanently terminated.

Effective Spring (April) Term 1993, if a student attending **part-time** has completed 22 terms, all Title IV aid will be automatically and permanently terminated.

A student who changes majors or courses is still responsible for completing his/her degree or certificate in the maximum time frame.

Student Activities

Student Government

All Cincinnati State students are encouraged to attend Student Senate meetings. The Senate is involved in all student activities and acts as a liaison between students and the administration.

Athletics

Cincinnati State currently competes in Division I of the National Junior College Athletic Association (NJCAA) in three sports: women's and men's basketball and co-ed golf. All three teams regularly compete under the rules and regulations of the National Junior College Athletic Association Region IX (Indiana, Lower Michigan Peninsula and Ohio) and play a very competitive junior college schedule.

Student Organizations

Students are encouraged to join the organizations that appeal to their academic and social interests.

Current student organizations on-campus are: Business Professionals of America, Data Processing Management Association (Student Chapter), Junior Association of Les Chefs de Cuisine, Junior Craftsmen Club, Laser Institute of America, Occupational Therapy Association (Junior Chapter), Ohio Nurserymen's Association, Ornamental Horticulture Club, Professional Grounds Management Society, Professional Land Surveyors of Ohio, Society Manufacturing Engineers (Student Chapter 108), and United African American Association.

Facilities

Use of College Facilities

Students presenting College I.D. cards may use such facilities as the gymnasium, natatorium, weight room, library, student center, meeting rooms, etc. Such use is restricted to hours set aside for student use for free time recreation. These hours will not conflict with previously scheduled events, and may be subject to change because of short term scheduling of intramurals, athletics, community use, etc.

Students or student groups may lease on-campus facilities through the Office of the Director of Facilities.

Smoking Policy

Cincinnati State Technical and Community College is a smoke-free facility, effective August 31, 1993. No smoking is permitted in any College owned or operated building. Students, employees and guests should extinguish smoking materials in receptacles provided at all entrances to the building. The outdoor area immediately outside the College's main entrance is also designated smoke-free.

All employees and students share in the responsibility for adhering to and enforcing this policy. Employees and students are expected to assist in the enforcement of this policy through the following actions: refraining from smoking inside the building and politely reminding persons who smoke inside the building to observe the College's policy.

Johnnie Mae Berry Library

The Johnnie Mae Berry Library, named for the College's first librarian, includes both Information and Multimedia Services. The center is open from 7:30 a.m. to 9:30 p.m. Monday through Thursday, and 7:30 a.m. to 4:30 p.m. on Fridays. Library professional and associate staff members are available to provide assistance during most open hours.

Books, journals and media programs (films, slides, videotapes, etc.) are available to support the College curriculum. New technologies such as compact disk players, computers, and other interactive devices are increasingly available to the student. Reference books, reserve materials, journals and media programs must be used in the library. Students may check out circulating books for a three-week period by presenting a Cincinnati State I.D. card or another type of identification with the student's photograph. There is no charge for the return of overdue material. However, if items are not returned within one week of the receipt of an overdue notice, students will receive a bill for the replacement cost of the book plus a $50 service charge.

The library includes group study rooms, tables and desks for individual study, and carrels for the use of media programs and equipment. Typewriters and microcomputers (with standard business programs) are available for student use during library hours.

Smoking, food, and drink are not permitted in the LRC.

William L. Mallory Child Development Center

The William L. Mallory Child Development Center is located on the Fourth Floor of the College. It offers a comprehensive program of child care for infants of six months and older through pre-kindergarten. The Center is operated by the Salvation Army and is available both day and evening. Students interested in placing children in the program should contact the director.

Access to Greater Cincinnati Library Consortium (GCLC Libraries)

Cincinnati State students have access to a number of libraries in the area through the Greater Cincinnati Library Consortium. To use the member libraries, students must obtain a "GCLC Common Patron I.D." card from the circulation desk. These I.D.s expire at the end of each term and must be renewed every term. Brochures that explain the Consortium and give information about the member libraries are available in the LRC.

Student Bookstore

The bookstore is located on the first floor of Wing C. A complete supply of new texts and a limited supply of used books are

available covering all the courses offered at the College. The store also carries a complete line of classroom supplies, calculators, and course related equipment and supplies.

Used books are purchased by the bookstore at any time during the year.

Books for which an exchange or refund is requested must be accompanied by the original receipt and presented to the College bookstore within one week after the beginning day of each term. If a student drops a course and wishes a refund within the established time frame, the student must show the bookstore personnel a copy of the drop/add form. Only books on approved technology book lists can be returned as used books and refunded accordingly

Regular hours of the Bookstore are Monday thru Thursday, 9:30 a.m. to 6:30 p.m.; Friday 9:30 a.m. to 4:00 p.m. During registration periods hours are extended.

Dining Facilities

The cafeteria, operated by Canteen, Inc. offers a wide selection of foods and refreshments - hot and cold. An extensive salad bar and a deli sandwich bar offer many healthful and appetizing choices.

Hours of operation are:

7:30 a.m. to 10:00 a.m. - Breakfast,
10:45 a.m. to 2:00 p.m. - Lunch
5:00 p.m. - 6:30 p.m. - Dinner

Daily specials are featured during the lunch hours.

Vending facilities are open 6:30 a.m. - 10:00 p.m. daily in the first floor cafeteria area and the third floor student lounge area. Refunds from vending facilities are obtained from the cafeteria cashier or at the switchboard.

Gymnasium

The gymnasium is open for "free play" from 8:00 a.m. to 3:00 p.m. Monday through Friday unless it is scheduled for a special activity/event. Equipment to play volleyball, basketball, football, soccer, and softball is available. I.D.s are required to check out equipment.

Pool

The pool is open for free swimming Monday through Friday during designated hours.

Activities Center

This area features a game room with pool tables, ping pong, foose ball, pin ball, card tables, etc., a snack and lounge area. I.D.s are required to use this facility. Hours — 8:00 a.m. to 6:30 p.m.

Activities Center, Pool, Gym Rules

1. Students using the center must have their Cincinnati State I.D. card and drivers license and show them upon request
2. Food and drink will not be allowed in the gym, exercise room or pool.
3. No smoking allowed in the gym, exercise room or pool.
4. No street clothes allowed in pool area.
5. No swimming suits allowed in other activities areas.
6. Students must present I.D. to lifeguard while using pool area.
7. Please place all cigarettes in ashtrays and all trash in trash containers.
8. I.D.s must be presented to use equipment.
9. Loud or disruptive behavior will not be tolerated.
10. All students are encouraged to shower after activity.
11. Gym shoes must be worn when using the gymnasium. (Street shoes with soft soles are not permissible.)
12. It is recommended that gym clothes be worn when using the gymnasium.

Facilities for the Disabled

The College has renovated areas to make its facilities more accessible to disabled students. Outdoor and indoor ramps, elevators and specially designed restroom facilities are available to assist any physically disabled person.

Lockers

The College has lockers available for use by students. Students must provide their own locks. Cincinnati State Technical and Community College assumes no responsibility for any loss, theft or damage to lockers, locks or contents due to fire, trespassers, etc. Each year, at the end of the Spring (April) Term, students must remove locks and contents from their lockers so that general cleaning and maintenance can be performed.

Parking & Traffic Regulations

The regulations set forth in this section were developed by the Security and Safety Department, and approved by the College Administration in accordance with the Ohio Revised Code.

The goal of the Security and Safety Department is to utilize the available parking resources for the benefit of students, faculty, and visitors to insure that the parking areas are maintained and safe.

The purpose of parking tickets, etc. is not to generate income; it is to obtain cooperation from all students, faculty, and visitors.

Parking Facilities

The College offers on-campus parking in lots, garage, spaces and on driveways around the building (designated "Upper Lot" and in an adjacent lot accessible from Ludlow Avenue (designated "Lower Lot C"). A garage is also available to students. Students and College staff may park on campus as designated below:

Upper Lot

College Staff: spaces lined in white are reserved for Faculty/Staff until 4:30 p.m.

Students: all spaces in Lot A and spaces lined in yellow around the building and on the main entrance and exit drives are designated for student parking.

Handicapped parking: spaces lined in blue are reserved for the handicapped. Handicapped parking requires a state-issued license plate or plaque and a Cincinnati State parking permit.

Garage: garage parking is available to students with the garage permit.

Lower Lot "C" parking spaces are available for any vehicle displaying a valid Cincinnati State parking permit.

Obtaining a Parking Permit

Complete a Vehicle Registration form (forms are available at the Cashier Window or in Room #15). A maximum of two vehicles may be registered on each form and only one permit will be issued to each student. Deliver the completed form to the proper College office, as designated below, to receive the parking permit:

Day Parking (prior to 1:45 p.m.)

Upper Lot - Permits are limited in number and sold on a first-come, first-served basis. These permits are purchased in-person

only at the College Cashier window. Mail-in requests will not be accepted. A new permit must be purchased for each academic term.

Garage permits are purchased at the Cashier Window.

Lower Lot "C" - Prior to 3:00, parking is charged on a per-use basis at the entrance to Lower Lot "C". Parking in Lower Lot "C" after 3:00 requires the purchase of an Upper Lot Permit, Evening Permit, or Garage Permit.

Evening Parking (after 1:45 p.m.)

The evening parking permit allows students to park in both the upper and lower lots and in the garage. Students may park in all yellow-bordered spaces, Lot "A", the driveways and the garage until 4:30 p.m. with this permit. After 4:30 p.m., all parking spaces are open except for spaces specifically designated "Handicapped" or "Evening Faculty Parking Area". These permits are sold by the College Cashier Office. A new permit must be purchased for each academic term.

Handicapped Parking

Parking permits are available allowing use of the Handicap parking spaces. Both a state-issue license plate/plaque and a Cincinnati State parking permit are required. Student Upper Lot Permits are sold at a reduced rate. Contact the Parking Office (Room 15) for details.

Parking permit sales begin approximately four weeks prior to the beginning of every term at the Cashier window. Please see the Cashier Bulletin Board for the exact dates.

Parking Permit Regulations

1. Falsifying any information on the registration form will result in revocation of the permit.
2. Issuance of a parking permit does not guarantee an available parking space.
3. If a parking permit is lost or stolen, replacement permits are available at a reduced charge.
4. Permits must be displayed on the rear-view mirror, or dash facing out.
5. Permits are not transferable.

Visitors Parking

Visitors parking is available in Lot B, located near the building. A fee is charged based on the length of time a car is parked in the lot.

Emergencies

If you see a crime being committed on campus or need assistance from the Security and Safety Department call 861-8888 or for Police or Fire Department call 911.

If you accidentally lock your keys in your car or need a jump start, come to the Security and Safety Office in room 15 and a security officer will assist you.

Violations

Citation Procedure

College parking regulations are enforced by the Campus Security and Safety Department. Any violation can result in a citation being issued. Citations must be paid or appealed within five business days from the date of issue. After that time, the fine will double and the ability to appeal will be lost. At this time a financial hold will be placed on the student operating or registered to the ticketed vehicle. Repeated or serious violations can result in permanent loss of on-campus parking privileges, immobilization or towing of the vehicle and impoundment at the owner's risk and expense. Ignorance of College parking policy is not an excuse for operating or parking in violation. Citations are payable at the Cashier's Office.

The purchase and display of a parking permit does not guarantee the availability of a parking space and does not justify parking against College policy.

Parking Violations

Parking in the following areas is not allowed:

1. In any area with posted "NO PARKING" signs.
2. Outside a bordered parking space or not in front of concrete parking chocks.
3. On the lawns or grass.
4. In front of entrances or garage doors.
5. In a crosswalk or hash-marked area.
6. In reserved areas such as the Upper Lot, Staff, Handicapped, or marked temporarily as "NO PARKING."
7. Without displaying a valid parking permit.
8. With an unregistered vehicle.
9. In areas designated by a Security Officer or Parking Attendant.
10. Failure to pay parking fee.

Moving Violations

1. Excessive speed of a vehicle. The posted speed limit on campus is 10 miles per hour.
2. Driving the wrong way on a one-way drive or entering through an exit.
3. Reckless operation of a vehicle.

(Amounts of fines are printed on the back of the ticket.)

Citation Appeal Procedure

Any ticket issued by the Security and Safety Department can be appealed by filling out the appeal form available in the Security and Safety Office. The form must be completed and turned in prior to 4:00 p.m. on the tenth business day after the ticket was issued. The findings of the Appeal Committee are final.

Liability

Cincinnati State Technical and Community College assumes no responsibility for theft or damage to vehicles parked on College property.

Cincinnati State
Technical and Community College

ACADEMIC DIVISIONS, DEGREE & CERTIFICATE PROGRAMS

Academic Divisions & Programs of Study

Cincinnati State Technical and Community College has five academic divisions which offer credit courses: Business Technologies, Engineering Technologies, Health Technologies, Humanities, and Sciences.

The College offers a variety of educational programs that lead to associate degrees. Full-time students can complete these programs in two years or less; however, many students take longer to complete their degree requirements

- Technical associate degree programs are intended to prepare students for employment immediately after graduation, although the credits earned in these programs also are transferable to four-year colleges and universities.

The technical associate degrees awarded are Associate of Applied Business (AAB), Associate of Applied Science (AAS), Associate of Technical Study (ATS), and Associate of Individualized Study (AIS). In this catalog, the AAB and AAS degree programs are listed according to the academic division that offers the program. The ATS and AIS programs are listed on page 90.

- University-parallel associate degree programs are intended to prepare students for immediate transfer to a four-year college or university, by providing the courses required for the first two years of a bachelor's degree. Students who complete these degrees are given preferential consideration for admission to a public university in Ohio.

The university-parallel degrees awarded are Associate of Arts (AA) and Associate of Science (AS). In this catalog, these associate degree programs are listed beginning on page 51.

In addition to associate degree programs, the College offers several certificate programs that prepare students for specific occupational situations. These certificate programs usually can be completed in less time than is required to complete an associate degree.

The College also offers courses and services to assist students who may need additional preparation or support in order to be successful in achieving their academic goals.

College-Wide Requirements

As part of the graduation requirements for the Associate of Applied Business, Associate of Applied Science, Associate of Individualized Study, and Associate of Technical Study degrees, a student must complete at least 21 credit hours in the communication skills/social sciences areas, distributed as follows:

- Communication Skills - 12 credits
  6 credits written communication
  3 credits technical writing or business communication
  3 credits oral communications
- Social/Behavioral Sciences - 9 credits, selected from at least two of these areas:
  psychology, economics, sociology, government relations, geography, history

(Note: students may select courses from the Arts/Humanities areas as a substitute for one area of the Social/Behavioral Sciences, with prior approval of the program chair/advisor.)

As part of the graduation requirements for the Associate of Arts (AA) and Associate of Science (AS) degrees, a student must complete at least 70 or 71 credit hours distributed as follows:

- English composition - 9 credits (both AA and AS)
- Mathematics - 4 credits (AA) or 8 credits (AS)
- Social/Behavioral Sciences - 18 credits (AA) or 15 credits (AS) including at least two of these areas: psychology, economics, sociology, government relations, geography, history
- Biological/Physical Sciences - 12 credits (AA) or 24 credits (AS), including a three-course or four-course sequence in one or two of these areas: biology, chemistry, physics
- Arts/Humanities - 27 credits (AA) or 15 credits (AS), including 3 credits oral communications (both AA and AS) and at least two of these other areas: literature, philosophy, fine arts, interdisciplinary studies

The courses which constitute each of the areas are described elsewhere in this section of the Catalog, in the list of Transfer Module courses.

Developmental Education

The Developmental Education program consists of several parts which assist students in preparing for their technical programs.

Courses

Each Developmental Education course has been developed around specific objectives which relate to the courses required for the various technologies. Diagnostic techniques are used to determine individual deficiencies, to measure individual progress, and to determine when the student has met the established course objectives.

Developmental Education courses are designed to develop specific minimum competencies in each subject area. The grades for courses numbered from 0001 to 0027 are based on achievement of the identified competencies. Only grades of A, B, IP and F are awarded in these courses. Each specific course has predefined criteria to earn a grade of A, B, IP or F.

Developmental Education courses that begin with "00" course numbers are not included in GPA calculations.

Through the use of specialized methods and modern equipment, and with extensive reliance upon learning laboratory experiences, the student may progress at an individual rate in most courses. The student will be tested frequently to assist in determining progress.

The following courses are offered:

		Credits
0001	English Grammar	4
0002	College Spelling	3
0003	Basic Writing 1	4
0004	Basic Writing 2	4
0010	College Reading 1	4
0011	College Reading 2	4
0017	Speed Reading	4
0020	Basic Mathematics 1	4
0021	Basic Mathematics 2	4
0022	Essentials of Mathematics	6
0023	Basic Geometry	4
0024	Basic Algebra 1	4
0025	Basic Algebra 2	4
0027	Pre-Tech Health Math	4
1161	Applied Algebra	4
1162	Applied Geometry & Trigonometry	4
2270	Introduction to Physics	3
2900	Introduction to Accounting	4
4003	Basic Concepts of Biology	4
6700	Introductory Laser Principles	3
7001	Computer Concepts (ETD)	2

7002	Graphic Concepts (ETD)	2
7003	Engineering Science Concepts	3
7004	Enrichment Seminar (ETD)	1
7005	Introduction to Blueprint Reading & Sketching	3
7006	Introduction to EMET	1
7007	Introduction to Manufacturing	3
7015	Introduction to Environmental Topics	2
7700	Electrical Concepts	4
9014	College Study Skills	4

Learning Lab

Developmental Education offers an open lab with Apple and IBM computers, VCR equipment, Didactor machines and cassette players for students' use. Instructional materials in Math, Biology, Chemistry, Physics, Accounting, Computer Programming, Engineering, Reading, Grammar and Spelling are available. There are also drop-in "Help Sessions" on selected topics where students can come and get help one-on-one. Located on the mezzanine of the Learning Resource Center, the Lab is open in the afternoon for all Cincinnati State students.

Tutorial Services

Tutoring is offered to those who want and need more instruction, more practice or more discussion in a particular subject. At the beginning of each term, students sign up for tutoring hours in the subjects of their choice. As soon as a qualified student-tutor is located, weekly sessions are scheduled. Tutoring may be conducted in small groups or individually. Math drop-in tutoring is also available. There is no fee for this service.

Transfer Module

The State of Ohio has developed a statewide policy to facilitate movement of students and transfer credits from one Ohio public college or university to another. (See policy statement on page 27.)

The Cincinnati State Transfer Module consists of 55 to 59 quarter credit hours which will transfer to any public Ohio two- or four-year college. The courses listed below constitute the Transfer Module.

The Transfer Module requirements are incorporated into the degree requirements for students seeking the Associate of Arts or Associate of Science degree.

Categories contained in the Transfer Module are: English Composition, Mathematics, Arts/Humanities, Social/Behavioral Sciences, and Biological/ Physical Sciences. Students select "tracks" and courses from these categories based on the requirements of the college or university to which they will transfer, their planned baccalaureate major, and their individual needs and interests.

Students should consult with an advisor to assure that courses selected are appropriate for the baccalaureate major and the transfer institution selected, and are consistent with the graduation requirements of that institution.

Transfer Module Courses

English Composition

Select one of the following tracks (minimum 9 credit hours):

		(credits)
ENG 1001	English Composition 1	3
ENG 1002	English Composition 2	3
ENG 1003	English Composition 3	3
ENG 1001	English Composition 1	3
ENG 1002	English Composition 2	3
ENG 1010	Technical Writing 1 or	3
ENG 1011	Business Communications	3
ENG 1001	English Composition 1	3
ENG 1010	Technical Writing 1	3
ENG 1015	Technical Writing 2	3

Mathematics

Select one course (minimum 4 credit hours)

MAT 1128	Business Calculus	4
MAT 1132	Statistics	4
MAT 1152	College Algebra 2	4
MAT 1154	Calculus 1	5
MAT 1155	Calculus 2	5
MAT 1179	Introduction to Applied Statistics	4
MAT 1192	Algebra and Trigonometry 2	4
MAT 1193	Analytic Geometry & Calculus 1	4
MAT 1194	Analytic Geometry & Calculus 2	4
MAT 1195	Analytic Geometry & Calculus 3	4

Arts and Humanities

Select five courses from at least two areas (minimum 15 credit hours)

Literature

LIT 1040	Survey of American Literature 1	3
LIT 1041	Survey of American Literature 2	3
LIT 1042	Survey of American Literature 3	3
LIT 1045	Survey of British Literature 1	3
LIT 1046	Survey of British Literature 2	3
LIT 1047	Survey of British Literature 3	3
LIT 1050	The Short Story	3
LIT 1055	Science Fiction	3
LIT 1059	Topics in Literature	3

Philosophy

PHI 1620	Critical Thinking	3
PHI 1621	Introduction to Philosophy	3
PHI 1625	Ethics	3
PHI 1630	Comparative World Religions	3

Interdisciplinary Studies

HUM 1645	Civilization and Technology	3
HUM 1646	Mass Media and Culture	3
HUM 1698	Topics in Humanities	3

Fine Arts

HUM 1660	Introduction to Art	3
HUM 1665	Introduction to Music	3

Social and Behavioral Sciences

Select five courses from at least two areas (minimum 15 credit hours)

Psychology

PSY 1505	Introduction to Psychology 1	3
PSY 1506	Introduction to Psychology 2	3

Economics

ECO 1512	Microeconomics	3
ECO 1513	Macroeconomics	3
ECO 1514	International Aspects of Economics	3

Sociology

SOC 1521	Introduction to Sociology	3
SOC 1523	Sociology: Major Institutions	3
SOC 1525	Changing Roles for Men and Women	3
SOC 1526	Sociology: Marriage and the Family	3

Government

LBR 1535	Introduction to Labor/ Management Relations	3
LBR 1539	Introduction to Employment & Workplace Law	3

Geography

GEO 1551	Geography of Developed Nations	3
GEO 1552	Cultural Geography	3
GEO 1553	Geography of Developing Nations	3

History

HST 1561	History of World Civilization 1	3
HST 1562	History of World Civilization 2	3
HST 1563	History of World Civilization 3	3
HST 1568	American History 1	3
HST 1569	American History 2	3
HST 1570	American History 3	3
HST 1575	History of Africa	3
HST 1576	African-American History	3

BIOLOGICAL AND PHYSICAL SCIENCES
Select one three-course or four-course track (minimum 12 credit hours)

Biology

BIO 4009	General Microbiology	4
BIO 4014	Anatomy and Physiology 1	4
BIO 4015	Anatomy and Physiology 2	4
BIO 4016	Anatomy and Physiology 3	4
BIO 4071	Introductory Biology 1	4
BIO 4072	Introductory Biology 2	4
BIO 4073	Introductory Biology 3	4
BIO 4081	Principles of Biology 1	5
BIO 4082	Principles of Biology 2	5
BIO 4083	Principles of Biology 3	5

Chemistry

CHE 2231	Fundamentals of General Chemistry	4
CHE 2232	Fundamentals of Organic Chemistry	4
CHE 2233	Fundamentals of Biochemistry	4
CHE 2281	Organic Chemistry 1	5
CHE 2282	Organic Chemistry 2	5
CHE 2283	Organic Chemistry 3	5
SLT 6611	Chemistry 1 and Quantitative Analysis	5
SLT 6621	Chemistry 2 and Quantitative Analysis	5
SLT 6631	Chemistry 3 and Quantitative Analysis	5

Physics

PHY 2241	College Physics 1	5
PHY 2242	College Physics 2	5
PHY 2243	College Physics 3	5
PHY 2291	Physics 1	4
PHY 2292	Physics 2	4
PHY 2293	Physics 3	4
PHY 2294	Physics 4	4

Associate of Arts and Associate of Science Degrees

Cincinnati State offers the Associate of Arts and Associate of Science degrees, which are often called "university parallel degrees" or "transfer degrees," because these degrees provide the first two years of a bachelor's degree program. The primary purpose of the Associate of Arts and Associate of Science degrees is to prepare students for transfer to a four-year college or university. Students who earn these degrees and have an overall grade point average of 2.0 or better are given preferential consideration for admission to Ohio public universities.

To earn the Associate of Arts or Associate of Science degree at Cincinnati State, a student must complete 102 credit hours of courses from these areas:

- English Composition
- Mathematics
- Biological/Physical Sciences
- Social/Behavioral Sciences
- Arts/Humanities
- Computer Literacy
- Cooperative Education/Career Exploration

The Associate of Arts degree provides the start toward bachelor's degree programs in fields such as English, history, psychology, sociology, economics, political science, and many other areas of study.

The Associate of Science degree provides the start toward bachelor's degree programs in fields such as biology, chemistry, physics, mathematics, and pre-professional fields such as medicine, dentistry, or engineering.

Either the Associate of Arts or the Associate of Science degree could provide the start toward a bachelor's degree in education, business, journalism, or pre-professional fields such as law.

The student who seeks the Associate of Arts or Associate of Science degree is expected to be familiar with the requirements for the bachelor's degree at the institution where the student intends to complete his or her studies. Each student will work with a Cincinnati State faculty advisor to develop a planned curriculum of required and elective courses. This plan should allow a full-time student to transfer to the desired four-year institution at junior status after two years or less. Students who need additional preparation or attend part-time may take longer than two years to complete their degree requirements.

Associate of Arts Degree Requirements

English Composition	9 credits - select one track
Mathematics	4 credits - select one course
Social/ Behavioral Sciences	18 credits - select six courses from at least two areas
Arts/Humanities	27 credits - select one Oral Communication course, and select eight courses from at least two other areas
Biological/ Physical Sciences	12 credits - select one track
Computer Literacy	6 credits - select two courses
Cooperative Education	7 credits - complete course 9801 and additional courses selected from 9802, 9803, 9804, and 9805
Electives	19 credits - In consultation with advisor, select courses which meet general and programmatic requirements of the institution where the student plans to complete a bachelor's degree.
Total - 102 credit hours	

Associate of Science Degree Requirements

English Composition	9 credits - select one track
Mathematics	8 credits - select two courses
Social/ Behavioral Sciences	15 credits - select five courses from at least two areas
Arts/Humanities	15 credits - select one Oral Communication course, and select four courses from at least two other areas
Biological/ Physical Sciences	24 credits - select two tracks
Computer Literacy	6 credits - select two courses
Cooperative Education	7 credits - complete course 9801 and additional courses selected from 9802, 9803, 9804, and 9805
Electives	18 credits - In consultation with advisor, select courses which meet general and programmatic requirements of the institution where the student plans to complete a bachelor's degree.
Total - 102 credit hours	

Courses that meet Associate of Arts and Associate of Science Requirements

ENGLISH COMPOSITION

		(credits)
Track 1		
ENG 1001	English Composition 1	3
ENG 1002	English Composition 2	3
ENG 1003	English Composition 3	3
Track 2		
ENG 1001	English Composition 1	3
ENG 1002	English Composition 2	3
ENG 1010	Technical Writing 1 or	3
ENG 1011	Business Communications	3

MATHEMATICS

MAT 1152	College Algebra 2	4
MAT 1154	Calculus 1	5
MAT 1155	Calculus 2	5
MAT 1128	Business Calculus	4
MAT 1132	Statistics	4
MAT 1179	Introduction to Applied Statistics	4
MAT 1192	Algebra and Trigonometry 2	4
MAT 1193	Analytic Geometry and Calculus 1	4
MAT 1194	Analytic Geometry and Calculus 2	4
MAT 1195	Analytic Geometry and Calculus 3	4

SOCIAL/BEHAVIORAL SCIENCES

Psychology		
PSY 1505	Introduction to Psychology 1	3
PSY 1506	Introduction to Psychology 2	3
PSY 1508	Child Psychology	3
PSY 1509	Adult Psychology	3
PSY 1510	Adolescent Psychology	3
Economics		
ECO 1512	Microeconomics	3
ECO 1513	Macroeconomics	3
ECO 1514	International Aspects of Economics	3
Sociology		
SOC 1521	Introduction to Sociology	3
SOC 1523	Sociology: Major Institutions	3
SOC 1525	Changing Roles for Men & Women	3
SOC 1526	Sociology: Marriage & the Family	3
Government		
LBR 1535	Intro to Labor/Management Relations	3
LBR 1539	Intro to Employment & Workplace Law	3
Geography		
GEO 1551	Geography of Developed Nations	3
GEO 1552	Cultural Geography	3
GEO 1553	Geography of Developing Nations	3
History		
HST 1561	History of World Civilization 1	3
HST 1562	History of World Civilization 2	3

HST 1563	History of World Civilization 3	3
HST 1568	American History 1	3
HST 1569	American History 2	3
HST 1570	American History 3	3
HST 1575	History of Africa	3
HST 1576	African-American History	3

HUMANITIES

Oral Communication

SPE 1020	Effective Speaking	3
SPE 1022	Business & Professional Presentations	3
SPE 1024	Group Dynamics	3

Literature and Composition

LIT 1040	Survey of American Literature 1	3
LIT 1041	Survey of American Literature 2	3
LIT 1042	Survey of American Literature 3	3
LIT 1045	Survey of British Literature 1	3
LIT 1046	Survey of British Literature 2	3
LIT 1047	Survey of British Literature 3	3
LIT 1050	The Short Story	3
LIT 1055	Science Fiction	3
LIT 1059	Topics in Literature	3

Foreign Languages

FRN 1060	Elementary French 1	4
FRN 1061	Elementary French 2	4
FRN 1062	Elementary French 3	4
FRN 1063	Intermediate French 1	4
FRN 1064	Intermediate French 2	4
FRN 1065	Intermediate French 3	4
GRM 1070	Elementary German 1	4
GRM 1071	Elementary German 2	4
GRM 1072	Elementary German 3	4
GRM 1073	Intermediate German 1	4
GRM 1074	Intermediate German 2	4
GRM 1075	Intermediate German 3	4
SPN 1080	Elementary Spanish 1	4
SPN 1081	Elementary Spanish 2	4
SPN 1082	Elementary Spanish 3	4
SPN 1083	Intermediate Spanish 1	4
SPN 1084	Intermediate Spanish 2	4
SPN 1085	Intermediate Spanish 3	4

Philosophy

PHI 1620	Critical Thinking	3
PHI 1621	Introduction to Philosophy	3
PHI 1625	Ethics	3
PHI 1630	Comparative World Religions	3

Interdisciplinary Studies

HUM 1645	Civilization and Technology	3
HUM 1646	Mass Media and Culture	3
HUM 1647	Work and the New Economy	3
HUM 1698	Special Topics in Humanities	3

Fine Arts

HUM 1660	Introduction to Art	3
HUM 1665	Introduction to Music	3

BIOLOGICAL/PHYSICAL SCIENCES

Biology

BIO 4081	Principles of Biology 1	5
BIO 4082	Principles of Biology 2	5
BIO 4083	Principles of Biology 3	5
BIO 4071	Introductory Biology 1	4
BIO 4072	Introductory Biology 2	4
BIO 4073	Introductory Biology 3	4
BIO 4009	General Microbiology	4
BIO 4014	Anatomy and Physiology 1	4
BIO 4015	Anatomy and Physiology 2	4
BIO 4016	Anatomy and Physiology 3	4

Chemistry

SLT 6611	Chemistry 1 & Quantitative Analysis	5
SLT 6621	Chemistry 2 & Quantitative Analysis	5
SLT 6631	Chemistry 3 & Quantitative Analysis	5
CHE 2281	Organic Chemistry 1	5
CHE 2282	Organic Chemistry 2	5
CHE 2283	Organic Chemistry 3	5
CHE 2231	Fundamentals of General Chemistry	4
CHE 2232	Fundamentals of Organic Chemistry	4
CHE 2233	Fundamentals of Biochemistry	4

Physics

PHY 2241	College Physics 1	5
PHY 2242	College Physics 2	5
PHY 2243	College Physics 3	5
PHY 2291	Physics 1	4
PHY 2292	Physics 2	4
PHY 2293	Physics 3	4
PHY 2294	Physics 4	4

COMPUTER LITERACY

Computer Programming

MIS 1701	Introduction to Data Processing	4
MIS 1702	Introduction to Structured BASIC	3
MIS 1721	Programming Logic and Methods	3
MIS 1722	Introduction to Structured BASIC-PC	3
MIS 1731	MS-DOS™	3
CSC 1135	"C" Programming 1	3
CSC 1139	Introduction to XENIX/UNIX	3

Computer Applications

MIS 1850	Computerized Business Applications	4
MIS 1861	Electronic Spreadsheets (Lotus 1-2-3®)	3
MIS 1863	Electronic Spreadsheets (Microsoft Excel®)	3
SEC 3061	Word Processing Applications - WordPerfect®	3
SEC 3062	Database/Spreadsheet Applications	3
SEC 3065	Text Processing - Microsoft Word®	3
GC 1422	Desktop Publishing (PC PageMaker®)	3

MAC 5102	Introduction to Macintosh™	3
MAC 5103	Macintosh™ Software Applications	3
MAC 5105	Macintosh™ Applications - Microsoft Word®	3
MAC 5116	Desktop Publishing 1 (PageMaker® Mac™)	3
MAC 5117	Desktop Publishing 2 (QuarkXPress® Mac™)	3

Cooperative Education

In order to complete the AA or AS degree at Cincinnati State Technical and Community College, students must earn no fewer than seven credits in work exploration/experience, selected from the courses described below.

- All students seeking the AA or AS degree must successfully complete course 9801, "Career Exploration Seminar" (3 credits). Students are expected to enroll in this course in their second or third academic term.
- All students seeking the AA or AS degree must successfully complete two, three or four additional "work experience" classes (totalling 4 credits) selected from courses 9802, 9803, 9804, or 9805.

No other classes may be substituted for the "work experience" courses without prior approval of the program chair and the cooperative education coordinator. However, students with prior work experience that is related to their post-baccalaureate career goals may be eligible to receive credit through the standard College procedures for granting "Advanced Standing Credit."

HUM 9801	Career Exploration Seminar	3 credits
HUM 9802	Internship - Arts & Sciences	2 credits
HUM 9803	Cooperative Employment - Arts & Sciences	2 credits
HUM 9804	Parallel Cooperative Employment - Arts & Sciences	1 credit
HUM 9805	Career Education Project - Arts & Sciences	2 credits

Business Technologies Division

Business and industry are constantly searching for capable and responsible men and women identified as managers who can establish an environment in which people work together in the most effective manner to achieve management goals. The number of managerial workers required by business is great and, especially in specialized business fields, is growing each year. Sound business training helps to develop better management for American business enterprise and, ultimately, has a profound influence on the economic welfare of the nation.

Cincinnati State is meeting the need for specialized business training with twenty technological programs. Organized job experience through cooperative work assignments with leading business firms is a key phase of the learning program in each of these twenty-four business curricula. Collegiate level courses in these business areas, combined with job-related activities during the alternating ten-week co-op terms, provide students with both business skills and business experience. Upon completion of the two-year, co-op/college program in business, students receive an associate degree and begin advancing rapidly to more responsible and better paying mid-management positions.

Credits earned in the degree programs are transferable. Articulation agreements have been established with The College of Mount St. Joseph, Thomas More College, Xavier University, Northern Kentucky University, Ohio University, Rochester Institute of Technology and the Union Institute.

Cooperative Education

In the Business Technologies Division, students participate in a cooperative education program. We feel that cooperative education sets Cincinnati State apart from most colleges and universities. Cooperative education allows students to apply their majors in the business world, and to gain experience that will enhance their first full-time employment after graduation. Therefore, in the Business Technologies Division, all students are required to earn 10 credit hours in cooperative education.

To prepare for successful job interviews and continued success in their cooperative education jobs, all students are required to successfully complete the Professional Practice course 9200 (1 credit hour) offered by the Business Technologies Division, either before or concurrent with course 9210 (first co-op session).

The Co-op Requirement

1. A student can meet the Business Technologies Division cooperative education requirement in these four ways.
   A. The student does the traditional co-op.
   B. The student meets the requirement by applying for advanced standing.
   C. The student takes the co-op seminar classes.
   D. The dean or the dean designee makes emergency exceptions.
2. In order to be eligible to co-op, a student must meet the following requirements.
   A. Be a matriculated student.
   B. Have a 2.0 GPA or better, and complete any required program technical courses. See coordinator for list.
   C. Complete a Petition to Co-op Packet and return it to the technology coordinator before they will be considered ready for placement.
   D. Agree to follow their curriculum and meet all requirements as prescribed in the curriculum in the order in which they appear.
   E. Agree not to seek full-time employment with their co-op employer until all five co-op terms have been completed.
   F. Any student wishing to drop out of co-op must have co-ordinator approval and complete the remainder of their co-op requirement by taking business courses BUS 9230 and BUS 9231. Once a student leaves the co-op program, they will not be eligible to re-enter.

ASSET

All students seeking entry to degree programs in the Business Technologies Division are required to take the ASSET Placement Test. The results of the test will be used by the program advisors to place students in the proper reading, English and math courses according to their ability level.

Transfer Module

Associate degree programs in the Business Technologies Division contain in their curricula most of the required courses for the Cincinnati State Transfer Module. The additional courses needed to complete the transfer module should be scheduled at

times convenient to the student. Students who wish to transfer to an Ohio public university for baccalaureate degrees will find that a Cincinnati State Associate of Applied Business or Associate of Applied Science degree combined with a transfer module (showing grades of "C" or better) will receive preferential consideration at the receiving university.

Industry Training

The Business Technologies Division is committed to providing customized training programs for business and industry. These programs are designed to provide employees with the necessary skill-building or updating needed to keep abreast of the rapid technological changes and challenges faced in today's business world.

Administrative Services Technologies

Three programs are available in the administrative services area: Executive Secretarial, Office Management, and Office Information Processing. The curricula include not only technical skill development but also courses in business principles and management.

The Executive Secretarial (ES) curriculum emphasizes the art of oral and written communication in office procedures, shorthand, keyboarding, information processing and management techniques.

The Office Management (OM) curriculum emphasizes learning skills in keyboarding, data entry, Office Information Processing and office management.

The Office Information Processing (OIP) curriculum prepares an individual to be an information processing operator or an information processing supervisor. In this program, hands-on classroom training is provided on electronic typewriters and personal computers. Information Processing management techniques and procedures are emphasized.

The Office Support Certificate is designed for persons who want to develop marketable office skills in a short period of time. Students learn office procedures, grammar and punctuation, formatting, and computer skills.

Advanced placement is available only through testing in keyboarding, shorthand, and typing.

Executive Secretarial Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
SPE	1020	Effective Speaking	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
	300X	Typewriting Elective	2	3	3
SEC	3021	Office Procedures 1	2	3	3
SEC	3061	Word/Processing - Wordperfect	2	3	3
SEC	3062	DBASE/Lotus Applications	2	3	3
			14	12	18
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1001	English Composition 1	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
MGT	2925	Business Principles	3	0	3
SEC	3002	Typewriting 2	2	3	3
SEC	3032	Office Procedures	2	3	3
SEC	3092	WP with Desk Top Publishing	2	3	3
			15	9	18
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
MAT	1123	Business Mathematics 3	3	0	3
BUS	1823	Business Law 1	3	0	3
MGT	2967	Survey of Management	3	0	3
SEC	3003	Typewriting 3 Advanced Formatting	2	3	3
SEC	3022	Machine Trans & Proofreading	2	3	3
SEC	3035	Essential Business Correspondence	2	3	3
SEC	3080	Speedwriting 1	2	3	3
			17	12	21
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
	XXXX	Business Elective	2	3	3
ENG	1018	Technical Writing Style & Techniques 1	2	2	3
PSY	1502	Human Relations	3	0	3
MKT	2903	Survey of Marketing	3	0	3
ACC	2911	Principles of Accounting 1	3	2	4
SEC	3023	Adv Machine Transcription/Dictation	2	3	3
SEC	3081	Shorthand: Speed Development	2	3	3
			17	13	22
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
ENG	1011	Business Communications	3	0	3
ECO	1512	Microeconomics	3	0	3
SOC	1521	Introduction to Sociology	3	0	3
	29XX	Business Elective	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
SEC	3090	Shorthand Transcription	2	8	4
			17	10	20
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					110

Typewriting Electives: SEC 3001, SEC 3006
Business Elective: Chairperson Approval Required

Office Management Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
SEC	3062	DBase/Lotus Applications	2	3	3
	300X	Typewriting Elective	2	3	3
SEC	3021	Office Procedures 1	2	3	3
SEC	3061	Word Processing-WordPerfect	2	3	3
			14	12	18
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
MGT	2925	Business Principles	3	0	3
BUS	1823	Business Law 1	3	0	3
SEC	3002	Typewriting 2	2	3	3
SEC	3032	Office Procedures 2	2	3	3
			16	6	18
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
MAT	1123	Business Mathematics 3	3	0	3
SEC	3064	Harvard Graphics	2	3	3
MGT	2965	Principles Management 1	3	0	3
ACC	2911	Principles of Accounting 1	3	2	4
SEC	3003	Typing 3/AdvFormatting	2	3	3
SEC	3022	Machine Trans and Proofreading	2	3	3
SEC	3035	Essential Business Correspondence	2	3	3
			17	14	22

■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ENG	1011	Business Communications	3	0	3
PSY	1502	Human Relations	3	0	3
MGT	2966	Principles Management 2	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
SEC	3024	Office Procedures 3	2	3	3
SEC	1521	Introduction to Sociology	3	0	3
			17	5	19
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
	XXXX	Business Elective	3	0	3
SPE	1020	Effective Speaking	3	0	3
ECO	1512	Micro Economics	3	0	3
MKT	2903	Survey of Marketing	3	0	3
MGT	1832	Human Resource Management	3	0	3
SEC	3070	Administrative Office Management	3	0	3
	29XX	Business Elective	3	0	3
			21	0	21
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					109

Typewriting Electives: SEC 3001, SEC 3006
Business Elective: Chairperson Approval Required

Office Information Processing Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
	300X	Typewriting Elective	2	3	3
SEC	3021	Office Procedures 1	3	2	3
SEC	3061	Word Process - WordPerfect	2	3	3
SEC	3062	Dbase/LOTUS Applications	2	3	3
			15	11	18
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
MGT	2925	Business Principles	3	0	3
SEC	3002	Typewriting 2	2	3	3
SEC	3032	Office Procedures 2	2	3	3
SEC	3063	Advanced Word Processing - WordPerfect	2	3	3
			15	9	18
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
MAT	1123	Business Mathematics 3	3	0	3
MGT	2967	Survey of Management	3	0	3
SEC	3003	Typing 3/ Adv Formatting	2	3	3
SEC	3022	Machine Trans & Proofreading	2	3	3
SEC	3035	Essential Business Correspondence	2	3	3
SEC	3064	Harvard Graphics	2	3	3
SEC	3058	Microsoft Word/Windows	2	3	3
			16	15	21
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ENG	1011	Business Communications	3	0	3
GC	1422	Desktop Publishing	2	2	3
PSY	1502	Human Relations	3	0	3
MKT	2903	Survey of Marketing	3	0	3
ACC	2911	Principles of Accounting 1	3	2	4
SEC	3023	Adv Machine Transc/Dictation	2	3	3
SEC	3066	Microsoft Works	2	3	3
			18	10	22
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
	XXXX	Business Elective	3	0	3
SPE	1020	Effective Speaking	3	0	3
ECO	1512	Micro Economics	3	0	3
SOC	1521	Introduction to Sociology	3	0	3
BUS	1823	Business Law 1	3	0	3
SEC	3067	Simul: Integ Info Process	2	3	4
			17	3	19
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					109

Typewriting Electives: SEC 3001, SEC 3006
Business Elective: Chairperson Approval Required.

Office Support Certificate Program

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
SEC	3003*	Typing 3-AdvFormatting	2	3	3
SEC	3021	Office Procesures 1	2	3	3
			4	6	6
■ Second Term					
SEC	3032	Office Procedures 2	2	3	3
SEC	3035	Essential Bus Correspond	2	3	3
			4	6	6
■ Third Term					
SEC	3061	Word Process-WordPerfect	2	3	3
SEC	3062	DBase/Lotus Applications	2	3	3
			4	6	6
■ Fourth Term					
SEC	3024	Office Procedures 3	2	3	3
SEC	3022	Machine Trans & Proofread	2	3	3
			4	6	6
■ Fifth Term					
	30XX	Technical Elective	2	3	3
	30XX	Technical Elective	2	3	3
			4	6	6
■ Sixth Term					
	30XX	Technical Elective	2	3	3
	30XX	Technical Elective	2	3	3
			4	6	6
					36

* 3001 and 3002 may be necessary as prerequisites to course.

Automotive Service Management Technology (ASM)

Automotive Service Management students are instructed in automotive theory, repair and testing procedures and practices, as well as management techniques while in school. As co-ops on the job in automotive service departments, parts departments and technical centers they receive practical experience under the direction of qualified technicians or experienced managers.

Automotive Service Management Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
ASM	2501	Engine Fundamentals	2	3	3
ASM	2502	Cylinder Head Rebuilding	2	3	3

ASM	2503	Engine Overhaul	2	3	3
ASM	2515	Machine & Hand Tool Lab	2	3	3
			14	12	18
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1170	Intro to Technical Mathematics	4	0	4
PHY	2221	Technical Physics 1	2	3	3
ASM	2504	Ign/Electrical Systems	2	3	3
ASM	2505	Fuel Systems	2	3	3
ASM	2506	Engine Trouble Diagnosis	2	3	3
			15	12	19
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
PHY	2222	Technical Physics 2	2	3	3
ASM	2507	Brake Systems	2	3	3
ASM	2508	Suspension & Alignment	2	3	3
ASM	2516	Techniques of Welding	2	3	3
ACC	2911	Principles of Accounting 1	3	2	4
MGT	2925	Business Principles	3	0	3
			14	14	19
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ENG	1010	Technical Writing 1	3	0	3
PSY	1505	Intro to Psychology 1	3	0	3
ECO	1512	Microeconomics	3	0	3
LBR	1535	Intro to Labor Management Relations	3	0	3
ASM	2509	Automatic Transmissions	2	3	3
ASM	2510	Manual Trans. & Drive Line	2	3	3
ASM	2514	Automotive Management	2	3	3
			18	9	21
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
SPE	1020	Effective Speaking	3	0	3
BUS	1823	Business Law 1	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
ASM	2511	A/C Heat & Vent Sys	2	3	3
ASM	2512	Diagnostic Equipment	2	3	3
ASM	2513	Engine Performance	2	3	3
MKT	2903	Survey of Marketing	3	0	3
			18	11	22
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					110

Business Computer Science Technologies

The four majors available, Computer Communications, Computer Operations, Computer Programming and PC Support and Administration, provide specialized technical training in the most popular career areas of Data Processing.

The Computer Communications (CC) technician is trained to provide expertise to ensure that information gets from its source to the place where it is needed. Trained to utilize a wide array of diagnostic tools and trouble-shooting techniques, the Data Communications specialist installs and maintains the links of information.

The Computer Operations (CO) courses prepare the student for two career paths: micro-computer specialist (PC Specialist) and/or computer operations. Students learn the initial COBOL and BASIC languages. Emphasis is placed on PC software packages such as dBASE and LOTUS and operating systems such as Job Control Language and DOS.

The Computer Programming (CP) major is trained to write business applications programs for micro-, mini-, and main-frame computers. The three most popular languages, COBOL, RPG and BASIC, are emphasized, as well as training in Data Communications and Data Base Management Systems.

The PC Support and Administration (PCSA) student is trained to install, set-up, troubleshoot and maintain hardware and software for microcomputers. Emphasis is placed on hardware support, software support, PC DOS data communications and networking.

Computer Communications Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1124	Business Algebra	4	0	4
MIS	1701	Introduction to Data Processing	3	2	4
MIS	1731	PC/MS-DOS	2	3	3
EET	7701	Electronic Fundamentals 1	3	2	4
			15	7	18
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MIS	1721	Program Logic & Methods	2	3	3
MIS	1733	Advanced PC/MS-DOS	2	3	3
MIS	1754	Data Communications 1	2	3	3
MGT	2925	Business Principles	3	0	3
EET	7702	Electronic Fundamentals 2	3	2	4
			15	11	19
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
ENG	1010	Technical Writing 1	3	0	3
PSY	1505	Introduction to Psychology 1	3	0	3
MIS	1702	Structured BASIC Programming	2	3	3
MIS	1764	Data Communications 2	3	2	4
ACC	2911	Principles of Accounting 1	3	2	4
MGT	2967	Survey of Management	3	0	3
			17	7	20
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
MAT	1127	Business Statistics	4	0	4
	15XX	Social Science Elective	3	0	3
ECO	1512	Microeconomics	3	0	3
MIS	1771	Data Base Management Systems	2	3	3
MIS	1861	Electronic Spreadsheets Lotus 1-2-3	2	2	3
ACC	2912	Principles of Accounting 2	3	2	4
			17	7	20
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
SPE	1020	Effective Speaking	3	0	3
MIS	1763	Systems Analysis and Design	2	3	3
MIS	1774	Telecommunications	3	2	4
MIS	1784	Local Area Networks	3	4	5
BUS	1823	Business Law 1	3	0	3
MKT	2903	Survey of Marketing	3	0	3
			17	9	21
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					109

Social Science Electives: PSY 1502, PSY 1506, PSY 1509, ECO 1513, SOC 1521, SOC 1523, SOC 1524, SOC 1525, SOC 1527, GOV 1531, LBR 1535, GOV 1536, LBR 1539, MIL 1542, MIL 1543, GEO 1551, GEO 1553

Computer Operations Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1124	Business Algebra	4	0	4
MIS	1701	Introduction to Data Processing	3	2	4
MIS	1703	Program Design	2	2	3
MGT	2925	Business Principles	3	0	3
MIS	1731	PC/MS-DOS	2	3	3
			16	10	20
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1127	Business Statistics	4	0	4
MIS	1721	Programming Logic and Methods	2	3	3
MIS	1733	Advanced PC/MS-DOS	2	3	3
MIS	1711	Intro to Computer Operations	2	3	3
ACC	2911	Principles of Accounting 1	3	2	4
			16	11	20
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
	15XX	Social Science Elective	3	0	3
MIS	1702	Basic Prog/Mainframe	2	3	3
MIS	1771	Database Management Systems	2	3	3
MIS	1861	Electronic Spreadsheet Lotus 1-2-3	2	2	3
ACC	2912	Principles of Accounting 2	3	2	4
MGT	2967	Survey of Management	3	0	3
			15	10	19
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ENG	1010	Technical Writing 1	3	0	3
ECO	1512	Microeconomics	3	0	3
MIS	1739	Operating Systems	2	3	3
MIS	1754	Data Communications 1	2	3	3
BUS	1823	Business Law 1	3	0	3
ACC	2913	Principles of Accounting 3	3	1	3
MIS	1862	Advanced Electronic Spreadsheets	2	2	3
			17	11	21
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
SPE	1020	Effective Speaking	3	0	3
PSY	1505	Intro to Psychology 1	3	0	3
MIS	1741	Operating Systems 2	2	3	3
MIS	1742	Intro Structured Cobol	3	7	6
MKT	2903	Survey of Marketing	3	0	3
			14	10	18
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					109

Social Science Electives: PSY 1502, PSY 1506, ECO 1513, SOC 1521, SOC 1524, SOC 1527, LBR 1535, GEO 1551, GEO 1553

Computer Programming Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1124	Business Algebra	4	0	4
MIS	1701	Introduction to Data Processing	3	2	4
MIS	1721	Programming Logic & Methods	2	3	3
MIS	1731	PC/MS - DOS	2	3	3
MGT	2925	Business Principles	3	0	3
			17	8	20
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1127	Business Statistics	4	0	4
MIS	1702	Basic Prog/Mainframe	2	3	3
MIS	1761	Introduction to RPG Programming	3	6	5
ACC	2911	Principles of Accounting 1	3	2	4
			15	11	19
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
PSY	1505	Intro to Psychology 1	3	0	3
ECO	1512	Microeconomics	3	0	3
MIS	1742	Intro Structured COBOL	3	7	6
MIS	1781	Advanced RPG 2	2	3	3
ACC	2912	Principles of Accounting 2	3	2	4
			14	12	19
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ENG	1010	Technical Writing 1	3	0	3
MIS	1754	Data Communications 1	2	3	3
MIS	1762	Advanced Structured COBOL	3	7	5
MIS	1763	Systems Analysis & Design	2	3	3
ACC	2913	Principles of Accounting 3	3	1	3
MGT	2967	Survey of Management	3	0	3
			16	14	20
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
SPE	1020	Effective Speaking	3	0	3
	15XX	Social Science Elective	3	0	3
MIS	1739	Operating Systems	2	3	3
MIS	1769	Program Data Base Applications	2	3	3
MIS	1797	Special Problems Seminar	2	3	3
BUS	1823	Business Law 1	3	0	3
MKT	2903	Survey of Marketing	3	0	3
			18	9	21
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					110

Social Science Electives: PSY 1502, PSY 1506, ECO 1513, SOC 1521, SOC 1524, SOC 1527, LBR 1535, GEO 1551, GEO 1553

Technical Electives: MIS 1765 may substitute for MIS 1797

PC Support and Administration Technology

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1124	Business Algebra	4	0	4
MIS	1701	Intro to Data Processing	3	2	4
MIS	1703	Program Design	2	2	3
MGT	2925	Business Principles	3	0	3
MIS	1731	PC/MS-DOS	2	3	3
			17	7	20
■ Second Term					
BUS	9200	Professional Practices	1	0	2
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1127	Business Statistics	4	0	4
MIS	1721	Program Logic and Methods	2	3	3
MIS	1733	Advanced PC/MS-DOS	2	3	3
ACC	2911	Principles of Accounting 1	3	2	4
MIS	1711	Intro to Computer Oper	2	3	3
			16	11	20

■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
	17X2	Basic Programming Elective	2	3	3
MIS	1771	Data Base Mgt Systems	2	3	3
MIS	1861	Electronic Spreadsheet Lotus 1-2-3	2	2	3
ACC	2912	Principles of Accounting 2	3	2	4
MGT	2967	Survey of Management	3	0	3
TWE	5102	Intro to Macintosh	2	2	3
			14	12	19
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ENG	1010	Technical Writing 1	3	0	3
PSY	1505	Intro to Psychology 1	3	0	3
ECO	1512	Microeconomics	3	0	3
MIS	1734	PC Software Support	3	2	4
MIS	1754	Data Communications	2	3	3
TWE	5103	Mac Software Apps	2	2	3
			16	7	19
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
SPE	1020	Effective Speaking	3	0	3
	15XX	Social Science Elective	3	0	3
MIS	1736	PC Hardware Support	3	2	4
MIS	1784	Local Area Networks	3	4	5
LAW	1823	Business Law 1	3	0	3
MKT	2903	Survey of Marketing	3	0	3
			18	6	21
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					110

Basic Programming Electives: MIS 1702, MIS 1722, MIS 1742
Social Science Elective: PSY 1505, PSY 1506, ECO 1513, SOC 1521, SOC 1524, SOC 1527, LBR 1535, GEO 1551, GEO 1553

Business Management Technology (BM)

The Business Management Technology at Cincinnati State combines sound business training with on-the-job experience. The classroom experience centers around a well-planned management curriculum including courses in basic management principles, labor-management relations and management theories with practical applications. Through cooperative education work experience, students learn to handle directions and gain valuable insights into solving management problems.

Business Management Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
ECO	1512	Microeconomics	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
ACC	2911	Principles of Accounting 1	3	2	4
MGT	2925	Business Principles	3	0	3
			18	4	20
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
	1535	Social Science Elective	3	0	3
MKT	2901	Principles of Marketing 1	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
MGT	2965	Principles of Management1	3	0	3
			18	2	19
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
MAT	1123	Business Mathematics 3	3	0	3
	29XX	Business Elective	3	0	3
MGT	2966	Principles Management 1	3	0	3
MIS	1861	Electronic Spreadsheets	2	2	3
MKT	2902	Principles of Marketing 2	3	0	3
ACC	2913	Principles of Accounting 3	3	1	3
			17	3	18
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ENG	1011	Business Communications	3	0	3
MKT	1810	Principles of Sales	3	0	3
BUS	1823	Business Law 1	3	0	3
ACC	2921	Managerial Accounting	3	0	3
BUS	2960	Principles of Finance	3	0	3
MGT	1832	Contemporary Management Concepts	3	0	3
			18	0	18
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
	102X	Oral Communication Elective	3	0	3
	15XX	Social Science Elective	3	0	3
MGT	1804	Risk and Insurance	3	0	3
BUS	1824	Business Law 2	3	0	3
	29XX	Business Elective	3	0	3
MGT	2975	Business Management Seminar	2	3	3
			20	3	18
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					104

Business Electives: Chairperson approval required
Oral Communication Electives: SPE 1020, SPE 1024
Social Science Electives: PSY 1502, PSY 1505, ECO 1513, SOC 1521, SOC 1524, LBR 1535, LBR 1539, GEO 1551, GEO 1553, PHI 1620, PHI 1625

Business Financial Management Technology (BFM)

Business Financial Management is an option of the Business Management technology designed especially to provide a combination of sound financial business training with on-the-job experience. Courses covering basic management concepts and specializing in investment management techniques, financial law and investment tax principles provide much of the necessary background for careers in the financial industry.

Business Financial Management Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
	151X	Economics Elective	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
ACC	2911	Principles of Accounting 1	3	2	4
MGT	2925	Business Principles	3	0	3
			18	4	20
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3

■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
MKT	2903	Survey of Marketing	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
MGT	2926	Principles of Management 1	3	0	3
BUS	2960	Principles of Finance	3	0	3
			18	2	19
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
MAT	1123	Business Mathematics 3	3	0	3
BUS	2961	Financial Planning	3	0	3
MGT	2966	Principles Management 2	3	0	3
MIS	1861	Electronic Spreadsheets	2	2	3
	29XX	Business Elective	3	0	3
ACC	2913	Principles of Accounting 3	3	1	3
			17	3	18
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ENG	1011	Business Communications	3	0	3
MGT	1804	Risk and Insurance	3	0	3
BUS	1823	Business Law 1	3	0	3
MIS	1862	Advanced Electronic Spreadsheets	2	2	3
MGT	1832	Human Resource Management	3	0	3
BUS	2976	Principles of Banking	3	0	3
			17	2	18
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
	102X	Oral Communication Elective	3	0	3
	15XX	Social Science Elective	3	0	3
	15XX	Social Science Elective	3	0	3
BUS	1824	Business Law 2	3	0	3
MGT	2962	Principles of Investments	3	0	3
MGT	2975	Business Management Seminar	2	3	3
			20	3	18
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					104

Economics Electives: ECO 1512, ECO 1513
Business Elective: Chairperson approval required
Oral Communication Electives: SPE 1020, SPE 1024
Social Science Elective: PSY 1502, PSY 1505, SOC 1521, SOC 1524, LBR 1535, LBR 1539, GEO 1551, GEO 1553, PHI 1620, PHI 1625

Culinary Arts Certificate (CAC)

Due to the growing demand for food preparation classes and courses that lead to certification, the hospitality faculty at Cincinnati State has developed a Culinary Arts Certificate program. The purpose of the certificate program is to provide technical food skills and theory skills to food service employees in the industry.

With the food service employee in mind, the faculty and a professional advisory committee have put together ten comprehensive courses believed to be the most needed and beneficial to the industry. With these courses, approved and recognized by the National Restaurant Association and the American Hotel and Motel Association, the food service worker can gain certification from associations such as The American Culinary Federation Educational Institute, as well as increasing his or her own employment opportunities in the hospitality industry.

Culinary Arts Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
CHT	2822	Basic Cooking 1	2	3	3
CHT	2831	Theory of Cooking	3	0	3
			5	3	6
■ Second Term					
HRM	2801	Food & Beverage Sanitation Safety	3	0	3
CHT	2832	Preparation and Cooking	2	3	3
			5	3	6
■ Third Term					
HRM	2802	Food & Bev. Cost Control & Purchasing 1	3	0	3
CHT	2833	Basic Baking	2	3	3
			5	3	6
■ Fourth Term					
HRM	2828	Nutrition for Food Service Worker	2	2	3
CHT	2834	Advanced Baking	2	3	3
			4	5	6
■ Fifth Term					
HRM	2805	Food & Beverage Supervision	3	0	3
CHT	2835	Production Cooking	2	3	3
			5	3	6
					30

Chef Technology (CH)

The Chef Technology program leads to the awarding of an associate degree. Students will be trained in all aspects of Culinary Arts including soups, sauces, butchery, vegetable cookery, meat and fish cookery, pastry, hors d'oeuvres, ice carving, garde manger and all other fields of culinary management.

The program is accredited by the American Culinary Federation Educational Institute.

Chef Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
HRM	2801	Food & Beverage Sanitation & Safety	3	0	3
HRM	2802	Food & Beverage Cost Control & Pur. 1	3	0	3
HRM	2811	Intro. Hospitality Management	3	0	3
CHT	2822	Basic Cooking 1	2	3	3
CHT	2827	Butchery & Fish Management	2	3	3
CHT	2831	Theory of Cooking	3	0	3
			19	6	21
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
PSY	1502	Human Relations	3	0	3
HRM	2808	Food and Beverage Service Lab	1	3	2
HRM	2818	Food & Beverage Cost Control & Pur. 2	4	0	4
CHT	2823	Basic Cooking 2	2	4	4
MGT	2925	Business Principles	3	0	3
			19	7	22
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
ENG	1011	Business Communications	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
	15XX	Social Science Elective	3	0	3
BUS	1825	Hotel Law	3	0	3
CAT	2824	Advanced Cooking 1	2	3	3
ACC	2911	Principles of Accounting 1	3	2	4
			17	5	19

■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
MAT	1123	Business Mathematics 3	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
HRM	2805	Food & Beverage Supervision	3	0	3
HRM	2821	Hosp. Sales & Marketing	3	0	3
CHT	2825	Pastry & Confectionary	4	6	6
			16	8	19
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
	102X	Oral Communications Elective	3	0	3
ECO	1512	Microeconomics	3	0	3
HRM	2803	Menu Prod. & Facility Plan	3	0	3
CHT	2826	Advanced Cooking 2	4	8	6
HRM	2828	Nutrition Food Service	2	2	3
			15	10	18
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					110

Social Science Elective: PSY 1505, ECO 1513, SOC 1521, SOC 1524, LBR 1539, GEO 1551, GEO 1553
Oral Communications Elective: SPE 1020, SPE 1024
Technical Electives: CHT 2825 can be replaced by CHT 2833 and CHT 2834. CHT 2826 can be replaced by CHT 2832 and CHT 2835.

Graphic Communications Technology (GC)/ Flexography Communications (FGT)

At Cincinnati State, modern computerized typesetting equipment, color scanners, letterpress and offset presses, screen printing, flexographic and ancillary equipment are combined with experienced instructors to provide a quality graphic arts program.

Although students study all of the major modern graphic arts processes, the scope of the program is not limited to the development of craftsmanship. The Graphic Communications program provides mid-management training as well as technical knowledge.

Flexography is an option of the Graphic Communications program. Flexography is used to print on corrugated boxes, plastics, foils and pressure sensitive substrates. Students will get hands-on experience on a 7" four color flexo press, photopolymer, platemaking, mounting and a step and repeat camera.

Graphic Communications Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1170	Introduction to Technical Mathematics	4	0	4
GC	1403	Advertising Typography	2	6	4
GC	1415	Graphic Arts Processes	2	3	3
GC	1419	Survey of Printing Inks	3	0	3
MGT	2925	Business Principles	3	0	3
			17	9	20
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
GC	1421	Cold Type Process	1	9	4
GC	1449	Estimating Preparation	2	3	3
GC	1480	Photolithography 1	2	3	3
ECO	1512	Microeconomics	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
			14	17	20
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
SPE	1020	Effective Speaking	3	0	3
GC	1422	Desktop Publishing	2	2	3
GC	1429	Screen Printing	2	6	4
PSY	1502	Human Relations	3	0	3
MKT	1810	Principles of Sales	3	0	3
PHY	2263	Physical Science for GC	3	4	5
			16	12	21
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
GC	1430	Relief Presswork 1	1	9	4
GC	1450	Estimating	2	3	3
GC	1481	Photolithography 2	2	3	3
PHI	1620	Critical & Creative Thinking	3	0	3
BUS	1823	Business Law 1	3	0	3
ACC	2911	Principles of Accounting 1	3	2	4
			14	17	20
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
ENG	1010	Technical Writing 1	3	0	3
GC	1428	Management Survey	3	0	3
GC	1440	Offset Press Operation	3	9	6
GC	1483	Color Imaging	2	3	3
SOC	1521	Introduction to Sociology	3	0	3
			14	12	18
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					110

Flexography Communications Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1170	Introduction to Technical Mathematics	4	0	4
GC	1403	Advertising Typography	2	6	4
GC	1415	Graphic Arts Processes	2	3	3
GC	1419	Survey of Printing Inks	3	0	3
MGT	2925	Business Principles	3	0	3
			17	9	20
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
GC	1421	Cold Type Process	1	9	4
GC	1449	Estimating Preparation	2	3	3
GC	1480	Photolithography 1	2	3	3
ECO	1512	Microeconomics	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
			14	17	20
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
SPE	1020	Effective Speaking	3	0	3
GC	1422	Desktop Publishing	2	2	3
GC	1429	Screen Printing	2	6	4
PSY	1502	Human Relations	3	0	3
MKT	1810	Principles of Sales	3	0	3
PHY	2263	Physical Science for GC	3	4	5
			14	12	21

■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
GC	1430	Relief Presswork 1	1	9	4
GC	1450	Estimating	2	3	3
GC	1481	Photolithography 2	2	3	3
PHI	1620	Critical & Creative Thinking	3	0	3
BUS	1823	Business Law 1	3	0	3
ACC	2911	Principles of Accounting 1	3	2	4
			14	17	20
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
ENG	1010	Technical Writing 1	3	0	3
GC	1428	Management Survey	3	0	3
GC	1431	Relief Presswork 2	3	9	6
GC	1483	Color Imaging	2	3	3
SOC	1521	Introduction to Sociology	3	0	3
			14	12	18
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					110

Hotel-Restaurant Management Technology (HR)

Cincinnati State's Hotel-Restaurant Management students receive comprehensive knowledge of all the departments and operations found in the hospitality industry. Students are involved early in these fields through paid cooperative work experience so they can set their goals for the type of career they wish to follow in industry.

Hotel-Restaurant Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
HRM	2801	Food & Beverage Sanitation & Safety	3	0	3
HRM	2802	Food & Beverage Cost Control & Pur1	3	0	3
HRM	2811	Introduction to Hospitality Mgmt	3	0	3
MGT	2925	Business Principles	3	0	3
			18	2	19
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
MAT	2808	Food and Beverage Service Lab	1	3	2
HRM	2812	Hotel Front Office Procedures 1	3	0	3
HRM	2813	Hospitality Housekeeping	3	0	3
HRM	2818	Food & Beverage Cost Control & Pur 2	4	0	4
ACC	2911	Principles of Accounting 1	3	2	4
			20	5	22
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
	102X	Oral Communications Elective	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
PSY	1502	Human Relations	3	0	3
BUS	1825	Hotel Law	3	0	3
HRM	2817	Hotel Front Office Procedures 2	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
			18	2	19
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ENG	1011	Business Communications	3	0	3
MAT	1123	Business Mathematics 3	3	0	3
ECO	1512	Microeconomics	3	0	3
HRM	2805	Food & Beverage Supervision	3	0	3
HRM	2814	Hotel Maintenance	3	0	3
HRM	2821	Hospitality Sales & Marketing	3	0	3
			18	0	18
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
	15XX	Social Science Elective	3	0	3
HRM	2803	Menu Prod. & Facility Planning	3	0	3
HRM	2804	Catering & Banquets	3	0	3
HRM	2806	Hospitality Beverage Management	3	0	3
HRM	2828	Nutrition for Food Service	2	2	3
HRM	2830	Managing Qty/Food Product	2	4	4
			16	6	16
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					107

Oral Communications Elective: SPE 1020, SPE 1024
Social Science Elective: PSY 1505, ECO 1513, SOC 1521, SOC 1524, LBR 1539, GEO 1551, GEO 1553

International Trade Management Technology (ITM)

The International Trade Management Technology Program is designed to train students for beginning work assignments in the rapidly expanding field of International Trade Marketing & Operations. Students will be trained in the areas of international banking, manufacturing, shipping and related services important to international traders. These areas of study include: selecting market entry strategies, market research, issuing quotations, coordinating shipping and production schedules, processing orders, preparing export and financial documents used for payment purposes, and performing post-shipment activities. In addition to these specialized areas of training, students will receive practical business education in business administration topics such as accounting, marketing, finance, law, and management. Students entering this technology will be required to double major in business management in order to co-op.

International Trade Management Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
MIS	1850	Comp. Bus. Applications	3	2	4
ACC	2911	Prin of Accounting 1	3	2	4
MGT	2925	Business Principles	3	0	3
ITM	2980	Introduction to International Business	3	0	3
			18	4	20
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
	151X	Economics Elective	3	0	3
MKT	2901	Principles of Marketing 1	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
ITM	2983	International Order Proces & Ship	3	0	3
			18	2	19
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2

■ Fifth Term

MAT	1123	Business Mathematics 3	3	0	3
MKT	2902	Prin. Marketing 2	3	0	3
ACC	2913	Principles of Accounting 3	3	1	3
MGT	2965	Principles of Management 1	3	0	3
ITM	2981	International Marketing	3	0	3
ITM	2985	International Trans Simulations	2	2	3
			17	3	18

■ Sixth Term

BUS	9210	Co-Op Employment Business Tech	1	40	2

■ Seventh Term

ENG	1011	Business Communications	3	0	3
GEO	1551	Geography of Developed Nations	3	0	3
MGT	2966	Principles of Management	3	0	3
BUS	1823	Business Law 1	3	0	3
MIS	1861	Electronic Spreadsheets	2	2	3
ITM	2982	International Banking & Finance	3	0	3
			17	2	18

■ Eighth Term

BUS	9210	Co-Op Employment Business Tech	1	40	2

■ Ninth Term

	102X	Oral Comm. Elective	3	0	3
	15XX	Social Science	3	0	3
GEO	1553	Geography of Developing Nations	3	0	3
MGT	1804	Risk & Insurance	3	0	3
MKT	1810	Principles of Sales	3	0	3
BUS	1824	Business Law 2	3	0	3
			18	0	18

■ Tenth Term

BUS	9210	Co-Op Employment Business Tech	1	40	2
					104

Oral Comm. Electives: SPE 1020, SPE 1024
Social Science Electives: PSY 1502, PSY 1505, ECO 1512, SOC 1521, SOC 1524, LBR 1535, LBR 1539, PHI 1620, PHI 1625
Economics Electives: ECO 1512, ECO 1513

Landscape Horticulture (LH)/ Turfgrass Management (TUR)

The Landscape Horticulture program prepares students for management positions in firms that design, install, maintain or produce and market plants for both interior and exterior landscapes. Our new Turfgrass Management Option allows students to specialize in lawn care or golf course management. Hands-on lab experiences are blended with classroom teaching to provide students with the skill and knowledge necessary to excel in this growing field.

Because of the unique seasonal employment opportunities of horticulturally related jobs, this program follows a different co-op schedule. Landscape Horticulture students spend two terms (during the growing season) in cooperative employment during each of the 2 years of the program. Students find cooperative employment with landscape contractors, nurseries, greenhouses, arboretums, golf courses, lawn care companies, interior plantscapers, or the staffs of major corporations and park systems as grounds managers.

Landscape Horticulture Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1161	Applied Algebra	3	2	4
LH	3502	Horticulture Science	2	2	3
LH	3504	Woody Plant Materials 1	2	3	3
LH	3508	Turfgrass Management	2	3	3
BUS	9200	Professional Practices	1	0	1
			13	10	17

■ Second Term

ENG	1002	English Composition 2	3	0	3
	22XX	Chemistry Elective	3	2	4
MAT	1162	Applied Geo & Trig	3	2	4
LH	3500	Orientation to Horticulture Occupation	1	0	1
LH	3510	Small Engine Maintenance & Repair	2	2	3
LH	3532	Landscape Management	2	3	3
			14	9	18

■ Third Term

PSY	1502	Human Relations	3	0	3
ACC	2911	Principles of Accounting 1	3	2	4
LH	3501	Soils & Plant Nutrition	2	2	3
LH	3509	Landscape Design 1	2	3	3
LH	3523	Horticulture Entomology	2	2	3
LH	3530	Horticulture Seminar 1	1	1	1
			13	9	17

■ Fourth Term

BUS	9210	Co-Op Employment Bus Tech	1	40	2
			1	40	2

■ Fifth Term

ENG	1010	Technical Writing 1	3	0	3
	35XX	Technical Elective	2	3	3
LH	3505	Herbaceous Plant Material	2	2	3
LH	3511	Intro. Landscape Construct.	2	3	3
LH	3520	Horticulture Lab	0	3	1
LH	3524	Plant Pathology	2	2	3
			11	13	16

■ Sixth Term

BUS	9210	Co-Op Employment Bus Tech	1	40	2

■ Seventh Term

	102X	Oral Communication Elective	3	0	3
	151X	Economics Elective	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
MGT	2925	Business Principles	3	0	3
	35XX	Technical Elective	2	3	3
LH	3515	Woody Plant Materials 2	2	3	3
			16	8	19

■ Eighth Term

	15XX	Social Science Elective	3	0	3
MKT	1810	Principles of Sales	3	0	3
BUS	1823	Business Law 1	3	0	3
	35XX	Technical Elective	2	3	3
	35XX	Technical Elective	2	3	3
			13	6	15

■ Ninth Term

BUS	9210	Co-Op Employment Bus Tech	1	40	2

■ Tenth Term

BUS	9210	Co-Op Employment Bus Tech	1	40	2
					110

Chemistry Electives: LC 2200, CHE 2231, CHE 2232
Technical Electives: OH 3506, OH 3507, LH 3512, LH 3513, LH 3516, LH 3517, OH 3518, OH 3519, OH 3522, OH 3528, OH 3533, OH 3534, OH 3535, LH 3536, LH 3537, LH 3538, LH 3539, LH 3540, OH 3544
Oral Communication Electives: SPE 1020, SPE 1024
Economics Elective: ECO 1512, ECO 1513
Social Science Electives: PSY 1505, PSY 1506, PSY 1508, PSY 1509, PSY 1510, SOC 1521, SOC 1524, GEO 1551, GEO 1553

Turfgrass Management Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
	35XX	Horticulture Elective	2	2	3
LH	3508	Turfgrass Management	2	3	3
			4	5	6

■ Second Term

	35XX	Horticulture Elective	2	2	3

			Class	Lab	Credit Hours
■ Third Term					
LH	3501	Soils & Plant Nutrition	3	0	3
LH	3502	Horticulture Science	2	2	3
			5	2	6
■ Fourth Term					
LH	3536	Turfgrass Culture	2	2	3
LH	3537	Turfgrass Pests	2	2	3
			4	4	6
■ Fifth Term					
LH	3538	Turfgrass Practices	2	2	3
					24

Horticulture Elective: LH 3504, LH 3505, LH 3506, LH 3507, LH 3509, LH 3510, OH 3521, OH 3528, LH 3533

Managerial Accounting Technology (MG)

Managerial Accounting provides students knowledge of business fundamentals and an understanding of accounting skills. Students are provided an opportunity to enhance their skills by co-oping with financial institutions, small and large CPA firms, manufacturing, merchandising and service companies and governmental agencies.

In addition to preparation in managerial, financial and tax accounting, students will be given a sound background in communication skills, management philosophy and computerized accounting.

Managerial Accounting Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
BUS	1823	Business Law 1	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
ACC	2911	Principles of Accounting 1	3	2	4
MGT	2925	Business Principles	3	0	3
BUS	9200	Professional Practices	1	0	1
			19	4	21
■ Second Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
			1	40	2
■ Third Term					
	100X	English Composition Elective	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
BUS	1824	Business Law 2	3	0	3
MIS	1861	Electronic Spreadsheet Lotus 1-2-3	2	2	3
ACC	2912	Principles of Accounting 2	3	2	4
ACC	2917	Federal Taxation 1	3	0	3
			17	4	19
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
MAT	1123	Business Mathematics 3	3	0	3
PHI	1620	Critical & Creative Thinking	3	0	3
MIS	1862	Advanced Electronic Spreadsheets	2	2	3
ACC	2913	Principles of Accounting 3	2	3	3
ACC	2916	Cost Accounting	3	0	3
ACC	2918	Federal Taxation 2	3	0	3
MGT	2926	Principles of Management	3	0	3
			19	5	21
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ENG	1011	Business Communications	3	0	3
	15XX	Social Science Elective	3	0	3
MKT	2903	Survey of Marketing	3	0	3
BUS	2922	Computerized Accounting Appl.	2	2	3
ACC	2919	Intermediate Accounting 1	3	0	3
FIN	2960	Principles of Finance	3	0	3
			17	2	18
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
SPE	1020	Effective Speaking	3	0	3
	15XX	Social Science Elective	3	0	3
ECO	1512	Microeconomics	3	0	3
ACC	1851	Auditing	3	0	3
	29XX	Business Elective	3	0	3
ACC	2920	Intermediate Accounting 2	3	0	3
ACC	2921	Managerial Accounting	3	0	3
			21	0	21
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					110

English Composition Electives: ENG 1002, ENG 1008, ENG 1009, ENG 1010
Business Elective: Chairperson approval required.
Social Science Electives: PSY 1502, PSY 1505, PSY 1506, PSY 1508, PSY 1509, PSY 1510, ECO 1513, SOC 1521, SOC 1523, SOC 1525, SOC 1527, GEO 1551, GEO 1553, GEO 1625

Marketing Management (MMT)

The scope of marketing is very broad and complex. This technology examines consumer behavior; pricing practices; how, why, and where products are sold and developed.

The serious student will discover not only the challenge and excitement of marketing but the many rewarding career opportunities as well. These opportunities include sales, purchasing, advertising, marketing research, market analysis, distribution specialists and many more.

Marketing Management Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MKT	2901	Principles of Marketing 1	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
	151X	Economics Elective	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
MGT	2925	Business Principles	3	0	3
			18	2	19
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
	102X	Oral Communications Elective	3	0	3
MIS	1861	Electronic Spreadsheets	2	2	3
MKT	2902	Principles of Marketing 2	3	0	3
MGT	2965	Principles of Management 1	3	0	3
			17	2	18
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
MAT	1123	Business Mathematics 3	3	0	3
MKT	1810	Principles of Sales	3	0	3
ITM	2981	International Marketing	3	0	3
MGT	1832	Human Resource Management	3	0	3
MGT	2966	Principles Management 2	3	0	3
ACC	2911	Principles of Accounting 1	3	2	4
			18	2	19
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2

■ Seventh Term					
ENG	1011	Business Communications	3	0	3
PSY	1505	Introduction to Psychology 1	3	0	3
BUS	1823	Business Law 1	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
BUS	2960	Principles of Finance	3	0	3
MKT	2923	Market Concept & Applicat	3	0	3
			18	2	19
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
	1804	Risk and Insurance	3	0	3
MKT	1817	Industrial Purchasing	3	0	3
MKT	1845	Principles of Retailing	3	0	3
ACC	2913	Principles of Accounting 3	3	1	3
BUS	2924	Business Law 2	3	0	3
MGT	2975	Business Management Seminar	2	3	3
			17	4	18
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					107

Oral Communications Electives: SPE 1020, SPE 1024
Economics Electives: ECO 1512, ECO 1513

Purchasing Management Technology (PUR)

Purchasing is very important to a company's operations and profits. Approximately 50 cents of every dollar received by a company is spent on the purchase of goods and services. Because of this, business is constantly searching for individuals who understand the fundamentals of effective purchasing practices. A career in purchasing offers individuals the opportunity to work with many professionals within their company and from the companies that call on them.

Purchasing Management Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
SPE	1020	Effective Speaking	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
PSY	1502	Human Relations	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
MGT	2925	Business Principles	3	0	3
			18	2	19
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
ENG	1002	English Composition 2	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
MKT	1817	Industrial Purchasing	3	0	3
MIS	1861	Electronic Spreadsheets	2	2	3
ACC	2911	Principles of Accounting 1	3	2	4
MGT	2965	Principles Management 1	3	0	3
			17	4	19
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
ENG	1011	Business Communications	3	0	3
MAT	1123	Business Mathematics 3	3	0	3
MGT	2966	Principles Management 2	3	0	3
MKT	1818	Advanced Purchasing	3	0	3
ITM	2980	Intro to Int'l Business	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
			18	2	19
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
	15XX	Social Science Elective	3	0	3
	1823	Business Law 1	3	0	3
MKT	1872	International Purchasing	3	0	3
	29XX	Business Elective	3	0	3
MKT	2903	Survey of Marketing	3	0	3
ACC	2913	Principles of Accounting 3	3	1	3
			18	1	18
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
	151X	Economics Elective	3	0	3
MKT	1810	Principles of Sales	3	0	3
MGT	1832	Human Resource Management	3	0	3
BUS	1824	Business Law 2	3	0	3
	29XX	Business Elective	3	0	3
FIN	2960	Principles of Finance	3	0	3
			18	0	18
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					101

Math Electives: ECO 1125, ECO 1127
Business Electives: Chairperson Approval Required
Economics Electives: ECO 1512, ECO 1513
Social Science Electives: PSY 1505, SOC 1521, SOC 1524, LBR 1535, LBR 1539, GEO 1551, GEO 1553, PHI 1620, PHI 1625

Property Management Technology (PM)

Cincinnati State was the first college in the country to offer an associate degree in Property Management. The curriculum is based on textbook course materials, class discussion and case studies. Publications of the Institute of Real Estate Management and the National Association of Realtors also are utilized. The curriculum includes required courses for the Ohio real estate sales license.

Property Management Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
MGT	2925	Business Principles	3	0	3
PM	2931	On-Site Property Management 1	3	0	3
RE	2951	Real Estate Principles & Practices	3	0	3
			18	0	19
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
MAT	1122	Business Mathematics 2	3	0	3
PHI	1620	Critical & Creative Thinking	3	0	3
MIS	1861	Electronic Spreadsheet Lotus 1-2-3	2	2	3
MGT	2967	Survey of Management	3	0	3
PM	2932	On-Site Property Management 2	3	0	3
RE	2953	Real Estate Law	3	0	3
			17	2	18
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
ENG	1011	Business Communications	3	0	3
MAT	1123	Business Mathematics 3	3	0	3
PSY	1502	Human Relations	3	0	3
ACC	2911	Principles of Accounting 1	3	2	4

PM	2933	Executive Level Property Management	3	0	3
RE	2955	Real Estate Appraisal 1-Residential	3	0	3
			18	2	19
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
	102X	Oral Communication Elective	3	0	3
ECO	1513	Macroeconomics	3	0	3
MKT	2901	Principles of Marketing 1	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
PM	2936	Institutional Property Management	3	0	3
RE	2954	Real Estate Finance	3	0	3
			18	2	19
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
	15XX	Social Science Elective	3	0	3
MGT	1832	Human Resource Management	3	0	3
MKT	2902	Principles of Marketing 2	3	0	3
PM	2935	Property Management Case Study	3	0	3
RE	2956	Real Estate Appraisal 2 - Income	3	0	3
RE	2964	Real Estate Finance 2	3	0	3
			18	0	18
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					104

Oral Communication Electives: SPE 1020, SPE 1024
Social Science Electives: PSY 1505, PSY 1506, ECO 1512, LBR 1535, GOV 1536, GEO 1551, GEO 1553, PHI 1620, PHI 1625

Real Estate Technology (RE)

If you are outgoing and flexible, if you are looking for a career in sales, management or finance, and if you want a real challenge, the Real Estate program is for you. This program provides an educational foundation which satisfies the requirements for licensing as well as future requirements for becoming a real estate broker.

Real Estate careers are available through local and national real estate firms, financial institutions, insurance companies and most major corporations. Students must combine this program with the Property Management curriculum in order to co-op.

Real Estate Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1121	Business Mathematics 1	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
MGT	2925	Business Principles	3	0	3
RE	2951	Real Estate Principles & Practices	3	0	3
RE	2953	Real Estate Law	3	0	3
			18	2	19
■ Second Term					
BUS	9200	Professional Practices	1	0	1
BUS	9210	Co-Op Employment Business Tech	1	40	2
			2	40	3
■ Third Term					
	102X	Oral Communications Elective	3	0	3
MAT	1122	Business Mathematics 2	3	0	3
PHI	1620	Critical & Creative Thinking	3	0	3
MIS	1861	Electronic Spreadsheet Lotus 1-2-3	2	2	3
MGT	2967	Survey of Management	3	0	3
RE	2954	Real Estate Finance	3	0	3
			17	2	18
■ Fourth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Fifth Term					
ENG	1011	Business Communications	3	0	3
MAT	1123	Business Mathematics 3	3	0	3
PSY	1502	Human Relations	3	0	3
MKT	2901	Principles of Marketing 1	3	0	3
ACC	2911	Principles of Accounting 1	3	2	4
RE	2955	Real Estate Appraisal 1 - Residential	3	0	3
			18	2	19
■ Sixth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Seventh Term					
ECO	1513	Macroeconomics	3	0	3
MGT	1804	Risk and Insurance	3	0	3
MKT	2902	Principles of Marketing 2	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
RE	2956	Real Estate Appraisal 2 - Income	3	0	3
BUS	2960	Principles of Finance	3	0	3
			18	2	19
■ Eighth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
■ Ninth Term					
	15XX	Social Science Elective	3	0	3
BUS	1823	Business Law 1	3	0	3
MGT	1832	Human Resource Management	3	0	3
RE	2959	Real Estate Appraisal 3	3	0	3
RE	2940	Real Estate Sales	3	0	3
RE	2964	Real Estate Finance 2	3	0	3
			18	0	18
■ Tenth Term					
BUS	9210	Co-Op Employment Business Tech	1	40	2
					104

Oral Communication Electives: SPE 1020, SPE 1024
Social Science Electives: PSY 1505, PSY 1506, ECO 1512, LBR 1535, GOV 1536, GEO 1551, GEO 1553, PHI 1620, PHI 1625
Business Elective: Chairperson Approval Required.

Engineering Technologies Division

The Engineering Technologies Division is proud of its recognition for instructional excellence and 98 percent graduate placement. In 1984 the Ohio Board of Regents initiated the prestigious Program Excellence Competition among Ohio's publicly supported two-year colleges and four-year universities. Cincinnati State's Engineering Technologies Division owns three Program Excellence Awards.

The Engineering Technologies Division offers programs in many engineering technology disciplines to help meet the need for competent technicians required for today's highly technological society. All programs are either two-year associate degree programs or certificate programs.

In addition to two-year associate degree and certificate programs, the Engineering Technologies Division offers specialized training classes that are tailored to meet the requirements of business and industry in their efforts to keep pace with rapidly changing technologies and computer software. The training classes vary in duration and dates offered. The Productivity Improvement Center offers training in environmental and occupational safety, electrical and instrumentation, manufacturing and design, and other engineering technology related areas. PIC also offers autho-

rized training for AutoCAD, DPSI, Intergraph, P-CAD, SCO, and SmartCAM. Continuing Education Units (CEU) may be awarded.

The curriculum in each program provides specialized technical instruction in the student's major area of concentration and basic theory and skills in physics and mathematics. In addition, the student takes a variety of courses in communication skills, the humanities and social sciences. These courses enable students to express ideas in speech and writing, and to better understand themselves and others in society.

Upon successful completion of a two-year program, the student is awarded an Associate Degree in Applied Science.

In order to ensure a high degree of success in the technology selected, the student must be able to meet established academic levels in mathematics, communication skills and reading comprehension. To aid in determining these levels, all students planning to enter an engineering technology program must take the college admission test.

Each program has a planned sequence of courses which provides a path for completion in two years. Students should attempt to follow the sequence of courses outlined to ensure completion in the two-year period. There is no guarantee that classes will be conducted outside of the planned curriculum sequence.

Students are encouraged to begin the admissions and testing process as soon as possible. If the test indicates that a student has not achieved certain academic levels, the student will be referred to the Engineering Technologies Division advisor to develop a plan of study that will help meet specific program entry-level requirements. If any preparatory courses are needed, students may be able to enroll in them during the summer, thereby improving their chances of being admitted into a program in the Fall (September) or Late Fall (November) terms when program course sequences begin.

Cooperative Education

The primary mission of the Engineering Technologies Division is to provide associate degree programs that combine classroom and laboratory instruction with practical, hands-on experience in a real work environment. This combination, called cooperative education, prepares graduates for immediate employment after graduation and for potential advancement in technical and mid-management careers.

Because the Engineering Technologies Division believes that cooperative education work experience is of great value, all students are required to earn up to 10 credit hours in cooperative education. Most students will complete this requirement through on-site cooperative education assignments.

Engineering Technologies Division students who are enrolled in a curriculum that contains a cooperative education requirement may fulfill the requirement in one of three ways:

* Alternate full-time terms in the classroom with full-time terms of cooperative education employment over a ten-term period.
* Attend classes on a half-day schedule, while simultaneously working part-time (or more) in cooperative education employment, for ten consecutive terms.
* With prior approval from the appropriate program co-op coordinator, certain students may substitute appropriate academic courses or previous related work experience for cooperative education employment.

Students with prior related work experience may be permitted to fulfill a portion (if not all) of the cooperative education requirement by submitting a petition to substitute that work experience for co-op credit. The petition must provide validated written documentation of evidence that the applicant has already demonstrated through successful work experience those skills or competencies which are the desired end-product of co-op employment. The petition will be evaluated by the co-op office to determine its validity. Students may earn up to 10 credits through this process. (See "Grades and Credit Earned, Advanced Standing Credit.") For eligibility requirements, co-op registration policy and other policies relating to cooperative education, please refer to the "Cooperative Education Program" section of the catalog.

The Engineering Technologies Division's Office of Cooperative Education will assist students in fulfilling their cooperative education requirements. Although the division's cooperative education coordinators have been extremely successful in finding positions for co-op students, they cannot guarantee placement. In these rare cases, the coordinator will work with the student on alternatives to meet the co-op education requirements.

Transfer Module

Associate degree programs in the Engineering Technologies Division contain in their curricula most of the required courses for the Cincinnati State Transfer Module. The additional courses needed to complete the transfer module should be scheduled at times convenient to the student. Students who wish to transfer to an Ohio public university for baccalaureate degrees will find that a Cincinnati State Associate of Applied Science degree combined with a transfer module (showing grades of "C" or better) will receive preferential consideration at the receiving university. Additionally, the transfer process has been dramatically facilitated by articulation agreements established with several local colleges and universities for most engineering technologies programs.

Aviation Maintenance Technology

Because of Federal Aviation Administration (FAA) regulations, students enrolled in Aviation Technology must complete six academic terms, with a cumulative grade point average of 2.00 or better, to be eligible for placement in cooperative education assignments. Courses will not count toward FAA Licensing unless the student is matriculated in either AMT or pre-AMT programs.

Aviation Maintenance Technology (AMT)

Graduates of the Aviation Program receive an Associate Degree in Applied Science and are eligible, under Air Agency Certificate Number A09T-004R, to test for the FAA Aviation Mechanic Certificate with Airframe and Powerplant ratings. The mechanic certificate entitles the holder to release aircraft for flight after maintenance has been performed. Classroom study is devoted to learning every system of today's aircraft while mechanical skills are developed on the fleet of aircraft owned by Cincinnati State. Primary employers of graduates include airlines and manufacturers of aircraft and engines. Note: Certification requirements are subject to current Federal Aviation Requirements and may change without notice.

Aviation Maintenance Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
MAT	1191	Algebra & Trigonometry 1	4	0	4
PHY	2221	Technical Physics 1	2	3	3
AVT	8100	Aircraft Orientation	4	4	5
AVT	8101	Materials & Processes 1	2	3	3
AVT	8102	Aerodynamics & FAA Regulations	3	2	3
			15	12	18
■ Second Term					
MAT	1192	Algebra & Trigonometry 2	4	0	4
PHY	2222	Technical Physics 2	2	3	3

AVT	8106	Engineering Graphics (AV)	2	2	2
AVT	8107	Materials & Processes 2	4	6	6
AVT	8108	Aircraft Electricity	3	2	3
AVT	8109	Cleaning & Corrosion Control	2	3	3
			17	16	21

■ Third Term

ENG	1001	English Composition 1	3	0	3
PHY	2223	Technical Physics 3	2	3	3
AVT	8130	Airframe Structures 1	3	7	5
AVT	8132	Aircraft Electric/Generating Systems	4	6	6
AVT	8143	Airframe Hyd & Pneu System	1	4	2
			13	20	19

■ Fourth Term

ENG	1010	Technical Writing 1	3	0	3
AVT	8140	Airframe Structures 2	3	7	5
AVT	8142	Assembly & Rigging	3	7	5
AVT	8151	Landing Gear Systems	3	7	5
			12	21	18

■ Fifth Term

ENG	1015	Technical Writing 2	3	0	3
AVT	8131	Welding Processes	1	4	2
AVT	8150	Air Electronic Instrumental Systems	4	6	6
AVT	8152	Airframe Inspection	1	4	2
AVT	8154	Airframe Systems	4	6	6
			13	20	19

■ Sixth Term

ECO	1512	Microeconomics	3	0	3
ET	7035	Computer Applications	2	3	3
AVT	8172	Ignition Systems	4	6	6
AVT	8180	Engine Systems Inspection	5	5	5
			14	14	11

■ Seventh Term

	102X	Oral Communication Elective	3	0	3
AVT	8160	Powerplant Theory & Maint 1	7	5	7
AVT	8162	Propellers	4	4	4
ET	9400	Co-op Employment Engineering Tech	1	40	2
			15	49	16

■ Eighth Term

PSY	1502	Human Relations	3	0	3
AVT	8170	Powerplant Theory & Maint 2	6	6	7
AVT	8171	Powerplant Fuel Metering Systems 1	5	5	5
			14	11	15

■ Ninth Term

AVT	8161	Powerplant Lubrication	3	2	4
AVT	8183	Powerplant Theory & Maint 3	7	5	7
ET	9400	Co-op Employment Engineering Tech	1	40	2
			11	47	13

■ Tenth Term

	15XX	Social Science Elective	3	0	3
AVT	8182	Engine Instruments/Fire Protect	2	3	3
			5	3	6
					162

Oral Communication Electives: ENG 1020, SPE 1024
Social Science Electives: ECO 1513, SOC 1521, SOC 1524, SOC 1527, LBR 1535, GOV 1536, LBR 1539, MIL 1542, MIL1543

Avionics Certificate

Another program offering, the avionics certificate, is available for students who are FAA certified aviation mechanics with airframe ratings. Advanced skills in aviation electronics are critical as aircraft systems become more sophisticated. Graduates will be able to troubleshoot and repair in a flight line environment for auto pilot, instrument navigation and communication equipment and powerplant electronic control systems.

Prerequisites for Admission:
1. Eligible to test for FAA Airframe Mechanics Certificate
2. Scores on the ASSET Test (Cincinnati State's Admissions Test) must indicate the student is:
   a. Ready to begin Algebra 1 MAT 1191
   b. Ready to begin English Composition ENG 1001
   c. Capable of College Reading Level.

Avionics Certificate

			Hours Per Week Class	Lab	Credit Hours
EET	7710	DC Circuit Analysis	5	0	5
EET	7711	DC Circuits Lab	0	3	1
EET	7720	AC Circuit Analysis	5	0	5
EET	7721	AC Circuits Lab	0	3	1
EET	7728	Intro to Digital Concepts	3	2	4
EET	7730	Electronics 1	5	2	6
EET	7738	Digital Systems 1	3	3	4
EET	7740	Electronics 2	5	2	6
EET	7743	Communication Systems 1	3	2	4
AVT	8201	Avionics 1	3	2	4
AVT	8202	Avionics 2	3	2	4
			35	21	44
					44

Aviation Maintenance Certificate Programs

Included in the Aviation Maintenance degree program are two certificate programs (Air Agency Certificate No. A09T004R). After the successful completion of either or both of the airframe and powerplant requirements, Cincinnati State issues a certificate which, upon presentation to an FAA designated examiner, allows students to take the FAA written test that leads to licensing. Note: Certification requirements are subject to current Federal Aviation Requirements and may change without notice.

Aviation Mechanics Airframe Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
ENG	1001	English Composition 1	3	0	3
ENG	1010	Technical Writing 1	3	0	3
ENG	1015	Technical Writing 2	3	0	3
MAT	1191	Algebra & Trigonometry 1	4	0	4
MAT	1192	Algebra & Trigonometry 2	4	0	4
PHY	2221	Technical Physics 1	2	3	3
PHY	2222	Technical Physics 2	2	3	3
PHY	2223	Technical Physics 3	2	3	3
AVT	8100	Aircraft Orientation	4	4	5
AVT	8101	Materials & Processes 1	2	3	3
AVT	8102	Aerodynamics & FAA Regulation	3	2	3
AVT	8106	Engineering Graphics (AV)	2	2	2
AVT	8107	Materials & Processes 2	4	6	6
AVT	8108	Aircraft Electricity	3	2	3
AVT	8109	Cleaning & Corrosion Control	2	3	3
AVT	8130	Airframe Structures 1	3	7	5
AVT	8131	Welding Processes	1	4	2
AVT	8132	Aircraft Electrical/Generating System	4	6	6
AVT	8140	Airframe Structures 2	3	7	5
AVT	8142	Assembly & Rigging	3	7	5
AVT	8143	Airframe Hydraulic & Pneumatic System	1	4	2
AVT	8150	Air Electronic Instrument Systems	4	6	6
AVT	8151	Airframe Systems, Hyd & Pneu Lnd Gr	3	7	5
AVT	8152	Airframe Inspection	1	4	2
AVT	8154	Airframe Systems	4	6	6
AVT	8155	Airframe Comprehensive	2	1	2
			72	90	97
					97

Aviation Mechanics Powerplant Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
ENG	1001	English Composition 1	3	0	3

ENG	1010	Technical Writing 1	3	0	3
ENG	1015	Technical Writing 2	3	0	3
MAT	1191	Algebra & Trigonometry 1	4	0	4
MAT	1192	Algebra & Trigonometry 2	4	0	4
PHY	2221	Technical Physics 1	2	3	3
PHY	2222	Technical Physics 2	2	3	3
PHY	2223	Technical Physics 3	2	3	3
AVT	8100	Aircraft Orientation	4	4	5
AVT	8101	Materials & Processes 1	2	3	3
AVT	8102	Aerodynamics & FAA Regulation	3	2	3
AVT	8106	Engineering Graphics (AV)	2	2	2
AVT	8107	Materials & Processes 2	4	6	6
AVT	8108	Aircraft Electricity	3	2	3
AVT	8109	Cleaning & Corrosion Control	2	3	3
AVT	8160	Powerplant Theory and Maintenance 1	7	5	7
AVT	8161	Powerplant Lubrication	3	2	4
AVT	8162	Propellers	4	4	4
AVT	8170	Powerplant Theory and Maintenance 2	6	6	7
AVT	8171	Powerplant Fuel Metering System	5	5	5
AVT	8172	Ignition Systems	4	6	6
AVT	8180	Engine Systems	5	5	5
AVT	8182	Engine Instruments/Fire Protection	2	3	3
AVT	8183	Powerplant Theory & Maintenance 3	7	5	7
AVT	8185	Powerplant Comprehensive	2	1	2
			88	73	101
					101

Biomedical Electronics Engineering Technology (BMET)

(A TAC/ABET accredited program)

The Biomedical Electronics Engineering Technology Program was created because of a need for technicians who repair, maintain, modify and design complex medical instrumentation.

This person is employed by hospitals as well as medical equipment manufacturers. The BMET graduate will have advanced electronic skills as well as education in the following areas:

* Installation and calibration of biomedical equipment.
* Preventative maintenance, repair, and inspection of equipment.
* Operation of safety and maintenance programs.

The Biomedical Electronics Technician is a professional whose broad background in electronics and instrumentation will make the graduate an asset to any organization.

Students pursuing a degree in Biomedical Electronics Engineering Technology are required to hold on-site, related cooperative education assignments for a minimum of three terms. Exceptions to this policy will be permitted with the approval of the co-op coordinator and the program chair for the BMET program.

Biomedical Electronics Engineering Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
MAT	1191	Algebra & Trigonometry 1	4	0	4
EET	7710	DC Circuit Analysis	5	0	5
EET	7711	DC Circuits Lab	0	3	1
EET	7728	Intro to Digital Concepts	3	2	4
EET	7739	Intro to Biomedical Instrumentation	3	2	4
			15	7	18
■ Second Term					
CHE	2231	Fund of Inorganic Chemistry	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Third Term					
MAT	1192	Algebra and Trigonometry 2	4	0	4
EET	7717	Intro to C Programming	3	3	4
EET	7720	AC Circuit Analysis	5	0	5
EET	7721	AC Circuits Lab	0	3	1
EET	7738	Digital Systems 1	3	3	4
			15	9	18
■ Fourth Term					
BIO	4014	Anatomy and Physiology 1	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Fifth Term					
ENG	1001	English Composition 1	3	0	3
PHY	2293	Physics 3	3	2	4
EET	7730	Electronics 1	5	2	6
EET	7748	Digital Systems 2	3	3	4
			14	7	17
■ Sixth Term					
MAT	1193	Analytical Geometry & Calculus 1	4	0	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			5	40	6
■ Seventh Term					
ENG	1002	English Composition 2	3	0	3
	15XX	Social Science Elective	3	0	3
BIO	4015	Anatomy and Physiology 2	3	2	4
EET	7740	Electronics 2	5	2	6
EET	7768	Digital Systems 3	3	3	4
			17	7	20
■ Eighth Term					
BMT	7749	Biomedical Instrumentation 1	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Ninth Term					
ENG	1010	Technical Writing 1	3	0	3
	102X	Oral Communication Elective	3	0	3
ECO	1513	Macroeconomics	3	0	3
EET	7750	Electronics 3	4	3	5
BMT	7759	Biomedical Instrumentation 2	3	2	4
			16	5	18
■ Tenth Term					
PSY	1502	Human Relations	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
					120

Social Science Electives: Any course with the first two digits of 15 except PSY 1502 and ECO 1513.

Oral Communication Electives: SPE 1020, SPE 1024

Civil Engineering Technology (CET)

(A TAC/ABET accredited program)*

Recipient of an Ohio Board of Regents Program Excellence Award.

Civil Engineering Technology is a single program from which a student may select one of four majors: architectural, construction management, environmental or surveying.

Students who work during the day can earn an associate degree in approximately three years while attending class only two nights per week.

* CETA, CETC, CETS accredited majors; CETE to be reviewed in 1996.

Architectural Major (CETA)

Architectural students work closely with architects and engineers as architectural technicians. To prepare students for the current needs of the profession, the architectural technology curriculum features a heavy emphasis on mechanical systems, water, waste, electrical lighting systems, and computer aided drafting. In addition, the program instructs students in the areas of construction methods and principles, architectural drafting and design, and structural design involved in building construction.

Civil Engineering Technology Curriculum Architectural Major (CETA)

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1191	Algebra & Trigonometry 1	4	0	4
CET	7024	Architectural Drafting 1	3	4	4
CET	7910	Surveying Measurements	3	2	4
CET	7913	Civil & Environ Topics	3	0	3
CET	7935	Introduction to CAD (CET)	2	3	3
			18	9	21
■ Second Term					
PHY	2291	Physics 1	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Third Term					
MAT	1192	Algebra & Trigonometry 2	4	0	4
CET	7025	Surveying Drafting	2	3	3
CET	7920	Surveying Calculations	4	2	5
CET	7927	CAD 1 (CET)	2	3	3
CET	7934	Statics (CET)	3	2	4
			15	10	19
■ Fourth Term					
ENG	1010	Technical Writing 1	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Fifth Term					
MAT	1193	Analytical Geometry & Calculus 1	4	0	4
PHI	1625	Technical & Ethical Decisions	3	0	3
PHY	2292	Physics 2	3	2	4
CET	7026	Architectural Drafting 2	2	3	3
CET	7944	Strength of Materials (CET)	3	2	4
			15	7	18
■ Sixth Term					
SPE	1020	Effective Speaking	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Seventh Term					
PHY	2293	Physics 3	3	2	4
CET	7928	CAD 2 (CET)	2	3	3
CET	7956	Structural Steel Design	3	2	4
CET	7964	Mechanical Systems	2	3	3
CET	7968	Lighting Systems	2	3	3
			12	13	17
■ Eighth Term					
HUM	1645	Civilization & Technology	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Ninth Term					
ECO	1513	Macroeconomics	3	0	3
CET	7954	Reinforced Concrete Design	3	2	4
CET	7936	HVAC Design Systems	3	2	4
CET	7963	Electrical Design Systems	3	2	4
CET	7969	Building Systems Design	3	2	4
			15	8	19
■ Tenth Term					
ENG	1015	Technical Writing 2	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
					120

Construction Management Major (CETC)

Early in the curriculum, students learn about materials and methods of construction, manual and computer aided architectural drafting, survey drafting, elements of structures, and light construction principles. Later, the principles of construction management are investigated. Topics include project control, scheduling, estimating, project safety, contracting, heavy construction,value engineering and labor relations.

Civil engineering fundamentals are conveyed through the four course sequence of statics, strength of materials, structural steel design and reinforced concrete.

Most courses are supplemented by the use of computers loaded with the leading architectural, scheduling, and estimating softwares in the industry.

Civil Engineering Technology Curriculum Construction Management Major (CETC)

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1191	Algebra & Trigonometry 1	4	0	4
CET	7024	Architectural Drafting 1	3	4	4
CET	7910	Surveying Measurements	3	2	4
CET	7913	Civil & Environ Topics	3	0	3
CET	7935	Introduction to CAD (CET)	2	3	3
			18	9	21
■ Second Term					
PHY	2291	Physics 1	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Third Term					
MAT	1192	Algebra and Trigonometry 2	4	0	4
CET	7025	Surveying Drafting	2	3	3
CET	7920	Surveying Calculations	4	2	5
CET	7927	CAD 1 (CET)	2	3	3
CET	7934	Statics (CET)	3	2	4
			15	10	19
■ Fourth Term					
ENG	1010	Technical Writing 1	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Fifth Term					
MAT	1193	Analytical Geometry & Calculus 1	4	0	4
PHI	1625	Technical & Ethical Decisions	3	0	3
PHY	2292	Physics 2	3	2	4
CET	7931	Light Construction	3	2	4
CET	7944	Strength of Materials (CET)	3	2	4
			16	6	19
■ Sixth Term					
SPE	1020	Effective Speaking	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Seventh Term					
PHY	2293	Physics 3	3	2	4
CET	7928	CAD 2 (CET)	2	3	3
CET	7942	Construction Management 1	2	3	3
CET	7943	Construction Estimating	2	3	3
CET	7956	Structural Steel Design	3	2	4
			12	13	17
■ Eighth Term					
HUM	1645	Civilization & Technology	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Ninth Term					
ECO	1513	Macroeconomics	3	0	3
CET	7951	Heavy Construction	3	2	4
CET	7953	Construction Management 2	2	3	3
CET	7954	Reinforced Concrete Design	3	2	4
CET	7955	Applied Soil Mechanics	3	2	4
			14	9	18
■ Tenth Term					
ENG	1015	Technical Writing 2	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
					120

Environmental Major (CETE)

The curriculum features a host of technology-specific "core" courses designed to prepare students in key technical areas - collecting soil and water samples, monitoring treatment, managing cleanup activities, writing reports/recommendations concerning solid and hazardous waste management and performing laboratory testing. Program highlights include the following courses: Regulations & Permits, Air Pollution Control, Solid Waste Management, Hazardous Waste Management, Water & Wastewater Technology, Treatment Technologies, Environmental Chemistry, and the OSHA 40-hour Course.

Civil Engineering Technology Curriculum Environmental Major (CETE)

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1191	Algebra & Trigonometry 1	4	0	4
CET	7024	Architectural Drafting 1	3	4	4
CET	7910	Surveying Measurements	3	2	4
CET	7913	Civil & Environ Topics	3	0	3
CET	7935	Introduction to CAD (CET)	2	3	3
			18	9	21
■ Second Term					
PHY	2291	Physics 1	3	2	4
ET	9400	Co-Op Employment	1	40	2
			4	42	6
■ Third Term					
MAT	1192	Algebra & Trigonometry 2	4	0	4
CET	7025	Surveying Drafting	2	3	3
CET	7920	Surveying Calculations	4	2	5
CET	7927	CAD 1 (CET)	2	3	3
CET	7934	Statics (CET)	3	2	4
			15	10	19
■ Fourth Term					
ENG	1010	Technical Writing 1	3	0	3
ET	9400	Co-Op Employment	1	40	2
			4	40	5
■ Fifth Term					
MAT	1193	Analytic Geometry & Calc 1	4	0	4
PHI	1625	Techn & Ethical Decisions	3	0	3
CHE	2231	Fund of Inorganic Chem	3	2	4
PHY	2292	Physics 2	3	2	4
CET	7944	Strength of Materials-CET	3	2	4
			16	6	19
■ Sixth Term					
SPE	1020	Effective Speaking	3	0	3
ET	9400	Co-Op Employment	1	40	2
			4	40	5
■ Seventh Term					
CHE	2232	Fund of Organic Chem	3	2	4
PHY	2293	Physics 3	3	2	4
CET	7946	Water & Wastewater Tech	3	2	4
CET	7970	Regulations & Permits	3	0	3
CET	7971	Air Pollution Control	3	3	4
			15	9	19
■ Eighth Term					
HUM	1645	Civilization & Technology	3	0	3
ET	9400	Co-Op Employment	1	40	2
			4	40	5
■ Ninth Term					
ECO	1513	Macroeconomics	3	0	3
SLT	6661	Environmental Chemistry	3	2	4
CET	7975	Solid Waste Management	2	3	3
CET	7976	Hazardous Waste Management	2	3	3
CET	7977	Treatment Technologies	2	3	3
			12	11	16
■ Tenth Term					
ENG	1015	Technical Writing 2	3	0	3
ET	9400	Co-Op Employment	1	40	2
			4	40	5
					120

Surveying Major (CETS)

A surveyor is a multi-talented individual possessing skills in mathematics, graphics, law, history, astronomy, computer science and urban planning. Professional surveyors are called upon to perform diverse tasks such as designing subdivisions, retracing original boundary lines, controlling construction projects, preparing legal descriptions, orienting communications systems by star observations, and inventoring resources.

Students train using state-of-the-art electronic surveying and computing equipment. Topics covered include instrument usage, computer graphics, document research and resolution, route design, control surveying, subdivision planning and satellite positioning (GPS), and geographic information systems (GIS).

Civil Engineering Technology Curriculum Surveying Major (CETS)

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1191	Algebra & Trigonometry 1	4	0	4
CET	7024	Architectural Drafting 1	3	4	4
CET	7910	Surveying Measurements	3	2	4
CET	7913	Civil & Environ Topics	3	0	3
CET	7935	Introduction to CAD (CET)	2	3	3
			18	9	21
■ Second Term					
PHY	2291	Physics 1	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Third Term					
MAT	1192	Algebra and Trigonometry 2	4	0	4
CET	7025	Surveying Drafting	2	3	3
CET	7920	Surveying Calculations	4	2	5
CET	7927	CAD 1 (CET)	2	3	3
CET	7934	Statics (CET)	3	2	4
			15	10	19
■ Fourth Term					
ENG	1010	Technical Writing 1	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Fifth Term					
MAT	1193	Analytic Geometry & Calculus 1	4	0	4
PHI	1625	Tech & Ethical Decisions	3	0	3
PHY	2292	Physics 2	3	2	4
CET	7930	Route Surveying	3	2	4
CET	7944	Strength of Materials (CET)	3	2	4
			16	6	19
■ Sixth Term					
SPE	1020	Effective Speaking	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Seventh Term					
PHY	2293	Physics 3	3	2	4
CET	7940	Elements of Land Surveying	3	3	4
CET	7947	Drainage Control Systems	3	2	4
CET	7948	Subdivision Design 1	2	3	3
CET	7949	Intro Geographic Info Sys	3	2	4
			14	12	19
■ Eighth Term					
HUM	1645	Civilization & Technology	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Ninth Term					
ECO	1513	Macroeconomics	3	0	3

CET	7950	Surveying Field Project	1	6	3
CET	7955	Applied Soil Mechanics	3	2	4
CET	7958	Control/GPS Surveying	1	6	3
CET	7959	Subdivision Design 2	2	3	3
			10	17	16

■ Tenth Term

ENG	1015	Technical Writing 2	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
					120

Computer Engineering Technology (CPET)

(A TAC/ABET accredited program)

The purpose of the Computer Engineering Technology program is to educate students in the areas of computer hardware/software design and testing. Coursework includes single board and multi-card microcomputers, operating systems, high-level languages and control applications.

A graduate of the program will be capable of working with computer hardware and software engineers. Also, the knowledge and use of test equipment make the graduate an excellent candidate for field service work. The introduction to computer communications systems will enable the graduate to install, test and troubleshoot digital communication equipment. The Computer Engineering Technology graduate should fit very well into any organization that uses computer systems to solve engineering problems.

Computer Engineering Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
MAT	1191	Algebra & Trigonometry 1	4	0	4
PSY	1502	Human Relations	3	0	3
EET	7710	DC Circuit Analysis	5	0	5
EET	7711	DC Circuits Lab	0	3	1
EET	7728	Introduction to Digital Concepts	3	2	4
			15	5	17
■ Second Term					
ENG	1001	English Composition 1	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Third Term					
MAT	1192	Algebra and Trigonometry 2	4	0	4
EET	7717	Introduction to "C" Programming	3	3	4
EET	7720	AC Circuit Analysis	5	0	5
EET	7721	AC Circuits Lab	0	3	1
EET	7738	Digital Systems 1	3	3	4
			15	9	18
■ Fourth Term					
PHY	2291	Physics 1	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Fifth Term					
PHY	2292	Physics 2	3	2	4
EET	7730	Electronics 1	5	2	6
EET	7742	Comp Aided Drafting (Elec)	2	3	3
EET	7748	Digital Systems 2	3	3	4
			13	10	17
■ Sixth Term					
MAT	1193	Analytic Geometry & Calculus 1	4	0	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			5	40	6
■ Seventh Term					
	102X	Oral Communication Elective	3	0	3
	15XX	Social Science Elective	3	0	3
EET	7727	Advanced "C"	4	2	5
EET	7747	Computer Instrumentation	4	2	5
EET	7768	Digital Systems 3	3	3	4
			17	7	20
■ Eighth Term					
ENG	1002	English Composition 2	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Ninth Term					
ENG	1010	Technical Writing 1	3	0	3
PHY	2293	Physics 3	3	2	4
	7XXX	Technical Elective	3	2	4
EET	7767	Computer Communications	4	2	5
			13	6	16
■ Tenth Term					
ECO	1513	Macroeconomics	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
					115

Oral Communication Electives: SPE 1020, SPE 1024
Social Science Electives: Any course with the first two digits of 15 except PSY 1502 and ECO 1513.
Technical Elective: MAT 1194, MAT 1195, PHY 2294, LOT 6710, EMT 7146, EMT 7157, EET 7743, EET 7753, EET 7758, EET 7740, EET 7750, * 7765, EET 7766

Electro-Mechanical Engineering Technology (EMET)

(A TAC/ABET accredited program)

Recipient of an Ohio Board of Regents Program Excellence Award.

The Electro-Mechanical Engineering Technology program is a unique combination of the study of mechanical systems used in industry and the electronic systems used to control them. There is a high demand for graduates in this field in many technical job categories.

Electro-Mechanical Systems Technicians test, install, maintain, troubleshoot, repair, modify, and operate automated systems such as industrial robots, computer controlled machines, and other machine and process systems used in industry. Graduates are equipped to enter diverse positions such as robotics/automation technician, field service technician, maintenance technician, process control/instrumentation technician, and similar fields.

The curriculum includes theory and applications of analog and digital electronics and devices, electric motors and controls, computer control applications/programming, industrial hydraulic and pneumatic systems, mechanisms and machine drives, programmable logic controllers, servomechanisms, industrial control systems, and robotics.

Additional training is available through two one-year evening certificate programs. The HVAC & Energy Management Certificate provides students with a finely tuned series of courses designed to prepare them for positions in Heating, Ventilation and Air Conditioning (HVAC) and building automation systems, energy management and auditing, central plant maintenance and operations, plant technical support, and service management and technical sales.

Students enrolled in the Process Control and Instrumentation Certificate program will learn to calibrate and maintain modern process control equipment through studies in flow, level and temperature measurement; documentation and instrument wiring practices and control valves.

Electro-Mechanical Engineering Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1191	Algebra & Trigonometry 1	4	0	4

PHY	2291	Physics 1	3	2	4
EMT	7712	Electrical Circuits 1	5	0	5
EMT	7713	Electrical Circuits I Lab	1	3	2
			16	5	18
■ Second Term					
SPE	1020	Effective Speaking	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Third Term					
MAT	1192	Algebra & Trigonometry 2	4	0	4
EMT	7036	Technical Computer Programming	3	3	4
EET	7722	Electrical Circuits 2	5	0	5
EET	7723	Electrical Circuits 2 Lab	0	4	2
EET	7728	Introduction to Digital Concepts	3	2	4
			15	9	19
■ Fourth Term					
ET	7027	Beginning AutoCAD*	2	3	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			3	43	5
■ Fifth Term					
PHY	2292	Physics 2	3	2	4
EET	7730	Electronics 1	5	2	6
EET	7738	Digital Systems 1	3	3	4
EET	7758	Motors and Controls	3	2	4
			14	9	18
■ Sixth Term					
MAT	1193	Analytic Geometry & Calculus 1	4	0	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			5	40	6
■ Seventh Term					
ENG	1010	Technical Writing 1	3	0	3
MET	7135	Fluid Power Systems	3	3	4
MET	7142	Mechanisms Analysis and Design	3	3	4
EMT	7146	EM Controls 1/Prog Contr	3	3	4
MET	7167	Robotics 1	2	2	3
			14	11	18
■ Eighth Term					
PHY	2293	Physics 3	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Ninth Term					
ENG	1015	Technical Writing 2	3	0	3
PSY	1502	Human Relations	3	0	3
ECO	1513	Macroeconomics	3	0	3
EMT	7156	Electromechanical Project	2	4	4
EMT	7157	EM Controls 2/Servos	3	3	4
			14	7	17
■ Tenth Term					
	15XX	Social Science Elective	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
					117

* Every EMET student is required to have a copy of the EMET Student Guide book and an Academic Plan. Contact the program chairperson.

* Courses SPE 1020, PSY 1502, ECO 1513, and 15XX can be taken any time they can be worked into a schedule.

* It is recommended that the student take ET 7008, Engineering Drawing 1, before taking ET 7027 (Computer Aided Drafting1) if the student has had no prior drafting course or experience.

* Take EMT 7036 before ET 7027.

* Courses EMT 7146, EMT 7157, and MET 7167 are available to students in other programs on a space-available basis. Complete the required prerequisites.

Social Science Elective: Any course having the first two digits of 15 except PSY 1502 and ECO 1513.

HVAC and Energy Management Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
BUS	2925	Business Principles	3	0	3
ET	7027	Beginning Autocad	2	3	3
HVC	7501	Maint & Oper Building Systems	3	2	4
AMT	7525	HVAC Fundamentals	3	2	4
AMT	7535	HVAC Equipment & Systems	3	0	3
AMT	7536	Eval of Bldg Elec Sys	3	2	4
HVC	7541	Eval Energy-Eff Bldg Sys	3	2	4
AMT	7546	Motors & Controls - Bldg Sys	3	2	4
HVC	7552	HVAC Cont & Bldg Auto Sys	3	2	4
HVC	7555	Energy Econ, Acct, & Aud	3	2	4
			29	17	37
					37

Process Control/Instrumentation Certificate

			Hours Per Week Class	Lab	Credit Hours
MET	7133	Intro to Process Control	3	2	4
EMT	7143	Basic Process Measurement	4	4	6
EMT	7153	Pro Sys Doc & Ins Wir Prac	3	2	4
EMT	7163	Control Valves	4	4	6
EMT	7173	Applied Process Control	4	4	6
			18	16	26
					26

Electronics Engineering Technology (EET)

(A TAC/ABET accredited program)

Electronics Engineering Technology includes studies in both analog and digital electronics.

College work consists of classes covering the theory and application of electronic systems, including time spent in labs fully equipped for electronic design. Graduates assume positions such as applications technician, software specialist, service technician, engineering technician, computer repair technician, telecommunications specialist, avionics technician, or field service technician.

Electronics Engineering Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
MAT	1191	Algebra & Trigonometry 1	4	0	4
EET	7710	DC Circuit Analysis	5	0	5
EET	7711	DC Circuits Lab	0	3	1
EET	7728	Intro to Digital Concepts	3	2	4
			12	5	14
■ Second Term					
MAT	1192	Algebra & Trigonometry 2	4	0	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			5	40	6
■ Third Term					
PHY	2291	Physics 1	3	2	4
EET	7717	Introduction to "C" Programming	3	3	4
EET	7720	AC Circuit Analysis	5	0	5
EET	7721	AC Circuits Lab	0	3	1
EET	7738	Digital Systems 1	3	3	4
			14	11	18
■ Fourth Term					
ENG	1001	English Composition 1	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Fifth Term					
PHY	2292	Physics 2	3	2	4
EET	7730	Electronics 1	5	2	6
EET	7742	Computer Aided Drafting (Elec)	2	3	3
EET	7748	Digital Systems 2	3	3	4
			13	10	17

■ Sixth Term

MAT	1193	Analytic Geometry & Calculus 1	4	0	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			5	40	6

■ Seventh Term

ENG	1002	English Composition 2	3	0	3
PHY	2293	Physics 3	3	2	4
EET	7740	Electronics 2	5	2	6
EET	7766	Feedback & Comp Control	3	2	4
EET	7768	Digital Systems 3	3	3	4
			17	9	21

■ Eighth Term

	102X	Oral Communication Elective	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5

■ Ninth Term

ENG	1010	Technical Writing 1	3	0	3
	15XX	Social Science Elective	3	0	3
PSY	1502	Human Relations	3	0	3
	77XX	Technical Elective	3	2	4
EET	7750	Electronics 3	4	3	5
			16	5	18

■ Tenth Term

ECO	1513	Macroeconomics	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
					115

Oral Communication Electives: SPE 1020, SPE 1024
Social Science Electives: Any course with the first two digits of 15 except PSY 1502 and ECO 1513.
Technical Elective: EET 7727, EET 7739, EET 7743, EET 7747, EET 7767.

Laser Electro-Optics Engineering Technology (LEOT)

(A TAC/ABET accredited program)

Recipient of an Ohio Board of Regents Program Excellence Award.

Cincinnati State's Laser Electro-Optics Engineering Technology program is the only such program in Ohio and one of the few associate degree programs of its kind in the country. The objectives of the Laser Electro-Optics Technology program are to give the student practical experience and theoretical training in the field. The laser/optics laboratories are well equipped with state-of-the-art equipment.

Graduates of this program will have a good basic background in fundamentals of lasers and electronic principles. They should be able to understand the workings and applications of different types of lasers. The Laser Electro-Optics Engineering Technology graduate should fit well in an organization that uses lasers.

The Bio-Laser Option is available for students who wish to focus on the medical applications of lasers. Ophthalmology, plastic surgery, dermatology, neurology, dentistry and diagnostics are just a few examples of laser usage in medicine. This option will suit students who want to work in the health care field while being challenged by advanced technology.

Laser Electro-Optics Engineering Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
MAT	1191	Algebra & Trigonometry 1	4	0	4
PHY	2291	Physics 1	3	2	4
LOT	6710	Introduction to Lasers	3	3	4
EET	7710	DC Circuit Analysis	5	0	5
EET	7711	DC Circuits Lab	0	3	1
			15	8	18
■ Second Term					
PHY	2293	Physics 3	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Third Term					
ENG	1001	English Composition 1	3	0	3
MAT	1192	Algebra & Trigonometry 2	4	0	4
LOT	6715	Laser Safety	2	2	3
LOT	6720	Geometrical & Wave Optics	3	3	4
EET	7720	AC Circuit Analysis	5	0	5
EET	7721	AC Circuits Lab	0	3	1
			17	8	20
■ Fourth Term					
102X	102X	Oral Comm Elective	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Fifth Term					
MAT	1193	Analytic Geometry & Calculus 1	4	0	4
LOT	6730	Optical Components/Devices	3	3	4
LOT	6739	Industrial Laser Systems	3	3	4
EET	7730	Electronics 1	5	2	6
			15	8	18
■ Sixth Term					
	151X	Economics Elective	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Seventh Term					
ENG	1002	English Composition 2	3	0	3
LOT	6740	Applications of Lasers	3	3	4
LOT	6741	Introduction Fiber-Optics	3	3	4
LOT	6749	Laser Electro-Optics Proj	0	4	2
LOT	6758	Laser Power Supplies	2	3	3
LOT	7XXX	Computer Programming Elective	3	2	4
			14	15	20
■ Eighth Term					
PHY	2292	Physics 2	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Ninth Term					
ENG	1010	Technical Writing 1	3	0	3
	15XX	Social Science Elective	3	0	3
LOT	6745	Optical System Design	3	3	4
LOT	6750	Laser/Electro Optic Measurement	3	3	4
LOT	6768	Laser Maintenance	2	3	3
			14	9	17
■ Tenth Term					
	15XX	Social Science Elective	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
					120

Oral Communication Electives: SPE 1020, SPE 1024
Economics Electives: ECO 1512, ECO 1513
Computer Programming Electives: ET 7027, ET 7030, ET 7036, EET 7717
Social Science Electives: Any course with the first two digits of 15 except ECO 1512 and ECO 1513.

Laser Electro-Optics Engineering Technology Bio-Laser Option Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
MAT	1191	Algebra & Trigonometry 1	4	0	4
CHE	2236	Physiological Chemistry	3	3	4
LOT	6710	Introduction to Lasers	3	3	4
EET	7710	DC Circuit Analysis	5	0	5
EET	7711	DC Circuits Lab	0	3	1
			15	9	18

■ Second Term

PHY	2293	Physics 3	3	2	4
HLT	4000	Intro Medical Terminology	2	2	3
ET	9400	Co-Op Employment	1	40	2
			6	44	7

■ Third Term

ENG	1001	English Composition 1	3	0	3
MAT	1192	Algebra & Trigonometry 2	4	0	4
LOT	6715	Laser Safety	2	2	3
LOT	6720	Geometrical & Wave Optics	3	3	4
EET	7720	AC Circuit Analysis	5	0	5
EET	7721	AC Circuits Lab	0	3	1
			17	8	20

■ Fourth Term

BIO	4014	Anatomy and Physiology 1	3	2	4
ET	9400	Co-Op Employment	1	40	2
			4	42	6

■ Fifth Term

MAT	1193	Analytic Geometry & Calc 1	4	0	4
LOT	6730	Optical Components/Device	3	3	4
LOT	6736	Medical Laser Systems	3	3	4
EET	7730	Electronics 1	5	2	6
			15	8	18

■ Sixth Term

	151X	Economics Elective	3	0	3
ET	9400	Co-Op Employment	1	40	2
			4	40	5

■ Seventh Term

ENG	1002	English Composition 2	3	0	3
LOT	6741	Intro Fiber-Optics	3	3	4
LOT	6742	Med Lasers Applications	3	3	4
LOT	6758	Laser Power Supplies	2	3	3
ET	7027	Beginning AutoCAD	2	3	3
			13	12	14

■ Eighth Term

	102X	Oral Comm Elective	3	0	3
ET	9400	Co-Op Employment	1	40	2
			4	40	5

■ Ninth Term

ENG	1010	Technical Writing 1	3	0	3
	15XX	Social Science Elective	3	0	3
BIO	4015	Anatomy and Physiology 2	3	2	4
LOT	6750	Laser/Electro/Optic Meas	3	3	4
LOT	6768	Laser Maintenance	2	3	3
			14	8	17

■ Tenth Term

	15XX	Social Science electives	3	0	3
ET	9400	Co-Op Employment	1	40	2
			4	40	5
					120

Oral Communications Elective: SPE 1020, SPE 1024
Economics Elective: ECO 1512, ECO 1513
Social Science Elective: Any course with the first two digits 15, except ECO 1512, and ECO 1513.

Manufacturing Engineering Technology (MFGT)

The Manufacturing Engineering Technology (MFGT) program produces technicians able to function in the world-wide manufacturing competition of the 90's.

Three distinct areas of manufacturing engineering technology are stressed in the curriculum. These areas are:

1. CNC-CAD/CAM
2. Statistical Quality Control
3. Applications of Manufacturing Processes

1. CNC-CAD/CAM - A series of courses designed to enable a student to use a CAD (computer aided drafting) system to develop three-view orthagonal, isometric, and three-dimensional piece part drawings. Also introduced in CAD are concepts of assembly drawings, bills of materials, and customizing CAD systems for manufacturing applications. CAM (Computed Aided Manufacturing) covers the sequence of transcribing a program from a drawing: part programs, language-based computer aided part programming such as APT and Compact II, and then graphics-based CAM systems that utilize CAD drawings' data bases to develop machine-ready N/C code.
2. Statistical Quality Control - A series of courses designed to enable a student to use applications of computer programming to compile and create necessary charts for comparing quality levels. Histograms, frequency distribution curves, SPC, and pareto diagrams, along with various quality concepts, are used to assess quality levels.
3. Applications of Manufacturing Processes - A series of courses designed to enable a student to apply manufacturing processes in areas of process planning, process sequence, estimating, tooling, material usage, work method and measurement and computer programming necessary to compile and obtain documentation of the same.These applications, along with the cooperative experience, will enable a manufacturing graduate to perform in the new age of manufacturing.

Manufacturing Engineering Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
MAT	1191	Algebra & Trigonometry 1	4	0	4
ET	7008	Engineering Drawing 1	2	3	3
ET	7030	Computer Program (BASIC)	3	2	4
MFT	7412	Manufacturing Data Analysis	3	2	4
MFT	7417	Manufacturing Processes	3	2	4
			15	9	19
■ Second Term					
ENG	1001	English Composition 1	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Third Term					
MAT	1192	Algebra & Trigonometry 2	4	0	4
PHY	2291	Physics 1	3	2	4
MFT	7144	NC/CNC Programming 1	2	3	3
MFT	7420	CAD 1 (MFGT)	2	3	3
MFT	7422	Quality Control 1	3	2	4
			14	10	18
■ Fourth Term					
PHY	2292	Physics 2	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Fifth Term					
MAT	1193	Analytic Geometry & Calc 1	4	0	4
MET	7111	Engineering Materials	3	2	4
MET	7145	Statics & Strength of Mat	3	2	4
MFT	7427	Tool, Jig and Fixture	3	2	4
MFT	7444	Mfg Process Planning & Estimating	3	3	4
			16	9	20
■ Sixth Term					
ENG	1002	English Composition 2	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Seventh Term					
PHY	2293	Physics 3	3	2	4
MFT	7154	CNC Programming 2	2	3	3
MFT	7438	Time, Motion & Work Study	3	2	4
MFT	7441	Statistical Meth in Manufacturing	3	2	4
MFT	7449	Computer Aided Manufacturing 1	2	3	3
			13	12	18
■ Eighth Term					
LBR	1535	Intro to Labor Management Relations	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5

■ Ninth Term					
	102X	Oral Communication Elective	3	0	3
	15XX	Social Science Elective	3	0	3
ECO	1512	Microeconomics	3	0	3
MFT	7428	CAD 2 - Manufacturing	2	3	3
MFT	7459	Computer Aided Manufacturing 2	2	3	3
EET	7707	Electrical Applications	3	2	4
			16	8	19
■ Tenth Term					
ENG	1010	Technical Writing 1	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
					120

Oral Communication Electives: SPE 1020, SPE 1024
Social Science Electives: Any course with the first two digits of 15 except ECO 1512 and LBR 1535.

Mechanical Engineering Technology (MET)

(A TAC/ABET accredited program)

Mechanical Engineering Technology produces graduates with the ability to combine problem solving skills and computer aided design skills to create new machine and product designs. Advanced CAD-CAM software and the MET computer design facility are used to teach students computer aided design and computer aided drafting. Graduates of the MET program assume positions such as CAD-CAM systems operator, machine and product design technician, and mechanical systems design technician.

In an independent survey of ALL Ohio colleges, the MET program at Cincinnati State had the best equipped academic CAD facility in the state of Ohio. The MET CAD facility is regularly upgraded with the latest in software and hardware.

Along with its outstanding software and facilities, the MET program has five full-time, highly qualified faculty members. The program has been selected twice as one of only 44 statewide finalists in the Ohio Program Excellence Award competition, and the program has received two state of Ohio Academic Challenge Grants.

Mechanical Engineering Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1191	Algebra & Trigonometry 1	4	0	4
PHY	2291	Physics 1	3	2	4
ET	7008	Engineering Drawing 1	2	3	3
MET	7160	Computer Aided Drafting 1 (MET)	2	3	3
			14	8	17
■ Second Term					
ET	7030	Computer Programming (BASIC)	3	2	4
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	42	6
■ Third Term					
MAT	1192	Algebra & Trigonometry 2	4	0	4
PHY	2292	Physics 2	3	2	4
ET	7010	Engineering Drawing 2	2	3	3
MET	7130	Engineering Mechanics	3	2	4
MET	7165	Computer Aided Drafting 2 (MET)	2	3	3
			14	10	18
■ Fourth Term					
PSY	1502	Human Relations	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Fifth Term					
MAT	1193	Analytic Geometry & Calculus 1	4	0	4
MET	7012	Engineering Drawing 3	2	3	3
MET	7111	Engineering Materials	3	2	4
MET	7132	Hydraulics and Pneumatics	3	3	4
MET	7140	Strength of Materials	3	3	4
			15	11	19
■ Sixth Term					
ECO	1512	Microeconomics	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
■ Seventh Term					
PHY	2293	Physics 3	3	2	4
MET	7124	Manufacturing Processes w/CAD-CAM	3	2	4
MET	7141	Kinematics & Dynamics of Machines	3	2	4
MET	7150	Machine Design 1	3	3	4
EET	7707	Electrical Applications	3	2	4
			15	11	20
■ Eighth Term					
ENG	1002	English Composition 2	3	0	3
MET	7198	Intro to Mechanical Systems Design	0	4	2
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	44	7
■ Ninth Term					
ENG	1010	Technical Writing 1	3	0	3
SPE	1024	Group Dynamics & Problem Solving	3	0	3
MET	7148	Applied Thermodynamics	3	2	4
MET	7155	Machine Design 2	4	2	5
MET	7158	Mechanical Systems Design Project	1	6	3
			14	10	18
■ Tenth Term					
LBR	1535	Intro to Labor Management Relations	3	0	3
ET	9400	Co-Op Employment Engineering Tech	1	40	2
			4	40	5
					120

Health Technologies Division

The Health Technologies Division at Cincinnati State brings together in one unit all programs for the education and training of health personnel. The division offers associate degree and certificate programs which are clinically intensive and prepare students to perform immediately upon graduation. Additionally, the division offers special courses, workshops, seminars and forums at which persons can learn new skills and acquire new knowledge or update the knowledge and skills needed to perform effectively on their jobs. The division affiliates with over fifty different hospitals and other health care agencies and institutions to provide clinical experiences for health students. All programs are accredited or approved by their respective professional bodies (if accreditation or approval is available).

Prerequisites for all programs are available at Cincinnati State.

Cooperative Education

Programs of education in health technology have a well established tradition of including experience in the clinical setting as an integral part of the educational process.

The Health Division supports the College's mission of providing a combination of theory and practice. The practical experience is received through cooperative/clinical education components, and each health program provides such experience. Refer to individual curriculum for specific information.

Transfer Module

Associate degree programs in the Health Technologies Division contain in their curricula most of the required courses for the Cincinnati State Transfer Module. The additional courses needed to complete the transfer module should be scheduled at times convenient to the student. Students who wish to transfer to an Ohio public university for baccalaureate degrees will find that a Cincinnati State Associate of Applied Science degree combined with a transfer module (showing grades of "C" or better) will receive preferential consideration at the receiving university.

Central Service Technology (CST)

This short certificate program will acquaint entry-level technicians with the scope of the central service profession along with the scientific principles that underlie their daily work. Individuals within this field must have a working knowledge of central service techniques for providing patient care items used in the health care facility.

The Central Service Technician processes, stores and distributes supplies and equipment used for patient care. In addition, Central Service Technicians participate in the selection and evaluation process of patient care items, assist with inventory control management and preventative maintenance of equipment.

The Central Service Technology program is approved by the International Association of Hospital Central Service Material Management (IAHCSMM). After successful completion of the program, graduates will be recognized as Registered Central Service Technicians (RCST). Graduates are eligible for the National Certification Examination administered by IAHCSMM for designation as a Certified Registered Central Service Technician (CRCST). Central Service Technicians can be employed in a health care facility in purchasing, sterile processing, material management and central service.

Central Service Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ST	4580	Central Service Technology 1	5	0	5
ST	4585	Central Service Clinical Prc 1	0	5	1
			5	5	6
■ Second Term					
ST	4581	Central Service Technology 2	5	0	5
ST	4586	Central Service Clinical Prc 2	0	5	1
			5	5	6
					12

Clinical Laboratory Technician (CLT)

Clinical Laboratory Technicians work closely with physicians. They provide much of the information needed by physicians to diagnose and treat patients. They work in the laboratories of hospitals, clinics, research centers and industry. In biochemistry, hematology, microbiology and blood bank laboratories they form a vital part of the health care team.

Clinical Laboratory Technicians employed in a laboratory, a hospital or clinic may specialize in one or two of the several areas of laboratory work or may rotate through all the departments in the laboratory. In biochemistry they perform chemical analysis of the blood for constituents, including glucose, urea, chloride, sodium, potassium and enzymes. In hematology they take blood samples from patients; count red and white cells; determine coagulation, bleeding and prothrombin times; measure sedimentation rates and determine hemoglobin concentrations. In microbiology they prepare and stain slides; plate cultures from urine, feces and wound specimens; determine the susceptibility of bacteria to antibiotics; and examine specimens for parasites. In blood banks they type blood from patients, draw blood from donors and process it. In the serology department they examine specimens for antibodies against various diseases.

The Clinical Laboratory Technician program is an associate degree program which includes two unpaid clinical laboratory rotations and two terms of paid cooperative employment. The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

Successful completion of the curriculum enables a student to apply to take a national certification exam. Graduates may apply to the American Society for Clinical Pathology Board of Registry Examination to obtain certification as a Medical Laboratory Technician, MLT (ASCP), or the National Certification Agency for Medical Laboratory Personnel to obtain certification as a Clinical Laboratory Technician, CLT (NCA).

Clinical Laboratory Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1131	College Algebra	4	0	4
CHE	2231	Fundamentals of Inorganic Chemistry	3	2	4
BIO	4014	Anatomy and Physiology 1	3	2	4
ML	4301	Basic Laboratory Techniques	2	3	3
			15	7	18
■ Second Term					
	15XX	Social Science Elective	3	0	3
CHE	2236	Physiological Chemistry	3	3	4
BIO	4015	Anatomy and Physiology 2	3	2	4
ML	4302	Basic Hematology & Hemo	2	6	4
ML	4303	Basic Urin & Body Fluids	1	3	2
			12	14	17
■ Third Term					
BIO	4016	Anatomy and Physiology 3	3	2	4
ML	4304	Clinical Chemistry	3	6	5
ML	4307	Hematology & Hemostasis 2	2	3	3
			8	11	12
■ Fourth Term					
ENG	1002	English Composition 2	3	0	3
BIO	4023	Immunology	3	0	3
ML	4311	Clinical Appl 1-Hematology & Urin	0	6	2
ML	4312	Clinical Appl 2-Clinical Chemistry	0	6	2
ML	4350	Orientation to the Clinical Lab	0	10	2
			6	22	12
■ Fifth Term					
ML	4353	Medical Lab Clinical Practice	1	40	6
■ Sixth Term					
	15XX	Social Science Elective	3	0	3
BIO	4009	General Microbiology	3	3	4
ML	4305	Immunohematology	3	6	5
ML	4308	Immunochemistry	2	3	3
			11	12	15
■ Seventh Term					
HLT	9300	Co-op Employment Health Technology	1	40	2
■ Eighth Term					
	101X	Technical Writing Elective	3	0	3
BIO	4020	Fundamentals of Pathophysiology	5	0	5
ML	4306	Clinical Microbiology 1	3	6	5
ML	4310	Clinical Microbiology 2	1	0	1
			12	6	14
■ Ninth Term					
ML	4309	Clinical Lab Seminar	3	0	3
HLT	9300	Co-op Employment Health Technology	1	40	2
			4	40	5
■ Tenth Term					
	102X	Oral Communication Elective	3	0	3
	15XX	Social Science Elective	3	0	3

ML	4313	Clinical Appl 3 BB - Serology	0	6	2
ML	4314	Clinical Appl 4-Clinical Microbiology	0	6	2
			6	12	10
					111

Social Science Electives:
Group 1 - Psychology: PSY 1502, PSY 1505, PSY 1506, PSY 1508, PSY 1509, PSY 1510
Group 2 - Economics: ECO 1512, ECO 1513
Group 3 - Sociology: SOC 1521, SOC 1523, SOC 1525, SOC 1527, SOC 1524
Group 4 - Government: GOV 1531, LBR 1535, LBR 1539
Group 5 - Humanities: LBR 1620, PHI 1625, HUM 1640, HUM 1642, HUM 1645
Technical Writing Electives: ENG 1010, ENG 1015, ENG 1018
Oral Communication Electives: SPE 1020, SPE 1024

Dietetic Technician (DT)

The Dietetic Technician is a professional in the challenging and ever-changing field of nutrition and dietetics. A Dietetic Technician is most often employed in the nutrition department of a hospital, nursing home, extended care facility, health maintenance organization, school or day care center.

The technician assumes a wide range of responsibilities assisting the Licensed Dietitian in nutrition care and departmental administration. The Dietetic Technician may be responsible for many aspects of health care from nutrition care and education of clients to the management of the food service facility. Activities in which the technician is involved include assessing a client's nutritional status utilizing appropriate assessment tools, teaching valuable nutrition concepts to individuals of varied age groups and social backgrounds, planning menus and diet modifications, training and scheduling food service employees, and supervising food production and service.

Successful completion of this program permits the student to take the American Dietetic Association certification examination for Dietetic Technicians. This program is approved by the American Dietetic Association.

Dietetic Technician Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
CHE	2236	Physiological Chemistry	3	3	4
HLT	4000	Introduction to Medical Terminology	2	2	3
DT	4111	Intro to Dietetics Tech	2	0	2
DT	4120	Food Management 1	2	6	4
			9	11	13
■ Second Term					
BIO	4014	Anatomy and Physiology 1	3	2	4
ENG	1001	English Composition 1	3	0	3
DT	4100	Fundamentals of Nutrition	3	2	4
DT	4121	Food Management 2	2	3	3
			11	7	14
■ Third Term					
HLT	4001	Intro Health Care System	2	0	2
PSY	1502	Human Relations	3	0	3
DT	4102	Nutrition for the Life Cycle	3	2	4
DT	4112	Dietetics Clinical Practice 1	0	9	3
DT	4124	Food Serv Sanitation Cert	2	0	2
			10	11	14
■ Fourth Term					
ENG	1002	English Composition 2	3	0	3
BIO	4015	Anatomy and Physiology 2	3	2	4
DT	4125	Quantity Food Production	2	6	4
HLT	9310	Coop Employment Health Tech	0	15	1
			8	23	12
■ Fifth Term					
BIO	4016	Anatomy and Physiology 3	3	2	4
DT	4104	Clinical Nutrition 1	3	2	4
DT	4113	Dietetics Clinical Practice 2	0	9	3
HLT	9310	Coop Employment Health Tech	0	15	1
			6	28	12
■ Sixth Term					
SPE	1024	Group Dynmic & Prob Solving	3	0	3
DT	4106	Clinical Nutrition 2	3	2	4
DT	4114	Dietetics Clinical Practice 3	0	9	3
DT	4155	Management of Human Res	3	0	3
HLT	9310	Cooperative Employment Health Tech	0	15	1
	15XX	Social Science Elective	3	0	3
			12	26	17
■ Seventh Term					
DT	4107	Clinical Nutrition 3	3	2	4
DT	4115	Dietetics Clinical Practice 4	0	9	3
DT	4122	Food Systems Management 1	2	3	3
			5	14	10
■ Eighth Term					
	101X	Technical Writing Elective	3	0	3
	15XX	Social Science Elective	3	0	3
DT	4129	Food Systems Management 2	2	6	4
			8	6	10
■ Ninth Term					
DT	4109	Dietetic Technician Seminar	2	0	2
DT	4116	DT Directed Practice 6	0	9	3
DT	* 4117	Community Outreach Directed Practice	1	6	3
			3	15	8
					110

* Course 4117 can be taken ineither eighth or ninth terms.
Social Science Electives:
Group 1 - Psychology: PSY 1505, PSY 1506, PSY 1508, PSY 1509, PSY 1510
Group 2 - Economics: ECO 1512, ECO 1513
Group 3 - Sociology: SOC 1521, SOC 1523, SOC 1524, SOC 1525, SOC 1526, SOC 1527
Group 4 - Government: GOV 1531, GOV 1535, GOV 1539, GOV 1551, GOV 1553
Group 5 - Humanities: PHI 1620, PHI 1625, HUM 1640, HUM 1642, HUM 1645
Tech Writing Elective: ENG 1010, ENG 1015, ENG 1018

Dietary Management Certificate (DMC)

This one-year certificate program prepares a person to perform supervisory functions in many types of dietary facilities. The program, attended on a part-time basis, encourages employment and coursework at the same time. Two terms of cooperative work experience or the equivalent are required.

Dietary Management graduates are employed in nursing homes, retirement facilities, hospitals, schools, handicap institutions and businesses. Job activities might include food distribution supervision; employee hiring, training, scheduling and evaluation; inventory controls and purchasing; safety and sanitation programs and food production supervision.

The program has national approval by the Dietary Managers Association. Following the certification examination, membership in this professional organization is encouraged.

Dietary Management Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
DT	4130	Introduction to Nutrition	3	0	3
DT	4141	Dietary Manager's Orientation	1	0	1
SPE	1024	Group Dynmic & Prob Solving	3	0	3
			7	0	7
■ Second Term					
DT	4124	Food Service Sanitation Certification	2	0	2
DT	4151	Food Production 1	2	3	3

DT	4153	Diet Therapy	2	0	2
HLT	9310	Cooperative Employment Health Tech	0	15	1
			6	18	8
■ Third Term					
DT	4142	Dietary Manager's Field Experience 1	0	9	3
DT	4152	Food Production 2	2	3	3
DT	4155	Management of Human Resources	3	0	3
HLT	9310	Cooperative Employment Health Tech	0	15	1
			5	27	10
■ Fourth Term					
DT	4143	Dietary Manager's Field Experience 2	0	9	3
DT	4154	Dietary Food Systems	3	0	3
			3	9	6
■ Fifth Term					
HLT	9310	Cooperative Employment Health Tech	0	15	1
MIS	1850	Computerized Business Applc	3	2	4
			3	17	5
					36

Electrocardiograph Technician Certificate (EGRT)

The ECG Technician is the entry-level position for the health field of cardiovascular technology. Individuals in this field must possess the knowledge, skill and ability necessary to provide professional services related to proper diagnosis and subsequent treatment of cardiovascular diseases. The ECG technician is responsible for performing electrocardiograms with patients who may have irregularities in heart action, or as part of a routine examination. The technician prepares the recording for analysis by the physician. This includes the recognition and elimination of technical errors in the recording and also the ability to recognize and call to the physician's attention significant ECG abnormalities. Some ECG technicians must also type physician interpretations of ECGs on reports, schedule appointments, maintain patient files and care for ECG equipment. ECG technicians spend time moving from patient to patient and must have the physical dexterity to handle the equipment and the patient, and the stamina to endure long periods of time on their feet. With experience, an ECG technician may assist with or perform additional procedures such as stress testing and Holter monitoring. The Cincinnati State program in Electrocardiography meets the essentials for an approved short course ECG technician training program as published by the American Cardiology Technologists Association. This program is designed for students seeking basic entry-level skills in the field of cardiovascular technology. Completion of the program will qualify the student to function as an ECG technician in the hospital, clinic or private physician's office.

Electrocardiograph Technician Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
PSY	1502	Human Relations	3	0	3
HLT	4000	Introduction to Medical Terminology	2	2	3
			5	2	6
■ Second Term					
RT	4770	Basic Electrocardiography	3	2	4
■ Third Term					
RT	4771	Arrhythmia Recognition	3	0	3
RT	4780	ECG Clinical Practice	0	20	2
			3	20	5
					15

Health Information Management (HIM)

(formerly Medical Records Technology)

Health Information Management is the field that focuses on health care data and management of information resources.

Health Information Management professionals collect, integrate and analyze primary and secondary health care data, disseminate information and manage information resources related to the research, planning, provision, payment and evaluation of health care services.

Students have the opportunity for paid cooperative education experiences.

Cincinnati State's program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the American Health Information Management Association's Council on Accreditation. Graduates of the program will be eligible to write the national certification examination for medical record technicians. After successful completion of this exam, the individual will be an Accredited Record Technician (ART).

Health Information Management Technician Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
MIS	1850	Computerized Business Appl	3	2	4
HLT	4000	Intro Medical Terminology	2	2	3
HLT	4001	Intro Health Care System	2	0	2
BIO	4014	Anatomy and Physiology 1	3	2	4
MR	4405	Orient to Health Info	2	2	3
MR	4407	Record Content-Format	2	2	3
			14	10	19
■ Second Term					
HLT	9300	Coop Employment Health Tech	1	40	2
■ Third Term					
ENG	1001	English Composition 1	3	0	3
PSY	1502	Human Relations	3	0	3
BIO	4015	Anatomy and Physiology 2	3	2	4
MR	4415	Legal Aspects of Health Infor	3	0	3
HIM	4420	ICD-9-CM Coding 1	2	2	3
HIM	4435	Computer Appl in HIM	1	2	2
			15	6	18
■ Fourth Term					
HLT	9300	Coop Employment Health Tech	1	40	2
■ Fifth Term					
	100X	English Comp Elective	3	0	3
	15XX	Social Science Elective	3	0	3
BIO	4016	Anatomy and Physiology 3	3	2	4
HIM	4421	ICD-9-CM Coding 2	2	2	3
MR	4431	Health Info Dept Mgmt	3	0	3
			14	4	16
■ Sixth Term					
HLT	9300	Coop Employment Health Tech	1	40	2
■ Seventh Term					
	15XX	Social Science Elective	3	0	3
BIO	4020	Fund of Pathophysiology	5	0	5
MR	4417	Med Stat and Rec Abstract	3	2	4
HIM	4422	ICD-9-CM Coding 3	2	2	3
MR	4428	MR Directed Practice I	0	16	3
MR	4432	Alt Health Record Systems	3	0	3
			16	20	21
■ Eight Term					
HLT	9300	Coop Employment Health Tech	1	40	2
■ Ninth Term					
ENG	1010	Technical Writing 1	3	0	3
SPE	1020	Effective Speaking	3	0	3
MR	4409	Medical Record Seminar	3	0	3
MR	4410	CPT Coding	2	2	3
MR	4418	Tumor Reg Utili Rev & Qua	4	0	4

MR	4429	MR Directed Practice 2	0	16	3
			15	18	19

■ Tenth Term

HLT	9300	Coop Employment Health Tech	1	40	2
					103

English Comp Elective: ENG 1002, ENG 1009
Social Science Elective:
Group 1 - Psychology: PSY 1505
Group 2 - Economics: ECO 1512, ECO 1513
Group 3 - Sociology: SOC 1521, SOC 1524, SOC 1527
Group 4 - Government: LBR 1535, LBR 1539
Group 5 - Humanities: PHI 1620, PHI 1625, HUM 1640, HUM 1642, HUM 1645

Health Unit Coordinator Certificate (UCMR)

Health Unit Coordinators work in hospitals and nursing homes as managers of the non-clinical nursing tasks. Job duties include communications with the patients, public and other members of the health care team; maintenance of the patient's chart; coordination of unit procedures; and general assistance with activities of the nursing unit.

Health Unit Coordinators must have good communication skills, ability to be tactful with all people, ability to organize and prioritize, and understand the legal and ethical implications of managing patient records.

Cincinnati State's Health Unit Coordinator training program is a four-term program. The first three terms consist of classes at the College covering Health Unit Coordinating procedures and communication skills. The last term consists of a five-week internship at a local hospital along with classes at the College.

The Cincinnati State program in Health Unit Coordinating meets the standards of education as published by the National Association of Health Unit Coordinators and is registered with the National Association of Health Unit Coordinators. This program is designed for students seeking basic entry-level skills in Health Unit Coordinating. Completion of the program will qualify the student to take the National Certification Exam for Health Unit Coordinators.

Health Unit Coordinator Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
HLT	4000	Introduction to Medical Terminology	2	2	3
HLT	4001	Introduction to Health Care Systems	2	0	2
MR	4470	Orient Health Unit Coordination	3	2	4
			7	4	9
■ Second Term					
SEC	3001	Typewriting 1	2	3	3
MR	4408	Advanced Medical Terminology	3	0	3
MR	4471	HUC 1 & Directed Practice	2	4	4
			7	7	10
■ Third Term					
ENG	1001	English Composition 1	3	0	3
PSY	1502	Human Relations	3	0	3
MR	4472	HUC 2 & Directed Practice	2	4	4
			8	4	10
■ Fourth Term					
MR	4481	HUC Practicum	2	20	6
MIS	1850	Comptrized Business Applc	3	2	4
			5	22	10
					39

Medical Assistant Technology (MAC) (MA)

Medical Assisting is a growth occupation for the 1990s. Job opportunities are plentiful and are expected to increase rapidly. The Medical Assistant is a versatile professional who performs administrative, clinical, and management functions.

The Medical Assistant program prepares students to work in physicians' offices providing patient care, performing administrative tasks and managing the medical office. The administrative tasks performed include filing, scheduling appointments, handling correspondence, maintaining patient records, bookkeeping and completing insurance forms. The clinical tasks performed involve taking and recording medical histories, preparing patients for examinations, assisting with examinations and office surgeries, measuring vital signs, performing routine laboratory work, x-rays, EKG's and giving injections. As a manager, the Medical Assistant manages patient care, the office, and the physician's time, personal & professional affairs.

The Medical Assistant program offers two options for the student: students can complete one year for a technical certificate or continue on to the second year, earning an associate degree upon successful completion. The first year of the program prepares the student with entry-level job skills. The second year of the program adds additional management, occupational and education skills. Students in either option must complete supervised clinical practices or externships to develop competencies in the skills needed by the Medical Assistant. Students receive no monetary reimbursement for these experiences.

Cincinnati State's Medical Assisting program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Committee on Accreditation for Medical Assistant Education.

Upon successful completion of the program, either the one or two year, graduates are eligible to take the examination to become a Certified Medical Assistant (CMA).

Medical Assistant Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
HLT	4000	Introduction to Medical Terminology	2	2	3
BIO	4014	Anatomy and Physiology 1	3	2	4
MA	4202	Clinical Procedures 1	3	3	4
MA	4204	Medical Lab Procedures 1	3	3	4
MA	4214	Medical Office Computer Literacy	1	3	2
			12	13	17
■ Second Term					
HLT	4007	Emergency Medical Procedures	1	2	2
BIO	4015	Anatomy and Physiology 2	3	2	4
MA	4200	Medical Office Practice 1	2	3	3
MA	4203	Clinical Procedures 2	3	3	4
MA	4205	Medical Lab Procedures 2	3	3	4
			12	13	17
■ Third Term					
MA	4208	Medical Office Bookkeeping & Insurance	3	6	5
MA	4211	MA Clinical Experience 1	0	17	3
			3	23	8
■ Fourth Term					
ENG	1009	Business English	3	0	3
PSY	1505	Intro to Psychology 1	3	0	3
BIO	4009	General Microbiology	3	3	4
BIO	4016	Anatomy and Physiology 3	3	2	4
MA	4201	Medical Office Practice 2	2	3	3
			14	8	17
■ Fifth Term					
PSY	1506	Intro to Psychology 2	3	0	3
HLT	4018	Essentials of Pharmacology	3	0	3
MA	4212	MA Clinical Experience 2	0	17	3
MA	4215	MA Applications	2	3	3
			8	20	12
					71

Medical Assistant Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
DT	4130	Introduction to Nutrition	3	0	3
MA	4224	Advanced Clinical Procedure	2	3	3
MR	4408	Advanced Medical Terminology	3	0	3
			11	3	12
■ Second Term					
MA	4213	MA Clinical Experience 3	0	17	3
■ Third Term					
ENG	1011	Business Communications	3	0	3
SPE	1024	Group Dynamics & Problem Solving	3	0	3
SOC	1527	Technical & Ethical Decisions	3	0	3
MA	4206	Medical Laboratory Procedures 3	2	3	3
			11	3	12
■ Fourth Term					
	15XX	Social Science Elective	3	0	3
	15XX	Social Science Elective	3	0	3
PSY	1509	Psychology: Adult Development	3	0	3
MA	4209	Medical Assistant Seminar	2	4	3
			11	4	12
					39

Social Science Electives: PSY 1502, PSY 1508, PSY 1510, SOC 1521, SOC 1523, SOC 1524, SOC 1525, LBR 1535, LBR 1539, PHI 1620, PHI 1625, HUM 1640, HUM 1642, HUM 1645

Nursing Program (NUR) (NURP)

The Nursing program was created through a joint effort between the former Cincinnati Technical College and Bethesda Hospital, Inc. The program is relatively new at Cincinnati State, but its developmental history is directly traced to the former Bethesda Hospital School of Nursing, one of Cincinnati's oldest and finest diploma programs.

The purpose of the program is to prepare graduate nurses who are eligible to take the national standardized nursing examination (NCLEX-RN) and upon passing, work as registered nurses.

The graduate is a member of the health team prepared to provide nursing care to clients with common health problems in structured health care settings, such as hospitals and extended health care facilities.

The program is approved by the Ohio Board of Nursing and accredited by the National League for Nursing.

The objectives of this program are to prepare the graduate to:

1. synthesize the knowledge and principles from biological, behavioral, and nursing sciences in providing nursing care to individuals and groups with common health problems;
2. collaborate with health team members to provide client and family referrals to appropriate resources;
3. advance own nursing practice by seeking new knowledge from current resources, continuing education courses and formal study;
4. practice therapeutic communication to promote client and family self-exploration, self-understanding, redirection for growth and development;
5. delegate aspects of nursing care to other health care workers commensurate with their educational preparation, experience, and job descriptions;
6. use nursing process as the basis for decision-making to administer care for individuals and groups of clients;
7. incorporate planned and spontaneous teaching activities into own practice with individuals, families and groups;
8. demonstrate competence in providing individualized nursing care to a group of clients in an acute or extended health care setting;
9. establish priorities as a manager of care for a group of clients in an acute or extended health care setting;
10. be accountable for both nursing care delivered and care delegated to others;
11. seek assistance from more experienced registered nurses when confronted with a situation that is beyond own educational preparation or experience.

To be eligible for the program, applicants must be graduates from an accredited high school or give evidence of high school equivalency by GED scores which meet standard score requirements set by the Ohio State Department of Education. Applicants must indicate achievement of "C" or better in high school or college courses of biology, chemistry and algebra. These courses must have been taken within seven years of application. In addition, ASSET scores must meet division requirements: College level reading and English; math ability above level of science math. Current two-person and child/infant CPR certification is required for admission into all clinical nursing courses. A recent physical exam with up to date immunizations, including Hepatitis B, is required to enter the first nursing course. An annual two-step TB skin test is required to remain in the program.

A minimum grade of "C" is required in all curriculum courses. Support courses MUST be taken in the sequence listed in the program curriculum outlines unless they have been taken previous to the term required. Students must meet all requirements of the program, receive a minimum grade of "C" or "Satisfactory" in all courses, attain satisfactory clinical evaluation, and maintain a minimum overall grade point average of 2.0 to enter, remain in, progress through and to complete the program.

Prospective students are advised that when applying for the state licensure examination, the candidate will be required to answer a series of questions related to criminal convictions and reasons for dismissal from work positions. A positive response to any of these questions can result in disqualification as a candidate for licensure. Refer to Ohio Revised Code 4723.28 for clarification.

Students who are admitted to the program with criminal records are required to contact the Program Chair to discuss their situation before entering the first nursing course. Students who are convicted of possession and/or distribution of controlled substances while enrolled in the program will be automatically dismissed.

A special track for Licensed Practical Nurses (NURP) with recent experience in hospitals or skilled long-term facilities exists, and persons interested in this tract should request information through the Nursing counselor or NURP clinical coordinator.

Students desiring to transfer nursing credit from another nursing program to Cincinnati State need to contact the program chair for specific information after being admitted to the College and program. Twenty-six (26) quarter credits is the maximum amount of nursing transfer of credit permitted after intense review of submitted course documents. Students who failed a nursing course or courses in another program have restrictions on nursing credit transfer.

Nursing Program Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term - Level 1					
PSY	1505	Introduction to Psychology 1	3	0	3
BIO	4014	Anatomy and Physiology 1	3	2	4
NUR	4911	Fundamentals of Nursing	4	6	6
			10	8	13

■ Second Term - Level 2

SOC	1521	Introduction to Sociology	3	0	3
BIO	4015	Anatomy & Physiology 2	3	2	4
NUR	4912	Adult Nursing 1	4	6	6
			10	8	13

■ Third Term - Level 3

ENG	1001	English Composition 1	3	0	3
BIO	4016	Anatomy and Physiology 3	3	2	4
HLT	4018	Pharmacology	3	0	3
NUR	4913	Gerontological Nursing	4	6	6
			13	8	16

■ Fourth Term - Level 3

BIO	4009	General Microbiology	3	3	4
NUR	4914	Adult Nursing 2	5	9	8
			8	12	12

■ Fifth Term - Level 4

ENG	1002	English Composition 2	3	0	3
SPE	1024	Group Dynamics & Problem Solving	3	0	3
NUR	4915	Mental Health Nursing	5	6	7
			11	6	13

■ Sixth Term - Level 4

PSY	1508	Psych: Child Development	3	0	3
NUR	4916	Parent-Child Health Nursing	7	12	11
			10	12	14

■ Seventh Term - Level 5

	15XX	Social Science Elective	3	0	3
NUR	4917	Adult Nursing 3	8	12	12
			11	12	15

■ Eighth Term - Level 5

NUR	9372	Nursing Co-op Educ Exp	0	25	2

■ Ninth Term - Level 6

ENG	1010	Technical Writing 1	3	0	3
NUR	4919	Management of Client Care	3	18	9
			6	18	12

Total Credits Required 110

Social Science Electives: PSY 1509, PSY 1510, SOC 1524, SOC 1525, SOC 1526, SOC 1527.

All courses within a level must be completed with a "C" or better before progressing to the next level.

Alternative Program: LPN to RN

			Hours Per Week Class	Lab	Credit Hours
■ First Term - Level 1					
ENG	1001	English Composition 1	3	0	3
PSY	1505	Intro to Psychology 1	3	0	3
BIO	4014	Anatomy and Physiology 1	3	2	4
NUR	4911	Fundamentals of Nursing	4	6	6
			13	8	16
■ Second Term - Level 2					
ENG	1002	English Composition 2	3	0	3
BIO	4015	Anatomy & Physiology 2	3	2	4
HLT	4018	Pharmacology	3	0	3
NUR	4912	Adult Nursing 1	4	6	6
			13	8	16
■ Third Term - Level 3					
SOC	1521	Introduction to Sociology	3	0	3
BIO	4016	Anatomy and Physiology 3	3	2	4
NUR	4996	Role Transition in Nursing: NURP	3	2	4
		(successful completion of this course results in fulfilling requirements for 4911 and 4912)			
			9	4	11
■ Fourth Term - Level 3					
ENG	1010	Technical Writing 1	3	0	3
SPE	1024	Group Dynamics & Problem Solving	3	0	3
NUR	4983	Gerontological Nsg: NURP	1	2	2
		(successful completion of this course results in fulfilling requirements for 4913)			
			7	2	8
■ Fifth Term - Level 4					
PSY	1508	Psych: Child Development	3	0	3
BIO	4009	General Microbiology	3	3	4
NUR	4984	Adult Nursing 2: NURP	2	2	3
		(successful completion of this course results in fulfilling requirements for 4914)			
			8	5	10
■ Sixth Term - Level 4					
	15XX	Social Science Elective	3	0	3
NUR	4985	Mental Health Nursing: NURP	5	6	7
			8	6	10
■ Seventh Term - Level 4					
NUR	4986	Parent-Child Health Nursing	7	12	11
■ Eighth Term - Level 5					
NUR	4988	Adult Nursing 3: NURP	3	4	5
		(successful completion of this course results in fulfilling requirements for 4917)			
NUR	9372	Nursing Co-op Educ Exp	0	25	2
			3	29	7
■ Ninth Term - Level 6					
NUR	4989	Management of Client Care: NURP	2	16	9
					97

Social Science Electives: PSY 1509, PSY 1510, SOC 1524, SOC 1525, SOC 1526, SOC 1527.

Advanced standing credit is available specifically to the LPN for courses HLT 4018 and NUR 9372.

Occupational Therapy Assistant Program (OTA)

Occupational therapy is the art and science of directing man's response to selected activity to promote and maintain health, to prevent disability, to evaluate behavior and to treat or train patients with physical or psychological dysfunction.

The term "selected activity" in the definition of occupational therapy is the key to the uniqueness of the field and relates directly to an individual's occupation. Occupation may be defined as those tasks which occupy the majority of one's time. Occupational therapy is concerned with the person biologically, psychologically and socially, and provides services to those individuals whose ability to cope with the tasks of living is threatened or impaired. Using evaluative and therapeutic means, occupational therapy promotes meaningful performance throughout the life cycle and encourages a healthy balance of time spent in self-care, work and play-leisure.

The graduate Occupational Therapy Assistant is a technically qualified member of the health team who functions under the supervision or consultation of a certified/registered occupational therapist. The assistant accepts clinical responsibilities in hospitals, nursing homes, day care centers, rehabilitation centers or those organizations directed to maintain health and socialization of their members. The graduate will demonstrate entry-level competency in the analysis of activities and their application to patient needs; occupational therapy concepts and skills (daily living skills, group activities, media used in treatment and adaptive equipment); direction of activity programs; management of department operations; data collection; self understanding and the realization of the effect that one's behavior has on the patient/client and others; upholding the standards of the profession and identifying the need for continuing professional education and growth; and relating occupational therapy to the total health care system.

The mission of the Occupational Therapy Assistant program is multifaceted. Major areas addressed by this program are as follows:

1. to meet the Occupational Therapy manpower needs in the greater Cincinnati area.
2. to prepare the graduates of the program to be a competent entry-level occupational therapy assistant in the variety of potential practice areas in the greater Cincinnati area.
3. to prepare the graduates to be contributing members of society.

4. to educate the community in the role of the occupational therapy assistant.
5. to function within the standards of the institution's mission, purpose, and philosophy.
6. to function within the educational and practice standards of the American Occupational Therapy Association.

The Occupational Therapy Assistant program is accredited by the Comission on Accreditation of Allied Health Education Programs in conjunction with the Accrediation Committee of the American Occupational Therapy Association. Graduates of the program will be able to sit for the national certification examination for the occupational therapy assistant administered by the American Occupational Therapy Certification Board. After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice, however, state licenses are usually based on the results of the AOTCB Certification Exam.

Occupational Therapy Assistant Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
SPE	1024	Group Dynamics & Problem Solving	3	0	3
PSY	1505	Introduction to Psychology 1	3	0	3
HLT	4000	Introduction to Medical Terminology	2	2	3
OTA	4600	Introduction to OTA	2	3	3
			13	5	15
■ Second Term					
PSY	1502	Human Relations	3	0	3
PSY	1506	Introduction to Psychology 2	3	0	3
BIO	4014	Anatomy and Physiology 1	3	2	4
OTA	4610	Theory of OT	4	0	4
OTA	4620	Techniques of OT	0	4	2
			13	6	16
■ Third Term					
HLT	4007	Emergency Medical Procedures	1	2	2
BIO	4015	Anatomy and Physiology 2	3	2	4
OTA	4611	OT Concepts - Psychosocial	3	0	3
OTA	4621	Media for OT - Psychosocial	0	4	2
OTA	4651	OTA Field Work 1 (Level 1)	0	9	3
			7	17	14
■ Fourth Term					
PSY	1508	Psychology: Child Development	3	0	3
BIO	4016	Anatomy and Physiology 3	3	2	4
OTA	4612	OT Concepts - Infants & Children	3	0	3
OTA	4622	Media for OT - Infants & Children	0	4	2
OTA	4652	OTA Field Work 2 (Level 1)	0	9	2
			9	15	14
■ Fifth Term					
ENG	1002	English Composition 2	3	0	3
SOC	1521	Introduction to Sociology	3	0	3
HLT	4001	Intro. to the Health Care System	2	0	2
			8	0	8
■ Sixth Term					
PSY	1509	Psychology: Adult Development	3	0	3
OTA	4613	OT Concepts & Skills - Dys	3	0	3
OTA	4623	Media for OT-Phys Disab	0	4	2
OTA	4653	OTA Field Work 3 (Level 1)	0	9	2
OTA	4633	Kinesiology for Occ Ther	2	2	3
			8	15	13
■ Seventh Term					
BIO	4020	Fund of Pathophysiology	5	0	5
OTA	4614	OT Concepts - Gerontology	3	0	3
OTA	4624	OT Therapeutic Media - Gerontology	0	4	2
			8	4	10
■ Eighth Term					
ENG	1010	Technical Writing 1	3	0	3
OTA	4625	Survey of Therapeu. Media OT	0	6	3
OTA	4631	OT Fundamentals Practice	2	0	2
			5	6	8
■ Ninth Term					
OTA	4660	OTA Field Work 4 (Level 2)	0	40	6
■ Tenth Term					
OTA	4661	OTA Field Work 5 (Level 2)	0	40	6
					109

Respiratory Care (RC)

Respiratory Care education at Cincinnati State is a two-year associate degree program.

Students are trained to administer all routine respiratory care procedures, continuous mechanical ventilation, hemodynamic monitoring and other specialized diagnostic and therapeutic procedures. In addition, they receive training in nontraditional areas such as home care and pulmonary rehabilitation. The program is twenty-two months in duration. This program does not include paid cooperative education since students spend their time in coursework and unpaid clinical experiences.

The program is fully accredited. Program graduates may apply for the certification examination and registry examination administered by the National Board for Respiratory Care (NBRC). Candidates who complete these requirements are recognized as Certified Respiratory Therapy Technicians (CRTT) and as Registered Respiratory Therapists (RRT).

Respiratory Care Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
MAT	1131	College Algebra	4	0	4
PHY	2244	Health Physics 1	3	2	4
BIO	4014	Anatomy and Physiology 1	3	2	4
RT	4700	Introduction to Respiratory Care	2	0	2
CHE	2236	Physiological Chemistry	3	3	4
			15	7	18
■ Second Term					
ENG	1001	English Composition 1	3	0	3
BIO	4015	Anatomy and Physiology 2	3	2	4
RT	4701	Respiratory Care Science 1	3	2	4
RT	4720	Cardiopulmonary A & P	3	2	4
			12	6	15
■ Third Term					
BIO	4009	General Microbiology	3	3	4
BIO	4016	Anatomy and Physiology 3	3	2	4
RT	4702	Respiratory Care Science 2	2	3	3
RT	4711	RC Clinical Practice 1	0	9	1
			8	17	12
■ Fourth Term					
ENG	100X	English Composition Elective	3	0	3
RT	4703	Respiratory Care Science 3	3	2	4
RT	4712	RC Clinical Practice 2	0	9	1
RT	4718	Pulmonary Diseases 1	2	0	2
HLT	4718	Pharmacology	3	0	3
			11	11	13
■ Fifth Term					
RT	4704	Respiratory Care Science 4	3	3	4
RT	4713	RC Clinical Practice 3	0	25	4
RT	4719	Pulmonary Diseases 2	2	0	2
			5	28	10
■ Sixth Term					
	15XX	Social Science Elective	3	0	3
RT	4705	Respiratory Care Science 5	3	2	4
RT	4714	RC Clinical Practice 4	0	30	5
			6	32	12
■ Seventh Term					
ENG	101X	Technical Writing Elective	3	0	3
BIO	4020	Fundamentals of Pathophysiology	5	0	5
RT	4706	Respiratory Care Science 6	5	0	5
			13	0	13

■ Eighth Term

	15XX	Social Science Elective	3	0	3
	15XX	Social Science Elective	3	0	3
RT	4707	Respiratory Care Science 7	3	0	3
RT	4715	RC Clinical Practice 5	0	18	3
			9	18	12

■ Ninth Term

SPE	102X	Oral Communication Elective	3	0	3
RT	4716	RC Clinical Practice 6	0	18	3
RT	4723	Respiratory Therapy Seminar	2	2	3
			5	20	9
					114

English Composition Electives: ENG 1002, ENG 1007, ENG 1008, ENG 1010
Social Science Electives:
Group 1 - Psychology: PSY 1502, PSY 1505, PSY 1506, PSY 1508, PSY 1509
Group 2 - Economics: ECO 1512, ECO 1513
Group 3 - Sociology: SOC 1521, SOC 1523, SOC 1524, SOC 1525, SOC 1527
Group 4 - Government: GOV 1531, LBR 1535, LBR 1539
Group 5 - Humanities: PHI 1620, PHI 1625, HUM 1640, HUM 1642, HUM 1645
Technical Writing Electives: ENG 1010, ENG 1015
Oral Communication Electives: SPE 1020, SPE 1024

Surgical Technology (ST)

Surgical Technology is the only health care educational program that prepares practitioners specifically for the operating room scrub role. Employment opportunities include hospital operating room departments, obstetrical departments, surgical supply/processing departments, outpatient surgery centers and surgeon office practices.

During operative procedures, the Surgical Technologist functions as an integral part of the surgical team and works directly with the surgeon and registered nurse. Their responsibilities include preparation of operative equipment and supplies, instrumentation during operative procedures and other intra-operative patient care activities.

Surgical Technology, an associate degree program, focuses upon the scrub role during general surgery and surgical specialty procedures. Approximately thirteen area hospitals are affiliated with the program.

Theory and practice are integrated through the use of simulated laboratory experiences and hospital operating room experiences. Students also take supportive coursework in basic sciences, communication skills and social sciences.

The program is accredited by the Commission on Accreditation of Allied Health Education Programs in collaboration with the Joint Review Committee for Surgical Technologists.

Upon satisfactory completion of the curriculum, students are eligible for the National Certification Examination of the Association of Surgical Technologists for designation as a Certified Surgical Technologist (CST). A Certified Surgical Technologist may practice in any state within the USA.

Surgical Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
HLT	4000	Introduction to Medical Terminology	2	2	3
BIO	4014	Anatomy and Physiology 1	3	2	4
ST	4505	Introduction to Surgery 1	5	0	5
ST	4541	ST Surgery Lab	0	3	1
			10	7	13
■ Second Term					
SPE	1024	Group Dynmic & Prob Solving	3	0	3
BIO	4009	General Microbiology	3	3	4
ST	4506	Introduction to Surgery 2	5	0	5
ST	4542	ST Clinical Experience 1	0	4	2
ST	4560	ST Surgery Lab 2	0	2	1
			11	9	15
■ Third Term					
MAT	1131	College Algebra	4	0	4
BIO	4015	Anatomy and Physiology 2	3	2	4
ST	4531	General Surgery	5	0	5
ST	4543	ST Clinical Experience 2	0	4	2
ST	4561	ST Surgery Lab 3	0	2	1
			12	8	16
■ Fourth Term					
ENG	1001	English Composition 1	3	0	3
BIO	4016	Anatomy and Physiology 3	3	2	4
ST	4532	General Surgery 2	5	0	5
ST	4544	ST Clinical Experience 3	1	4	3
			12	6	15
■ Fifth Term					
ENG	1002	English Composition 2	3	0	3
HLT	4001	Intro. to Health Care System	2	0	2
HLT	4018	Pharmacology	3	0	3
ST	4533	Surgical Specialties 1	5	0	5
			13	0	13
■ Sixth Term					
	15XX	Social Science Elective	3	0	3
ST	4534	Surgical Specialties 2	5	0	5
ST	4551	ST Clinical Practice 1	0	25	5
			8	25	13
■ Seventh Term					
	15XX	Social Science Elective	3	0	3
ST	4535	Surgical Specialties 3	5	0	5
ST	4552	ST Clinical Practice 2	0	25	5
			8	25	13
■ Eighth Term					
ENG	1010	Technical Writing 1	3	0	3
	15XX	Social Science Elective	3	0	3
ST	4553	ST Clinical Practice 3	0	25	5
			6	25	11
					109

Social Science Electives:
Group 1 - Psychology: PSY 1505, PSY 1506, PSY 1508, PSY 1509, PSY 1510
Group 2 - Economics: ECO 1512, ECO 1513
Group 3 - Sociology: SOC 1521, SOC 1523, SOC 1524, SOC 1525, SOC 1527
Group 5 - Humanities: PHI 1620, PHI 1625, HUM 1640, HUM 1642, HUM 1645

Humanities Division

The Humanities Division recognizes that each student is a unique combination of attitudes, beliefs, values, and experiences. The Humanities courses are designed to enable students to understand the forces which shape them, especially in the psychological, social, and economic areas, and to provide tools which will assist students either in controlling or in adapting to these forces.

Foremost among these tools is effective communication, both oral and written; therefore, the division offers a number of courses which enhance communication skills through the development of critical thinking techniques and the development of the ability to present information in a clear, organized manner.

Programs of Study

The Humanities Division offers the Associate of Arts degree

described on page 51 as well as the Associate of Applied Science degree and certificate programs described below.

The Writing Center

Individualized Composition Courses—Currently, English Composition courses ENG 1001, ENG 1009, ENG 1010 and ENG 1011 are offered in both the traditional lecture format and as individualized courses. For individualized courses, students meet one-on-one with the course instructor to review material and complete assignments. The individualized courses offered each term are designed as course type "I" in class schedules.

Computerized Composition Courses—Some sections of selected composition classes are offered in a computer laboratory. These classes contain the same material as other composition classes, but allow students to compose and revise their assignments using word processing software. Students interested in taking such classes are advised to have keyboarding skills. A lab fee is charged in these classes.

Other Services—Instructors of Communications Skills staff the Writing Center to provide all students with help they need in any writing or other communication problems. Students usually can be accommodated on a "drop-in" basis or may request an appointment. For students uncertain of their communication skills level, assessment is available.

The Writing Center Hotline (569-1736 or 569-1737) answers questions about business communications, technical writing, grammar, punctuation, spelling, capitalization and word usage. The hours are 8:00 a.m. to 8:00 p.m., Monday through Thursday, 8:00 a.m. to 4:00 p.m. Friday, and 9:00 a.m. to 1:00 p.m. Saturday.

Cooperative Education in the Humanities Division

The Humanities Division shares the College's commitment to cooperative education as an integral part of the curriculum. In order to participate in cooperative education, students in the Humanities Division degree programs must comply with College eligibility requirements and registration procedures. Students may complete their cooperative education requirement through varied (full-time or part-time) on-site work experiences. In some cases, degree-seeking students in the Humanities Division may complete their cooperative education requirement by receiving credit for past related work experience or by completing appropriate courses. However, all substitutions must be approved in advance by the Program Chair and the Cooperative Education Coordinator.

Students seeking the Associate of Arts degree must adhere to the cooperative education requirements for the AA degree, as stated on page 54.

Transfer Module

The Associate of Arts degree requirements contain all of the requirements of the College Transfer Module.

The technical associate degree program in the Humanities Division contains in its curriculum most of the required courses for the College Transfer Module. The additional courses needed to complete the transfer module may be scheduled at times convenient to the student. Students who wish to transfer to an Ohio public university for baccalaureate degrees will find that an Associate of Applied Science degree combined with a transfer module (showing grades of C or better) will receive preferential consideration at the receiving institution.

Customized Training

Faculty in the Humanities Division welcome inquiries about providing training for individuals and corporations. Resources are available to assist with identifying and satisfying a variety of training needs.

Employee and Labor Relations Certificate Curriculum

The certificate in employee and labor relations recognizes the student who successfully completes a program of courses from the Business and Social Sciences curricula which have been chosen to develop competencies in the area of Human Resource Management. The student will prepare to face the complex social, legal, and economic issues of the modern American workplace. The focus of the coursework is on human behavior, vital management/leadership skills, and the rights and responsibilities of the employer and employee today.

This concentration of courses would be helpful to students or professionals in preparing for such positions as manager, supervisor, team leader, foreperson, department head, or employee representative. It would also be useful as a foundation for those who plan a career in the field of human resource management. Students may elect to take longer than three terms to complete the curriculum.

Employee and Labor Relations Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
	XXXX	Elective	0	0	3
SPE	1024	Group Dynamics and Problem Solving	3	0	3
LBR	1535	Intro to Labor-Management Relations	3	0	3
LAW	1823	Business Law 1	3	0	3
MGT	2925	Business Principles	3	0	3
			12	0	15
■ Second Term					
	XXXX	Elective	0	0	3
SOC	1525	Changing Roles for Men and Women	3	0	3
MGT	1832	Human Resource Management	3	0	3
MIS	1850	Computerized Business Applications	3	2	4
MGT	2926	Principles of Management	3	0	3
			12	2	16
■ Third Term					
	XXXX	Elective	0	0	3
	XXXX	Elective	0	0	3
	XXXX	Elective	0	0	3
LBR	1539	Intro to Employment/Workplace Law	3	0	3
MGT	2970	Contemporary Management Concepts	3	0	3
			6	0	15
					46

Electives: SPE 1027, PSY 1502, PSY 1505, PSY 1506, PSY 1509, ECO 1512, SOC 1521, SOC 1523, SOC 1524, SOC 1527, LAW 1824, MGT 2975

Technical Writing & Editing Technology (TWET)

Technical communication is the work performed by writers and editors who put scientific or technical information into readily understandable language for a specific group of readers. Technical writers and editors combine their language skills with their technical knowledge so they can prepare materials which meet the needs of technical specialists as well as average consumers.

The Technical Writing & Editing Technology program gives students an opportunity to develop the skills required of professional

technical communicators. Students practice the writing and editing techniques needed to enter the profession by preparing reports, manuals, handbooks, brochures, and many other documents. Much class work takes place in the College's Writing Center, where students learn to use a variety of computer application systems. In addition, students gain technical competence by selecting a minimum of 18 credit hours in a designated technical specialty area (see the "Sample Technical Specialty Requirements" below).

Because courses in the technical specialty area vary, students may complete the Technical Writing & Editing program with a total of 100 to 110 credit hours.

Students who plan to study Technical Writing & Editing Technology should have previous successful writing experience (either in school or on the job) and good reading skills.

Technical Writing & Editing Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG*	1001	English Composition 1	3	0	3
ENG	1018	Technical Writing Style & Techniques 1	2	2	3
MAT	11XX	Mathematics Elective	4	0	4
SEC	3007	Intro to Keyboarding	3	0	3
TWE	5001	Intro TWET Careers	1	2	2
MAC	5102	Intro to Macintosh™	2	2	3
			15	6	18
■ Second Term					
	XXXX	Technical Specialty Requirement	2	3	3
ENG	1019	Tech Writing Style & Techniques 2	2	2	3
ECO	1512	Microeconomics	3	0	3
PHI	1620	Critical Thinking	3	0	3
MAC	5103	Mac® Software Apps	2	2	3
			12	7	15
■ Third Term					
	XXXX	Technical Specialty Requirement	2	3	3
	XXXX	Technical Specialty Requirement	2	3	3
ENG	1017	Project Research	3	2	4
MIS	1850	Computer Business Applications	3	2	4
MAC	5116	Desktop Pub 1 - PageMaker™	2	2	3
			12	12	17
■ Fourth Term					
SPE	1024	Group Dynamics & Problem Solving	3	0	3
GC	1480	Photolithography 1	2	3	3
TWE	5010	Visual Communication	2	2	3
MAC	5117	Desktop Pub 2 - QuarkXpress™	2	2	3
TWE	5032	Writing Instructional Documents	3	2	4
			12	9	16
■ Fifth Term					
TWE	9700	Co-Op Employment TWET	1	40	2
■ Sixth Term					
	XXXX	Technical Specialty Requirement	2	3	3
	15XX	Social Science Elective	3	0	3
TWE	5034	Online Documents	3	2	4
TWE	5041	Technical Editing Methods 1	2	2	3
			10	7	13
■ Seventh Term					
TWE	9700	Co-Op Employment TWET	1	40	2
■ Eighth Term					
	XXXX	Technical Specialty Requirement	2	3	3
TWE	5022	Technical Presentations	2	2	3
TWE	5033	Writing Promotional Documents	3	2	4
TWE	5042	Technical Editing Methods 2	2	2	3
			9	9	13
■ Ninth Term					
TWE	9700	Co-Op Employment	1	40	2
■ Tenth Term					
	XXXX	Technical Specialty Requirement	2	3	3
	15XX	Social Science Elective	3	0	3
TWE	5051	Organ. Dynamics & Career Assessment	3	1	3
TWE	5089	Technical Communication Seminar	2	3	3
			10	7	12
					110

* Composition Requirement: Student whose test scores or previous experience indicates advanced standing may substitute another composition course. Recommended substitutes: ENG 1003, ENG 1009, ENG 1010, Eng 1011.
Mathematics Elective: MAT 1132, MAT 1179, MAT 1152, MAT 1154. Other mathematics courses may be substituted with Program Chairperson approval.
Tech Specialty Requirement: Program Chairperson approval required. Minimum 18 total credits required.
Social Science Electives: any 15XX course, PHI 1625, HUM 1645, HUM 1646, HUM 1647. At least two Social Science/Humanities groups must be represented.

Sample Technical Specialty Requirements

Students who seek a degree in Technical Writing & Editing Technology must select a technical speciality, which is comparable to a "minor" within the student's degree program. The technical specialty courses must provide a minimum of 18 credit hours in courses selected from any of the other technologies offered at Cincinnati State. The Technical Writing & Editing advisor helps students plan an appropriate curriculum in their preferred technical specialty area.

The Technical Writing & Editing advisor helps students plan an appropriate curriculum in their preferred technical specialty area. The courses are selected to help students prepare for the kinds of assignments they are likely to encounter while working in the technical communication profession.

The samples that follow show courses that apply to a few possible technical specialty areas. Students should consult with the Technical Writing & Editing Program Chair for information about other technical specialty areas.

Sample A - Computer Systems Documentation

			Hours Per Week Class	Lab	Credit Hours
MIS	1701	Introduction to Data Processing	2	3	3
MIS	1702	Introduction to BASIC Programming	2	3	3
MIS	1721	Programming Logic & Methods	2	3	3
MIS	1731	PC/MS-DOS	2	3	3
MIS	1742	COBOL I	3	7	6
MIS	1763	Systems Analysis & Design	2	3	3
CSC	1135	"C" Programming Language	2	3	3

Sample B - Applied Engineering Documentation

			Hours Per Week Class	Lab	Credit Hours
ET	7008	Engineering Drawing I	2	3	3
MAT	1191	Algebra & Trigonometry I	4	0	4
MAT	1192	Algebra & Trigonometry II	4	0	2
PHY	2291	Physics 1	3	2	4
MET	7160	Computer Aided Design/Drafting	2	3	3
MFT	7441	Statistical Methods in Manufacturing	3	2	4
EET	7701	Electronic Fundamentals I	4	2	4

Sample C - Applied Health Sciences Documentation

			Hours Per Week Class	Lab	Credit Hours
BIO	4071	Introductory Biology 1	3	2	4
BIO	4072	Introductory Biology 2	3	2	4
BIO	4073	Introductory Biology 3	3	2	4
CHE	2231	Fundamentals of General Chemistry	3	2	4
CHE	2232	Fundamentals of Organic Chemistry	3	2	4
CHE	2233	Fundamentals of Biochemistry	3	2	4
HLT	4000	Medical Terminology	2	2	3

Sample D - Technical Publication Production & Coordination

			Hours Per Week Class	Lab	Credit Hours
GC	1415	Graphic Arts Processes	2	3	3
GC	1419	Survey of Printing Inks	3	0	3
GC	1421	Cold Type Process	1	9	4
GC	1481	Photolithography 2	2	3	3
MIS	1861	Electronic Spreadsheets	2	2	3
ACC	2911	Principles of Accounting 1	3	2	4
MGT	2926	Principles of Management	3	0	3

Technical Writing & Editing Certificate

The certificate in Technical Writing & Editing is designed for persons already competent in technical fields who want to expand their communication skills and for professional communicators who want to enhance their technical expertise.

The certificate program is designed to meet individual needs. To earn the certificate, the student is required to take 14 courses, usually a combination of eight technical communication courses and six courses (minimum 18 credits) in a technical skill area. However, the specific curriculum for each student is developed individually in consultation with the Program Chair. In some cases, students may be able to receive academic credit for prior studies or work experience.

Technical Writing & Editing Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
	**XXXX	Tech Specialty Requirement	0	0	18
ENG	1018	Technical Writing Style & Techniques1	2	2	3
ENG	1019	Technical Writing Style & Techniques2	2	2	3
TWE	5032	Writing Instructional Documents	3	2	4
TWE	5033	Writing Promotional Documents	3	2	4
TWE	5034	Online Documents	3	2	4
TWE	5041	Technical Editing Methods 1	2	2	3
TWE	5042	Technical Editing Methods 2	2	2	3
TWE	5089	Tech Communication Seminar	2	3	3
			19	17	45

** Program Chairperson approval required. Generally, the technical specialty will include six courses totaling 18 or more credit hours.

Desktop Publishing Certificate (DTPC)

The certificate in Desktop Publishing is designed for persons who want to develop skill using many application software programs that are part of the rapidly-evolving, computerized environment for communication and publishing-related fields. Students will learn to operate the software that is used in business and industry for a variety of writing, editing, design, and document production tasks, and will improve their ability to prepare specific documents such as newsletters.

The certificate program is intended to help those who want to add contemporary computer skills to their current knowledge in a communication-related field, or to help those who may be considering starting a home-based desktop publishing business. The certificate program also could be a foundation for pursuing an associate degree in a communication or business-related field.

Students may elect to take longer than four terms to complete the certificate curriculum.

Desktop Publishing Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
First Term					
ENG	1018	Technical Writing Style & Techniques 1	2	2	3
SEC	3007	Intro Keyboarding	3	0	3
MAC	5102	Intro to Macintosh™	2	2	3
			7	4	9
Second Term					
MIS	1850	Computer Business Applications	3	2	4
TWE	5010	Visual Communication	2	2	3
MAC	5103	Mac® Software Apps	2	2	3
MAC	5116	Desktop Pub 1 - PageMaker™	2	2	3
			9	8	13
Third Term					
GC	1422	Desktop Publishing (PC)	2	2	3
SEC	3061	Word Proc. Applications	2	3	3
MAC	5117	Desktop Pub 2 - QuarkXpress - Macintosh™	2	2	3
SEC	3064	Harvard Graphics®	2	3	3
			8	10	12
Fourth Term					
	**XXXX	Business Elective	2	2	3
MAC	5111	Adv. Illus - Macintosh™	2	2	3
TWE	5037	Writing & Designing Newsletters	2	2	3
			6	6	9
					43

** Program Director Approval Required.

Sciences Division

Division faculty have been selected for their dedication and academic preparation to fulfill the major functions of the division:

1. teaching the principles of physics, chemistry, mathematics and computer programming considered basic for successful study in a science dependent field such as engineering technology, health or technical business services.
2. providing in-depth instruction in the applied physical sciences leading the student to a career in scientific laboratory technology.
3. providing in-depth instruction which prepares students for bachelor's degree studies in a scientific or mathematical field, through the Associate of Science degree (see page 51).

Course recommendations for students in the sciences at Cincinnati State are determined according to the readiness of each student. Readiness is determined during the admission process through assessment and an interview. Faculty are chosen for their abilities to communicate effectively with students and their knowledge of subject matter, as well as their experiences in business and industry. As a result, the chances for student success in physics, chemistry and mathematics are greatly enhanced, and the student is well prepared to master technological developments.

Mathematics Readiness

Students who wish to brush up on skills prior to enrolling in a regular course sequence should refer to the Developmental Education courses listed elsewhere in this catalog.

Mathematics Courses

Each sequence of mathematics courses is tailored to meet the requirements of the curriculum served and to provide additional skills as elected by the student.

Courses Serving General Student Interests:

MAT 1132 Statistics
MAT 1151 College Algebra 1
MAT 1152 College Algebra 2
MAT 1154 Calculus 1
MAT 1155 Calculus 2

Courses Serving Health Technology Students:

MAT 1105 Health Mathematics
MAT 1170 Introduction to Technical Mathematics
MAT 1171 Technical Mathematics 1
MAT 1179 Introduction to Applied Statistics

Courses Serving Business Technology and Business Programming Students:

MAT 1121 Business Mathematics 1
MAT 1122 Business Mathematics 2
MAT 1123 Business Mathematics 3
MAT 1124 Business Algebra
MAT 1127 Business Statistics
MAT 1128 Business Calculus
MAT 1170 Introduction to Technical Mathematics

Courses Serving Engineering Technology & Science Technology Students:

MAT 1161 Applied Algebra
MAT 1162 Applied Geometry & Trigonometry
MAT 1171 Technical Mathematics 1
MAT 1172 Technical Mathematics 2
MAT 1179 Introduction to Applied Statistics
MAT 1191 Algebra & Trigonometry 1
MAT 1192 Algebra & Trigonometry 2
MAT 1193 Analytic Geometry & Calculus 1
MAT 1194 Analytic Geometry & Calculus 2
MAT 1195 Analytic Geometry & Calculus 3

Chemistry and Physics Courses

Physics and chemistry are, of necessity and tradition, laboratory sciences. Many students cannot know without doing. Actual observation and manipulation allow physical laws, concepts and hypotheses to take on real meaning in the minds of the students. The science departments therefore place much emphasis on the laboratory. Care is taken to ensure all laboratories are well supplied with equipment. The laboratory experiences point the way for students by helping them to organize an attack on a problem, to use their own ingenuity and thoughts while carrying the investigation to a conclusion, and to prepare a report of the findings.

Introductory Courses Serving General Student Interests:

CHE 2200 Introduction to Chemistry
PHY 2270 Introduction to Physics

Courses Serving General Student Interests:

CHE 2231 Fundamentals of Inorganic Chemistry
CHE 2232 Fundamentals of Organic Chemistry
CHE 2233 Fundamentals of Biochemistry
CHE 2236 Physiological Chemistry
PHY 2241 College Physics 1
PHY 2242 College Physics 2
PHY 2243 College Physics 3

Courses for Students With Specific Needs in Business & Health Technologies

PHY 2220 Automotive Physics
PHY 2221 Technical Physics 1
PHY 2222 Technical Physics 2
PHY 2223 Technical Physics 3
PHY 2244 Health Physics 1
PHY 2245 Health Physics 2
PHY 2263 Physical Science for Graphic Communications

Courses Serving Engineering Technology & Physical Sciences Technology Students:

PHY 2291 Physics 1
PHY 2292 Physics 2
PHY 2293 Physics 3
PHY 2294 Physics 4

Computer Science Courses:

CSC 1135 "C" Programming 1
CSC 1139 Introduction to XENIX/UNIX
CSC 6101 Introduction to Artificial Intelligence
CSC 6135 "C" Programming 2
CSC 6138 "C" Programming 3
CSC 6140 "C++" & Object-Oriented Programming

For the student who relates to the sciences, the Scientific Laboratory Technology program leads to careers which focus on chemical and physical testing techniques as well as the instrumentation used while performing the tests.

Cooperative Education in the Sciences Division

The Sciences Division shares the College's commitment to cooperative education as an integral part of the curriculum. In order to participate in cooperative education, students in the Sciences Division degree programs must comply with College eligibility requirements and registration procedures. Students may complete their cooperative education requirement through varied (full-time or part-time) on-site work experiences.

In some cases, degree-seeking students in the Sciences Division may complete their cooperative education requirement by receiving credit for past related work experience or by completing appropriate additional courses. However, all substitutions must be approved in advance by the Program Chair and the Cooperative Education Coordinator.

Students seeking the Associate of Science degree must adhere to the cooperative education requirements for the AS degree, as stated on page 54.

Transfer Module

The Associate of Science degree requirements contain all of the requirements of the College Transfer module.

The technical associate degree program in the Sciences Division contains in its curriculum most of the required courses for the College Transfer Module. The additional courses needed to complete the transfer module may be scheduled at times convenient to the student. Students who wish to transfer to an Ohio public university for baccalaureate degrees will find that an Associate of Applied Science degree combined with a transfer module (showing grades of C or better) will receive preferential consideration at the receiving institution.

Customized Training

Faculty in the Sciences Division welcome inquiries about providing training for individuals and corporations. A program may vary from a single course to a series of programs. Resources are available to assist and advised individuals in solving their problems in these areas.

Scientific Laboratory Technology

The Scientific Laboratory Technology Program prepares students for employment in industry or government laboratories where research and analytical testing are performed on specific products and processes. A graduate will fulfill a variety of jobs ranging from the instrumental analysis of pharmaceuticals and other consumer products to the testing of properties of polymers

and other materials. The technician will plan and execute the testing, and compile, report, and analyze the measured data. Because the Scientific Laboratory Technology curriculum has ample science requirements, including chemistry, biology, and physics, students who later express interest in earning the bachelor of science degree from a university have found the curriculum serves their needs well.

The Biotechnology major curriculum prepares students to assist biochemists and molecular biologists in academic research and industrial research facilities. The technician will assist in the analysis of proteins and nucleic acids using common biochemical techniques and will assist in the routine analysis of data collected during these experiments.

Scientific Laboratory Technology Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1191	Algebra & Trigonometry 1	4	0	4
MIS	1861	Electronic Spreadsheet (Lotus 1-2-3)	2	2	3
PHY	2291	Physics 1	3	2	4
SLT	6611	Chemistry 1 & Quantitative Analysis	3	4	5
			15	8	19
■ Second Term					
CHE	2232	Fundamentals of Organic Chemistry	3	2	4
SLT	9600	Co-Op Employment SLT Tech	1	40	2
			4	42	6
■ Third Term					
MAT	1192	Algebra & Trigonometry 2	4	0	4
PHY	2292	Physics 2	3	2	4
SLT	6621	Chemistry 2 & Quantitative Analysis	3	4	5
SLT	6629	Industrial Materials Testing	3	2	4
			13	8	17
■ Fourth Term					
MAT	1179	Intro Applied Statistics	4	0	4
SLT	9600	Co-Op Employment SLT Tech	1	40	2
			5	40	6
■ Fifth Term					
	15XX	Social Science Elective	3	0	3
PHY	2221	Technical Physics 1	2	3	3
PHY	2293	Physics 3	3	2	4
SLT	6631	Chem 3 & Quant Anal	3	4	5
			11	9	15
■ Sixth Term					
SLT	9600	Co-Op Employment SLT Tech	1	40	2
ENG	101X	Tech Writing Elective	3	0	3
			4	40	3
■ Seventh Term					
ECO	1512	Microeconomics	3	0	3
ENG	101X	Technical Writing Elective	3	0	3
MAT	1193	Analytic Geometry and Calculus 1	4	0	4
SLT	6641	Instrumental Chemical Analysis 1	3	3	4
QCC	6672	Intro to Design of Experiment	3	2	4
			16	5	18
■ Eighth Term					
SLT	6651	Instrumental Chemical Analysis 2	2	3	3
SLT	9600	Co-Op Employment SLT Tech	1	40	2
			3	43	5
■ Ninth Term					
	XXXX	Elective/Advisor Approval Required	2	2	3
SPE	1024	Group Dynamics & Problem Solving	3	0	3
	15XX	Social Science Elective	3	0	3
PHY	2294	Physics 4	3	2	4
SLT	6649	SLT Analysis/Test	2	3	3
			13	7	16
■ Tenth Term					
SLT	9600	Co-Op Employment SLT Tech	1	40	2
					109

Technical Writing Elective: ENG 1010, ENG 1015, ENG 1017, ENG 1018, ENG 1019

Social Science Elective: PSY 1502, PSY 1505, PSY 1506, SOC 1521, SOC 1524, SOC 1527, LBR 1535, GEO 1551, GEO 1553, PHI 1620, PHI 1625, HUM 1645.
Elective/Advisor Approval Required: CSC 1135, CSC 1137, MAT 1194, MAT 1195, MIS 1862, CHE 2233, BIO 4009, SLT 6605, SLT 6615, SLT 6625, SLT 6635, SLT 6661, SLT 6665, QCC 6670, QCC 6674, LOT 6710, LOT 6720, ET 7030, ET 7031, EET 7707, EET 7710, EET 7711

Scientific Laboratory Technology - Biotechnology Option

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1001	English Composition 1	3	0	3
MAT	1191	Algebra & Trigonometry 1	4	0	4
MIS	1861	Electronic Spreadsheet (Lotus 1-2-3)	2	2	3
CHE	2232	Fund of Organic Chem	3	2	4
SLT	6611	Chemistry 1 & Quant Anal	3	4	5
			15	8	19
■ Second Term					
CHE	2233	Fund of Biochemistry	3	2	4
SLT	9600	Co-op Employment SLT Tech	1	40	2
			4	42	6
■ Third Term					
ENG	101X	Tech Writing Elective	3	0	3
MAT	1192	Algebra & Trigonometry 2	4	0	4
SLT	6605	Introduction to Biotech	3	3	4
SLT	6621	Chemistry 2 & Quant Anal	3	4	5
			13	7	16
■ Fourth Term					
PHY	2293	Physics 3	3	2	4
SLT	9600	Co-op Employment SLT Tech	1	40	2
			4	42	6
■ Fifth Term					
MAT	1179	Intro Applied Statistics	4	0	4
BIO	4009	General Microbiology	3	3	4
SLT	6631	Chemistry 3 & Quant Anal	3	4	5
SLT	6615	Biotechnology 1	3	3	4
			13	10	17
■ Sixth Term					
SLT	9600	Co-op Employment SLT Tech	1	40	2
ECO	1512	Microeconomics	3	0	3
			4	40	5
■ Seventh Term					
	101X	Tech Writing Elective	3	0	3
SLT	6625	Biotechnology 2	3	3	4
SLT	6641	Instrumental Chem Analysis 1	3	3	4
QCC	6672	Intr Design of Experiment	3	2	4
	15XX	Social Science Elective	3	0	3
			15	8	18
■ Eighth Term					
SLT	6651	Instrumental Chem Analy 2	2	3	3
SLT	9600	Co-op Employment SLT Tech	1	40	2
			3	43	5
■ Ninth Term					
	XXXX	Elective/Advsr Approv Req	2	2	3
SPE	1024	Group Dynamic & Prob Solving	3	0	3
	15XX	Social Science Elective	3	0	3
SLT	6635	Biotechnology 3	3	3	4
SLT	6649	SLT Analysis/Test	2	3	3
			13	8	16
■ Tenth Term					
SLT	9600	Co-op Employment SLT Tech	1	40	2
					110

Tech Writing Elective: ENG 1010, ENG 1015, ENG 1017, ENG 1018, ENG 1019
Social Science Elective: PSY 1502, PSY 1505, PSY 1506, SOC 1521, SOC 1524, SOC 1527, LBR 1535, GEO 1551,

GEO 1553, PHI 1620, PHI 1625, HUM1645
Elective/Advisor Approv Req: CSC 1135, CSC 1137, MAT 1193, MAT 1194, MAT 1195, MIS 1862, PHY 2221, BIO 4014, BIO 4015, BIO 4016, SLT 6629, SLT 6661, SLT 6665, QCC 6670, QCC 6674, LOT 6710, LOT 6720, ET 7030, ET 7031, EET 7707, EET 7710, EET 7711

Quality Control/Assurance Certificate

The Professional Certificate in Quality Control and Assurance is designed for persons already competent in one or more technical fields who want to expand and add focus to their quality skills. Both product quality and service quality (e.g. banks, hospitals, airlines, etc.) are emphasized throughout the curriculum.

The certificate is designed around the body of knowledge required for certification by the American Society for Quality Control (ASQC). The idea is that many individuals may also be interested in earning ASQC certification as a quality technician (CQT), quality engineer (CQE), or quality engineer-in-training (QEIT). The curriculum advisor can provide specific details.

To earn the certificate, the candidate must successfully complete the eight courses listed below and verify that he or she is a current practitioner in the quality field.

Quality Control/Assurance Certificate Curriculum

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
ENG	1015	Technical Writing 2	3	0	3
SPE	1027	Group Dynamics for Quality Profession	3	0	3
MAT	1179	Introduction to Applied Statistics	4	0	4
			10	0	10
■ Second Term					
	XXXX	Technical Elective	3	0	3
QCC	6670	Intr Stat Process Control	4	0	4
SLT	6675	ISO 9000 Auditing/Costing	3	0	3
			10	0	10
■ Third Term					
QCC	6672	Intro to Design of Experiment	3	2	4
QCC	6674	Intro to Reliability	3	2	4
SLT	6699	Technical Lab Problems	0	3	1
			6	7	9
					29

*Suggested technical electives: MGT 2970, HLT 4001, HLT 4061, SLT 6611, SLT 6629, ET 7035, MET 7111

Associate of Individualized Study

In order to meet the particular career education needs of qualified students Cincinnati State offers the Associate of Individualized Study (AIS) degree. This degree can be pursued by students whose career objectives cannot be met through one of the associate degree programs offered by the College.

To apply for acceptance into an AIS degree program, students should follow these steps:

1. Complete an admissions application.
2. Have a copy of their high school transcript and college transcript, if applicable, sent directly to the College's Admission Records Office. Applicants who have a GED should submit a copy of the scores.
3. Attend a Success Seminar, which includes the ASSET test.
4. Meet with an admissions counselor who will direct the student to the academic division which will be responsible for the AIS program.
5. Consult with the assigned academic advisor who will assist the student in planning the AIS curriculum.
6. Write a justification of the degree program, including a statement of career goals and an explanation of why another associate degree program would not be appropriate.

The program justification and curriculum must be sent to the Academic Policies and Curriculum Committee (APCC) for approval. The APCC may approve the request, suggest modifications in the curriculum, or deny the request. If the AIS program proposal is denied, the student may wish to apply to another academic program.

For additional information on the Associate of Individualized Study program, contact the Director of Continuing Education.

Associate of Technical Study

Associate of Technical Study: Type A Program

This program enables the student to receive college credit for qualified industry training and to choose courses from two or more existing Cincinnati State associate degree programs and thereby design a personalized curriculum. All ATS-Type A program curriculums must be approved by the Academic Policies and Curriculum Committee.

For more information concerning the Associate of Technical Study-Type A program, contact the Director of Continuing Education.

Associate of Technical Study: Type B Program

This program helps the college to develop associate degree programs in partnership with professional organizations and business/industrial firms with staff development programs by equating their training activity to a block of college credit.

A college review committee will examine the training program offered by an organization in order to determine if it qualifies for inclusion.

When implemented, each program accommodates students transferring from an educational program which lies outside the traditional collegial domain. The degree gives recognition to the training of the professionals while enabling them to experience the broadening, liberalizing, and enriching components of a college education.

For more information concerning the Associate of Technical Study-Type B program, contact the Director of Continuing Education.

Currently, cooperative arrangements are in effect for ATS-Type B degrees in the following:

Industrial Technologies

Cincinnati State has worked with the Ford Motor Company plants in Sharonville and Batavia to develop an associate degree program for apprentices in traditional skill areas such as industrial electricity, machine repair, plumber/pipefitter, tool and die, and millwright. These completed apprenticeship programs can

provide a significant amount of credit toward an associate degree in industrial technologies.

The basic ingredients of these programs and their basic framework can easily be adapted to other trade or skill areas to meet other companies' needs.

Law Enforcement

The Cincinnati Police Academy cooperates with Cincinnati State in this program. Credits toward this degree are awarded for proof of certification from any accredited or approved Peace/Police Officer Training School. Additional Cincinnati State coursework is required to complete this associate degree.

Continuing Education and Extended Services

The College has developed different and improved ways to serve the needs of its increasingly diverse student population.

Flexibility of Scheduling

To serve students wishing to continue their education, Cincinnati State offers classes during the day, evening and Saturday. If a student wishes to take a class for personal enrichment, he or she may do so without being accepted into a degree program.

Evening Programs

Cincinnati State offers the following associate degree and certificate programs through the main campus evening program:

Business Technologies Division
Administrative Services:
- Executive Secretarial
- Office Management
- Office Information Processing
- Office Support Certificate

Business Management
Business Computer Sciences:
- Computer Communications
- Computer Operations
- Computer Programming
- PC Support Specialist

International Trade Management
Managerial Accounting
Marketing Management
Property Management
Purchasing Management
Real Estate

Engineering Technologies Division
Aviation Maintenance Technology
Biomedical Electronics Engineering Technology
Civil Engineering Technology - Architectural
Civil Engineering Technology - Environmental
Civil Engineering Technology - Construction Management
Civil Engineering Technology - Surveying
Computer Engineering Technology
Electro-Mechanical Engineering Technology
HVAC /Energy Management Certificate
Process Control/Instrumentation Certificate
Electronics Engineering Technology
Laser Electro-Optics Engineering Technology
Manufacturing Engineering Technology
Mechanical Engineering Technology

Health Technologies Division
Central Supply Technician Certificate
Dietary Manager Certificate
Dietetic Technology
Electrocardiography Certificate
Health Information Management Technology
Health Unit Coordinator Certificate

Humanities Division
Associate of Arts
Employee & Labor Relations Certificate
Technical Writing & Editing Technology
(Degree and Certificate)

Sciences Division
Associate of Science
Scientific Laboratory Technology
Quality Control Assurance Certificate

Flexibility of Location

Cincinnati State provides college credit courses through our extension centers located at Oak Hills High School, Princeton High School, Harrison High School and St. Francis Center.

The continuing education operations also include recreational and leisure-time courses.

Services For Business and Industry

Cincinnati State can respond to the business, industrial, and professional communities' requests to provide on-site courses to upgrade employee skills. In addition, the College works with professional and technical societies, organizations and trade unions to offer short-term and long-term programs for their members. Charges are negotiable based on instructional services, facilities, number of participants and equipment.

Small Business Management

The Small Business Management Certificate is scheduled through the Center for Business and Industry of the Business Technologies Division.

Small Business Management is another option of the Business Management Technology. This certificate is designed to provide the students with the knowledge to own and operate their own businesses. The courses will expose the student to the basic principles of management, marketing, accounting and other courses that are developed for those with this type of career in mind. The combination of courses and on-the-job training will give the students the necessary background for Small Business Management.

Small Business Management Certificate

			Hours Per Week Class	Lab	Credit Hours
■ First Term					
MIS	1850	Computerized Business Applications	3	2	4
MKT	2903	Survey of Marketing 1	3	0	3
ACC	2911	Principles of Accounting 1	3	2	4
MGT	2967	Survey of Management	3	0	3
			12	4	14
■ Second Term					
	*XXXX	Technical Elective	3	0	3
MIS	1861	Electronic Spreadsheets	2	2	3
BUS	2960	Principles of Finance	3	0	3
ACC	2912	Principles of Accounting 2	3	2	4
			11	4	13
■ Third Term					
	*XXXX	Technical Elective	3	0	3
MKT	1810	Principles of Sales	3	0	3

MGT	1832	Human Resource Management	3	0	3
MGT	2971	Small Business Management 1	3	0	3
			12	0	12
■ Fourth Term					
	*XXXX	Technical Elective	3	0	3
BUS	1823	Business Law 1	3	0	3
BUS	2976	Principles of Banking	3	0	3
MGT	2972	Small Business Management 2	3	0	3
			12	0	12
■ Fifth Term					
	*XXXX	Technical Elective	3	0	3
	151X	Economics Elective	3	0	3
MGT	1804	Risk and Insurance	3	0	3
BUS	1824	Business Law 2	3	0	3
			12	0	12
					63

*Technical Electives: Chairperson approval required
Economics Elective: ECO 1512, ECO 1513

Transfer Agreement between Cincinnati State and the University of Cincinnati College of Evening and Continuing Education

In addition to the program articulation agreements with four-year colleges and universities mentioned in the academic divisions sections, Cincinnati State Technical and Community College offers a general transfer agreement with the University of Cincinnati for technical degree graduates.

Cincinnati State and the University of Cincinnati College of Evening and Continuing Education (CECE) recognize the significance of transfer practices and therefore join together to foster the opportunity for Cincinnati State graduates to link the learning from their technical and applied associate degrees with the CECE Applied and General Studies (AGS) baccalaureate degree.

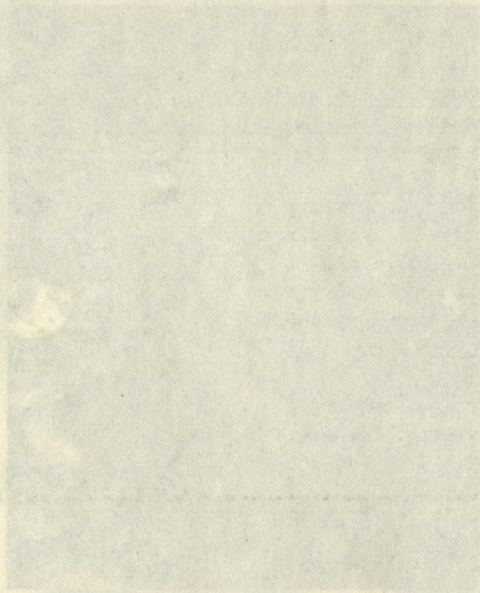
Cincinnati State students who earn an Associate of Applied Business or Applied Science degree will normally enter the AGS baccalaureate program at the junior level upon being admitted to CECE. A varying number of credit hours will transfer into the program, depending on the transferred courses that are equivalent to AGS degree requirements; however, students are guaranteed the acceptance of 45-69 technical credit hours earned through their associate degree in which a grade point average of 2.0 was maintained.

The AGS program is structured as a dual major program in order to provide a broad educational experience for students. The technical area of the student's associate degree comprises one concentration area. The other concentration area of the program is different from the area of study within the associate degree. The student selects this area from three tracks of study: Business, Information Processing Systems, or Individualized Study.

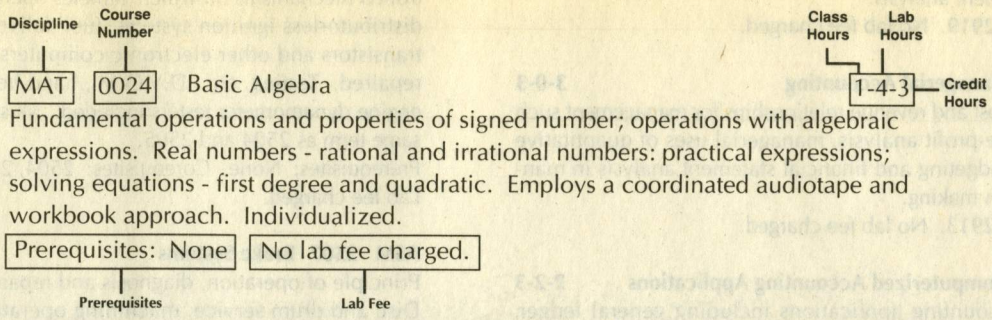
Information on this transfer agreement is available in the Cincinnati State Admissions Office.

Cincinnati State
Technical and Community College

COURSE DESCRIPTIONS



Understanding Course Descriptions



Course Number: identifying code for each course in a curriculum.

Class Hours: number of hours per week of lecture or individualized instruction.

Lab Hours: number of hours per week in laboratory instruction. Lab hours are usually in addition to class hours.

Credit Hours: academic credit awarded for successful completion of the course.

Prerequisites: any course(s) which must be successfully completed before a student may enroll in the course.

Co-requisites: any course(s) which must be taken at the same time or at a previous time as the course listed.

Lab Fees: a fee in addition to the regular tuition which covers the cost of laboratory supplies for a particular course. A listing of current lab fees is available in the division offices.

ACC Accounting

ACC 1851 Auditing **3-2-4**
Auditing techniques and procedures for manual and computer based accounting. Topics include review of internal control; preparation of audit programs, flowcharts and working papers; internal auditing. Prerequisites: 2913. No lab fee charged.

ACC 2911 Principles of Accounting 1 **3-2-4**
Principles and practices of basic accounting, including journalizing, posting, adjusting accounts, preparing financial statements for both service and merchandising companies. Students will use both manual and computer accounting systems. Keyboarding knowledge recommended.
Prerequisites: 3007 or keyboarding knowledge. Lab fee charged.

ACC 2912 Principles of Accounting 2 **3-2-4**
A continuation of Principles of Accounting 1. Topics include: cash, bank reconciliations, accounts receivable, accounting for bad debts, inventory methods, long-term assets, depreciation methods, current liabilities and payroll accounting. Students will use both manual and computer accounting systems.
Prerequisites: 2911. Lab fee charged.

ACC 2913 Principles of Accounting 3 **2-3-3**
A continuation of Principles of Accounting 1 and 2. Advanced topics include: partnership, corporations, earnings per share, retained earnings, dividends, bonds and investments, working capital, statement of cash flows, and analysis of financial statements. Students will use both manual and computer accounting systems.
Prerequisites: 2912. No lab fee charged.

ACC 2914 Cost Accounting 1 **3-0-3**
Nature and purpose of cost accounting. Accounting and control procedures for materials, labor and manufacturing overhead. Cost effects of fixed and variable costs. Predetermining departmental overhead rates.
Prerequisites: 2912. No lab fee charged.

ACC 2915 Cost Accounting 2 **3-0-3**
Job order cost system and process cost system, standard cost accounting. Setting cost standards, variance analysis. Direct costing, accounting for scrap and spoilage. Managerial use of cost data.
Prerequisites: 2914. No lab fee charged.

ACC 2916 Cost Accounting **3-0-3**
An introduction to the principles and practices of cost accounting, including the study of manufacturing costs; the determination of product costs using both job order costing and process costing systems; the application of standard costs and variance analysis.
Prerequisites: 2912. No lab fee charged.

ACC 2917 Federal Taxation 1 **3-0-3**
A study of Federal Income Tax as it relates to the individual taxpayer. The course deals in general terms with the most common aspects of taxes as they relate to the individual and business.
Prerequisites: None. No lab fee charged.

ACC 2918 Federal Taxation 2 **3-0-3**
A study of Federal Income Tax advanced topics such as: corporations, partnerships, S corporations and property transactions.
Prerequisites: None. No lab fee charged.

ACC 2919 Intermediate Accounting 1 **3-0-3**
Preparation and analysis of accounting statements; special problems in accounting for current, plant, investment, and intangible assets, for liabilities and for corporate net worth; and funds and reserves.
Prerequisites: 2913. No lab fee charged.

ACC 2920 Intermediate Accounting 2 **3-0-3**
Advanced topics in accounting theory and practice dealing with

corporations. Topics include retained earnings, earnings per share, accounting changes, changes in financial position and financial statement analysis.
Prerequisites: 2919. No lab fee charged.

ACC 2921 Managerial Accounting **3-0-3**
Determining cost and revenue relationships for management such as cost-volume-profit analysis, managerial uses of quantitative techniques, budgeting and financial statement analysis in managerial decision making.
Prerequisites: 2913. No lab fee charged.

ACC 2922 Computerized Accounting Applications **2-2-3**
Integrated accounting applications including general ledger, accounts receivable, accounts payable, payroll, fixed assets and depreciation, and inventory. laboratory work will include the operation of accounting software to process typical business transactions.
Prerequisites: 2913. Corequisites: None. Lab fee charged.

ASM Automotive Service Management

ASM 2501 Engine Fundamentals **2-3-3**
Fundamental operating principles of the internal-combustion engine. Identifying various component parts, types of cylinder arrangements, valve locations, measurements and tolerances, cooling and lubricating systems. Tools used in diagnosis and repair will be included. (ie. leak detectors, torque wrenches, and micrometers). Must be taken during the same term as 2502 and 2503.
Prerequisites: None. Corequisites: None. Lab fee charged.

ASM 2502 Cylinder Head Rebuilding **2-3-3**
Principles of cylinder head design, construction valve train locations and arrangements. Inspection and repair of various seats, camshafts, lifters, rocker arms, etc. Proper use of specialized hand and machine tools will be emphasized. Must be taken during the same term as 2501 and 2503.
Prerequisites: None. Corequisites: None.
Lab fee charged.

ASM 2503 Engine Overhaul (Cylinder Block Assembly) **2-3-3**
Internal-combustion engine cylinder block assembly repair and rebuilding. Cylinder bores, pistons, piston rings, connecting rods, crank shafts, and bearings will be studied. Emphasis on proper use of hand tools and special machine equipment included. Must be taken during the same term as 2501, 2502 and 2515.
Prerequisites: None. Corequisites: None. Lab fee charged.

ASM 2504 Ignition & Electrical Systems **2-3-3**
Fundamentals of automotive electronics; construction operation and repair of the electrical system including batteries, ignition, starting, generating and accessory circuits. Must be taken during the same term as 2506 and 2505.
Prerequisites: None. Corequisites: None. Lab fee charged.

ASM 2505 Automotive Fuel Systems **2-3-3**
Fundamental principles, operation and service of carbureted and fuel injected fuel delivery systems. Emission control systems with computer controls and various types of engine fuels included. Must be taken during the same term as 2504 and 2506.
Prerequisites: None. Corequisites: 2504, 2506.
Lab fee charged.

ASM 2506 Engine Trouble Diagnosis **2-3-3**
Advanced automotive electronics are provided for computer controlled mechanisms on which vehicles operate today. Including: distributorless ignition systems, fuel delivery systems, sensors, transistors and other electronic computers will be studied and repaired. Testing, etc., D.V.O.M., hand-held, roll-around, and engine dynamometer testers included. Must be taken during the same term as 2504 and 2505.
Prerequisites: None. Corequisites: 2504, 2505.
Lab fee charged.

ASM 2507 Brake Systems **2-3-3**
Principle of operation, diagnosis and repair of braking systems. Disc and drum service, machining operations, power assisted booster units, meter valving, proportion valving, and anti-lock brake units are incorporated in this course. Must be taken during the same term as 2508.
Prerequisites: None. Corequisites: None. Lab fee charged.

ASM 2508 Steering, Suspension and Alignment **2-3-3**
Suspension and steering systems principles, design, diagnosis and service of these units. From leaf and coil springs to torsion bars and active suspension from manuel to power to rack and pinon to 4 wheel alignment tires, wheels, balance plus shock absorbers including struts will studied. Must be taken during the same term as 2507.
Prerequisites: None. Corequisites: None. Lab fee charged.

ASM 2509 Automatic Transmissions/Transaxles **2-3-3**
Theory, operation, and service of automatic transmissions and transaxles. Laboratory experience includes diagnosis and overhaul of various manufacturers products. Live testing and repair of these units provides an understanding of two-speed, three-speed and four-speed automatic overdrive units with standard and lock up torque converters. Must be taken during the same term as 2510.
Prerequisites: None. Corequisites: None. Lab fee charged.

ASM 2510 Manual Transmissions & Drive Line **2-3-3**
Theory, operation and service of manual transmissions, clutchs, drive shafts, differential and axle assembles. Diagnosis and service of drive line vibrations, abnormal operations, and non-functional units will be studied. Must be taken during the same term as 2509.
Prerequisites: None. Corequisites: None. Lab fee charged.

ASM 2511 A/C, Heating & Ventilating Systems **2-3-3**
The theory and operation of heating, ventilating and air conditioning systems of the passenger cabin are studied. Laboratory experiences in diagnosis and repair procedures including computerized electronic controls. (ie. 4-seasons climate control). Must be taken during the same term as 2512 and 2513.
Prerequisites: None. Corequisites: None. Lab fee charged.

ASM 2512 Diagnostic Equipment for Tune-up **2-3-3**
The use of all types of diagnostic equipment to assist the auto technician to achieve maximum engine performance will be undertaken. From simple volt, ohm, and amp tests, to full computer aided diagnosis. The use of compression, pressure and leakage gauges, chassis, dynamometer assisting load tests, and many more will be advanced during the lab time. Must be taken during the same term as 2511 and 2512.
Prerequisites: 2501, 2506. Corequisites: None.
Lab fee charged.

ASM 2513 Engine Performance **2-3-3**
Engine performance (Tune-up) is the process of bringing an engine up to its maximum capabilities through the use of specialized equipment and adjustments. Chassis refinements, electrical, and fuel delivery as well as most emission controls will be serviced. This course, combined with diagnostic equipment, is the culmination of all other technical courses. Must be taken during the same term as 2511 and 2513.
Prerequisites: 2506. Corequisites: None. Lab fee charged.

ASM 2514 Automotive Management **2-3-3**
Organization, design, lay-out, administration and operation of an automobile dealership, trucking company or independent automotive operation as well as personnel, customer, and supervisory relations will be studied. Traffic flow, marketing, parts, sales and service selling are to be presented.
Prerequisites: 2925. No lab fee charged.

ASM 2515 Machine & Hand Tool Lab **2-3-3**
Principles and processes which underlie the use of hand tools, cutting tools, portable and permanent mounted equipment with their related accessories along with gauges and measuring devices. Emphasis is placed on developing sound trade judgements, safe work habits and correct work procedures. Must be taken during the same term as 2501, 2502 and 2503.
Prerequisites: None. Corequisites: None. Lab fee charged.

ASM 2516 Techniques of Welding **2-3-3**
Fundamentals of understanding and skills in the use of arc, oxy-acetylene welding and cutting equipment is developed. Such typical operations as butt, lap, and fillet welds are performed. MIG/TIG will be studied and performed.
Prerequisites: None. Lab fee charged.

AVT Aviation Maintenance Technology

AVT 8100 Aircraft Orientation **4-4-5**
Weigh aircraft. Perform complete weight-and-balance check and record data. Start, ground operate, move, service, and secure aircraft and identify typical ground operation hazards. Identify and select fuels.
Prerequisites: None. No lab fee charged.

AVT 8101 Materials & Processes 1 **2-3-3**
Identify and select proper hand tools for particular applications. Hand form, layout and bend sheet metal. Perform precision measurements.
Prerequisites: None. Lab fee charged.

AVT 8102 Aerodynamics & FAA Regulations **3-2-3**
Demonstrate ability to read, comprehend, and apply information contained in FAA and manufacturer's aircraft maintenance specifications, data sheets, manuals, publications and related Federal Aviation Regulation, Airworthiness Directives, and Advisory Material. Read technical data.
Prerequisites: None. No lab fee charged.

AVT 8106 Engineering Graphics (Aviation) **2-2-2**
Use aircraft drawings, symbols and system schematics. Draw sketches of repairs and alterations. Use blueprint information. Use graphs and charts.
Prerequisites: 8100. Lab fee charged.

AVT 8107 Materials & Processes 2 **4-6-6**
Fabricate and install rigid and flexible fluid lines and fittings. Identify and select appropriate non-destructive testing methods. Perform dye penetrant, eddy current, ultrasonic, and magnetic particle inspections. perform basic heat-testing processes. Identify and select aircraft hardware and materials. Inspect and check welds.
Prerequisites: 8101. Lab fee charged.

AVT 8108 Aircraft Electricity **3-2-3**
Calculate and measure capacitance and inductance. Calculate and measure electrical power. Measure voltage, current, resistance, and continuity. Determine the relationship of voltage, current, and resistance in electrical circuits. Read and interpret aircraft electrical circuit diagrams, including solid state devices and logic functions. Inspect and service batteries. Material covered in 2221 Technical Physics is helpful in completing this course.
Prerequisites: None. No lab fee charged.

AVT 8109 Cleaning & Corrosion Control **2-3-3**
Identify and select cleaning materials. Inspect, identify, remove, and treat aircraft corrosion and perform aircraft cleaning.
Prerequisites: None. Lab fee charged.

AVT 8130 Airframe Structures 1 **3-7-5**
Service and repair wood structures. Identify wood defects. Inspect wood structures. Select and apply fabric and fiberglass covering materials. Inspect, test, and repair fabric and fiberglass. Apply trim, letters, and touch-up paint. Identify and select aircraft finishing materials. Apply finishing materials. Inspect finishes and identify defects. Inspect bonded structures. Inspect, test, and repair fiberglass, plastics, honeycomb, composite, and laminated primary and secondary structures.
Prerequisites: 8102, 8107. Lab fee charged.

AVT 8131 Welding Processes **1-4-2**
Weld magnesium and titanium. Solder stainless steel. Fabricate tubular structures. Solder, braze, gas-weld, and arc-weld steel. Weld aluminum and stainless steel.
Prerequisites: 8107. Lab fee charged.

AVT 8132 Aircraft Electrical & Generating Systems **4-6-6**
Repair and inspect aircraft electrical system components; crimp and splice wiring to manufacturer's specifications; and repair pins and sockets of aircraft connectors. Inspect, troubleshoot, service, and repair alternating nd direct current electrical systems. Inspect, check, and troubleshoot constant speed and integrated speed drive generators. Install, check, and service airframe electrical wiring, controls, switches, indicators, and protective devices. Inspect, check, troubleshoot, and service landing gear position indicating and warning systems.
Prerequisites: 8102, 8106, 8108. No lab fee charged.

AVT 8140 Airframe Structures 2 **3-7-5**
Select, install, and remove special fasteners for metallic, bonded, and composite structures. Inspect, check, service, and repair windows, doors, and interior furnishings. Inspect and repair sheet metal structures. Install conventional rivets.
Prerequisites: 8102, 8107. Lab fee charged.

AVT 8142 Assembly & Rigging **3-7-5**
Rig rotary-wing aircraft. Rig fixed-wing aircraft. check alignment of structures. Assemble aircraft components, including flight control surfaces. Balance, rig, and inspect movable primary and secondary flight control surfaces. Jack aircraft.
Prerequisites: 2222, 8102, 8107. Lab fee charged.

AVT 8143 Airframe Hydraulic & Pneumatic Systems 1-4-2
Repair hydraulic and pneumatic power systems components. Identify and select hydraulic fluids. Inspect, check, service, troubleshoot and repair hydraulic and pneumatic power systems.
Prerequisites: 1191, 2222, 8107. No lab fee charged.

AVT 8150 Airframe Electronic and Instrument Systems 4-6-6
Inspect, check, service, troubleshoot, and repair electronic flight instrument systems and both mechanical and electrical heading, speed, altitude, temperature, pressure, and position indicating systems to include the use of built-in test equipment. Install instruments and perform a static pressure system leak test. Inspect, check, and service navigation systems, including VHF passenger aircraft VOR, ILS, LORAN.
Prerequisites: 8132, 8140. No lab fee charged.

AVT 8151 Landing Gear Systems 3-7-5
Inspect, check, service and repair landing gear, retraction systems, shocks, struts, brakes, wheels, tires and steering systems. Inspect, check and troubleshoot, and service landing gear position indicating and warning systems.
Prerequisites: 8143. No lab fee charged.

AVT 8152 Airframe Inspection 1-4-2
Perform airframe and powerplant conformity and airworthiness inspection.
Prerequisites: 1192, 2223, 8140, 8142. Corequisites: None.
No lab fee charged.

AVT 8154 Airframe Systems 4-6-6
Inspect, check, troubleshoot, and repair the following systems and components: heating, cooling, air conditioning, pressurization, air cycle machines, oxygen, fuel dump, fuel system components, fluid quantity indicating pressure fueling systems, fluid pressure and temperature warning, airframe ice and rain control, fire detection and extinguishing, smoke and carbon monoxide detection systems. Perform fuel system management transfer and refueling.
Prerequisites: 2222, 8140. No lab fee charged.

AVT 8155 Airframe Comprehensive 2-1-2
A comprehensive study and review of all the required subjects and subject material preparing the student for the Comprehensive Examination, demonstrating the proficiency required to be awarded the degree and be named a candidate for the Federal Aviation Agency written test.
Prerequisites: All general & airframe courses.
No lab fee charged.

AVT 8160 Powerplant Theory & Maintenance 1 7-5-7
Introduction to the design, manufacture, and overhaul of aircraft reciprocating engines. Overhaul and inspection of an opposed reciprocating engine.
Prerequisites: 1191, 2222, 8102. No lab fee charged.

AVT 8161 Powerplant Lubrication 3-2-4
Identify and select proper lubricants. Inspect, check, service, troubleshoot and repair reciprocating and turbine engine lubrication systems. Identify and select propeller lubricants. 8160 Powerplant Theory & Maintenance 1 should be taken at the same time.
Prerequisites: 2221, 8102, 8106. Corequisites: 8160.
No lab fee charged.

AVT 8162 Propellers 4-4-4
Inspect, check, service, and repair propeller synchronizing and ice control systems. Balance propellers. Repair propeller control system components. Inspect, check, service, and repair fixed pitch constant speed and feathering propellers and propeller governing systems. install and repair propellers. 8161 Powerplant Lubrication should be taken at the same time.
Prerequisites: 1191, 2221, 8109. Corequisites: 8161.
No lab fee charged.

AVT 8170 Powerplant Theory & Maintenance 2 6-6-7
Inspect and repair reciprocating engines. Inspect, check, service, and repair turbine and reciprocating engines installations. Install, troubleshoot and remove turbine and reciprocating engines.
Prerequisites: 8160. No lab fee charged.

AVT 8171 Powerplant Fuel Metering Systems 1 5-5-5
Inspect, check and service water injection systems. Overhaul a carburetor. Repair fuel metering components. Inspect, check, service, troubleshoot and repair reciprocating carburetor systems and induction manifolds. Inspect, check, troubleshoot, service and repair reciprocating fuel injection systems. Troubleshoot and inspect turbine fuel metering systems.
Prerequisites: 8100, 8107. No lab fee charged.

AVT 8172 Ignition Systems 4-6-6
Overhaul magneto and ignition harness. Repair engine ignition system components. Inspect, check, service, troubleshoot and repair powerplant ignition systems. Inspect, service, and repair turbine ignition and starting systems.
Prerequisites: 8108. No lab fee charged.

AVT 8180 Engine Systems & Inspection 5-5-5
Inspect, check, troubleshoot, service and repair engine induction, cooling, exhaust, and electrical systems and components.
Prerequisites: 8101, 8108. Corequisites: None.
No lab fee charged.

AVT 8182 Engine Instruments & Fire Protection 2-3-3
Inspect, check, service, troubleshoot and repair engine temperature, pressure and RPM indicating systems. Inspect and repair fire detection systems. Repair engine electrical systems.
Prerequisites: 8108. Corequisites: None. No lab fee charged.

AVT 8183 Powerplant Theory & Maintenance 3 7-5-7
Overhaul turbine engines.
Prerequisites: 2222, 8170. No lab fee charged.

AVT 8185 Powerplant Comprehensive 2-1-2
A comprehensive study and review of all the required subjects and subject material preparing the student for the Comprehensive Examination; demonstrating the proficiency required to be awarded the degree and be named a candidate for the Federal Aviation Agency written test.
Prerequisites: All general and powerplant courses.
No lab fee charged.

AVT 8190 Aviation Make-Up 0-0-0
Opportunity for students to make up N.A.A. required time. Laboratory, written or reading requirements or extra time on lab projects will be performed during this time.
Prerequisites: None. No lab fee charged.

AVT 8191 General Comprehensive 4-0-4
This course is designed to improve the student's performance on the FAA general written, oral, and practical tests. Subjects included are: FAR's, physics, electricity, weight and balance, and others. Note: Aviation Department approval is required to register

for this course.
Prerequisites: None. No lab fee charged.

AVT 8201 Avionics I **3-2-4**
Electronic control of airframe environmental systems. Ice and rain control. Passenger address and entertainment systems. Voices and aid data records. ARINC 429 and ARINC 561. Aviation frequencies and Fuel quantity indication systems. Engine Indication and Crew Alert Systems (EICAS) Synchro Devices.
Prerequisites: 8154. Corequisites: 7743, 7740.

AVT 8202 Avionics II **3-2-4**
Pressure, gyroscopic and temperature aircraft instruments. magnetic compass, Radio aids to navigation, Transponders. Auto pilots and flight management systems. Emergency Locator Transmitters, Built in Test Equipment (BITE).
Prerequisites: 8150, 8201, 7743.

BIO Biology

BIO 4009 General Microbiology **3-3-4**
Fundamental microbiology including microbial cell structure, metabolism, growth requirements and ecology. An introduction to principles of immunology and control of microorganisms.
Prerequisites: 4014. Lab fee charged.

BIO 4010 Human Biology **3-2-4**
An introduction to cell biology, genetics, anatomy and physiology. Fulfills high school biology requirement.
Lab fee charged.

BIO 4014 Anatomy and Physiology 1 **3-2-4**
Structure and function of the human body. Topics discussed include anatomical terminology, physiological transport, the cell, tissue, skin, the skeletal system, and the muscular system. Laboratory includes dissection. High school biology and chemistry with a minimum of a "C" grade within seven years can substitute for prerequisites.
Prerequisites: 2200, 4010.
Lab fee charged.

BIO 4015 Anatomy and Physiology 2 **3-2-4**
Structure and function of the human body. Topics discussed include nervous system, special senses, endocrine system, blood, and the cardiovascular system. Laboratory includes dissection.
Prerequisites: 4014. Lab fee charged.

BIO 4016 Anatomy and Physiology 3 **3-2-4**
Structure and function of the human body. Topics discussed include the respiratory system, gastro-intestinal system, metabolism, the renal system, fluids and electrolytes, acid-based balance, reproduction and the immune system. Laboratory includes dissection.
Prerequisites: 4015. Lab fee charged.

BIO 4020 Fundamentals of Pathophysiology **5-0-5**
An introduction to basic disease processes including necrosis, inflammation, repair, developmental abnormalities, neoplasia, immune disorders and infectious disease. The pathogenesis of representative diseases in each category will be discussed.
Prerequisites: 4014, 4015, and 4016 (or equivalent) or permission of instructor. No lab fee charged.

BIO 4023 Immunology **3-0-3**
A study of structure and function of the immune system. Includes discussions of antigen, antibody, lymphocytes, serology complement, immune disease and transplant reactions.
Prerequisites: 4016 and 2236. No lab fee charged.

BIO 4071 Introductory Biology 1 **3-2-4**
This sequence is for non-biology majors who are completing a science requirement or for students who need to meet A&P prerequisites. A study of basic biology principles for cell structure and function. Includes genetics and evolution. Not for biology majors.
Prerequisites: None. Lab fee charged.

BIO 4072 Introductory Biology 2 **3-2-4**
Continuation of the study of basic biological principles. Includes structure and function of plants. Also includes ecology. Not for biology majors.
Prerequisites: 4071. Lab fee charged.

BIO 4073 Introductory Biology 3 **3-2-4**
Continuation of study of basic biological principles. Includes structure and function of animals with emphasis on human systems. Not for biology majors.
Prerequisites: 4072, or permission of instructor. Lab fee charged.

BIO 4081 Principles of Biology 1 **3-4-5**
An introduction to basic biological principles. Principles of Biology is a series designed for AS majors wishing to transfer as biology or other natural science majors and pre-professional students. This course includes topics such as structure and function of cells, cell division, cellular respiration, photosynthesis, genetics, evolution and taxonogy.
Prerequisites: 4073 or permission of instructor. Lab fee charged.

BIO 4082 Principles of Biology 2 **3-4-5**
Continuation of the Principles of Biology Sequence. A survey of the animal kingdom. The major animal phyla are introduced and their taxonomic, evolutionary, and organizational relationships are studied. The anatomy and physiology of animal organ systems are also studied.
Prerequisites: 4081. Lab fee charged.

BIO 4083 Principles of Biology 3 **3-4-5**
Continuation of the Principles of Biology sequence. A survey of the plant kingdom. The major plant phyla are introduced and their taxonomic, evolutionary, organizational relationships and life cycles are studied. The anatomy and physiology of plants are studied. Ecosystems are also discussed.
Prerequisites: 4082. Lab fee charged.

BMT Biomedical Engineering Tech

BMT 7749 Biomedical Instrumentation 1 **3-2-4**
Covers basic medical instrumentation. To include: man-to-machine interface, medical terminology, hospital organization, heart and circulatory system, electrodes, transducers, bioelectric amplifiers, EKG's, mechanical recorders, ICU's and CCU's, electrical safety, and electro-surgery units.
Prerequisites: 4012, 7717, 7730, 7738, 7739.
No lab fee charged.

BMT 7759 Biomedical Instrumentation 2 **3-2-4**
Course presents a survey of the more complex and specialized

medical devices used for patient care and diagnosis. Advanced equipment malfunction isolation and test instrumentations ares presented. Maintenance management including records, stock level optimization, shop layout, forms and technician duties are discussed. Consideration is given to the ethics related to biomedical equipment servicing.
Prerequisites: 7749. No lab fee charged.

BUS Business

BUS 1823 Business Law 1 **3-0-3**
Treatment of fundamental principles of business law, including contracts, negotiable instruments, and agencies.
Prerequisites: None. No lab fee charged.

BUS 1824 Business Law 2 **3-0-3**
A continuation of Business Law 1 with a treatment of government regulations, trust, and insurance.
Prerequisites: 1823. No lab fee charged.

BUS 1825 Hotel Law **3-0-3**
A study of the fundamental principles of hotel law concerned with the various public callings. Covers the essential laws for making responsible decisions in the complex and diverse operations of modern hotels, motels and restaurants.
Prerequisites: None. No lab fee charged.

BUS 1826 Financial Law **3-0-3**
This course covers the study of the securities and exchange commission, regulations as they relate to the offering, and management of client investments.
Prerequisites: 1823. No lab fee charged.

BUS 1999 Special Problem Seminar **Var-Var-Var**
Individual study and special projects pertaining to the particular technology that the student is enrolled in. Open to fourth and fifth term students, by special arrangement with the Coordinator and Division Dean.
Prerequisites: None. No lab fee charged.

BUS 2905 Money & Banking **3-0-3**
The processes of modern banking, including capital, deposits, loans, investments, and reserves. Credit expansion and contraction. The operation of the Federal Reserve Systems.
Prerequisites: None. No lab fee charged.

BUS 2925 Business Principles **3-0-3**
A study of the nature of business, forms of business ownership, production problems and financing, forecasting, budgeting, governmental regulation of business, business personnel practices, the security markets and financial news.
Prerequisites: None. No lab fee charged.

BUS 2960 Principles of Finance **3-0-3**
Study of consumer finance, small business and large business finance, including scheduling, transporting and flow of goods.
Prerequisites: None. No lab fee charged.

BUS 2961 Financial Planning **3-0-3**
Effective financial planning is consumerism applied to your financial affairs. It involves coordinated, realistic planning in the areas of buying insurance, homes, and investment property, accumulating capital, retirement planning, estate planning, individual and investment tax planning.
Prerequisites: None. No lab fee charged.

BUS 2962 Principles of Investments **3-0-3**
Principles and techniques involved in selecting and managing a portfolio; including securities, stocks, bonds, etc., depending on the financial needs and resources of the client. Course covers the concepts involved with the sources and uses of investment funds.
Prerequisites: 2960. No lab fee charged.

BUS 2976 Principles of Banking **3-0-3**
Designed to give the financial management student a working knowledge and analysis of the operations of commercial banks. The course investigates the techniques and principles employed by bank management in the performance of their many functions; reviews past banking laws and practices and confronts the volatile economic conditions and revised regulations.
Prerequisites: None. No lab fee charged.

BUS 3094 Workshops in Business **Var-0-Var**
Consideration and study of selected issues and topics in the business technologies area designed to meet current needs. Content and emphasis varies from year to year.
Prerequisites: None. Lab fee charged.

BUS 9200 Professional Practices **1-0-1**
The purpose of this course is to prepare the students for the interview process, heighten the students' awareness of the work environment, and provide skills which will ensure the students' success as a professional.
Prerequisites: None. No lab fee charged.

BUS 9210 Cooperative Employment - Business Technologies **1-40-2**
Usually on an alternating term basis, the business student is placed on a full-time (32-40) hour job that ideally relates to his or her class work. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his or her class work. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned form the previous term(s) of employment and the added knowledge and skills acquired in each school term. Participation in a cooperative employment seminar and related hours per term is required to earn co-op credit.
Prerequisites: None. Lab fee charged.

BUS 9230 Cooperative Education Seminar 1 **3-0-3**
The purpose of this course is to assist the student in the development of concrete skills for managing a business career. Topics include: time management, goal setting, resumes, professional presence, communication skills, business etiquette, and assertiveness.
Prerequisites: Co-op coordinator's permission.
No lab fee charged.

BUS 9231 Cooperative Education Seminar 2 **4-0-4**
The purpose of this course is to assist the student in the development of concrete skills for managing a business career. Topics include: interviewing, business environment, personal and professional behavior, leadership, stress management, and performance evaluations.
Prerequisites: Co-op coordinator's permission.
No lab fee charged.

BUS 9232 Cooperative Education Seminar 3 **4-0-4**
The purpose of this course is to assist the student in the develop-

ment of concrete skills for managing a business career. Topics include: conflict resolution, problem solving, team building, meeting organization, ethics, coping with change, Equal Employment Opportunity Law.
Prerequisites: Co-op coordinator's permission. Corequisites: None. No lab fee charged.

CAR Career Development

CAR 9000 Career Development 3-0-3
A small group, self development, approach to career choice and development. This course will help the student to gain better self-understanding through the exploration of personal interests and aptitudes as they relate to career demands. The student will acquire skills in communications, establishing career goals and making decisions. Emphasis on job seeking techniques, the job application, the resume, the interview. Activities will include testing, group interaction exercises, guest lectures, and review of pertinent literature.
Prerequisites: None. No lab fee charged.

CAR 9005 College Success Strategies for Returning Adults 3-0-3
Are you afraid of failure; are you unsure about your career and personal goals; are you concerned about the adequacy of you academic and study skills for college success? We have an answer for coping with those fears and uncertainties. Beginning in the June term we will be offering a new class, "College Success Strategies," tailored to meet the needs of the adult student, to provide valuable support and dispel those crippling fears. This course will help you to learn more about yourself and your skill potential and will include: Library skills, values and goal setting, college support services, career exploration, decision making, taking control of your life, study skills, time management, self-esteem and confidence building activities, as well as skill assessment in math, English and reading.
Prerequisites: None. No lab fee charged.

CAR 9010 Nontraditional Careers for Women 3-0-3
The course is designed to meet the special needs of women, including single parents and homemakers who are searching for better paying jobs in male-dominated or nontraditional professions. Traditionally, men and women have selected specific careers based on socially defined traits. The student will acquire skills needed to overcome stereotypical barriers which prevent them from entering well paid nontraditional careers. Emphasis on overcoming Math/Science anxiety, how to study Math, Nontraditional career exploration reducing the home/career conflict.
Prerequisites: None. No lab fee charged.

CAR 9014 College Study Skills 4-0-4
A comprehensive course for the student who would like to get the most out of his or her courses. Attention is given to the development of positive attitudes toward good study habits and self-improvement of basic study skills (such as note-taking, memory, preparing for examinations). Individualized.
Prerequisites: None. No lab fee charged.

CET Civil Engineering Technology

CET 7015 Introduction to Environmental Topics 1-2-2
This course is designed to introduce students to the basic concepts and terminology associated with environmental science. It will increase students' awareness and understanding of environmental problems, regulations and solutions through lectures, laboratory exercises and field trips.
Prerequisites: 0020. No lab fee charged.

CET 7024 Architectural Drafting 1 3-4-4
An open-forum drawing lab intended to introduce architectural drafting concepts and review the residential construction process. Through the preparation of a set of residential working drawings, the student will learn architectural symbols, details, abbreviations, dimensioning methods and an overview of building codes. Additionally, the student will investigate the four major building materials used in construction: steel, concrete, wood, and masonry.
Prerequisites: None. Lab fee charged.

CET 7025 Surveying Drafting 2-3-3
A beginning course in surveying drafting to include contour maps from field notes, cross sections, grading plans and volume calculations. Deed abstracts, boundry plats and building permit drawings are also included. Students should complete 1171 prior to or concurrently with this course.
Prerequisites: 7024, 7910. Lab fee charged.

CET 7026 Architectural Drafting 2 2-3-3
A continuation course in drafting in which the student becomes familiarized with the level of detail and information required in a complete professional set of Architectural Working Drawings. The student then develops a selection of drawings for a small office building.
Prerequisites: 7024. Lab fee charged.

CET 7910 Surveying Measurements 3-2-4
Introductory course in field measurement techniques, with emphasis on units of measurement, field note format, instrument usage, differential leveling, three-wire leveling, profiles, cross sections, taping, E.D.M. usage, horizontal and vertical angles, bearings and azimuths.
Prerequisites: None. Corequisites: 1171 or 1191.
No lab fee charged.

CET 7913 Civil & Environmental Topics 3-0-3
This course introduces the student to important fundamentals of civil and environmental engineering. The course will provide an overview of the profession's various branches, as well as providing pertinent information regarding terminology, materials, and current problems. This is accomplished through lecture, case studies, and references and laboratory assignments.
Prerequisites: None. No lab fee charged.

CET 7920 Surveying Calculations 4-2-5
Intermediate course in surveying calculations, with emphasis on traverse closures and adjustments, coordinate calculations, area determination by D.M.D. and coordinates, coordinate geometry, direct and inverse routines using "COGO" Computer Program.
Prerequisites: 7910. No lab fee charged.

CET 7927 CAD 1 (CET) 2-3-3
A continuation of Computer Aided Drafting (CAD) in which the student will become familiar with CAD drawing, editing and dimensioning commands as they apply to civil engineering drawings. Students will also investigate other CAD techniques such as blocks, attributes and extraction files.
Prerequisites: 7024, 7935. Corequisites: Must be in CET Program or approval of CET Program Chair. Lab fee charged.

CET 7928 CAD 2 (CET) 2-3-3
An advanced course that builds on material covered in CAD I (CET). Topics include isometric and three-dimensional drawing techniques, surfacing, menu customization, DXF files, slide and script commands for presentations.
Prerequisites: 7927. Corequisites: Must be in CET Program or approval of CET Program Chair.

CET 7930 Route Surveying 3-2-4
Advanced course in the elements of route surveying, with emphasis on design and layout of horizontal curves, vertical curves, spiral transition curves, calculation of super-elevation. Includes extensive utilization of coordinate geometry program (COGO).
Prerequisites: 7920. Corequisites: 7025. No lab fee charged.

CET 7931 Light Construction 3-2-4
Introduces to the student concepts of residential planning. Investigates construction methods such as platform framing, brick veneer, lightweight steel, and masonry construction. Includes structural member selection, footing design, and typical construction detailing. Presents the dynamics of heat loss and heat gain.
Prerequisites: 7024, 7913. No lab fee charged.

CET 7934 Statics (CET) 3-2-4
A continuation of applying the principles of physics to engineering analysis. Topics of instruction are limited to force analysis and equilibrium of civil engineering structures, centroids, moment of inertia, and static friction. Course objectives are accomplished through lecture, visual aids, example calculations, and handouts.
Prerequisites: 1191, 2291. Corequisites: None.
No lab fee charged.

CET 7935 Introduction to CAD (CET) 2-3-3
Introduction to microcomputer systems, including basics of DOS. Fundamentals of AutoCAD software, with emphasis on DRAW, LAYER, EDIT, PLOT, UTILITY, and SETTING commands.
Prerequisites: Must be in CET Program or approval of CET Program Chair. Corequisites: 1171, 1191. Lab fee charged.

CET 7936 HVAC Design Systems 3-2-4
Students will continue their study of treating, ventilation, and air-conditioning (HVAC) topics, including heat loss and heat gain; design, distribution, controls, and equipment selection. Topics in acoustics will also be examined.
Prerequisites: 7964, 7928. Lab fee charged.

CET 7940 Elements of Land Surveying 3-3-4
Advanced course in the elements of boundary surveys, with emphasis on: document research, deed descriptions, U.S. public lands survey system, Ohio land subdivisions, and legal aspects of land surveys.
Prerequisites: 7920. No lab fee charged.

CET 7942 Construction Management 1 2-3-3
The student will investigate the evolution of the construction management process and compare this process to the traditional method of general contracting. Topics discussed include advantages and disadvantages of construction management and services the construction manager provides. The student will examine the concepts of CPM scheduling and will manually create schedules for various projects. Additionally, the student explores the realm of computer aided scheduling and creates schedules with the computer.
Prerequisites: 7024, 7913. Lab fee charged.

CET 7943 Construction Estimating 2-3-3
A technical course designed to give the student a confident knowledge of estimating. Topics include: quantity takeoff, types of estimates, bidding procedures, types of contracts, selecting the contractor, contract law, feasibility studies, and time-value of money. Each student will perform a detailed manual estimate from a set of working drawings. Additionally, the student will begin to explore computer aided estimating and develop a computer aided estimate of a commercial building.
Prerequisites: 7024, 7913. Lab fee charged.

CET 7944 Strength of Materials (CET) 3-2-4
A course investigating the behavior and ability of engineering materials to resist forces. Topics will include Hooke's Law, temperature effects, connection analysis, beam mechanics, shear and moment diagrams, and combined stress. Course objectives are accomplished through lecture, lab demonstrations, and example calculations.
Prerequisites: 7934. No lab fee charged.

CET 7946 Water & Wastewater Technology 3-2-4
Scientific and engineering principles and applications in water quality control are examined in this course. Concepts and practices in the treatment of industrial, as well as domestic, wastewater before discharge to either municipal POTW or the environment are also explored. Students will be exposed to the principles and design of physical, chemical and biological units in the treatment plant.
Prerequisites: 2200 or 2231. Corequisites: None .
No lab fee charged.

CET 7947 Drainage Control Systems 3-2-4
An introductory course in the design of drainage conduits for removal of storm runoff. Analysis of hydrologic problems by the rational method. Study of open channels, median swales, culverts, gutters, and pipe networks using computer application. Emphasis will be on control of erosion and sedimentation. Course objectives are accomplished through lecture, visual aids, example calculations, literature references, and handouts.
Prerequisites: 1191. No lab fee charged.

CET 7948 Subdivision Design 1 2-3-3
Introductory course in residential subdivision design with emphasis on general zoning and subdivision regulations such as lot, street and easement design utilizing COGO and CADD computer programs. Students should complete 7947 prior to or concurrently with this course.
Prerequisites: 7025, 7930. Corequisites: None.
No lab fee charged.

CET 7949 Introduction to Geographic Information Systems 3-2-4
A introductory course in Geographic Information Systems to include basic concepts of GIS, terminology, data acquisition and applications. Lab work will include utilization of ArcCAD® and IDRISI® software and Trimble Navigation Pathfinder Satellite Receivers. Students should complete 7940 prior to or concurrently with this course.
Prerequisites: 7935, 7920. Corequisites: None.
No lab fee charged.

CET 7950 Surveying Field Project 1-6-3
Specialized project utilizing fundamental theories and standard practices involved in surveying. Includes courthouse research, field reconnaissance and measurements, resolution, platting and

astronomic observations. Students should be registered for 7958.
Prerequisites: 7930, 7940. No lab fee charged.

CET 7951 Heavy Construction 3-2-4
Heavy construction includes large commercial buildings, industrial facilities, and highway construction. This course includes construction techniques involving heavy timbers, structural steel, reinforced concrete, and combinations thereof. Particular attention is paid to commercial construction from site work and shoring to curtain walls, glazing, and interior finishes. The study and application of computer aided estimating is continued from a previous course with an emphasis on heavy construction.
Prerequisites: 7943. No lab fee charged.

CET 7953 Construction Management 2 2-3-3
The student will continue to study the construction management movement in the construction industry. A continuation of computer aided scheduling is emphasized with the student creating computer aided schedules for various projects including one that was designed and estimated with the aid of computers. Other topics include value engineering, project controls, labor relations, quality control, and safety management.
Prerequisites: 7942. Lab fee charged.

CET 7954 Reinforced Concrete Design 3-2-4
A course presenting the fundamentals of statics to reinforced concrete design. Topics of instruction include the design of flexural and shear reinforcing in beams and the design of columns using the ACI ultimate strength method. The laboratory demonstrates the standard testing procedures and introduces the student to the properties of concrete as a structural material.
Prerequisites: 7934, 7944, 1192. No lab fee charged.

CET 7955 Applied Soil Mechanics 3-2-4
This course is an introduction to the properties of soil as a construction material. Topics of instruction include routine laboratory tests, soil classification, compaction, settlement, soil strength and simplified foundation design. Course objectives are accomplished through lecture, laboratory testing, example calculations, and handouts.
Prerequisites: 7934, 7944. No lab fee charged.

CET 7956 Structural Steel Design 3-2-4
A design course in which the principles of statics are applied to the design of simple structures. Topics of instruction include tension member design, column behavior and design, and simple beam design. All design conforms to the Allowable Stress Design per the AISC code. A simple structure design project will introduce the student to the integration of all aspects involved in design.
Prerequisites: 7934, 7944. No lab fee charged.

CET 7958 Control/GPS Surveying 1-6-3
Introduction to control surveying. Topics of instruction include: geodesy, state plane coordinates, astronomic observations, satellite positioning and network adjustments. Students will observe and adjust a horizontal control network with total stations and satellite receivers. Students should be registered for 7950.
Prerequisites: 7927, 7930, 1192. No lab fee charged.

CET 7959 Subdivision Design 2 2-3-3
Second course in residential subdivision design with emphasis on road profiles, design of sanitary and storm sewer systems, grading plans, and earthwork calculations and record plats. All designs will utilize COGO and CAD computer programs.
Prerequisites: 7923, 7947, 7948. No lab fee charged.

CET 7960 Water & Waste Systems 3-2-4
Students will initially investigate the design of water supply and waste systems in buildings. Additional topics examined involved disposal of contaminated waste product, process piping, and hyperonic piping.
Prerequisites: 7964. No lab fee charged.

CET 7963 Electrical Design Systems 3-2-4
Students will investigate the electrical systems in buildings. Design topics include power distribution wring, circuit layout, and fire protection. Other topics include communication, alarm, and security systems.
Prerequisites: 7026. No lab fee charged.

CET 7964 Mechanical Systems 2-3-3
Students will investigate various mechanical systems employed in buildings, including water and waste systems, fire protection, and heating, ventilation and air-conditioning (HVAC). Particular attention is given to HVAC topics. Students should complete 7928 prior to or concurrently with this course.
Prerequisites: None. No lab fee charged.

CET 7968 Lighting Systems 2-3-3
Students will investigate lighting design concepts such as illumination, footcandles, and surface reflectance and how they relate to room lighting, speciality lighting, site lighting, and fixture selection.
Prerequisites: 7963. No lab fee charged.

CET 7969 Building Systems Design 3-2-4
Students will perform a design project integrating all mechanical, electrical and architectural systems into a predetermined building or space emphasizing a coordination and interfacing process between the design teams of the particular systems. Three dimensional CAD drawings and a 3-D models will be used to implement this process and help reduce design interferences. Students should complete 7970 prior to or concurrently with this course.
Prerequisites: 7963, 7964. Corequisites: 7960, 7968.
No lab fee charged.

CET 7970 Regulations & Permits 3-0-3
This course introduces the student to federal, state, and local laws and ordinances controlling waste disposal. The regulations pertaining to wastewater discharge, hazardous material handling, storage, transport and disposal, and air releases will be explored. Regulations examined include: TSCA, FIFRA, OSHA, CCA, CWA, CERCLA, RCRA, and HMTA.
Prerequisites: None. Corequisites: None. No lab fee charged.

CET 7971 Air Pollution Control 3-3-4
This course deals more specifically with permitting and controlling air releasing. Air quality management, environmental and health effects of air pollution, and the selection and design of appropriate control equipment will be examined. Indoor air pollution will also be discussed. The operation of particulate and gaseous sampling equipment, instrument maintenance and calibration, data analysis, pollen and mold counts, and site inspections are topics addressed in the laboratory exercises. Students should complete 7970 prior to or concurrently with this course.
Prerequisites: 2231. Corequisites: None. No lab fee charged.

CET 7975 Solid Waste Management 2-3-3
This course is an introduction to the solid waste problem. The various methods and basic design concepts of solid waste disposal techniques are discussed. Topics included are landfills, incineration, composting, recycling and emerging technologies in this

field. The course objectives are accomplished through lectures, field trips, laboratory demonstrations and class projects.
Prerequisites: None. Corequisites: None. No lab fee charged.

CET 7976 Hazardous Waste Management 2-3-3
Types of hazardous materials are discussed as to their origin and impact on humans, plants and animals Principles and practices in the sampling, storage, transport, treatment and disposal of hazardous wastes are examined. The governmental regulations and permits pertaining to hazardous wastes are also included in this course. Course objectives are accomplished through lectures, field trips and laboratory exercises. Students should complete 7975 prior to or concurrently with this course.
Prerequisites: 2232. Corequisites: None. No lab fee charged.

CET 7977 Treatment Technologies 2-3-3
The U.S. Environmental Protection Agency, academic institutions and private industry develop new cost-effective technologies to prevent, monitor and control pollution. This course provides an overview of the basic principles and applications of mainstream treatment and monitoring technologies. Physical, chemical and biological treatment methods will be covered including bioremediation, air stripping, vitrification, and solidification. Monitored media that will be discussed ranges from soil, air and water to plant and animal tissue.
Prerequisites: 2232. Corequisites: None. No lab fee charged.

CET 7999 Special Problems Seminar - Civil Var-Var-2-4
Individual and independent study and special projects pertaining to the particular technology in which the student is enrolled. The study may deal with an idea or concept normally not covered by existing courses at the College, or with a specific problem found in the industry in which the student is employed. Open to fourth and fifth term students by special arrangement with the instructor and program chair.
Prerequisites: Approval by CET Program Chair.
No lab fee charged.

CHE Chemistry

CHE 2200 Introduction to Chemistry 4-2-5
This is an introductory course that is designed to satisfy entrance requirements for related areas of study. The course stresses an integrated approach between lectures and laboratory experiments to form a sound basis for future study in more rigorous chemistry courses. Topics covered include properties, structure and chemical classification of matter, use of symbols, formulas and equations, chemical bonding, properties of bases, salts and solutions, naming of acids, bases and salts, radio-activity, and organic chemistry. (All students should be tested in advance of registration for basic math competency and if there is a need, suggested corequisites math courses are available.)
Prerequisites: 0024 or 1161. (Competency test may be waived.)
Lab fee charged.

CHE 2231 Fundamentals of General Chemistry 3-2-4
A course in college level general chemistry; for those interested in the structure and properties of matter, changes in matter, chemical bonding, chemical reactions, equilibrium. It is strongly suggested that students have completed high school chemistry or course 2200 within three years prior to enrolling in this course, or have passed the departmental chemistry placement test.
Prerequisites: None. Lab fee charged.

CHE 2232 Fundamentals of Organic Chemistry 3-2-4
A course in college level organic chemistry as a foundation for biochemistry—carbon bonding; saturated, unsaturated aromatic hydrocarbons; alcohols; phenols; aldehydes; ketones; acids; amines. It is strongly suggested that students have completed high school chemistry or course 2200 or 2231 within three years prior to enrolling in this course, or have passed the departmental chemistry placement test.
Prerequisites: None. Lab fee charged.

CHE 2233 Fundamentals of Biochemistry 3-2-4
A course in college level biochemistry—carbohydrates, amino acids, proteins, lipids, vitamins, enzymes, metabolism body fluids.
Prerequisites: 2232 or equivalent. Lab fee charged.

CHE 2236 Physiological Chemistry 3-3-4
An introduction to physiological chemistry for the health professional. Students will consider basic organic concepts such as types of organic compounds, functional groups, and basic organic reactions. They will also study carbohydrates, proteins, lipids, nucleic acids and metabolic cycles.
Prerequisites: High School chemistry or 2200 (within 3 years). Lab fee charged.

CHE 2281 Organic Chemistry 1 3-4-5
This is the first of a three-course sequence in organic chemistry, covering the principles of carbon chemistry, including bonding, structure, mechanisms, properties, reactions, and synthesis. Compounds studied are hydrocarbons, both aliphatic and aromatic. Laboratory experiences include general organic laboratory techniques, especially those of purification of organic compounds. It is strongly suggested that 6611, 6621, and 6631 or the equivalent be taken prior to this course.
Prerequisites: High School chemistry or equivalent within 3 years. Lab fee charged.

CHE 2282 Organic Chemistry 2 3-4-5
This course is second in a three-course sequence of organic chemistry, continuing topics covered in 2281. Compounds studied include alcohols, alkyl halides, ethers, thiois, aldehydes, and ketones. Laboratory experiences include classical as well as instrumental techniques. Emphasis is on simple synthesis and analysis, as well as determination of purity.
Prerequisites: 2281. Lab fee charged.

CHE 2283 Organic Chemistry 3 3-4-5
This is the third of a three-course sequence in organic chemistry, continuing topics covered in 2282. Functional groups covered include organic acids and their derivatives, and amines. Stereochemistry, spectroscopy, and complex mechanisms are also studied. Laboratory experiences include multistep synthesis, spectrophotometric analysis, and determination of unknowns.
Prerequisites: 2282. Lab fee charged.

CHT Chef Technology

CHT 2822 Basic Cooking 1 2-3-3
Through hands on lab experience, the student will gain a working knowledge of the following subjects: kitchen skills development, methods of cookery, soup, sauce, starch, vegetable and meat cookery. Must be taken during the same term as 2831.
Corequisites: none. Lab fee charged.

CHT 2823 Basic Cooking 2 **2-4-4**
Basic classical soups, salad making, basic meat, fish and poultry, basic baking, confectionery, menu planning.
Prerequisites: 2822. Lab fee charged.

CHT 2824 Advanced Cooking 1 **2-3-3**
Through lab and lecture, you will gain a working knowledge of the following: classical soups, sauces, classical meat, poultry, fish dishes, garne manger, buffet work.
Prerequisites: 2823. Lab fee charged.

CHT 2825 Pastry & Confectionary **4-6-6**
Through lab and lecture, you will gain a working knowledge of the following: pastry and confectionary for the hotel and restaurant industry, dessert menu planning, correct orientation and familiarization with the patisserie environment, all basic pastry preparations and apply them to classical dessert making.
Prerequisites: 2824. Lab fee charged.

CHT 2826 Advanced Cooking 2 **4-8-6**
Using previous knowledge, cooking advanced menus and planning and coordinating them, refining the skills of a chef and testing standard recipes, final cooking test of a seven-hour demonstration and theory test (three hours). Must have successfully completed all required culinary courses: 2822, 2823, 2824, 2825, 2827.
Prerequisites: None. Lab fee charged.

CHT 2827 Butchery & Fish Management **2-3-3**
Through lab and lecture, the student will gain a working knowledge of the identification of grades of meats and fish, the wholesale purchase and distribution of any products, cutting of meats and fish, and the sanitary storage of them.
Prerequisites: None. Lab fee charged.

CHT 2831 Theory of Cooking **3-0-3**
Through lecture and discussion, the student will gain a knowledge of the following subjects: principles and methods of cookery, soup, sauce, starch, vegetable, and meat cookery, basic bakeshop production. must be taken during the same term as 2822.
Corequisites: None. No lab fee charged.

CHT 2832 Preparation and Cooking **2-3-3**
This course is designed to give students a working knowledge of breakfast cookery, lunch preparations, and simple menu preparations. Students will learn: salad and salad dressings, sandwiches, breakfast preparation and simple menu preparation. Upon completion of course student will have gained experienced in all components listed.
Prerequisites: None. Lab fee charged.

CHT 2833 Basic Baking **2-3-3**
Through the lab and lecture the student will gain a working knowledge of the following: The formulation of baking recipes and the correct measuring and selection of ingredients for baking formulas, the making of various basic pastry, yeast and cake items and their application to the hotel and restaurant industry.
Prerequisites: None. Lab fee charged.

CHT 2834 Advanced Baking **2-3-3**
Through lab and lecture the student will gain a working knowledge of the following: the making of flour confectionery desserts and cold preparations suitable for the hotel and restaurant industry. The assembling and decoration of various types of cakes and gateau, the making of cookies and petit fours and small confectionery items.
Prerequisites: None. Lab fee charged.

CHT 2835 Production Cooking **2-3-3**
This course is designed as the culmination food preparation course for the Culinary Certificate Student. Students will, through laboratory experience, work in the various stations in a commercial kitchen. They will assist in the planning, organizing and implementation of catered service, banquet service and cafeteria service.
Prerequisites: 2934. Lab fee charged.

CSC Computer Science

CSC 1135 "C" Programming-1 **2-2-3**
This course will cover structured programming concepts, input/output operations, arrays and data structures, functions, and the "C" library. Students will be expected to have experience using a high level programming language.
Prerequisites: None. Lab fee charged.

CSC 1139 Introduction to XENIX/UNIX **2-2-3**
A course designed to introduce students to the UNIX operating system for mini and micro computers. Covered topics include: basic operating system concepts, text editors, file systems, shell scripts, system utilities. Students will employ microcomputer terminals to master the basics while completing a set of predefined exercises. Students will be expected to have experience using application software.
Prerequisites: None. Lab fee charged.

CSC 6101 Introduction to Artificial Intelligence - Expert Systems **2-2-3**
This course presents the concepts central to Artificial Intelligence with emphasis on Expert Systems. Prolog/e is used as a laboratory vehicle to provide first-hand experience with rule-based programming. Backward and forward chaining, breadth-first and depth-first search, confidence factors, heuristics, inference engine, knowledge base, knowledge representation are covered.
Prerequisites: Basic or Cobol, etc. Lab fee charged.

CSC 6135 "C" Programming 2 **2-2-3**
In this project-oriented class students will develop four larger programs. These projects will provide practice with the basic elements of the language learned in "C" programming. It will also provide an opportunity to use some of the advanced features of "C" including file I/0, library functions, structures and unions. Concepts of program design, module building, design documentation and testing will be introduced and applied.
Prerequisites: 1135. Lab fee charged.

CSC 6138 "C" Programming 3 **2-2-3**
This course is a continuation of "C" Programming 2. It will include multi-module applications, advanced pointer manipulation and introductory Windows programming.
Prerequisites: 6135. Lab fee charged.

CSC 6140 C++ With Object Oriented Programming **2-2-3**
A course that covers the introductory object - oriented philosophies of C++ programming including polymorphisms, encapsulation and inheritance. Students will be required to write four C++ programs.
Prerequisites: 1135. Lab fee charged.

CSC 6198 Workshops In Computer Science Var-Var-1-4
Study of selected topics in Computer Science designed to meet current needs. Content and emphasis varies year-to-year
Prerequisites: None. Lab fee charged.

DE Developmental Education

DE 0001 English Grammar 4-0-4
This course deals with the words and language of the grammatical system of standard English. Correct usage is stressed.
Prerequisites: None. Lab fee charged.

DE 0002 College Spelling 4-0-4
An individualized spelling improvement program. Uses multisensory approach to develop desirable spelling attitudes and habits. Also stresses word analysis, word processing, and proofreading.
Prerequisites: None. No lab fee charged.

DE 0003 Basic Writing 1 4-0-4
After an analysis of strengths and weaknesses in writing, student is given instruction and practice in the construction of clear, error-free sentences and messages.
Prerequisites: 0001 or equivalent. Lab fee charged.

DE 0004 Basic Writing 2 4-0-4
Emphasizes paragraph organization and transitional devices in longer composition; punctuation.
Prerequisites: 0003 or equivalent. No lab fee charged.

DE 0010 College Reading 1 4-0-4
Instruction and practice to develop flexibility in reading, improve vocabulary; and sharpen comprehension. Diagnostic and prescriptive testing; individualized, multi-media.
Prerequisites: None. Lab fee charged.

DE 0011 College Reading 2 4-0-4
Continuation of 0010. Recommended for students needing further improvement in reading skills.
Prerequisites: 0010 or equivalent. Lab fee charged.

DE 0017 Speed Reading 4-0-4
This course is designed to help readers increase their reading efficiency. This course will increase recall, and eliminate inefficient reading habits while improving speed, comprehension and memory. Speed reading offers specific techniques to help readers process written materials quickly while extracting essential information. This course uses several approaches, processing skill development, visual/perceptual training and concept development, to improve speed and comprehension.
Prerequisites: 0013. No lab fee charged.

DE 0020 Basic Mathematics 1 4-0-4
Individualized instruction and practice in the fundamental skills of mathematics. Assignments for each student as determined by diagnostic test. Topics available: whole numbers and related operations, primes, composites, factoring, common fractions, decimals, percent.
Prerequisites: None. No lab fee charged.

DE 0021 Basic Mathematics 2-Individualized 4-0-4
Continuation of 0020. Recommended for students needing further instruction and practice in computation and application.
Prerequisites: 0020. No lab fee charged.

DE 0022 Essentials of Mathematics 4-0-4
A review of mathematical principles and computations. Individualized instruction and practice in the fundamental skills of mathematics. Assignments determined by diagnostic testing. Basic topics available: whole numbers, common fractions, decimals, percent, metric system.
Prerequisites: None. No lab fee charged.

DE 0023 Basic Geometry 4-0-4
This course will provide the student with the essential elements of Geometry. Included are the following topics: logic and sets, systems of measurement, geometric figures, triangle relationships, and coordinate geometry.
Prerequisites: 0020 or equivalent. No lab fee charged.

DE 0024 Basic Algebra 1 4-0-4
This course will provide the student with a foundation in the concepts of basic algebra and prepare the students for further math courses. The course covers all the topics considered essential in a developmental algebra course while emphasizing applications of algebra throughout. The topics covered include: signed numbers, linear equations, monomials, and polynomials. Available in lecture or self-paced format.
Prerequisites: 0020 or placement by skills assessment.
No lab fee charged.

DE 0025 Basic Algebra 2 4-0-4
This course will continue to provide the student with a foundation in the concepts of basic algebra and prepare the student for further math courses. The course covers the remaining topics considered essential in a developmental algebra course, while emphasizing applications of algebra throughout. Those topics covered include: factoring, quadratic equations, algebraic fractions, square roots, radical expressions, graphing, properties of lines, systems of equations. Available in lecture or self-paced format.
Prerequisites: 0024. No lab fee charged.

DE 0026 Fundamentals of Business Math 4-0-4
Structure of the number system with business applications. Whole numbers, equations, fractions, decimals, percent, percentages, ratio, proportion, measurements (U.S. and metric), measures of central tendency. Individualized with audio tapes, text and film strips.
Prerequisites: None No lab fee charged.

DE 0027 Pre-Tech Health Math-Individualized 4-0-4
Fundamental skills of mathematics applied to health professions. Includes: operations with fractions, decimals, and percents; geometry; metric, apothecaries', and household systems; ration and proportions; measurement; graphs; introduction to statistics. Available in lecture or self-paced format.
Prerequisites: 0020 or placement by skills assessment.
No lab fee charged.

DE 2900 Introduction to Accounting 4-0-4
This course emphasizes reading strategies, vocabulary terms and math concepts for success in accounting courses. It covers the basic accounting equation, the accounting cycle and related terminology, as well as the income statement, the statement of owner's equity and the balance sheet.
Prerequisites: None. No lab fee charged.

DE 4003 Basic Concepts Biology 3-1-4
A survey of the study of life processes. Included: Terminology, basic principles of biology, laboratory experiences.
Prerequisites: None. Lab fee charged.

DT Dietetic

DT 4100 Fundamentals of Nutrition 3-2-4
A basic introduction to the science and art of nutrition. Includes fundamental study of the food nutrients, their digestion absorption, and metabolism; the relationship of nutrition to health maintenance, and the determination of nutritional needs of adults.
Prerequisites: Acceptance into Dietetic Technician Program.
Corequisites: 2236. Lab fee charged.

DT 4102 Nutrition for the Life Cycle 3-2-4
The study of the nutritional needs of the lifecycle from conception through maturity. Nutritional needs are directly correlated with normal growth patterns, taking into consideration the physiological, psychological and sociological changes significant to each age group.
Prerequisites: 4100. Corequisites: 4112. Lab fee charged.

DT 4104 Clinical Nutrition 1 3-2-4
An introduction to Nutritional Therapy and Assessment. Course used a Holistic approach to the Nutritional treatment of illness, burns, and surgical disorders. Also included are nutritional treatment for bone disorders, rehabilitation, and the role of the CNS in food acceptance.
Prerequisites: 4014, 4102. Corequisites: 4113. Lab fee charged.

DT 4105 Introduction to Clinical Nutrition 2-2-3
An introductory study of nutritional therapy as it relates to pathological states of the body systems. Basic nutritional assessment and counseling skills are also covered in this course.
Prerequisites: 4130. Corequisites: 4113. No lab fee charged.

DT 4106 Clinical Nutrition 2 3-2-4
Nutritional therapy and assessment for endocrine, cardiovascular, and respiratory disorders. Also included is the role of the senses in food acceptance.
Prerequisites: 4104. Corequisites: 4015, 4114.
No lab fee charged.

DT 4107 Clinical Nutrition 3 3-2-4
Nutritional therapy and assessment for metabolic, gastro-intestinal, renal and immune disorders. The role of total parenteral nutrition and enteral tube feedings in nutritional therapy will be explored.
Prerequisites: 4106. Corequisites: 4115, 4016. Lab fee charged.

DT 4109 Dietetics Technician Seminar 2-0-2
Course provides preparation for DTR examination and entry into the Dietetics profession. Students will be responsible for the preparation and presentation of a technical paper in Dietetics.
Prerequisites: Completion of all Dietetic Technician courses or in final term. No lab fee charged.

DT 4111 Introduction to Dietetics Technology 2-0-2
Orientation to the field of nutrition and dietetics: roles, mission and relationship to the health care team.
Prerequisites: Acceptance into Dietetics program.
Lab fee charged.

DT 4112 Dietetics Clinical Practice 1 0-9-3
Nutrition care rotation in a health care facility parallel to didactics covered in Normal Nutrition.
Prerequisites: 4111, 4100. Corequisites: 4102. Lab fee charged.

DT 4113 Dietetics Clinical Practice 2 0-9-3
Nutrition care rotation in a health care facility parallel to didactics covered in Nutrition in Human Growth & Development.
Prerequisites: 4112. Corequisites: 4104. No lab fee charged.

DT 4114 Dietetics Clinical Practice 3 0-9-3
Nutrition care rotation in a health care facility parallel to didactics covered in Nutrition in Disease.
Prerequisites: 4113. Corequisites: 4106. Lab fee charged.

DT 4115 Dietetics Clinical Practice 4 0-9-3
Nutrition care rotation in a health care facility parallel to didactics covered in Diet Therapy.
Prerequisites: 4114. Corequisites: 4107. No lab fee charged.

DT 4116 Dietetics Directed Practice 6 0-9-3
Nutrition care rotation in a health care facility parallel to didactics covered in Dietetics Seminar.
Prerequisites: 4115. Corequisites: 4109. No lab fee charged.

DT 4117 Community Outreach Directed Practice 0-6-3
This directed practice provides the nutrition care dietetic technician student with home nutrition care delivery system experience. The student will be responsible for visiting, assessing, developing care plans and educating patients and nurses within the patients home under the guidance of a clinical instructor and the home care nursing staff. This course will be graded using: U - Unsatisfactory, and S - Satisfactory
Prerequisites: 4113. No lab fee charged.

DT 4120 Food Management 1 2-6-4
Course content covers basic techniques of food preparation and presentation. Topics include: menu planning, food composition, consumer equipment and food economics.
Prerequisites: Admission into DT Program. Lab fee charged.

DT 4121 Food Management 2 2-3-3
Course content covers preparation and evaluation of more complex food groups using appropriate procedures. Topics include: consumer kitchen layout, work efficiency, food presentation and food composition. Laboratory includes meal preparation and presentation for a small group.
Prerequisites: 4120. Lab fee charged.

DT 4122 Food Systems Management 1 2-3-3
This course serves as a basic introduction to the principles of health care food systems. Topics addressed are institutional menu planning recipe standardization, purchasing of supplies, inventory controls, equipment maintenance and management and supervision of quality food production and service.
Prerequisites: 4125. Lab fee charged.

DT 4124 Food Service Sanitation Certificate 2-0-2
This course includes all aspects of institutional food service sanitation for both the commercial and health care industries. Upon completion the student will receive a certificate approved by the Ohio Department of Health and one from the Education Foundation National Restaurant Association.
Prerequisites: None. No lab fee charged.

DT 4125 Quantity Food Production 2-6-4
A lecture/laboratory course in quantity food production. Including the following topics: identification and use of institutional equipment, use of standardized recipes, purchasing and inventory control.
Prerequisites: 4121. Lab fee charged.

DT 4129 Food Systems Management 2 **2-6-4**
Lecture content includes advanced principles of food service management as they relate to the Health Care Industry. Laboratory provides opportunity for student to rotate through all aspects of a food service program.
Prerequisites: 4122. Lab fee charged.

DT 4130 Introduction to Nutrition **3-0-3**
This course serves as an introduction to nutrition for students with a minimal science background. The content includes basic nutrient composition and functions, food sources, nutritional impact on the various population groups and results of deficiencies or excesses. Energy requirements are calculated and body weights discussed. Menu planning for maximum nutritional status is studied and implemented. Legislation which impacts food and nutrition is included.
Prerequisites: None. No lab fee charged.

DT 4131 Developmental Nutrition **2-0-2**
Nutritional science and its effect on human physiology with applications to all population groups. Nutrient composition, digestion absorption and metabolism for normal states are studied.
Prerequisites: None. No lab fee charged.

DT 4141 Dietary Manager's Orientation **1-0-1**
This course is designed to orient the new student to the Dietary Manager's program and profession. Regulatory standards from federal, state and local agencies are studied along with accreditation requirements and how these standards affect all institutions providing nutrition services. The Dietary Manager's role and interrelationships with other care providers is discussed along with post graduation affiliations with support organizations.
Prerequisites: Acceptance into DM Program.
No lab fee charged.

DT 4142 Dietary Manager's Field Experience 1 **0-9-3**
This field experience will be directly supervised by a registered dietitian in various health care, child care, and school facilities. It will include basic applied techniques in food production, nutrition information, collection, and application of this information to various population groups.
Prerequisites: 4130, 4151, 4153. Lab fee charged.

DT 4143 Dietary Manager's Field Experience 2 **0-9-3**
This course is individualized for each student and completed in a health care institution. Food systems of all types, therapeutic nutrition and human relations is applied in a real work setting.
Prerequisites: 4142. Corequisites: 4154. No lab fee charged.

DT 4151 Food Production 1 **2-3-3**
This course acquaints the student with quality control factors and food evaluation standards and techniques for household and institutional food production. The course begins with appropriate and sanitary equipment usage followed by methods of food merchandising to maximize acceptability. Each food category studied includes composition, nutritional content, preparation principles for household and institutional production. Categories studied are seasonings, beverages, fruits and vegetables, cereals and breads and dairy products.
Prerequisites: None. Lab fee charged.

DT 4152 Food Production 2 **2-3-3**
This course continues the study of food principles, nutritive values and production methods begun in Food Production I. Household and institutional methods are used. Food categories studied include meat and meat alternatives, fats and oils, all batters and doughs plus other desserts. Efficient work flow and simplification principles will be stressed throughout the course.
Prerequisites: 4151. Lab fee charged.

DT 4153 Diet Therapy **2-0-2**
This course introduces the student to some commonly used diet therapy issues applied to disease conditions. Nutrition information is identified and collected. Interview skills are practiced.
Prerequisites: 4130. No lab fee charged.

DT 4154 Dietary Food Systems **3-0-3**
This course serves as an introduction to the principles of food systems. Topics addressed are institutional menu planning, recipe standardization, purchasing of supplies, inventory controls, equipment maintenance and management, and supervision of quality food production and service.
Prerequisites: 4151, 4152, 9310 (two terms).
No lab fee charged.

DT 4155 Management of Human Resources **3-0-3**
This course is designed to provide applied management skills for persons employed in food services. Various organizational structures and types of leadership are explored plus policy and procedure writing and all kinds of communication. The course covers practical knowledge needed for recruiting, hiring, training, and evaluating food service employees.
Prerequisites: 9310. No lab fee charged.

DT 4194 Workshops in Dietetics **3-0-3**
Consideration and study of selected issues and topics in the dietetics area designed to meet current needs. Content and emphasis varies from year to year.
Prerequisites: None. No lab fee charged.

DT 4197 Lifesteps Weight Management **2-0-2**
Lifesteps is a comprehensive weight management program that stresses the importance of diet, physical activity and behavior modification techniques for weight loss.
Lab fee charged.

DT 4199 Special Studies - Dietetics **Var-Var-1-8**
A student initiated academic pursuit, mutually agree upon by the student and faculty member and carried on outside the classroom. Before registration, the student must have the plan of study approved by a supervising faculty member and the Dean of Health Technologies. This course is approved for "S" and "U" grades.
Prerequisites: None. No lab fee charged.

ECO Economics

ECO 1512 Microeconomics **3-0-3**
This course will introduce the fundamental economic problem of scarcity and provide a brief overview of the macro-system. The primary focus will be on demand and supply analysis within individual markets, price determination, analysis of cost, forecasting, and economic decision making in the firm.
Prerequisites: None. No lab fee charged.

ECO 1513 Macroeconomics **3-0-3**
This course introduces the basic economic problems of scarcity and provides an overview of the micro-system. The primary focus of the course is on an analysis of price level, inflation and unemployment, the role of government in monetary and fiscal

policy, and analysis of aggregate income, consumption, savings and investment.
Prerequisites: None. No lab fee charged.

ECO 1514 International Aspects of Economics 3-0-3
The application of Micro and Macroeconomics to the global economy. The course will focus on the theories of comparative economic systems, resource markets, trade policies, economic development, the international monetary system, and trade policies.
Prerequisites: None. No lab fee charged.

EET Electronic Engineering Tech

EET 7700 Electrical Concepts 3-2-4
Designed for the student with limited formal background in electrical fundamentals. Introduces the concepts of electrical units, circuits and measurements, including series, parallel, series-parallel and basic inductance and capacitance concepts. Required for all students in the pre-BMET, pre-CPET, pre-EET, pre-EMET, and pre-LEOT programs.
Prerequisites: Corequisites: 1171 or 1191. No lab fee charged.

EET 7701 Electronic Fundamentals 1 3-2-4
Introduces the basic laws of AC and DC electricity and their applications. In addition, power distribution, magnetic principles, control system fundamentals, component testing, and troubleshooting are covered.
Prerequisites: Corequisites: 1171 or 1191. No lab fee charged.

EET 7702 Electronic Fundamentals 2 3-2-4
A continuation of Fundamentals of Electronics 1 covering basic of AC Circuits, Linear and Digital Electronic Circuits and Microcomputers. Also covered will be oscilloscope use as a measuring device and introduction to Hardware Troubleshooting Techniques.
Prerequisites: 7701, 1191 or 1171. No lab fee charged.

EET 7703 Electrical Troubleshooting 3-3-4
Basic electrical theory; resistance and its measurement; voltage and its measurement; and current and its measurement. These are continually applied to control diagrams, circuits, and components. Also studied: electromagnetism, transformers, available electrical power, control circuit functions, DC and 3 0 AC motors and components replacement with emphasis on safe troubleshooting and repair of power and control circuits.
Prerequisites: None. Lab fee charged.

EET 7707 Electrical Applications 3-2-4
This course is designed for students in a non-electrical degree program. Topics include: electrical control components, reading schematic and wiring diagrams, applied electrical basics, electromagnetism, AC and DC motor characteristics and applications, typical factory power, connecting and checking motors, control and power circuit troubleshooting procedures, logic concepts and programmable controllers.
Prerequisites: 1192, 7132. No lab fee charged.

EET 7710 DC Circuit Analysis 5-0-5
This course introduces the concept of electricity, including current, voltage, power and energy. Series, parallel, and series-parallel circuits will be covered along with application of these circuits. Also, network analysis and an introduction to capacitance will be studied.
Prerequisites: Corequisites: 1191 or 1172, 7711.
No lab fee charged.

EET 7711 DC Circuits Lab 0-3-1
Laboratory exercises, demonstrations, evaluations in the proper use of techniques and instruments commonly used by technicians in theory verification and troubleshooting of D.C. circuits. Major emphasis on power supplies, VOM's and DVOM's. PSPICE circuit simulation software will be used.
Prerequisites: None. Corequisites: 7710. No lab fee charged.

EET 7717 Introduction to "C" Programming 3-3-4
Introduction to "C" Programming is an entry level computer programming class using the "C" Programming language. The class involves elementary programming features including the use of mathematical operations and variables. Simple programming techniques are explored including sorting algorithms and the implementation of numerical methods for solving mathematical problems. Students should have a rudimentary knowledge of personal computer operation including the basics of the DOS operating system and the use of a text editor or wordprocessor.
Prerequisites: None. Lab fee charged.

EET 7720 AC Circuit Analysis 5-0-5
This course introduces inductance and covers capacitance and inductive time constants. AC waveforms, reactance, and impedance will be studied. Series, parallel and series-parallel AC circuits will be covered along with applications of these circuits including filters and resonance. Transformers will be introduced. An emphasis in lab will be placed on the oscilloscope, function generator and VTVM for applications in AC circuits.
Prerequisites: 7710, 7711. Corequisites: 1192, 7721.
No lab fee charged.

EET 7721 AC Circuits Lab 0-3-1
Laboratory exercises, demonstrations, and evaluations in the proper techniques and instruments commonly used by technicians in theory verification and troubleshooting of AC circuits. Major emphasis on DVOM's, oscilloscope, signal generators and frequency counters. PSPICE circuit simulation software is used.
Prerequisites: 7710, 7711. Corequisites: 7720.
No lab fee charged.

EET 7722 Electrical Circuit Analysis 2 5-0-5
This course is a continuation of 7712, Electrical Circuit Analysis 1. Topics included: capacitance and inductance, magnetic effects, transients in capacitive and inductive networks, time constants, sinusoidal alternating waveforms, phase relationships in sinusoidal waveforms, average and RMS values of waveforms, capacitive and inductive reactance, frequency effects, circuit impedance; and average, reactive, and apparent, power in alternating current (ac) circuits. Analysis of series, parallel, and series-parallel ac circuits containing capacitors, inductors, and resistors. Wye-delta, wye-wye, and delta-delta three-phase systems and transformer connections. Particular emphasis is placed on applications such as ac power, power factor correction, resonance, filters, three-phase systems, and transformers. Students should complete 1192 prior to or concurrently with this course.
Prerequisites: 1191 or 1172, 7712, 7713. Corequisites: None.
No lab fee charged.

EET 7723 Electrical Circuit Analysis 2 Lab 1-3-2
A continuation of 7713, Electrical Circuit Analysis 1 Lab. Hands-on laboratory exercises, projects, and evaluation in the proper use of components, circuits, test instruments, and data-collection techniques commonly used by electro-mechanical technicians for

ac circuits. Included are safety considerations; use of signal generator, dual-channel oscilloscope, ac voltmeter and ac ammeter; circuit wiring from schematic diagrams; circuit measurements, data collection and analysis, and preparation of reports. Emphasis is placed throughout on troubleshooting techniques and fault analysis of ac circuits. Students will complete a circuit project and submit a formal report as part of this course. A standard lab text is used. Students should complete 1192 prior to or concurrently with this course.
Prerequisites: 1191 or 1172, 7712, 7713. Corequisites: 7722.
No lab fee charged.

EET 7727 Advanced "C" 4-2-5
Advanced "C" Programming is a continuation of 7717, Intro to "C" Programming. Topics include: graphic functions, structured variables, pointers, bitwise operations, and preprocessor commands. These features are combined with disk I?O operations, and command line operations using advanced programming techniques to produce database managers, and graphical analysis and display programs.
Prerequisites: 7717. Lab fee charged.

EET 7728 Introduction to Digital Concepts 3-2-4
Number systems, codes and review of Boolean Algebra. Logic families, logic simplification methods and implementation of logic equations using NAND and NOR gates and Flip-flops.
Prerequisites: None. Corequisites: 1191 or 1172, 7710 or 7712.
No lab fee charged.

EET 7730 Electronics 1 5-2-6
Electronics 1 involves the study of semiconductor theory, PN junctions, and diodes including an introduction to diode circuits and basic power supply circuits. The use of operational amplifiers to design inverting and non-inverting amplifiers, comparators, and oscillators is also covered. Further examination of op-amp characteristics includes offset, slew rate and single supply usage. PSpice® circuit simulation software will be used.
Prerequisites: 7720, 7721, or 7722, 7723. No lab fee charged.

EET 7733 Electronic Troubleshooting 3-2-3
Development of systematic analysis and troubleshooting techniques. Electronic device/circuit principles, analysis, failures and corrections. Possible modification of circuits and device specifications are studied to increase circuit reliability.
Prerequisites: None. Corequisites: 7730. Lab fee charged.

EET 7736 Electrical Power Systems 4-2-4
Covers the articles of the National Electrical Code which apply to electrical systems. Transformer principles and three phase systems. Also covers overcurrent devices, conductors, grounding, wiring methods, branch circuits, service entrances, load calculations and special topics.
Prerequisites: 7708. No lab fee charged.

EET 7738 Digital Systems 1 3-3-4
Includes edge-triggered circuitry: J-K flip-flops, Sync and Async Counters, shift registers, clock circuits, monostable theory. Also encoders, decoders, multiplexing (time base) displays. Circuit design techniques using MSI IC's will be discussed.
Prerequisites: 7728. Corequisites: 7720. Lab fee charged.

EET 7739 Introduction to Biomedical Instrumentation 3-2-4
Presents a survey of the field of Biomedical Engineering Technology and the role of the BMET in the hospital. Also included is organization of the hospital, regulations, professional certifications, regulations, ethics, and professionalism. The computer will be introduced as a tool in the Biomedical Department.
Prerequisites: None. Corequisites: 7710, 7711, 7728.
No lab fee charged.

EET 7740 Electronics 2 5-2-6
Electronics 2 covers operational amplifier theory; active filters, decibel measurements and amplifier frequency response, differentiators, and integrators, bridge and instrumentation amplifiers. Transistor theory; biasing, and biasing circuits, common emitter and common collector amplifiers and cascade amplifiers. PSPICE® circuit simulation software is used.
Prerequisites: 7730. No lab fee charged.

EET 7742 Computer Aided Drafting (Electrical) 2-3-3
An introduction to Computer Aided Design and Drafting (CADD) for electronics based technologies. Use of computer graphics to create, store, copy, and alter schematic designs. Schematic capture, circuits simulation, printed circuit board layout, artwork generation, component libraries, bill of materials, costs, and related data for analysis of circuit designs. P-CAD version 6.0 software is used for this course.
Prerequisites: 7030, 7738. Lab fee charged.

EET 7743 Communication Systems 1 3-2-4
Communications Systems 1 is an introductory class in radio communications theory. Topics for study include the transmission and reception of amplitude and frequency modulated radio signals. Working transmitters and receivers are designed and built as laboratory exercises. The fundamentals of noise and radio wave propagation are also covered in this class. Communications Systems 1 is designed to prepare the student to pass the technical portion of the FCC Amateur Radio License Examination and FCC General Radio Operators Exam.
Prerequisites: 7730. Corequisites: 7740. Lab fee charged.

EET 7747 Computer Instrumentation 4-2-5
This course is an introduction to basic transducers. In this course, students will apply analog-to-digital techniques to sensors for the purpose of creating data acquisition systems. The course also includes types of sensor-computer integration for the purpose of creating intelligent stand-alone sensors. Students will construct sensor-computer interfaces and write software to acquire sensor data. Course also includes techniques for manipulation of acquired data such as integration and differentiation.
Prerequisites: 7717, 7748. No lab fee charged.

EET 7748 Digital Systems 2 3-3-4
Microprocessor hardware and software for the Motorola 68000 family of chips. Topics include: basic microprocessor hardware, number systems, software architecture, introduction to the 68000 instruction set, addressing modes, subroutines, educational computer board, system hardware and timing, and memory and I/O expansion techniques. Students will be required to write software in assembly language and in the "C" language.
Prerequisites: 7717, 7738. Lab fee charged.

EET 7750 Electronics 3 4-3-5
electronics 3 covers the analysis and design of Class A Power amplifiers, Class B and Class C amplifiers. Small signal and power JFET and Mosfet circuits are examined. Thyrister devices represent the final topic in the electronics sequence. PSPICE® circuit simulation software is used.
Prerequisites: 7740. No lab fee charged.

EET 7758 Motors & Controls 3-2-4
Fundamentals, applications, selection, and control of DC and

three-phase AC motors. Includes speed and torque characteristics, horsepower and efficiency calculations, control circuits, safety considerations, equipment and personal protection, across-the-line starting, acceleration methods, speed control, plugging, braking, and jogging. Introduction to programmable logic controllers. Weekly laboratory exercises include design, construction, and fault analysis/troubleshooting of motor control circuits.
Prerequisites: 7722 and 7723 or 7720 and 7721. Lab fee charged.

EET 7766 Computer Control Systems 3-2-4
Introduction of feedback and computer control techniques to accurately control DC motors and stepper motors using digital information obtained from sensors and transpulers.
Prerequisites: 7730, 7748. No lab fee charged.

EET 7767 Computer Communications 4-2-5
This course will discuss the various topics and methods of computer communications. The course will deal with the following topics: parallel communications, Async vs. Sync communications, serial communication standards, modems, networking techniques, fiber optic systems.
Prerequisites: 7717, 7768. No lab fee charged.

EET 7768 Digital Systems 3 3-3-4
Advanced topics on microprocessor hardware and software for the Motorola 68000 family of chips, including investigation of various higher level I/O devices. Basic introduction to serial communications using the RS232 format. Indepth discussion of the Motorola 6850 (ACIA) device. Course continues with the use of the Motorola 68230 parallel interface timer chip. Students will study various applications of parallel I/O, including analog to digital input, digital to analog output, seven segment display, and keyboard input techniques. The course concludes with a discussion of microcomputer interrupts. Software developed by students in the course will be written in assembly language and in the "C" language.
Prerequisites: 7748, 7717. Lab fee charged.

EET 7780 Computer Repair 2-3-3
Coursework demonstrations, lab exercises, diagnostic evaluations, hands-on troubleshooting of IBM PC, XT, AT, PS2 & compatable computer systems using available diagnostic software to determine the problem and restore systems to normal operation. Experience in at least one PC application program is essential.
Lab fee charged.

EET 7799 Special Problems Seminar-Electrical Var-Var-2-4
Individual study and special projects pertaining to the particular technology that in which the student is enrolled. The study may deal with an idea or concept normally not covered by existing courses at the College, or with a specific problem found in the industry in which the student is employed. Open to fourth and fifth term students by special arrangement with the instructor and program chair.
Prerequisites: None. No lab fee charged.

EMT Electro-Mechanical Engineering Tech

EMT 7006 Intro to Electro-Mechanical Engineering Tech 1-0-1
An introduction to Electro-Mechanical Engineering Technology (EMET) and the EMET program. Topics include a description the functions and jobs typically performed by Electro-Mechanical Systems technicians, the knowledge and skills requirements of EMET field, industry standards and requirements, the EMET cooperative education and academic programs, and development of goals and of personalized academic/co-op plan to achieve the goals. Guest speakers will be invited who are graduates of the program and/or representatives from companies that hire our graduates and co-op students.
Prerequisites: None. Corequisites: None. No lab fee charged.

EMT 7036 Technical Computer Programming 3-3-4
A beginning course for technicians in the use of computers to solve technical problems. An introduction to DOS is included. This course uses the Pascal language, which was developed to teach introductory programming. Pascal provides students with an easy-to-learn high-level language that is self-documenting and has a modular top-down design methodology. A variety of technical problems are introduced with an emphasis on developing student problem-solving skills and algorithm development.
Prerequisites: 1191 or 1172. Lab fee charged.

EMT 7133 Introduction to Process Control 3-2-4
This course presents the basic principles of process control and instrumentation. Topics inclue definition of process control, basic control theory, control devices, instrumentation, symbology, and control systems documentation requirements. Must have math skills equivalent to 1171.
Prerequisites: None. Corequisites: None. Lab fee charged.

EMT 7143 Process Control Systems 1 4-4-6
This course covers the principles of flow, level, pressure and temperature measurement. Included are factors to be considered in instrument specification and selection. laboratory projects involve methods of calibration, troubleshooting, and repair of flow, level, pressure, and temperature measuring instruments commonly used in process industries.
Prerequisites: 7133. Lab fee charged.

EMT 7146 Electro-Mechanical Controls 1 (Programmable Controllers-PLC's) 3-3-4
This course is divided into two parts. Part 1 deals with power semiconductor devices used to control large industrial loads such as motors, heaters, and lighting systems. Topics covered include transistors, thyristors, resistive loads, and signal and power line conditioning. Part 2 deals with Programmable Logic Controllers (PLC). Emphasis is on developing, maintaining, and troubleshooting PLC programs using on-line computer software. Topics include contact-coil ladder logic, counters, timers, latches, shift registers, and digital sequencer logic as applied to on/off control systems and analog I/O. Also included are PLC basics applied to process control. Students should take 7142 concurrently with this course.
Prerequisites: 7036, 7730, 7738, 7758. Corequisites: None.
Lab fee charged.

EMT 7153 Process Control Systems 2 3-2-4
This course is in two parts. Part 1 teaches how to use and prepare the different types of documents used in industries using process control systems. Included are the PFD, P&ID, Instrument List, Loop Diagram, Logic Diagram, Panel Drawing, Installation Detail, Piping Plans, Location Plans, Elementaries and Construction Specification. Part 2 teaches the standard instrument wiring practices used in process systems. Included are series and parallel circuits; circuit resistance and loading; two, three, and four-wire transmitters; grounding; signal isolation; "smart" transmitters; electromagnetic and radio frequency inter

ference; intrinsic safety; and thermocouple wiring.
Prerequisites: 7143. Lab fee charged.

EMT 7156 Electro-Mechanical Project 2-4-4
The emphasis is on laboratory/project work which provides the opportunity for students to work on various projects involving electro-mechanical systems and devices. One important project area emphasizes various topics related to the process control/instrumentation field. A process control system consists of one or more automated control systems designed to regulate the manufacture of foods, chemicals, and other solid and liquid products. Process control/instrumentation technology is vital to the economy of this region. A student may also work on other project areas (as available) such as machine control, robotics, or industrial automation and control.
Prerequisites: None. Corequisites: None. Lab fee charged.

EMT 7157 Electro-Mechanical Controls 2 (Servomechanisms) 3-3-4
This course develops the concepts of negative feedback for closed-loop servo systems. These techniques are vital to automation systems in modern industry. Topics covered include: transducers for sensing system parameters, proportional (p), proportional-derivative (PD), and proportional-integral-derivative (PID) positional control systems; and computer control of servo-control systems. Emphasis is on simple closed-loop control.
Prerequisites: 7146. Corequisites: 1015. Lab fee charged.

EMT 7163 Control Valves 4-4-6
This course is an introduction to control valves as used in the process industries. The course presents a detailed examination of control valve application and selection. Topics include: goals of control valve applications; the major, common valve types and how they perform relative to the goals; actuators; positioners; valve applications; valve characteristics; trim; noise/cavitation. Selection, sizing, and specification of control valves for sample common applications is covered. The latter part of the course covers special valves such as pressure control regulators, safety/relief valves and conservation vents.
Prerequisites: 7153. Lab fee charged.

EMT 7168 Robotics 2 2-2-3
Continuation of Course 7167. The course covers robot operations and hands-on programming principles. Includes project work, such as programming for pick and place operations, palletizing operations, assembly operations, and material handling.
Prerequisites: 7150, 7707. Lab fee charged.

EMT 7173 Applied Process Control 4-4-6
This is the final course of the five courses in the Process Control/Instrumentation Certificate Program. The topics presented include: instrument applications and misapplications; control of unit operations, including characteristics, typical control strategies, and advanced control methods such as feed forward control, ration control, and bias control; troubleshooting control loops; decision analysis in controls problems; and loop tuning concepts and methods.
Prerequisites: 7163. Lab fee charged.

EMT 7501 H.V.A.C. - Plant Maintenance 3-2-4
This course is an introduction to the maintenance and operation of electrical and mechanical building systems. Topics include: planning for the efficient operation of building systems; compliance with energy codes and standards; electrical and lighting system operation and maintenance; energy management system and control systems operation and maintenance; building envelope; boiler and fired-system operation and maintenance; water treatment; steam, condensate, and insulation maintenance; and HVAC systems operation and maintenance.
Prerequisites: 7552. Lab fee charged.

EMT 7525 HVAC Fundamentals 3-2-4
This course covers the basics of Heating, Ventilating and Air Conditioning (HVAC) concepts and theory. Included are HVAC system components; refrigeration cycle/systems operation; psychometrics; refrigerator water piping; refrigerants and oils/practical applications; gas heating basics and hydronic heating; gas furnaces and controls; combustion and fuels; properties of air; airflow measuring devices; fan laws and performance; and air flow calculations. Must have math skills equivalent to 1171.
Prerequisites: None. Lab fee charged.

EMT 7535 HVAC Equipment and Systems 3-0-3
This course describes systems used to provide heating and cooling. The course comprehensively takes the student from a general overview of systems to an in-depth understanding of the equipment used for different applications, including the components and operation of the equipment. Topics covered are: air systems; water systems; air-water systems; direct refrigerant systems; cogeneration; central station air handlers/coils; packaged reciprocating liquid chillers; central plant systems; heating systems; air compressors/dryers and process equipment; VAV/VVT and controls.
Prerequisites: 7525. No lab fee charged.

EMT 7536 Evaluation of Building Electrical Systems 3-2-4
This course covers the basics of electrical systems used in buildings. Topics include: electric rates; AC circuits; single and three-phase systems; transformers; power distribution. Panel load calculations; riser diagrams; electric safety and protection; grounding. Voltage drop calculations; power loss calculations; power factor correction; electric motors. Lighting fundamentals and applications. Lighting retrofits and payback analysis. Must have math skills equivalent to 1171.
Prerequisites: None. Lab fee charged.

EMT 7541 Evaluation of Energy-Efficient Building Systems 3-2-4
This course covers the principles and practices of maintenance, operation, and selection of energy-efficient building systems. Topics include: terms, definitions, units, conversions, and blueprint reading; comfort design conditions and load calculations; air conditioning system selection; heating system selection; thermal insulation; ducts and fans; pipes and pumps; and HVAC controls, balancing and testing.
Prerequisites: 7552.

EMT 7546 Motors and Controls for Building Systems 3-2-4
Fundamentals, applications, selection, and control of single and three-phase AC motors. Includes speed and torque characteristics, horsepower and efficiency calculations, control circuits, acceleration methods, speed control, plugging, braking and jogging. Variable frequency drives and their selection and sizing. Building equipment control circuits will be covered in detail, such as air conditioning and sizing. Building equipment control circuits will be covered in detail, such as air conditioning, boilers, fans, pumps, and other systems. Weekly laboratory exercises include: design, construction, and fault analysis of motor control circuits as used in building systems.
Prerequisites: 7535. Lab fee charged.

EMT 7552 HVAC Controls and Building Automation Systems **3-2-4**

This course covers the basics of building automation systems and HVAC controls. Topics include: control applications and terminology; electrical and electronic control fundamentals; pneumatic control fundamentals; introduction to Building Automation Systems (BAS); hardware and software for BAS; boiler, chiller, AHU, and HVAC BAS controls; and lighting and miscellaneous building systems controls.
Prerequisites: 7535 Lab fee charged.

EMT 7555 Energy Economics, Accounting and Auditing 3-2-4

This course covers the factors related to the costs of energy usage in buildings, and energy cost accounting and auditing procedures contributing to the cost-effective use of energy. Topics include: gas and electric rates; demand charges; the load management rider; power factor corrections; savings calculations; payback equations; life-cycle costs vs. first costs; energy audit procedures; demand scheduling; commercial and industrial energy consumption; common energy-saving recommendations with short or immediate paybacks; reports and graphs for presentation to management; and programs and resources available for assistance.
Prerequisites: 7725, 7535.

EMT 7712 Electrical Circuit Analysis 1 **5-0-5**

This course covers basic electrical concepts, laws, devices, applications, and troubleshooting techniques. Topics include: charge, current, voltage, resistance, power, efficiency, and circuit analysis laws and theorems such as Ohm's Law, Kirchoff's Laws, mesh and branch current analysis, superposition, Thevenin's theorem, and Maximum Power Transfer theorem. Analysis of direct current series, parallel, series-parallel, and complex networks are covered for circuits containing single or multiple voltage sources and current sources. Emphasis is placed throughout on troubleshooting techniques and fault analysis of circuits, and applications such as design of loaded voltage dividers, current-limiter circuits, and variable voltage-divider circuits using components from a project kit. Students must purchase an electrical project kit and a multimeter kit to be used as part of this course. Students should complete 1172 or 1191 prior to or concurrently with this course.
Prerequisites: None. Corequisites: 7713. Lab fee charged.

EMT 7713 Electrical Circuit Analysis 1 Lab **1-3-2**

Hands-on laboratory exercises, projects, and evaluation in the proper use of components, test instruments, and data-collection techniques commonly used by electro-mechanical technicians. Included are safety considerations, soldering techniques and practice in the use of power supplies, ohmmeters, ammeters, and voltmeters; mechanical switches such as SPST, SPDT, DPST, DPDT, PBNO, and PBNC; circuit wiring from schematic diagrams; circuit measurements, and data collection and analysis,and preparation of reports. Emphasis is placed throughout on troubleshooting techniques and fault analysis of circuits. Students must purchase and construct a multimeter kit to be used as part of this course and course 7712. A standard lab text is used. Students should complete 1172 or 1191 prior to or concurrently with this course.
Prerequisites: None. Corequisites: 7712. No lab fee charged.

ENG English

ENG 1001 English Composition 1 **3-0-3**

The composition of essays emphasizing the development of an effective thesis; review of grammar, usage, and sentence and paragraph development.
Prerequisites: None. No lab fee charged.

ENG 1002 English Composition 2 **3-0-3**

Composition of essays emphasizing types of development; syntax, composition of clear and effective sentences; principles of library research.
Prerequisites: None. No lab fee charged.

ENG 1003 English Composition 3 **3-0-3**

Advanced practice of the principles of good writing, emphasizing reading and responding critically to works of literature.
Prerequisites: 1002.

ENG 1009 Business English **3-0-3**

Current practices in business communication; accuracy is stressed in the areas of grammar, mechanics, usage, spelling, and syntax.
Prerequisites: None. No lab fee charged.

ENG 1010 Technical Writing 1 **3-0-3**

The principles and practices of various types of business correspondence including the letter of application and resume; audience analysis; visuals; various technical communications such as procedures, explanation of process, mechanism description, formal and informal reports. Students who register for this course should also register for an upper level course within their program major.
Prerequisites: 1001 or 1002 and 12 hours in technical area.
Lab fee charged in individualized courses.

ENG 1011 Business Communications **3-0-3**

The principles and practices of the more common types of business correspondence; informal and formal business reports; development of style.
Prerequisites: 1001 or equivalent. Lab fee charged in individualized courses.

ENG 1015 Technical Writing 2 **3-0-3**

The principles and practices of researching, organizing, and presenting the various types of reports germane to the student's career choice. The course focuses on both written and oral reports which include analytical subject areas such as surveys, proposals, testing, lab reports, problem analysis, and job related reports. Students who register for this course should also register for an upper level course within their program major.
Prerequisites: 1010. No lab fee charged.

ENG 1017 Project Research **3-2-4**

This course addresses the tasks that technical writers and editors perform as they conduct research. Students will learn to identify, select, and use the most appropriate method that corresponds to the project. Major topics to be explored include interviewing skills, questionnaire design, observation techniques, case studies, and classical experimental design. Literature searches using data bases will also be discussed. Students will prepare primary and secondary research reports, and present an oral report.
Prerequisite: 1018. No lab fee charged.

ENG 1018 Technical Writing Style & Techniques 1 **2-2-3**

In this course students work individually with the instructor to examine and practice the conventions, style, and structures of technical writing. The course focuses on four skill areas: economy, emphasis, clarity and correctness. Students are tested in each skill area and then complete individually-assigned exercises to build proficiency. All exercises should be completed in the

College Writing Center. Conferences with the instructor are required. Students seeking the Technical Writing & Editing degree or certificate who have not already completed at least one college composition course should consult with the program chair before enrolling for this course.
Prerequisite: None. Lab fee charged.

ENG 1019 Technical Writing Style and Techniques 2 2-2-3
In this course students work individually with the instructor to examine and practice the conventions, style and structures of technical writing. This course focuses on four skill areas: concreteness, unity, coherence, and correctness. Students are tested in each skill area and then complete individually-assigned exercises to build proficiency. Students will write compositions based on investigation of technical communication topics. All exercises should be completed in the College Writing Center. Conferences with the instructor are required.
Prerequisites: 1018. Lab fee charged.

ENG 1098 Workshops in Communication Skills Var-Var-Var-1-6
Consideration and study of selected areas of written and oral communication designed to meet current needs. Content and emphasis vary year to year.

ENG 1099 Special Problems in Communication Skills Var-Var-Var
Individual study and special projects pertaining to the particular technology that the student is enrolled in. Open to students wishing advanced standing, independent study, and/or research. This course is arranged with the instructor with the approval of the Dean of the Communication Skills Division.
Prerequisites: 6 hours in Communication Skills.
No lab fee charged.

ESL English as a Second Language

ESL 0060 English as a Second Language -- Reading 1 4-0-4
Non-native speakers will spend considerable time in building English vocabulary and learning how to read for meaning at the sentence, paragraph, and extended text levels. Many of the basic readings will deal with important ideas and values in American culture.
Lab fee charged.

ESL 0061 English as a Second Language--Writing 1 4-0-4
The writing course for non-native speakers will begin with controlled writing practice and gradually will introduce students to writing a paragraph. By the end of the course, students will write short narrative paragraphs. The goal of the course is that students gain mastery of English patterns and learn to express ideas completely in standard English.
Lab fee charged.

ESL 0062 English as a Second Language-- Structure/Grammar 1 4-0-4
The English grammar course for non-native speakers will focus on key structures of the language and provide extensive practice in using them in meaningful contexts.
Lab fee charged.

ESL 0063 English as a Second Language -- Speaking 1 4-0-4
Non-native speakers will concentrate on the fundamentals of speech production. The course focuses on improving spoken English and listening skills so that students will have greater understanding of others and will be more easily understood.
Lab fee charged.

ET Engineering Technologies

ET 7001 Computer Concepts 2-1-2
Introduction to computers, including keyboarding, hardware, disk operating systems, basic word processing, elementary programming. Required for all Engineering Technology pre-tech students unless specifically waived by the dean of the Division.
Prerequisites: None. No lab fee charged.

ET 7002 Graphic Concepts 1-2-2
This course offers preliminary instruction in basic drafting techniques such as line quality, lettering and geometric construction. The primary objective is to prepare students for success in ET 7008 and CET 7024. Required for all Engineering Technology pre-tech students unless specifically waived by the dean of the Division.
Prerequisites: None. Lab fee charged.

ET 7003 Engineering Science Concepts 3-0-3
An introductory course to the principles of engineering technology. An overview of the various areas of engineering technology, including units of measurement and basic formula. Required for all Engineering Technology pre-tech students unless specifically waived by the dean of the Division.
Prerequisites: None. No lab fee charged.

ET 7004 Enrichment Seminar 1-0-1
Orientation to the Engineering Technologies Division and the associated support areas. This course is primarily designed to assist Engineering Technologies Pre-Tech students in the successful transition to their chosen technology. Required for all Engineering Technology pre-tech students unless specifically waived by the dean of the Division.
Prerequisites: None. No lab fee charged.

ET 7005 Introduction to Blueprint Reading and Sketching 2-2-3
Provides a working knowledge of machine-trades, Blueprint Reading and Shop Sketching. Technical terminology is defined and applied in a logical sequence.
Prerequisites: None. Lab fee charged.

ET 7008 Engineering Drawing 1 2-3-3
A beginning course which covers the techniques and functions of drafting. Topics include equipment, lettering, line quality, line types, orthographic projection, sectioning, dimensioning, and machined hole types.
Prerequisites: None. Corequisites: 1171 or 1191.
Lab fee charged.

ET 7010 Engineering Drawing 2 2-3-3
Emphasis on continued development of drafting skills. Concepts include: secondary auxiliary views, sectioning, class of fit, surface finish designations, tolerancing, threads, fasteners and welding representations. Course projects will include various detail and assembly drawings. Stack-up analysis and geometric feature control will be introduced here.
Prerequisites: 7008. Corequisites: 1192. Lab fee charged.

ET 7027 Beginning AutoCAD™ 2-3-3
A first course in Computer Aided Design/Drafting in which the student will become familiar with AutoCAD™ drawing commands editing commands and display commands and will create various drawings on the computer. Students will also investigate other CAD/D techniques such as defining blocks, layering and plotting techniques.
Prerequisites: 7035. Lab fee charged.

ET 7028 Intermediate AutoCAD™ 2-3-3
A second course in Computer Aided Design/Drafting in which the student will further explore CAD/D drawing techniques including external referencing, advanced features of CAD/D and will create drawings on the computer. Students will also investigate other CAD/D techniques such as block attributes, and prototype drawings.
Prerequisites: 7027. Corequisites: None. Lab fee charged.

ET 7029 Advanced AutoCAD™ 2-3-3
A third course in Computer Aided Design/Drafting in which the student will further explore CAD/D drawing techniques including Isometric drawing, and 3 Dimensional drawing and Surfacing on the computer. Students will also learn how to customize the various types of AutoCAD™ Menus and work with Slides and create a Slide Show for presentations.
Prerequisites: 7027, 7028. Corequisites: None.
Lab fee charged.

ET 7030 Computer Programming (BASIC) 3-2-4
Study of the BASIC programming language as a vehicle to write and code computer programs. Course is problem-solving oriented. Emphasis is on good program design (flow charting and documents) and efficient, logical coding. Programs will be analyzed, designed and entered by use of a terminal to the computer. Output will be produced on terminal and printer.
Prerequisites: None. Corequisites: 1191. Lab fee charged.

ET 7035 Computer Applications 2-3-3
Application software usage with emphasis on word processing, spreadsheets and data bases on microcomputer systems.
Prerequisites: None. Lab fee charged.

ET 7099 Special Studies - Engineering Technologies Var-Var-1-6
Special studies which may occur on an individual basis to provide a student the opportunity to work on special technical topics in the field of Engineering Technologies. This course may be substituted for technical elective credits.
Prerequisites: None. No lab fee charged.

ET 9400 Co-op Employment - Engineering Technologies 1-40-2
Usually on an alternating term basis, the technology student is placed on a full-time (32-40 hour) job that ideally relates to his or her class work. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his or her class work. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term. Adherence to division co-op policies and procedures required to earn credit.
Prerequisites: None. Lab fee charged.

ET 9401 Parallel Cooperative Employment- Engineering Technologies 1-20-1
The Engineering Technology Student is placed on a part-time job (20-32 hours per week) for one academic term that affords the opportunity to apply knowledge and skills acquired in classes. Adherence to ETD co-op policies and procedures is required to earn credit. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from previous term(s) of employment and the added knowledge and skills acquired in each school term. Adherence to division co-op policies and procedures required to earn credit.
Prerequisites: None. Lab fee charged.

FRN French

FRN 1060 Elementary French 1 4-0-4
Introduction to French language. Provides foundation for understanding, speaking, reading, and writing French. Covers fundamentals of French intonation, grammar, and syntax. Laboratory work may be required.
Prerequisites: None.

FRN 1061 Elementary French 2 4-0-4
Continuation of Elementary French 1. Provides foundation for understanding, speaking, reading, and writing French. Covers fundamentals of French intonation, grammar, and syntax. Introduces more advanced readings. Laboratory work may be required.
Prerequisites: 1060 or 1 year of high school French or equivalent. No lab fee charged.

FRN 1062 Elementary French 3 4-0-4
Continuation of Elementary French 2. Continues fundamentals of understanding, speaking, reading, and writing French. Covers fundamentals of French intonation, more complex grammar and syntax. Introduces more advanced readings and basic composition. Laboratory work may be required.
Prerequisites: 1061 or 2 years high school French or equivalent. No lab fee charged.

FRN 1063 Intermediate French 1 4-0-4
Review and extension of basic principles of grammar and syntax through composition and conversation, stressing fluency. Introduces more advanced reading, composition, and short literary pieces. Laboratory work may be required.
Prerequisites: 1062 or 3 years high school French or equivalent.

FRN 1064 Intermediate French 2 4-0-4
Continues review and extension of principles of grammar and syntax through composition and conversation, stressing fluency. Introduces more advanced reading, composition, and longer literary pieces. Laboratory work may be required.
Prerequisites: 1063 or equivalent. No lab fee charged.

FRN 1065 Intermediate French 3 4-0-4
Continues review and extension of principles of grammar and syntax through composition and conversation, stressing fluency. Introduces more advanced reading, composition, and longer literary pieces. Laboratory work may be required.
Prerequisites: 1064 or equivalent. No lab fee charged.

GC Graphic Communications

GC 1401 Layout and Design 3-0-3
Principles of printing design and art work. Conventional layout,

modern layout, type design, color usage, scaling photographs and art work, copy preparation for camera, newspaper layouts, designing folder, broadsides and booklets.
Prerequisites: None. Lab fee charged.

GC 1403 Advertising Typography **2-6-4**
An extended study of display advertising utilizing computer equipment and some hot metal typesetting. Analysis, evaluation, and recommendations based on individual usage of type styles and sizes presented for good design and makeup.
Prerequisites: 3007 Intro Keyboarding. Lab fee charged.

GC 1415 Graphic Arts Processes **2-3-3**
Development and evaluation of the many printing methods. Graphic Art processes in use today: Lithography, Flexography, Screen, Gravure, and Letterpress.. This course will also cover an in-depth training of simple pre-press and presswork will be covered in laboratory. A demonstration of flexography and screen printing will also be covered in laboratory.
Prerequisites: None. Lab fee charged.

GC 1419 Survey of Printing Inks **3-0-3**
This course is about ink technology as it is divided into physical makeup; how its integral parts affect color, drying properties, substrates, cost, how the many printing processes use inks to each advantage. The four classifications of printing will be covered in the beginning to help understand the advantages and the disadvantages of each method and how an ink is manufactured for each process.
Prerequisites: None. No lab fee charged.

GC 1421 Cold Type Process **1-9-4**
Classification of cold type devices - hand assembled paper or plastic alphabets, dry transfer fonts; keyboard text - on paper machines; keyboarded photo-typesetting; photo-lettered displays. Principles and operation of various keyboards. The use of electronics, computers, and tape operated controls.
Prerequisites: 1403. Corequisites: None. Lab fee charged.

GC 1422 Desktop Publishing **2-2-3**
The program is designed to provide high quality training in the field of Desktop Publishing with PC PageMaker. The student is expected to become proficient in PageMaker skills to build reports, build newsletters and create display ads using the IBM personal computer.
Prerequisites: 1850 or approval by instructor. Lab fee charged.

GC 1428 Management Survey **3-0-3**
A broad overview of printing management methods. Topics included are union relations, SPC, and organizational behavior. This course will use case studies and simulation methods to teach the entire scope of management functions and decision making for the printing industry.
Prerequisites: None. No lab fee charged.

GC 1429 Screen Printing **2-6-4**
The use and operation of manual and semi-automatic screen printing presses. Basic fundamentals of printing frames, screen cloths, stencils, squeegees and inks. Printing on many substrates and odd shaped objects. Student must have completed 1421 and 1480 or have equivalent knowledge.
Prerequisites: 1421. Lab fee charged.

GC 1430 Relief Presswork 1 **1-9-4**
The use and operation of platen and cylinder letterpress equipment. The use of such equipment for diecutting, foil stamping and embossing. Basic fundamentals of flexographic printing. Student must have completed 1421 and 1480 or have equivalent knowledge.
Prerequisites: None. Lab fee charged.

GC 1431 Relief Presswork 2 **3-9-6**
Advance techniques in the operation of multi-color narrow web flexo press. Strong emphasis in process printing. Comparison of narrow web, wide web and corrugated flexo presses. Advance training on mounting, platemaking, and finishing operations. Student must have completed 1421 and 1480 or have equivalent knowledge.
Prerequisites: None. Lab fee charged.

GC 1440 Offset Press Operation **3-9-6**
This course will cover both sheetfed and webfed offset printing. Techniques of operation and control, study of various moistening systems, comparison of wet and dry forms of lithography. Plate comparisons to include presensitized, bi-metal, tri-metal, and other synthetics, grained and grainless. Understanding the required adjustments necessary for top quality printing. Use of pressroom and quality control equipment. Student must have completed 1415 and 1480 or have equivalent knowledge.
Prerequisites: None. Lab fee charged.

GC 1449 Estimating Preparation **2-3-3**
This course is designed to cover those areas in the printing industry that require the attention of math for cost factors in paper, ink, spoilage, and imposition. Imposition training will be conducted in the classroom, computer lab, and on large offset presses.
Prerequisites: None. No lab fee charged.

GC 1450 Estimating **2-3-3**
Determine job costs; elements of job costs - labor, materials, burden, profit and markup. Characteristics and types of paper; paper sizes, selection and purchase of paper; determining proper cuts from mill size sheets; use of manufacturers' catalogs and price books.
Prerequisites: 1449. No lab fee charged.

GC 1480 Photolithography 1 **2-3-3**
Types and uses of photo-copy and image recording. General and special uses of films on camera, contact frames and imagesetters. Introduction to QuarkXPress and Photoshop software making line and half-tone images on film for all printing processes. Comparing and making single and two color proofs. Simple stripping.
Prerequisites: None. Lab fee charged.

GC 1481 Photolithography 2 **2-3-3**
Follow-up of Photolithography 1 using advanced techniques. Making color separations and color proofs. Stripping techniques related to multi-color jobs. Hands-on training on rotary and flat bed scanners. Advanced training on QuarkXPress and Photoshop software.
Prerequisites: 1480. Lab fee charged.

GC 1483 Color Imaging **2-3-3**
Overview of electronic color separations and film output. Hands-on training of color scanners and color proofing systems. Students will also learn color correction, UCR, UCA, and GCR. More advanced training on QuarkXPress and Photoshop software. The course will also cover the latest color technology in the printing industry.
Prerequisites: 1481. Lab fee charged.

GEO Geography

GEO 1551 Geography of Developed Nations **3-0-3**
This course includes both physical and cultural geographic studies of the following nations and areas: Australia, Canada, Japan, New Zealand, U.S.A., Central and Western Europe.
Prerequisites: None. No lab fee charged.

GEO 1552 Cultural Geography **3-0-3**
An investigation of the impact of the natural environment upon human societies and the lives of people. Focuses on the limits imposed by the physical world and how humans adapt and overcome these limits. Study by major climatic zones.
Prerequisites: None. No lab fee charged.

GEO 1553 Geography of Developing Nations **3-0-3**
This course includes the physical and cultural studies of the following nations and areas: Mexico, Central America, South America, Eastern Europe, Africa, Southeast Asia, China, India, Southwest Asia, and Pacific Island nations.
Prerequisites: 1551. No lab fee charged.

GRM German

GRM 1070 Elementary German 1 **4-0-4**
Introduction to German language. Provides foundation for understanding, speaking, reading, and writing German. Covers fundamentals of German intonation, grammar, and syntax. Laboratory work may be required.
Prerequisites: None.

GRM 1071 Elementary German 2 **4-0-4**
Continuation of Elementary German 1. Provides foundation for understanding, speaking, reading, and writing German. Covers fundamentals of German intonation, grammar, and syntax. Introduces more advanced readings. Laboratory work may be required.
Prerequisites: 1070 or 1 year high school German or equivalent. No lab fee charged.

GRM 1072 Elementary German 3 **4-0-4**
Continuation of Elementary German 2. Continues fundamentals of understanding, speaking, reading, and writing German. Covers fundamentals of German intonation, more complex grammar and syntax. Introduces more advanced readings and basic composition. Laboratory work may be required.
Prerequisites: 1071 or 2 years high school German or equivalent. No lab fee charged.

GRM 1073 Intermediate German 1 **4-0-4**
Review and extension of basic principles of grammar and syntax through composition and conversation, stressing fluency. Introduces more advanced reading, composition, and short literary pieces. Laboratory work may be required.
Prerequisites: 1072 or 3 years high school German or equivalent. No lab fee charged.

GRM 1074 Intermediate German 2 **4-0-4**
Continues review and extension of principles of grammar and syntax through composition and conversation, stressing fluency. Introduces more advanced reading, composition, and longer literary pieces. Laboratory work may be required.
Prerequisites: 1073 or equivalent. No lab fee charged.

GRM 1075 Intermediate German 3 **4-0-4**
Continues review and extension of principles of grammar and syntax through composition and conversation, stressing fluency. introduces more advanced reading, composition, and longer literary pieces. Laboratory work may be required.
Prerequisites: 1074 or equivalent. No lab fee charged.

HIM Health Information Management

HIM 4420 ICD-9-CM Coding 1 **2-2-3**
Introduction of basic principles for coding ICD-9-CM classification system.
Prerequisites: 4000, 4407, 4014. Corequisites: 4015.
No lab fee charged.

HIM 4421 ICD-9-CM Coding 2 **2-2-3**
Continuation of ICD-9-CM Coding principles include: cardiovascular system, neoplasms, pregnancy, and injuries and poisonings.
Prerequisites: 4420, 4015. Corequisites: None.
No lab fee charged.

HIM 4422 ICD-9-CM Coding 3 **2-2-3**
Further understanding of coding classification according to ICD-9-CM. Includes an introduction to the Prospective payment System, DRG coding procedures and the computer applications available to increase coding productivity. Provides an additional overview of other major coding classification systems such as SNDO, CPT and DSM-III.
Prerequisites: 4421. Corequisites: 4020. No lab fee charged.

HIM 4435 Computer Applications in Health Information Management **1-2-2**
This course will introduce the student to the major concepts of information systems. There will be an overview of an operating system (DOS) and a discussion of hardware and software currently being utilized in hospitals and health information management departments. A major focus of this course will be on the use of computers in health care facilities. the students will perform projects using WordPerfect, Dbase and Lotus.
Prerequisites: 4405, 4407, 1850. No lab fee charged.

HIM 4499 Special Studies - Health Information Management **Var-Var-1-8**
A student initiated academic pursuit, mutually agreed upon by the student and faculty member and carried on outside the classroom. Before registration, the student must have the plan of study approved by a supervising faculty member and the Dean of Health Technologies.
Prerequisites: None. No lab fee charged.

HLT Health Technologies

HLT 4000 Introduction to Medical Terminology **2-2-3**
A computer based introduction to a basic medical vocabulary through word analysis, definition, spelling and pronunciation of medical and surgical terms. Emphasis on prefixes, suffixes, word roots and their combining forms. Assist in the development of a basic working medical vocabulary. Includes practice in pronunciation and spelling.
Prerequisites: None. Lab fee charged.

HLT 4001 Introduction to the Health Care System **2-0-2**
This course will acquaint students with an overall view of the

health care system. Topics stressed will include history, organization, areas of specialization, roles and relationships, education, medical ethics and patient rights.
Prerequisites: None. No lab fee charged.

HLT 4007 Emergency Medical Procedures 1-2-2
An introduction to basic first aid including: emergency care to the sick and injured, safety awareness and habits and prevention and treatment of sudden illness or accidental injury.
Prerequisites: None. Lab fee charged.

HLT 4018 Pharmacology 3-0-3
Course content includes discussion of drug therapy, dealing with the pharmacokinetics, pharmacodynamics, pharmacotherapeutics and adverse drug reactions and drug interactions. Topics include principles, terminology, modes of administration and mechanism of action of the major drug groups.
Prerequisites: 4016. Corequisites: None. No lab fee charged.

HLT 4030 Technology of Education for Health 1-3-2
Principles and techniques for planning, designing, producing, implementing and evaluation and instructional program. For health occupations students.
Prerequisites: None. No lab fee charged.

HLT 4050 Patient Care Skills 0-2-1
Basic patient care techniques including verbal and non-verbal communication, body mechanics, procedures for assisting patients to walk, patient positioning, universal precautions procedures, use of restraints and vital signs. An introduction to services provided by the clinical lab is also presented.
Prerequisites: None. Lab fee charged.

HLT 4061 Contemporary Health Care Issues 3-0-3
This course will acquaint students with health care economics and new trends and issues in health care.
Prerequisites: None. No lab fee charged.

HLT 4094 Workshops in Health Technologies 3-0-3
Consideration and study of selected issues and topics in the health technologies area designed to meet current needs. Content and emphasis varies from year to year.
Prerequisites: None. No lab fee charged.

HLT 4099 Special Studies in Health 1-55-Var-Var
A student initiated academic pursuit, mutually agreed upon by the student and faculty member and carried on outside the classroom. Before registration, the student must have the plan of study approved by a supervising faculty member and the Dean of Health Technologies.
Prerequisites: Varies. No lab fee charged.

HLT 9300 Cooperative Employment - Health Technologies 1-40-2
Usually on an alternating term basis, the health student is placed on a full-time (32-40 hour) job that ideally relates to his or her class work. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his or her class work. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term. Participation in a cooperative employment seminar and related instructional assignments equivalent to five to ten class hours per term is required to earn co-op credit.
Prerequisites: None. Lab fee charged.

HLT 9301 Cooperative Employment Health Technologies 1-40-3
Usually on an alternating term basis, the health student is placed on a full-time (32-40 hour) job that ideally relates to his or her class work. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his or her class work. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term. Participation in a cooperative employment seminar and related instructional assignments equivalent to five to ten class hours per term is required to earn co-op credit.
Prerequisites: None. Lab fee charged.

HLT 9302 Cooperative Employment Health Technologies 1-40-3
Usually on an alternating term basis, the health student is placed on a full-time (32-40 hour) job that ideally relates to his or her class work. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his or her class work. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term. Participation in a cooperative employment seminar and related instructional assignments equivalent to five to ten class hours per term is required to earn co-op credit.
Prerequisites: None. Lab fee charged.

HLT 9303 Cooperative Employment Health Technologies 1-40-3
Usually on an alternating term basis, the health student is placed on a full-time (32-40 hour) job that ideally relates to his or her class work. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his or her class work. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term. Participation in a cooperative employment seminar and related instructional assignments equivalent to five to ten class hours per term is required to earn co-op credit.
Prerequisites: None. Lab fee charged.

HLT 9304 Cooperative Employment Health Technologies 1-40-2
Usually on an alternating term basis, the health student is placed on a full-time (32-40 hour) job that ideally relates to his or her class work. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his or her class work. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term. Participation in a cooperative employment seminar and related instructional assignments equivalent to five to ten class hours per term is required to earn co-op credit.
Prerequisites: None. Lab fee charged.

HLT 9305 Cooperative Employment Health Technologies **1-40-2**

Usually on an alternating term basis, the health student is placed on a full-time (32-40 hour) job that ideally relates to his or her class work. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his or her class work. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term. Participation in a cooperative employment seminar and related instructional assignments equivalent to five to ten class hours per term is required to earn co-op credit.
Prerequisites: None. Lab fee charged.

HLT 9310 Cooperative Employment - Health Technologies **0-15-1**

Usually on an alternating term basis, the health student is placed on half time (15-20 hours) job that ideally relates to his or her class work. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his or her class work. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term. Participation is a cooperative employment seminar and related instructional assignments equivalent to five to ten class hours per term is required to earn co-op credit.
Prerequisites: None. Lab fee charged.

HRM Hotel-Restaurant Management

HRM 2801 Food & Beverage Sanitation & Safety **3-0-3**

A study of sanitation and safety and its importance in the Food Service Industry. This course provides information and methods to help a foodservice manager apply sanitation procedures to good handling functions. This course is the National Restaurant Association's Educational Institute certification course.
Prerequisites: None. No lab fee charged.

HRM 2802 Food & Beverage Cost Control & Purchasing 1 **3-0-3**

An examination of food markets, food buyer, and how they interact to develop a complete food and beverage purchasing systems. Topics covered are buying, receiving, storing, issuing, transfers, inventories, and cost determinations. Recommend completion of 0024 or equivalent.
Prerequisites: None. No lab fee charged.

HRM 2803 Menu Production & Facilities Planning **3-0-3**

Principles of Menu development: Menu Planning, Construction Constraints, Analysis and Pricing.
Prerequisites: None. No lab fee charged.

HRM 2804 Catering & Banquets **3-0-3**

To give a comprehensive study of a hotel banquet operation and catering office.
Prerequisites: None. No Lab fee charged.

HRM 2805 Food & Beverage Supervision **3-0-3**

Encountering the problems of human resources while learning the elements of leadership and supervision.
Prerequisites: None. No lab fee charged.

HRM 2806 Hospitality Beverage Management **3-0-3**

Studies of actual situations, pricing and profit, beverage personnel job descriptions, terms, merchandising, liquor laws in relation to hospitality refreshments.
Prerequisites: None. No lab fee charged.

HRM 2808 Food and Beverage Service Lab **1-3-2**

A practical application of service and kitchen duties in a full service restaurant.
Prerequisites: None. Lab fee charged.

HRM 2811 Introduction to Hospitality Management **3-0-3**

A study of the various departments within the framework of private clubs, hotels, and motels, available vocational opportunities, and a look at the future.
Prerequisites: None. No lab fee charged.

HRM 2812 Hotel Front Office Procedures 1 **3-0-3**

Study of front office management and operation with emphasis on the use of various front office equipment, supplies, and procedures. Practical operating procedures in performing the hotel night audit including registration, rates, hotel racks posting charges and credits.
Prerequisites: None. No lab fee charged.

HRM 2813 Hospitality Housekeeping **3-0-3**

Studies in housekeeping and its administration, control of supplies, sanitation, cleaning techniques, decoration, equipment and related subjects.
Prerequisites: None. No lab fee charged.

HRM 2814 Hotel Maintenance Management **3-0-3**

A study of the basic terminology of energy, maintenance, and engineering. Explains, investigates, and provides basic decision-making models for energy, maintenance, and engineering situations.
Prerequisites: None. No lab fee charged.

HRM 2817 Hotel Front Office Procedures 2 **3-0-3**

A continuation of Hotel Front Office Procedures 1. Emphasis on statistics generated from the night audit.
Prerequisites: 2812. No lab fee charged.

HRM 2818 Food & Beverage Cost Control & Purchasing 2 **4-0-4**

An application of accounting theory to foodservice management. The student will learn how to set up a system that can be implemented to control major costs in the foodservice industry.
Prerequisites: 2802. No lab fee charged.

HRM 2821 Hospitality Sales & Marketing **3-0-3**

A study of marketing and sales techniques in the hospitality industry. Purposes and goals of both internal and external marketing strategies. Topics covered include marketing plans, personal sales, advertising, and market segmentation.
Prerequisites: None. No lab fee charged.

HRM 2828 Nutrition for Food Service **2-2-3**

Students will learn the characteristics of the major nutrient groups, their relationship to diet and health and the foods in which they are found. Students will apply these principles to menu planning, marketing, food purchasing, preparation and service activities.
Prerequisites: None. Lab fee charged.

HRM 2830 Managing Quantity Food Production **2-4-4**
This course is designed to give the management student an overview of the principles of cooking, the use of commercial equipment, and the guidelines for proper service and merchandising of food.
Prerequisites: None. Lab fee charged.

HST History

HST 1561 History of World Civilization 1 **3-0-3**
An introductory survey of the major trends in the development of Western and Asiatic civilizations from ancient Eurasian times to the Fall of Byzantium.
Prerequisites: None. No lab fee charged.

HST 1562 History of World Civilization 2 **3-0-3**
An introductory survey of the major trends in Western and Asiatic civilizations from the Fall of Byzantium to the Congress of Vienna. Includes the native civilizations of the Americans.
Prerequisites: None. No lab fee charged.

HST 1563 History of World Civilization 3 **3-0-3**
An introductory survey of the major trends in Western and Asiatic civilizations from the Congress of Vienna to contemporary times.
Prerequisites: None. No lab fee charged.

HST 1568 American History 1 **3-0-3**
General historical survey of the formative years of the Republic from Colonial American through the outbreak of the American Civil War.
Prerequisites: None. No lab fee charged.

HST 1569 American History 2 **3-0-3**
General historical survey of the United States from the Civil War through the end of World War I.
Prerequisites: None. No lab fee charged.

HST 1570 American History 3 **3-0-3**
General historical survey of the United States from the Roaring Twenties to contemporary times.
Prerequisites: None. No lab fee charged.

HST 1575 History of Africa **3-0-3**
General survey of African history with emphasis on the Diaspora, and the political, social and cultural factors creating modern Africa.
Prerequisites: None. No lab fee charged.

HST 1576 African-American History **3-0-3**
Development of African-American culture from the Diaspora throughout the Americans, including the institution of slavery, the struggle for civil rights and contemporary issues.
Prerequisites: None. No lab fee charged.

HUM Arts & Humanities

HUM 1090 Orientation to Deafness **3-0-3**
An overview of deafness, including historical perspectives and present day legal, educational, and political issue. The course covers types and causes of hearing impairment, and its influence on language development.

HUM 1091 American Sign Language 1 **3-2-4**
Introductory course in American Sign Language taught in the context of English as a first language. Course will emphasize basic signs, and finger-spelling, rely heavily on conversation and be geared to developing student's expressive and receptive skills.

HUM 1645 Civilization and Technology **3-0-3**
Study and discussion of the cultural relationships among and the societal consequences of significant applications of science and technology. Course topics include review of individual achievements and cultural trends that have resulted in scientific and technological developments, and investigation of the impact of applied science and technology (including specific products, tools, and systems) on western and non-western cultures.
Prerequisites: 1001. No lab fee charged.

HUM 1646 Mass Media and Culture **3-0-3**
Study and discussion of the role and function of mass media (newspapers, magazines, film, radio, TV, and computer multimedia) in today's society, including assessment of historical, business, and cultural perspectives and implications.
Prerequisites: 1001. No lab fee charged.

HUM 1647 Work and the New Economy **3-0-3**
Study and discussion of economic, sociological, and other issues faced by individuals and organizations in dealing with a rapidly changing workplace. Topics include new business standards for competition and productivity, and organizational strategies related to globalization, workforce diversity, trade status, and economic policy. This course integrates these issues into a cohesive framework for understanding the New Economy.
Prerequisites: 1001. No lab fee charged.

HUM 1660 Introduction to Art **3-0-3**
An introduction to visual artistic expression in Western culture from ancient times to the present. The course emphasizes examination of the painting, sculpture, architecture, and other appropriate media of each period for their style, function, and relationship to the historical and cultural developments of the period. No previous formal art training is necessary. Students are required to participate in field trips to local art museums.
Prerequisites: None. No lab fee charged.

HUM 1665 Introduction to Music **3-0-3**
An introduction to major periods in Western musical history from the Middle Ages to the Twentieth Century, including the major composers of the Western musical tradition. The course emphasizes development of perceptive listing habits through analysis of compositional styles and techniques. No previous formal music training is necessary. Students are required to attend a listening laboratory session once each week.
Prerequisites: None. No lab fee charged.

HUM 1698 Topics in Humanities **Var-Var-1-6**
Study and discussion of selected in the humanities, which may be drawn from one field within the humanities (e.g., urban history, criminology, social welfare in society, film studies, etc.) or may be interdisciplinary (e.g., popular culture studies, women's studies, etc.). Content and emphasis may vary from term to term.
Prerequisites: 1001. Lab fee charged.

HUM 9801 Career Exploration Seminar **3-0-3**
Students seeking the Associate of Arts or Associate of Science degree will assess their life experience, skills, and interests, and will carry out a variety of structured activities (including directed reading and writing assignments) in order to set realistic post-bac-

calaureate career goals. Students will be required to conduct informational interviews with professionals in their field of interest, and will be required to participate in activities associated with their field of interest, such as attending meetings of a professional association, or "shadowing" working professionals on the job. Other course activities include writing resumes, cover letters, and job applications; developing interviewing skills; and preparing a portfolio of work samples. Students should complete this course during their second or third academic term. This course may not be repeated for credit.
Prerequisites: None. Lab fee charged.

HUM 9802 Internship - Humanities & Sciences 1-40-2
The student seeking the Associate of Arts or Associate of Science degree is placed on an unpaid part-time or full-time job that is related to the student's post-baccalaureate career goals, and provides the opportunity to apply knowledge and skills acquired in classes. The student must adhere to divisional internship policies and procedures in order to earn credit. This course may be repeated for additional credit.
Prerequisites: 9801. Lab fee charged.

HUM 9803 Cooperative Employment - Humanities & Sciences 1-40-2
The student seeking the Associate of Arts or Associate of Science degree is placed on a full-time (32 to 40 hours per week for one academic term), paid job that is related to the student's post-baccalaureate career goals, and provides the opportunity to apply knowledge and skills acquired in classes. The student must adhere to divisional cooperative education policies and procedures in order to earn credit. This course may be repeated for additional credit.
Prerequisites: 9801. Lab fee charged.

HUM 9804 Parallel Cooperative Employment - Humanities & Sciences 1-20-1
The student seeking the Associate of Arts or Associate of Science degree on a part-time (20 to 32 hours per week for one academic term), paid job that is related to the student's post-baccalaureate career goals, and provides the opportunity to apply knowledge and skills acquired in classes. The student must adhere to divisional cooperative education policies and procedures in order to earn credit. This course may be repeated for additional credit.
Prerequisites: 9801. Lab fee charged.

HUM 9805 Career Education Project - Humanities & Sciences 1-40-2
The student seeking the Associate of Arts or Associate of Science degree completes individual study or a special project pertaining to the student's major field and pertaining to the student's post-baccalaureate career goals. The student, working with an assigned faculty mentor, will define the project goals, carry out project tasks, and evaluate the results achieved. This course may be repeated for additional credit.
Prerequisites: 9801 and permission of co-op coordinator.
Lab fee charged.

ILT Industrial Lab Tech

ILT 6639 Fundamentals of Physical Measurement 3-2-4
A study of measurement standards, error and uncertainty, propagation of uncertainty, accuracy and precision and basic statistics. Laboratory experiments are performed utilizing various measuring devices, then the data is analyzed and empirical equations developed through computerized data spreadsheets. Basic electricity is taught to the extent that the student can understand the fundamental operation of the laboratory equipment used. For success in this course, a competency in a spreadsheet software is suggested.
Prerequisites: 6629. Lab fee charged.

ITE Industrial Training

ITE 8500 Problems- Mechanical Apprentice VAR-VAR-VAR
Individual study and special projects pertaining to Mechanical areas of specialization. Open to students with valid documented course academics, work experience, professional certification and/or licensing, or completed formal training programs.
Prerequisites: Completed formalized training program/apprenticeship. No lab fee charged.

ITE 8700 Problems Electrical Apprentice VAR-VAR-VAR
Individual study and special projects pertaining to Electrical/Electronic areas of speciality. Open to students with documented valid academics or work experience, professional certification and/or licensing, or completed formal training programs.
Prerequisites: Completed formalized training program apprenticeship/Licensing. No lab fee charged.

ITE 8900 Problems - Plumber/Pipefitter VAR-VAR-VAR
Individual study and special projects pertaining to Plumber/Pipefitting areas of specialization. Open to students with valid documented course academics, work experience, professional certification and/or licensing or completed formal training programs.
Prerequisites: Completed formalized training program/apprenticeship. No lab fee charged.

ITM International Commerce

ITM 2980 Intro to International Business 3-0-3
This course is an overview of international business and the institutions which affect business today. The scope and challenges of international trade, concepts and theories, market entry strategies, cultural dynamics, business customs and practices, political environments, legal systems and international market techniques will be discussed.
Prerequisites: None. No lab fee charged.

ITM 2981 International Marketing 3-0-3
This course is designed to make students aware of the various components of International Marketing. Covers determination of export potential, international market research, internationalization of products, pricing methods, market entry strategies, promotional techniques and long-term marketing planning.
Prerequisites: None. No lab fee charged.

ITM 2982 International Banking & Finance 3-0-3
This course is designed to identify financial procedures & responsibilities of international bankers, buyers, and sellers; examine financing & collection alternatives, & provide an understanding of the rules & regulations governing international collections. Methods of checking the credit of potential customers.
Prerequisites: None. No lab fee charged.

ITM 2983 International Orders Processing & Shipping 3-0-3
This course provides the skills necessary to perform all of the tasks required by the international order processing & shipping

departments: inquiries, quotations, foreign purchase orders, bills of lading, country required documents; selecting forwarders, carriers, insurance; and the communication procedures necessary to accomplish inter-company coordination. This course will also cover the roles & responsibilities of all parties to the contract of carriage for shipments; reading & understanding trade, tariff, exchange regulations & restrictions.
Prerequisites: None. No lab fee charged.

ITM 2985 International Transaction Simulations 2-2-3
This course is designed for students to practice their skills by applying the topical instruction of previous courses to the techniques used by trade professionals in the processing of actual international transactions. This course will also offer practice in dealing with the decision making process necessary to analyze & solve problems normally encountered in transactions by exporters, importers, freight forwarders, and carriers. Should be taken in conjunction with 2981.
Prerequisites: 2983. Lab fee charged.

LBR Labor Relations

LBR 1535 Introduction to Labor/Management Relations 3-0-3
A general overview of the historical, legal and current status of Labor/Management relations, in union and non-union environments, and in both the public and private sectors. Includes labor economics, labor law, labor movements and the concept of relative bargaining power.
Prerequisites: None. No lab fee charged.

LBR 1538 Case Studies in Labor Relations 3-0-3
A case study approach to the American labor relations system and the application of labor law.
Prerequisites: 1535 or equivalent. No lab fee charged.

LBR 1539 Introduction to Employment and Workplace Law 3-0-3
Covers the major legislation regarding employment rights and responsibilities from the viewpoint of management and labor. Emphasis on the public policy on EEO, workers' compensation, OSHA, hiring, termination, ADA-related topics.
Prerequisites: None. No lab fee charged.

LC Loss Control

LC 1202 First Aid 3-0-3
First-aid instruction including Red Cross Multi-Media Standard First Aid course, including instructors' certification; CPR instruction, including instructors' certification.
Prerequisites: None. No lab fee charged.

LC 1203 Security Investigation 3-0-3
Investigations will provide the security officer the methods for gathering information from public records and private individuals. Legal aspects, investigative strategies, and report writing will be covered.
Prerequisites: 1001. No lab fee charged.

LC 1205 Criminal Interrogation 3-0-3
This course is an in-depth study of proper interrogation procedures designed to gather information from persons.
Prerequisites: None. No lab fee charged.

LC 1208 Criminal Law 1 3-0-3
Criminal procedure deals with the scope of all criminal rules and their applicability as established by the State of Ohio. Procedures and options of criminal justice.
Prerequisites: 1001. No lab fee charged.

LC 1209 Criminal Law 2 3-0-3
This course covers all areas dealing with Ohio codes and statutes (H.B.511).
Prerequisites: 1208. No lab fee charged.

LC 1233 Emergency Planning 3-0-3
Principles governing the development of emergency plans. Problems encountered in planning for emergencies and implementing such plans. Procedures for plan development. Procedures for plan implementation. Emergencies to be covered include: bomb threat, fire, explosion, storm, riot, strike violence.
Prerequisites: None. No lab fee charged.

LC 1239 Special Studies in Law Enforcement Var-Var-Var
Individual or independent study or particular project as related to the area of law enforcement. Advisor approval is required before registration.
Prerequisites: None. No lab fee charged.

LC 1240 Directed Case Study 3-0-3
An analysis of criminal court decisions; these decisions must be reduced to a written brief by student.
Prerequisites: 1208, 1209. No lab fee charged.

LC 1299 Problems in Law Enforcement Var-Var-1-45
Individual study and special projects pertaining to law enforcement. Open to students wishing advanced standing, independent study, and/or research. This course is arranged with the approval of the Dean of the Division.
No lab fee charged.

LH Landscape Horticulture

LH 3500 Orientation to Horticulture Occupations 1-0-1
An introduction to the various horticulture occupations. Guest speakers will discuss benefits, working conditions, abilities needed, and job levels within the horticulture industries.
Prerequisites: None. No lab fee charged.

LH 3501 Soils and Plant Nutrition 2-2-3
A basic course dealing with the formation and physical, chemical, and biological properties of soils that affect plant growth.
Prerequisites: 2200. Lab fee charged.

LH 3502 Horticulture Science 2-2-3
To provide a basic understanding of plant classification, structures, physiology, development, and the environmental conditions which affect plant growth.
Prerequisites: None. Lab fee charged.

LH 3504 Woody Plant Materials 1 2-3-3
The study of woody plants primarily grown by nurseries and found in the landscape and secondarily found in naturalized settings of Ohio. The deciduous and evergreen trees, shrubs, and vines will be studied with emphasis on identifying features, cultures, and landscape use. Weekly plant walk field trips are required.
Prerequisites: None. No lab fee charged.

LH 3505 Introduction to Herbaceous Plant Materials 2-2-3
An introduction to the classification, identification, and general cultural requirements of annuals, perennials, bulbs, and roses commonly used in garden plantings. Researching theme gardens and basic bed design will also be covered.
Prerequisites: None. Lab fee charged.

LH 3506 Nursery Management 1 2-2-3
An introduction to the techniques and practices used in the commercial production of field or containerized landscape plants. Nursery business management, organization, summer culture, irrigation, and prunning are emphasized. Field trips required.
Prerequisites: None. Lab fee charged.

LH 3507 Arboriculture 3-2-3
A study of the commercial arboriculture business. The diagnosis and treatment of tree ills, principles and techniques used to protect trees from disease and damage, pruning, removal, and climbing safety are emphasized. Field activities required.
Prerequisites: 3510, 3521, 3532. Lab fee charged.

LH 3508 Turfgrass Management 2-2-3
Principles and practices of identification, growth, uses, establishment, and pest control of turfgrass areas. Field trips required.
Prerequisites: None. Lab fee charged.

LH 3509 Landscape Design 1 2-3-3
A course in landscape development for residential sites. The design process, graphics, and lettering are emphasized. Drawing tools to be provided by student. Field trips required.
Prerequisites: None. Lab fee charged.

LH 3510 Small Engine Maintenance & Repair 2-2-3
A study of the operation and maintenance of small gasoline engines with emphasis on safety and troubleshooting.
Prerequisites: None. Lab fee charged.

LH 3511 Introduction to Landscape Construction 2-3-3
The techniques of selecting and working with materials such as wood, stone, concrete, brick and interlocking pavers used in the construction of landscape features. Measuring, site layout, grading, drainage and erosion control are also covered. Hand and power tool use is emphasized. Field trips required.
Prerequisites: 3509. Lab fee charged.

LH 3512 Nursery Management 2 1-2-2
Nursery harvesting techniques, Fall pruning and fertilization, inventory control and shipping methods will be emphasized.
Prerequisites: None. Lab fee charged.

LH 3513 Advanced Landscape Construction 2-3-3
More advanced techniques of landscape construction. Construction of decks, patios, walkways, retaining walls, steps and water features will be emphasized. Field trips required.
Prerequisites: 3511. Lab fee charged.

LH 3515 Woody Plant Materials 2 2-3-3
The study of woody plants primarily grown by nurseries and used in the landscape. Secondary consideration is given to novel plants found in arboretums and those plants in naturalized settings in the state of Ohio. The deciduous and evergreen trees, shrubs, and vines will be covered with emphasis on identifying features, culture, and landscape use. Weekly plant walk field trips required.
Prerequisites: None. No lab fee charged.

LH 3516 Herbaceous Plants 2 2-2-3
An advanced course emphasizing the design, long term establishment, selection, maintenance, and propagation of herbaceous plants. Prior gardening experience or the successful completion of course 3505 is recommended before taking this course. Field trips required.
Prerequisites: 3509. Lab fee charged.

LH 3517 Computer Aided Landscaping Drafting 2-3-3
An introductory course on the use of computers in landscape design. The techniques of generating plot plans, planting plans, and presentation drawings used in landscape contracting will be covered.
Prerequisites: 3509. Lab fee charged.

LH 3518 Landscape Design 2 2-3-3
A continuation of the principles of Landscape Design, with progressively difficulty problems. Emphasis is placed on basic details of landscape architectural construction. Grading, construction, drainage irrigation factors are examined and utilized in plan development.
Prerequisites: 3509. Lab fee charged.

LH 3519 Landscape Contracts and Specifications 3-0-3
A study of planting design, and plan presentation. Typical plantings are examined in the field. Cost estimates, procedures, specifications and types of contracts are studied and developed.
Prerequisites: 3511. No lab fee charged.

LH 3520 Horticulture Lab 0-3-1
The lab will involve supervised practical experience carried out in a structured environment. It will include the installation, and maintenance of landscape plantings and the operation of equipment and vehicles common to the industry. Field trips required.
Prerequisites: None. Lab fee charged.

LH 3521 Entomology & Plant Pathology 2-2-3
Principles and practices in diagnosing and treating plant diseases and insect problems on various horticultural crops.
Prerequisites: None. Lab fee charged.

LH 3522 Nursery Operations 3 1-2-2
This course covers nursery plant propagation, over-wintering techniques, winter pruning, pre-emergent herbicide applications, spring planting and digging. Field trips required.
Prerequisites: None Lab fee charged.

LH 3523 Horticulture Entomology 2-2-3
Principles and practices in diagnosing and controlling insect pests on various horticultural crops. Integrated Pest Management principles will be emphasized. Field trips required.
Lab fee charged.

LH 3524 Plant Pathology 2-2-3
Principles and practices in diagnosing, prevention, and controlling plant diseases on various horticulture crops. Field trips required.
Prerequisites: None. Lab fee charged.

LH 3528 Greenhouse and Garden Center Management 2-3-3
Principles and practices in controlling the greenhouse environment for plant growth and sales. Growing, marketing, retailing, purchasing, inventory and customer service will be emphasized.
Prerequisites: None. Lab fee charged.

LH 3530 Horticulture Seminar **1-0-1**
Guest speakers and field trips dealing with current industry topics. "For first year students."
Prerequisites: None. No lab fee charged.

LH 3531 Horticulture Seminar 2 **1-1-1**
Guest speakers and field trips dealing with current industry topics. "For second year students."
Prerequisites: None. No lab fee charged.

LH 3532 Landscape Management **2-3-3**
Principles and practices involved in the maintenance of ornamental plants including planting, fertilizing, pruning, pest control, and other related maintenance practices. Field projects required.
Prerequisites: None. Lab fee charged.

LH 3533 Landscape Irrigation **2-2-3**
A study of the design, construction, installation and use of landscape irrigation systems.
Prerequisites: None. No lab fee charged.

LH 3534 Interior Plantscaping **2-2-3**
Identification, culture, and maintenance of tropical plants used in residential and commercial interior plantings. Field trips required.
Prerequisites: None. No lab fee charged.

LH 3535 Woody Plant Materials 3 **2-3-3**
A course emphasizing plants commercially available and widely used in the landscape and nursery industry. Special emphasis will be on cultivar distinctions and landscape use. Field trips required.
Prerequisites: 3504, 3515. No lab fee charged.

LH 3536 Turfgrass Culture **2-2-3**
An in-depth look at the turf environment from establishment through renovation. Soil modification, selection of turf species and cultures, thatch management and fertilization practices will be covered. Field trips required.
Prerequisites: 3501, 3502, 3508. No lab fee charged.

LH 3537 Turfgrass Pests **2-2-3**
A study of the insects, diseases, weeds and other pests that affect turf grasses. Diagnosis and management of the problems will be stressed. Field trips required.
Prerequisites: 3508, 3521. Lab fee charged.

LH 3538 Turfgrass Practices **2-2-3**
The special concerns of athletic turf, golf course and commercial lawn care industry will be explored. A research project and field trips will be required.
Prerequisites: 3536, 3537. Lab fee charged.

LH 3539 Landscape Design 3 **2-3-3**
Advanced study in the application of design theory, landform design, and the use of water in garden design. The course will emphasize advanced graphic skills including section, elevation, isometric and perspective techniques an the application of computers in design. Course projects will also concentrate on client contact and sales presentation skills.
Prerequisites: 3511, 3518. Lab fee charged.

LH 3540 Introduction to Floral Design **2-2-3**
A basic course dealing with principles of making simple flower arrangements and corsages. Types of design, style, principle tools, equipment, materials, foliage and flower types are covered.
Prerequisites: None. Lab fee charged.

LIT Literature

LIT 1040 Survey of American Literature 1 **3-0-3**
Chronological survey of American authors from the colonial period to the beginning of the Civil War with discussion of the major historical and cultural issues of their times.
Prerequisites: 1001. No lab fee charged.

LIT 1041 Survey of American Literature 2 **3-0-3**
American authors from the Civil War era to the period before World War I with emphasis on the developments and changes in American culture.
Prerequisites: 1001. No lab fee charged.

LIT 1042 Survey of American Literature 3 **3-0-3**
Notable American authors since World War I with discussion of the major cultural and social developments.
Prerequisites: 1001. No lab fee charged.

LIT 1045 Survey of British Literature 1 **3-0-3**
Chronological survey of major works of English literature from the Anglo-Saxon period to 1550.
Prerequisites: 1001. No lab fee charged.

LIT 1046 Survey of British Literature 2 **3-0-3**
Survey of major British authors from the Renaissance through the 18th century.
Prerequisites: 1001. No lab fee charged.

LIT 1047 Survey of British Literature 3 **3-0-3**
Survey of major British authors and literary movements in the 19th and 20th centuries.
Prerequisites: 1001. No lab fee charged.

LIT 1050 The Short Story: Forms and Themes **3-0-3**
An exploration of short classics, emphasizing their development and form. The course concentrates on works by a multicultural group of authors.
Prerequisites: 1001. No lab fee charged.

LIT 1055 Science Fiction **3-0-3**
An examination of the formal elements of science fiction, including early examples and recent works. The course emphasizes discussing the writing in relation to current trends in science and technology.
Prerequisites: 1001. No lab fee charged.

LIT 1059 Topics in Literature **3-0-3**
Study and discussion of selected topics or genres in literature (e.g. detective fiction, images of women, etc). Content and emphasis vary term to term.
Prerequisites: 1001. No lab fee charged.

LOT Laser Electro-Optics

LOT 6700 Introductory Laser Principles **3-0-3**
Study of Introductory laser Concepts and Principles. Required for laser Electro-Optics Engineering Technology pre-tech students unless specifically waived by the dean of the Engineering

Technologies Division.
Prerequisites: 1161. No lab fee charged.

LOT 6710 Introduction to Lasers **3-3-4**
Emission and absorption of photons, elements of the laser, properties of laser light, optical cavities, helium-neon lasers, laser classifications and characteristics, introduction to laser safety.
Prerequisites/Corequisites: 1172 or 1191. Lab fee charged.

LOT 6715 Laser Safety **2-2-3**
Examination of: parts of the eye most susceptible to damage from laser light, point sources and extended sources, specular, diffuse and Fresnel reflections, hazards of laser beam, laser classification, bioeffects, associated hazards, calculations of MPE, OD, nominal hazard zone, etc.
Prerequisites: 6710. No lab fee charged.

LOT 6720 Geometrical and Wave Optics **3-3-4**
Geom. Optics: reflection and refraction of light, mirrors, lenses and prisms. Wave Optics: reflection, interference, diffraction and polarization.
Prerequisites: 1191, 6710. Lab fee charged.

LOT 6730 Optical Components and Devices **3-3-4**
Optical Components: optical windows, flats, filters and beam-splitters. Laser-Optic Devices: photodetectors, laser power and energy detectors, collimators, autocollimators, beam expanders, spatial filters, electro-optic Q-switches and laser modulators.
Prerequisites: 6720. Lab fee charged.

LOT 6735 Industrial Laser Systems **3-2-4**
Various types of lasers such as Nd: YAG, CO_2, Excimer, Argon, and Semiconductor. Motion Control Systems and Beam Delivery Systems.
Prerequisites: 6730.

LOT 6736 Medical Laser Systems **3-2-4**
Various types of Medical Lasers such as Nd: YAG, CO_2, Excimer, dye, Argon,etc used in medical applications. Beam delivery systems, filters and tips and other accessories.
Prerequisites: 6730. Lab fee charged.

LOT 6740 Applications of Lasers **3-3-4**
Cutting, drilling, welding, engraving, and surface modification. Holography (learning about the holograms).
Prerequisites: 6730. Lab fee charged.

LOT 6741 Introduction to Fiber Optics **3-3-4**
Optics Review-Lenses, Imaging, Numerical Aperature, Diffraction. Light wave fundamentals dispersion, pulse distortion, reflection at a plane boundary and critical-angle reflections. Wave guides-Modes in symmetric slab wave guide. Step index fiber, graded index fiber. Modes in step-index fiber, distortion in step-index fiber. Couplers and connectors, lateral misalignment, angular misalignment, end separations. Splices.
Prerequisites: 6710. Lab fee charged.

LOT 6742 Medical Lasers Applications **3-2-4**
This course covers laser tissue interaction, various techniques and power levels used. Various medical laser applications such as ophthalmology, gynecology, dermatology and general surgery will be discussed.
Prerequisites: 6740. Lab fee charged.

LOT 6745 Optical System Design **3-3-4**
Co-axial system of two thin lenses, thick lenses, cardinal points. Refraction matrix, translation matrix, lens matrix. System matrix of two thin lenses. System matrix of combination of lenses. Gaussian constants and their physical significance. Lens aberrations.
Prerequisites: 6720 Lab fee charged.

LOT 6749 Laser Electro-Optic Project **0-4-2**
Individual study and special projects pertaining to the particular technology in which the student is enrolled. The study may deal with an idea or concept normally not covered by existing courses at the college, or with a specific problem found in the industry in which the student is employed. Open to fourth and fifth term students by special arrangement with the instructor and program chair.
Prerequisites: Fourth or Fifth Term Status. No lab fee charged.

LOT 6750 Laser Electro-Optic Measurements **3-3-4**
Laser power and energy measurements; wavelength; dispersion and refractive index measurements; use of monochromators and spectrophotometers; use of Fabry-Perot. Michaelson. Nd: YAG Laser.
Prerequisites: 6740. Lab fee charged.

LOT 6758 Laser Power Supplies **2-3-3**
Introduces students to theory, operation, and construction of various types of power supplies used to energize lasers. Major emphasis will be placed on safety considerations, different types of supplies needed for different types of lasers, and physical configuration of actual supplies.
Prerequisites: 7710 or 7712, 7720 or 7722. No lab fee charged.

LOT 6768 Laser Maintenance **2-2-3**
This course covers the use of support and test equipment. The course also includes schematic reading, cleaning and alignment of optical systems. The maintenance of optical, electronics and cooling systems of the laser will be discussed.
Prerequisites: 6758. No lab fee charged.

LOT 6799 Special Problems Seminar - Lasers **Var-Var-1-5**
Individual study and special projects pertaining to the particular technology in which the student is enrolled. The study may deal with an idea or concept normally not covered by existing courses at the college, or with a specific problem found in the industry in which the student is employed. Open to fourth and fifth term students by special arrangement with the instructor and program chair.
Prerequisites: fourth or fifth term status. No lab fee charged.

MA Medical Assisting

MA 4200 Medical Office Practice 1 **2-3-3**
Course will include the following content areas: Medical Law & Ethics, Communication skills, team working relationships, career & professional characteristics and behavior. Students will begin working through Laboratory practice modules simulating office practices for performing administrative functions. Students work with an office automation system.
Prerequisites: 4214. No lab fee charged.

MA 4201 Medical Office Practice 2 **2-3-3**
Fundamentals of patient reception, appointment making, mail handling, telephone techniques, inventory procedures, care of equipment and supplies, medical-legal relationships of the medical office and the assistant's responsibility.
Prerequisites: 4200. Lab fee charged.

MA 4202 Clinical Procedures 1 **3-3-4**
Fundamentals of patient preparation, history taking, positioning, draping, taking and recording the vital signs, assisting the physician with the examinations, caring for the physician's bag, caring for the examination room before and after a patient.
Prerequisites: Acceptance into the Medical Assisting program. Lab fee charged.

MA 4203 Clinical Procedures 2 **3-3-4**
Course will include the following content areas: medications, sterile procedures, assisting in minor office surgeries, assisting in ob/gyn and special examinations - pap smears, pelvics, proctology, etc.
Prerequisites: 4202. Lab fee charged.

MA 4204 Medical Laboratory Procedures 1 **3-3-4**
This course includes units in the following content areas: the use of basic laboratory equipment, quality assurance and quality control, specimen collection, hematology procedures, chemistry procedures including blood glucose and cholesterol and urinalysis.
Prerequisites: High school biology, chemistry and math or permission of instructor. Lab fee charged.

MA 4205 Medical Laboratory Procedures 2 **3-3-4**
This course is a continuation of Medical Procedures 1 with emphasis on microbiology, serology, and other diagnostic techniques such as electrocardiography, X-ray procedures, ultrasound, CAT scan, radionuclides and pulmonary function testing.
Prerequisites: 4204. Lab fee charged.

MA 4206 Medical Laboratory Procedures 3 **2-3-3**
Special diagnostic procedures and techniques including ECG interpretation, microbiology diagnostic techniques, ova and parasites, uses of standards and controls, troubleshooting x-ray procedures and techniques.
Prerequisites: 4205. Lab fee charged.

MA 4208 Medical Office Bookkeeping & Insurance **3-6-5**
Course content will include principles of insurance, filing claims, using superbills, coding of claims (ICD-9-CM, CPT, HCPCS), electronic claims filing, principles of bookkeeping & billing, pegboard procedures.
Prerequisites: 4200, 4214. Lab fee charged.

MA 4209 Medical Assistant Seminar **2-4-3**
In this course, student preparation for entry-level position in the professional field is stressed through competency testing, student seminar presentations, certification testing, and student-run clinics.
Prerequisites: Student must be enrolled in or have completed the last term of second year. Lab fee charged.

MA 4211 Medical Assisting Clinical Experience 1 **0-17-3**
Clinical practice in the physician's office, health centers and clinics, hospital out-patient departments, performing functions related to medical assisting. The student will spend an equal number of hours in clinical and administrative assisting. Students will not receive reenumeration for these experiences.
Prerequisites: Successful completion of first and second terms. Student must schedule pre-clinical conference with instructor. Lab fee charged.

MA 4212 Medical Assisting Clinical Experience 2 **0-17-3**
Clinical practice in the physician's office, health centers and clinics, hospital out-patient department, performing functions related to medical assisting. Students will spend an equal number of hours in clinical and administrative assisting. Students will not receive remuneration for these experiences.
Prerequisites: successful completion of third and fourth terms; 4211. No lab fee charged.

MA 4213 Medical Assisting Clinical Experience 3 **0-17-3**
Clinical practice in the physician's office, health centers and clinics, hospital out-patient departments, performing functions related to medical assisting. The student will spend an equal number of hours in clinical and administrative assisting. Students will not receive reenumeration for these experiences.
Prerequisites: Successful completion of first year of program. No lab fee charged.

MA 4214 Medical Office Computer Literacy **1-3-2**
This course will cover information on computer software, hardware, and medical office applications. Students will learn computer terminology and gain hands on experience using computers for word processing and in medical office applications.
Prerequisites: Typing - 25 wpm. Lab fee charged.

MA 4215 MA Applications **2-3-3**
Review of theory and practice of medical assisting skills with competency testing. Discussions of resume preparation, conducting a job search, and interviewing. Includes preparation for the National Certification Exam.
Prerequisites: Completion of 4200, 4201, 4202, 4203, 4204, 4205, 4208, 4214.

MA 4224 Advanced Clinical Procedure **2-3-3**
Course will include areas related to specialties and special patient concerns. Included will be information related to geriatrics, pediatrics, ophthalmology, orthopedics and ENT.
Prerequisites: 4203. Lab fee charged.

MA 4294 Workshops in Medical Assisting **Var-0-1-4**
Consideration and study of selected issues and topics in the medical assisting area designed to meet current needs. Content and emphasis varies from year to year.
Prerequisites: None. No lab fee charged.

MA 4299 Special Studies - Medical Assisting **Var-Var-1-8**
A student initiated academic pursuit, mutually agreed upon by the student and faculty member and carried on outside the classroom. Before registration, the student must have the plan of study approved by a supervising faculty member and the Dean of Health Technologies.
Prerequisites: None. No lab fee charged.

MAC Computer Applications - Macintosh ™

MAC 5102 Introduction to Macintosh ™ **2-2-3**
This course provides introductory skills for operating the Apple® Macintosh™ computer, including Microsoft Word® word processing software and Claris MacDraw® graphics software. Laboratory work includes effective use of software applications to produce a variety of documents, integrate graphics and text, and produce documents on dot matrix and laser printers. Competency in typing or keyboarding is recommended.
Prerequisites: None. Lab fee charged.

MAC 5103 Macintosh™ Software Applications **2-2-3**
This course provides an introduction to operating Microsoft Excel® electronic spreadsheet software and Claris FileMaker Pro®

database management software on the Apple® Macintosh™ computer. Laboratory work includes a review of basic computer operations; learning basic techniques for designing and generating spreadsheets, charts, and report; and organizing information to design and generate database reports. Competency in typing or keyboarding is recommended.
Prerequisites: 5102 or equivalent experience. Lab fee charged.

MAC 5104 Introduction to HyperCard™ **2-2-3**
This course provides an introduction to operating HyperCard™ software and the HyperTalk™ scripting language on the Apple® Macintosh™ computer. Topics include terminology and tools; using, modify, and creating stacks; and the relationship between hypermedia and online documentation. Competency in typing or keyboarding is recommended.
Prerequisites: 5102 or equivalent experience. Lab fee charged.

MAC 5105 Macintosh Applications - Microsoft Word™ 2-2-3
This course provides an introduction to operating Microsoft Word® word processing software on the Apple® Macintosh™ computer. Laboratory work includes a review of basic computer operations and extensive practice of techniques for preparing and printing a variety of documents, including documents that integrate standard text with graphics, tables, outlines, and other elements, as applied to situations that simulate the use of database management software in business and industry. Competency in typing or keyboarding is recommended.
Prerequisites: None. Lab fee charged.

MAC 5106 Macintosh™ Applications - FileMaker Pro™ 2-2-3
This course provides an introduction to operating Claris FileMaker Pro® database management software on the Apple® Macintosh™ computer. Laboratory work includes defining, creating, sorting and manipulating data files, and designing and printing data management software in business and industry. Competency in typing or keyboarding is recommended.
Prerequisites: None. Lab fee charged.

MAC 5111 Advanced Illustration Software - Macintosh™ 2-2-3
In this course students learn to operate advanced graphics software for Apple® Macintosh™ computers, emphasizing use of Adobe Illustrator® and Aldus Freehand® software. Students will review the standards and principles of effective illustration and design, and will practice applying techniques for preparing a variety of illustrations. Competency in keyboarding is recommended.
Prerequisites: 5102 or equivalent experience. Lab fee charged.

MAC 5116 Desktop Publishing 1 - PageMaker™ Macintosh™ **2-2-3**
This course provides an introduction to operating Aldus PageMaker® desktop publishing software on the Apple® Macintosh™ computer. Laboratory work includes formatting text, positioning graphics, and applying appropriate typographic and design enhancements while preparing a variety of documents such as brochures, posters, newsletters, and reports. Competency in typing or keyboarding is recommended.
Prerequisites: 5102 or equivalent experience. Lab fee charged.

MAC 5117 Desktop Publishing 2 - QuarkXPress™ Macintosh™ **2-2-3**
This course provides an introduction to operating QuarkXPress® desktop publishing software on the Apple® Macintosh™ computer. Laboratory work includes formatting text, positioning graphics, and applying appropriate typographic and design enhancements while preparing a variety of documents such as brochures, posters, newsletters, and reports. Competency in typing or keyboarding is recommended.
Prerequisites: 5102 or equivalent experience. Lab fee charged.

MAT Mathematics

MAT 1105 Mathematics For The Health Professions **4-0-4**
This course is primarily for the health technologist whose work environment implies use of measurement concepts. The prime thrust is problem solving experiences within the health field. This includes: applications of elementary mathematics such as solving simple algebraic equations, ratio & proportion and percent; work with units (metric, apothecary and household systems) including conversions; dosage and concentration calculations. An electronic calculator is required.
Prerequisites: Appropriate placement test score.
No lab fee charged.

MAT 1121 Business Mathematics 1 **3-0-3**
The first of a sequence of courses designed to cover the many applications of mathematics in the business world. Introductory topics on equations, ratios and a review of percents. Mathematics of business topics include: payroll, insurance, taxes and insurance. An electronic calculator is required.
Prerequisites: Appropriate placement test score or 0024.
No lab fee charged.

MAT 1122 Business Mathematics 2 **3-0-3**
A continuation of business mathematics. Topics include: trade and cash discounts, markups, and markdowns,inventory, depreciation, financial reports, graphs, and statistics. Use of an electronic calculator is required.
Prerequisites: 1121. No lab fee charged.

MAT 1123 Business Mathematics 3 **3-0-3**
A continuation of business mathematics topics with emphasis on financial math. Topics included are: simple interest, bank discounts, compound interest, multiple payment plans, annuities, amortizations, stocks and bonds. An electronic calculator is required.
Prerequisites: 1121. No lab fee charged.

MAT 1124 Business Algebra **4-0-4**
Review of the basic laws of algebra. Linear and exponential equations with business applications in compound interest, annuities, etc. Graphing as a problem solving method. Simultaneous equations. Linear inequalities. This course requires students to have had three years of high school college prep math, or the equivalent. A scientific calculator is required.
Prerequisites: Appropriate placement test scores or 0025.
No lab fee charged.

MAT 1127 Business Statistics **4-0-4**
An introduction to the quantitative techniques of probability and statistics as applied to modern business problems. The scientific method, organization of data and graphical displays. Descriptive measures including mean, median, standard deviation and z-scores. Probability concepts and distributions including the binomial and normal. Sampling techniques and size determination. Hypothesis testing for proportions, means and relationships linear regression and correlation. This course is business application oriented. A scientific calculator with STAT capabilities is required. Course presentation assumes that the student has taken a college level algebra course such as 1124 or 1151.

Prerequisites: Appropriate placement test score.
No lab fee charged.

MAT 1128 Business Calculus **4-0-4**
Covered topics include: analytic geometry involving lines and the conic sections, graphs and analysis of polynomial functions, derivative concept and indefinite and definite integrals. Derivative applications include related rates and finding maximum and minimum points. Integral applications include areas, volumes and related topics. Applications are used extensively. Course presentation assumes that the student has taken a college level algebra course such as 1124 or 1151. A scientific calculator or graphing calculator is required.
Prerequisites: Appropriate placement test score.
No lab fee charged.

MAT 1132 Statistics **3-2-4**
An introduction to the quantitative techniques of probability and statistics, the scientific method, organization of data and graphical displays and descriptive measures including mean, median, standard deviation and z-scores. Topics include probability concepts; distributions including the binomial and the normal; sampling techniques and size determination; hypothesis testing for proportions, means and relationships; forecasting; linear regression and correlation. A scientific calculator with STAT capabilities is required. Course presentation assumes that the student has taken a college level algebra course such as 1151.
Prerequisites: Appropriate placement test score. Lab fee charged.

MAT 1151 College Algebra 1 **4-0-4**
Covered topics include: algebra review, functions & graphs, systems of equations, quadratic equations, inequalities, exponentials & logarithms. A scientific calculator or graphing calculator is required.
Prerequisites: Appropriate placement test score.
No lab fee charged.

MAT 1152 College Algebra 2 **4-0-4**
Covered topics include: complex numbers; trigonometric, exponential and logarithmic functions; conic section; inequalities, trigonometric equations & identities; solving oblique triangles; sequences & series. A scientific calculator or graphing calculator is required.
Prerequisites: 1151 or appropriate placement test score. No lab fee charged.

MAT 1154 Calculus 1 **5-0-5**
Covered topics include: conic sections, functions, limits and continuity, the derivative and its applications, the integral. It will be assumed that students have completed a college level algebra course such as 1151. A scientific calculator is or graphing calculator required.
Prerequisites: Appropriate placement test score.
No lab fee charged.

MAT 1155 Calculus 2 **5-0-5**
Covered topics include: more conic sections, the integral and its applications; exponential & logarithmic functions, inverse functions; methods of integration. A scientific calculator will be required. A graphing calculator would be helpful. It will be assumed that the student has taken college level algebra and trigonometry courses such as 1151 and 1152 as well as a Calculus 1 course.
Prerequisites: 1154. No lab fee charged.

MAT 1161 Applied Algebra **3-2-4**
A course designed to build an awareness of the practical uses of algebra in engineering technology and basic science applications. Covered topics include: manipulation of measured values and variables in formulas; relationship between formulas and real devices; construction & reading of graphs and lab exercises reading numbers from technical drawings & from measuring devices. A scientific calculator is required.
Prerequisites: Appropriate placement test score.
No lab fee charged.

MAT 1162 Applied Geometry & Trigonometry **3-2-4**
A course designed to build an awareness of the practical uses of geometry and trigonometry in engineering technology and basic science applications. Covered topics include: manipulation of the formulas of geometry and trigonometry; use of geometric facts; the relationship between geometry & trigonometry and lab exercises reading numbers from technical drawings & from measuring devices. A scientific calculator is required.
Prerequisites: 1161. No lab fee.

MAT 1170 Introduction to Technical Mathematics **4-0-4**
Covered topics include: percents, geometric figures, measurement and geometry, metric system, signed numbers, solving algebraic equations, ratios and proportions, reading measuring instruments & dial scales and interpretation & construction of graphs. Applications will use the tools of the sciences and the engineering technologies: graphs, calipers, etc. A scientific calculator is required.
Prerequisites: Appropriate placement test score.
No lab fee charged.

MAT 1171 Technical Mathematics 1 **4-0-4**
Covered topics include: order of calculation, scientific notation, accuracy, rounding, unit conversion, formula & equation manipulation, graphing ratio & proportion, area & volume calculation, right triangle trigonometry and simultaneous equations. Applications from the sciences and the engineering technologies are used extensively. A scientific calculator is required.
Prerequisites: Appropriate placement test score or 1162. No lab fee charged.

MAT 1172 Technical Mathematics 2 **4-0-4**
Covered topics include: quadratic equations, equations involving fractions, oblique triangle trigonometry, solving exponential equations and equations using angles in radians. Applications from the sciences and the engineering technologies are used extensively. A scientific calculator is required.
Prerequisites: 1171. No lab fee charged.

MAT 1179 Introduction to Applied Statistics **4-0-4**
An introduction to the quantitative techniques of probability and statistics as applied to manufacturing/industrial problems. The scientific method, organization of data and graphical displays. Descriptive measures including mean, median, standard deviation and z-scores. Probability concepts and distributions including the binomial and normal. Sampling techniques and size determination. Hypothesis testing for proportions, means and relationships. Forecasting, linear regression and correlation. This course is industry application oriented. A scientific calculator with STAT capabilities is required. Course presentation assumes the student has taken a college level algebra course such as 1191 or 1151.
Prerequisites: Appropriate placement test score. No lab fee charges.

MAT 1191 Algebra and Trigonometry 1 **4-0-4**
Covered topics include: scientific calculations, unit conversions, geometry review, solving algebraic formulas, graphing, right triangle & oblique triangle trigonometry, quadratic equations and simultaneous equations. Applications from the sciences and the engineering technologies are used extensively. A scientific calculator is required.
Prerequisites: Appropriate placement test score or 1162.
No lab fee charged.

MAT 1192 Algebra and Trigonometry 2 **4-0-4**
Covered topics include: solving exponential & logarithmic equations, complex numbers, solving trigonometric equations, variation, second degree simultaneous equations and graphs of trigonometric functions. Applications from the sciences and the engineering technologies are used extensively. A scientific calculator is required.
Prerequisites: Appropriate placement test score or 1191 or 1172.
No lab fee charged.

MAT 1193 Analytic Geometry & Calculus 1 **4-0-4**
Covered topics include: Analytic geometry involving lines and the conic sections, graphs and analysis of polynomial functions, derivative concept and indefinite & definite integrals. Derivative applications include related rates and finding maximum & minimum points. Integral applications include areas and volumes and related topics. Applications from the sciences and the engineering technologies are used extensively. A scientific calculator or graphing calculator is required.
Prerequisites: Appropriate placement test score or 1192.
No lab fee charged.

MAT 1194 Analytic Geometry & Calculus 2 **4-0-4**
Covered topics include: Derivatives and integrals of transcendental functions, integration using tables, integration using the computer, double integrals and partial derivatives with application to Least Squares curve fitting. Applications from the sciences and the engineering technologies are used extensively. A scientific calculator or graphing calculator is required.
Prerequisites: 1193. No lab fee charged.

MAT 1195 Analytic Geometry & Calculus 3 **4-0-4**
Covered topics include: Maclaurin Series, Taylor Series, Fourier Series, first order differential equations, linear differential equations, second order differential equations, equations with repeated roots, nonhomogeneous equations, Laplace Transform and numerical methods of solving differential equations. Applications from the sciences and the engineering technologies are used extensively. A scientific calculator or graphing calculator is required.
Prerequisites: 1194. No lab fee charged.

MAT 1198 Workshops in Mathematics **Var-Var-1-4**
Study of selected topics in mathematics designed to meet current needs. Content and emphasis varies year-to-year.
Prerequisites: None. No lab fee charged.

MAT 1199 Special Studies-Mathematics **Var-Var-Var**
A personal academic pursuit related to the student's technical field of study mutually agreed upon by the student and supervising faculty member. Prior to registration, the plan of study must be approved by the Dean of the Division. (Grades S or U.)
Prerequisites: None. No lab fee charged.

MET Mechanical Engineering Tech

MET 7012 Engineering Drawing 3 **2-3-3**
A study of the design process as it relates to Mechanical Engineering Technology and related disciplines. Emphasis is placed on working drawings, supporting documentation and selection of commercially available components. Geometric Feature Control and Stack Up Analysis are employed in establishing detail specifications which will provide product function at a reduced manufacturing cost, also known as Design for Manufacturability. A major course project requires a complete set of assembly and detail drawings.
Prerequisites: 7010, 7165. Corequisites: 7111. Lab fee charged.

MET 7111 Engineering Materials **3-2-4**
The atomic arrangement and properties of common alloys are defined and discussed. Steel and cast iron are emphasized, including their response to industrial strengthening processes. Topics of study to include the crystalline structure of solid materials, physical and mechanical properties of materials and the tests which measure these properties, alloying and phase diagrams, heat treatment, and industrial material classifications. Characteristics and processing of plastics, ceramics, and composite materials are also discussed.
Prerequisites: None. No lab fee charged.

MET 7124 Manufacturing Process w/CADCAM **3-2-4**
This course offers an introduction to a broad variety of manufacturing processes. All types of operations are discussed, topics can range anywhere from hand tool type operations to the most recent manufacturing processes such as laser and water-jet technology. The student is also introduced to and is expected to run CAM software to possess the ability to program parts to be cut by means of Computer Numerical Controlled machine tools.
Prerequisites: 7012, 7165. No lab fee charged.

MET 7130 Engineering Mechanics **3-2-4**
Vector algebra is employed to calculate forces and moments and their effect on machine parts, frames, and structures in static equilibrium. Topics of study include free body diagrams, couples, equilibrium, trusses, frames, two and three-dimensional force systems, friction, centroids and moment of inertia.
Prerequisites: 1191, 2291. Corequisites: None.
No lab fee charged.

MET 7132 Hydraulics & Pneumatics **3-3-4**
Fluid transport and power studies of liquid and gas systems, emphasizing hydraulic and pneumatic pumps, compressors, control logic, actuators, motors, reservoirs, safety concerns and piping components. The student will create machine control schematics with ANSI symbols and use pressure, directional and flow control valves in those circuits.
Prerequisites: 1192 and 2292. No lab fee charged.

MET 7135 Fluid Power Systems **3-3-4**
Basic principles of hydraulics and pneumatics. Covers the generation, distribution and control of fluid power and fluid transport systems. Includes graphical symbols and circuits. A comprehensive study in the fundamental concepts of servo-hydraulics, air logic, fluidics, machine and process control systems.
Prerequisites: 1191, 2291. Lab fee charged.

MET 7140 Strength of Materials **3-3-4**
Through the application of force and moment analysis techniques acquired in Engineering Mechanics, Strength of Materials covers

the analysis of stresses and strains which occur within machine and structural elements subjected to various types of loads. Machine element dimensions and material specifications will be determined or verified. Topics of study include simple, shear, torsional and bending stresses; deflection and combined stresses.
Prerequisites: 7130, 1192, 2292. No lab fee charged.

MET 7141 Kinematics & Dynamics of Machines 3-2-4
A course in the analysis of mechanisms. Mathematical, Computer Aided Design and graphical-calculus solutions, machine kinematics and dynamics. Topics include linear and angular/rotary displacement, velocity, acceleration, work, force, horsepower, harmonic motion, moment of inertia and dynamic balance. Emphasis is placed on piston machines with an introduction to cams and gear trains.
Prerequisites: 2292, 7165. Corequisites: 1193.
No lab fee charged.

MET 7142 Mechanisms Analysis & Design 3-3-4
An introduction to mechanisms and machine drives. This course includes mathematical and graphical analysis of linear and angular displacement, velocity, and acceleration of planar linkages mechanisms. Other topics covered include centered and offset crank-sliders, four-bar mechanisms and other complex linkages; chain sprocket, belt, and gear drives; rack and pinion systems. Analysis and design of simple and compound gear drive systems is emphasized. Students should complete a mechanisms design project as part of this course. Students should complete 1010, 1193, 2292, and 7146 prior to or concurrently with this course.
Prerequisites: 1192, 2291, 7036. Corequisites: None.
Lab fee charged.

MET 7145 Statics & Strength of Materials 3-2-4
A survey course intended for the non-design oriented student. Effects of forces and stresses on materials in various forms and configurations found in engineering and mechanical construction. Use of mathematics in analyzing forces, stresses, moments and equilibrium by use of centroids and moments of inertia. Determination of dimensions and material specifications.
Prerequisites: 1192, 2292. No lab fee charged.

MET 7148 Applied Thermodynamics 3-2-4
The application of the first and second laws of thermodynamics, the energy equation of gases, mollier diagrams, energy utilization and heat transfer. Topics include specific heat, the carnot cycle, entropy, enthalpy and adiabatic processes. System studies include steam generation and turbines, internal combustion engines and mechanical refrigeration.
Prerequisites: 1193, 2292. No lab fee charged.

MET 7150 Machine Design 1 3-3-4
The application of the principles of engineering mechanics and strength of materials to the analysis and selection of mechanical elements and components. Topics include combined stress analysis, Treska's and Von Mises' theories of failure, tolerances and fits, shaft components, shaft design, fasteners, bolted connections, and springs. Emphasis will not be entirely on force analysis and calculations, but will also include: economics, installation, safety, servicing, and computer aided design/selection applications.
Prerequisites: 7030, 7130, 7140. No lab fee charged.

MET 7155 Machine Design 2 4-2-5
A continuation of Machine Design 1. Topics include: spur, helical, bevel and worm gearing; belts and chains, plain surface and rolling contact bearings, power and ball screws, and clutches & brakes.
Prerequisites: 7150. Corequisites: 7158. No lab fee charged.

MET 7158 Mechanical Systems Design Project 1-6-3
A parallel course to Machine Design 2 that requires the design, selection, fabrication, assembly and troubleshooting of a mechanical device or system. A final oral and written report encompassing the entire design, including a product demonstration is required.
Prerequisites: 7150, 7198, 7707. Corequisites: 7155.
No lab fee charged.

MET 7160 Computer Aided Drafting 1 (MET) 2-3-3
This course is designed to make the student an efficient CAD operator. The student also learns updated drafting and dimensioning techniques per ANSI Y14.5M-1982 standard. The coursework will focus on two dimensional machine and component drawings.
Prerequisites: None. Corequisites: 1171 or 1191, 7008.
Lab fee charged.

MET 7165 Computer Aided Drafting 2 (MET) 2-3-3
Techniques of creating both wireframe and surfaced 3 dimensional models with oblique surfaces will be the main focus of this course. The student will use shading of surfaced and other CAD features to develop their understanding of 3 dimensional models. A final project consisting of separate detail and a final assembly will be required.
Prerequisites: 7160. Corequisites: 7010. Lab fee charged.

MET 7167 Robotics 1 2-2-3
An introduction to basic concepts of robotics and factory automation where robots are used as a common tool for better quality and productivity. The course covers such topics as analysis of industrial robotics applications in an automated manufacturing environment, description of mechanical and electrical components, hands-on programming and operation of training robots, and principles of selection of a robot for an industrial application.
Prerequisites: 7036 or equivalent, 7730 or equivalent.
Lab fee charged.

MET 7198 Introduction to Mechanical Systems Design 0-4-2
An immediate prerequisite to the MET-7158 Mechanical System Design Project, this course includes the feasibility study, multiple concepts determination, design definition, design basis, and finally the start of preliminary design.
Prerequisites: 7150, 7707. No lab fee charged.

MET 7199 Special Problems Seminar - Mechanical Var-Var-2-4
Individual and independent study and special projects pertaining to the particular technology in which the student is enrolled. The study may deal with an idea or concept normally not covered by existing courses at the college, or with a specific problem found in the industry in which the student is employed. Open to fourth and fifth-term students by special arrangements with the instructor and program chair.
Prerequisites: Varies. No lab fee charged.

MFT Manufacturing

MFT 7007 Introduction to Manufacturing (MFGT) 3-0-3
This course covers the "systems approach" and focuses on the "big picture" of the role of manufacturing in our global society, its

impact on our lives and the lives of others, and its effect on the environment. "Systems Diagrams" cover the manufacturing process as a whole, rather than limiting the focus to isolated technical skills.
Prerequisites: None. Corequisites: None. No lab fee charged.

MFT 7144 Numerical Control Part Programming 1 2-3-3
Introduction to Numerical Control manual part programming of 2 1/2 axes N.C. milling machines, although the concepts would be applicable to other types of N.C. machines. Emphasis is on trigonometry and machine tool codes. Calculation of feeds and speeds is also considered.
Prerequisites: 1171, 7417, 7035. Lab fee charged.

MFT 7154 CNC Programming 2 2-3-3
A continuation of Numerical Control 1 with emphasis on more complex problems, including part setup, and canned cycles. Programming of two axes lathes will also be introduced.
Prerequisites: 7144. Lab fee charged.

MFT 7412 Manufacturing Data Analysis 3-2-4
This course is designed to acquaint the student with the fundamentals of dimensional metrology along with their applications to manufacturing. Topics include types and use of measuring equipment; geometric tolerancing; and analysis, reading and construction of charts and graphs.
Prerequisites None. Corequisites: 1171, 7035. Lab fee charged.

MFT 7417 Manufacturing Processes 3-2-4
Designed to acquaint students with the fundamental principles of fabricating materials. With emphasis on metal-removing processes of turning, milling, drilling and grinding. Lasers, edm and other nontraditional processes are covered along with iron and steel castings, dies and cutting tools.
Prerequisites: None. No lab fee charged.

MFT 7420 CAD 1 - Manufacturing 2-3-3
Introductory course in Computer Aided Drafting (CAD) in which the student will become familiar with drawing, editing, dimensioning and plotting of mechanical drawings as they apply to manufacturing.
Prerequisites: 7008, 7035. Lab fee charged.

MFT 7422 Quality Control 1 3-2-4
The course is designed to acquaint the student with the various quality control concepts necessary for a company to compete in the world wide market. To include quality history and evolution, Japanese quality circles, zero deflects, statistical process control, sampling plans, total quality control program which defines areas of responsibility for quality and machine vision and digital imaging applications.
Prerequisites: 1171, 7412. Lab fee charged.

MFT 7427 Tool, Jig and Fixture 3-2-4
Designed to acquaint students with the fundamental principles of tooling, jigs, fixtures and other hardware employed in the manufacture of consumer and industrial goods. With emphasis on cutting tools, tool holders, locating and clamping, fasteners and jig, fixture, gage and die designs.
Prerequisites: 7008, 7417 or equivalent. No lab fee charged.

MFT 7428 CAD 2 - Manufacturing 2-3-3
A continuation course in Computer Aided Design/Drafting (CADD) in which the student will explore some of the advanced features of drawing systems, such as isometric and 3-D drawing, bill of retrieval, importing and exporting files and customizing techniques for manufacturing drawing.
Prerequisites: 7420. Lab fee charged.

MFT 7438 Work Methods & Measurement 3-2-4
This course provides students and practitioners with a resource which describes the techniques and procedures of motion and time study. Practical, detailed applications are given on all aspects of motion and time study including work station design, job analysis, and the techniques of setting time standards. Major decisions such as machines to buy, people to hire, cost of product, scheduling, and new methods are questions answered in this course.
Prerequisites: 7417, 1171. No lab fee charged.

MFT 7441 Statistical Methods in Manufacturing 3-2-4
This course covers every aspect of manufacturing needs by the use of statistical reasoning. The recent revival of statistical process control (SPC) along with other statistical tools are covered in the areas of planning, building, and the execution of a manufacturing process. Other technologies, such as just-in-time, quality function deployment, experimental design, and CAD/CAM, all rely in part on the use of statistics. These new techniques apply to world-class manufacturer concepts.
Prerequisites: 1171. Lab fee charged.

MFT 7442 Reliability for the Technologies 3-2-4
Definitions of reliability, durability, availability, maintainability and safety as related to products/systems and their improvement. Principles of performance evaluation and prediction, failure mode effect analysis, reliability/life testing and field failures, and human factors in reliability. Both repairable and nonrepairable parts and systems are examined. Various mathematical models and computer and graphical techniques are emphasized throughout the course.
Prerequisites: 1179. No lab fee charged.

MFT 7444 Manufacturing Process Planning and Estimating 3-3-4
A course designed to enable the student to process and estimate the cost necessary to produce a finished product per blueprint specifications. Techniques include the application of manufacturing processes, sequence of operations, durable and perishable tooling, material usage, quality considerations, direct and indirect labor rates and times, burden and overhead, applicable costs and "costimator" computer software to compile and process a detailed engineering process and cost analysis.
Prerequisites: 7035, 7008, 7417, 7420. Corequisites: 7422.
Lab fee charged.

MFT 7449 Computer Aided Manufacturing 1 2-3-3
This course is a continuation of Numerical Control (N.C.) Programming and introduces the student to writing programs using the APT programming language. Course covers geometry, cutter motion, and postprocessor statements for 2 1/2 axes N.C. milling machines but could be applicable to any numerically controlled machine.
Prerequisites: 7035, 7144. Lab fee charged.

MFT 7455 Statistical Design Analysis 3-2-4
This course presents an introduction to quality engineering (off-line quality control) as it affects production quality engineering. Beginning with a brief review of elementary applied statistics, the course moves from one-sample to two-sample hypothesis testing to an introduction of analysis of variance (anova). One-way and two-way anova layouts are examined including repetitions, interactions, etc. An introduction to experimental design follows; the

approach being that of orthogonal arrays and linear graphs as popularized in Japan by Taguchi. His signal to noise ratio is also explored.
Prerequisites: 1179 or equivalent. No lab fee charged.

MFT 7459 Computer Aided Manufacturing 2 **2-3-3**
This course is a continuation of N.C. programming and introduces the student to writing N.C. programs using graphics-based Computer Aided Manufacturing (CAM) software. Mechanical parts are drawn using the graphics editor, or imported into the drawing from another graphics editor and coded into machine tool language.
Prerequisites: 7449, 7144, 7420. Lab fee charged.

MGT Management

MGT 1804 Risk & Insurance **3-0-3**
The concept of risk in the business enterprise, the need for insurance protection against risks in area of property and liability, casualty, fire, life and health. Fundamentals of insurance contracts and selection of insurers.
Prerequisites: None. No lab fee charged.

MGT 1832 Human Resource Management **3-0-3**
A broad overview of the traditional functions of a personnel office, such as job evaluation, recruitment, interviewing, training, employee and union relations, employee services, and of specific concepts concerning human relations and organizational behavior.
Prerequisites: 2926. No lab fee charged.

MGT 2938 Principles of Production & Inventory Management 1 **3-0-3**
This is an introductory course designed to give an overview in the field of production and inventory management, along with the terms, definitions and basic practices. The course provides fundamental treatment of manufacturing principles regarding the history and objectives of production and inventory control, organizational structure, forecasting and production planning systems, and fundamentals of controlling inventories using the latest techniques.
Prerequisites: None. No lab fee charged.

MGT 2939 Principles of Production & Inventory Management 2 **3-0-3**
This is a continuation of course #2938 designed to give an overview in the field of production and inventory management, along with the terms, definitions and basic practices. The course provides fundamental treatment of manufacturing principles regarding Materials Requirements Planning (MRP), Master Production Scheduling (MPS), capacity and priority control, production activity control, purchasing and materials management, and information control.
Prerequisites: 2938. No lab fee charged.

MGT 2963 Investment Tax **3-0-3**
Course content will cover tax treatment of all savings and investment vehicles including IRA's and pension plans. Discussion will identify tax benefits of various investments including federal, state, city and personal property implications.
Prerequisites: None. No lab fee charged.

MGT 2965 Principles of Management 1 **3-0-3**
The first part of a two part course covering the fundamentals of modern management. Part 1 covers the history of management, the varied environments management takes place in, and the management functions of planning and organizing. The course is an in-depth look at management for management majors.
Prerequisites: None. No lab fee charged.

MGT 2966 Principles of Management 2 **3-0-3**
The second part of a two part course covering the fundamentals of modern management. Part 2 covers implementing, including techniques of leadership for today's managers and the controlling function. Case studies are used to apply those theories learned in this course and Principles of Management 1. This course is an in-depth look at management for management majors.
Prerequisites: 2965. No lab fee charged.

MGT 2967 Survey of Management **3-0-3**
The course is an overview of the functions a manager must be able to perform on a daily basis. These functions include planning, organizing, implementing and controlling. The course is designed to fit the needs of non-management majors who may have to assume supervision duties.
Prerequisites: None. No lab fee charged.

MGT 2970 Contemporary Management Concepts **3-0-3**
Study of the Basic Management Theories, including Theory X, Theory Y, Theory Z and Quality Circles Management. The course includes practical applications of these theories in current management situations.
Prerequisites: 1832. No lab fee charged.

MGT 2971 Small Business Management 1 **3-0-3**
This is a beginning course in the ownership and operation of a small business, covering the areas of formation and start-up. The course also includes your basic sources of funding and financial management as well as location and layout.
Prerequisites: None. No lab fee charged.

MGT 2972 Small Business Management 2 **3-0-3**
This is the second course in the ownership and operation of a small business, covering the elements of management and control. The course also includes marketing as well as legal implications and government regulations that affect a small business owner.
Prerequisites: 2971. No lab fee charged.

MGT 2975 Business Management Seminar **2-3-3**
An in-depth management course using the case study and simulation methods. The course covers the entire scope of management including all functional and decision making areas. Successful completion of 2902, 2966 and 2913 is necessary.
Prerequisites: None. Lab fee charged.

MIS Management Information Systems

MIS 1701 Introduction to Data Processing **3-2-4**
This course is designed to provide first-term students with an overview of Data Processing. Terminology and concepts for hardware and software are introduced. Current issues and future trends are discussed. Classroom concepts will be reinforced with lab exercises.
Prerequisites: None. Lab fee charged.

MIS 1702 Introduction to Structured BASIC Programming **2-3-3**
This course is designed to teach the student BASIC Programming using Structured Programming techniques. The concepts of mod-

ules and cohesiveness are stressed, and business applications are used as class problems. Keyboarding ability necessary
Prerequisites: 1721. Corequisites: None. Lab fee charged.

MIS 1703 Introduction to Program Design 2-2-3
The course is designed to introduce students to the basic elements of program design. Emphasis is on flowcharting and pseudocode. Basic program functions of business applications are discussed and assignments will be typical business problems. This course does not substitute for 1721.
Prerequisites: None. Corequisites: 1701. No lab fee charged.

MIS 1711 Introduction to Computer Operations 2-3-3
Instruction is in the operational function of the key-operated equipment and introduction to computer operations. Laboratory work will reinforce these principles.
Prerequisites: High school typing or 3001. Lab fee charged.

MIS 1721 Programming Logic & Methods 2-3-3
The course is designed to give the student initial exposure to programming logic methods and programming documentation. Emphasis is on structured approach to programming. Typical business applications are assigned as problems.
Prerequisites: None. Corequisites: 1701. No lab fee charged.

MIS 1722 Introduction to Structured BASIC on the PC 2-3-3
The full range of BASIC instructions are utilized in structured programming formats. The course will use Microsoft BASIC® and/or Microsoft Quick BASIC® to program disk and printer file assignments. Keyboarding ability necessary.
Prerequisites: 1721. Corequisites: None. Lab fee charged.

MIS 1723 Assembler Language 1 2-4-4
The first course in assembler coding techniques utilizing microcomputer assembler instructions. Program problems are assigned to utilize I/O processing, direct and indirect addressing, and peripheral equipment and table manipulation.
Prerequisites: 1721. Lab fee charged.

MIS 1731 DOS® for the PC 2-3-3
This course covers introductory and advanced features of the Disk Operating System (DOS) for he PC. Additional commands and utilities provided with DOS are also covered. This course is intended for anyone supporting PC's or those with a "hard disk" system. Keyboarding ability necessary.
Prerequisites: None. Lab fee charged.

MIS 1733 Advanced PC-DOS® 2-3-3
Advanced DOS® is a continuation of 1731 writing batch files, using shells/menus/windows as well as the use of advanced utility programs will be studies. Upgrading the PC will be covered, specifically determining upgrade specifications and installing/upgrading the PC.
Prerequisites: 1731. Lab fee charged.

MIS 1734 PC Software Support Technician 3-2-4
This course will teach the Computer Science major: 1. How to use Utility Programs to "Back-up" and "Recover" from hardware and software "disasters". 2. How to install new software and update existing programs. 3. How to "optimize" computer performance using software tools. 4. Modifying/optimizing the "WINDOWS"® environment..
Prerequisites: 1733. Lab fee charged.

MIS 1735 PC Software Support 2 3-2-4
The student will continue to use PC Software to update existing systems to improve performance and provide new features to the user. PC-based as well as network-based software packages are used in the labs to reinforce course topics.
Prerequisites: 1734. Lab fee charged.

MIS 1736 PC Hardware Support Technician 3-2-4
This course will train the Computer Science major in: 1. How to maintain a Personal Computer. 2. How to upgrade the Personal Computer by adding memory, disk drives, etc. 3. How to diagnose and fix many problems that occur with Personal Computers.
Prerequisites: 1733. Lab fee charged.

MIS 1737 PC Hardware Support 2 3-2-4
The student will continue to upgrade, maintain, and trouble-shoot the PC system's hardware. A variety of disk types, printers, and other peripherals will be installed and removed to provide real hands-on experience.
Prerequisites: 1736. Lab fee charged.

MIS 1739 Operating Systems - AS/400 2-3-3
The standard functions of supervisory routines, including introduction to: run control, I/0 control, multi-programming and service routines, are discussed and explained. Job control languages are introduced with exercises.
Prerequisites: 1721. Lab fee charged.

MIS 1740 Operating Systems 1 2-3-3
The OS/400 ™ operating system will be used to acquaint the student with fourth generation operating systems. CL™ (Control Language) is used to expedite operations, create accounts, libraries, and files on the IBM AS/400 ™. The student will write programs of CL procedures to accomplish work on the computer system. Student should have some programming experience.
Prerequisites: None. Lab fee charged.

MIS 1741 Operating Systems 2 VAX/VMS 2-3-3
The student will use the VAX ™, VMS ™, operating system to control the computer system, implement security measures, and create user accounts and data files. The student will design menus and procedures to make the computer "user friendly." The Digital Language, DCL ™, is used to write the controlling procedures. The student should have some programming experience.
Prerequisites: None. Lab fee charged.

MIS 1742 Introduction to Structured COBOL 3-7-6
The COBOL - 85 standard language will be used in the structured environment. Assignments will use disk, printer and terminal data. Debugging techniques are emphasized.
Prerequisites: "C" or better in 1701 and 1721. Lab fee charged.

MIS 1752 Real Time Systems & Data Communications 2-3-3
The Systems Analysis student will enter into man-machine interactions through a teleprocessing based on data processing system. Topics will include tele-communications hardware and the appropriate (related) programming languages. Emphasis will be placed on the current timesharing language(s). Also stressed will be problem-solving techniques requiring the use of remote terminals, inquiry-response techniques, and time-sharing techniques.
Prerequisites: "C" or better in 1762. Lab fee charged.

MIS 1754 Data Communications 1 2-3-3
The course is designed to give the student an understanding of the scope of business data communications. It will also explain basic terminology and concepts that apply to the operation and design data communications systems and to provide a logical approach

to recognizing communication problems.
Prerequisites: 1701. Lab fee charged.

MIS 1761 Introduction RPG 400 **3-6-5**
Beginning level course for the programming major student. Topics covered include processing of sequential files and generating typical business reports.
Prerequisites: "C" or better in 1701 and 1721. Lab fee charged.

MIS 1762 Advanced Structured COBOL **3-7-5**
Advanced COBOL techniques using randomly processed disc files. The student is taught to access indexed-sequential and direct-access files using keys and algorithms.
Prerequisites: "C" or better in 1742. Lab fee charged.

MIS 1763 Systems Analysis & Design **2-3-3**
A complete methodology of analyzing and designing computer oriented information processing systems is presented. Instruction and exercises cover data collecting, data structure, file structure and design, input editing and volume consideration, processing requirements, output formats, real time and time sharing systems. The Computer Science major should complete at least 15 credits in 17xx course before enrolling in 1763.
Prerequisites: 1721. No lab fee charged.

MIS 1764 Data Communications 2 **3-2-4**
The course will focus on wide-area communications systems used to link business communications equipment, communications test equipment and software testing programs. Labs will include analysis of protocols, transmission cables and connectors, and software diagnosis of communications problems. Emphasis is on the model for Open Systems Interconnection of the international Standards organization (ISO).
Prerequisites: 1754. Corequisites: 7702. Lab fee charged.

MIS 1765 Introduction to AS/400-PC™ Environment **3-2-4**
This course is designed to introduce the student to the interconnection of the AS/400 and PC's. Topics include: AS/400-PC™ communication, shared folders, AS/400™ office, downloading AS/400™ to the PC, uploading, memory manager, "PC organizer", PC printer, "PC support", and LAN's.
Prerequisites: 1711, 1731, 1761. Lab fee charged.

MIS 1769 Programming Data Base Applications **2-3-3**
The programmer will be introduced to the concepts of Data Base Management Systems, both Hierarchical and Relational. Problems will be assigned using the cobol database implementation.
Prerequisites: 1762. Lab fee charged.

MIS 1771 Data Base Management Systems **2-3-3**
Manipulating data to extract required information through the use of external database managers. Topics include designing the database, creating it, and accessing it. Methods of access will include interactive manipulation, user-written procedures, and access through other languages.
Prerequisites: 1721. Lab fee charged.

MIS 1774 Telecommunications **3-2-4**
This course will focus on business telephone systems, equipment, services and management. Topics to be covered will include PBX, Digital IBX®, ISDN, SDN, DDS, ACD T-1, WATS, Megacomm®, tariffs, wire distribution systems, documentation, and integration between computers and phone systems. Course work will include case histories and case studies.
Prerequisites: 1754. No lab fee charged.

MIS 1781 Advanced RPG™ 400 **2-3-3**
A business application oriented course for the Business Computer Science student with emphasis on the advanced programming techniques available in the RPG™ language. Topics include indexed files, table handling, and instruction selected subjects.
Prerequisites: "C" or better in 1761. Lab fee charged.

MIS 1784 Local Area Networks **3-4-5**
The course is designed to present the methodologies of data transmission in local area networks, highlighting software and data bases. The details of hardware and software interfaces will be discussed. Network planning and management guidelines will be used to accomplish laboratory projects using Novell Netware® and other popular network operating systems.
Prerequisites: 1754. Lab fee charged.

MIS 1790 CICS - Online Applications Programming **2-3-3**
The Customer Information Control System (CICS) is a software product which does high volume transaction control to promote higher productivity for the company. Students will be introduced to: File control; terminal control; transient data control; temporary storage control; intercommunication; internal and task control; testing/problem determination; internal and task control; testing/problem determination; internal control; and additional BMS topics. In-depth discussions on CICS components, and VSAM file browsing using base and alternate indexes. Learning will be reinforced by lab problems. done on the classroom system.
Prerequisites: CICS-Command Level or significant COBOL Programming experience. Lab fee charged.

MIS 1791 CICS - Additional Topics **2-3-3**
The Customer Information Control System (CICS) is a software product which does high column transaction control to promote higher productivity for the company. Students are introduced to: CICS environment; bringing up/shutting down CICS; journaling; discussion of CICS tables; initialization/termination; local IMS; using control blocks for run-time information; relationship between CICS and DB2®. Learning is reinforced by lab problems done on the classroom system.
Prerequisites: 6 cr. hrs. Oper. Systems courses or 2 yrs Opn's. experience. Lab fee charged.

MIS 1792 CICS - Command Level Online Programming **2-3-3**
The Customer Information Control System (CICS) is a software product which does high volume, general purpose transaction processing for the organization. Students will be introduced to: CICS environment; command level interface; pseudo-conversational transaction design; basic mapping support; Link and XCTL commands; File inquiry and update transactions. Learning is reinforced by laboratory problems done on the classroom system.
Prerequisites: 1762 or COBOL Programming experience.
Lab fee charged.

MIS 1797 Current Topics Seminar **2-3-3**
Current topics seminar has many applications to the computer science/data processing field. Course content will be initiated by the instructor and could include but will not be limited to CICS, COBOL 2, Windows®, Netware®, DB2®, DL1, IMS and others. The topics covered will draw on knowledge gained from existing 17XX courses and focus on state-of-the-art systems, software, and issues. Learning will be reinforced by practical computer laboratory problem solving techniques.
Prerequisites: 20 credit hours in programming courses.
Lab fee charged.

MIS 1850 Computerized Business Applications 3-2-4
A course in Data Processing theory with an emphasis on business applications. Laboratory work will include the operation of personal computers, execution of application software, and use of results to increase productivity.
Prerequisites: Keyboarding knowledge or 3007. Lab fee charged.

MIS 1860 Management Software for Professionals 2-2-3
This course is designed to acquaint students with Symphony, a fully integrated software package. Students will be introduced to three of Symphony's® five microcomputer software applications: spreadsheet, word processing, and data management.
Prerequisites: Basic microcomputer operations & keyboarding. Lab fee charged.

MIS 1861 Electronic Spreadsheets (Lotus 1-2-3®) 2-2-3
Lotus Development Corps. 1-2-3® Application Software Package will be the primary topic discussed in this class. This software combines the benefits of an electronic spreadsheet, a graphics chart generator and a file manager in one integrated package. PC experience and keyboarding recommended.
Prerequisites: None. Lab fee charged.

MIS 1862 Advanced Electronic Spreadsheets 2-2-3
This course teaches advanced concepts in spreadsheet applications utilizing LOTUS 1-2-3®. The topics include macros, the command language, advanced data commands, advanced graph commands, transferring files, advanced functions, and LOTUS add-ins.
Prerequisites: 1861. Lab fee charged.

MIS 1863 Electronic Spreadsheets (Excel®) 2-2-3
The Microsoft Excel® Spreadsheet application will be the focus of this class. This software utilizes a graphic user interface in both Apple MacIntosh® and IBM-PC® computer environments. Basic spreadsheet operations, commands, functions, and graphic processes will be covered.
Prerequisites: None. Lab fee charged.

MKT Marketing

MKT 1810 Principles of Sales 3-0-3
Analysis of the general principles and techniques of effective salesmanship. Principles and problems that include background information a salesman needs, and analysis of the selling process.
Prerequisites: None. No lab fee charged.

MKT 1817 Industrial Purchasing 3-0-3
Analysis of buyer behavior in terms of the way a company views the market. Review techniques which influence institutional buyers, industrial buyers, the purchasing agent and consumers. Review difference in department buyer and purchasing agent.
Prerequisites: None. No lab fee charged.

MKT 1818 Advanced Purchasing 3-0-3
A detailed study of purchasing's role in the overall operation of company activities. Examine relationships between purchasing and other company departments.
Prerequisites: 1817. No lab fee charged.

MKT 1819 Contemporary Purchasing Issues 2-2-3
Current purchasing trends, market cost and value analysis, buying decisions. Course will incorporate use of microcomputers. Successful completion of 1850 or equivalent is recommended.
Prerequisites: 1818. Lab fee charged.

MKT 1845 Principles of Retailing 3-0-3
Introduces students to the field of retailing and provides the technical and theoretical knowledge necessary for retail mid-management employment. Case studies are introduced to give the students practical operating experiences.
Prerequisites: None. No lab fee charged.

MKT 1872 International Purchasing 3-0-3
The purpose of this course is to help the student understand the planning and procedures necessary to participate in International Purchasing. Discussions include import/export activities, quotas and tariff regulations.
Prerequisites: 1818. No lab fee charged.

MKT 2901 Principles of Marketing 1 3-0-3
The first of a two part series. This course covers the marketing environment, buying behavior, segmentation, market research, and forecasting.
Prerequisites: None. No lab fee charged.

MKT 2902 Principles of Marketing 2 3-0-3
This is the second of a two part series. The course covers the parts of the marketing mix - promotion - distribution - price - product.
Prerequisites: 2901 or permission of coordinator.
No lab fee charged.

MKT 2903 Survey of Marketing 3-0-3
An introductory course that covers the basic principles of marketing. This course is designed to give the non-marketing/management majors a basic understanding of the marketing mix and how it relates to all positions within a firm.
Prerequisites: None. No lab fee charged.

MKT 2923 Marketing Concepts & Applications 3-0-3
This course is designed to allow students to apply the marketing theory and to simulate actual business situations through the use of projects and case simulations. Successful completion of 1850 or equivalent is recommended.
Prerequisites: 2902. No lab fee charged.

ML Medical Lab

ML 4301 Basic Laboratory Techniques 2-3-3
Introduction to the field of Medical Technology, includes a discussion of the role of the medical laboratory technician, study of the use and maintenance of laboratory equipment and basic laboratory techniques.
Prerequisites: Acceptance into tech courses of CLT Program.
Lab fee charged.

ML 4302 Basic Hematology & Hemostasis 1 2-6-4
A study of the theory and practice of basic hematology coagulation. Emphasis will be given to frequently performed tests, including cell counts, hemoglobin and hematocrit measurements, examination of blood smears, reticulocyte counts, erythrocyte sedimentation rates, prothrombin times and partial thromboplastin times.
Prerequisites: 4301. Lab fee charged.

ML 4303 Basic Urinalysis and Body Fluids 1-3-2
A study of the physiological concepts of the formation of urine as well as its physical, chemical and microscopic examination in the clinical laboratory. Normal renal function, pathological conditions and laboratory principles and procedures are included. Course discussions also include other body fluids of clinical significance.
Prerequisites: 4301. Lab fee charged.

ML 4304 Clinical Chemistry 3-6-5
Study of theory and procedures of routine manual and automated chemical laboratory procedures, their quality control and use of related instrumentation.
Prerequisites: 2231, 2236, 4301. Lab fee charged.

ML 4305 Immunohematology 3-6-5
A study of blood banking theory and procedures including inheritance of blood group determinants and donor procedures. Emphasis will be given to routine ABO grouping and Rh typing, antibody screening and identification, and compatibility testing.
Prerequisites: 4023, 4301. Lab fee charged.

ML 4306 Clinical Microbiology 1 3-6-5
Study of diagnostic microbiology including staining, cultivation, isolation, identification and antimicrobial susceptibility testing of clinically significant aerobic bacteria. Basic principles of anaerobic bacteriology and mycobacteriology are included.
Prerequisites: 4009, 4301. Lab fee charged.

ML 4307 Hematology & Hemostasis 2 2-3-3
Discussion of abnormal hematology and hemostasis, including morphological, laboratory and clinical features of anemias, leukemias an other blood cell disorders, and common coagulopathies.
Prerequisites: 4302. Lab fee charged.

ML 4308 Immunochemistry 2-3-3
Discussion of immunochemical principles and techniques, including radial immunodiffusion, immunoelectrophoresis, enzyme-linked immunosorbent assay. Also included are serological testing and special chemical analysis of body fluids.
Prerequisites: 4023, 4304. Lab fee charged.

ML 4309 Medical Lab Seminar 3-0-3
Review of theory and practice of laboratory procedures. Discussion of current developments in medical laboratory science. Includes a registry-type comprehensive exam.
Prerequisites: Completion of all CLT courses.
No lab fee charged.

ML 4310 Clinical Microbiology 2 1-0-1
Study of basic techniques in clinical mycology and parasitology including specimen collection and processing, principles of identification and recognition of common fungi and parasites. Basic concepts of clinical virology will also be discussed.
Prerequisites: None. Corequisites: 4306.
Lab fee charged.

ML 4311 Clinical Applications 1 - Hematology and Urinalysis 0-6-2
Laboratory practice in routine hematology and urinalysis. The practicum will stress workload organization, record keeping, quality control, routine maintenance and troubleshooting of related instrumentations.
Prerequisites: 4302, 4303. Lab fee charged.

ML 4312 Clinical Applications 2 - Clinical Chemistry 0-6-2
Laboratory experience in performance of routine manual and automated procedures in clinical chemistry. Emphasis on workload organization, record keeping, quality control, routine maintenance and trouble-shooting for related instrumentation.
Prerequisites: 4304. Lab fee charged.

ML 4313 Clinical Applications 3 - Immunohematology 0-6-2
On campus laboratory practice in routine blood banking and serology. The practicum will stress workload organization, record keeping and quality control.
Prerequisites: 4305. Lab fee charged.

ML 4314 Clinical Applications 4 - Clinical Microbiology 0-6-2
On campus laboratory experience in routine clinical microbiology procedures. The practicum will stress workload organization, record keeping and quality control applied to the microbiology lab.
Prerequisites: 4306, 4310. Lab fee charged.

ML 4315 Laboratory Practicum 1 0-12-4
On campus laboratory experience in hematology, urinalysis, coagulation, and clinical chemistry. The practicum will stress workload organization, record keeping, quality control, routine maintenance, and trouble-shooting of related instrumentation.
Prerequisites: 4302, 4304. Lab fee charged.

ML 4316 Laboratory Practicum 2 0-12-4
On campus laboratory experience in Blood Bank, Serology, and Clinical Microbiology. The Practicum stresses workload organization, record keeping, and quality control.
Prerequisites: 4305, 4306. Lab fee charged.

ML 4350 Orientation to the Clinical Lab 0-10-2
Experience in the clinical laboratory, designed to familiarize the student with laboratory organization, specimen collection and handling with emphasis on phlebotomy experience.
Prerequisites: 4301, 4302, 4304. Lab fee charged.

ML 4351 Clinical Experience 1 1-24-4
Students are assigned to a clinical laboratory where previously learned theories and procedures are applied in a patient-oriented atmosphere. Students are required to complete a minimum of 240 hours. This may necessitate makeup work to accommodate the scheduled holidays of the college. Students also attend seminar activities on campus, relating to the clinical experience.
Prerequisites: 4311. No lab fee charged.

ML 4352 Clinical Experience 2 1-24-4
Students are assigned to the clinical laboratory where previously learned theories and procedures are applied in a patient-oriented atmosphere. Students are required to complete a minimum of 240 hours. This may necessitate makeup work to accommodate the scheduled holidays of the college. Students also attend seminar activities on campus, relating to the clinical experience.
Prerequisites: 4312. No lab fee charged.

ML 4353 Medical Laboratory Clinical Practice 1-40-6
Students are assigned to the clinical laboratory where previously learned theories and procedures in hematology, urinalysis, and clinical chemistry are applied in a patient-oriented atmosphere. Students are required to complete a minimum of 400 hours. This may necessitate make-up work to accommodate scheduled college holidays.
Prerequisites: 4311, 4312, 4350. No lab fee charged.

ML 4380 Introduction to Phlebotomy 3-0-3
The course is designed to familiarize the student with health care issues directly related to the phlebotomist. An overview of health care organizations, legal aspects, professional development, as well as laboratory tests and their clinical significance are discussed.
Prerequisites: Acceptance into phlebotomy program.
No lab fee charged.

ML 4390 Basic Phlebotomy 4-3-5
This course introduces the student to blood drawing. Topics include terminology, anatomy and physiology appropriate to phlebotomy; techniques of vein puncture and capillary sampling; professional responsibilities.
Prerequisites: 4380. Lab fee charged.

ML 4391 Phlebotomy Clinical Practice 1-10-4
Students are assigned to a local health care facility for practical experience in adult phlebotomy. Course requires 100 hours of clinical practice and attendance at scheduled seminars.
Prerequisites: 4390. Lab fee charged.

ML 4394 Interpretation of Laboratory Values 3-0-3
Course 4394 will present many of the clinical laboratory tests. How samples are collected and analyzed will be outlined. Also discussed will be how the results are reported and what they may mean clinically to the health professional.
Prerequisites: None. No lab fee charged.

ML 4399 Special Studies - Clinical Laboratory Var-Var-1-8
A student initiated academic pursuit, mutually agreed upon by the student and faculty member and carried on outside the classroom. Before registration, the student must have the plan of study approved by a supervising faculty member and the Dean of Health Technologies.
Prerequisites: None. No lab fee charged.

MR Medical Record

MR 4405 Orientation to Health Information 2-2-3
Orientation to the health information field. History, philosophy and development of the profession. Course will include acquisition and maintenance of health care data. Students will be introduced to concepts and develop their knowledge in the areas of storage and retrieval systems, record retention and filing and numbering.
Prerequisites: Acceptance in Medical Record Program. No lab fee charged.

MR 4407 Health Record Content and Format 2-2-3
Emphasis on the content of the medical record, importance, uses, forms, assembly and analysis. Indepth discussion on the standards from the Joint Commission on Accreditation of Health Care Organizations, Conditions of Participation and the American Osteopathic Association.
Prerequisites: None. Corequisites: 4405 No lab fee charged.

MR 4408 Advanced Medical Terminology 3-0-3
This course will provide a continuation of the study of basic medical terminology. Terms emphasized in the areas of pathology, pharmacology, psychiatry, radiology, obstetrics, cancer medicine and other associate specialty terms.
Prerequisites: 4000. No lab fee charged.

MR 4409 Health Information Management Seminar 3-0-3
Review of health information management courses in preparation for the accreditation examination.
Prerequisites: All technical courses or permission of instructor.
No lab fee charged.

MR 4410 CPT Coding 2-2-3
Introduction to ambulatory coding systems, with emphasis on Physicians' Current Procedural Terminology, Fourth Edition (CPT-4).
Prerequisites: 4016 or permission of instructor.
Corequisites: None. No lab fee charged.

MR 4415 Legal Aspects of Health Information 3-0-3
The medical record as a legal document; confidential communication; authorization for release of medical information; consent forms; preparation and presentation of medical record for courtroom use; the medical witness; legal responsibilities of hospital administration, employees and physicians; record management systems in other health care facilities including Medicare and Medicaid Laws and JCAHO standards for these facilities.
Prerequisites: 4405, 4407. No lab fee charged.

MR 4417 Medical Statistics and Record Abstracting 3-2-4
Statistical procedures including calculation of daily census, monthly census and percentages. Completion of monthly reports; analysis of reports including simple retrieval through abstracting of medical information from the patient record and learning the process of computer terminal input.
Prerequisites: 4407, 4420, 1850. Lab fee charged.

MR 4418 Tumor Registry, Utilization Review & Quality Assurance 4-0-4
Further understanding of Tumor Registry including completion of abstracts. Fundamentals of federal requirements for the Utilizations Review process; introduction to the quality assurance process as it relates to health care facilities.
Prerequisites: 4407, 4415, 4422.

MR 4428 Health Information Management Directed Practice 1 0-16-3
Practice in a medical record department performing the following: admission/discharge procedures; correspondence and release of medical information; assembly/analysis; record control and projects in health information.
Prerequisites: 4405, 4407, 4431, 4415. Lab fee charged.

MR 4429 Health Information Management Directed Practice 2 0-16-3
Practice includes: Cancer Registry, Utilization Review, Quality Assurance; inpatient coding; abstracting of medical data for computer input and statistical reporting; special interest assignments and exposure to alternative specialities in the medical record field.
Prerequisites: 4420, 4421, 4422, 4428. Corequisites: 4418.
No lab fee charged.

MR 4431 Health Information Department Management 3-0-3
Topics include management functions, organizational structure, line and staff relationships, position descriptions, job procedures, personnel evaluations, budgeting and specific issues in management of medical record departments.
Prerequisites: 4407, 4415, 4405. No lab fee charged.

MR 4432 Alternative Health Record Systems 3-0-3
Health Record content and format, regulatory and accreditation requirements, storage and retention needs, classification systems,

data collection/reporting and quality issues in specialized patient care setting.
Prerequisites: 4405, 4407, 4415, 4421.

MR 4441 Medical Word Processing Operations 1 1-2-2
Basic medical word processing and text management operation, medical terminology and transcription related to diseases and operations encountered in transcription of history and physical examinations; radiology, operative, and pathology reports; discharge summaries.
Prerequisites: 1850, 4000. Lab fee charged.

MR 4442 Medical Word Processing Operations 2 1-4-3
Medical word processing and text management operation; medical terminology and transcription related to diseases and operations encountered in transcription of various types of medical specialty reports; autopsy reports.
Prerequisites: 4000, 4408, 4441. Lab fee charged.

MR 4470 Orientation to Health Unit Coordinating 3-2-4
This course will discuss the gradual evolution of Health Unit Coordinating, while orienting the student to the organization and structure of health care facilities. Legal and ethical issues of Health Unit Coordinating, patients admissions, transfers, and discharges are included.
Prerequisites: Acceptance into Unit Coordinator program.
No lab fee charged.

MR 4471 Health Unit Coordinating 1 and Directed Practice 2-4-4
The course incorporates concepts presented in course number 4470 into the area of transcribing physician orders. The course will provide special emphasis on transcription of orders involving medications. Directed practice in a health care facility paralleled to didactics.
Prerequisites: 4470. Lab fee charged.

MR 4472 Health Unit Coordinating 2 and Directed Practice 2-4-4
This course is a continuation of course 4471, and focuses on skills involving transcription of orders for diagnostic and therapeutic procedures. Directed practice in a health care facility paralleled to didactics.
Prerequisites: 4471. Lab fee charged.

MR 4481 Health Unit Coordinator Practicum 2-20-6
This course is designed to be a learning experience in which the student will be involved in the application of principles learned in the classroom to actual performance of those principles in a health care facility. The clinical rotation is paralleled to didactics covered on campus.
Prerequisites: 4000, 4001, 3001, 1000, 1502, 4470, 4471, 4472, 4408. Lab fee charged.

MR 4494 Workshops in Medical Records 3-0-3
Consideration and study of selected issues and topics in the medical records area designed to meet current needs. Content and emphasis varies from year to year.
Prerequisites: None. Lab fee charged.

NUR Nursing

NUR 4911 Fundamentals of Nursing: NUR 4-6-6
This is the introductory course of the nursing program. It focuses on identifying and assessing the needs of individuals; identifying factors which influence communication with others; recognizing the roles of the Associate Degree Nurse in the scope of nursing practice; and assessing the health promoting behaviors of individuals. An overview of nursing process is presented with a focus on the assessment phase. The client focus is adults who may have self-care deficits. The practice focus is acquisition of skills in simulated laboratory experience and adult inpatient units. A variety of teaching-learning experiences are utilized to assist students in acquiring and applying classroom content to the clinical setting.
Prerequisite: Acceptance into Nursing Program, current CPR certification and health records. Corequisites: 1505 and 4014 or prior credit. Lab fee charged.

NUR 4912 Adult Nursing 1: NUR 4-6-6
This is the first of a series of three nursing courses which address common health problems of the adult. It focuses on: developing appropriate nursing diagnoses; utilizing appropriate communication techniques; demonstrating behaviors appropriate to the Associate degree nursing student; and planning nursing care based on nursing diagnoses as well as identified collaborative problems. The client focus is adults with selected common need interferences. The practice focus is simulated laboratory experiences and adult inpatient units. A variety of teaching-learning experiences are utilized to assist students in acquiring and applying classroom content to the clinical setting.
Prerequisites: 4911, 1505, 4014, current CPR certification and health records. Corequisites: 4015 and 1521. Lab fee charged.

NUR 4913 Gerontological Nursing: NUR 4-6-6
This nursing course addresses health problems associated with the gerontological client. It focuses on: utilizing a scientific and theoretical basis for care of the older adult; implementing communication techniques to support the gerontological client's expression of thoughts and feelings; using nursing process to organize, prioritize, and evaluate the plan of care; applying teaching-learning principles in gerontological settings; and utilizing the ANA Code for Nurses as a standard to measure client care. The client focus is simulated laboratory experiences, community and extended health care facility settings. A variety of teaching-learning experiences are utilized to assist in acquiring and applying classroom content to the clinical setting.
Prerequisites: 4912, 4015, current CPR certification and health records. Corequisites: 1001, 4016 and 4018. Lab fee charged.

NUR 4914 Adult Nursing 2: NUR 5-9-8
This is the second nursing course which addresses additional common health problems of adults. It focuses on: using the nursing process as the organizing and prioritizing structure to implement care; selecting appropriate interaction techniques to establish nurse/client relationships; using the ANA Code of Nursing as a standard of care; evaluating mechanisms that promote continuity of care. The client focus is adults with selected common need interferences. The practice setting includes simulated laboratory experiences and adult inpatient units. A variety of teaching-learning experiences are utilized to assist students in acquiring and applying classroom content to the clinical setting.
Prerequisite: 4913, 4018, 4016, current CPR certification and health records. Corequisites: 4009. Lab fee charged.

NUR 4915 Mental Health Nursing: NUR 5-6-7
This nursing course addresses the needs of the emotionally distressed client. It focuses on: modifying nursing care; evaluating appropriate interactions utilized with individuals and groups; meeting standards of nursing care; and incorporating health promotion activities into the plan of care. Content includes the bio-

logical and psychosocial theories relating to mental illness. The client focus is the emotionally distressed adolescent and adult. The practice focus is primarily inpatient Mental Health facilities. A variety of teaching-learning experiences are utilized to assist students in acquiring and applying classroom content to the clinical setting.
Prerequisites: 4914, 1001, 4016, 1521, 4009, current CPR certification and health records. Corequisites: 1024 and 1002.
Lab fee charged.

NUR 4916 Parent-Child Health Nursing: NUR 7-12-11
This course focuses on child bearing and child rearing families. It incorporates scientific and theoretical bases for maternal and pediatric client care; promotes communication techniques for client and family self-understanding and growth; employs nursing process to deliver, prioritize and modify care; provides teaching experiences with family and group focus; plus, explores ethical dilemmas related to maternity or pediatric nursing. A variety of teaching-learning experiences are utilized to assist students in acquiring and applying classroom content to the clinical setting.
Prerequisites: 4914, 1001, 4016, 1521, 4009, current CPR certification and health records. Corequisites: 1508.
Lab fee charged.

NUR 4917 Adult Nursing 3: NUR 8-12-12
This is the third of a series of three courses which stresses the needs of the adult client. The primary focus of this course is the comprehensive nursing care of two acutely ill adult clients. The course requires demonstration of the integration of concepts and principles in order to plan, prioritize and modify the nursing plan of care for clients. Problem solving for self-growth in nurse-client interactions is stressed. Client teaching is modified based upon client responses and outcomes. Advocacy to promote continuity of care is expected. A variety of teaching-learning experiences are utilized to assist students in acquiring and applying classroom content to the clinical setting.
Prerequisites: 4915, 4916, 1024, 1002, 1508, current CPR certification and health records. Corequisites: 15XX.
Lab fee charged.

NUR 4919 Management of Client Care: NUR 3-18-9
This is the final course in the nursing program. Its focus is utilization of the nursing process as a framework for: delivery of nursing care, effective interaction, decision-making, and health promotion. It is a course to assist in acclimating the student to the real world work situation. The client focus is groups of adult inpatients. The practice focus is management of client groups on medical-surgical units. During this course the student is assisted to assume increasing accountability for delivered and delegated care. A variety of teaching-learning experiences are utilized to assist students in acquiring and applying classroom content to the clinical setting.
Prerequisites: 4917, 15XX, current CPR certification and health records. Corequisites: 1010. Lab fee charged.

NUR 4983 Gerontological Nursing: NURP 1-2-2
This mini course is specifically designed for the practicing LPN, who has had recent experience working with Gerontological clients. 4983 corresponds to the 4913 NUR course. The majority of classroom content is learned through independent study guided by specific objectives. Selected content such as theories associated with aging are presented in class. Clinical lab experience such as indepth gerontological assessment and patient teaching. Students without recent gerontological experience in a long term care facility will be required to spend part of the lab experience in a geriatric facility.
Prerequisites: 4996 or 4911 and 4912; 1521, 4016.
Corequisites: 1010 and 1024. Lab fee charged.

NUR 4984 Adult Nursing 2: NURP 2-2-3
This mini course is specifically designed for the practicing LPN who has recent experience working directly with adult clients in structured health care settings. 4984 corresponds to the 4914 NUR course. The majority of classroom content is learned through independent study guided by specific objectives. Selected content related to adult client nursing is presented in class. Clinical lab experiences are provided to assist the LPN to attain new skills such as parenteral medication administration. Students without recent medical-surgical nursing experience, as determined by the Program Director, will be required to spend part of the lab experience in an acute care facility on a medical surgical unit working with adult clients.
Prerequisites: 4983 or 4913, 1010 and 1024.
Corequisites: 4009 and 1508. Lab fee charged.

NUR 4985 Mental Health Nursing: NURP 5-6-7
This course is specifically designed for the practicing Licensed Practical Nurse. The majority of classroom content is learned through independent study using course materials and audiotapes. This nursing course addresses the needs of the emotionally distressed client. It focuses on: modifying nursing care; evaluating appropriate interactions utilized with individuals and groups; meeting standards of nursing care; and incorporating health promotion activities into the plan of care. Content includes the biological and psychosocial theories relating to mental illness. The client focus is the emotionally distressed adolescent and adult. The practice focus is primarily inpatient Mental Health facilities. A variety of teaching-learning experiences are utilized to assist students in acquiring and applying classroom content to the clinical setting.
Prerequisites: 4984 or 4914, 4009, 1508, current CPR certification and health records. Corequisites: 15XX. Lab fee charged.

NUR 4986 Parent-Child Health Nursing: NURP 7-12-11
This course is specifically designed for the practicing Licensed Practical Nurse. The majority of classroom content is learned through independent study using course materials and audio tapes. This course focuses on child bearing and child rearing families. It incorporates scientific and theoretical bases for maternal and pediatric client care; promotes communication techniques for client and family self-understanding and growth; employs nursing process to deliver, prioritize and modify care; provides teaching experiences with family and group focus; plus, explores ethical dilemmas related to maternity or pediatric nursing. A variety of teaching-learning experiences are utilized to assist students in acquiring and applying classroom content to the clinical setting.
Prerequisites: 4984 or 4914, 4009, 1508, current CPR certification and health records. Lab fee charged.

NUR 4988 Adult Nursing 3: NURP 3-4-5
This mini course is specifically designed for the practicing LPN and corresponds to the 4917 NUR course. The majority of classroom study is learned through independent study guided by specific objectives. Selected content related to advanced adult client nursing is presented in class. The clinical lab experience focuses on the comprehensive nursing care for acutely ill adult hospitalized clients.
Prerequisites: 4985 or 4915, 4986 or 4916, 15XX, current CPR certification and health records. Lab fee charged.

NUR 4989 Management of Client Care: NURP **3-18-9**
This course is specifically designed for the practicing Licensed Practical Nurse. The majority of classroom content is learned through independent study using course materials and audio tapes. This is the final course in the nursing program. Its focus is utilization of the nursing process as a framework for: delivery of nursing care, effective interaction, decision-making, and health promotion. It is a course to assist in acclimating the student to the real world work situation. The client focus is groups of adult inpatients. The practice focus is management of client groups in medical-surgical units. During this course the student is assisted to assume increasing accountability for delivered and delegated care. A variety of teaching-learning experiences are utilized to assist students in acquiring and applying classroom content to the clinical setting.
Prerequisites: 4988 or 4917, current CPR certificate and health records. Lab fee charged.

NUR 4995 Nursing Program Orientation **Var-Var-Var**
This course is required of students transferring nursing credit from another institution and of students who have been out of the nursing program technical sequence for one year or longer. It is specifically designed to meet individual student needs as determined by the nursing Faculty and/or Program Director/Chair.
Prerequisites: 4911, 4014, 1505, Current CPR Certification.
Lab fee charged.

NUR 4996 Role Transition in Nursing: NURP **3-2-4**
This course is specifically designed for the Licensed Practical Nurse entering the Associate Degree Nursing Program and serves as an orientation to the program. It focuses on assisting the LPN to: Utilize the nursing process in planning care for individuals with selected common need interferences; planning appropriate interactions with clients and health team members; developing behaviors appropriate to the roles of the Associate Degree Nurse; and planning health care promotion activities utilizing teaching-learning principles. Through the clinical laboratory component in this course, it is expected that written assignments reflect care given in the LPN's nursing practice. A variety of teaching-learning experiences is utilized to assist the student in acquiring and applying classroom content. Successful completion of this course results in the student obtaining credit for courses 4911 and 4912 plus serves as access to the NURP courses.
Prerequisites: Acceptance into nursing program, 4014, 4015, 1001, 1002, 1505, 4018. Corequisites: 4016 and 1521.
Lab fee charged.

NUR 4997 Special Studies in Nursing 1 **1-0-1**
A student initiated academic pursuit, mutually agreed upon by the student and faculty member and carried on outside the classroom. Before registration, the student must have the plan of study approved by a supervising faculty member and the Assistant Dean/Nursing Program Chair.
Prerequisites: 4911 or 4996. Corequisites: None.
No lab fee charged.

NUR 4999 Special Studies in Nursing 2 **Var-Var-1-4**
A student initiated academic pursuit, mutually agreed upon by the student and faculty member and carried on outside the classroom. Before registration, the student must have the plan of study approved by a supervising faculty member and the Dean of Health Technologies.
Prerequisites: 4914. No lab fee charged.

NUR 9372 Nursing Cooperative Education Experience **0-25-1**
This experience provides further opportunity for the student to make practical application of basic knowledge and skills acquired in previous courses within the nursing program. All positions are paid with an average of twenty-four hours per week. The student functions under a faculty approved nurse technician job description which excludes responsibilities requiring licensure or registration. The student is assigned a faculty advisor who meets with the student on a bi-weekly basis for the purpose of assisting the student to meet objectives, apply knowledge and skills to the work setting, clarify values and examine role relationships. The advisor also acts as a liaison between the student and employer when necessary and evaluates the student's achievement of objectives and the appropriateness of the work experience. A satisfactory or unsatisfactory grade will be given after the term is completed. The grade will be determined by the advisor with input from the employer.
Prerequisites: 4914, and current CPR certification and health records. Lab fee charged.

OH Ornamental Horticulture

OH 3544 Advanced Floral Design **2-2-3**
An advanced course in floral design, dealing with more complex designs such as wedding, hospital, church and funeral work.
Prerequisites: 3540. Lab fee charged.

OTA Occupational Therapy Assistant

OTA 4600 Introduction to Occupational Therapy **2-3-3**
Course surveys the history, philosophy, and development of the profession and its relationship to other Allied Health professions. The role and function of the Occupational Therapist and Occupational Therapy Assistant are defined; team approach is defined. The student is introduced to current practice areas of Occupational Therapy through observation in community Occupational Therapy settings.
Prerequisites: Acceptance into OTA program.
No lab fee charged.

OTA 4610 Theory of Occupational Therapy **4-0-4**
Introduction to the developmental process of human performance; exploration of occupational tasks and roles from birth to death; instruction in age-appropriate balance of work, self-care, play/leisure; introduction to the impact of disease and function in human occupation; and development of the therapeutic use of self.
Prerequisites: 4600. No lab fee charged.

OTA 4611 Occupational Therapy Concepts and Skills - Psychosocial **3-0-3**
Introduction to the role of Occupational Therapy in the treatment of adults in a mental health setting; development of analysis and observational skills; use of self and group for therapeutic intervention and application of group process. Communication and interpersonal skills are developed. Documentation skills are developed.
Prerequisites: 1505, 1506, 4014, 4600, 4610.
No lab fee charged.

OTA 4612 Occupational Therapy Concepts and Skills - Infants and Children 3-0-3

Introduction to the role of Occupational Therapy in the treatment of children with physical and/or psychological dysfunction. Emphasis is on normal development and developmental disabilities and the selection of occupational performance age-appropriate treatment interventions. Documentation skills are developed. Team approach is explored.
Prerequisites: 4014, 4015, 4600, 4610, 4611.
Corequisites: 1508. No lab fee charged.

OTA 4613 Occupational Therapy Concepts and Skills - Phys Disabilities 3-0-3

Introduction to the role of Occupational Therapy in the treatment of adults with physical dysfunction to include acute care and rehabilitation. Emphasis is on understanding the treatment techniques utilized for various diagnoses. Treatment planning and implementation are developed along with documentation skills. Emphasis is on adolescence through adulthood.
Prerequisites: 4014, 4015, 4016, 4600, 4610, 4611, 4612.
Corequisites: 4025. No lab fee charged.

OTA 4614 Occupational Therapy Concepts and Skills - Gerontology 3-0-3

Introduction to the role of Occupational Therapy with the elderly population. Emphasis is on understanding the aging process and function pertinent to the elderly. The role of the OT assistant in non-traditional settings is explored.
Prerequisites: 1509, 4014, 4015, 4016, 4600, 4610, 4611, 4612, 4613. No lab fee charged.

OTA 4620 Techniques of Occupational Therapy 0-4-2

Instruction in the use of crafts and activity as therapeutic modalities in treatment toward function. The concepts of activity analysis and therapeutic adaptations are emphasized. Problem-solving skills are developed.
Prerequisites: 1024, 4600. Lab fee charged.

OTA 4621 Occupational Therapy Media - Psychosocial 0-4-2

Instruction in therapeutic intervention for adults in a mental health setting to include development of leadership skills necessary for a group setting, application of group process and use of purposeful activity and crafts as therapeutic tools. Emphasis is on adolescence through adulthood.
Prerequisites: 1024, 4600, 4620. Lab fee charged.

OTA 4622 Therapeutic Media - Infants and Children 0-4-2

Instruction in therapeutic intervention with infants and children to include the use of play as a therapeutic tool, evaluation of other occupational performance skills, adaptive equipment, therapeutic techniques for positioning, handling, feeding, and basic developmental screening. Problem solving skills are emphasized.
Prerequisites: 4600, 4620, 4621. Lab fee charged.

OTA 4623 Therapeutic Media for Occupational Therapy - Phys Disabilities 0-4-2

Instruction in therapeutic intervention for physically disabled adults in acute care and rehabilitation settings to include techniques related to activities of daily living, therapeutic adaptations, orthotics, and use of adaptive/assistive equipment. Problem solving is emphasized.
Prerequisites: 4600, 4620, 4621, 4622. Lab fee charged.

OTA 4624 Occupational Therapy Therapeutic Media - Gerontology 0-4-2

Instruction in therapeutic intervention for elderly individuals in a geriatric setting to include selection of role and age appropriate occupational performance, use of recreational/leisure activity, and application of group process. Occupational Therapy treatment approaches in non-traditional settings are explored.
Prerequisites: 4600, 4620, 4621, 4622, 4623. Lab fee charged.

OTA 4625 Survey of Therapeutic Media for Occupational Therapy 0-6-3

Instruction in the use of various crafts and activities, cost analysis, and application in various clinical settings. Teaching and in-servicing skills are developed.
Prerequisites: 4621, 4622, 4623, 4624. Corequisites: 4631.
Lab fee charged.

OTA 4631 Occupational Therapy Fundamentals Practice 2-0-2

Issues concerning licensure, liability, professionalism, continuing education, and national registration are discussed. The relationships are explored and participation in the promotion of OT is discussed. Preparation is begun for Level 2 Field Work Experience.
Prerequisites: 4600, 4610. No lab fee charged.

OTA 4633 Kinesiology for Occupational Therapy 2-2-3

A study of the movement of body parts, stressing the relationship to rehabilitation therapy.
Prerequisites: 4613, 4623. No lab fee charged.

OTA 4651 Occupational Therapy Assisting Field Work 1 (Level 1) 0-9-2

Provides the opportunity for directed observation and participation in a community Occupational Therapy setting.
Prerequisites: 4600, 4610, 4620. Corequisites: 4007.
Lab fee charged.

OTA 4652 Occupational Therapy Assisting Field Work 2 (Level 1) 0-9-2

Provides the opportunity for directed observation and participation in a community Occupational Therapy setting.
Prerequisites: 4651, 4007, 4610, 4611, 4620, 4621.
No lab fee charged.

OTA 4653 Occupational Therapy Assisting Field Work 3 (Level 1) 0-9-2

Provides the opportunity for directed observation and participation in a community Occupational Therapy setting.
Prerequisites: 4007, 4651, 4652, 4610, 4611, 4612, 4620, 4621, 4622. No lab fee charged.

OTA 4660 Occupational Therapy Assisting Field Work 4 (Level 2) 0-40-6

A clinical practicum in Occupational Therapy settings. An 8 week period of full time work experiences under the supervision of a registered occupational therapist provides the student with in-depth experience in the delivery of Occupational Therapy services to a variety of ages and conditions.
Prerequisites: Completion of all 46xx level courses and permission of instructor. Lab fee charged.

OTA 4661 Occupational Therapy Assisting Field Work 5 (Level 2) 0-40-6

A clinical practicum in Occupational Therapy settings. An 8 week period of full time work experience under the supervision of a registered occupational therapist provides the student with in-depth experience in the delivery of Occupational Therapy service to a variety of ages and conditions.

Prerequisites: Completion of all 46xx level courses.
No lab fee charged.

OTA 4699 Special Studies - OTA **Var-Var-1-8**
A student initiated academic pursuit, mutually agreed upon by the student and faculty member and carried on outside the classroom. Before registration, the student must have the plan of study approved by a supervising faculty member and the Dean of Health Technologies.
Prerequisites: None. No lab fee charged.

PHI Philosophy

PHI 1620 Critical Thinking **3-0-3**
An introduction to principles of philosophy, with emphasis on the development of "thinking tools" that students will use to solve abstract and practical problems. Course topics include review of standard methods and terminology used to ask philosophical questions (i.e., logic).
Prerequisites: 1001. No lab fee charged.

PHI 1621 Introduction to Philosophy **3-0-3**
An introduction to philosophical investigation, covering problems and methods of knowledge, reasoning and morality. Includes survey and analysis of notable western and eastern philosophers and their concepts.
Prerequisites: None. No lab fee charged.

PHI 1625 Ethics **3-0-3**
An introduction to philosophical principles of ethics and moral reasoning. Through reading and research, students will develop understanding of how ethics is applied in practical situations. This course emphasizes making practical decisions about issues which have ethical or moral implications, using examples that are related to students' major field of study.
Prerequisites: 1001. No lab fee charged.

PHI 1630 Comparative World Religions **3-0-3**
Study and comparison of major religions of the world, through examination of historical development, cultural function, and religious traditions. Major world religions to be studied include Judaism, Christianity, Islam, Buddhism, Hinduism, Taoism, and Confucianism.
Prerequisites: 1001. No lab fee charged.

PHY Physics

PHY 2220 Automotive Physics **2-3-3**
The topics of mechanics, fluids mechanics and heats will be examined, as they apply to automobiles. The treatment of mechanics with emphasis on the kinematics and dynamics of moving objects, including rotational motion and machines. Heat with emphasis on temperature scales; expansion; energy; specific heat; heat of combustion; the gas laws; engines; and refrigerators. It is recommended that math course 1170 be taken prior to taking this course.
Prerequisites: None. Lab fee charged.

PHY 2221 Technical Physics 1 **2-3-3**
The major emphasis will be placed on the theory of basic electricity, circuit building and analysis, and VOM instruments. The fundamental of analog and digital electrics are presented. For success in this course it is suggested that math course 1170 be taken either prior to or concurrently with this course.
Prerequisites: None. Lab fee charged.

PHY 2222 Technical Physics 2 **2-3-3**
The topics of mechanics, pressure, density and heat will be examined. The treatment of mechanics with emphasis on kinematics and dynamics of moving objects, including rotational motion and machines. Heat with emphasis on temperature scales; expansion; energy; specific heat; latent heat; heat of combustion; and the gas laws. For success in this course, a competency of at least math course 1191 is suggested.
Prerequisites: None. Lab fee charged.

PHY 2223 Technical Physics 3 **2-3-3**
Topics to be examined include the structure of matter, the laws of thermodynamics, energy conversions, engines, ideal gases, properties of waves, doppler effect, electromagnetic waves, optics, and modern physics. For success in this course, a competency of at least math course 1191 is suggested.
Prerequisites: 2222. Lab fee charged.

PHY 2241 College Physics 1 **4-2-5**
This course is the first of a three-term sequence designed for non-physics majors. Topics include: Measurement, including length, area and volume; systems of units and conversions; statics, including addition of forces and non-concurrent parallel forces; kinematics including motion near the Earth, velocity, acceleration, and projectile motion; friction; Newton's laws of motion; energy, work and power in general and as related to simple machines as time permits.
Prerequisites: Knowledge of high school algebra and some trigonometry is suggested. Lab fee charged.

PHY 2242 College Physics 2 **4-2-5**
This course is the second of a three-term sequence designed for non-physics majors. Topics include: Temperature scales and expansion; molecular energy; specific and latent heats and related phenomena; convection, conduction, and radiation; the study of waves; electromagnetic radiation; geometric optics including index of refraction,lenses, and simple optical instruments; interference and diffraction.
Prerequisites: Knowledge of high school algebra and some trigonometry is suggested. Lab fee charged.

PHY 2243 College Physics 3 **4-2-5**
This course is the third of a three-term sequence designed for non-physics majors. Topics include: basic forces in nature with emphasis on the magnetic and electric force; simple DC circuits and capacitance; electrical power and energy; light as a photon including spectral analysis; the atomic nucleus and basic concepts of decay, half-life, and biological effects of nuclear radiation; particles and acceleration of particles including the determination of the charge to mass ratio of an electron.
Prerequisites: A knowledge of some high school algebra and some trigonometry is suggested. Lab fee charged.

PHY 2244 Health Physics 1 **3-2-4**
Selected topics as applied to the allied health profession. Pressure, forces, volume, temperature and density; fundamental nuclear particles and applications of nuclear techniques both as diagnostic and therapeutic tools; fundamentals of basic electricity, including current, resistance, voltage, power, simple DC circuits, potentiometer, transformer, and simple amplifier circuits; simple schematics and basic components of various medical instruments. It is strongly suggested that math course 1105 be

taken prior to or concurrently with 2244.
Prerequisites: None. Lab fee charged.

PHY 2245 Health Physics 2 **3-2-4**
Selected topics from those not covered in course number 2244.
Prerequisites: 2244. Lab fee charged.

PHY 2263 Physical Science for Graphic Communications **3-4-5**
This is a lab-oriented course concerning selected topics from chemistry and physics as they are applied to the graphic communications field.
Prerequisites: 1170. Lab fee charged.

PHY 2270 Introduction to Physics **2-3-3**
Fundamentals of physics; laboratory procedures; the controlled experiment; methods of measurement; techniques of data collection and analysis; interpretation of experimental results.
Prerequisites: None. Lab fee charged.

PHY 2291 Physics 1 **3-2-4**
Measurement techniques; functions and scaling; kinematics; velocity vectors; motion near the earth; laws of force and motion; work; energy; power; impulse; momentum; machines; conservation of energy and momentum. For success in this course, a competency of at least math course 1191 is suggested.
Corequisites: None. Lab fee charged.

PHY 2292 Physics 2 **3-2-4**
Translational equilibrium; center of gravity; moments of forces; force analysis of structures; beams; trusses; booms; shear; elasticity; friction as a force; structure of matter; density; pressure; temperature scales; expansion; molecular energy; specific heat; change of state; heat of combustion; heat energy. For success in this course, a competency of at least math course 1191 is suggested.
Prerequisites: None. Lab fee charged.

PHY 2293 Physics 3 **3-2-4**
Electromagnetic radiation with emphasis on the wave nature; basic wave properties; the electromagnetic spectrum with emphasis on the visible region, refraction; fundamentals of geometric optics, simple optical instruments; diffraction; spectral analysis and color; vision, and the eye; the inverse square law and the nature of the fundamental forces. For success in this course, a competency of at least math course 1191 is suggested.
Prerequisites: None. Lab fee charged.

PHY 2294 Physics 4 **3-2-4**
Relativity, and the relativistic changes in space, time, and mass; mechanics of the electron and its relationship to the field of electronics; electron energies, and their relationship to electromagnetic radiation; planck's radiation, the hydrogen atom; the compton effect, and other related atomic phenomena. The nucleus and its structure, mass defect, and binding energy; radioactivity and modes of decay; half-life, and carbon 14 dating, fission, fusion, reactors and power generation; the biological effects of nuclear radiation. For success in this course, a competency of at least math course 1191 is suggested.
Prerequisites: None. Lab fee charged.

PHY 2298 Workshops in Physics **Var-Var-1-4**
Study of selected topics in physics designed to meet current needs. Content and emphasis varies from year-to-year.
Prerequisites: None. Lab fee Charged.

PM Property Management

PM 2931 On-Site Property Management 1 **3-0-3**
Practical methods for successful management of property at the on-site level. This course encompasses management systems and philosophies, policies, property maintenance, merchandising, and renting, financial reporting, resident relations and legal concerns.
Prerequisites: None. No lab fee charged.

PM 2932 On-Site Property Management 2 **3-0-3**
Continuation of course #2931, practical methods for successful management of property at the on-site level. This course encompasses management planning, personnel and resident policies, accounting and budgeting, legal aspects, insurance, marketing, leasing and sales, maintenance management and energy conservation.
Prerequisites: 2931. No lab fee charged.

PM 2933 Executive Level Property Management **3-0-3**
Techniques for successful management of property at the executive level. This course encompasses objectives of ownership, use of data and statistics, analysis of regions, neighborhoods and markets, cash flow projections and financial analysis, developing and managing apartments, offices, shopping centers, condominiums and cooperatives, and developing the management plan.
Prerequisites: None. No lab fee charged.

PM 2935 Property Management Case Study **3-0-3**
A case study utilizing a property in the Cincinnati area on which the student will develop a complete management plan. The student is allowed to utilize in a real management situation all the techniques and skills of property management developed in course 2931, 2932, 2933, and 2934, and to apply them in the form of a management plan created by the student for a specific property.
Prerequisites: 2933. No lab fee charged.

PM 2936 Institutional Property Management **3-0-3**
Techniques for successful management of non-traditional housing. This course provides training in HUD housing, nursing home care, handicapped housing and those facilities providing services for people with special needs.
Prerequisites: 2933. No lab fee charged.

PSC Physical Science

PSC 2299 Special Studies-Science **Var-Var-Var**
A personal academic pursuit related to the student's technical field of study mutually agreed upon by the student and supervising faculty member. Prior to registration, the plan of study must be approved by the Dean of the Division. (Grades S or U.)
Prerequisites: None. No lab fee charged.

PSC 6699 Technical Laboratory Problems **Var-Var-Var**
Special problems, projects, seminars and individual study assignments pertinent to technical laboratory areas. Arranged only with approval of coordinator and dean.
Prerequisites: None. No lab fee charged.

PST Physical Sciences Tech

PST 6999 Special Project Seminar **Var-Var-1-5**
Individual study and/or special project assigned in students' tech-

nical field of study. Available to fourth and fifth-term students by special arrangement with coordinator and dean.
Prerequisites: None. No lab fee charged.

PSY Psychology

PSY 1502 Human Relations - Applied Psychology 3-0-3
Applies psychological principles to everyday life. These applications help students understand themselves better, change their behaviors, and enhance their relationships. The students must participate in structured experiences.
Prerequisites: None. No lab fee charged.

PSY 1505 Introduction to Psychology 1 3-0-3
This course presents psychology as the science of understanding behavior. Topics covered are: methods of psychological research, the biological bases of behavior, perception, learning, memory and language; motivation, and emotions.
Prerequisites: None. No lab fee charged.

PSY 1506 Introduction to Psychology 2 3-0-3
This course discusses the development and growth of people; the personality, the maladjusted patterns of behavior; psychotherapy; social psychology; and applied psychology in terms of business, industry, education, and consumerism.
Prerequisites: 1505 or equivalent. No lab fee charged.

PSY 1508 Psychology: Child Development 3-0-3
This course discusses the child's life which begins with genetic and environmental influences. The student considers the physical, intellectual, language, social, moral, and abnormal growth of the child. Theories help to explain this growth to adolescence.
Prerequisites: 1506 or equivalent. No lab fee charged.

PSY 1509 Psychology: Adult Development 3-0-3
The general principles and theories governing human growth and development from adolescence through aging are studied as they relate to the physical, cognitive, and psychosocial development of people. The major contemporary theories are presented, discussed and compared. Major topics include the identity struggle of adolescence, career selection and development, marriage, parenting, mid-life crises, retirement and death and dying.
Prerequisites: 1506 or equivalent. No lab fee charged.

PSY 1510 Psychology: Adolescent Development 3-0-3
Adolescence, the years between 12 and 22, is a period of tremendous changes physically, psychologically and socially. This course will examine these developmental issues as well as self concept, sex roles and identity, relating to parents, peers and achieving independence, value formation, and choosing and preparing for an occupation. Hazards of this age period, such as alcohol and drug abuse, will be discussed.
Prerequisites: 1506 or equivalent. No lab fee charged.

QCC Quality Control Certificate

QCC 6670 Introduction to Statistical Process Control 3-2-4
This course provides a fundamental, yet comprehensive, coverage of quality control/process control concepts. The course starts with the modern definitions, functions, philosophies, and responsibilities of quality control as they pertain to both products and services. Basic statistics are then reviewed to form the foundation for the techniques of statistical quality control/statistical process control (SPC) that follow. Specifics include fishbone and Pareto charts, histograms, control charts (X-bar, R, p, np, c, u), etc. Short run situations are examined as well as sampling strategies and quality costing. Reliability and experimental design (DOE) are briefly introduced. A sophisticated, through user friendly, SPC computer package is utilized hands-on in class.
Prerequisites: 1179. Lab fee charged.

QCC 6672 Introduction to Design of Experiments 3-2-4
This statistically based course relates the ideas of quality engineering especially as popularized by noted Japanese electrical engineer Genichi Taguchi. The classical techniques involving one and two sample procedures are followed with an introduction to analysis of variance (ANOVA). Various experimental designs and corresponding ANOVA are explored with special attention to repetitions, interactions, blocking, randomization, etc. The main emphasis is the introduction to the methods of Taguchi including orthogonal arrays, linear graphs, and signal-to-noise ratio. Computer and graphical techniques are stressed throughout. The course culminates with each student presenting a final project.
Prerequisites: 1179

QCC 6674 Introduction to Reliability 3-2-4
This course provides a statistically based approach to reliability with the emphasis on practical applications. Reliability, availability, maintainability, repairability and safety are all defined. Appropriate statistical models of reliability are explored (e.g. exponential, Weibull, etc.), including probability plotting and fitting techniques. A confidence interval approach is stressed. Additional topics include prediction, stress-strength interference, margin of safety, failure mode effect analysis (FMEA and FMECA), human factors, etc. Repairable and non-repairable parts and systems are considered. Hands-on computer and graphical techniques are stressed throughout. The material for this course is oriented toward the body of knowledge for ASQC certification as Reliability Engineer.
Prerequisites: 1179.

RE Real Estate

RE 2940 Real Estate Sales 3-0-3
Listing real estate. The exclusive listing. Listing goals and aids. Classified advertising, Qualifying buyers. Financing showing the property. The purchase contract. Obtaining and presenting the offer. Creative salesmanship.
Prerequisites: 2951. No lab fee charged.

RE 2945 Residential Construction 3-0-3
This course is a "bricks and mortar" course for the nonconstructionist, topics covered will include site work and concrete; building structure to the roof; finishing trades and scheduling; cost estimating; and the lender and the appraiser.
Prerequisites: None. No lab fee charged.

RE 2951 Real Estate Principles & Practices 3-0-3
An introduction to real estate economics; principles of contracts, financing, brokerage, appraisal. This course is required by the state of Ohio prior to taking the sales license exam.
Prerequisites: None. No lab fee charged.

RE 2952 Real Estate Brokerage 3-0-3
Introduction to the operation of a real estate brokerage: office management; selecting, training, and retaining sales personnel;

marketing and advertising; and expansion.
Prerequisites: 2951, 2953. No lab fee charged.

RE 2953 Real Estate Law 3-0-3
Law of agency as applied to real estate, law of fixtures, estates including leases. Conveyancing of real estate, the sales contract, the mortgage, deeds and recording. Real estate brokers and managers, license laws of Ohio. Zoning, cooperatives, and condominiums. This course is required by the state of Ohio prior to taking the sales license exam.
Prerequisites: None. No lab fee charged.

RE 2954 Real Estate Finance 3-0-3
Real Estate Finance is a prerequisite course to taking the Ohio Real Estate License Examination. Emphasis on Ohio real estate cycles, government influences and the secondary market; types of Ohio lenders, types of finance instruments, types of conventional and government financing (FHA/VA), an overview of the loan process from qualifying the buyer and property; loan application, documentation, underwriting, closing, servicing and possible foreclosure and state and federal regulation of real estate finance.
Prerequisites: None. No lab fee charged.

RE 2955 Real Estate Appraisal 1 - Residential 3-0-3
Methodology of appraising: residential property. Theory of appraisal techniques. The three basic approaches of appraising: market comparison, cost of replacement, and income capitalization. Required by the state of Ohio prior to taking the brokers license exam.
Prerequisites: None. No lab fee charged.

RE 2956 Real Estate Appraisal 2 - Income Producing Properties 3-0-3
Comprehensive analysis of theory and practical application of preparing an appraisal on investment property. Appraisal techniques unique in the area of income producing properties. A term case study project is assigned providing practical experience in utilizing the income approach.
Prerequisites: 2955. No lab fee charged.

RE 2957 Real Estate Seminar: Special Topics 3-0-3
Issues and problems facing the real estate industry. Case studies discussed.
Prerequisites: 2951, 2952, 2953, 2954, 2955, 2956.
No lab fee charged.

RE 2959 Real Estate Appraisal 3 3-0-3
This course will give the student an understanding & experience of the mathematical problems in analyzing data to arrive at value estimates for income producing properties. Outlines details of the uniform standards of professional practices as set forth by the Appraisal Standards Board of the Appraisal Foundation. These standards govern the necessary procedures followed by appraisers in their work. This course is necessary to sit for the State of Ohio Residential & General Appraisal Certification exam.
Prerequisites: 2955, 2956.

RT Respiratory Therapy

RT 4700 Introduction to Respiratory Care 2-0-2
This introductory class gives the student an overall view of Respiratory Care and the health care system. The subjects covered include the history of the profession, hospital organization, the role of the Respiratory Therapist and how they relate to other health care professionals in the health care system. Other topics include infection control, vital signs and moving & positioning the patient.
Prerequisites: Acceptance into Respiratory Therapy Program.
No lab fee charged.

RT 4701 Respiratory Care Science 1 4-3-2
This course covers basic concepts of the atmosphere and all the gas laws as they relate to the field of Respiratory Care. Patient assessment, indication, hazards and administration of O_2 therapy, charting, policy and procedure manuals and infection control are covered in this class.
Prerequisites: 2244, 4014, 1105, 4700. Corequisites: 4720.
Lab fee charged.

RT 4702 Respiratory Care Science 2 2-3-3
Respiratory procedures and equipment involved in humidity therapy, aerosol therapy, IPPB, chest physiotherapy and non-invasive monitoring. Pharmacology applicable to respiratory care procedures.
Prerequisites: 4701, 4720, 4001, 4015. Corequisites: 4711.
Lab fee charged.

RT 4703 Respiratory Care Science 3 3-2-4
The course and lab cover the following areas as they pertain to Respiratory Care: X-Rays, infection control, IPPB machines, airway management, manual resuscitators, 0_2 Analyzers and hyperbaric oxygenation, pharmacology pertaining to the field of Respiratory Care.
Prerequisites: 4702, 4711, 4016, 4009. Corequisites: 4712, 4718. Lab fee charged.

RT 4704 Respiratory Care Science 4 3-3-4
This course covers respiratory care of the ventilator patient. It includes a review of respiratory anatomy and physiology, assessment of the need for mechanical ventilation, classification and the use of most of the mechanical ventilators, the care of the patient on a mechanical ventilator, different modes of ventilation, and the discontinuance of mechanical ventilation. An in-depth discussion of acid base balance, O_2 transport and arterial blood gases will also be covered.
Prerequisites: 4703, 4712, 4718. Corequisites: 4713, 4719.
Lab fee charged.

RT 4705 Respiratory Care Science 5 3-2-4
This course covers two areas of Respiratory Care, Pulmonary function testing at the bedside and in the laboratory and the care of the neonatal and pediatric patient.
Prerequisites: 4704, 4713, 4719. Lab fee charged.

RT 4706 Respiratory Care Science 6 5-0-5
This course is a review of cardiopulmonary anatomy and physiology. Care of the critically ill patient; the technique and significance of hemodynamic monitoring techniques are also discussed.
Lab fee to cover cost of AARC Membership.
Prerequisites: 4016, 4714, 4705. Lab fee charged.

RT 4707 Respiratory Care Science 7 3-0-3
In depth study of specialized areas of respiratory care including pulmonary rehab, pulmonary function testing, sleep studies, etc. These areas are subject to change each year to correspond to the changing job description of the respiratory therapist.
Prerequisites: 4706, 4714. Corequisites: 4715, 4020.
Lab fee charged.

RT 4711 Respiratory Care Clinical Practice 1 0-9-1
An introduction to the hospital environment with practical application of 0_2 delivery systems, aerosol therapy, incentive spirometry, patient assessment and positioning patients.
Prerequisites: 4701, 4720, 4007, 4001, 4015.
Corequisites: 4702. Lab fee charged.

RT 4712 Respiratory Care Clinical Practice 2 0-9-1
Practical application of IPPB, humidity, aerosol therapy, chest physiotherapy and incentive spirometry.
Prerequisites: 4702, 4711, 4016, 4009. Corequisites: 4703, 4718. Lab fee charged.

RT 4713 Respiratory Care Clinical Practice 3 0-25-4
A continuation of 4712 plus Airway management, sterilization of equipment, introduction to ventilator care and the operating room.
Prerequisites: 4703, 4712, 4718.
Corequisites: 4704, 4719. No lab fee charged.

RT 4714 Respiratory Care Clinical Practice 4 0-30-5
A clinical practicum in all phases of respiratory care with emphasis on patients requiring mechanical ventilation. Special rotations in pulmonary functions, equipment and pediatrics.
Prerequisites: 4713, 4719, 4704. Lab fee charged.

RT 4715 Respiratory Care Clinical Practice 5 0-18-3
Application of advanced respiratory care techniques. Emphasis on patients in the critical care setting. Specialized areas of practice are included. Use of computerized clinical simulations.
Prerequisites: 4706, 4714. Corequisites: 4707, 4020.
Lab fee charged.

RT 4716 Respiratory Care Clinical Practice 6 0-18-3
A continuation of RT Clinical Practice V.
Prerequisites: 4707. No lab fee charged.

RT 4718 Pulmonary Diseases 1 2-0-2
In depth study of pulmonary disease, including pathophysiology, diagnosis and treatment. Emphasis placed on the role of respiratory therapy in the management of patients with pulmonary disease.
Prerequisites: 4702, 4711 4016. Corequisites: 4703, 4712.
No lab fee charged.

RT 4719 Pulmonary Diseases 2 2-0-2
Continuation of 4718.
Prerequisites: 4718, 4703, 4712. Corequisites: 4704, 4713.
No lab fee charged.

RT 4720 Cardiopulmonary Anatomy & Physiology 3-2-4
Detailed anatomy and physiology of the respiratory and circulatory systems. Emphasis is placed on topics relevant to respiratory therapy; i.e., ventilation, diffusion, 0_2 and CO_2 transport, red cell physiology and acid base balance.
Prerequisites: 4700, 4014. Corequisites: 4701. Lab fee charged.

RT 4723 Respiratory Care Seminar 2-2-3
Practice in NBRC testing techniques. Student presentation of research topic. Discussion of current issues relating to the respiratory care profession. Additional lab fee assessed to cover the cost of clinical simulations and standardized testing. This course is approved for "S" and "U" grades.
Prerequisites: 4707. Corequisites: 4716. Lab fee charged.

RT 4770 Basic Electrocardiography 3-2-4
An introduction to the principles of electrocardiography. Designed to acquaint students with cardiac anatomy and physiology, taking the ECG, patient preparation, recognizing and correcting distortion problems, mounting and filing of the ECG, special patients and other procedures.
Prerequisites: 4000 and acceptance into ECG program.
Lab fee charged.

RT 4771 Arrhythmia Recognition 3-0-3
Advanced course in electrocardiography with emphasis on recognizing arrhythmias. Review of basic ECG principles and cardiac anatomy. Emphasis on measurement and calculation of ECG patterns for determining variations in heart patterns (Dyshrythmias).
Prerequisites: 4770 or experience with ECG. No lab fee charged.

RT 4780 Electrocardiography Clinical Practice 0-20-2
This course consists of clinical practice of electrocardiography in a local hospital. Students will be supervised by practicing ECG technicians employed by the hospital. Grade of Satisfactory or Unsatisfactory.
Prerequisites: 4770. Lab fee charged.

RT 4794 Workshops in Respiratory Therapy 0-0-1-4
Consideration and study of selected issues and topics in the respiratory therapy area designed to meet current needs. Content and emphasis varies from year-to-year.
Prerequisites: None. Lab fee charged.

RT 4795 Workshop in RT 2 Var-Var-1-4
Consideration and study of selected issues and topics in the respiratory therapy area designed to meet current needs. Content and emphasis varies from year to year.
Prerequisites: None. No lab fee charged.

RT 4799 Special Studies - Respiratory Care VAR-VAR-1-8
A student initiated academic pursuit, mutually agreed upon by the student and faculty member and carried on outside the classroom. Before registration the student must have the plan of study approved by a supervising faculty member and the Dean of Health Technologies.
Prerequisites: None.

SEC Secretarial

SEC 3001 Typewriting 1 2-3-3
A beginning course in typewriting including keyboard mastery, machine parts, margins and centering. Designed to develop accurate typing skills. Minimum grade of "C" required to continue into 3002 and to graduate.
Prerequisites: None

SEC 3002 Typewriting 2 2-3-3
Continuous review of keyboard and techniques; intensified drills on improvement of speed and accuracy; progress through personal documents, basic business communications, unbound reports and basic tabulations. Minimum grade of "C" required to continue into 3003 and to graduate.
Prerequisites: 3001. Lab fee charged.

SEC 3003 Typewriting 3 - Advanced Formatting 2-3-3
The development of skills, knowledge, and techniques applicable to keyboarding. Opportunity is provided for the student to experience situations in which problem solving is necessary.

Advanced keyboarding problems and techniques, knowledge and skills involved in production keyboarding and composition are taught. Minimum grade of "C" required to continue into 3004 and to graduate.
Prerequisites: 3002. Lab fee charged.

SEC 3004 Typewriting 4 - Simulation 2-3-3
Application of the basic processes of keyboarding in the preparation of forms, administrative communications, and employment communications. The application of keyboarding skills in a variety of employment simulations. Minimum grade of "C" required to graduate.
Prerequisites: 3003. Lab fee charged.

SEC 3006 Intermediate Typing: Skill Development 2-3-3
A typing course designed for those students who have had previous instruction on the typewriter and know the keyboard, but who have not achieved proficiency in speed and accuracy to continue on to Typewriting 2. The Cortez Peters system of diagnostic testing and analyzation is used to improve speed and accuracy. Keyboarding knowledge is required to take this course.
Prerequisites: None. Lab fee charged.

SEC 3007 Introduction To Keyboarding 3-0-3
A keyboarding class designed for all Business Technologies students who do not have a basic keyboarding skill. This course emphasizes keyboarding on computers.
Prerequisites: None. Lab fee charged.

SEC 3016 Law Office Procedures 3-0-3
This course is a study of legal office procedures in which the legal structure, the court system, legal terminology, preparation of legal forms and documents will be the main focus. This course is specifically designed to meet the current needs of the legal professional.

SEC 3017 Legal Terminology and Transcription 1-4-3
This course provides hands-on training in formatting legal correspondence and court documents in the basic areas of law. An office simulation using the computer and transcribing machines is used to teach preparation of legal documents, legal terminology, spelling, and grammar and punctuation specifically designed for the legal secretary. Student must know how to use Word-Perfect® 5.1, Word for Windows® or Microsoft® Word.
Lab fee charged.

SEC 3021 Office Procedures 1/ 2-3-3
Office Skills Development
An introduction to the training and development of personality qualities essential to the office worker and the development of principles and procedures fundamental to basic office duties and activities. Minimum grade of "C" required to continue into 3032 and to graduate.
Prerequisites: None. Lab fee charged.

SEC 3022 Machine Transcription and Proofreading 2-3-3
An introduction to machine transcription and proofreading utilizing tapes, dictation equipment and personal computers. This course provides realistic learning experiences through language arts exercises and tape applications. Students are expected to improve skills in grammar and punctuation, input and formatting, speaking and listening, editing and decision making. Word processing knowledge is necessary to take this course. Minimum grade of "C" required to continue into 3023 and to graduate.
Prerequisites: None. Corequisites: None Lab fee charged.

SEC 3023 Advanced Machine Transcription and 2-3-3
Dictation
An integrated approach to machine transcription and dictation combining instruction in dictation/transcription with intensive instruction in English usage and grammar. Students learn how to operate dictation/transcription equipment efficiently and apply language usage and other skills to the production of all kinds of written communications. Course must be completed with the grade of "C" to graduate.
Prerequisites: 3022. Corequisites: None. Lab fee charged.

SEC 3024 Office Procedures 3/ 2-3-3
Simulations & Applications
Business information applicable to office employment. Emphasis on important responsibilities of the office worker pertaining to business communications, travel, meetings, reference and preparation of reports, including a continuation of the operations/applications of machine transcription emphasizing dictation methods, correct grammar, punctuation and spelling. Minimum grade of "C" is required to graduate.
Prerequisites: 3023, 3032. No lab fee charged.

SEC 3032 Office Procedures 2/ 2-3-3
Professional Development
A continuation of training in office procedures and human relations principles with emphasis placed on oral and written office communications, negotiating, assertiveness, and professional development. Minimum grade of "C" required to continue into 3024 and to graduate.
Prerequisites: Passed 3021. Lab fee charged.

SEC 3035 Essential Business Correspondence 2-3-3
An intensive, competency-based business correspondence course that involves grammar, punctuation, proofreading, spelling, vocabulary building and office correspondence origination. An 80 percent competency level must be reached in order to pass this course. A solid background in English grammar and punctuation is recommended.
Prerequisites: None. No Lab fee charged.

SEC 3058 Microsoft® Word for Windows 2-3-3
This course will instruct student in the practical application of Microsoft® Word for Windows. each student will complete hands-on exercises and problems using a personal computer. A keyboarding skill of 35 wpm is required to take this course.
Lab fee charged.

SEC 3059 Word/Information Processing - 2-3-3
WordPerfect® for Windows
This course is designed to introduce the beginning and intermediate capabilities of WordPerfect® for Windows, using WordPerfect 5.2® for Windows software. Students will prepare a variety of documents from simple one-page letters to more complex documents. A keyboarding skill of 35 wpm is required to take this course.
Lab fee charged.

SEC 3061 Word Processing Applications-WordPerfect® 2-3-3
A course designed for students choosing a career in word information processing. Students will receive "hands-on," practical experience on a personal computer using WordPerfect® software. Minimum grade of "C" required to continue into 3063 and to graduate.
Prerequisites: 3001 or 3007. Lab fee charged.

SEC 3062 Database/Lotus Applications 2-3-3
This course is designed to acquaint students with a database management tool which involves creating, sorting, and manipulating files within a data management environment. Students will also become acquainted with an electronic spreadsheet environment utilizing the IBM Personal Computer. The creation of database records (D-Base®) and spreadsheet applications (Lotus 1-2-3®) are designed to enable students to logically sequence computer operations. Minimum grade of "C" is required to continue with program sequence and to graduate.
Prerequisites: 3001. Lab fee charged.

SEC 3063 Advanced Word Processing - WordPerfect® 2-3-3
An advanced course in WordPerfect 5.1® that includes a review of basics and advances into document comparison, columnar math features, spreadsheets, line and paragraph numbering, advanced printing features, macros, style creations, and office graphic and publications. Minimum grade of "C" required to graduate.
Prerequisites: 3061. Lab fee charged.

SEC 3064 Harvard Graphics® 2-3-3
This course is designed to introduce the student to the basics of sound graphing theory and the exciting software tools for producing impressive and influential charts using a friendly, easy-to-understand windows environment. Software used will be Harvard Graphics® and Windows 3®.
Prerequisites: 3001. Lab fee charged.

SEC 3065 Text Processing - Microsoft Word® 2-3-3
This course will instruct students in the theories and practical applications of the Microsoft Word® software package using an IBM or IBM compatible microcomputer.
Prerequisites: 3001. Lab fee charged.

SEC 3066 Microsoft Works® 2-3-3
Because integrated programs are commonly used in the business world today, this course will introduce students to the integrated computer program; namely, Microsoft Works®. The student will combine five computer operations--DOS®, word processing, database, spreadsheet and electronic communications--to effect an exchange and combination of documents and information from various applications more quickly and accurately.
Prerequisites: 3002. Lab fee charged.

SEC 3067 Simulation: 3-2-4
Integrated Information Processing
This course is designed to increase the skill level of the student in managing information through the use of various software packages and integration on the microcomputer. It is also designed to increase the student's awareness of information processing and information management concepts. Assignments and projects will be completed in an office simulation environment using word processing, database, spreadsheet, and graphics software. Student must be proficient in use of WordPerfect®, D-Base and Lotus®.
Prerequisites: 3035. No lab fee charged.

SEC 3068 Word Processing Applications-Multimate® 2-3-3
A course designed to train students in word processing using Multimate Advantage Software®.
Prerequisites: 3001 or keyboarding knowledge. Lab fee charged.

SEC 3070 Administrative Office Management 3-0-3
An upper-level office management course which emphasizes management of the office environment, office employees, office systems, and office functions.
Prerequisites: 2966, 1832. No lab fee charged.

SEC 3072 Data Entry Systems 2-3-3
This course is designed to give students a basic understanding of data entry with the knowledge and skills to effectively practice with a database management tool in a data management environment.
Prerequisites: High school typing or 3001. Lab fee charged.

SEC 3080 Speedwriting 1 2-3-3
Designed for those students who have had no previous speedwriting training. Emphasis is on rapid reading of plate material, mastery of principles of theory, including brief forms. The student is introduced to writing speedwriting and transcribing on the typewriter from speedwriting notes. Minimum grade of "C" required to continue into 3081 and to graduate.
Prerequisites: 3001 or permission of the chairperson.
Lab fee charged.

SEC 3081 Shorthand: Speed Development 2-3-3
Designed for those students who have had previous speedwriting training and can transcribe within a 5 percent error allowance from shorthand notes dictated at the rate of 60 words per minute. The student is introduced to dictation from material which is not familiar. Emphasis is on speed development. Minimum grade of "C" required to continue to 3090 and to graduate.
Prerequisites: 3080. Lab fee charged.

SEC 3090 Shorthand Transcription 2-8-4
A continuation of shorthand with emphasis placed on mailable transcription with a review of punctuation and spelling.
Prerequisites: 3081. Lab fee charged.

SEC 3092 Word Processing with Desktop Publishing 2-3-3
This course is designed to give students already familiar with word processing another tool, desktop publishing with WordPerfect 5.1® to add the maximum professional look to all documents and to effectively use and practice these word processing/desktop publishing features and concepts.
Prerequisites: 3061.

SLT Scientific Lab Tech

SLT 6605 Introduction to Biotechnology 3-3-4
A basic course in the principles of cell and molecular biology to be used as a preparatory course for the Biotechnology 1, 2, and 3 series. Topics include an introduction to the biological molecules, basic cellular structure and physiology including membranes, chromosomes and basic genetics, and basic immunology. Laboratory exercises will emphasize hands-on experience in techniques for the preparation of bacterial cultures and media for genetic cloning.
Prerequisites; 2232, 6611. Lab fee charged.

SLT 6611 Chemistry 1 & Quantitative Analysis 3-4-5
This course is the first of a three-term sequence in college chemistry. Topics include measurement systems, the quantitive aspects of compounds and mixtures, and chemical reactions and their quantitative relationships. Laboratory techniques are emphasized especially gravimetric analysis and solution preparation. For success in this course, a competency of at least Math course 1191 is suggested.
Prerequisites: High school chemistry or equivalent within 3 years. Lab fee charged.

SLT 6615 Biotechnology 1 **3-3-4**
The first in a sequence of three laboratory-driven courses concerned with the basic theory and techniques involved in protein and nucleic acid analysis. Topics include an introduction to protein structure and function, basic enzyme kinetics, the role of receptor proteins, and proteins as gene regulators. Laboratory exercises include protein separation and purification, protein concentration assays (Lowry and Folin-Ciocalteu), column chromatography and antibody-antigen interactions as related to protein separation techniques.
Prerequisites: 6605, 6621. Lab fee charged.

SLT 6619 Computer Analysis of Laboratory Data 1 **2-2-3**
Examination of the Personal Computer and software as a laboratory tool for technicians. Course begins with introduction to DOS (Disk Operating System) and leads into applications programs with emphasis on Lotus 1-2-3 as data analysis package and Labtech Notebook for data acquisition. Much hands-on experience with the PC involved. Other software packages to be examined as well.
Prerequisites: None. Lab fee charged.

SLT 6621 Chemistry 2 & Quantitative Analysis **3-4-5**
This course is the second of a three-term sequence in college chemistry. Topics include chemical equilibrium, acid-base equilibrium, and solubility equilibrium. Laboratory experiments stress volumetric analytical techniques.
Prerequisites: 6611. Lab fee charged.

SLT 6625 Biotechnology 2 **3-3-4**
The second in a sequence of three laboratory-driven courses concerned with the basic theory and techniques involved in protein and nucleic acid analysis. Topics include DNA structure and function, DNA sequencing techniques, alternative DNA structures and their possible roles in the cell, the role of RNA in DNA transcription and translation, restriction enzymes, bacterial transformation, plasmid preparation, and basic techniques of molecular cloning. laboratory exercises will emphasize basic cloning techniques.
Prerequisites: 6615. Lab fee charged.

SLT 6629 Industrial Materials Testing **3-2-4**
A study of the physical and mechanical properties of engineering materials and of the tests that are used to determine those properties. The materials studied are primarily ferrous and nonferrous metals, woods, and polymers but there is some discussion of composites and ceramics. Tests include tensils, creep, hardness, torque and impact. For success in this course, a competency of at least math course 1191 is suggested.
Prerequisites: None. Corequisites: None. Lab fee charged.

SLT 6631 Chemistry 3 & Quantitative Analysis **3-4-5**
This course is the third of a three-term sequence in college chemistry. Topics include atomic structure, chemical bonding, kinetic molecular theory, thermodynamics and basic concepts of oxidation reduction and electrochemistry. Laboratory experiments continue to stress analytical techniques.
Prerequisites: 6621. Lab fee charged.

SLT 6635 Biotechnology 3 **3-3-4**
The third in a sequence of three laboratory-driven courses concerned with the basic theory and techniques involved in protein and nucleic acid analysis. Topics include DNA libraries, the role of RNA, RNA purification and separation techniques,the human genome project, and the future of biotechnology. Laboratory exercises will emphasize basic techniques in RNA purification and separation.
Prerequisites: 6625. Lab fee charged.

SLT 6641 Instrumental Chemical Analysis 1 **3-3-4**
This course is the first of a two-term sequence in the instrumental aspects of chemical analysis of both inorganic and organic compounds. Lab procedures include specific ion analysis using selective electrodes, potentiometric titrations, gas chromatography, visible and UV spectrophotometry, infrared spectrophotometry, high performance liquid chromatography and atomic absorption spectroscopy.
Prerequisites: 2232 and 6621. Lab fee charged.

SLT 6645 Biochemical Analysis and Testing **2-3-3**
This course is project oriented. Students will develop an experimental procedure, perform testing and apply statistical techniques to be included in a formal report. The project selected will pertain to the technical specialty area of the student.
Prerequisites: 6635.

SLT 6649 Scientific Laboratory Technology Analysis & Testing **3-2-4**
This course is project oriented where the student will develop an experimental procedure, perform testing and apply statistical techniques to be included in a formal report. The project selected will pertain to the technical specialty area of the student.
Prerequisites: 6639, 6651. Lab fee charged.

SLT 6651 Instrumental Chemical Analysis 2 **2-3-3**
This course is the second of a two-term sequence in the instrumental aspects of chemical analysis. A more in depth study of the same instruments will be covered. Additional topics such as mass spectroscopy and other hyphenated techniques will be covered off campus with hands-on experience.
Prerequisites: 6641. Lab fee charged.

SLT 6659 Computerized Analysis of Laboratory Data 2 **3-2-4**
Use of electronic spreadsheets to analyze and summarize laboratory data on the microcomputer. Emphasis is on mathematical, statistical, and graphical manipulation of the data using Lotus 1-2-3 in order to check the accuracy of the results. Much hands-on experience with computers. No programming required.
Prerequisites: 1179, 1191, 6619, 6631. Lab fee charged.

SLT 6661 Environmental Chemistry **3-2-4**
Chemical principles of environmental systems are examined. The applications of chemical instrumentation such as gas chromatography, liquid chromatography, and atomic absorption to environmental measurements in air, water, wastewater and solid waste are also examined. Course objectives are achieved through lectures, laboratory exercises and demonstrations.
Prerequisites: 2231, 2232. Lab fee charged.

SLT 6665 Hazardous Materials Management **3-0-3**
A practical guide discussing how hazardous materials are transported, regulated and managed to reduce human risk. This course will include current regulatory guidelines, emergency planning and response as well as analytical procedures used in characterizing hazardous wastes.
Prerequisites: None. No lab fee charged.

SLT 6675 ISO 9000 Auditing and Costing **3-0-3**
This course describes the historical background and development of the ISO Standards in Europe and the United States; details of the contents of ISO 9000; the importance of the standards of the

global community; how a company or organization complies with the standards and the "how to" of setting up dynamic internal audits; and whether/when customers should be interested in the standards; the relationships between ISO standards and total quality management; the interrelationships between statistical process control techniques and ISO Standards; costing compliance and registration; documenting and documentation.
Prerequisites: None. No lab fee charged.

SLT 6698 Workshops in Scientific Laboratory Var-Var-1-4
Study of selected topics in scientific laboratory designed to meet current needs. Content and emphasis varies from year-to-year.
Lab fee charged.

SLT 9600 Cooperative Employment - Scientific Laboratory 1-40-2
Usually on an alternating term basis, the Science Technology student is placed on full-time (32-40 hour) job that ideally relates to his or her class work. With each succeeding co-op term, the student ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term. Adherence to Divisional co-op policies and procedures required to earn credit.
Prerequisites: None. Lab fee charged.

SLT 9610 Parallel Cooperative Employment - Scientific Laboratory 1-20-1
The Science Technology students is placed on part-time (20 hours) job that ideally relates to his or her class work. With each succeeding co-op term the students ideally is able to assume more responsibility and perform higher level duties on the job because of what he or she has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term. Adherence to Divisional co-op policies and procedures required to earn credit.
Prerequisites: None. Lab fee charged.

SOC Sociology

SOC 1521 Introduction to Sociology 3-0-3
A look at sociology as a science occupied with classifying and defining group behavior. Emphasis is placed on the basic institutions necessary to the processes of socialization and acculturation.
Prerequisites: None. No lab fee charged.

SOC 1523 Sociology: Major Institutions 3-0-3
The detailed study of the five major social institutions in society; the family, religion, education, the economy and government.
Prerequisites: 1521. No lab fee charged.

SOC 1524 Stress Management 3-0-3
Theory and coping techniques for use in dealing with physical, social, and psychological stressors. Course utilizes both lecture and group interaction in discussing such diverse topics as nutrition, time management, and assertiveness. Relaxation techniques are practiced in class.
Prerequisites: None. No lab fee charged.

SOC 1525 Changing Roles for Men and Women 3-0-3
An interdisciplinary look at the processes through which sex roles develop, the ways in which they impact upon individuals and society, and an analysis of the changing sex role patterns in the U.S. and elsewhere.
Prerequisites: Three (3) hours of psychology or sociology.
No lab fee charged.

SOC 1526 Sociology: Marriage and The Family 3-0-3
This course examines the social institutions of marriage and the family. Course topics include the historical perspective of marriage, male and female roles and society's impact on marital roles, and the impact of the family on the individual.
Prerequisites: None. No lab fee charged.

SOC 1527 Technology and Ethical Decisions 3-0-3
The technician and issues having ethical or moral implications to technology. Students will use acceptable ethical principles and apply them to their own technology. Research into current publications will assist students in understanding how ethics is applied in practical situations. Discussion of ethical principles and procedures is an integral part of the course. Practical decisions with emphasis on technology will be stressed.
Prerequisites: None. No lab fee charged.

SOC 1528 The African-American Family 3-0-3
This course uses a sociological approach to examine many of the important issues that confront contemporary African-American families. Students will investigate the realities, myths, structures, and dynamics that surround and affect today's Black family, and will identify strategies that can be used to help address these issues. Topics include historical background; male-female and parent/child relationships; social, economic, health, and lifestyle issues; public policy issues, and the role of the church in the community.
Prerequisites: 1526. No lab fee charged.

SPE Speech

SPE 1020 Effective Speaking 3-0-3
The preparation and effective delivery of various types of speeches. Improved listening techniques, audience participation, and evaluation are stressed.
Prerequisites: None. No lab fee charged.

SPE 1022 Business and Professional Presentations 2-2-3
Preparation and delivery of oral presentations for business and professions, emphasizing the analysis, management, styles, and evaluation of various forms of presentational communication. Coursework includes a variety of interpersonal, group, and public communication situations, using audio or visual aids.
Prerequisites: 1001. Lab fee charged.

SPE 1024 Group Dynamics & Problem Solving 3-0-3
This course helps people understand themselves and their roles as communicators, improve their small group communication skills, develop problem-solving strategies as group members and apply theories to their work (i.e. Quality circles) and personal relationships. Students must participate in structured experiences.
Prerequisites: None. No lab fee charged.

SPE 1025 Group Dynamics within Organizations 3-0-3
Investigation of methods groups can use to operate successfully within any given organizational structure. Problem solving between groups and the organization, decision making, recommendation and implementation are major areas studied.
Prerequisites: 1024. No lab fee charged.

SPE 1027 Group Dynamics for Quality Professionals 3-0-3
This course stresses the concept of the individual as part of the team in terms of solving quality problems related to products and/or services provided by their organization. Successful quality circles and brainstorming sessions are taught hands on through real student generated problems. The team approach is emphasized and synergism demonstrated. Human factors and quality motivation approaches are explained and stressed.
Prerequisites: None. Corequisites: Current employment in quality profession. No lab fee charged.

SPN Spanish

SPN 1080 Elementary Spanish 1 4-0-4
Introduction to Spanish language. Provides foundation for understanding, speaking, reading, and writing Spanish. Covers fundamentals of Spanish intonation, grammar, and syntax. Laboratory work may be required.
Prerequisites: None. No lab fee charged.

SPN 1081 Elementary Spanish 2 4-0-4
Continuation of Elementary Spanish 1. Provides foundation for understanding, speaking, reading, and writing Spanish. Covers fundamentals of Spanish intonation, grammar, and syntax. Introduces more advanced readings. Laboratory work may be required.
Prerequisites: 1080 or 1 year high school Spanish or equivalent. No lab fee charged.

SPN 1082 Elementary Spanish 3 4-0-4
Continuation of Elementary Spanish 2. Continues fundamentals of understanding, speaking, reading, and writing Spanish. Covers fundamentals of Spanish intonation, more complex grammar and syntax. Introduces more advanced readings and basic composition. Laboratory work may be required.
Prerequisites: 1081 or 2 years high school Spanish or equivalent. No lab fee charged.

SPN 1083 Intermediate Spanish 1 4-0-4
Review and extension of basic principles of grammar and syntax through composition and conversation, stressing fluency. Introduces more advanced reading, composition, and short literary pieces. Laboratory work may be required.
Prerequisites: 1082 or 3 years high school Spanish or equivalent. No lab fee charged.

SPN 1084 Intermediate Spanish 2 4-0-4
Continues review and extension of principles of grammar and syntax through composition and conversation, stressing fluency. Introduces more advanced reading, composition, and longer literary pieces. Laboratory work may be required.
Prerequisites: 1083 or equivalent. No lab fee charged.

SPN 1085 Intermediate Spanish 3 4-0-4
Continues review and extension of principles of grammar and syntax through composition and conversation, stressing fluency. Introduces more advanced reading, composition, and longer literary pieces. Laboratory work may be required.
Prerequisites: 1084 or equivalent. No lab fee charged.

SSC Social Sciences

SSC 1599 Special Problems in Social Science Var-Var-Var
Individual study and special projects pertaining to the particular technology that the student is enrolled in. Open to students wishing advanced standing, independent study, and/or research. This course is arranged with the instructor with the approval of the Dean of the Division.
Prerequisites: None. No lab fee charged.

ST Surgical Technology

ST 4505 Introduction to Surgery 1 5-0-5
Students must be concurrently enrolled in course 4541. This course will discuss the development of modern day surgery, orient the student to the organization of the hospital and OR department. The student will be introduced to the roles of OR personnel, and explore the ethical and legal responsibilities of OR staff members. Patient care concepts will be studied. Principles of asepsis and infection control measures utilized in the OR will be presented. The final segment of the course will address occupational hazards of the OR and economy and work simplification.
Prerequisites: Acceptance into technical courses of ST program. No lab fee charged.

ST 4506 Introduction to Surgery 2 5-0-5
Students must be concurrently enrolled in course 4542 and 4560. Course topics include discussion of special equipment used in the operating room such as lasers, endoscopes, sponges, needles and surgical instruments. General and regional anesthesia will also be included. Final course content will focus on wound healing, sutures and surgical staplers.
Prerequisites: 4505. No lab fee charged.

ST 4531 General Surgery 1 5-0-5
Students must be concurrently enrolled in courses 4543 and 4561. The course will introduce students to general surgery. Course content will include steps of an operative procedure, features of general surgery, hemostasis, operative drains, surgical specimens, layers of the abdominal wall, abdominal incisions and laparotomy. Class discussion will then focus on an understanding of the following types of operative procedures: Hernia procedures of the abdominal region. Liver and biliary procedures, including related procedures on the pancreas and spleen. Gastric and related esophageal procedures.
Prerequisites: 4506. No lab fee charged.

ST 4532 General Surgery 2 5-0-5
Students must be concurrently enrolled in course 4544. This course is a continuation of general surgery procedures. Lower gastrointestinal procedures, breast surgery, gynecological and obstetrical procedures will be discussed. The final segment of the course will focus on plastics/reconstructive surgery.
Prerequisites: 4531. No lab fee charged.

ST 4533 Surgical Specialties 1 5-0-5
Course content will focus upon surgical specialty operative procedures. Opthalmic, genitourinary, and orthopedic procedures will be discussed.
Prerequisites: 4532 or permission of instructor. No lab fee charged.

ST 4534 Surgical Specialties 2 5-0-5
Students must be concurrently enrolled in course 4551. This

course is a continuation of surgical specialty operative procedures. Course content includes a basic introduction to neurosurgery procedures, head and neck procedures, ear, nose and throat surgery, and oral surgery, including maxillofacial operative procedures.
Prerequisites: 4533. No lab fee charged.

ST 4535 Surgical Specialties 3 5-0-5
Students must be concurrently enrolled in course 4552. This final course of surgical specialty operative procedures will introduce the student to peripheral vascular, thoracic and cardiac surgery. A discussion of pediatric and transplant surgery will complete the course.
Prerequisites: 4534. No lab fee charged.

ST 4538 ST Seminar 3-0-3
The course consists of a comprehensive review of surgical technology.
Prerequisites: 4534. No lab fee charged.

ST 4541 ST Surgery Lab 0-3-1
Students must be concurrently enrolled in course 4505. Concepts from course 4505 will be applied to beginning level circulating skills that will be learned in a modern, well-equipped simulated operating room suite on campus. Course content will include patient transportation and transfer skills, operation of the surgical bed, patient positioning, operation of ESU and suction and techniques utilized for dispensing sterile supplies to the operative field.
Prerequisites: Acceptance into technical course of ST Program.
Corequisites: 4505. Lab fee charged.

ST 4542 ST Clinical Experience 1 0-4-2
Students must be concurrently enrolled in courses 4506 and 4560. During this course students will perform beginning level circulating skills while caring for a surgical patient in the operating room of an affiliated hospital. The skills students will perform are correlated with circulating skills learned previously in 4541 and concurrently in 4560. Students will also attend a one-hour weekly seminar related to the hospital experience.
Prerequisites: 4541. Lab fee charged.

ST 4543 ST Clinical Experience 2 0-4-2
Students must be concurrently enrolled in courses 4531 and 4561. During this course students will perform beginning level scrub skills in the operating room of an affiliated hospital; scrub, gowning and gloving procedures, Back Table and Mayo set ups and surgical draping. Employability skills are also stressed. Students will learn the basic steps of an operative procedure and perform second assisting duties when applicable. Students will also attend a one hour weekly seminar related to the hospital experience.
Prerequisites: 4542. Lab fee charged.

ST 4544 ST Clinical Experience 3 1-4-3
Students must be concurrently enrolled in course 4532. Students will perform all previously learned scrub skills during assigned operative procedures at an affiliated hospital. Student will practice instrumentation skills required for each step of the procedure. Employability skills of students will be evaluated. Students will also attend a one hour weekly seminar relating to the field experience.
Prerequisites: 4543. Lab fee charged.

ST 4551 ST Clinical Practice 1 0-25-5
Students must be concurrently enrolled in course 4534. Students are assigned to an affiliate hospital where previously learned concepts and procedures are applied daily during operative procedures. Students will be required to demonstrate competency in basic scrub skills for a variety of gynecologic and general surgery procedures. Students will gain experience in endoscopic procedures. Students also attend a one hour weekly seminar, on-campus, relating to the field experience.
Prerequisites: 4016, 4544. No lab fee charged.

ST 4552 ST Clinical Practice 2 0-25-5
The course is a continuation of 4551. The course will focus on specialty operative procedures. Students will be rotated, as needed, to another affiliate hospital for OB experience. Students also attend a one hour weekly seminar, on-campus, relating to the field experience.
Prerequisites: 4551. No lab fee charged.

ST 4553 ST Clinical Practice 3 0-25-5
This course is a continuation of 4552 and continues to focus on surgical specialties. Students also attend a one hour weekly seminar, on-campus, relating to the field experience.
Prerequisites: 4552. No lab fee charged.

ST 4560 ST Surgical Laboratory 2 0-2-1
Students must be concurrently enrolled in courses 4542 and 4506. During the first half of the course students will learn additional circulating skills such as skin preps, urinary catheterization and employability skills. The second part of the course will focus on the scrub role. Students will learn introductory scrub skills; surgical scrub and gowning and gloving procedures.
Prerequisites: 4541, 4505. Lab fee charged.

ST 4561 ST Surgical Laboratory 3 0-2-1
Student must be concurrently enrolled in courses 4543 and 4531. Students will learn additional scrub skills; Back table and Mayo set ups, laparotomy draping, preparation and handling of drugs and instrumentation skills. Students must satisfactorily perform these skills in the lab prior to application of these skills in the hospital.
Prerequisites: 4560, 4506, 4542. No lab fee charged.

ST 4570 First Assisting in Operating Room 1 3-0-3
This course is an introduction to the First Assisting Curriculum. Topics covered are: Role of the First Assistant; Ethical, Moral, and Legal Responsibilities; Principles of Asepsis and Infection Control; Anesthesia Methods and Agents; and Potential Surgical Hazards and Appropriate Action. Teaching methods will include: lecture, audio-visual, and class discussion and projects.

ST 4571 First Assisting in Operating Room 2 3-0-3
This course will briefly review basic anatomy and physiology then proceed to focus on surgical anatomy and physiology related to specific surgical interventions. The material will be presented in a surgical procedure format instead of a body system format.
Prerequisites: 4570

ST 4572 First Assisting in Operating Room 3 3-0-3
This course discusses the fundamental skills needed to practice as a First Assistant. Course topics include: Patient Positioning, Prepping, and Draping; Application of Pneumatic Tourniquets; Characteristics of Safe Tissue Handling; Methods of Providing Wound Exposure; Methods of Providing Hemostasis; Needles and Suturing; Knot Tying; Endoscopic Equipment and Instrumentation; Surgical Wound Dressings; Drainage Systems; and Castings Techniques. Teaching methods will include: lecture, audio-visual, demonstration, practice and return demonstrations. Students will have the opportunity to practice in a lab setting and at home

with certain teaching aids provided.
Prerequisites: 4571.

ST 4579 First Assisting in OR - Clinical Practice 0-10-3
This course is designed as an individualized clinical preceptorship. The student will be given the opportunity to develop and demonstrate his or her proficiency in manual and behavioral skills in the surgical setting of area hospitals under the individual preceptorship of Surgeons and/or Registered Nurses First Assistants in current active practice within three major specialities and two elective specialities. A minimum of 100 cases will be required. Clinical logs, competency-based assessment and evaluation by surgeon preceptors/RNFA and written case studies will be the tolls used to determine preceptors accomplishment of behavioral objectives.
Prerequisites: 4572

ST 4580 Central Service Technician 1 5-0-5
This course is an overview of the Central Service Department and how it relates to the hospital in providing quality patient care. Students will be oriented to the hospital organizational structure, functions of the Central Service Department, and the responsibilities of the CSD technician. Course content includes basic microbiology, methods of infection control, fundamentals of cleaning, packaging materials and techniques and care of instruments, including processing. Medical terminology, basic anatomy and physiology will be introduced with the appropriate course content.
Prerequisites: Acceptance into Central Serv. Tech. program. Corequisites: 4585. No lab fee charged.

ST 4581 Central Service Technician 2 5-0-5
This course is a continuation of course 4580. Course content includes principles and methods of sterilization, chemical disinfection, quality assurance, principles of storage of sterile supplies and equipment, distribution and control of supplies, inventory management, maintenance of equipment and preparation of irrigating solutions. Additional topics include communication skills, work simplification and personnel safety.
Prerequisites: 4580. Corequisites: 4586. No lab fee charged.

ST 4585 Central Service Clinical Practice 1 0-5-1
This course will introduce students to the primary responsibilities of a Central Services Technician. Students will be assigned to each of the four major areas of a Central Service Department for practical application of learned concepts and procedures.
Prerequisites: None. Corequisites: 4580. Lab fee charged.

ST 4586 Central Service Clinical Practice 2 0-5-1
This course will continue to focus on the practical application of central service techniques performed in each of the four major areas of a Central Service Department.
Prerequisites: 4585. Corequisites: 4581. Lab fee charged.

ST 4594 Fundamentals of Operating Room Practice 3-2-4
The course was designed for registered nurses and others who do not have operating room experience. The course can also serve as a review for nurses planning to take First Assisting coursework. The course concentrates on "Need to know" technical information related to the care of the surgical patient and to operating room practice. Both the circulating and scrub role are discussed. Students will practice scrub and circulating skills in a modern, well-equipped simulated operating room on campus. Course content includes OR organization, legal aspects of practice, applications of aseptic techniques, general and regional anesthesia, surgical instruments, sutures, sponges and needles. Lab demonstrations include positioning, skin preps, ESU, scrub, gowning/gloving and table set-ups. Class sessions are held two evenings per week.
Prerequisites: Undergraduate course work in Anatomy/Physiology & Microbiology. Lab fee charged.

ST 4599 Special Studies - Surgical Technology Var-Var-1-8
A student initiated academic pursuit, mutually agreed upon by the student and faculty member and carried on outside the classroom. Before registration, the student must have the plan of study approved by a supervising faculty member and the Dean of Health Technologies. Prerequisites: None. No lab fee charged.

TWE Technical Writing & Editing

TWE 5001 Introduction to Technical Writing & Editing Careers 1-2-2
While introducing students to career requirements and options in technical writing and editing, this course also offers opportunities to assess prior life and work experience in order to set realistic career goals. Course activities include interviews with professionals in the field of technical communication; assessment of student learning style, personality type, and writing and editing capabilities; directed reading and journal-writing; and development of a resume, job application letter, portfolio of work samples, and other career-related support materials. Conferences with the instructor are required.
Prerequisites: None. No lab fee charged.

TWE 5010 Visual Elements of Communication 2-2-3
In this course students will study a variety of non-textual elements that support or affect written and computer-based communication materials. Topics include basic principles of layout and design; typography as a design element; kinds and styles of illustration; selection and preparation of tables, charts, and graphs; use of color; and considerations for preparing graphical user interfaces (GUI) for computer online documentation systems. Competency in using word processing, graphics, or desktop publishing software is strongly recommended.
Prerequisites: None. Lab fee charged.

TWE 5015 Technical Publication Production 2-2-3
An introductory course for writers and editors, covering the principles and techniques needed to professionally design and produce a variety of printed materials. Students will learn the vocabulary and practice the skills used by typesetters, printers, graphic artists, and other print publication specialists. Laboratory work includes both traditional and computer-assisted publication tools.
Prerequisites: None. Lab fee charged.

TWE 5022 Technical Presentations 2-2-3
Technical communicators must use presentational communication to advocate points of view, report the outcomes of projects, or sell particular services or products. This course emphasizes the analysis, management, styles, and evaluation of various forms of presentational communication used in business and professional settings. Course work includes a variety of interpersonal, group, and public communication situations, using audio or visual aids.
Prerequisites: None. Lab fee charged.

TWE 5032 Writing Instructional Documents 3-2-4
In this course, students focus on development of instructional materials for varied audiences. Topics include the requirements and restraints of the instructional process, audience analysis, and process and mechanism description. Students will prepare one or

more manuals for general and technical products. Conferences with the instructor are required. Competency in using word processing and desktop publishing software is strongly recommended. Prerequisites: 1019. Lab fee charged.

TWE 5033 Writing Promotional Documents 3-2-4
In this course, students analyze and practice writing narrative, expository, persuasive, and promotional prose as applied to a variety of technical communication projects. Topics include audience analysis, definitions, and marketing communication techniques. Students will produce memos and reports, solicited or unsolicited proposals, press releases, and brochures or newsletters. Competency in using word processing and desktop publishing software is strongly recommended.
Prerequisites: 1019. Lab fee charged.

TWE 5034 Preparing Online Documents 3-2-4
In this course, students study principles and techniques for preparing instructional and informational materials that are conveyed to the reader on a personal computer screen, rather than on printed pages. Topics include comparison of the strengths and liabilities of print and online media, audience analysis, review of visual literacy factors, and investigation of hardware and software tools required to prepare and deliver online documents. Students will prepare several online documents dealing with varied subjects. Competency in using word processing software is required; competency in using desktop publishing software is strongly recommended.
Prerequisites: 5102 (or equivalent) and 5032. Lab fee charged.

TWE 5037 Writing and Designing Newsletters 2-2-3
Newsletters are documents that combine good writing and appropriate design in order to provide needed information for a selected audience in business, industry, professional associations, or community organizations. In this course students will study and practice essential aspects of newsletter preparation. Topics include basic principles of journalism; techniques for writing news, features, and human interest stories; planning publication content; developing effective page layouts with headlines and graphic elements; and business and legal issues that affect newsletter writing and production. Students will use desktop publishing software to prepare one or more newsletters for general and specialized audiences.
Prerequisites: One English composition course (1001 or 1018) and one desktop publishing course (1422, 5116, or 5117)
Lab fee charged.

TWE 5041 Technical Editing Methods and Techniques 1 2-2-3
This course explores skills and techniques that are essential to the editorial process. Topics include theory and application of the levels of edit approach, proofreading and copy marking, the editor/author relationship, the editorial assessment process, editorial stylebooks and other resource materials, and editorial behaviors. Students will proofread and edit a variety of manuscripts.
Prerequisites: 1019. No lab fee charged.

TWE 5042 Technical Editing Methods and Techniques 2 2-2-3
Students will continue analyzing issues and practicing techniques of technical editing. Activities include understanding the interaction between editors and other publications specialists, editing large manuscripts, preparing stylebooks, and performing special editorial tasks such as preparation of abstracts, indexes, and bibliographies. Students will proofread and edit a variety of manuscripts.
Prerequisites: 5041. No lab fee charged.

TWE 5051 Organizational Dynamics and Career Assessment 3-1-3
Students seeking the Technical Writing & Editing degree should enroll in this course during one of the last three terms prior to completing all other degree requirements. This course analyzes organizational structures and management techniques. Topics include organizational development, leadership styles, and time and stress management. Students will assess their personal and career goals, compare these goals to organizational needs and practices, and review job-seeking skills.
Prerequisites: None. No lab fee charged.

TWE 5089 Technical Communication Seminar - Review of Products and Processes 2-3-3
In this course, which must be taken last in the Technical Writing & Editing program, each student prepares a professional portfolio developed from his or her previous academic, cooperative employment, and other experience. Students are required to review their portfolios, informally and through formal oral presentation, with a panel of professional technical communicators from local business and industry. The panel members will assess whether the individual students could be able to acquire entry-level positions as technical communicators. Students are expected to spend extensive time outside of scheduled class and laboratory sessions in order to complete their portfolios. Conferences with the instructor are required.
Prerequisites: Successful completion of all TWE core courses. No lab fee charged.

TWE 5098 Workshops in Technical Writing & Editing Var-Var-1-4
Group consideration and study of selected topics in technical writing & editing, designed to meet current needs. Course content and emphasis vary from year to year.
Lab fee charged.

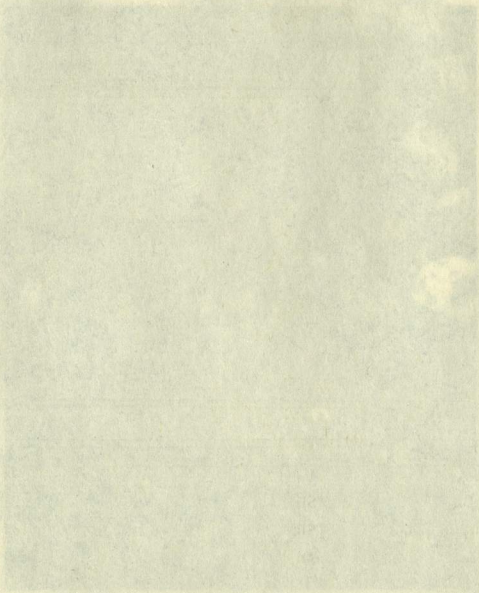
TWE 5099 Special Problems in Technical Writing Var-Var-Var
Individual study and special projects pertaining to the student's technology are assigned. This course is open to students wishing advanced standing, independent study, or implementation of specialized writing projects. This course is arranged with the coordinator, with the approval of the Dean of the Humanities Division.
Prerequisites: None. No lab fee charged.

TWE 9700 Cooperative Employment - Technical Writing & Editing 1-40-2
The Technical Writing & Editing student is placed on a full-time job (32 to 40 hours per week for one academic term) that provides the opportunity to apply knowledge and skills acquired in classes. The student must adhere to Humanities Division co-op policies and procedures to earn credit.
Prerequisites: 1018, 5002, 5016. Lab fee charged.

TWE 9710 Parallel Cooperative Employment- Technical Writing & Editing 1-20-1
The Technical Writing & Editing student is placed on a part-time job (20 to 32 hours per week for one academic term) that provides the opportunity to apply knowledge and skills acquired in classes. The student must adhere to Humanities Division co-op policies and procedures to earn credit.
Prerequisites: 1018, 5002, 5016. Lab fee charged.

Cincinnati State
Technical and Community College

FACULTY & STAFF



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Tom Lyall ..... CMI Brokerage
Bill Salisbury ..... Miami Systems Corp.
Michael Schuitemaker ..... Cincinnati Milacron
Gary Willig ..... Parkway Products

Managerial Accounting
Nancy Baker ..... Federal Home Loan Bank
Bonnie Barnes .....
Dave Britton ..... Patrick J. Burke & Co.
Claudia Grimm ..... Oliver-Berninger & Associates
Charles Ripperger ..... Frisch's Restaurant, Inc.
Michael Rohrkemper ..... Rohrkemper & Ossege
Richard Thompson ..... Internal Revenue Service

Manufacturing Engineering Technology
Jerry Barnes ..... Electro-Jet Tool Co., Inc.
Tom Bellman ..... American Power Equipment
Gary Hoelle ..... Hamilton-Stevens Group, Inc.
Arnie Johnson ..... Belcan Engineering Co.
Herman Kleine ..... Cincinnati Milacron
Rob Mayer ..... Queen City Forging
G.W. McCray ..... Hamilton Die Castings
Gene Shelton ..... Rotex, Inc.
Keith Wells ..... Buschmann Conveyor
Tom Whittington ..... ITT AC Pump
Don Wiesmann ..... Wiesmann Consultants

Mechanical Engineering Technology
Jim Balcom ..... Little Design Company
Michael Brauer ..... Litton Unit Handling Systems
Ken Frey ..... BGP Services
Bill Gerard ..... ITT AC Pump
Greg Hauck ..... Gold Crown Machinery
Carl Koors ..... Cincinnati, Inc.
Don McLennan ..... Alexander & Associates, Inc.
Tom Tenkman ..... American Laundry Corp.
Tom Wilkening ..... Heekin Can, Inc.

Medical Assisting Technology
JoAnn Dill, R.N. ..... Clifton Group Health Associates
Greg Ebner, DO ..... Private Practitioner
Gail Hennekes, PA-C .....
Lee Moeller, R.N. ..... Anderson Ferry Group Health Associates
Rhonda Moeller, C.M.A. ..... Dr. Halpin, Private Practice
Shirley Morton ..... Hill Top Pharmatest
Victoria Nash ..... UCAN
Lori Seitzer, C.M.A. ..... Daugherty Medical Group

Medical Laboratory Technology
Diane Cundiff ..... Bethesda Oak Hospital
Joyce Dicks ..... Shriners Burns Institute
Paul Laemmle ..... Jewish Hospital
Colin R. MacPherson, M.D. ..... University Hospital
Dorothy Martin ..... Mercy Hospital Anderson
Carol McCray ..... Jewish Hospital

Carl L. Parrott, Jr., M.D. .....Deaconess Hospital
Nancy Reeves .....Deaconess Hospital
Jim Reynolds .....Cincinnati Health Department
Yotsa Snow .....Drake Center, Inc.
Jeanne Wagner .....St. Francis/St. George Hospital
Deborah Wolterman .....Jewish Hospital

Nursing

Dr. Jo-Ann Adelsperger .....University of Cincinnati
Mildred Blalock, RN .....Veterans Administration Hospital
Kim Haley, RN .....Agency Nurse
Patricia Hardy, RN .....Bethesda Hospital
Brenda Heck, RN .....Cincinnati State Nursing Program
Lisa Heine, RN .....Bethesda Hospital
Joanne Johnson, RN .....Cincinnati State Nursing Program
Dr. Thomas Kober .....Cincinnati State
Margaret Mason, RN .....Bethesda Hospital
Judy Moss, RN .....Queen City Vocational
Alice Palmer, RN .....Cincinnati State Nursing Program
Linda Schaffner, RN .....Bethesda Hospital
Laura Tewes, RN .....St. Francis/St. George Hospital

Occupational Therapy Technology

Liz Buddlemeyer, OTR/L .....Jewish Hospital
Karen Burhaus, OTR/L .....Children's Hospital Medical Center
Linda Cooper .....Student
Beth Dwyer .....American Hospital for Rehabilitation
Cindy Kief, COTA/L .....Cincinnati State
Jane Osika .....Christ Hospital
Sandra Prantl, OTR/L .....
Kim Williams, COTA/L .....University Hospital

Pre-Tech Business Technologies Division

Robert F. Ketterer .....Ketterer & Associates
Betty Richard .....Ohio Bureau of Employment Services
Willie F. White .....Micro Mechanical Finishing Co.

Respiratory Care

Sal Beccera, RRT .....Jewish Hospital
Patty Branson, RRT .....Children's Hospital Medical Center
Cyndi Campbell, RRT .....University Hospital
Judy Daleiden, RRT .....Providence Hospital
Dave Dunlap, RRT .....St. Elizabeth Medical Center
Peter Enyeart, M.D. .....Medical Director
Heidi Fleming, RRT .....Amerimed
Brenda Lancaster .....Children's Hospital Medical Center
Steve Litke, RRT .....St. Elizabeth Medical Center
Nancy Maschinot, RRT .....Shriners Burns Institute
Mike Moore, RRT .....Advance Home Health Services
Kimberly Patton, RRT .....Christ Hospital
Tim Wilder, RRT .....Bethesda North Hospital

Scientific Laboratory Technology

Phillip Bates .....Marion Merrell Dow Pharmaceuticals
Dr. Alan Cardin .....Marion Merrell Dow Pharmaceuticals
Karen Darling .....Cincinnati Gas & Electric Company
Robert Deutsch .....Ridgeview Analytical
Barbara Dunn .....Cincinnati State Health Tech. Div.
Ray Grant .....The Procter & Gamble Company
Dr. Jim Greenberg .....Children's Hospital Research Center
Jim McCarty .....The Procter & Gamble Company
Craig Meverden .....Quantum Chemical Corp.
Judy Reid .....Marion Merrell Dow Pharmaceuticals
Scott Reid .....The Procter & Gamble Company
Ken Rogers .....James River Corp.
Carolyn Rost .....Mother of Mercy High School
Jim Thompson .....The Procter & Gamble Company
Ralphael Warren .....The Procter & Gamble Company

Surgical Technology

Patty Bechtel .....Student
Larry Bronnert, CST .....Providence Hospital
Marvin Brower, SA .....Fort Hamilton Hughes Hospital
David Cover, M.H. Ed. .....Cincinnati State
Judy Cunningham, RN .....Clermont Mercy Hospital
Wanda Dantzler, RN .....Cincinnati State
Ellie DeLorenzo, RN .....Christ Hospital
Marsha Ellington, M.Ed. .....Right Associates
Jenny Gable .....Student
Melodie Gillett, RN .....Deaconess Hospital
Joan Hughes .....Student
Tim Kincaid, CST .....Christ Hospital
Dick Osborne, CST .....Clermont Mercy Hospital
Judy Spraley, RN .....Cincinnati State
Ken Wilkens, CST .....Providence Hospital

Technical Writing & Editing Technology

Sandy Fields .....Zonic Corp.
Anne Hamilton .....NIOSH
D.J. Kline .....Independent Consultant
Karen Mueller .....Independent Consultant
Ray Owens .....SDRC
Terri Parker-Halpin .....CTR
Wayne Wilkinson .....DCA

Small Business Advisory Committee

Paul Davis .....Cincinnati State
Gary Johns .....U.C. Dept. of Facility Management
Joe Kramer .....Service Corps. of Retired Executives
Gene O'Connell .....Small Business Administration
John Vorse .....Service Corps. of Retired Executives

Educational Relations Advisory Committee

Leisa Anslinger .....McNicholas High School
Carol Cooke .....Colerain Senior High School
Bill Feldman .....Newport Hill High School
Karen Irwin .....D. Russel Lee Vocational School
Kathy Kaplin .....Aiken High School
Juanita Lovelace .....Princeton High School
Nancy Luddeke .....Amelia High School
Mark Merchant .....Career Awarness Exploring
Dan Shay .....Fairfield High School
Don Shields .....Moeller High School

1994 - 1995 Calendar

Early Fall Term 1994
Monday, September 5 - College closed
Tuesday, September 6 - Classes begin
Monday, October 10 - College closed
Tuesday, November 8 - Classes end
Wednesday, November 9 - No classes, offices open
Thursday, November 10 - No classes, offices open
Friday, November 11 - College closed

Late Fall Term 1994
Monday, November 14 - Classes begin
Thursday, November 24 - College closed
Friday, November 25 - College closed
Saturday, November 26 - College closed
Saturday, December 24 -
Monday, January 2 - College closed
Monday, January 16 - College closed
Thursday, January 26 - Classes end
Friday, January 27 -
Friday, February 3 - No classes, offices open

Winter Term 1995
Monday, February 6 - Classes begin
Monday, February 20 - College closed
Monday, April 10 - Classes end
Tuesday, April 11 -
Friday, April 14 - No classes, offices open

Spring Term 1995
Monday, April 17 - Classes begin
Monday, May 29 - College closed
Monday, June 19 - Classes end
Tuesday, June 20 -
Friday, June 23 - No classes, offices open

Summer Term 1995
Monday, June 26 - Classes begin
Tuesday, July 4 - College closed
Monday, August 28 - Classes end

Cincinnati State
Technical and Community College

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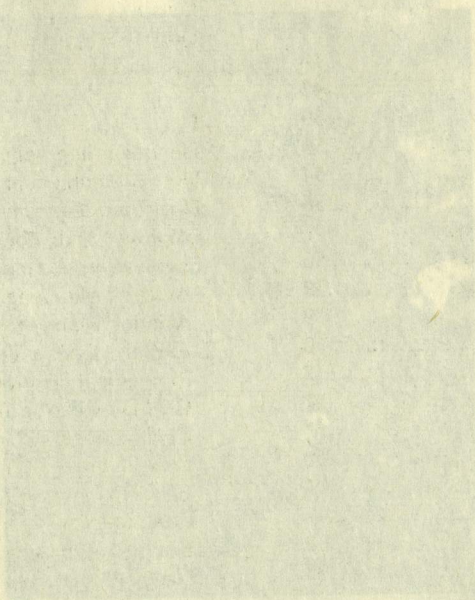

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Customized Training for Business and Industry

Cincinnati State Technical and Community College can provide custom-designed programs, short and long-term training, credit and non-credit courses to business, industry, and professional organizations in a variety of areas including the following:

Communications
- Assertiveness Training
- Communications that Get Results
- Decision Making
- Goal Setting
- Group Dynamics
- Guest/Customer Relations
- Interpersonal Skills
- Listening Skills
- Motivating Your Employee
- Negotiating Skills
- Problem Solving
- Public Speaking & Technical Presentations

Continuous Improvement
- Total Quality Management
- Statistical Process Control (SPC)
- Reliability
- Taguchi/Design of Experiments (DOE)
- Deming's Philosophy of Quality
- ISO - 9000
- Basic Measurement
- Job Analysis
- Cultural Diversity
- Strategic Planning

Electrical/Electronics
- Basic Industrial Electricity with Troubleshooting
- Electrical Maintenance
- Electrical Motors and Controls
- Electrical Power Distribution
- Electronic Troubleshooting
- Energy Management
- Process Control
- Programmable Logic Controller

Finance
- Basic Accounting Principles
- Fundamentals of Budgeting
- Finance and Accounting for Non-financial Managers
- Fundamentals of Financial Management

Health Professions
- Anatomy & Physiology
- Basic Patient Care Skills
- Cardio-Pulmonary Resuscitation
- Central Supply Technician
- Certification Review
- EKG Training
- 1st Assistant in the Operating Room
- Food Service Management
- Food Sanitation
- Health Care Management Techniques
- ICD-9-CM & CPT-4 Coding Basics & Updates
- Communication Techniques for Dietary Personnel
- Medical Terminology
- Operating Room Fundamentals
- Phlebotomy
- Unit Clerk Training

Maintenance
- Electrical Troubleshooting
- Mechanical Drives & Linkages
- Safe Use of Hand/Portable Power Tools
- Welding

Management
- Building Leadership Skills
- Career Assessment
- Coaching and Counseling Skills
- Conducting Effective Meetings
- Creative Problem Solving and Decision Making
- Executive Writing
- Increasing Employee Effectiveness
- Interviewing and Hiring the Best Employees
- Leading Productive Meetings
- Leadership Styles
- Management Skills and Techniques for the First Line-Supervisor
- Managing Change, Conflict and People

Managing through Influence
- Performance Appraisals
- Preparing a Business Plan
- Presenting a Positive Executive Image
- Principles of Learning
- Project Management
- Stress Management
- Supervisor Training Groups
- Team Building
- Time Management
- Training Needs Analysis
- Training the Trainer
- Transitional Management

Manufacturing
- Applied Statistics and Quality Design
- Blueprint Reading
- Computer Assisted Manufacturing (CAM)
- Costimator
- Design of Experiments/Taguchi Method
- Manufacturing Processes
- Materials Handling
- Measurement and Metrology
- NC/CNC Programming
- Product Design and Development
- Production Costs and Controls
- Smart CAM
- Statistical Process Control (SPC)
- Tool-Die-Jig and Fixtures

Marketing/Sales
- Customer-Oriented Selling
- Fundamentals of Marketing
- Fundamentals of Sales Management for the Newly-Appointed Manager
- Principles of Professional Selling
- Sales Presentations and Demonstrations

Mechanical Engineering Technology
- Auto CAD
- Computervision Personal Designer
- Geometric Tolerancing
- Hydraulics and Pneumatic
- Intergraph Microstation
- Mechanical Drives & Linkages

Printing Industry Training Programs
- Bindery Method Procedures
- Cold Type Process
- Color Separation
- Color Stripping
- Computer Graphics
- Computer Graphics Typesetting
- Estimating
- Flexo Photography
- Graphic Arts Processes
- Layout and Design
- Offset Press Operation
- Photolithography I & II
- Proofreading and Copy Preparation
- Relief Presswork I & II
- Screen Printing
- Survey of Printing Inks

Personnel Administration
- Compensation and Benefits
- Basic Wage and Salary Administration
- Advanced Wage and Salary Administration
- Employee Discipline and Grievance Handling
- How to Practice Affirmative Action
- Issues and Personnel Law
- Negotiating and Administering the Labor Contract
- Simulated Collective Bargaining
- Termination at Will

Programming
- Basic
- "C"
- COBOL
- FORTH
- PASCAL

Purchasing
- Buyer Basics
- Advanced Buyer Basics
- Purchasing and Materials Management

Secretarial
- Communication Skills for Secretaries
- Office Procedures
- Secretary and Administrative Assistant as Manager
- Telephone Techniques

Skills Assessment and/or Development
- Reading Comprehension
- Grammar
- Literacy in the Workplace
- Writing
- Mathematics

Software
- Computer Literacy
- Displaywrite IV
- Lotus 1-2-3
- MultiMate
- Word Perfect
- dBase IV
- Wordstar
- Software Documentation
- UNIX (SCO)
- Quark
- Additional software upon request

Writing and Editing
- Business Writing
- Desktop Publishing
- Executive Writing
- Instructional Writing
- Newsletter Design and Production
- Proposal Writing
- Technical Editing

Other
- Automotive Service Technical Training
- Culinary Arts
- Hotel-Restaurant Management
- Insurance Pre-Licensing Courses
- Landscape Maintenance
- Real Estate Principles and Practices
- Real Estate Law

Please contact the Director of Continuing Education and Extended Services for further information.

CINCINNATI STATE TECHNICAL and COMMUNITY COLLEGE
3520 Central Parkway ■ Cincinnati, OH 45223
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