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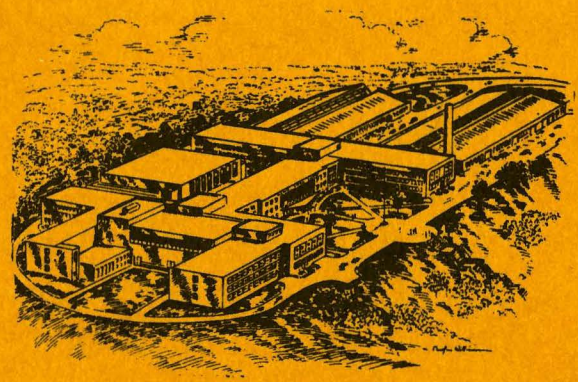

CINCINNATI TECHNICAL COLLEGE

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Cincinnati Technical College does not discriminate on the basis of race, color, natural origin or sex in the admission of students or in any activity conducted by Cincinnati Technical College.

Cincinnati Technical College is an equal opportunity institution.

CINCINNATI TECHNICAL COLLEGE
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Cincinnati, Ohio 45223
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CLIFFORD R. HOUSE
President

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CONTENTS

Associate Degree Programs

As to their studies, it would be well if they could be taught everything that is useful and everything that is ornamental. But art is long and their time is short. It is therefore proposed that they learn those things that are likely to be most useful and most ornamental, regard being had to the several professions for which they are intended."

— Benjamin Franklin

MISSION OF THE CINCINNATI TECHNICAL COLLEGE

The Cincinnati Technical College has a vital and distinctive educational mission to perform in the interests of the educational and economic welfare of metropolitan Cincinnati. An understanding of the precise nature of this mission requires an appreciation of these three facts:

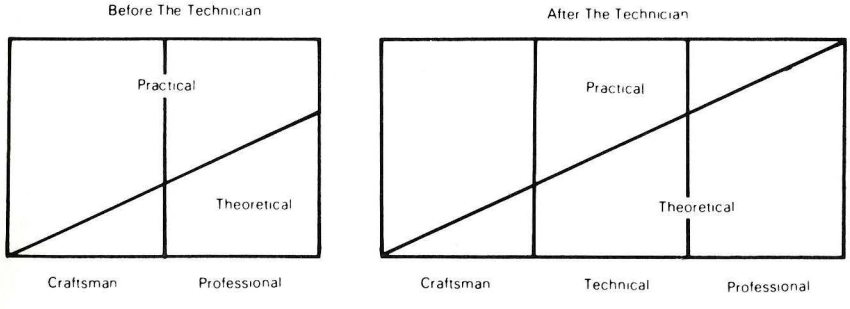
(1) Technical education is a distinctive, relatively new and urgently needed type of higher education.

(2) A technical college is a distinctive kind of college with the special type of expertise required to meet the need for technical education.

(3) Cincinnati Technical College has a distinctive "co-opportunity" plan which enables it to serve students and employers with needs which would not otherwise be met.

Each of these facts deserves elaboration.

CHANGING ROLE OF THE PROFESSIONAL



Why the need for the technical education has arisen.

A scientific revolution, underway the last several decades, has quickened the pace of change in all of the professions and transformed the occupational role and the educational requirements of the professionally trained employee. In the past, the professional — the product of four or more years of college — had the time, the

training and the duty to perform many practical functions in his work. An engineer, for example, might spend hours drawing or routinely testing a new product. New scientific discoveries and technological advances have so enlarged the body of theoretical knowledge underlying many of the professions that now there is too little precious time in the professional curricula to develop practical skills. The mastery of theory has become the first priority of the professional. The use of this theoretical knowledge has become the dominant function of the professional in his day-to-day work.

As a consequence, the professional needs the assistance of a new member of the employment team, the technician or semi-professional. And, to prepare him to work with the scientist, or the engineer or the medical specialist, the technician requires a new type of college education.

He must master, to some extent, the theoretical principles relating to the technology in which he specializes and develop the practical abilities the specialty requires. Such educational preparation is above the high school level, but does not require the four or more years of college needed by the professional. An intensive program, usually of two years duration and designed to prepare the student for immediate and effective employment upon graduation, suffices. Such a program is technical education.

The need for technicians, already great, is growing rapidly. The increase in technician jobs over the next decade will exceed that of most other employment categories according to federal projections.

How technical colleges differ from other types of institutions of higher education.

Technicians are action people. They must be trained to apply theory in support of the professionals with whom they work. Their education therefore differs markedly from that of the professionals.

Technicians need some theoretical preparation, but not in the breadth and depth required of the professional. As a consequence, the technical education curriculum must be practical in nature. The first two years of college prepare the professional-to-be for more advanced college work. In his two-year education program, the technician must learn all he needs to know in order to be employable. The curricula needed by the two are in sharp contrast: the professional is academic and theoretical; the technical is practical and action-oriented. In his first two college years the professional-level student learns how to learn more; the technical education student learns how to do well those things he must do on the job.

Technical education, to be effective, requires a special educational environment: a faculty dedicated to practical education; laboratory equipment adequate to make such education possible; a governing body and administration dedicated to the philosophy of this education; a close working relationship with business and industry. The technical college provides that special environment.

Ohio has a network of seventeen rapidly growing technical colleges, all created in the last half dozen years or so as a result of federal, state and local initiatives. The National Defense Education Acts of 1958 and 1963 and the Vocational Education Acts of 1963 and 1968 helped to provide a stimulus to these and hundreds of other technical schools throughout the nation. Passage of these acts and state statutes creating technical colleges have underscored the high priority of these institutions. The orderly growth of the nation's economy depends in large measure on the quantity and quality of the supply of technicians.

The special needs served by Cincinnati Technical College "co-opportunity" plan.

The Board of Trustees, the administrative staff, and the faculty of the Cincinnati Technical College share a profound conviction that the school's distinctive plan of cooperative education offers the soundest possible approach to technical education. The objective of any associate degree program in technical education is to prepare the student for immediate employment and potential advancement as a technician. The student must learn both the "why" and the "how." Rigorous, college-level academic instruction is necessary; it is not, however, sufficient. The student's understanding of theory and his ability to apply it are fortified with periodic practice. The classroom can provide valuable laboratory experience but it cannot duplicate an employment environment. Because Cincinnati Technical College students spend every other term in supervised cooperative employment, they are exposed to such an environment at regular intervals. The practical training received in such employment enriches the academic experience.

The distinctive cooperative approach enables the College to fulfill a distinctive mission, to serve two types of high school graduates in the Cincinnati area with special needs that would not otherwise be met. The academically able but economically disadvantaged student needs the full co-op plan to finance his education. The affluent but practical-minded student likes the plan because it makes employment experience an integral part of the learning process from the very outset of the program. (Less than one of every ten graduates pursues a baccalaureate degree on a full time basis.)

In the Cincinnati area there are thousands of high school graduates each year who fit into one of these two categories and who are potential College students. The College seeks to expand its cooperative program to meet their distinctive needs.

Certainly if the technician manpower needs of the area — already great and rapidly growing — are to be served, more high school graduates must be attracted to technical education. Yet limited family finances are a major reason why so many do not further their education after high school. In 1974 the national median household income was only $12,836, according to the Commerce Department. Clearly, in the Cincinnati area, thousands who graduate from high school each year have the ability to complete successfully a two-year college-level technical education but do not because they cannot afford either the income forgone while in school two years, or the direct expenses incurred (tuition, books, etc.), or both.

Yet few of these graduates are likely to be given effective on-the-job technician training, for relatively few of the 1700 plants in the area can afford training programs.

The cooperative education program of the Cincinnati Technical College meets both these needs. Less than half of its students are certain they could afford to attend the College were it not for the co-op earnings. The College therefore is now serving hundreds of students who cannot afford to attend other institutions in the area. Thousands of area high school graduates in this category need to be served each year. The potential enrollment of the College is therefore quite large. The cooperative education plan also enables many small firms to have technician training programs of a quality they could not otherwise have. The Cincinnati Technical College thus has a vital and distinctive role to play in the area, contributing to both the educational and the economic welfare of the community.

The College is offering 35 associate degree programs and/or options in 1975–76. Each program was developed to meet a specific need for technicians in local industry demonstrated by a formal or informal feasibility study and supported by the counsel of

an advisory committee representing the potential employers of such technicians. No co-op program can be started if it does not address itself to real employment needs of industry and to the real educational interests and aptitudes of youth. Each program requires training positions and students qualified to prepare to fill them.

The College will continue to develop programs through the feasibility study-advisory committee approach. In this manner it must necessarily be attuned to the educational needs of the students it serves and the employment needs of the companies with whom it cooperates.

HISTORY OF CINCINNATI TECHNICAL COLLEGE

The Cincinnati Board of Education established the Cincinnati Cooperative School of Technology, a two-year technical institute for high school graduates, in 1966. A great and growing shortage of technicians existed in the Cincinnati area. The function of the school was to train technicians in a program combining college-level classroom instruction and cooperative work experience. The school grew rapidly. By 1968–69, enrollment had risen to 500 and the number of cooperative employers to 127.

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.

The Board of Regents approved the degree programs and the operating plan on September 19, 1969 and issued the Cincinnati Technical Institute charter on that date.

December 31, 1969 was the final day of operation under the governance of the Cincinnati Board of Education. On the first day of the new decade, the Institute became an autonomous institution.

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 Institute is located, for $8.4 million.

The Trustees acquired title to the property in November, 1970, when they made the first payment of $3.6 million. Additional payments were made annually as the Institute moved into additional rooms and the high school operation was being phased out.

In 1972 the name of the Institute was changed to Cincinnati Technical College, in accordance with a state statute passed by the Ohio General Assembly in the fall of 1971.

On June 27, 1974, the phase out of the high school was completed and the College made the final payment of $2.7 million to the Cincinnati Public Schools.

The College has experienced rapid growth in its ten years of existence.

GROWTH OF CINCINNATI TECHNICAL COLLEGE

YEAR	PROGRAMS AND OPTIONS	DAY ENROLLMENT (CCST: 1966–69)	CO-OP EMPLOYERS	GRADUATES
66–7	4	118	38	—
67–8	4	276	77	71
8–9	10	496 (CTI/-CTC)	127	107
69–0	11	651	191	190
70–1	18	897	232	228
71–2	21	1149	350	334
72–3	23	1290	358	320
73–4	23	1468	400	431
74–5	28	1576	400	445
75–6	35	1972	*400	*500
80–1	*58	*3500	*700	*970

*Projected

CINCINNATI TECHNICAL COLLEGE UNIQUE CO-OP PLAN
How It Works — From the Student's Viewpoint

The Applicant Takes the Admission Test. In the admissions process, the applicant takes an entrance test (the Differential Aptitude Test of the Psychological Corporation). He also usually specifies the program in which he wishes to enroll.

The Coordinator Interviews the Applicant. After the test has been scored and after the applicant has sent in his high school transcript, he is interviewed by the coordinator of the program he wishes to enter. The coordinator assesses the applicant's chances of success in the classroom and on the co-op job on the basis of the applicant's aptitude and interests as measured by his test; his high school academic record; and the interview. The coordinator either (a) accepts the applicant into the program; (b) accepts him on probation, if the applicant's chances for success are in question, and, if the applicant wishes an Engineering Technology program, recommends the June Term "Pre-Engineering Technology Program" as a condition of probation; (c) advises the applicant, if he appears to have little chance of success, to enroll in another of the programs at the College more congenial to his interests and aptitudes, and refers the applicant to the coordinator of that program or the Admissions Office.

The Student is Assigned to Either the "A" or the "B" Section. If he is assigned to the "A" section of students, he will spend the first quarter in school and his second on co-op. If he is assigned to the "B" section, he will co-op the first quarter and spend the next in college. Whether on the "A" or "B" schedule, the student will repeat his two-quarter cycle five times until he completes the program. Ornamental Horticulture and Aviation Maintenance Technology students, however, follow different schedules, as explained elsewhere in the catalog.

The coordinator will attempt to help the student secure a co-op job, often times in the summer before the academic year begins. The coordinator will arrange for the student to be interviewed by an employer; the employer will make the decision to hire or not to hire.

The Student Grows — In the Classroom and on the Co-op Job — As He Proceeds Through His Ten-Quarter, Two-Year Associate Degree Program. Each time that a student, after completing a co-op term, returns to College for another academic quarter, he has experienced many kinds of growth because of his employment experience. He is likely to be noticeably more mature, more confident, and more perceptive about the relationship of his academic work to his career aspirations. His earnings have helped him to become more self-sufficient and self-reliant. And when the student returns to his co-op job upon completion of the academic quarter, he is better prepared for the employment challenge because of the additional knowledge, skill, and intellectual competence he has acquired.

The result of the alternation of classroom and co-op experience is quite positive. Most students tend to perform more effectively in the classroom as they advance through their sequence of five academic quarters. Most co-ops earn incentive wage or salary increases, and many earn promotions, as they advance through their sequence of five co-op quarters.

The Student Graduates with Considerable Career Assets. Each Cincinnati Technical College graduate begins his career as a technician with these credentials: an associate degree in his technical specialty, with as much as 50% more classroom contact hours than are provided in some two-year degree programs at other colleges; up to a full year of work experience; a level of intellectual and emotional maturity which only the co-op program could provide. Graduates earn $5,500 to $10,000 on their first full-time jobs (three-fourths of them stay on with their co-op employer). Some graduates (6% to 10%) pursue a baccalaureate degree full-time. Others work toward the four-year degree by taking university courses in the evening.

The average earnings for five co-op terms exceed $4,500 — more than enough to pay for tuition, fees and books. Many co-ops are able to purchase their own automobiles with their co-op earnings.

Co-ops pay taxes of various kinds (state sales and income and federal income) on their earnings (a total of over $2.5 million in earnings estimated for 1974–75) and by so doing, while they are receiving their education, help repay the tax money invested in their education.

Benefits of Cincinnati Technical College's co-op plan

The student can benefit —

(1) Educationally. From the outset of his technical education the student can learn on the job and in school. The two types of learning experiences are complementary. One can learn certain aspects about employment in general and a certain position in particular only through experience. Conversely, one can never learn, amid the rigors of his daily work situation, innumerable lessons that can be learned only in the reflective atmosphere of the classroom. The co-op program enables a student to gain a more liberal education than he could gain in the classroom alone.

(2) Financially — through income received from co-op work. Many CTC students could not afford to attend other schools and would have to enter the job market unskilled, immediately after graduation from high school, if CTC did not have the co-op feature both years. The co-op plan enables students to earn while they learn.

(3) Through guidance. Coordinator, instructors, counselors, employer — all can contribute to the guidance of the student. Many things the student learns about himself — his personal strengths and weaknesses as they relate to employ-

ment — he can learn in his very first quarter on the job. A student may find that the field he has chosen really does not suit him or fit him; he can learn this relatively soon after graduation from high school. Or his original belief that he is qualified for and likely to enjoy a certain type of technical career can realistically be strengthened by what he learns as he tests himself on the job during each co-op term.

(4) Socially and emotionally. The two years at CTC can provide a sensibly paced transition from adolescence and high school to maturity and the world of work. The experiences gained in the classroom and on the co-op job can help ripen the social and emotional development of the student. Faculty members, employers, and students themselves observe the new levels of maturity most students reach after each successive on-the-job term.

(5) Through relevant general education. Half of the CTC curriculum consists of non-technical subjects — communication skills, social studies, mathematics, science. The courses have relevance to the student's co-op job needs and provide broad preparation for his career and his role as a citizen.

The employer can benefit:

(1) From the services provided by the school in providing him with co-op job applicants (the school does not select the student for a co-op job, this choice is made by the employer from a group of candidates), employee guidance, and, of course, the education provided the co-op student.

(2) From the chance to train a student for responsible work over a two-year period. He is not obligated to hire the student after graduation. He can promote the co-op, give him more responsibilities, pay him more; or he can demote him, reduce his pay, or even discharge him. The co-op must measure up.

The student's family can benefit:

(1) Financially, because many students earn more than enough to pay for their education; in fact, some students contribute significant amounts to their parents from their co-op earnings. Also the parent does not bear the expense of a complete college program only to have the student enter an occupation other than that for which he prepared himself.

(2) From the assistance provided by the program in helping the student to help himself and to attain a maturity level necessary for self-direction as an adult.

The community benefits:

(1) CTC can tap the intellectual talents of many young men and women which could not otherwise be developed to their potential.

(2) The increased earning potential of graduates results in greater contributions to society in terms of work accomplished, taxes paid, etc.

(3) The employer shares in the training process.

(4) The school meets previously unmet needs by providing technical education affordable by all; with a practical approach that many youngsters require and prefer; with a close working relationship between employer and school; with a systematic approach to meeting industry's specific and current technical employment needs.

Elements of Cincinnati Technical College's Unique co-op plan
The Academic Quarter

Number of quarters: 5
Length of quarter: 10 weeks
Number of credit hours earned in each quarter of classroom instruction: 18

Number of credit hours earned in each quarter of cooperative employment: 2 or 3
Number of weekly contact hours in each quarter of classroom instruction: 25–30
Number of hours employed in each quarter of cooperative employment: variable, usually 400.

The Two-Year Associate Degree Program*

Number of quarters: 10
Number of academic quarters: 5
Number of co-op quarters: 5
Number of credit hours: over 100
Number of credit hours earned for five academic quarters: usually 90
Number of credit hours earned for five co-op quarters: 13
Number of classroom contact hours in five academic quarters: usually 1500
Number of employment hours in five co-op terms: usually about 2000
*Except for Aviation Technology (7 academic, 3 co-op quarters) and Ornamental Horticulture (6 academic, 4 co-op quarters).

Options

Students may elect to take the complete associate degree program at their own rate of speed.
Students may complete the program by attending the college for ten consecutive quarters on a half-day basis.

STARTING SALARIES FOR GRADUATES

Average starting salaries for graduates in each technology are available from the coordinator or can be found posted in the Admissions Office.

CONTINUING EDUCATION

One of the most important functions of Cincinnati Technical College is that of service to local business, industry, and government. The Division of Continuing Education offers a wide variety of credit and non-credit courses of an occupational nature. Admission to the program is open to all residents of the greater Cincinnati area.

When sufficient interest is shown, every effort will be made to offer instruction which will permit an employee to improve, upgrade, or re-train himself through classroom work. This instruction may be pertinent to the employee's present job requirements or to anticipated advancements. The spectrum of courses offered ranges from those of fundamental content to those requiring considerable preparation and background.

The Division also develops and administers specialized programs tailored to the needs of public and private agencies, organizations and groups. The college in cooperation with business, industry, government, labor, the professions, and other community groups stands ready to develop and implement such courses and programs

ranging from single-session meetings to those requiring numerous hours for completion.

A third area developed by the Division is its "how-to-college" of recreation and leisure-time activities, making it possible for students to pursue non-credit, self-interest courses at nominal cost.

For persons interested in learning more about possible program offerings in their specific areas — for adults who would love to pick up their education where they left off — contact the Division of Continuing Education for details.

ACCREDITATIONS & MEMBERSHIPS

Ohio Board of Regents
Division of Vocational Education, State Department of Education
Candidate Status with North Central Association of Colleges and Secondary Schools
Associate Member, Ohio College Association
FAA — Approved Aircraft Maintenance Technician School
Member of American Society of Allied Health Professions
Member of Ohio Organization of Technical Colleges
Member of Cooperative Education Association
Member of American Technical Education Association
Member of American Association of Junior Colleges

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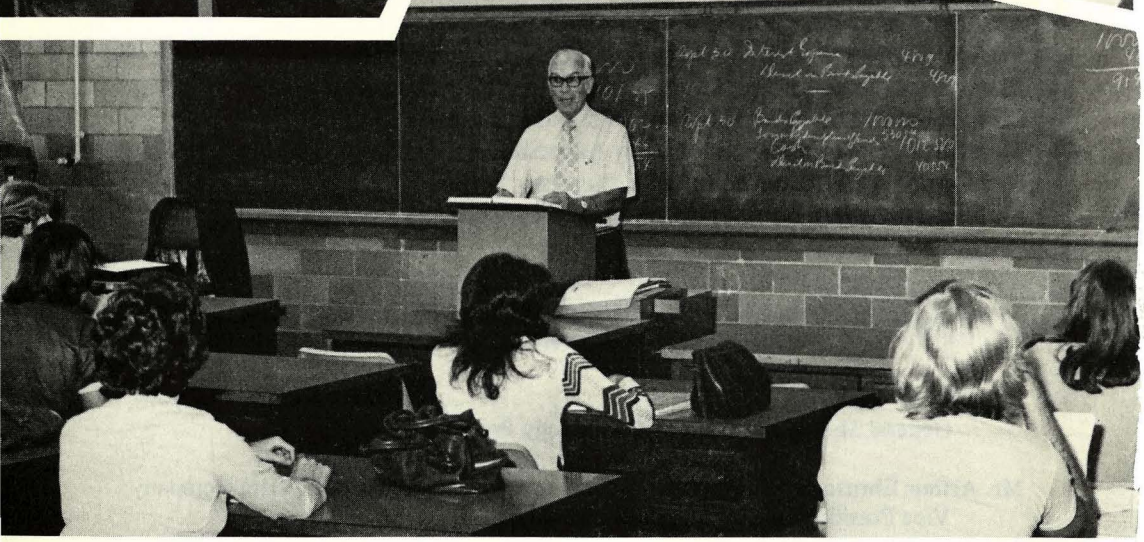


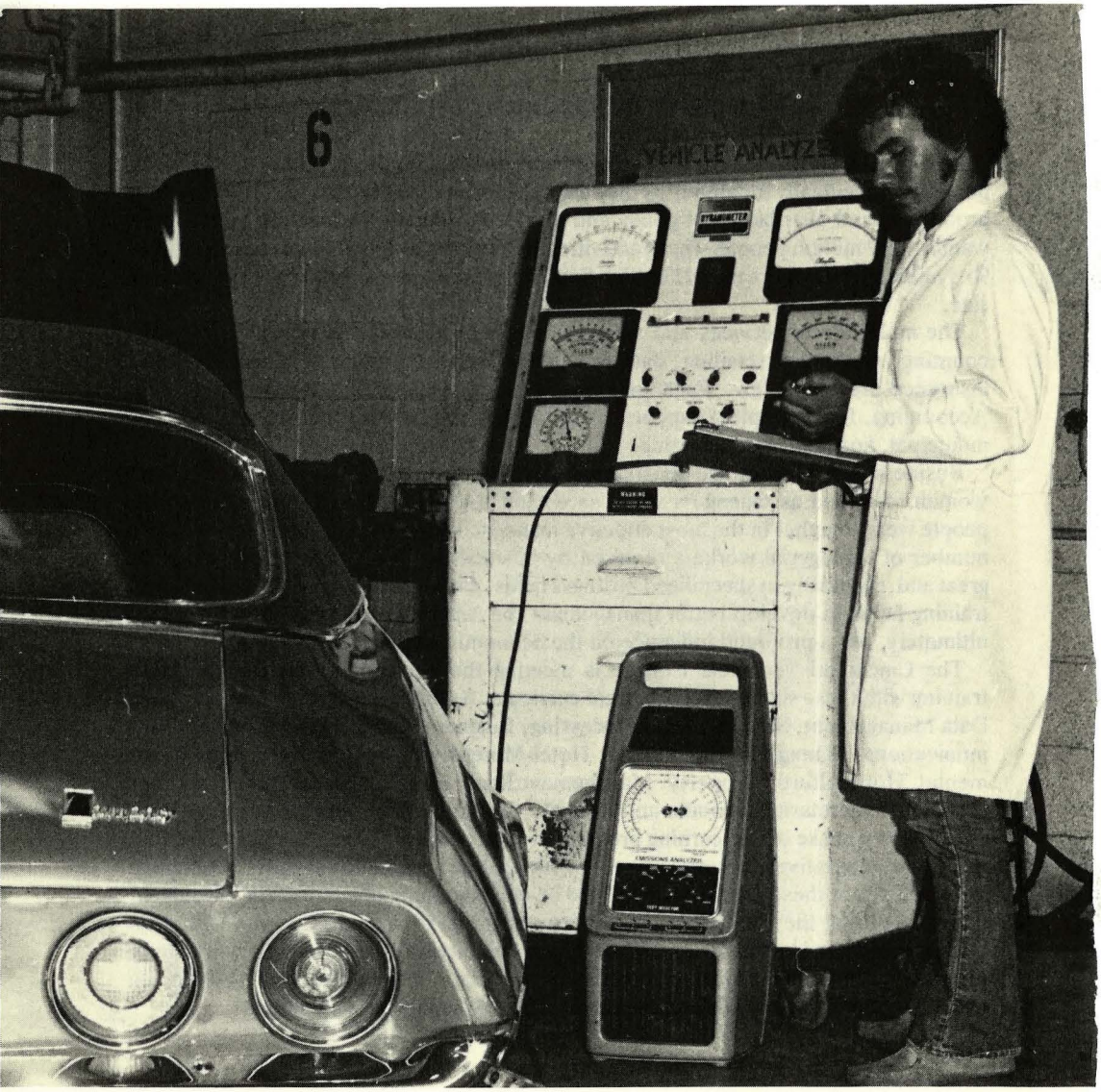
DEPARTMENT OF BUSINESS TECHNOLOGY

Business in the United States is a major economic activity. It relates to the work people do specifically for money as they engage in business activities which involve the production and distribution of goods and services to satisfy the insatiable needs and wants of 212 million people. These activities are performed by the workers in a total of 90.5 million jobs in more than 11 million firms or companies, each varying in nature and size.

The multitude of services and activities business generates is never-ending. Accounting, marketing, retailing, data processing, banking, office administration and insurance are but a few. Each of these branches generates a host of activities. Accounting, for example, branches off into such specialties as cost, tax, payroll, municipal, financial and budgeting.

Business and industry are constantly searching for capable, responsible men and women identified as managers who can establish a working environment in which people work together in the most effective manner to achieve management goals. The number of managerial workers required by business to direct the work of others is great and, especially in specialized business fields, 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.

The Cincinnati Technical College is meeting the need for specialized business training with these sixteen technological curricula: Automotive Service Management, Data Management, Business Data Processing, Business Management, Graphic Communications, Managerial Accounting, Hotel-Motel-Restaurant Management, Ornamental Horticulture, Property Management/Real Estate, Sales Marketing, four choices of Secretarial curricula and Security Administration. Organized job experience is a key phase of the learning program in each of these sixteen business curricula through co-operative work assignments with leading area business firms. Collegiate level courses in these areas of specialized business training combine with job-related activities during the alternating ten-week work terms to provide students with both business skills and business experience. Upon completion of the two-year work/study program in business, students receive an Associate Degree and begin advancing rapidly to more responsible and better paying mid-management positions.



AUTOMOTIVE SERVICE MANAGEMENT TECHNOLOGY

The automobile industry employs more people and generates more income than any other industry in the nation. Increasing numbers of automobiles, generally increased complexity of design, and additional use of complex accessories all increase the number of people employed in automotive service — and increase employment opportunities for those technicians who work at the mid-management level.

Cincinnati Technical College students are instructed in theory, procedures, and management techniques in school. As co-ops on the job in automotive service departments, parts departments, etc., they get practical experience under the direction of experienced service and parts managers.

Graduates of the Automotive Service Management program will work as service managers, assistant service managers, service writers, parts department supervisors, and in other appropriate positions in the automobile industry.

■ Fifth School Term			
1005 Effective Speaking	3	2	3
1501 Human Relations	5	-	4
1823 Business Law	5	-	3
2505 Automotive Technology V	7	8	8
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

AUTOMOTIVE SERVICE MANAGEMENT TECHNOLOGY ADVISORY COMMITTEE

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Auto Dealer

Thomas Lipps ..... Tri-County Volkswagen
1973 Graduate Cincinnati Technical College

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Buick Zone Service and Parts Manager

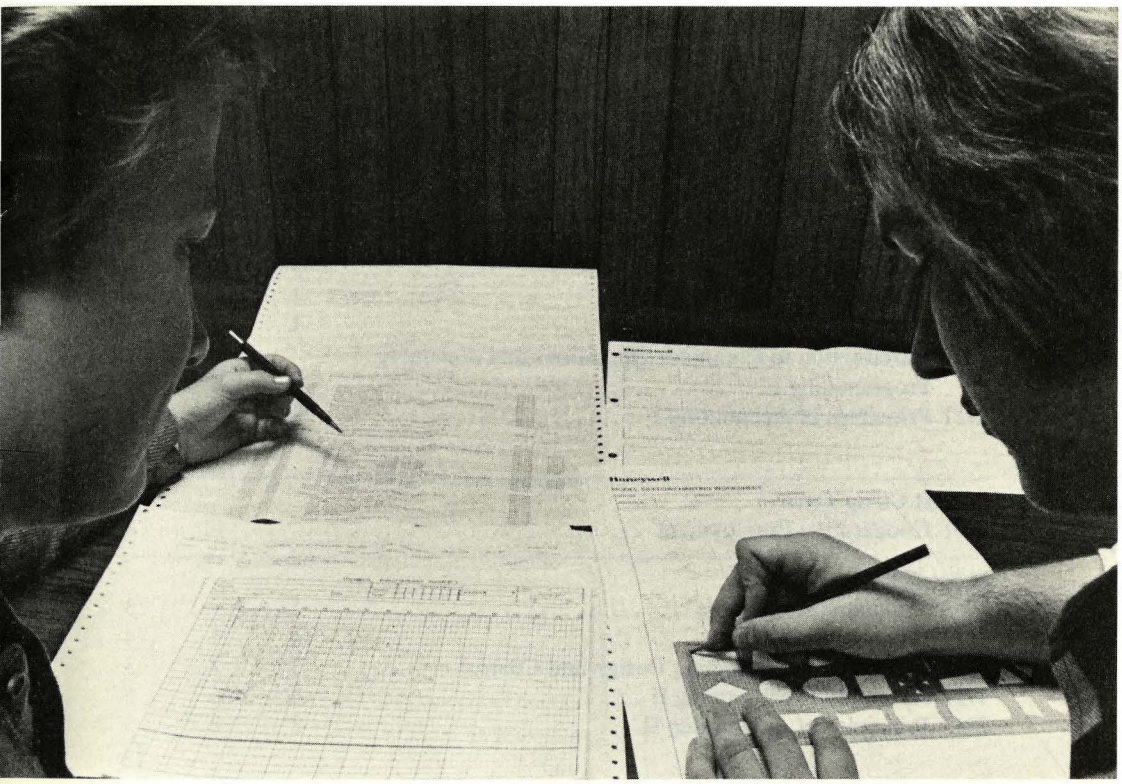
Lenny Pugh ..... Superior Chevrolet
Parts Manager

Irwin Sobul ..... Leaseway Corporation (Cincinnati Division)
Vice President

Carl Tedesco ..... Cincinnati Automobile Dealers Association

AUTOMOTIVE SERVICE MANAGEMENT CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1171 Technical Mathematics I	5	-	4
2501 Automobile Technology I	5	10	8
2506 Machine and Hand Tool Laboratory	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills III	5	-	3
1101 Business Mathematics	5	-	4
2221 Physics I	3	2	3
2502 Automotive Technology II	5	10	8
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1321 Blueprint Reading and Sketching	2	3	2
1505 Psychology	3	-	3
1512 Economics I	3	-	3
2222 Physics II	3	2	3
2503 Automotive Technology III	4	6	4
2510 Automotive Management I	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1004 Technical Writing	3	2	3
1513 Economics II	3	-	3
1535 Labor-Management Relations	3	-	3
2504 Automotive Technology IV	4	6	4
2508 Techniques of Welding	1	4	2
2511 Automotive Management II	3	2	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3



BUSINESS DATA PROCESSING TECHNOLOGY

The objective of the Business Data Processing program at Cincinnati Technical College is to provide the student with the technical training necessary to function effectively as a computer programmer/analyst and to make a significant contribution to his co-op employer during training and to the data processing community after graduation.

Data processing is an essential part of every business. Its function is to collect, control, and process the data necessary to provide management with meaningful information which is useful input to the management decision-making process. This task has become more significant over the past few years due to the volume of data now available and essential to business. Thus, computers are now used extensively in data processing to perform tasks previously accomplished by clerks, statisticians and even management personnel.

The introduction and eventual sophistication of data processing equipment has created a continuous need for professional data processing technicians, especially computer programmers.

A computer programmer is the vital link between the computer and the systems analyst. He instructs the computer to perform various tasks based on the requirements set down by the systems analyst. His assignments range from simple (listing a set of punched cards on a printing devise), to complex (developing a complete set of programs to prepare employee time records, payroll checks, payroll check reconciliation reports, quarterly FICA and Withholding Tax Report, W-2 forms, and labor-cost distribution reports).

The Cincinnati Technical College student in Business Data Processing spends five ten-weeks terms in school and five ten-weeks terms in cooperative employment.

BUSINESS DATA PROCESSING TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1131 College Algebra	5	-	4
1511 Principles of Economics	5	-	4
1701 Introduction to Computer Operations and Assembly Programming I	4	6	4
2911 Principles of Accounting I	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1002 Communication Skills	5	-	3
1132 Business Statistics	4	1	4
1721 Advanced Programming Design and Control	3	2	3
1722 Assembly Programming II	4	6	5
2912 Principles of Accounting II	3	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1007 Expository Writing	3	2	3
*1134 Programming Mathematics II	4	2	4
1741 Operating Systems	3	2	3
1742 Cobol Programming I	6	9	8
*2913 Principles of Accounting III	2	3	3
			17/18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1004 Technical Writing	3	2	3
1504 Psychology	5	-	4
1762 Cobol Programming II	4	6	6
1763 Systems Analysis and Design	5	5	5
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

*Either 1134 or 2913 will be scheduled.

■ Fifth School Term			
1005 Effective Speaking	3	2	3
*1133 Programming Mathematics I	4	-	4
*1135 Business Calculus	5	-	4
1781 Programming Systems II	5	5	5
1782 Installation Management	3	2	3
1783 Research Project		5	3
			18

*Either 1133 or 1135 will be scheduled.

■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

BUSINESS DATA PROCESSING TECHNOLOGY ADVISORY COMMITTEE*

James A. Arriens ..... Monsanto Company
Information Systems Superintendent

Andrew Atkinson ..... Cincinnati/Hamilton County
Superintendent of Data Processing Regional Computer Center

Jerry Burton ..... Champion International Paper Co.
Education Specialist

Kenneth Cobb ..... Central Trust Company
Assistant Programming Manager

William S. Davis, Jr. ..... U.S. Shoe Corporation
Manager of Systems and Programming

Richard Fischer ..... Cincinnati Technical College
Student (1975 Graduate)

C. T. Hall ..... Cincinnati Gas and Electric Co.
Manager of Data Processing

Charles J. Jenkins ..... The Midland Company
Data Processing Manager

William McDonald ..... General Electric Company
Manager, Information Support Systems

Robert Nieberding ..... Inter-Ocean Insurance Co.
Vice-President

Lee Ransick (Chairman) ..... Ohio National Life Insurance Co.
Director of Data Processing

Neal Schmidt ..... Tresler Oil Company
Data Processing Manager

*Also serving as advisers for Business Data Management.

BUSINESS DATA MANAGEMENT TECHNOLOGY

Today's business is a complex organization requiring workers with specialized talents and techniques to perform efficiently in a data processing department. With an increasing number of business establishments comes the need for trained personnel to assume managerial responsibilities in computer operations.

In the Business Data Management Technology at Cincinnati Technical College, students learn the principles of both management and data processing. Business Data Management is a particularly rewarding field of study because of the increasing demand for personnel who can administer data processing operations.

The Data Management coordinator uses input-output devices, job control decks, console commands, processing programs, utility programs, operating systems. Data Management personnel in Business Data Processing identify with company policy and work with the top management and non-supervisory employees.

Job opportunities available to graduates of the Business Data Management curriculum include the following:

Data Management Coordinator
Data Base Coordinator
Data Management Supervisor
Supervisor Computer Operations
Digital-Computer Operator
Computer Peripheral Equipment Operator
Peripheral Equipment Operator

BUSINESS DATA MANAGEMENT TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1130 Overview of Mathematics	5	-	3
1711 Introduction to Data Management and Computer Operations	4	6	6
1712 Data-Entry Systems	1	4	3
3024 Secretarial Procedures, Data Management	2	3	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1002 Communication Skills	5	-	3
1131 College Algebra	5	-	4
1731 Peripheral-Equipment Operations	4	6	5
1832 Personnel Management	5	-	3
2911 Principles of Accounting I	3	2	3
			18

■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1007 Expository Writing	3	2	3
1132 Business Statistics	5	-	4
1733 Data Preparation and Control	3	2	2
1741A Operating Systems A	4	6	6
2912 Principles of Accounting II	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1004 Technical Writing	3	2	3
1511 Principles of Economics	5	-	4
1761 Programming Systems I	4	6	4
2913 Principles of Accounting III	2	3	3
2920 Business Principles	5	-	4
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
■ Fifth School Term			
1005 Effective Speaking	3	2	3
1501 Human Relations	5	-	4
1781 Programming Systems II	5	5	5
1783 Research Project	-	5	3
2904 Office Management	5	-	3
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

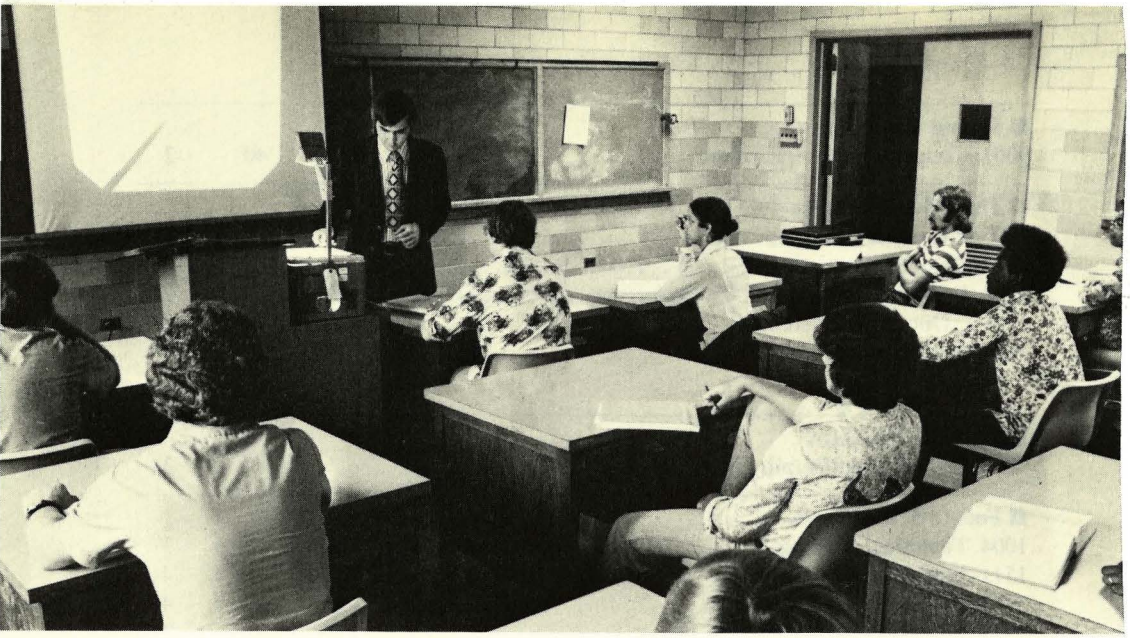
BUSINESS DATA MANAGEMENT TECHNOLOGY ADVISORY COMMITTEE

In addition to the Business Data Processing Advisory Committee members the following will lend support to the Data Management Program through their knowledge of Operations.

Michael Legeay ..... David J. Joseph Company
Data Processing Manager

Wayne McDonoven..... French-Bauer Dairies
Data Processing Manager

Bob C. Russell .....Control Data Corporation
Manager, Machine Services, Systems and Programming



BUSINESS MANAGEMENT TECHNOLOGY

Opportunities in business are almost unlimited. A combination of business training and business experience prepares students to capitalize on the potential career opportunities awaiting them in the world of business. The Cincinnati Technical College Business Management program, offered by a school experienced in technical education, fills the need for personnel with the technical skills and knowledge so valuable to business and industry.

Business Management program students meet with instructors experienced in fields of office organization, personnel procedure, management, finance, sales accounting and related business subjects. A wide variety of learning experiences are provided through the college's program of field trips, guest lecturers possessing special expertise, case studies and modern visual presentation techniques.

The technical business training provided in the College's Business Management program lends itself to employment in a wide variety of business positions. These positions often lead to promotional opportunities in career areas such as credit, finance, personnel, purchasing, public relations, inventories, distribution and many others in the related areas of general business management.

While engaged in their cooperative work experience, Business Management program students participate in employment training by occupying positions in banking, insurance, retailing and a number of other important fields. Many of Cincinnati's leading firms cooperate in providing training positions for students; these positions frequently lead to other, more responsible and challenging assignments as the student matures on the job and proves his value to the cooperating employer. Upon graduation, the Business Management program student will be prepared to assume mid-management responsibilities in a meaningful business career.

There are also many opportunities for one to own and operate his own business enterprise. To be successful in such a venture, one should possess an understanding of accounting principles, business procedures, merchandising and business management skills offered through the Business Management program at Cincinnati Technical College.

BUSINESS MANAGEMENT TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1101 Business Mathematics I	5	-	4
1799 Survey of Data Processing	5	-	4
2911 Principles of Accounting I	3	2	3
2921 Introduction to Business I	5	-	2
3005 Administrative Typing	1	4	2
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1002 Communication Skills	5	-	3
1102 Business Mathematics II	5	-	4
1512 Principles of Economics	3	-	3
1810 Principles of Salesmanship	5	-	3
2912 Principles of Accounting II	3	2	3
2922 Introduction to Business II	5	-	2
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1007 Expository Writing	3	2	3
1504 Psychology	5	-	4
2901 Principles of Marketing I	5	-	2
2905 Money and Banking	5	-	3
2913 Principles of Accounting III	2	3	3
2926 Principles of Management	5	-	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1006 Technical Writing	3	2	3
1520 Sociology	3	2	4
1823 Business Law I	5	-	3
1832 Personnel Management	5	-	3
2902 Principles of Marketing II	5	-	2
2960 Principles of Finance	5	-	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1005 Effective Speaking	3	2	3
1804 Risk and Insurance	5	-	3
1824 Business Law II	5	-	3
2904 Office Management	5	-	3
2906 Credits and Collections	5	-	3
2917 Tax Accounting	3	2	3
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

BUSINESS MANAGEMENT TECHNOLOGY ADVISORY COMMITTEE*

W. B. Carpenter ..... The Kroger Company
Manager, Office Services

G. James Haan ..... Union Central Life Insurance Company
Second Vice-President, Personnel Relations

Norman Hartleb ..... F. H. Lawson Company
Internal Auditor

Larry W. Jones ..... Cincinnati Technical College
Student (1974 Graduate)

Stuart J. Mahlin ..... The Provident Bank
Director of Personnel

Robert M. Moore ..... David J. Joseph Co.
General Office Administrator

Richard Morris ..... Central Trust Bank
Assistant Personnel Director

Marvin E. Walker ..... Blue Cross of Southwest Ohio
Vice-President, Staff Corporate Secretary

E. Kenneth Whalen ..... DuBois Chemical Corp.
Director of Employee Relations

James Williams ..... Sears, Roebuck & Co.
Personnel Manager

*Also serving as advisers for the Managerial Accounting Technology program.

MANAGERIAL ACCOUNTING TECHNOLOGY

Managerial Accounting is especially designed to develop those who have a high degree of inherent skill in accounting. The technical skill and the additional knowledge of business fundamentals, provides the graduate with a thorough understanding of accounting systems and how these systems are applied in business (small and large) and industrial organizations. In addition, the program goes into depth in the design, maintenance, and utilization of a financial system.

Cincinnati Technical College, through the Managerial Accounting program, prepares students for careers in a variety of business and industrial positions. Principal among these are positions in the field of accounting, such as: junior accountants, cost accountants, payroll, finance accounting clerks, cost estimators and other specialized accounting assignments. There are many other specialized job opportunities related to the Managerial Accounting field that are available to the well-trained student in the program.

The Computer Augmented Accounting course offers a unique adaptation of management accounting correlated with data processing in managerial decision making.

Opportunities are provided to demonstrate, expand or refine competencies required for potential mid-management employment.

MANAGERIAL ACCOUNTING TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1101 Business Mathematics I	5	-	4
1799 Survey of Data Processing	5	-	4
2911 Principles of Accounting I	3	2	3
2921 Introduction to Business I	5	-	2
3005 Administrative Typing	1	4	2
			18

■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1002 Communication Skills	5	-	3
1102 Business Mathematics II	5	-	4
1512 Principles of Economics	3	-	3
1850 Computerized Business Applications	5	-	3
2912 Principles of Accounting II	3	2	3
2922 Introduction to Business II	5	-	2
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1007 Expository Writing	3	2	3
1504 Psychology	5	-	4
2901 Principles of Marketing I	5	-	2
2905 Money and Banking	5	-	3
2913 Principles of Accounting III	2	3	3
2926 Principles of Management	5	-	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1006 Technical Writing	3	2	3
1520 Sociology	5	-	4
1823 Business Law I	5	-	3
1832 Personnel Management	5	-	3
2902 Principles of Marketing II	5	-	2
2914 Cost Accounting I	5	-	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
■ Fifth School Term			
1005 Effective Speaking	3	2	3
1804 Risk and Insurance	5	-	3
1824 Business Law II	5	-	3
2904 Office Management	5	-	3
2915 Cost Accounting II	3	2	3
2917 Tax Accounting	3	2	3
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

GRAPHIC COMMUNICATIONS TECHNOLOGY

The influence of printing radiates through all the fields of endeavor known to man. The printed word is necessary to sustain our civilization and to support social, educational, technological, and commercial growth. As society becomes more complex, more communication via printing becomes increasingly important.

At Cincinnati Technical College, modern computerized typesetting equipment, high speed letterpress and offset presses, excellent ancillary equipment, and expert instruction combine to provide a quality graphic arts program.

Although each Graphic Communications student masters all of the major modern graphic arts processes, the scope of the program is not limited to the development of craftsmanship. Technicians in a dynamic, growing industry constantly address themselves to new problems. The Graphic Communications program provides the scientific and technical knowledge necessary to resolve those problems.

As important as they are, craftsmanship and scientific-technical knowledge do not fully describe the Graphic Communications program. The graphic arts industry urgently requires mid-management personnel. Courses in Human Behavior, Effective Speaking, Business Law, etc., provide the management skills necessary for mid-management positions in shop leadership, estimating, production planning, and cost control.

GRAPHIC COMMUNICATIONS TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1161 Math for Printers	5	-	4
1401 Layout & Design	2	-	2
1402 Typography	5	5	4
1415 Graphic Arts Processes	2	-	2
1512 Economics I	3	-	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1002 Communication Skills	5	-	3
1405 Proofreading and Copy Preparation	2	-	2
1410 Machine Composition	5	5	4
1460 Bindery	2	3	3
1513 Economics II	3	-	3
2261 Chemistry-Printing Science	3	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1005A Effective Speaking	3	-	2
1007 Expository Writing	5	-	3
1421 Cold Type	5	5	3
1450 Estimating	5	-	2
1502 Human Relations	3	-	3
2262 Physics	3	2	3
1812 Salesmanship	2	-	2
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1004A Technical Writing	3	-	2
1419 Survey of Graphic Communications	3	-	3
1430 Presswork	5	5	4
1480 Photolith I	3	2	3
1823 Business Law	5	-	3
2911 Accounting I	5	-	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1428 Management Survey	3	-	3
1440 Offset Press	5	10	5
1481 Photolith II	3	2	3
1520 Introduction to Sociology	5	-	4
2916 Cost Accounting	5	-	3
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

GRAPHIC COMMUNICATIONS TECHNOLOGY ADVISORY COMMITTEE

William Bell.....Standard Publishing Company
Vice President

Kenneth Boyle.....Durham Business Forms Corp.
1973 Graduate Cincinnati Technical College

Mel Brower.....Melbro Color Service
President

William Duffey.....Queen City Typesetting
President

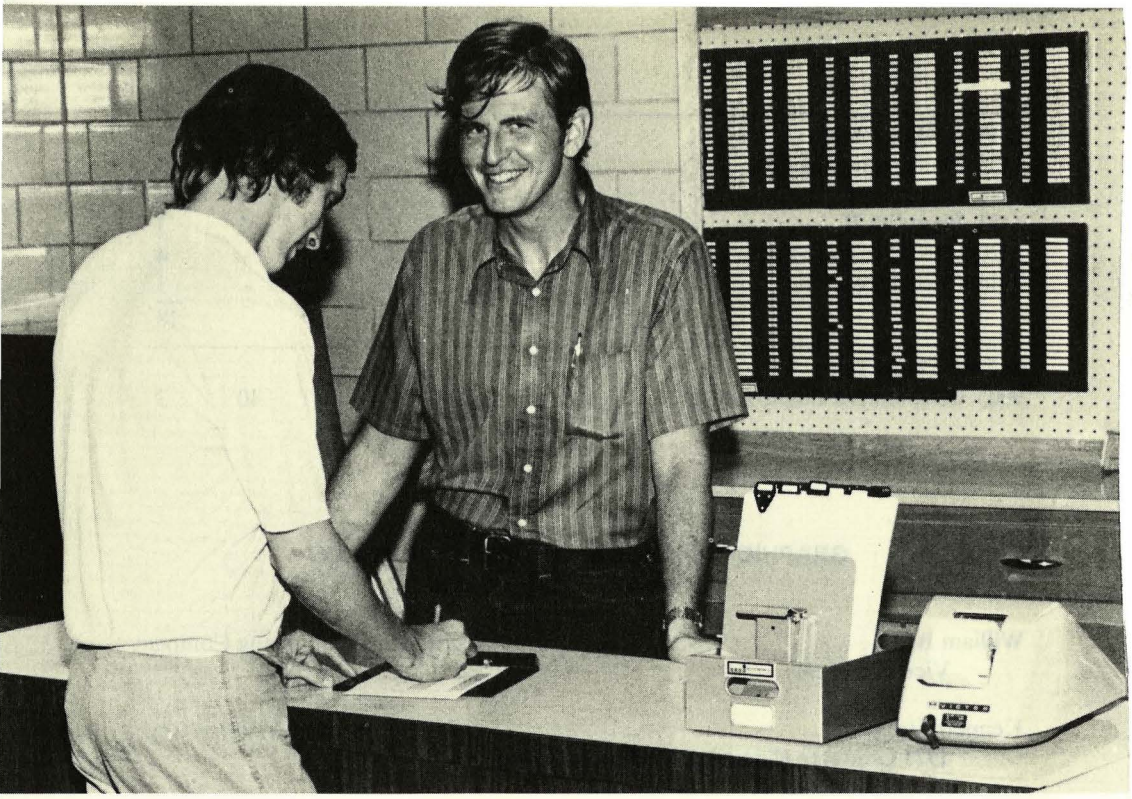
Norb Giver.....Volts-Thomas Printing Company
President

Jerry Hoffman.....Hennegan Company
1973 Graduate Cincinnati Technical College

Edgar Kobman.....Gibson Greeting Card Company
Supervisor

Hal Sterne.....S. Rosenthal Company
Production Manager

Robert Zschau.....S. Rosenthal Company
1973 Graduate Cincinnati Technical College



HOTEL-MOTEL-RESTAURANT MANAGEMENT TECHNOLOGY

Increased leisure, a higher living standard and improved transportation have caused the demand for the services of the hospitality industry to spiral. Chains of motels, hotels and restaurants have responded with large scale expansion programs. As a result, the industry is experiencing a shortage of qualified personnel, particularly at the mid-management level. At present, the employment estimates indicate a conservative need for at least 100,000 supervisory employees new to the industry each year just to satisfy the demands of existing properties. Added to this total is another large number of supervisory employees to reflect the needs of the many new properties, rooms and restaurants currently being planned and constructed. Cincinnati Technical College is prepared to meet the employment needs of this industry locally through its Hotel-Motel-Restaurant Management program.

Today's modern hotel or restaurant manager must have a comprehensive knowledge of all the departments and operations to his institution. This program, therefore, prepares the young person to assume, upon graduation, responsibility in a variety of positions: front office manager, superintendent of service, assistant or executive housekeeper, steward, dining room manager, assistant restaurant manager, assistant catering manager or assistant hotel manager. (Training afforded by this program can also prepare students for employment as executive housekeepers or food managers in hospitals and nursing homes.)

Students encounter all phases of this field in their training — from front office procedure to mass food preparation to maintenance problems. They learn from instructors experienced and knowledgeable in the complex facets of this industry.

Cooperative employment gives the students practical experience at some of Cincinnati's leading hotels and restaurants.

HOTEL-MOTEL-RESTAURANT MANAGEMENT TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communications Skills I	5	-	3
1101 Business Mathematics I	5	-	4
2801 Introduction to Restaurant Management	4	6	3
2806 Beverage Management	1	2	1
2811 Introduction to Hotel-Motel Management	5	-	3
2911 Principles of Accounting I	3	2	3
3022A Office Machines	1	2	1
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills	5	-	3
1102 Business Mathematics II	5	-	4
2802 Restaurant Management II	4	6	3
2812 Hotel-Motel Management II	5	-	3
2821 Sales Techniques	3	-	2
2912 Principles of Accounting II	3	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1005 Effective Speaking	3	2	3
1512 Economics I	3	-	3
2803 Restaurant Management III	4	6	3
2813 Hotel-Motel Management III	5	-	3
2928 Hotel-Motel Accounting	3	2	3
2929 Audit Procedures and Operation	2	3	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1502 Human Relations	3	-	3
1535 U.S. Labor Relations	3	-	3
1823 Business Law I	5	-	3
2804 Restaurant Management IV	4	6	3
2814 Hotel-Motel Management IV	5	-	3
2930 Hotel-Motel Accounting II	3	2	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term				
1006	Technical Writing	3	2	3
1520	Introduction to Sociology	5	-	4
1824	Business Law II	5	-	3
2805	Restaurant Management V	4	6	3
2815	Hotel-Motel Management V	5	-	3
1798	Survey of Data Processing	3	-	2
				18
■ Fifth Co-op Term				
9005	Cooperative Employment		40	3

HOTEL-MOTEL-RESTAURANT MANAGEMENT TECHNOLOGY ADVISORY COMMITTEE

Barry S. Cholak ..... Stouffer's Inn
General Manager

Glen Cole ..... Hospitality Motor Inn
General Manager

David Darby ..... Northern Kentucky Area Vocational School
Coordinator Food Service

Robert Haines ..... Norwood High School
Coordinator Food Service

Dorothy Larsson ..... Cincinnati Milacron
Food Service Director

Larry Parks ..... Hilton Hotel
Personnel Director

Thomas Trimpe ..... Beatrice Foods Co.
Foods Sales Manager

Pete Vaughn ..... Willson Dairy Company
Sales Manager

Leland White ..... Deaconess Hospital
Administrator

ORNAMENTAL HORTICULTURE TECHNOLOGY

The beauty of a rose. The loveliness of the green expanse of a park. The majesty of an oak that shelters a home. How great a pleasure it is for us to admire these gifts of nature, in an age of steel, concrete and glass, especially at a time of great concern for the environment.

In the city we owe these pleasures to those who work with nature to produce them. Beauty is their business. Many of the flowers, trees, shrubs and lawns that adorn our city are their handiwork. They are the men and women of the ornamental horticulture industry. They include landscapers, nurserymen, greenskeepers, flower growers. Others grow our vegetables from first frost to spring, under glass in greenhouses.

Theirs is — literally and figuratively — a growth industry, in which career opportunities are excellent for aspiring "green thumb technicians." These opportunities offer special satisfactions to those who like the elbow room of the out-of-doors, who like to work with their hands as well as their heads; who like to work with nature but live in the city.

The Ornamental Horticulture Technology program is designed to prepare high school graduates, exhibiting the necessary interests and aptitudes to work for a wide range of employers — garden stores, nurseries, golf courses, parks, private estates, hospitals, universities, schools and others who sell, install or maintain turf, trees, shrubs and gardens.

Due to the unique seasonal employment requirements of horticulturally related jobs, this program does not follow the usual Cincinnati Technical College schedule of alternating in-college and on-the-job quarters. Instead, students will spend three successive ten-week terms in school and two successive terms (during the growing season) in cooperative employment, each of the two years they are enrolled in the program. The purpose of this arrangement is to maximize the learning and earning opportunities of horticulture students during the peak of the propagation, cultivation and selling season.

ORNAMENTAL HORTICULTURE TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
3501 Horticulture Soils and Application	5	5	6
3502 Horticulture Science I	3	2	3
3507 Arboriculture	3	2	3
3508 Turf Management I	3	2	3
			18
■ Second School Term			
1512 Economics	3	-	3
3503 Horticultural Science II	3	2	3
3504 Woody Plants I	4	1	3
3505 Herbaceous Plants I	4	1	3
3506 Nursery Operation I	4	1	3
3511 Landscape Planning and Construction	3	2	3
			18
■ Third School Term			
1003 Communication Skills	5	-	3
1502 Human Relations	3	-	3
1810 Principles of Salesmanship	5	-	3
3509 Landscaping I	3	2	3
3510 Horticulture and Turf Equipment	6	4	6
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Fourth School Term			
1005 Effective Speaking	3	2	3
2911 Principles of Accounting I	5	-	3
3512 Nursery Operation II	3	2	3
3515 Woody Plants II	3	2	3
3517 Turfgrass Management II	3	2	3
3518 Landscaping II	3	2	3
			18
■ Fifth School Term			
1004 Technical Writing	3	2	3
1101 Business Math	5	-	4
2924 Principles of Management	5	-	2
3514 Garden Store Operation	4	1	3
3516 Herbaceous Plants II	3	2	3
			15

■ Sixth School Term			
1504 Psychology	5	-	4
2901 Principles of Marketing I	5	-	2
3513 Horticulture Science III	3	2	2
3519 Landscape Contracts & Specifications	3	2	3
3521 Entomology & Plant Disease Control	3	2	2
3522 Nursery Operation III	3	2	3
			16
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

ORNAMENTAL HORTICULTURE TECHNOLOGY ADVISORY COMMITTEE

John H. Brooks ..... Delhi Hills Flower and Garden Center Garden Store
Supervisor of Growers

Robert (Bobbie) Davis..... Hamilton County Agricultural Extension Service
County Agent

Richard Fabing..... Delhi Hills Flower and Garden Center Garden Store
Manager

Edward Friedhoff..... Spring Grove Cemetery

Michael Hinckley..... Cincinnati Technical College
Student (1974 Graduate)

Roger Hodgeman..... Cincinnati Technical College
Student (1975 Graduate)

Joseph T. Obermeyer ..... Natorp's Garden Store
Supervisor of Personnel

Arthur Sherman ..... Sherman's Flower Shop
Owner

Thomas Smith..... Spring Grove Cemetery

Samuel Steuve ..... Spring Grove Cemetery

Miss Patricia Strausser ..... Delhi Hills Flower and Garden Center Garden Store
Supervisor of Landscaping

PROPERTY MANAGEMENT AND REAL ESTATE TECHNOLOGY

The dynamic growth in the building of apartment complexes, office structures, industrial parks, and shopping centers has accelerated the demand for professionally trained property managers. Property Management is a growth career field for men and women. An effective property manager must have the ability to properly supervise maintenance, office, and accounting functions, handle tenant relations, prepare and implement management plans, and operating budgets. The successful fulfillment of these functions determines whether a property is a valuable entity to the owner, tenant, resident, and community. Men and women who assume responsibilities as property managers are well compensated. Property management experience provides an excellent background to all other specialties in the real estate profession.

The Property Management curriculum is based upon class discussion, case studies, publications of the Institute of Real Estate Management and National Association of Realtors. The property management program covers the resident manager through executive property manager positions.

Cincinnati Technical College is the nation's first and only institution of higher learning to offer an associate degree in property management. Certified Property Managers (C.P.M.'s) assist in class instruction and counsel the college to help provide the latest principles and practices employed in the property management field. The program provides excellent cooperative employment opportunities with leading property managers and institutional owners in the Cincinnati metropolitan area.

The Real Estate curriculum consists of courses which are required by the Ohio Real Estate Commission for obtaining a real estate license and courses required for obtaining the Ohio Association of Realtors' GRI Designation. A student taking these courses along with the property management curriculum can earn an associate degree with a double major in Real Estate and Property Management.

PROPERTY MANAGEMENT AND REAL ESTATE CURRICULUM* *

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1101 Business Mathematics I	5	-	4
2921 Introduction to Business I	5	-	2
2931 Principles of Property Management I	3	-	3
*2951 Real Estate Principles and Practices I	3	-	3
3301 Principles of Maintenance I	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills	5	-	3
1102 Business Mathematics II	5	-	4
2911 Principles of Accounting I	3	2	3
2922 Introduction to Business II	5	-	2
2932 Principles of Property Management II	3	-	3
3302 Principles of Maintenance II	3	2	3
			18
■ Second Co-op Term			
9902 Cooperative Employment		40	2
■ Third School Term			
1005 Effective Speaking	3	2	3
1504 Psychology	5	-	4
1512 Principles of Economics I	3	-	3
2912 Principles of Accounting II	3	2	3
*2953 Real Estate Law	5	-	3
3303 Principles of Maintenance III	3	2	2
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1007 Expository Writing	3	2	3
1502 Human Relations	3	-	3
1810 Principles of Salesmanship	5	-	3
2933 Principles of Property Management III	3	-	3
*2952 Real Estate Principles & Practices II	3	-	3
*2955 Real Estate Appraisal I	3	-	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1006 Technical Writing	3	2	3
1804 Risk and Insurance	5	-	3
2830 Decorating and Design	3	2	2
2934 Principles of Property Management IV	3	-	3
*2954 Real Estate Finance	3	-	3
*2957 Special Topics Development & Investment Case Study	3	-	3
			17
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

*Six Real Estate courses required to obtain a double major in Property Management and Real Estate.
**Students interested in a major in only Property Management should confer with their coordinator.

PROPERTY MANAGEMENT AND REAL ESTATE TECHNOLOGIES ADVISORY COMMITTEE

Thomas Behan ..... Cincinnati Technical College
Student (1975 Graduate)

Orville Brown ..... Cincinnati Apartment Association
Executive Director

Stanley R. Gershun, C.P.M. ..... Stanroy Realtors
President

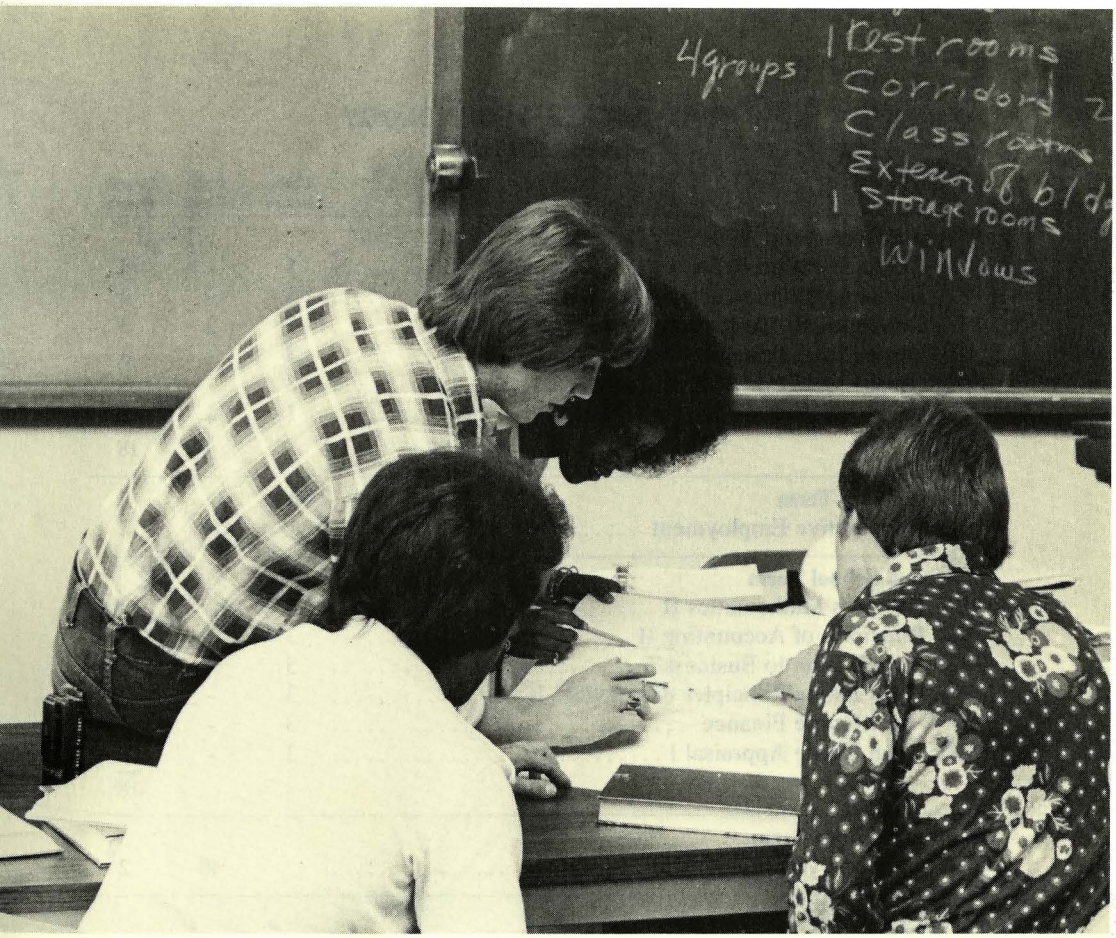
William Koenig, C.P.M. ..... Western & Southern Life Insurance Company
Director of Property Management

Albert D. Loring, C.P.M. ..... Robert A. Cline, Inc.
President

William F. Merusi, C.P.M. ..... Merusi Management, Inc.
President

Donald W. McClanahan ..... West Shell, Inc.
V.P./Director of Property Management

Leroy Walker ..... Deb-Roe Realtors
President



REAL ESTATE TECHNOLOGY

Real Estate is one of the most stable of all career areas. Prices of land and buildings follow the cycles of general business, but as our population increases and the land area remains constant, more and more trained people are needed in real estate occupations.

The real estate sales and related real estate specialties offer unlimited opportunities for men and women to provide a valuable service to buyers and sellers of real property and be well compensated for their efforts.

The age requirement in Ohio for a person to be eligible for real estate license is presently 18 years of age. The recent change in the Ohio law on the legal age of majority opens the way to young men and women being able to enter the real estate profession.

The Cincinnati Technical College Real Estate Technology curriculum includes all the required courses for a real estate license and the Ohio Association of Realtors' GRI Designation. A student may also elect to take the required property management courses, which will enable him to earn an associate degree with a double major in Real Estate and Property Management.

The Real Estate course instructors are well experienced Realtors and/or attorneys. The various Real Estate programs offered at Cincinnati Technical College are endorsed by the Cincinnati Board of Realtors and the Ohio Association of Realtors.

REAL ESTATE TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1101 Business Mathematics I	5	-	4
2911 Principles of Accounting I	3	2	3
*2951 Real Estate Principles & Practices I	3	-	3
*2953 Real Estate Law	3	-	3
3022 Office Machines	1	4	2
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1102 Business Mathematics II	5	-	4
2912 Principles of Accounting II	3	2	3
2921 Introduction to Business I	5	-	2
*2952 Real Estate Principles & Practices II	3	-	3
*2954 Real Estate Finance	3	-	3
*2955 Real Estate Appraisal I	3	-	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1003 Communication Skills	5	-	3
1502 Human Relations	3	-	3
1804 Risk and Insurance	5	-	3
1511 Principles of Economics	5	-	4
1810 Principles of Salesmanship	5	-	3
2922 Introduction to Business II	5	-	2
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1006 Technical Writing	3	2	3
1520 Introduction to Sociology	5	-	4
1823 Business Law I	5	-	3
2904 Office Management	3	2	3
2924 Principles of Management I	5	-	2
*2957 Special Topics Development and Investment Case Study	3	-	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1005 Effective Speaking	3	2	3
1505 Psychology	3	-	3
1824 Business Law II	5	-	3
1842 Advertising and Display	3	2	4
2905 Money and Banking	5	-	3
2925 Principles of Management II	5	-	2
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

*Six Real Estate courses required to obtain a double major in Property Management and Real Estate.

REAL ESTATE TECHNOLOGY ADVISORY COMMITTEE

Benjamin J. Allen ..... Benjamin J. Allen, Realtor
President

Jerry Devitt ..... Devitt and Associates, Realtors
President

M. Robert Garfield ..... West Shell Realtor
Vice-President

Bill Henkel ..... Grady Realtor
Associate

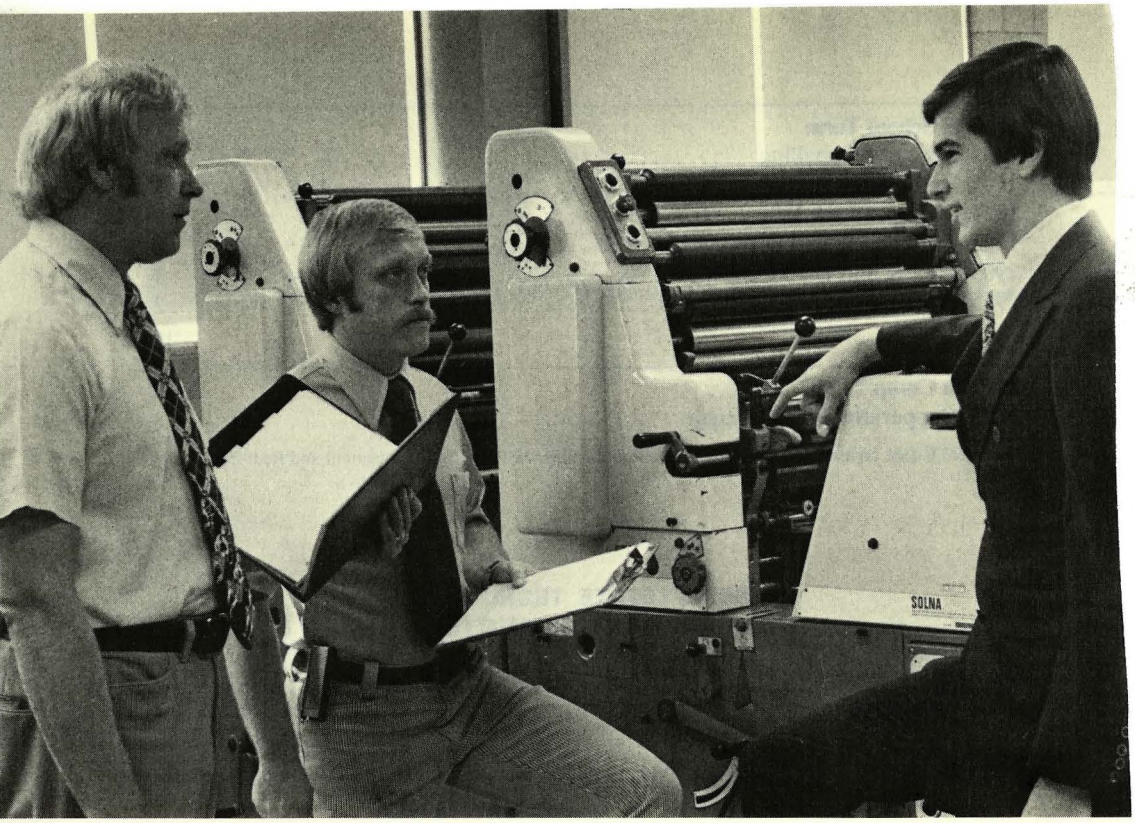
Beth Huber ..... Cincinnati Technical College
Student (1975 Graduate)

Robert H. Kelly ..... Robert A. Cline Residential, Inc., Realtors
Vice-President

Marilyn Stenton ..... West Shell Realtor
Associate

Chester C. Sudbrack, CPM ..... Ohio Real Estate Commission
Member

Lester Wolpa ..... Lester Wolpa and Associates
President



SALES MARKETING TECHNOLOGY

Nationally, the field of sales-marketing generates more income than any other profession. Eighty percent of those who earn more than $20,000 a year are directly engaged in sales-marketing.

In the Sales-Marketing department at Cincinnati Technical College, small classes, an approach which presupposes adult attitudes, and expert guidance, instruction and coordination, all focus on a single objective: developing talent for the sales-marketing professions. Advertising, display, retailing, wholesaling, mid-management supervision, data processing, accounting, and other studies develop the attitudes and skills necessary for success.

To further meet the needs of the business community and students, this department offers the option of Industrial Sales Marketing. This option focuses on selling at the professional level by the manufacturer's representative and by the wholesale salesmen who are primarily concerned with characteristics of the industrial market, purchasing agents, the product, and services.

The business-industrial community in Cincinnati provides a unique laboratory in which Sales-Marketing students acquire their cooperative employment experience. Greater Cincinnati is such a diverse marketing complex that this area is used by many national agencies for market research. The kinds of cooperative employment presently held by Sales-Marketing students are as varied as the marketing area itself.

On-the-job training is not a substitute for the critical analysis and careful exposition undertaken in school; nor is schooling a substitute for field experience. The Cincinnati Technical College cooperative employment system offers both in the proper proportions for optimum personal and professional growth.

SALES MARKETING TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1005 Effective Speaking	3	2	3
1101 Business Mathematics I	5	-	4
1810 Principles of Salesmanship	5	-	3
1845 Principles of Retailing	5	-	4
2920 Business Principles	5	-	4
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1001 Communication Skills	5	-	3
1102 Business Mathematics II	5	-	4
1836 Principles of Wholesaling	5	-	4
2926 Principles of Management	5	-	3
3005 Administrative Typing	1	4	2
			16
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1002 Communication Skills	5	-	3
1505 General Psychology	3	-	3
1521 Sociology	3	-	3
1799 Survey of Data Processing	5	-	4
1832 Personnel Management	5	-	3
2901 Principles of Marketing I	5	-	2
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1007 Expository Writing	3	2	3
1511 Principles of Economics	5	-	4
1815 Audiovisual Sales Techniques	2	3	4
2902 Principles of Marketing II	5	-	2
2911 Principles of Accounting I	3	2	3
			16
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1006 Technical Writing	3	2	3
1820 Sales Management	5	-	4
1823 Business Law I	5	-	3
1842 Advertising and Display	3	2	4
2912 Principles of Accounting II	3	2	3
			17
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

INDUSTRIAL SALES MARKETING TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1005 Effective Speaking	3	2	3
1101 Business Mathematics I	5	-	4
1810 Principles of Salesmanship	5	-	3
1846 Industrial Product Marketing I	5	-	4
2920 Business Principles	5	-	4
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1001 Communication Skills	5	-	3
1102 Business Mathematics II	5	-	4
1847 Industrial Product Marketing II	4	-	4
2926 Principles of Management	5	-	3
3005 Administrative Typing	1	4	2
			16
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1002 Communication Skills	5	-	3
1505 General Psychology	3	-	3
1521 Sociology	3	-	3
1799 Survey of Data Processing	5	-	4
1832 Personnel Management	5	-	3
2901 Principles of Marketing I	5	-	2
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3

■ Fourth School Term (See Sales Marketing Technology Curriculum)

■ **Fourth Co-op Term**

9004 Cooperative Employment	40	3

■ **Fifth School Term (See Sales Marketing Technology Curriculum)**

■ **Fifth Co-op Term**

9005 Cooperative Employment	40	3

SALES MARKETING TECHNOLOGY ADVISORY COMMITTEE

Stanley J. Collins ..... Osborne-Kemper Thomas Company
Director of Marketing

Ralph Estes, Chairman ..... Self Employed
Sales Consultant

Bob Flannery ..... Formica Corporation
Director of Manpower Development

W. James Foken ..... The John Shillito Company
Personnel Manager

Joyzell Friason ..... Cincinnati Technical College
Student (1975 Graduate)

James R. Gleason ..... Indian Hill High School
D. E. Coordinator

Donald Leimenstoll ..... Brendamour Sporting Goods, Inc.
Treasurer

Willard Rose ..... WLW-Television
Account Executive

Alice Roy ..... Cincinnati Technical College
Student (1975 Graduate)

Albert Schaefer ..... H & S. Pogue Company
Personnel Manager

Herbert P. Schaffer, Sr. ..... M. and I. Associates, Inc.
Vice President and General Manager

James Schroeder ..... Mutual Manufacturing Company
Personnel Manager

Ruth Van Gorden ..... Merten Company
Representative

John Waddell ..... DuBois Chemicals
Director of Marketing Services

SECRETARIAL TECHNOLOGY

The secretarial technologies offer up-to-date programs for professional development in secretarial science. Besides providing a modern and thorough technical and professional education, the curricula are also designed to give attention to the liberal aspects of a college education needed by the secretary in the modern business world. This enables her to take an active part in the main stream of our society so that our progress and prosperity will grow in the years ahead.

Secretaries are emerging as important members of the management team. Through the years they have earned recognition, status, and prestige. More than ever secretaries must accept the challenge of their changing role and be prepared for the new role as part of the professional management team.

The function of the secretarial program is to prepare young women for these responsible secretarial and clerical positions in business as well as those in industry and public service.

Four major areas of secretarial education are offered:

OPTION I prepares a young woman for a responsible position as an executive secretary or administrative assistant requiring a thorough background in shorthand. In addition this program offers a study of modern business practices and office procedures.

OPTION II prepares a young woman to be a legal secretary thoroughly familiar with judicial procedures and legal terminology working with a wide variety of legal documents including briefs, petitions, subpoenas, wills, contracts and deeds.

OPTION III is designed for the young woman who, while desiring a responsible position as a secretary or administrative assistant, prefers to concentrate her learning in the area of machine transcription with a limited background in shorthand.

OPTION IV is designed for the young woman who desires training to qualify her to fill any of a broad range of office positions requiring a variety of technical skills. In this program a young woman can learn office skills, a knowledge of accounting and other fundamental office techniques.

SECRETARIAL TECHNOLOGY CURRICULUM
Option I — Secretarial/Shorthand

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1101 Business Mathematics I	5	-	4
2921 Introduction to Business I	5	-	2
*3001 Typewriting I	2	3	2
*3011 Shorthand I	2	5	4
3021 Office Procedures	1	2	3
			18
*If advance placement, elective will be substituted.			
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills	5	-	3
1102 Business Mathematics II	5	-	4
3002 Typewriting II	2	3	2
3012 Shorthand II	2	5	4
3022 Office Machines	1	4	2
3032 Records Management	1	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1009 Business English	3	2	3
1520 Introduction to Sociology	5	-	4
1823 Business Law I	5	-	3
3003 Typewriting III	1	4	2
3013 Shorthand III	2	3	4
3023 Machine Transcription	1	4	2
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1006 Technical Writing	3	2	3
1504 Psychology	5	-	4
2911 Principles of Accounting I	3	2	3
3014 Transcription I	2	5	4
3024 Secretarial Procedures (or 3025 Legal Secretarial Procedures or 3035 Medical Secretarial Procedures)	1	2	3
			17
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1005 Effective Speaking	3	2	3
1511 Principles of Economics	5	-	4
1799 Survey of Data Processing	5	-	4
2912 Principles of Accounting II	3	2	3
3015 Transcription II	2	5	4
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

SECRETARIAL TECHNOLOGY CURRICULUM
Option II — Legal Secretarial

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1101 Business Mathematics I	5	-	4
2921 Introduction to Business I	5	-	2
*3001 Typewriting I	2	3	2
*3011 Shorthand I	2	5	4
3021 Office Procedures	1	2	3
			18
*If advance placement, elective will be substituted.			
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills	5	-	3
1102 Business Mathematics II	5	-	4
3002 Typewriting II	2	3	2
3012 Shorthand II	2	5	4
3022 Office Machines	1	4	2
3032 Records Management	1	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1009 Business English	3	2	3
1520 Introduction to Sociology	5	-	4
1823 Business Law I	5	-	3
3003 Typewriting III	1	4	2
3013 Shorthand III	2	3	4
3023 Machine Transcription	1	4	2
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3

■ Fourth School Term			
1824 Business Law II	5	-	3
*3025 Legal Secretarial Procedures I	3	7	4
2911 Principles of Accounting I	3	2	3
1501 Human Relations	5	-	4
1006 Technical Writing	3	2	3
			17
*See course description.			
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
■ Fifth School Term			
*3026 Legal Secretarial Procedures II	3	7	4
3029 Legal Research Projects I	2	8	4
1799 Survey of Data Processing	5	-	4
2912 Principles of Accounting II	3	2	3
1005 Effective Speaking	3	2	3
			18
*See course description.			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

SECRETARIAL TECHNOLOGY CURRICULUM
Option III — Secretarial/Transcription

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1101 Business Mathematics I	5	-	4
2921 Introduction to Business I	5	-	2
*3001 Typewriting I	2	3	2
*3011 Shorthand I	2	5	4
3021 Office Procedures	1	2	3
			18
*If advance placement, elective will be substituted.			
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills	5	-	3
1102 Business Mathematics II	5	-	4
3002 Typewriting II	2	3	2
3012 Shorthand II	2	5	4
3022 Office Machines	1	4	2
3032 Records Management	1	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2

■ Third School Term			
1009 Business English	3	2	3
1520 Introduction to Sociology	5	-	4
1823 Business Law I	5	-	3
2904 Office Management	5	-	3
3003 Typewriting III	1	4	2
3027 Office Practicum	1	4	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1006 Technical Writing	3	2	3
1501 Human Relations	5	-	4
2911 Principles of Accounting I	3	2	3
3014A Transcription IA	2	5	4
3024 Secretarial Procedures	1	2	3
			17
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
■ Fifth School Term			
1005 Effective Speaking	3	2	3
1511 Principles of Economics	5	-	4
1799 Survey of Data Processing	5	-	4
2912 Principles of Accounting II	3	2	3
3015A Transcription IIA	2	5	4
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

SECRETARIAL TECHNOLOGY CURRICULUM
Option IV — Secretarial /General

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1101 Business Mathematics I	5	-	4
1799 Survey of Data Processing	5	-	4
2921 Introduction to Business I	5	-	2
*3001 Typewriting I	2	3	2
3021 Office Procedures	1	2	3
			18

*If advance placement, elective will be substituted.

■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills	5	-	3
1102 Business Mathematics II	5	-	4
3002 Typewriting II	2	3	2
3022 Office Machines	1	4	2
3027 Office Practicum	2	6	3
3032 Records Management	1	2	3
			17
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1009 Business English	3	2	3
1520 Introduction to Sociology	5	-	4
1823 Business Law I	5	-	3
2905 Money and Banking	5	-	3
2926 Principles of Management I	5	-	3
3003 Typewriting III	1	4	2
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1006 Technical Writing	3	2	3
1501 Human Relations	5	-	4
1832 Personnel Management	5	-	3
2911 Principles of Accounting I	3	2	3
3004 Typewriting IV	1	4	2
3024 Secretarial Procedures	2	3	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
■ Fifth School Term			
1005 Effective Speaking	3	2	3
1511 Principles of Economics	5	-	4
2904 Office Management	5	-	3
2912 Principles of Accounting II	3	2	3
3028 Secretarial Practicum	3	7	4
			17
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

SECRETARIAL TECHNOLOGY ADVISORY COMMITTEE

Richard Adams ..... South-Western Publishing Company
Editor

Nina Brown ..... Heekin Can Company
Secretary to the Chairman of the Board and to the President

Beverly Burke ..... Procter & Gamble
Personnel Services Manager

William K. Clark ..... City of Cincinnati
City Personnel Officer and Civil Service Secretary

Robert L. Daniels ..... State Farm Insurance Co.
Property Supervisor

Carl Doran, Jr. ..... Ace Doran Hauling & Rigging Company
Office Manager

Marian Hagedorn ..... Fifth Third Bank
Training Specialist

Elizabeth Kenney
Senior Administrative Assistant to
Honorable David S. Porter
United States District Judge

Marie Kutz ..... Cincinnati Technical College
Student (1975 Graduate)

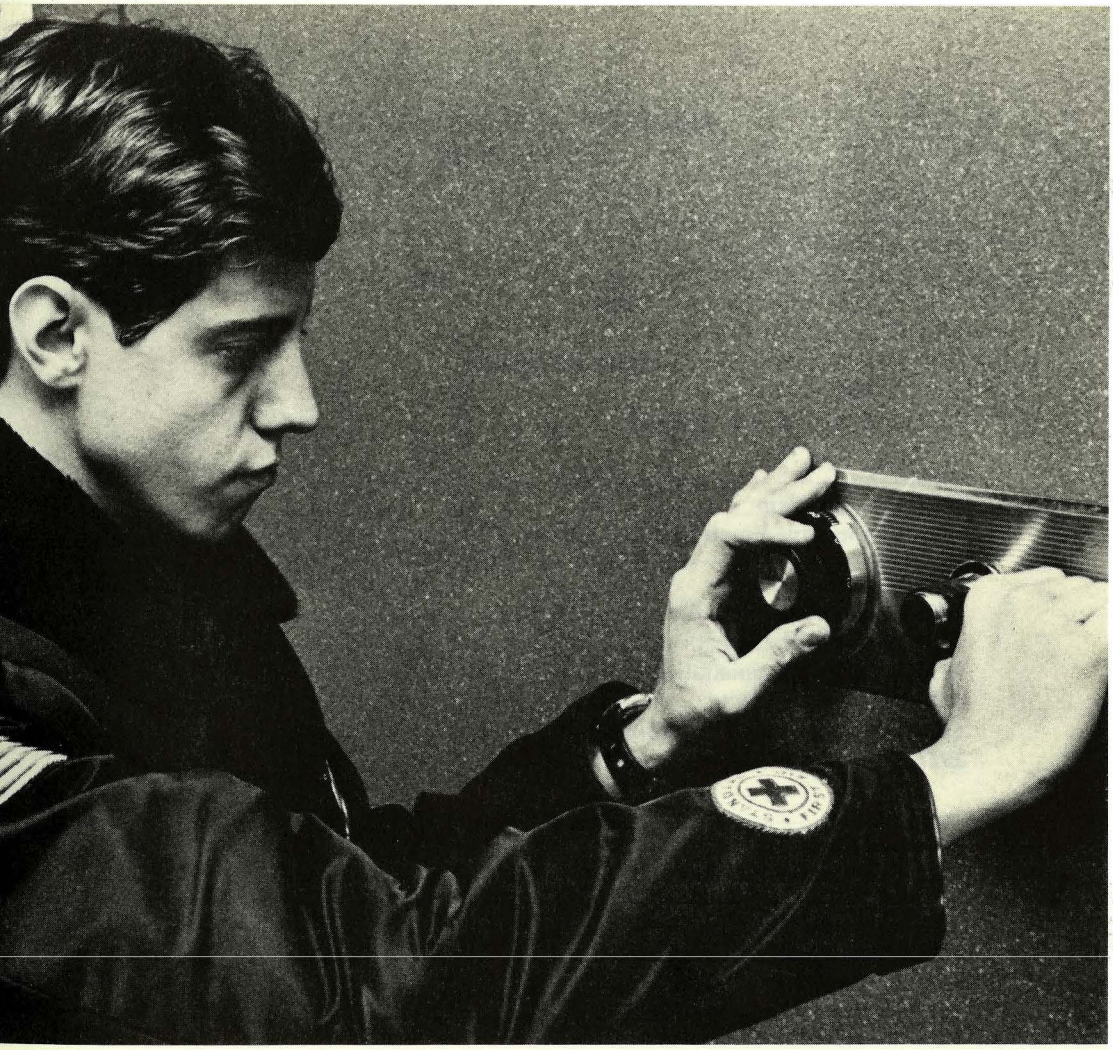
Patricia Richardson ..... Cincinnati Technical College
Student (1975 Graduate)

Jeanne Schneider ..... Cincinnati Bell Telephone Co.
Employment Counselor

Edith Schnelle ..... The Ohio Knife Company
Corporate Secretary

Anne Trull ..... General Electric Company Evendale Plant
Placement Specialist

LaMont Turner ..... Procter & Gamble
Employment Supervisor



SECURITY ADMINISTRATION TECHNOLOGY

An ever-increasing crime rate, continuing business losses occasioned by theft and pilferage, and concern about threatened extremist activities have caused businessmen to recognize a need for security specialists on the management team. The demand for trained specialists in the security field is greater than the available supply of such persons. Training is the key word. While law enforcement and police science programs have existed in academic institutions for a number of years, few colleges have given thought or action to the unique education and training requirements of the security practitioner.

The curriculum was developed in collaboration with the Tri-State Chapter of the American Society for Industrial Security. This program of training has the assistance and support of both public agencies and professional groups.

A career in the rapidly expanding field of security administration can prove to be exciting, challenging, and rewarding. The opportunities afforded in this career field are limitless since security administration is recognized as a major responsibility of management in business, industry, and government.

SECURITY ADMINISTRATION CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1101 Business Mathematics	5	-	4
1201 Private Police Officer's Course	9	3	6
1001 Communication Skills	3	2	3
1210 Introduction to Loss Control and Security Administration	3	-	2
2926 Principles of Management	5	-	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills	3	2	3
1102 Business Mathematics II	5	-	4
1216 Security Administration I	5	-	3
1211 Industrial Security	5	-	3
1220 Fundamentals of Fire Protection	3	2	2
2927 Principles of Management II	5	-	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1005 Effective Speaking	3	2	3
1823 Business Law I	5	-	3
1217 Security Administration II	5	-	3
1004 Technical Writing	3	2	3
1204 Personnel Security Systems	5	-	3
2911 Principles of Accounting I	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1205 Interviewing	3	2	3
1502 Human Relations	3	-	3
1230 Safety Management	3	2	2
1208 Criminal, Civil & Administrative Law I	5	-	4
1233 Emergency Planning	3	2	3
1535 Labor Management Relations	3	-	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1209 Criminal, Civil & Administrative Law II	5	-	4
1224 Fundamentals of Fire Prevention	3	2	4
1505 Psychology	3	-	3
1240 Directed Case Study	3	2	3
1520 Introduction to Sociology	5	-	4
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

SECURITY ADMINISTRATION TECHNOLOGY ADVISORY COMMITTEE

Stanley M. Carle ..... Shillito's
Protection Manager

Raymond Clift ..... Safety Council of Greater Cincinnati
Executive Director

Thomas Dixon ..... Nuchols & Associates
Vice President

Tolbert Francis ..... Jewish Hospital
Director of Security

Bryan Gillespie ..... Cincinnati Technical College
Student (1975 Graduate)

Bert Hinds ..... Cal Crim Detective Agency
Vice President

Jack Mack ..... Fifth Third Bank
Security Officer

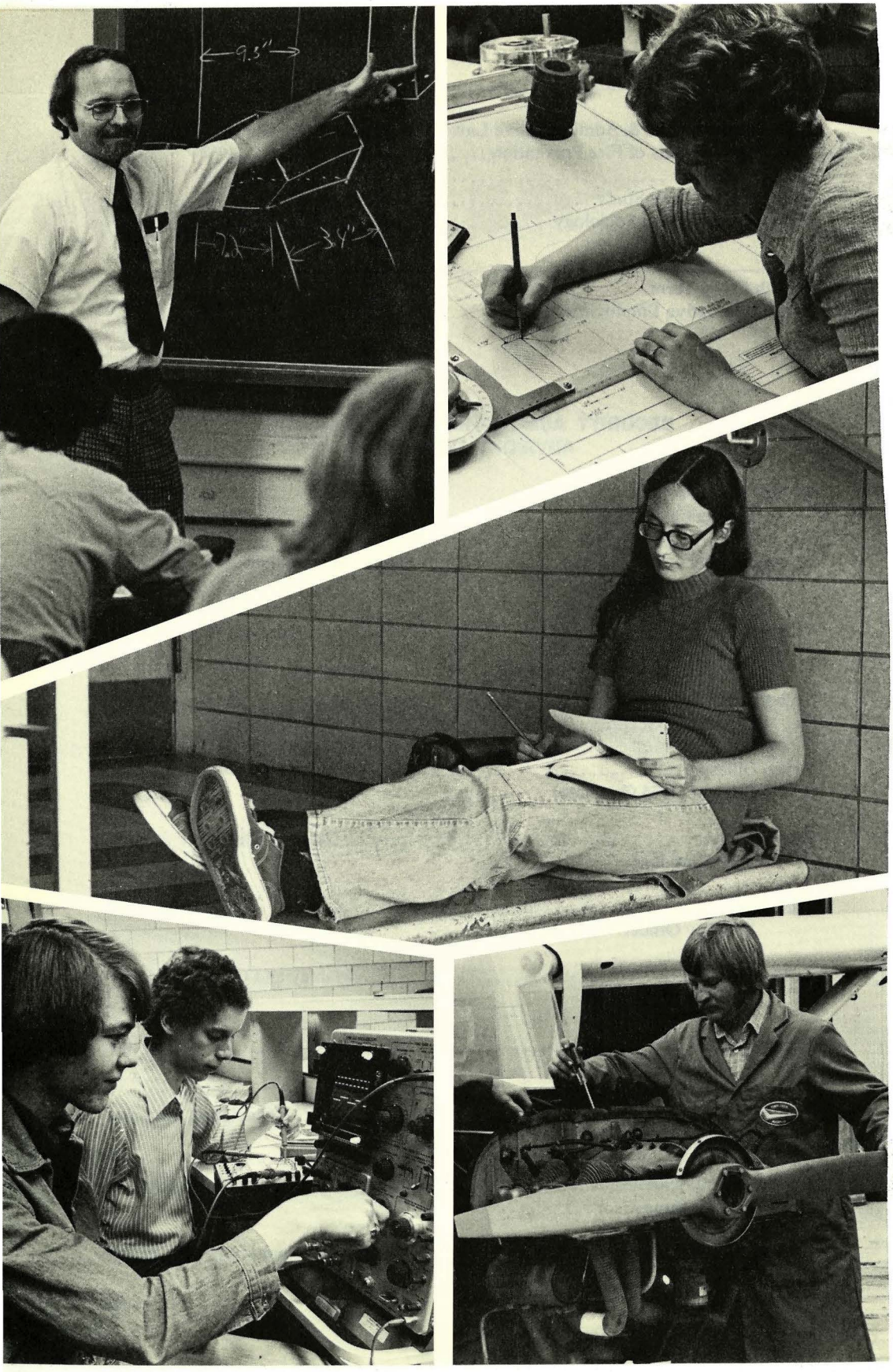
James Pritchett ..... Mabley and Carew Company
Director of Security

Elmer Reis ..... U.S. Marshal

James Royer ..... Cincinnati Milacron
Director of Security

Capt. Edward Schneuer ..... Fire Prevention Bureau
District Supervisor

Captain Herbert Vogel ..... Hamilton County Sheriff's Office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DEPARTMENT OF ENGINEERING TECHNOLOGIES

The Department of Engineering Technologies offers nine programs — Air Conditioning, Aviation, Civil Engineering Technology, Electro-Mechanical Technology, Electronics Technology, Electrical Design Technology, Industrial Engineering Technology, Mechanical Design Technology and Plastic Technology.

The Engineering Technology curriculum followed by each program provides basic theory and skills in physics, mathematics and graphic sciences and specialized instruction in the student's major area of concentration. In addition, the student takes a variety of courses in communication skills, the humanities and the social sciences. These courses enable the student to express himself in speech and writing and to better understand himself, others and society. Upon successful completion of the two-year program, the student is awarded an appropriate degree.

The graduate usually works in support of engineers, scientists or other professional persons. A student who exhibits unusual industry and continues upgrading himself through further education may advance to an important supervisory position. Engineering Technology programs provided by Cincinnati Technical College help to meet the need for competent technicians required by the highly technological society in which we live.

AVIATION TECHNOLOGY

Ever since the pioneer flight of the Wright brothers at Kitty Hawk, N.C., the aircraft industry has recorded milestone after milestone of achievement. Today, huge planes, carrying hundreds of passengers in luxurious comfort, have further shrunk the distance — geographically and culturally — between the continents.

The dramatic advances in aviation have revolutionized the role of those who keep the planes safe for flying. Once they were called mechanics. Now — in the age of the jet, with electronic instruments and exotic support systems — they are called technicians, in recognition of the increased knowledge and skill their task requires.

This program is designed to prepare aircraft and power-plant technicians for employment in commercial, corporate or general aviation.

The curriculum includes the theoretical and practical training designed to equip the student with the competence required to work effectively with all of these systems.

The student gains experience in working with a variety of types of aircraft and engines. The program includes seven academic terms and three co-op terms. The first four academic terms concentrate on airframe, and the last three on powerplant and business subjects.

The term schedule for the program follows. The Roman Numeral designates a school term, the letter E a co-op term.

AVIATION TECHNOLOGY TERM SCHEDULE

	First Year					Second Year				
Session	1	2	3	4	5	6	7	8	9	10
Group A	I	II	III	IV	V	E	VI	E	VII	E
Group B	I	II	III	IV	E	V	E	VI	E	VII

Co-op positions are in general aviation. Graduates may be employed by fixed base operators, corporate plane operations, or commercial airlines.

AVIATION TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1191 Algebra & Trigonometry I	5	-	4
1381 Aircraft Drawing	1	4	2
2241 Physics I	3	2	3
2601 Welding Processes	3	7	3
2602 Machine and Hand Tools	1	4	3
			18
■ Second School Term			
1192 Algebra & Trigonometry II	5	-	4
2242 Physics II	3	2	3
2603 Basic Aerodynamics and FAA Regulations	2	1	1
2604 Airframe Structures	5	5	5
2605 Materials and Processes	2	3	3
2606 Airframe Hydraulic & Pneumatic Systems	1	4	2
			18
■ Third School Term			
1193 Functions & Calculus I	5	-	4
2243 Physics III	3	2	3
2607 Airframe Systems, Hydraulic & Pneumatic Landing Gear	3	9	5
2608 Aircraft Structures (Metal)	3	7	4
2609 Fuels and Fuel Systems	1	4	2
			18
■ Fourth School Term			
1003 Communication Skills	5	-	3
1531 Introduction to Political Science	3	-	3
2610 Aircraft Electrical Systems	3	7	4
2611 Aircraft Instrument, Communications and Navigational & Unity Systems	3	7	4
2616 Flight Line Maintenance	3	7	4
			18
■ First Co-op Term			
9003 Cooperative Employment		40	3
■ Fifth School Term			
1004 Technical Writing	3	2	3
1505 Psychology	3	-	3
2613 Powerplant Theory, Reciprocating	3	7	5
2612 Airframe Assembly & Rigging	6	9	7
			18

■ Sixth School Term			
1511 Economics	5	-	4
2615 Ignition Systems	4	6	4
2614 Power Lubrication	2	3	3
*2921 Introduction to Business I	5	-	2
*2911 Accounting I	5	-	3
2619 Power Plant, Turbine	3	7	4
			17 or 18

*Students will take 2911 or 2921.

■ Second Co-op Term			
9004 Cooperative Employment		40	3

■ Seventh School Term			
1005 Effective Speaking	3	2	3
2617 Powerplant Systems & Components, Reciprocating	5	10	8
2618 Propellers	1	4	3
2620 Turbine Powerplant Systems & Components	5	5	4
			18

■ Third Co-op Term			
9005 Cooperative Employment		40	3

AVIATION TECHNOLOGY ADVISORY COMMITTEE

Joseph Babas ..... Avionics, Inc. (Lunken Airport)

Ralph Day ..... Blue Ash Airport

Richard Elliot, Steven Hanifin ..... Servair Aviation

Louis Glos ..... Co-op Aircraft Service

R. G. Grahm ..... American Airlines (Chicago Office)
Supervisor-Production Control

Dr. Sarah Harris ..... General Electric Co.
Technical Training School

William Hogan ..... Hamilton Airport, Inc.

Homer Jones ..... Retired Instructor Aviation Technology

Martha Lunken ..... Midwest Flight Center (Lunken Airport)

Larry Rodgers ..... Air Service Center, Inc. (Hamilton Airport)

James Ross ..... Cencom I (Lunken Airport)
General Manager

James Sievers ..... Chemed Corp. (Lunken Airport)

George Wedekind, Jr. ..... Wedekind Aircraft Co. (Middletown)

Dennis Wolter ..... Aircraft Paint & Upholstery (Clermont Airport)

CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY PROGRAMS

The building industry, highway building construction and climate control offers an unlimited future for civil, architectural, construction and environmental engineering technologists. As the population grows, the need for housing, highways, schools, shopping centers, etc., will grow. As a result, the demand for highly trained specialists in this field will also grow. The future needs of our society will demand that it also provide the engineering technicians who will serve these industries.

To meet this challenge, Cincinnati Technical College offers the Civil/Construction Engineering Technologies Program that is designed to provide effective training in a common core of preparation, but, flexible enough to allow the student to endeavor in an area of specialization. During two alternating terms of attending school and two terms of work experience, the student options from specialties such as: highway (surveying and graphics), construction (building), and heating and air conditioning. A tentative future option would be in the area of architectural.

CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY CURRICULUM
(Building Construction Option)

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1191 Algebra & Trigonometry I	5	-	4
1371 Engineering Graphics	1	5	3
2276 Science of Materials	3	2	3
3101 Surveying I	3	3	3
3109 Construction Methods	3	1	2
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills II	5	-	3
1192 Algebra & Trigonometry II	5	-	4
1373 Engineering Graphics II	1	4	2
2101 Engineering Materials	3	2	3
2271 Physics I	3	2	3
3102 Surveying II	1	5	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions & Calculus I	5	-	4
1521 Sociology	3	-	3
2105 Statics & Strength of Materials I	3	2	3
2273 Physics III	3	2	3
3144 Properties of Soils	2	3	2
3151 Light Construction	3	3	3
			18
■ Third School Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1005A Effective Speaking	3	-	2
1502 Human Relations	3	-	3
2106 Strength of Materials II	3	2	3
2274 Physics IV	3	2	3
3121 Structural Design I	3	2	3
3127 Quantity Surveys and Estimating	3	3	3
3161 Construction Management & Operations	2	3	2
			19

■ Fifth School Term			
1004A Technical Writing	3	-	2
1512 Economics I	3	-	3
1531 Introduction to Political Science	3	-	3
1772 Introduction to Computer Programming	3	2	3
3122 Structural Design II	2	4	3
3129 Contracts & Specifications	3	-	2
3152 Heavy Construction	3	2	3
			19
Student may elect 1194 Calculus.			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY ADVISORY COMMITTEE
Building Construction Option

V. P. Chronis, President ..... Chronis Construction Company

David Cunningham ..... Cincinnati Technical College
Student

Dick Frantz ..... Dugan & Meyers Construction Company
Vice President

James Houghten ..... Turner Construction Company
General Superintendent

Loren Poff ..... Frank Messer & Sons, Inc.
Vice President

Edward Recker ..... Cincinnati Floor Company, Inc.
Vice President

David Swedes ..... Hummel Building Company
President

Charles Warg ..... Charles F. Warg Construction Company
President

Richard Wess ..... Rehm Company, Inc.
President

CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY CURRICULUM
(Transportation Option)

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1191 Algebra & Trigonometry I	5	-	4
1371 Engineering Graphics	1	5	3
2276 Science of Materials	3	2	3
3101 Surveying I	3	3	3
3109 Construction Methods	3	1	2
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills II	5	-	3
1192 Algebra & Trigonometry II	5	-	4
1373 Engineering Graphics II	1	4	2
2101 Engineering Materials	3	2	3
2271 Physics I	3	2	3
3102 Surveying II	1	5	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions & Calculus I	5	-	4
1521 Introduction to Sociology	3	-	3
2105 Statics & Strength of Materials I	3	2	3
2273 Physics III	3	2	3
3103 Surveying III	3	3	3
3144 Properties of Soils	2	3	2
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1005A Effective Speaking	3	-	2
1502 Human Relations	3	-	3
2106 Strength of Materials II	3	2	3
2274 Physics IV	3	2	3
3104 Survey Calculations	3	2	3
3127 Quantity Surveys & Estimating	3	-	2
3132 Hydrology & Hydraulics	2	3	2
			18

■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
■ Fifth School Term			
1004A Technical Writing	3	-	2
1512 Economics I	3	-	3
1531 Introduction to Political Science	3	-	3
1772 Introduction to Computer Programming	3	2	3
3105 Design Problems	3	4	3
3129 Contracts & Specifications	3	-	2
3138 Municipal Engineering	3	-	2
			18
Student may elect 1194 Calculus.			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

CIVIL ENGINEERING TECHNOLOGY ADVISORY COMMITTEE
Transporation Option

Robert L. Adler, P.S., Chairperson ..... Punshon Engineering Co.
Coordinator

Jack Balcom ..... Cincinnati Technical College
Student (1975 Graduate)

Russell Ladley ..... Cincinnati Technical College
Retired Civil Engineering Instructor

Bob Grote, Sr. Engineer..... Cincinnati Gas & Electric Company
Manager, Engineering & Planning, Gas Dept.

Stanley Perin, P.E., P.S. ..... Butler County
County Engineer

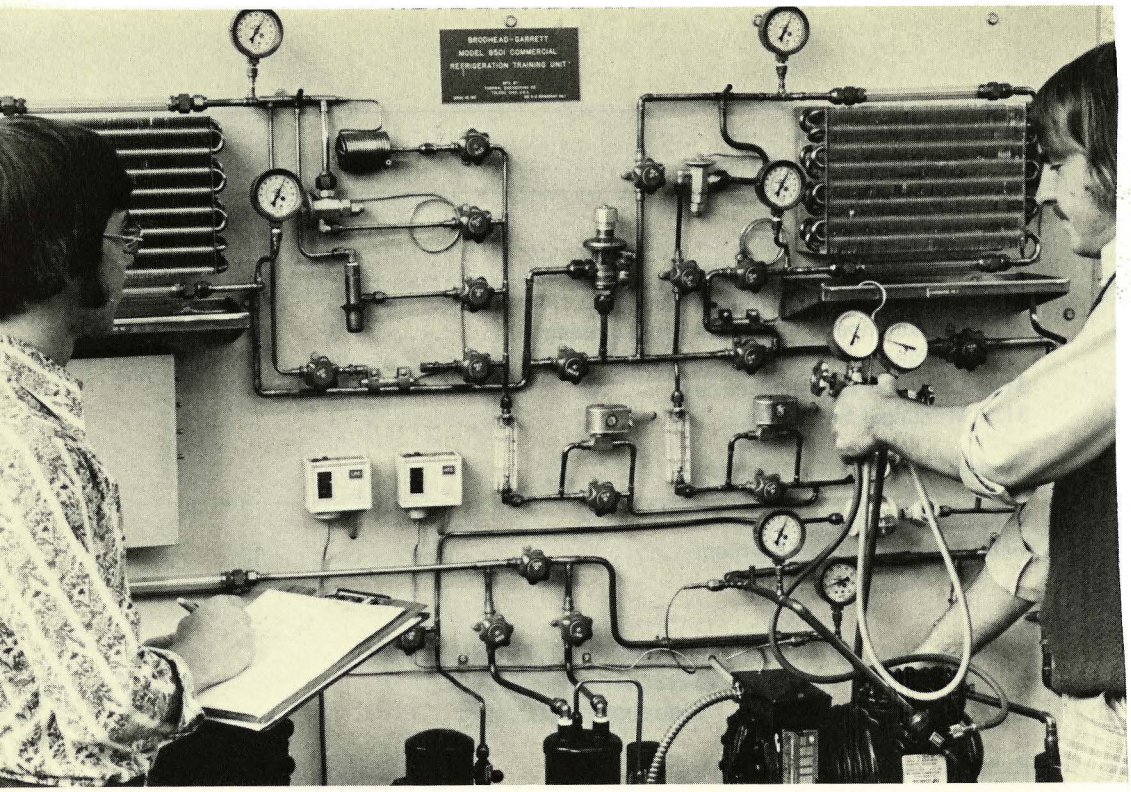
Ralph Schlueter, Secretary..... Cincinnati Technical College
Instructor

Donald Schramm, P.E., P.S..... Hamilton County
County Engineer

Donald E. Schultz, P.S. ..... Schultz Reg. Surveyor, Inc.
Owner

Matthew Schultze, P.E., P.S. ..... City of Cincinnati
Senior Engineer

John E. White, P.E..... Kral, Zepf, Freitag & Assoc.
Engineering Manager



AIR CONDITIONING TECHNOLOGY

Man cannot live without the air that envelops the earth, nor can he always live — comfortably, efficiently, healthily — with it. Even in the shelter he occupies, the air may be too cold or too hot, too warm or too dry, too dirty with dust, pollen or, in recent years, pollutant. For some sixty centuries of civilization, man lacked the tools and the technology to condition the air in his dwellings to make them more habitable.

Ours is the first generation to develop these tools and master the technology; now air conditioning, at first considered a luxury, is rapidly being regarded as another of man's necessities. Already one in every eight homes is at least partly air conditioned and one in every twelve completely so. A growing percentage of homes under construction is being built with central air conditioning. Few apartment houses, commercial buildings or industrial plants are being built without it.

The rapid growth in demand for "environmental control" has generated the new industry — air conditioning — with a new array of career opportunities. Manufacturers and dealers need technically trained personnel to research, develop, design, make, sell, install, service and maintain air conditioning installations in residences, offices, plants. In some cases, these units merely heat and cool the air, in others they clean and moisture-control it as well. In many instances the conditioned air so provided serves primarily creature comfort; in other instances it is needed to safeguard sophisticated equipment, specialized industrial processes, or indeed human life itself.

Refrigeration processes and equipment constitute a major related responsibility of this field.

The air conditioning industry has an acute need for trained technicians and affords them exceptional career possibilities.

AIR CONDITIONING TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1191 Algebra & Trigonometry I	5	-	4
1913 Electrical Fundamentals I	3	2	3
2276 Science of Materials	3	2	3
3201 Elements of Refrigeration & Heating	6	4	5
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills	5	-	3
1192 Algebra & Trigonometry II	5	-	4
1375 Engineering Graphics	1	4	2
1914 Electrical Fundamentals II	3	2	3
2271 Physics I	3	2	3
3202 Air Conditioning Principles I	2	4	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions and Calculus I	5	-	4
1385 Engineering Graphics (sheet metal layout)	1	4	2
1521 Sociology	3	-	3
2273 Physics III	3	2	3
3203 Air Conditioning Principles II	5	5	5
			17
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1005A Effective Speaking	3	-	2
1502 Human Relations	3	-	3
2274 Physics IV	3	2	3
3204 Air Conditioning Principles III	3	2	3
3205 Air Conditioning Design I	3	4	4
3209 A.C. Installation Techniques	3	2	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1004A Technical Writing	3	-	2
1512 Economics I	3	-	3
1531 Political Science	3	-	3
3206 Air Conditioning Design II	5	5	4
3207 Air Conditioning Controls	2	3	2
3208 Air Conditioning Applications	3	4	4
			18
Student may elect 1194 Calculus.			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

AIR CONDITIONING TECHNOLOGY ADVISORY COMMITTEE

Joseph A. Beal ..... Cincinnati Technical College
Student (1975 Graduate)

Richard Broering ..... P. H. Broering Company
Sales Manager

Frank Crane ..... Crane Heating & Air Conditioning Co.
Owner-Manager

Frederick Dietz..... Rusk Heating & Air Conditioning Company
Manager, Operations & Service

Robert Gerdsen ..... A. H. Gerdsen Co.
Manager

Cliff Pfirrman ..... Williamson Air Conditioning Co.
Manager, Retail Division

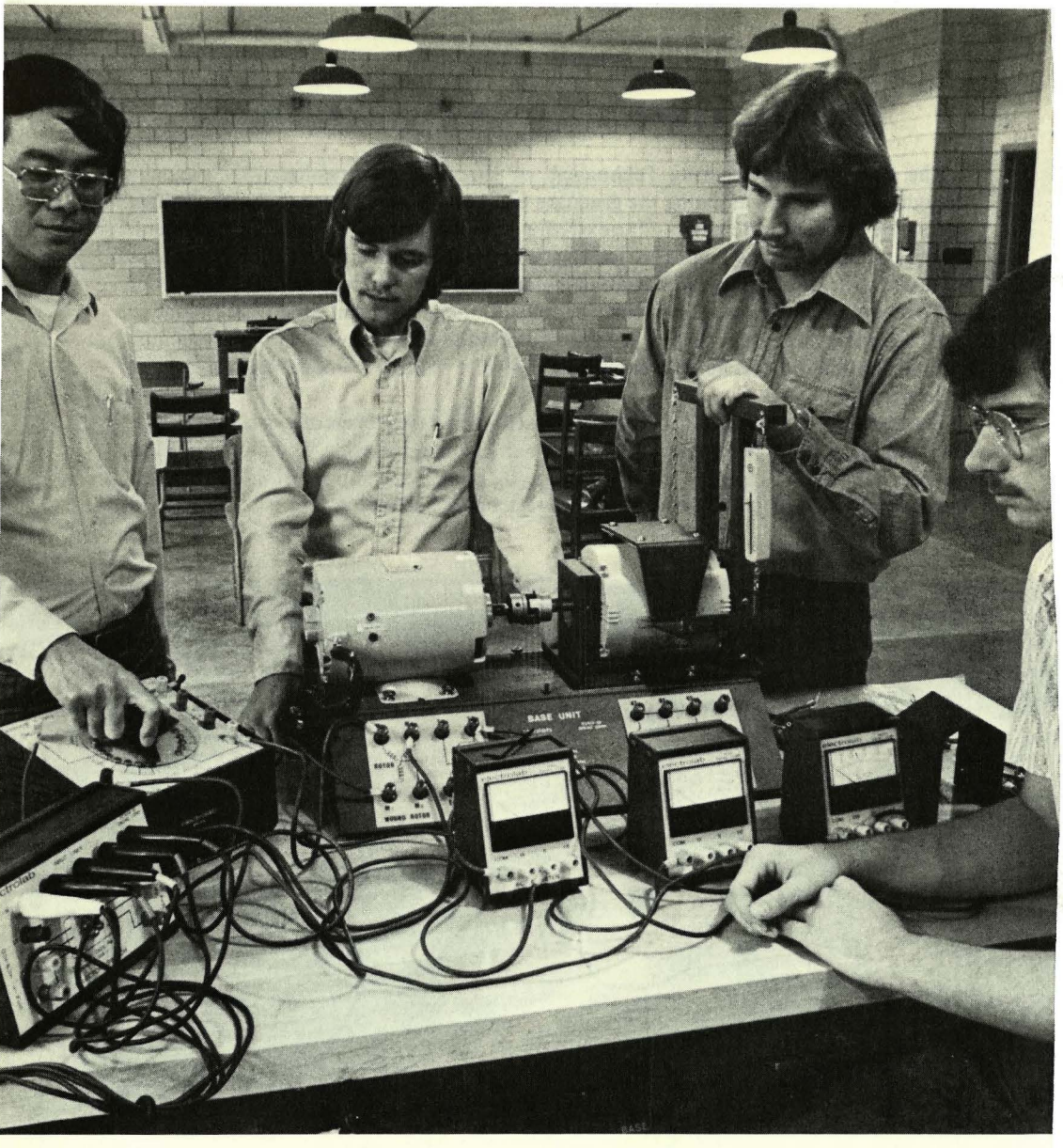
Thomas Winstell..... Technical Services, Inc.

ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

The Electrical Engineering Technician, or Electronics Specialist was originally thought of in terms of assisting the graduate engineer. Today, these technicians must specialize to meet the demands of an extremely rapid changing technical environment. Instead of assisting the engineer, today's Electrical Engineering Technician is also involved with application and design of engineering applications.

To meet this challenge, Cincinnati Technical College offers an Electrical Engineering Technology Program that is designed to provide effective training in a common core of preparation, but flexible enough to allow the student to endeavor in an area of specialization.

During two alternating terms of attending school and two terms of work experience, the student options from specialties such as: Electrical Design Technology, Electro-Mechanical Technology, Electronics Engineering Technology, Biomedical Electronics Technology and Communication Electronics Technology.



ELECTRICAL DESIGN TECHNOLOGY

This program is primarily designed to train electrical technicians or designers in the fields of electrical lighting system design for industrial, business and residential buildings, electrical power distribution and control and electrical motor and generator design and maintenance.

The prospective fields of employment are: manufacturing plant engineering, lighting system designer or estimator for architectural companies, electrical technicians for power companies, maintenance of industrial AC and DC motors and electrical systems; motor and generator manufacturers, industrial motor control systems, design of machine tool power panels, electrical contractors and sales or service representative for electrical equipment manufacturers.

ELECTRICAL DESIGN TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1191 Algebra & Trigonometry I	5	-	4
1901 Electronics I	6	4	5
*1371 Engineering Graphics I	2	4	3
*1772 Computer Programming	3	2	3
2271 Physics I	3	2	3
			18
*Either 1371 or 1772 will be scheduled.			
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills III	5	-	3
1192 Algebra & Trigonometry II	5	-	4
*1371 Engineering Graphics	2	4	3
*1772 Computer Programming	3	2	3
1902 Electronics II	6	4	5
2272 Physics II	3	2	3
			18
*Either 1371 or 1772 will be scheduled.			
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions and Calculus I	5	-	4
1377 Electrical Drafting	1	4	2
1521 Introduction to Sociology	3	-	3
1915 Electrical Lighting & Wiring Design I	4	3	4
1921 Electrical Codes	3	-	2
2273 Physics III	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1005A Effective Speaking	3	-	2
1502 Human Relations	3	-	3
1916 Electrical Lighting & Wiring II	4	3	4
1917 Electrical Machines I	3	2	3
1922 Industrial Instrumentation	2	3	3
2274 Physics IV	3	2	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1004A Technical Writing	3	-	2
1512 Economics I	3	-	3
1531 Introduction to Political Science	3	-	3
1907 Electrical Motor Control	3	2	3
1918 Electrical Power Distribution	4	3	4
1920 Electrical Estimating	3	2	3
			18
Student may elect 1194 Calculus.			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

ELECTRICAL DESIGN TECHNOLOGY ADVISORY COMMITTEE

Leo Grosser ..... Hixson, Inc.
Vice President

Walter G. Horais ..... Cincinnati Electronics, Inc.
Plant Engineer

Hubert A. Kahler ..... H. A. Kahler
Principal Engineer

H. M. Kallaher ..... Belcan Corporation
Vice President

Richard F. Lang ..... Westinghouse Electric Company
Product Manager

Roy McGuire ..... A. M. Kinney, Inc.
Director of Electrical Engineering Division

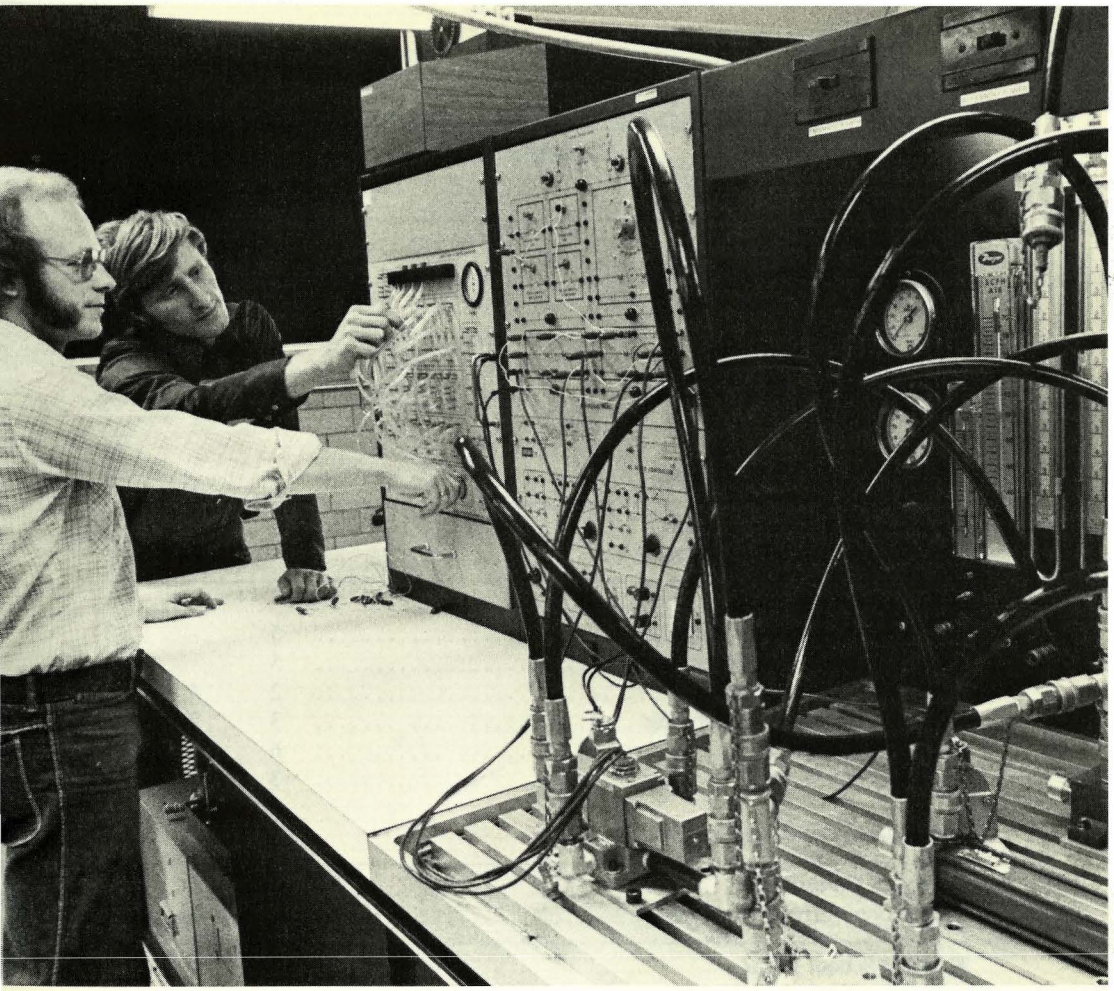
Gus G. Perdikakes ..... Midwest Technical, Inc.
Regional Manager

Charlie F. Pollock ..... Westinghouse Electric Company
Draftsman

Michael Siska ..... Whiteway Manufacturing Company
Manager of Engineering

John Vordenbrueggen ..... Wilde & Kraus
Director of Electrical Engineering

LeRoy Waldo ..... Bosch & LaTour
Associate



ELECTRO-MECHANICAL TECHNOLOGY

The technological impact of automation in American Industry, the rapidly expanded uses for electronic computers, and the tremendous increase in man's technical knowledge have increased the need in industry for a large number of technically trained personnel who understand both the mechanical and electric phases of automated systems.

In an effort to meet this growing need for the highly-trained technician Cincinnati Technical College — with the assistance of interested professionals from local industries — developed the Electro-Mechanical Technology program. The program provides study and practice in measurement systems, automation and control systems, special purpose computers, hydraulics and pneumatics, and the uses of mechanical and electronic devices in production and fabrication control in manufacturing.

Students seeking to qualify for the Associate in Applied Science degree in Electro-Mechanical Technology must complete the course requirements in mathematics, physics and graphics as required in all engineering technologies.

The Electro-Mechanical technician normally works as a member of an engineering team or directly under a production supervisor. Advancement opportunities are numerous and can be enhanced through further education.

ELECTRO-MECHANICAL TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1191 Algebra & Trigonometry I	5	-	4
1901 Electronics I	6	4	5
*1371 Engineering Graphics I	2	4	3
*1772 Computer Programming	3	2	3
2271 Physics I	3	2	3
			18
*Either 1371 or 1772 will be scheduled.			
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills III	5	-	3
1192 Algebra & Trigonometry II	5	-	4
*1371 Engineering Graphics	2	4	3
*1772 Computer Programming	3	2	3
1902 Electronics II	6	4	5
2272 Physics II	3	2	3
			18
*Either 1371 or 1772 will be scheduled.			
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions & Calculus I	5	-	4
1521 Introduction to Sociology	3	-	3
1905 Industrial Control Electronics	3	4	3
2104 Hydraulics & Pneumatics	3	2	3
2114 Machine Processes	1	4	2
2273 Physics III	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1005A Effective Speaking	3	-	2
1502 Human Relations	3	-	3
1908 Digital Systems I	3	2	3
2112 Fluid Power Systems I	3	-	2
2116 Electro-Mechanical Controls	5	5	5
2274 Physics IV	3	2	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1004A Technical Writing	3	-	2
1512 Economics I	3	-	3
1531 Introduction to Political Science	3	-	3
2105 Statics and Strength of Materials I	3	2	3
2113 Mechanisms Analysis and Design	3	2	3
2117 Electro-Mechanical Design	4	4	4
			18
Student may elect 1194 Calculus.			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

ELECTRO-MECHANICAL TECHNOLOGY ADVISORY COMMITTEE

Jack Cahall ..... Cincinnati Milacron
Manager, Training and Development

Fred Goebel ..... LeBlond Machine Tool Company
Development Engineer Research & Development

Albert E. Good ..... G. A. Gray Company
Chief Electrical Engineer

Sylvan Hausfield ..... Cincinnati Belting & Transmission Company
President

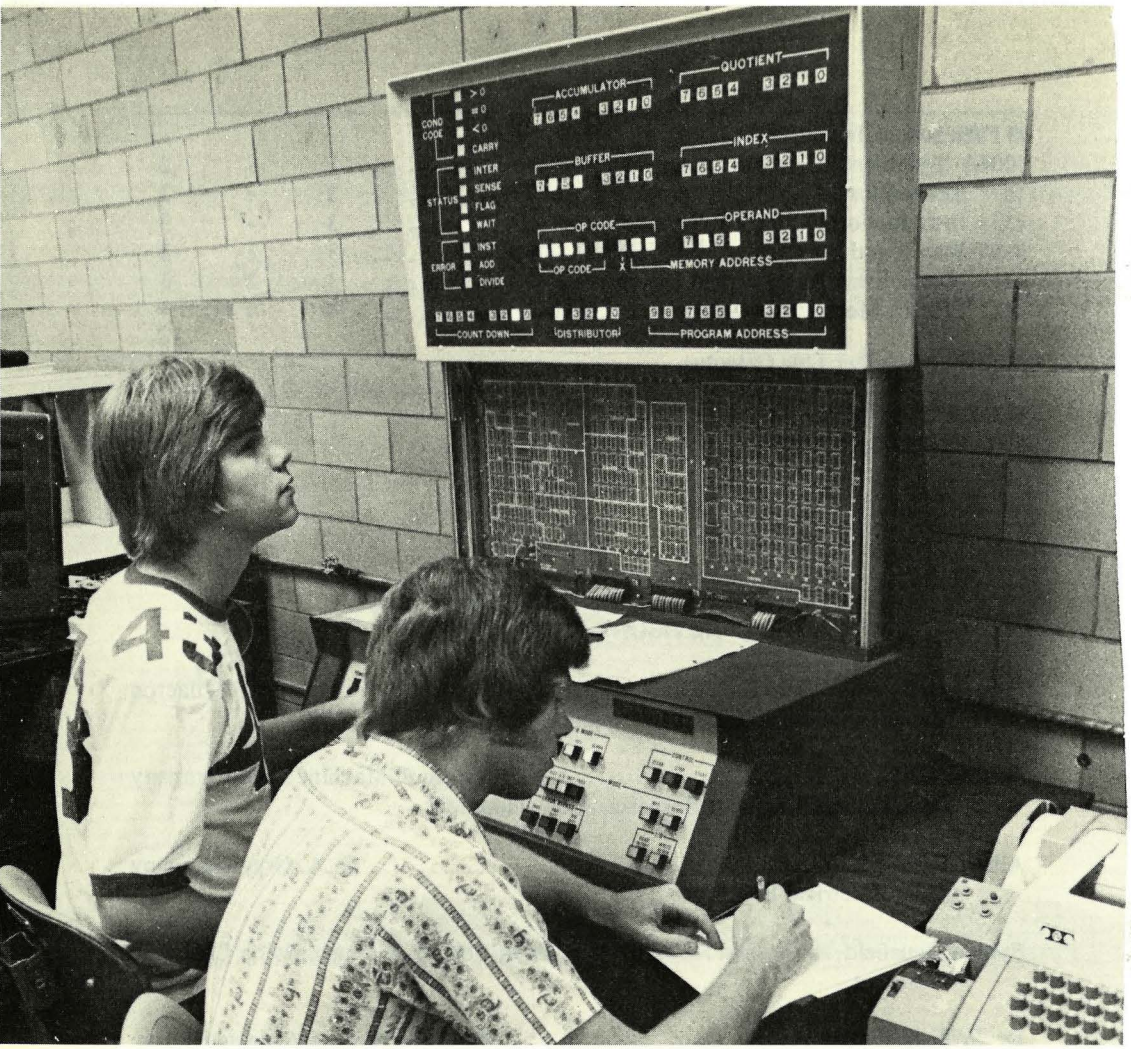
Dr. William Koster ..... Met Cut Research Associates, Inc.
Director of Metallurgical Engineering

Jim Mettey ..... Cincinnati Electronics Corp.
Director/Engineering Control Systems Analysis

Douglas Morgan ..... Lodge & Shipley
Electrical Designer

James VanLoan ..... Procter & Gamble Company

Paul Wagner ..... Allis-Chalmers Company
Senior Project Engineer Research & Development



ELECTRONIC ENGINEERING TECHNOLOGY

The growth of industrial and consumer electronic devices, automation, and computer electronics has generated a demand for electronic technicians that cannot be filled by those presently qualified. There exists a need for trained electronic technicians. Since computers are widely utilized in Data Systems for clerical and manufacturing systems, the electronics program is oriented toward the general electronics with emphasis on digital computers.

The electronic technician is a valuable member of the engineering team. He normally assists engineers in designing, building, troubleshooting and testing functions.

Students in the Electronic Engineering Technology program perform their cooperative work in many companies. Typical products of these companies are machine tools, computers, jet engines, military electronic gear, radio communication equipment, and telephone service. Most graduates choose to continue working for the companies that employed them as co-op students. Many will continue their education in company-sponsored programs.

ELECTRONICS TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1191 Algebra & Trigonometry I	5	-	4
1901 Electronics I	6	4	5
*1371 Engineering Graphics I	2	4	3
*1772 Computer Programming	3	2	3
2271 Physics I	3	2	3
			18
*Either 1371 or 1772 will be scheduled.			
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills III	5	-	3
1192 Algebra & Trigonometry II	5	-	4
*1371 Engineering Graphics	2	4	3
*1772 Computer Programming	3	2	3
1902 Electronics II	6	4	5
2272 Physics II	3	2	3
			18
*Either 1371 or 1772 will be scheduled.			
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions & Calculus I	5	-	4
1521 Introduction to Sociology	3	-	3
1903 Electronics III	5	5	5
1908 Digital Systems I	3	2	3
2273 Physics III	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1005A Effective Speaking	3	-	2
1502 Human Relations	3	-	3
1904 Electronics IV	4	3	4
1909 Digital Systems II	3	4	3
1911 Communicaton Systems I	3	4	3
2274 Physics IV	3	2	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1004A Technical Writing	3	-	2
1512 Economics I	3	-	3
1531 Introduction to Political Science	3	-	3
1910 Digital Systems III	5	4	6
1940 Electronic Project	4	4	4
			18
Student may elect 1194 Calculus.			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

ELECTRONIC ENGINEERING TECHNOLOGY ADVISORY COMMITTEE*

J. Anderson ..... Cincinnati Electronics Corp.
Sr. Staff Engineer

Albert E. Good ..... G. A. Gray Company
Chief Electrical Engineer

Raymond T. Harvey ..... Armco Steel Corp.
Coordinator, Professional Employment

Paul Houillion ..... Ohmart Corp.
Factory Superintendent

James Lausten ..... IBM Corporation
Field Manager

Charles Mack ..... Knodel-Tygrett Company
Service Manager, Electronics Division

Charles Shaw ..... Two-Way Mobile, Inc.
Owner Manager

Clay Strider ..... General Electric Company
Program Manager, Development Programs

Jim Wiechers ..... Cincinnati Technical College
Student (1975 Graduate)

*Also serving as advisers for the Communication 76 Electronics Option.

COMMUNICATION ELECTRONICS TECHNOLOGY

This program is designed to train students in obtaining a First-Class FCC License in order to work in the fields of: television stations, radio stations, closed circuit television, aviation communications and mobile radios.

The prospective fields of employment are: field engineer, master control operator, studio operator, transmission equipment maintenance, transmission operator and AVIONICS technician.

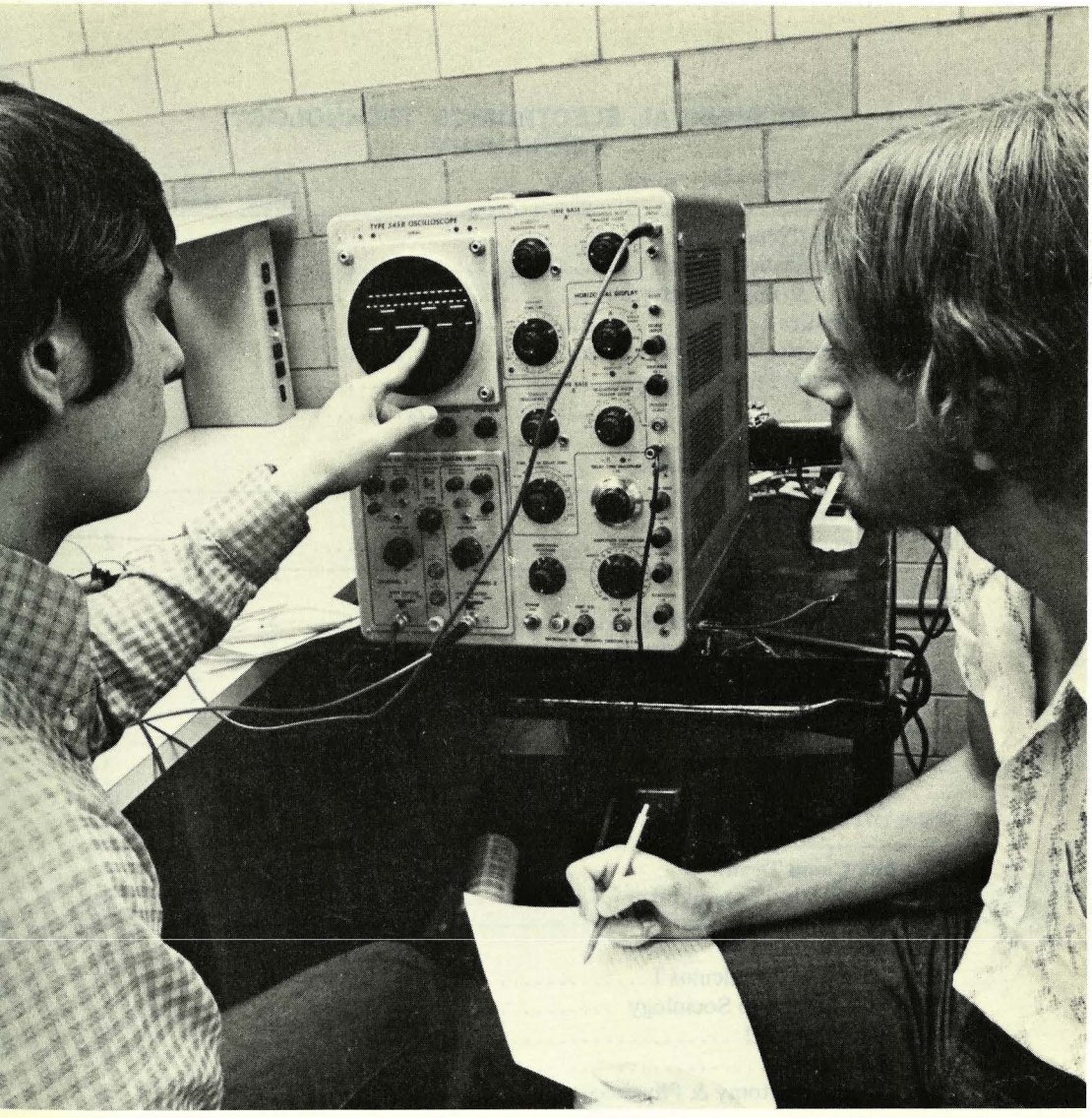
COMMUNICATION ELECTRONICS TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1191 Algebra & Trigonometry I	5	-	4
1901 Electronics I	6	4	5
*1371 Engineering Graphics I	2	4	3
*1772 Computer Programming	3	2	3
2271 Physics I	3	2	3
			18
*Either 1371 or 1772 will be schedule.			
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills III	5	-	3
1192 Algebra & Trigonometry II	5	-	4
*1371 Engineering Graphics	2	4	3
*1772 Computer Programming	3	2	3
1902 Electronics II	6	4	5
2272 Physics II	3	2	3
			18
*Either 1371 or 1772 will be scheduled.			
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions and Calculus I	5	-	4
1521 Introduction to Sociology	3	-	3
1903 Electronics III	5	5	5
1908 Digital Systems I	3	2	3
2273 Physics III	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3

■ Fourth School Term			
1005A Effective Speaking	3	-	2
1502 Human Relations	3	-	3
1904 Electronics IV	4	3	4
1909 Digital Systems II	3	2	3
1911 Communication Systems I	3	4	3
2274 Physics IV	3	2	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
■ Fifth School Term			
1004A Technical Writing	3	-	2
1512 Economics I	3	-	3
1531 Introduction to Political Science	3	-	3
1912 Communication Systems II	4	4	4
1926 FCC License Preparation	3	-	2
1940 Electronic Project	4	4	4
			18
Student may elect 1194 Calculus.			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

COMMUNICATION ELECTRONICS TECHNOLOGY ADVISORY COMMITTEE

(See the Electronic Engineering Technology Advisory Committee.)



BIOMEDICAL ELECTRONICS TECHNOLOGY

As the world's population grows, the need for health care increases. There has been major progress in neurology and cardiology because of the marriage of medicine and electronics.

Ultrasonics utilize sonar principles in sounding body cavities and tissue to detect signs of disease or deterioration. Electronics is involved in patient monitoring and diagnosis, therefore, doctors must be able to depend on the biomedical equipment and the information it provides.

This program is heavily concerned with electronic instrumentation but also provides a general understanding of physiology.

The prospective fields of employment are: designer for biomedical equipment manufacturers, maintenance of biomedical equipment for hospitals and service and sales engineer for biomedical equipment industries.

BIOMEDICAL ELECTRONICS TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1191 Algebra & Trigonometry I	5	-	4
1901 Electronics I	6	4	5
*1371 Engineering Graphics I	2	4	3
*1772 Computer Programming	3	2	3
2271 Physics I	3	2	3
			18
*Either 1371 or 1772 will be scheduled.			
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills III	5	-	3
1192 Algebra & Trigonometry II	5	-	4
*1371 Engineering Graphics	2	4	3
*1772 Computer Programming	3	2	3
1902 Electronics II	6	4	5
2272 Physics II	3	2	3
			18
*Either 1371 or 1772 will be scheduled.			
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions & Calculus I	5	-	4
1521 Introduction to Sociology	3	-	3
1903 Electronics III	5	5	5
*2213 Chemistry	4	2	3
2216 Human Anatomy & Physiology	5	-	3
			18
*Offered late afternoon or early evening.			
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1005A Effective Speaking	3	-	2
1502 Human Relations	3	-	3
1904 Electronics IV	4	3	4
1908 Digital Systems I	3	2	3
*1923 Biomedical Instrumentation I	3	2	3
2217 Human Anatomy & Physiology II	5	-	3
			18
*Offered late afternoon or early evening.			
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1004A Technical Writing	3	-	2
1512 Economics I	3	-	3
1531 Introduction to Political Science	3	-	3
*1924 Biomedical Instrumentation II	5	5	5
2218 Human Anatomy & Physiology III	5	-	3
*2730 Hospital Safety	3	-	2
			18

Student may elect 1194 Calculus.

*Offered late afternoon or early evening.

■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

BIOMEDICAL ELECTRONICS TECHNOLOGY ADVISORY COMMITTEE

Ronald Bradley ..... Jewish Hospital
Chief Electronic Technician

Robert Caldwell ..... V.A. Hospital
Supervisor of Inhalation Therapy

Nick Davis ..... V.A. Hospital
Supervisor of Research Laboratory

Neil Edwards ..General Hospital and College of Medicine, University of Cincinnati
Biomedical Engineer, Assistant Professor

Jack Knoechel ..... Cincinnati Technical College
Student (1974 Graduate)

Mark Krahe ..... Providence Hospital
Director of Plant Operations

Alfred McCoy ..... V.A. Hospital
Supervisor of Pulmonary Function Section

Edgar Miller ..... Christ Hospital
Supervisor of Maintenance

Elmer Nielsen ..... Good Samaritan Hospital
Director of Maintenance

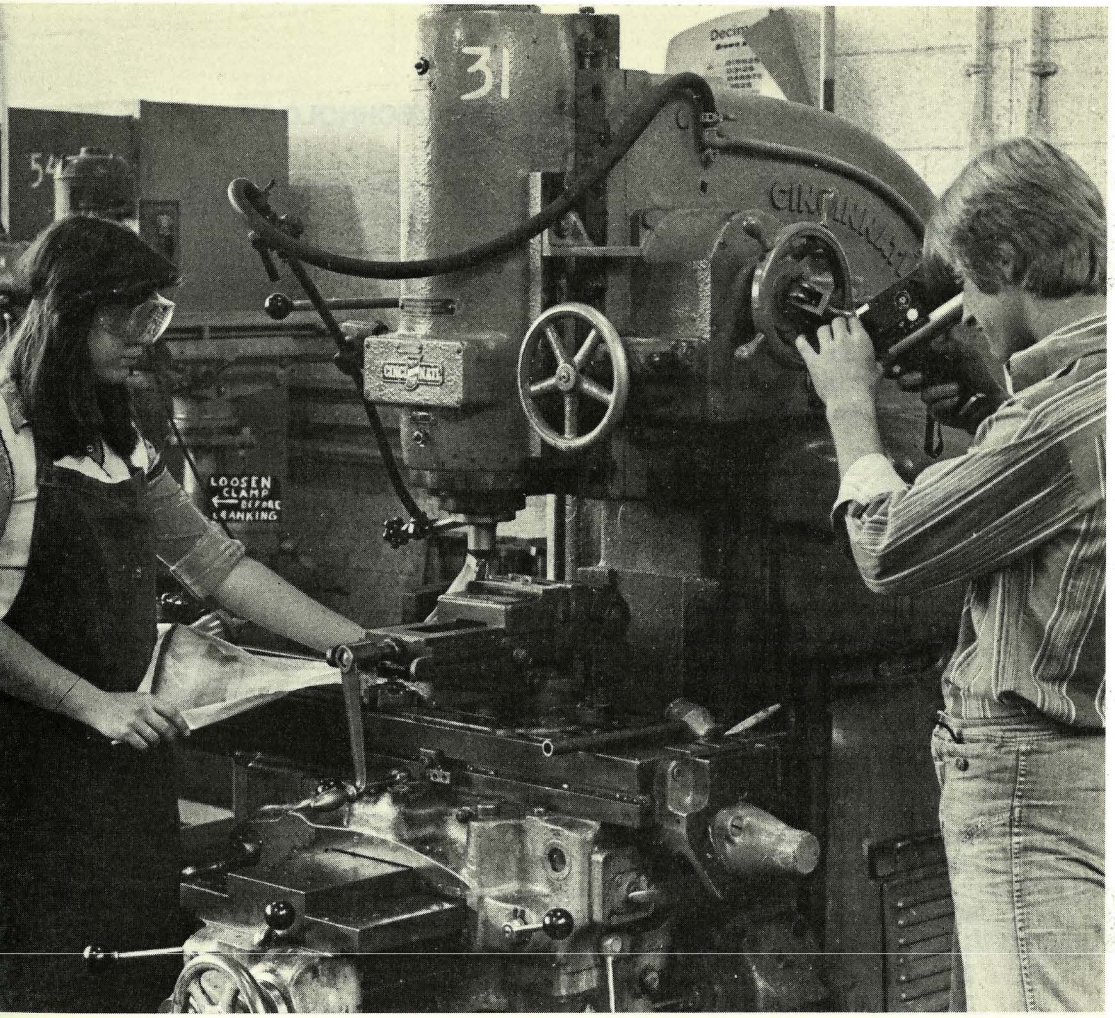
Edward Slago ..... Liebel Flarsheim Company
Vice President for Engineering Research Development

James Strother ..... V.A. Hospital
Supervisor of Chemistry Section

MECHANICAL ENGINEERING TECHNOLOGY PROGRAMS

The Mechanical Engineering Technician is primarily concerned with the application and design-oriented aspects of Engineering Technology. Originally, these technicians were concerned with assisting the engineer in a generalized nature. Today, these technicians must specialize to meet the demands of an extremely rapid changing technical environment.

To meet this challenge, Cincinnati Technical College offers a Mechanical Engineering Technology program that is designed to provide effective training in a common core of preparation; but flexible enough to allow the student to endeavor in an area of specialization. During two alternating terms of attending school and two terms of work experience, the student options from specialties such as: Mechanical Design, Industrial Engineering, Metal Fabrication, Materials (Plastics), and Air Conditioning.



INDUSTRIAL ENGINEERING TECHNOLOGY

A new plant is to be built. It will receive raw material for processing, fabricating, assembling and out-put finished products.

A lot of questions need to be answered; what's the best layout for the plant? How can the materials be processed most efficiently? What machines should be used? How should they be spaced? How can the employees be motivated to do high quality work? How can costs be lowered to meet those of efficient competitors?

The Industrial Engineering Technician is one of the members of the productivity team interested in finding the solutions to these problems. This type of technician is used by industry in new and long established plants to measure and analyze production data and devise means of improving the methods of production.

Graduates of this program may begin full time work as technicians in these areas: methods, time-study, work measurement, production control, inventory control, quality control, wage and job evaluation, material handling, plant layout. Able graduates can advance to more responsible positions with additional training and experience.

Cooperative training positions are in large and small industrial plants.

INDUSTRIAL ENGINEERING TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1191 Algebra and Trigonometry I	5	-	4
1371 Engineering Graphics I	1	5	3
2114 Machine Processes	1	4	2
1913 Electrical Fundamentals I	3	2	3
2276 Science of Materials	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills III	5	-	3
1192 Algebra and Trigonometry II	5	-	4
1372 Engineering Graphics II	1	4	2
2101 Engineering Materials	3	2	3
2104 Hydraulics and Pneumatics	3	2	3
2271 Physics I	3	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions and Calculus I	5	-	4
2273 Physics III	3	2	3
2002 Materials Handling	3	2	3
2004 Time and Motion Study	3	2	3
2009 Industrial Safety	3	-	2
1521 Introduction to Sociology	3	-	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1005A Effective Speaking	3	-	2
2102 Manufacturing Processes	3	-	2
2003 Plant Layout	3	4	3
2274 Physics IV	3	2	3
1502 Human Relations	3	-	3
2005 Quality Control	3	2	3
2119 Systems Development — N.C.	1	2	2
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1004A Technical Writing	3	-	2
1512 Economics	3	-	3
2010 Industrial Hygiene Measurement	1	4	2
1531 Introduction to Political Science	3	-	3
1772 Introduction to Computer Programming	3	2	3
2007 Production Cost and Control	3	-	2
2006 Industrial Engineering Project	2	5	3
			18
Student may elect 1194 Calculus.			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

INDUSTRIAL ENGINEERING TECHNOLOGY ADVISORY COMMITTEE

Fred Brinkmiller.....Allis-Chalmers Corp.
Senior Quality Assurance Engineer

James Davis ..... Procter & Gamble
Production Manager

Richard Evans .....C. G. & E. Company
Materials Management Administrator

William Ramsey ..... Procter & Gamble
Manager, Distribution Sales

Michael Smith..... Cincinnati Technical College
Student (1975 Graduate)

Paul Termuhlen .....Mercy Hospital
Engineer

Robert Turner, Chairman.....Nutone Corporation
Director, Manufacturing & Engineering

MECHANICAL DESIGN TECHNOLOGY

As the American economy expands, each new product passes through various design and development stages. To achieve the effective use of engineering talent, design departments are usually organized on a team basis. Then mechanical design technician is an important member of that team.

Engineers can communicate verbally, or through rough sketches, with mechanical design technicians who clarify specifications and prepare initial drawings. From these specifications and initial drawings, detail draftsmen prepare working drawings which are used to produce the new product.

Cincinnati Technical College Mechanical Design students co-op with companies which produce machine tools, air conditioning equipment, jet engines, and many other types of industrial and consumer products. Recognizing the increasing complexity of these industries, the Cincinnati Technical College provides the equipment and instruction necessary to familiarize the student with computerized numerical control processes, data processing to control the retrieval of drawings microfilmed in aperture cards, and other facets of automation significant to the mechanical design field.

The curriculum offers all the technical core courses necessary for success as a mechanical design technician, and management courses (job relations, supervision, etc.) which supports personal growth and development.

Working directly with key management personnel, the mechanical design technician is in an excellent position for continued advancement.

MECHANICAL DESIGN TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1191 Algebra and Trigonometry I	5	-	4
1371 Engineering Graphics I	1	5	3
2114 Machine Processes	1	4	2
1913 Electrical Fundamentals I	3	2	3
2276 Science of Materials	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills III	5	-	3
1192 Algebra and Trigonometry II	5	-	4
1372 Engineering Graphics II	1	4	2
2101 Engineering Materials	3	2	3
2104 Hydraulics and Pneumatics	3	2	3
2271 Physics I	3	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions & Calculus I	5	-	4
1374 Engineering Graphics III	1	4	2
1521 Introduction to Sociology	3	-	3
2105 Statics & Strengths of Materials I	3	2	3
2273 Physics III	3	2	3
2113 Mechanism Analysis & Design	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1005A Effective Speaking	3	-	2
2102 Manufacturing Processes	3	-	2
1502 Human Relations	3	-	3
2274 Physics IV	3	2	3
2106 Strength of Materials II	3	2	3
2107 Machine Design	2	5	3
2119 Systems Development, N.C.	1	2	2
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1004A Technical Writing	3	-	2
1531 Introduction to Political Science	3	-	3
1772 Introduction to Computer Programming	3	2	3
2111 Tool Engineering Design	3	2	3
1512 Economics	3	-	3
2108 Machine & Product Design	4	6	4
			18
Student may elect 1194 Calculus.			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

MECHANICAL DESIGN TECHNOLOGY ADVISORY COMMITTEE

Edward M. Ashley ..... General Electric Co.
Manager, Drafting and Training

Robert Bentzler ..... Intercontinental Chemical Corp.
Professional Engineer

John Blanton ..... General Electric Co.
General Manager, Advanced Technology Programs

Ralph Brenner ..... Cincinnati Milacron
Personnel Development

Werner Jessen ..... Alexander & Associates
President

Marvin R. Jester ..... Processes Research, Inc.
Executive Vice President

Ben Kearns ..... Keco Industries
Chief Draftsman

G. Fred Koenig ..... G. A. Gray Company
Vice President, Engineering

Russell Little ..... Little Design Engineering Co.
Owner

Don Suer ..... Plastic Molding, Inc.
Chief Engineer

Jayne Sunderman ..... Cincinnati Technical College
(1975 Graduate)

James Wyler, Chairman ..... Allis-Chalmers Corp.
Manager of Community Relations and Professional Placement

PLASTICS TECHNOLOGY

Few industries offer career opportunities to compare with those in plastics. While the average industry the past several decades has been expanding annually at a rate of about 4.5%, the plastics industry has recorded spectacular annual rates of 12%–14%. The volume of plastics produced is expected to exceed that of iron and steel by the 1980's. Two hundred and fifty thousand more employees will be needed in the plastics field in the Seventies. Three of every five firms in the industry say they need graduates of associate degree programs.

Plastics is a forward-looking industry. The state of the art has been advanced rapidly in response to the increasing demands of the market. Appliances, electrical and electronic devices, packaging, automobiles, aircraft engines — these and countless other products — have been improved through the use of plastics.

Plastics, then, offers exciting challenges to those with ambition, talent and imagination.

The curriculum in Plastics Technology as offered by the Cincinnati Technical College is designed to provide the student with the necessary technical background in plastics materials, testing, and fabrication by means of various manufacturing processes. Regular classroom instruction is supplemented by laboratory experiments and site training.

Plastics technologists trained in this curriculum will have excellent background suitable for application to positions in the materials, equipment and fabrication areas of industries concerned with plastics.

PLASTICS TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills	5	-	3
1191 Algebra & Trigonometry I	5	-	4
1371 Engineering Graphics I	1	5	3
1913 Electrical Fundamentals I	3	2	3
2114 Machine Processes	1	4	2
2276 Science of Materials	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills	5	-	3
1192 Algebra & Trigonometry II	5	-	4
1372 Engineering Graphics II	1	4	2
2101 Engineering Materials	3	2	3
2104 Hydraulics & Pneumatics	3	2	3
2271 Physics I	3	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1193 Functions & Calculus I	5	-	4
1521 Sociology	3	-	3
2273 Physics III	3	2	3
2278 Chemistry	3	3	3
2301 Compression & Transfer, Castings	2	3	2
2302 Injection & Extrusion Molding	2	3	2
2009 Industrial Safety	2	-	1
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1005A Effective Speaking	3	-	2
1502 Human Relations	3	-	3
2105 Statics & Strength of Materials	3	2	3
2119 Systems Development — N.C.	1	2	2
2274 Physics IV	3	2	3
2303 Fiber Reinforced Plastics	2	4	3
2304 Laminates & Foams	2	3	2
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1004A Technical Writing	3	-	2
1531 Introduction to Political Science	3	-	3
1512 Economics I	3	-	3
2005 Quality Control	3	2	3
2305 Thermo-forming Methods	2	3	2
2308 Blow Molding	3	2	3
2306 Product Design	2	3	2
			18
Student may elect 1194 Calculus			
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

PLASTICS TECHNOLOGY ADVISORY COMMITTEE

Frank Backscheider ..... Recto Molded Products, Inc.
Vice President

Roland Bedard ..... Monsanto Company
Senior Engineer, Process Technology

Harold Colwell ..... Cincinnati Technical College
Student (1975 Graduate)

Glenn N. Davis ..... Cincinnati Milacron, Inc.
Senior Development Engineer, Cimastra Division

Richard Fong ..... Globe Union, Inc.
Plant Superintendent

Robert Fremont ..... Formica Corporation
Manager, Technical Services

Robert Gerdes ..... Plastics Molding Corporation
President

Stanley Harrier ..... General Electric Company
Manager, Plastics Applications Development Laboratory

Mel F. Maringer ..... U.S. Industrial Chemical Co.
Research Associate

Robert Sherman ..... Society of the Plastic Industry
Mid-West Regional Manager

Donald Suer ..... Plastics Molding Corporation
Chief Engineer

DEPARTMENT OF ALLIED HEALTH

With the advent of a more sophisticated medical science, career opportunities in the health care fields are expanding. The concern for making medical care and preventive health care available to more people has prompted the development of educational programs for skilled technical personnel to assist the physician, dentist and nurse.

The traditional centers for training these individuals, the hospitals, medical centers and physician's offices have been unable to fill this educational need and have turned to technical institutions such as Cincinnati Technical College to provide the classroom instruction and organization which are a part of good educational programs.

Cincinnati Technical College, unique in its development of cooperative education, offers eight programs for students interested in allied health careers: Dietetic Technician, Dietetic Assistant, Medical Assisting Technology, Medical Laboratory Technology, Medical Record Technology, Surgical Assisting Technology, Physician Assisting Technology, Operating Room Technician and Respiratory Therapy Technician. Three of these programs are short-term programs. The Dietetic Assistant Program is offered for individuals currently employed in food service areas of health care facilities. The Operating Room Technician Program and the Respiratory Therapy Technician Program are one year programs. A core curriculum consisting of basic courses in medical science common to all these programs facilitates transfer from one program to another. All of the programs are designed to conform to the national standards of the American Medical Association Council on Medical Education for accreditation and to guidelines of professional organizations. Upon successful completion of the course of study, the student is granted an Associate Degree by Cincinnati Technical College.

Cooperative employment in the Health Technologies areas is considered to be a clinical experience. All clinical experience must be approved by the Program Coordinator.

DEPARTMENT OF HEALTH TECHNOLOGIES
GENERAL ADVISORY COMMITTEE

Mary Agna, M.D.
Doris Beatty, M.D.
Monica V. Brown
Executive Director,
Health Careers of Ohio
E. T. Buford, M.D.
Edna Caywood
Executive Director,
Health Careers Association
of Greater Cincinnati
Werner Donath, M.D.
Roberta Grant
Community Action Commission
Edie Sellers
West End Community Health Center
Lonnie Wright
Assistant Vice President
University of Cincinnati
Medical Center
John Wulsin, M.D.
*Ronald Fallat, M.D.

*Acting Medical Director

DIETETIC TECHNICIAN

The American Dietetic Association defines the Dietetic Technician as a technically skilled professional person, working under the guidance of a Registered Dietitian or A.D.A. dietitian, having responsibilities in assigned areas in food service management; in teaching foods and nutrition principles; and in dietary counseling. The Dietetic Technician extends the effectiveness of the dietitian or nutritionist.

The C.T.C. program will have major emphasis in food service management but with a strong nutrition component. Health care institutions generally are becoming more aware of the need for competent, knowledgeable nutrition practices and management. Other community food facilities for well people are becoming interested in the nutrition contribution to healthful, productive living.

Because of the growing demand for nutrition professionals, the most critical need will be in hospitals, nursing homes, extended care facilities and other health care institutions. Future position possibilities seem bright in community areas; child care centers, health departments, clinics, and government health programs.

Many persons currently employed in health care facilities may use this program to increase their knowledge and career mobility potential. Evening courses will be offered if there is sufficient student interest. Career progression is planned at all levels. Many courses will transfer towards a 4-year major in Food & Nutrition (offered at 3 local colleges).

A required, pre-planned, clinical experience progression will supplement classroom theory with on-the-job training. This practical experience will parallel newly acquired knowledge in all areas of food service management, personnel management and nutrition education. Health care facilities will be the major sites supplemented by numerous field trips or observation periods. The college will attempt to place each Dietetic Technician student in cooperative clinical experiences but cannot guarantee payment for these experiences.

Students interested in Dietetic Technology would be well advised to choose Chemistry prior to entering the program. Any experience in a health care institution or food facility would be a definite advantage.

DIETETIC TECHNICIAN CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1101 Business Mathematics	5	-	4
2210 General Chemistry	3	2	3
2216 Human Anatomy & Physiology	5	-	3
2780 Dietetic Tech. Orientation	3	-	2
2801 Intro. to Restaurant Mngt.	4	6	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1003 Communication Skills III	5	-	3
1501 Human Relations	5	-	4
2725 Microbiology	3	2	3
2781 Normal Nutrition	5	-	3
2802 Restaurant Management II	4	6	3
2911 Principles of Accounting I	3	2	3
			19
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1005 Effective Speaking	3	2	3
1512 Economics I	5	-	3
1832 Personnel Management	5	-	3
2783 Human Growth & Development	5	-	3
2803 Restaurant Management III	4	6	3
2813 Hotel, Motel Management III (Sanitation)	5	-	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1006 Technical Writing	5	-	3
1798 Survey of Data Processing	2	-	2
2784 Diet Therapy	5	-	3
2804 Restaurant Management IV	4	6	3
2820 Purchasing	5	-	3
1 Elective*	5	-	3
			17
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1505 Psychology	5	-	3
2 Electives*	10	-	6/7
2199 Special Problems (Dietetics)	3	2	3
2782 Dietetic Technician Seminar	2	-	1
2805 Restaurant Management V	4	6	3
			16/17
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

***NEEDED FOR 4-YEAR COLLEGE TRANSFEREES**

*Possible Electives are:

*2211 Clinical Chemistry
*1520 Sociology
2709 Pharmacology
3001 Typing I
1535 Labor Management
2926 Principles of Management

DIETETIC TECHNICIAN ADVISORY COMMITTEE

Ms. Anita Howe, R.D. ..... Cincinnati Health Dept.

Mrs. Ann Wolf, R.D. ..... Dietary Consultant to Nursing Homes

Mrs. Arlene Branch, R.D. ..... The Christ Hospital

Mrs. Denise Shepherd, D.T. ..... Jewish Hospital

Ms. Kathleen Maehler, R.D. ..... Jewish Hospital

Mrs. Melda Schmidt, R.D. ..... Edgecliff College

Sr. Marcel De Jonckheere, R.D. ..... Mt. St. Joseph College

Mrs. Mary Helen Palmer, R.D. ..... University of Cincinnati

Ms. Nan Chandler, R.D. ..... St. Francis Hospital

MEDICAL ASSISTING TECHNOLOGY

The medical assistant serves in a physician's office or clinic and holds a responsible position. The increasing workload and demand upon physicians' time have made it necessary to provide assistants to handle the appointments, paper work from medicare and other insurance programs and other technical jobs in the medical office. This allows the doctor to concentrate on the most important aspect of his medical practice — the patient. Working under the supervision of a physician, the trained medical assistant assures a smoothly functioning office or clinic.

The medical assistant performs a variety of duties dependent upon the physician's practice and the office requirements which may be unique. The administrative duties in the physician's office include those of a secretary, bookkeeper and receptionist, answering the incoming calls, receiving mail, greeting patients, handling correspondence and filing, arranging for laboratory, x-ray and hospital admissions procedures, taking histories, maintaining patient's records and accounts, and billing. A medical assistant who is well-informed on medicare coverage and insurance claims is a particularly valuable asset both to the physician and to the patients.

The clinical duties of a medical assistant include preparing the patient for examinations or treatment, measuring height, weight and taking temperatures. The assistant may perform certain laboratory tests, take x-ray or EKG's and assist the physician in examining or treating a patient, including preparing for the assisting with diagnostic and minor surgical procedures and administrating of injections or other medications. Applicants should be aware that both the administrative and clinical functions are important. In few physicians offices will an assistant perform only one set of functions.

Students upon completion of the program and after employment of one year in a medical assisting setting are eligible to sit for the national certifying examination given by the American Association of Medical Assistants.

Co-op positions for medical assistant students are in hospitals, nursing homes, clinics, and physician's offices in the Greater Cincinnati area.

Students interested in entering the program should take basic chemistry and biology courses in high school or prior to entering the program and should have a minimum typing speed of 35 wpm.

MEDICAL ASSISTING TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
2210 General Chemistry	3	2	3
2216 Human Anatomy & Physiology I	5	-	3
2704 Clinical Office Practice	2	8	4
2710 Basic Laboratory Techniques I	4	6	4
2720 Trends and Issues in Health Care	5	-	4
			18
■ Fifth Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1001 Communication Skills I	5	-	3
1150 Health Math	5	-	4
2212 Clinical Laboratory Procedures	2	1	1
2217 Human Anatomy & Physiology II	5	-	3
2703 Medical Assisting Procedures	2	8	3
2724 Immunology	2	1	2
2725 Microbiology	3	2	3
			19
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1003 Communication Skills III	5	-	3
2218 Human Anatomy & Physiology III	5	-	3
2705 Clinical Experience I	-	15	6
2709 Pharmacology	4	1	3
2911 Principles of Accounting I	5	-	3
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1004 Technical Writing	3	2	3
1511 Principles of Economics	5	-	4
1520 Introduction to Sociology	5	-	4
2706 Clinical Experience II	-	15	4
2722 Pathology	5	-	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1005 Effective Speaking	3	2	3
1501 Human Relations	5	-	4
2707 Clinical Experience III	-	15	4
2708 Medical Assisting Seminar	5	-	4
2723 Pathology II	5	-	3
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

MEDICAL ASSISTING TECHNOLOGY ADVISORY COMMITTEE

Forfelito Asuncion, M.D.

John G. Fleming, M.D.

Janet Haysbert, M.A.

Anne Lange, M.A.

Arnold Leff, M.D., R.Ph.
Medical Director

Mary M. Martin, M.D.

Manuel H. Mediodia, Jr., M.D.

Julie Mercer, M.A.

Sally Most, M.A.

Virgil A. Plessinger, M.D.

Jean Roehrig, M.A.

Robert Valentine, R.Ph.

■ Fifth School Term			
1005 Effective Speaking	3	2	3
1501 Human Relations	5	-	4
1511 Principles of Economics	5	-	4
2714 Medical Laboratory Seminar	5	5	4
2723 Pathology II	5	-	3
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

MEDICAL LABORATORY TECHNICIAN ADVISORY COMMITTEE

Sally Bartlow ..... Cincinnati Technical College
Graduate (1974)

Werner E. Donath, M.D. ..... Chairman

Frances Casey, M.T. (ASCP)BB ..... Middletown Hospital

Jane Herweh, M.T. (ASCP) ..... Drake Hospital

Larry Pendell, M.T. (ASCP) ..... St. Francis Hospital

Sharon Vincent, M.T. (ASCP), M.S. ..... Good Samaritan Hospital

MEDICAL RECORD TECHNICIAN

An accredited record technician is a skilled person, working in medical records, who has satisfactorily completed a national accreditation examination which is given once a year by the American Medical Record Association. Successful candidates are privileged to add the initials A.R.T. to their names as proof of their high qualifications.

Technicians are normally employed in the medical record department of a hospital, clinic or nursing home and are responsible for many aspects of preparing, analyzing and preserving health information needed by the patients, by the hospital and by the public. The medical record technician's duties chiefly include the daily departmental admission and discharge procedures including preparing the patient's index card and folder, computing the daily census, preparing birth certificates, assembling medical records, completing quantitative analysis and service analysis, coding and indexing operations and assisting in research studies, peer group and utilization review.

In addition to day courses, an extensive evening program is available for employees of health care institutions, agencies and physicians.

The college program is approved by the AMRA — AMA.

Students interested in entering this program should have a typing speed of over 40 wpm.

MEDICAL RECORD TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First Co-op Term			
2216 Anatomy & Physiology	5	-	3
2701 Medical Terminology	5	-	4
2704 Clinical Office Practice	2	8	4
2720 Survey of the Medical Professions	5	-	4
2790 Trends and Issues in Health Care	3	4	4
			19
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1001 Communication Skills I	5	-	3
1150 Health Math	5	-	4
2217 Human Anatomy & Physiology II	5	-	3
2702 Transcription & Related Medical Terminology	3	10	5
2791 Medical Record Science II	3	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1003 Communication Skills III	5	-	3
1799 Survey of Data Processing	5	-	4
2218 Human Anatomy & Physiology III	5	-	3
2792 Medical Record Science III	3	2	3
2796 Directed Practice I	-	16	4
			17
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1004 Technical Writing	3	2	3
1511 Principles of Economics	3	2	4
1520 Introduction to Sociology	5	-	4
2793 Medical Record Science IV	5	-	3
2797 Directed Practice II	-	16	4
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1005 Effective Speaking	3	2	3
1501 Human Relations	5	-	4
2795 Medical Record Seminar	5	-	3
2798 Directed Practice III	-	16	4
2904 Office Management	5	-	3
			17
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

MEDICAL RECORD TECHNICIAN ADVISORY COMMITTEE

Mrs. Esther Benford, A.R.T. ..... Bethesda Hospital

Sister Mary George Boklage, R.S.M. ..... Clermont County Hospital
Administrator

Mrs. Evelyn Carter, R.R.A. ..... Jewish Hospital
Chairman

Ann Coomes, R.R.A. ..... St. Elizabeth Hospital

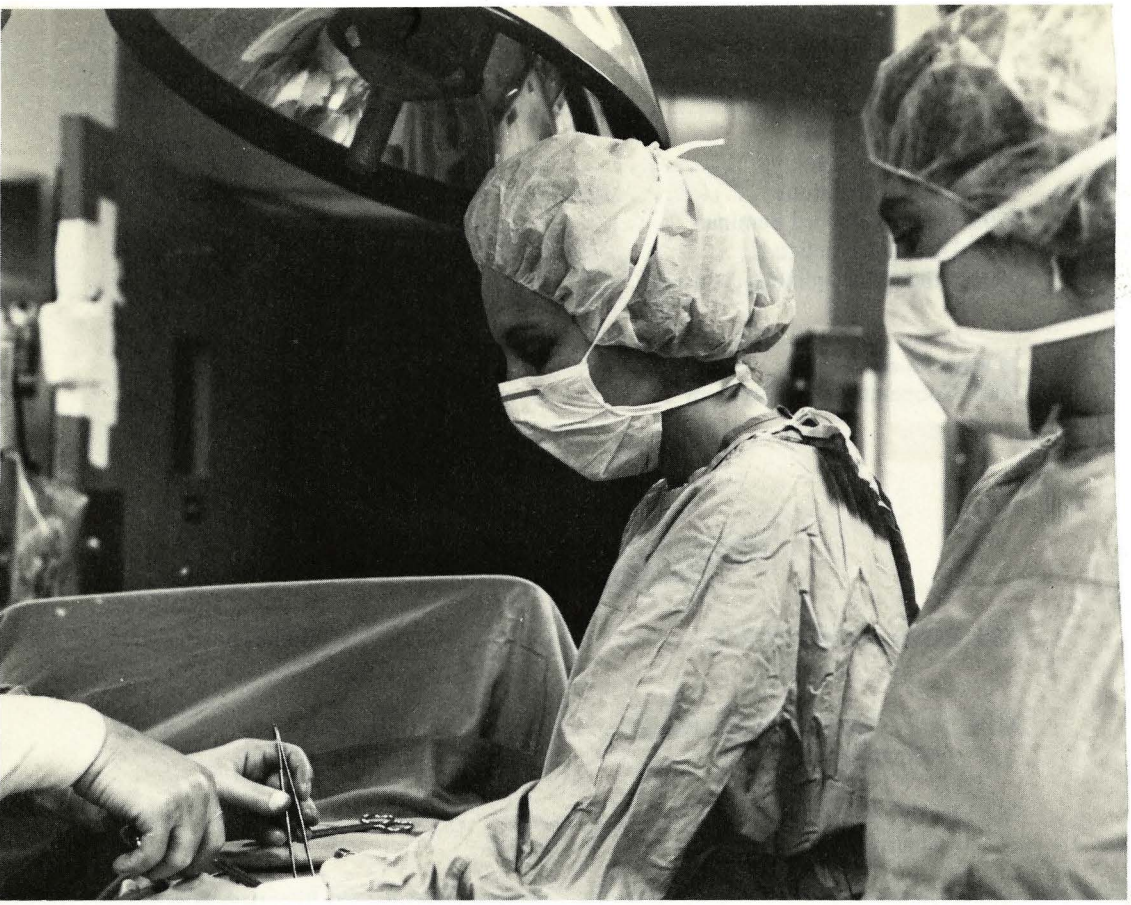
Frances Glaser, R.N. ..... Summit Nursing Home
Administrator

Miss Jane Lach, R.R.A. ..... St. Francis Hospital

Mrs. Bonnie Morgan, A.R.T. ..... Fort Hamilton Hospital

Miss Amy Palmer, R.R.A. ..... Providence Hospital

Mr. J. Ransohoff ..... Greater Cincinnati Hospital Council



SURGICAL ASSISTANT TECHNOLOGY

The Assistant to the Surgeon is defined by the American College of Surgeons as a "skilled person qualified by academic and clinical training to provide patient services under the supervision and responsibility of a surgeon who is in turn responsible for the performance of that assistant. The assistant may be involved with the patients of the surgeon in any medical setting for which the surgeon is responsible."

The development of the Surgeon's Assistant is the result of community health needs and their effect on the Surgeon who meets those needs. Program curriculum development at the College is, therefore, the product of continuous evaluation of input from those practitioners involved in service to the community.

The Surgeon's Assistant student receives training in a broad range of clinical skills including patient contact duties in the pre- and post-operative areas as well as assisting with surgical procedures. The didactic portion of the program includes lecture and laboratory classes in the basic medical sciences as well as the humanities and social sciences.

The program is designed to meet the Associate degree requirements of the Ohio Board of Regents and Cincinnati Technical College and the "essential" program requirements of the American College of Surgeons.

Applicants should have taken at least an advanced high school chemistry course. Those with previous health care experience are given preference by the Admissions Committee.

SURGICAL ASSISTANT TECHNOLOGY
PRIMARY CARE PHYSICIAN ASSISTANT TECHNOLOGY
CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
2210 General Chemistry	3	2	3
2216 Human Anatomy & Physiology I	5	-	3
2710 Basic Laboratory Techniques I	4	6	4
2720 Trends and Issues in Health Care	5	-	4
2740 Introduction to Medicine and Surgery	4	6	4
			18
■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Second School Term			
1001 Communication Skills I	5	-	3
1151 Science Mathematics I	5	-	4
2211 Clinical Chemistry	5	5	4
2217 Human Anatomy & Physiology II	5	-	3
2724 Immunology	2	1	2
2725 Microbiology	3	2	3
			19
■ Second Co-op Term			
9002 Cooperative Employment		40	2
■ Third School Term			
1003 Communication Skills III	5	-	3
1152 Science Mathematics II	5	-	2
2218 Human Anatomy & Physiology III	5	-	3
2244 Physics I	2	2	2
2709 Pharmacology	4	1	3
2741 Medical & Surgical Clinical Applications I	3	5	4
			17
■ Third Co-op Term			
9003 Cooperative Employment		40	3
■ Fourth School Term			
1004 Technical Writing	3	2	3
1520 Introduction to Sociology	5	-	4
2245 Physics II	3	2	3
2721 Emergency Procedures	1	4	1
2722 Pathology I	5	-	3
2742 Medical & Surgical Clinical Applications III	2	8	4
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3

■ Fifth School Term			
1005 Effective Speaking	3	2	3
1501 Human Relations	5	-	4
1511 Principles of Economics	5	-	4
2723 Pathology II	5	-	3
2743 Medical/Surgical Seminar	5	5	4
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3

SURGICAL ASSISTANT TECHNOLOGY ADVISORY COMMITTEE

Penny Butz, R.N. ..... Middletown Hospital Assn.
Supervisor of O.R.

James J. Clear, M.D. ..... St. Francis Hospital
Chief of Surgery

John Cranley, M.D. ..... Good Samaritan Hospital
Committee Co-Chairman (Surgery), Chief of Surgery and Director of Medical Education

Laurence H. Lindner, M.D. ..... Middletown Hospital Assn.
Chief of Surgery

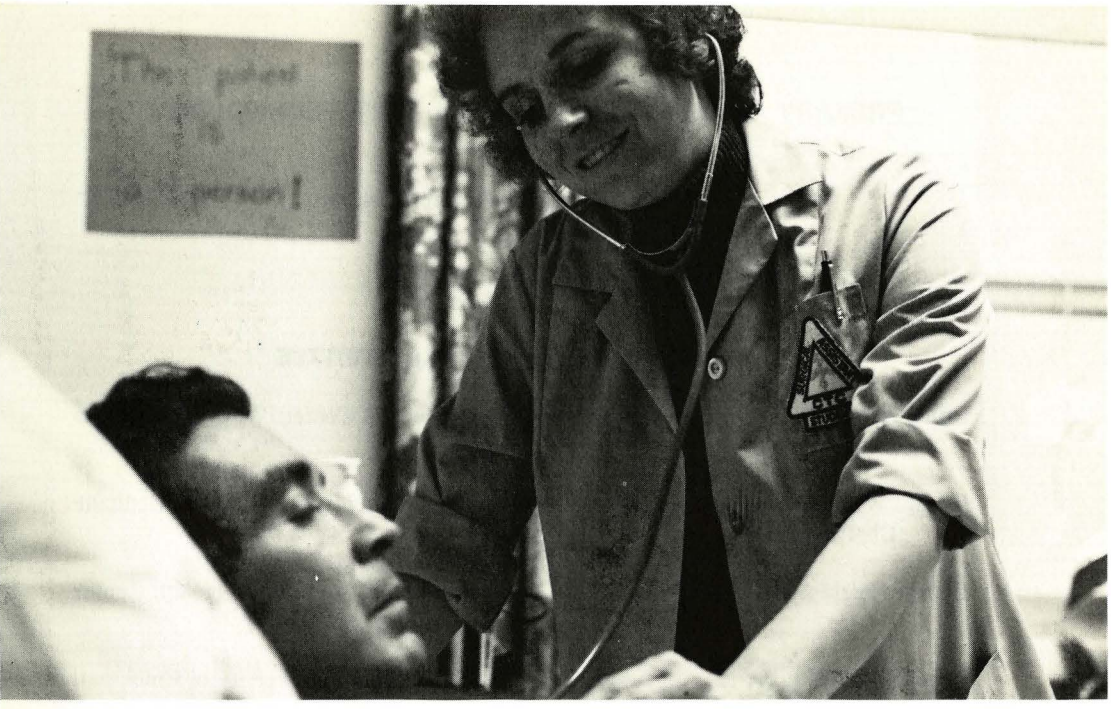
Margaret Mosby, R.N. ..... Middletown Hospital Assn.
Director of Nursing

David Neihaus (PA) ..... Good Samaritan Hospital
Director of Surgical Assistants

Carol Simons, R.N. ..... St. Francis Hospital

*Senior Service Resident in Surgery ..... Good Samaritan Hospital

*This is a rotating membership. The Senior Service Resident will serve on the advisory committee for the term of his position. His successor will fill the advisory Committee vacancy.



PRIMARY CARE PHYSICIAN ASSISTANT TECHNOLOGY

The Assistant to the Primary Care Physician is defined by the American Medical Association's Council on Medical Education as a "skilled person qualified by academic and clinical training to provide patient services under the supervision and responsibility of a doctor of medicine or osteopath who, in turn, is responsible for the performance of that assistant. The assistant may be involved with the patients of the physician in any medical setting for which the physician is responsible."

The ultimate role of the primary care assistant cannot be rigidly defined because of the great variations in practice requirements peculiar to different geographic, economic and sociologic factors. It is for this reason that Cincinnati Technical College provides students in the Primary Care Program with suitable background an opportunity to gain clinical experience in all of the major clinical disciplines. Students receive experience in Medicine, Pediatrics, Psychiatry, Obstetrics, Gynecology, and Surgery. Duties of the Assistant to the Primary Care Physician include the approach to/and physical examination of patients of any age group; the elicitation of a complete and detailed history; performance of routine laboratory tests including hematological and urinalysis procedures, EKG's, etc; routine therapeutic procedures; delivery of services to in-hospital and home-bound patients where appropriate; suturing and caring for wounds; evaluation and treatment in response to life threatening situations; counselling and referral of patients to other agencies; and the recording and presentation of pertinent data to the physician-employer in a comprehensive manner so that the physician may make appropriate decisions regarding the diagnosis and treatment of the patient.

Applicants should have taken advanced high school chemistry prior to application. Candidates with previous health care experience are given preference by the Admissions Committee. The Primary Care Physician Assistant Program is an AMA approved program. Graduates may sit for the National Board of Medical Examiners Examination.

PRIMARY CARE PHYSICIAN ASSISTANT TECHNOLOGY CURRICULUM

See Pages 107 and 108 for curriculum.

PRIMARY CARE ADVISORY COMMITTEE

Bruce Ashley, M.D. ....Adams-Brown County Medical Center, West Union, Ohio

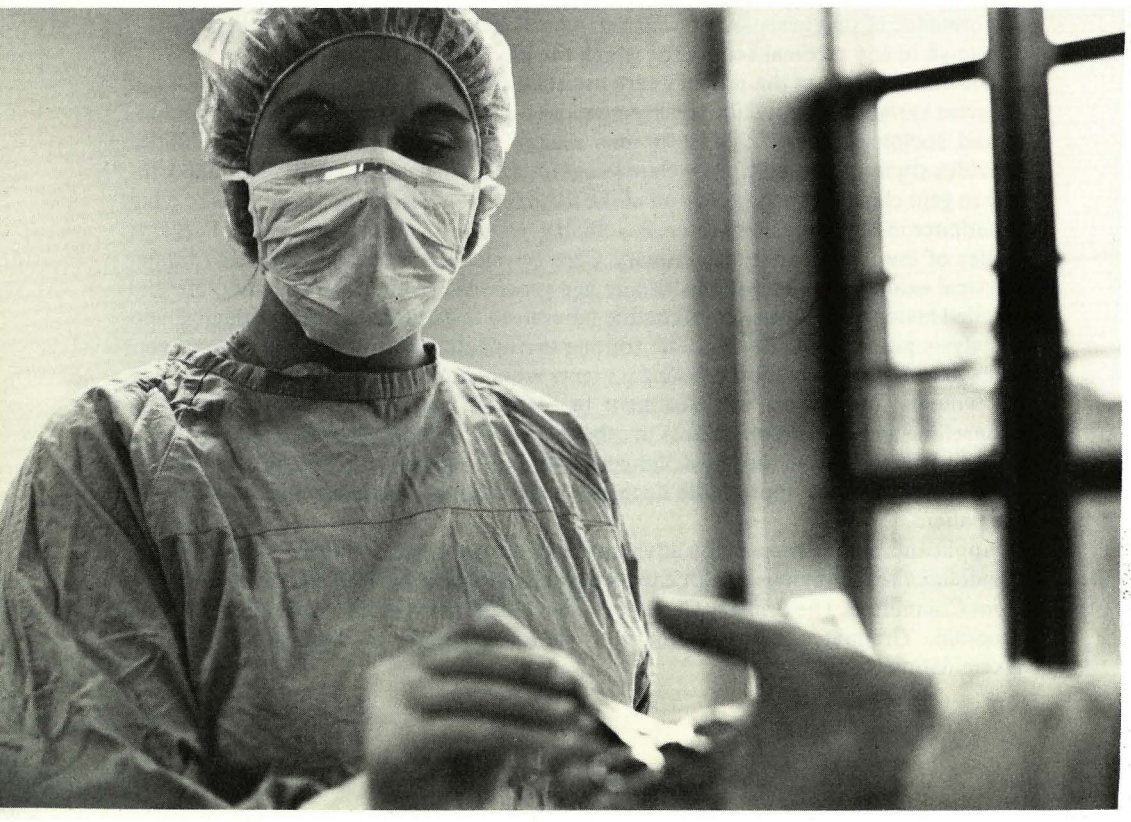
Ronald W. Fallat, M.D. ..... University of Cincinnati College of Medicine
Chairperson

George Shields, M.D. .....Winton Hills Community Health Center

James A. Sielski, PA ..... Lipid Research Clinic, University of Cincinnati

Janet Trainor, R.N. .....Our Lady of Mercy Hospital, Hamilton, Ohio

Robert Valentine, R.Ph. ..... West End Community Health Center



OPERATING ROOM TECHNOLOGY

Operating room technicians, also known as surgical technicians, take a one year program which teaches the student technicians the skills necessary to assist in the care of patients in the surgical suite and the techniques of preparing, maintaining and arranging sterile and unsterile supplies and equipment.

The Operating Room Technology Program offers to develop the student with skills in the practice of aseptic technique (sterilization), operating room procedures, instruments and equipment. Subjects studied include anatomy and physiology, nutrition, microbiology, immunology, surgical procedures and medical terminology.

In addition to the academic requirements necessary to graduate, the student also completes 20 weeks of cooperative education, on the job training.

The program is a one-year program. Students enter in September and spend two academic terms (20 weeks) at the college. In January all students are placed in the clinical rotation period, (hospital operating rooms) for their first 10 week cooperative term. Upon completion of 30 weeks of academic study and 20 weeks of cooperative education, the student graduates.

Graduate Operating Room Technicians are persuaded to complete The National Certification Examination, recognized by most hospitals as successful completion of the program in Operating Room Technology. The Operating Room Technician is then certified.

In addition to the academic and clinical environment for the student, there also is a professional environment offered to the student through the Association of Operating Room Technicians, a professional organization which offers membership to the student while attending the college, and after graduation and certification. This organization's goals are education, standardization and professional recognition for Operating Room Technicians.

Applicants interested in the program should have an interest in science and math. High school biology and math courses are desirable and taken into consideration by the admissions committee.

OPERATING ROOM TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
2216 Human Anatomy & Physiology I	5	-	3
2701 Medical Terminology	5	-	4
2720 Trends & Issues	5	-	4
2740 Introduction to Medicine & Surgery I	4	6	4
2705 Clinical Experience I	-	8	3
			18
■ Second School Term			
1151 Health Math	5	-	4
2217 Human Anatomy & Physiology II	5	-	3
2724 Immunology	2	1	2
2725 Microbiology	3	2	3
2741 Medicine and Surgery II	3	5	3
2705 Clinical Experience II	-	7	3
			18

■ First Co-op Term			
9001 Cooperative Employment		40	2
■ Third School Term			
2218 Human Anatomy & Physiology III	5	-	3
2709 Pharmacology	4	1	3
2722 Pathology I	5	-	3
2199 Special Problem Sem. (variable)	5	-	4
2721 Emergency Procedures	1	4	1
2707 Clinical Experience III	-	15	4
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2

OPERATING ROOM TECHNOLOGY ADVISORY COMMITTEE

John Cranley, M.D. ..... Good Samaritan Hospital
Chief of Surgery and Director of Medical Education

David Neihaus (P.A.) ..... Good Samaritan Hospital
Clinical Coordinator of Operating Room Technicians

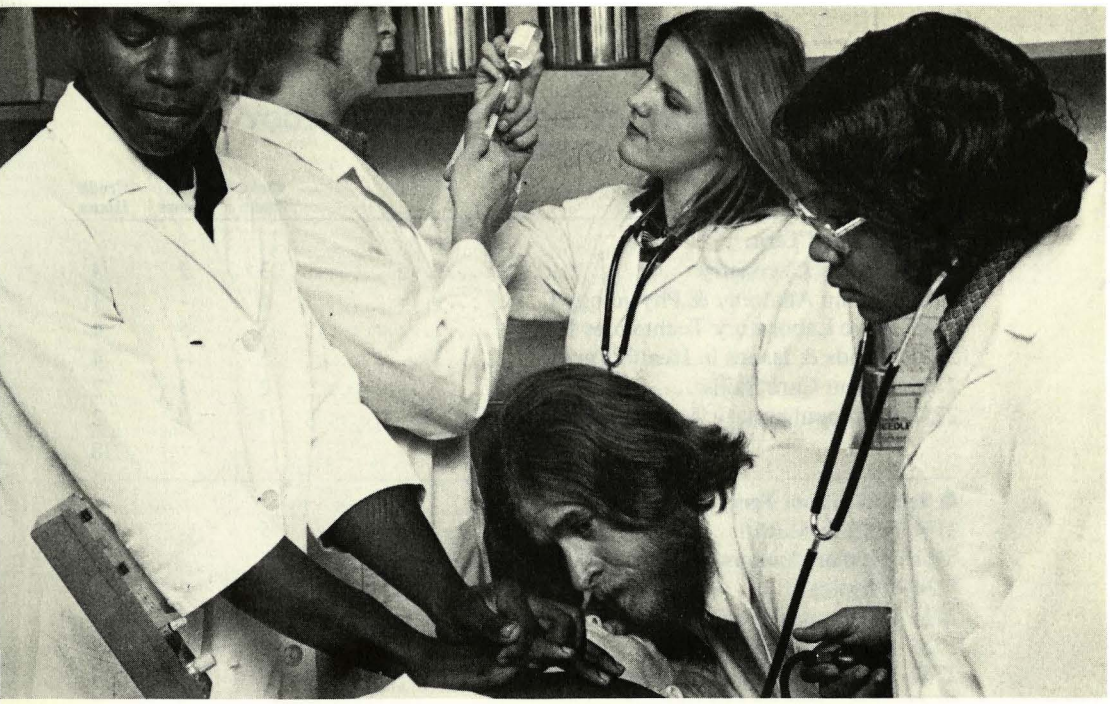
Carol Simons, R.N. ..... St. Francis Hospital
Surgical Supervisor

Annie Leaks, CORT ..... Cincinnati General Hospital
President of Greater Cincinnati Chapter of AORT

Dorothy Siliman CORT ..... Good Samaritan Hospital
Vice-President of Greater Cincinnati Chapter of AORT

Mary Louise Roebke, R.N. ..... Good Samaritan Hospital
Surgical Supervisor

Linda Mahsling, SORT ..... Cincinnati Technical College
(Student) 1976 Graduate



RESPIRATORY THERAPY TECHNICIAN

The rapid growth of technology in the field of Respiratory Therapy in conjunction with the present awareness of the prominence of disease affecting the respiratory system has challenged this field to supply personnel to fill the demand. This demand is for individuals with both the work experience as well as the educational background to competently and effectively carry out the many modes of Respiratory Therapy under medical direction.

Respiratory Therapy Technicians will be able to administer gas therapy, humidity therapy, aerosol therapy, and intermittant positive pressure breathing treatment. The technician should be able to assist with long-term continuous artificial ventilation, special therapeutic procedures in cardiopulmonary resuscitation. This individual will also be capable of administering drugs which are given through inhalation procedures, and will also be able to perform tasks related to patient care, especially those of airway management, while involved in giving respiratory therapy. The Respiratory Therapy Technician will be trained to clean, sterilize, and generally maintain respiratory therapy equipment. In addition, adequate and accurate records of patient's therapy and other department records must be maintained.

The program as structured is a one-year certificate program. Because of the nature of the structured experiences required by accreditation agencies, the student will spend one year in course work. The program is not co-operative in nature although students are encouraged to supplement their educational experiences in the college and in the clinical setting by actual job experiences. Many students in the program are currently employed in hospitals in the Greater Cincinnati area. Courses applicable to this program are available through the evening college.

Students interested in enrolling in this program should have a background in high school chemistry, biology, and algebra. Individuals currently employed in the field of Respiratory Therapy and who lack credential requirements are encouraged to apply.

RESPIRATORY THERAPY TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
2210 General Chemistry	3	2	3
2216 Human Anatomy & Physiology I	5	-	3
2710 Basic Laboratory Techniques I	5	5	4
2720 Trends & Issues in Health Care	5	-	4
2750 Patient Care Skills	2	3	2
2751 Cardiopulmonary Anatomy & Physiology	3	2	2
			18
■ Second School Term			
1151 Science Math I	5	-	4
*2217 Human Anatomy & Physiology II	5	-	3
*2245 Physics II	3	2	3
2721 Emergency Procedures	1	4	1
2725 Microbiology	3	2	-
2752 Respiratory Therapy Science I	5	-	3
2756 Clinical Practice I	-	10	2
			13
■ Third School Term			
1152 Science Math II	3	-	2
*2218 Human Anatomy & Physiology III	5	-	3
2244 Physics I	2	2	2
2753 Respiratory Therapy Science II	5	-	4
2757 Clinical Practice II	5	5	4
			12
■ Fourth School Term			
2709 Pharmacology	5	-	3
2754 Respiratory Therapy Science III	5	-	4
2758 Clinical Practice III	-	30	5
			12
■ Fifth School Term			
2755 Respiratory Therapy Science IV	5	-	4
2759 Clinical Practice IV	-	30	5
			9

*Courses are electives.

ASSOCIATE OF INDIVIDUALIZED STUDY

The Cincinnati Technical College has been offering career education since its inception in 1966.

As the College has increased in enrollment, and in its involvement with the community, it has expanded its offerings from the four original programs to 35 programs and options today. Even with this expansion of our offerings it has not been possible to fully satisfy the individual career preparation or course advancement needs of many who have applied.

To maximize our ability to meet particular career education needs, we now offer the Associate of Individualized Study Program. This Program enables us to consider total individual educational needs and, in cooperation with career consultants from the business/industrial community, to assist in planning an A.I.S. Program to respond to those needs.

WHO SHOULD APPLY

The A.I.S. Program will be attractive to anyone whose career education objectives cannot readily be met through one of the more structured Associate Degree Programs offered by our College. In order to qualify for admissions an applicant must meet the following requirements:

1. Submit written justification for admission to this degree program in preference to one of the other associate degree programs and options available at the College.
2. Demonstrate a level of maturity and motivation which gives promise of success in handling the responsibilities inherent in such a program.
3. Satisfy the general admissions requirements of the Cincinnati Technical College.
4. Demonstrate at least minimal academic aptitude by completing a minimum of six quarter college credit hours with an average of "C" or better at either CTC or another recognized institution of higher education.
5. Declare candidacy for the program at such time as the minimum six quarter college credit hours have been accumulated.
6. At the time of candidacy, plan an acceptable curriculum which must meet the approval of the A.I.S. Approval Committee.

Final approval of an A.I.S. Program must be granted by the Associate Of Individualized Study Review Committee. (This Committee consists of the three department chairpersons and the director of the A.I.S. Program.)

All advising will be coordinated by an assigned A.I.S. advisor. The applicant will receive counsel from professionals in business/industry and appropriate members of the CTC staff.

For additional information on the Associate of Individualized Study Program contact the Director of the A.I.S. Program.

COURSE DESCRIPTION

1001 Communication Skills — **5 Clock Hours — 3 Credit Hours**
Syntax, paragraph development, mechanics, usage, spelling and vocabulary. Analysis of each student's strengths and weaknesses.

1002 Communication Skills — **5 Clock Hours — 3 Credit Hours**
A continuation of 1001 Communication Skills, stressing expository writing.

1003 Communication Skills (Research for Technicians) — **5 Clock Hours — 3 Credit Hours**
A continuation of Communication Skills 1001, expanded to include the elementary principles of research techniques, logical thinking, and the library research paper.

1004 Technical Writing — **5 Clock Hours — 3 Credit Hours**
1004A — **3 Clock Hours — 2 Credit Hours**
Emphasis on developing the communication skills necessary for technicians. Study of the basic forms of technical reports, manuals, articles, and memoranda. Several research papers required.

1005 Effective Speaking — **5 Clock Hours — 3 Credit Hours**
1005A — **3 Clock Hours — 2 Credit Hours**
Organization, development, and presentation of general speeches with emphasis on the oral report as a form of business communication.

1006 Technical Writing — **5 Clock Hours — 3 Credit Hours**
Business Letters with emphasis on various types according to their purposes. Some work with informal and formal reports.

1007 Expository Writing — **5 Clock Hours — 3 Credit Hours**
Organization and development of expository and descriptive writing. Elementary principles of research techniques, logical and fallacious reasoning, and the library research paper.

1009 Business English — **5 Clock Hours — 3 Credit Hours**
Intensive review of grammar, mechanics, usage, spelling and vocabulary designed to obtain high efficiency levels in these areas for secretarial students.

1101 Business Mathematics I — **5 Clock Hours — 4 Credit Hours**
Proficiency in the fundamental skills of mathematics as applied to business. Emphasis will be placed on payroll procedures, business and financial reports, presentation of business data, and computing of interest for money and banking.
In the medical program it deals with mathematics as related to drug dosages and solutions, slide rule, basic ledger mathematics and statistical calculations including mode, mean, median and percentages.

1102 Business Mathematics II — **5 Clock Hours — 4 Credit Hours**
Application of mathematics to trade discounts, markons, commissions, installment charges, freight expenses, corporate earnings, stocks and bonds, insurance, taxes, loans, and data processing systems of billing and inventory.

***1103 Mathematics of Finance** — **5 Clock Hours — 4 Credit Hours**
Application of mathematical concepts to business activities: bank records, financial charges (including "Truth in Lending" legislation), payrolls and taxes, financial statements and inventories, statistics and computers. (Students who test out of 1101 Business Mathematics will take this course.)

1130 Overview of Mathematics **5 Clock Hours — 3 Credit Hours**
Structure of the number system with business applications. Whole numbers, fractions, integers, rational numbers, decimals, percent, scientific notation, exponents, variables, irrational numbers, tabulation of statistical data, measurement, metric system, sets.

1131 College Algebra **5 Clock Hours — 4 Credit Hours**
Number system; algebraic equations, linear equations, negative numbers, negative exponents. Arithmetic of computers; octal, binary and decimal systems. Introduction to set and group theory.

1132 Business Statistics **5 Clock Hours — 4 Credit Hours**
Practical business application of statistics to business problems. Students develop the ability to construct, use, and interpret tables, charts, frequency distribution; determine measures of central tendency and dispersion. The course acquaints the student with the theory and applications of probability and stresses the importance of statistics in decision making.

***1133 Programming Mathematics I** **5 Clock Hours — 4 Credit Hours**
The types of logic a computer uses in operation. Linear programming and additional number systems. Traditional logic and uses in computer operation. The memory and circuitry of the machine. Boolean algebra of propositions with application to switching circuits. FORTRAN language is used as a problem-solving tool.

1134 Programming Mathematics II **5 Clock Hours — 4 Credit Hours**
The optimizing blocking factors used for both magnetic tape and magnetic disk. Introductions to the linear programming and forecasting. The discussions of the searching lists and sorting techniques. FORTRAN language is used as a problem-solving tool.

1135 Business Calculus **5 Clock Hours — 3 Credit Hours**
Introductory calculus with applications in business decisions and probability theory. Develop skill in finding derivatives and integrals.

1150 Health Math **5 Clock Hours — 4 Credit Hours**
Proficiency in the fundamental skills of mathematics as applied to medicine and the allied health area. Fractions, percents, ratio, proportion, scientific notation; systems of measurement, English, SI metric, Apothecary; tabulation of statistical data, Basic ledger mathematics.

1151 Science Math I **5 Clock Hours — 4 Credit Hours**
Order of calculations, significance, scientific notations, exponents and logarithms, algebra, basic trig; units of length, volume, and mass; Metric System, standard deviations, Avogardro's Number, atomic weights, the mole.

1152 Science Math II **3 Clock Hours — 2 Credit Hours**
The mastery of the mathematics and skills in using: the Gas laws, chemical equations, percent composition and gram-equivalent weights, constants used in heat transfer, molarity, normality, pH and pOH, rate of radioactive disintegration, nuclear reactions.

1161 Math for Printers **5 Clock Hours — 4 Credit Hours**
Mathematic fundamentals with direct application to the printing industry are developed as integrated skills in this course. Fractional and decimal systems of measurement, and proportional relationships used in printing are stressed.

1170 Pre-Technical Mathematics **5 Clock Hours — 3 Credit Hours**
A course dealing with the fundamentals of algebra. Includes: real number system, equations, functions, variables, radicals, and exponents. (A course for technical students needing algebra and geometry.)

1171 Technical Math I **5 Clock Hours — 4 Credit Hours**
Order of calculations, meaning of equations, similar triangles, trigonometric ratios; formulas for triangles, rectangles, trapezoids, circles, cylinders, spheres; ratio and proportion, direct and inverse variation. Applications using Ohm's Law, pulley and gear speed-ratios, horsepower, torque, etc.

1172 Technical Math II **5 Clock Hours — 4 Credit Hours**
More complicated formulas, the skills involved in manipulating formulas, simultaneous first degree equations, complex ratios, joint and high order variations. Application using Kirchoff's Laws, mechanical systems in equilibrium, density, specific gravity, area and volume viewed as function of dimensions.

1173 Technical Math III **5 Clock Hours — 4 Credit Hours**
Exponential formulas and logarithms, trigonometry of any angle, Law of Sines and Law of Cosines, second degree equations and their graphs, analysis of the sine wave form. Applications using the Gas Laws, power ratios converted to decibels, A.C. circuit analysis, graphs of empirical data.

1179 Statistics **3 Clock Hours — 2 Credit Hours**
Measures of central tendency and variability, and elementary probability. Graphic representation of statistical data, and an application of correlation and tests of hypothesis.

***1181 Mathematics I** **5 Clock Hours — 4 Credit Hours**
Extract roots and raise numbers to a given power. Determine areas and columns of various geometrical shapes. To include ratios, proportions, and percentages.

***1182 Mathematics II** **5 Clock Hours — 4 Credit Hours**
To include basic concepts of algebra; the real number systems, equations, functions, variables, radicals, and exponents.

***1183 Mathematics III** **5 Clock Hours — 4 Credit Hours**
To include weight and balance check and record data. Continuation of Mathematics II, Logarithms, elements of trigonometry.

1191 Engineering Math — Algebra and Trig I **5 Clock Hours — 4 Credit Hours**
Order of calculations, meaning of equations, trigonometric ratios, geometric design, equation manipulation, quadratic equations and the Quadratic Formula, simultaneous linear equations, simultaneous second degree equations. Applications using series and parallel circuits, forces on mechanical systems, maxima and minima.

1192 Engineering Math — Algebra and Trig II **5 Clock Hours — 4 Credit Hours**
Trigonometry of any angle, Law of Sines and Law of Cosines, trigonometric identities and equations, direct and inverse variation, exponential equations and logarithms, arithmetic and geometric series, introduction to Boolean Algebra. Applications to power conversions, radian-degree conversions, pulley and gear speed-ratios, vibrations, resolution of logic networks. Prerequisite: 1191.

1193 Engineering Math — Functions and Calculus I **5 Clock Hours — 4 Credit Hours**
Complex numbers, polar coordinates, graphs of linear and second degree functions, graphs of second degree relations, empirical curve fitting, limit concept, derivatives, integrals. Applications using analysis of A.C. circuits; functions of dimensions, heat, time, etc.; maxima and minima. Prerequisite: 1192.

1194 Engineering Math — Calculus II **5 Clock Hours — 4 Credit Hours**
Areas, curves, derivatives, differentials, integrals, integration, variations, volumes. Applied

calculus with emphasis upon applications to the engineering fields: indeterminate force systems, pressure vessels, stresses, bending moments, instantaneous current and power, differentiating circuits. Prerequisite: 1193.

1201 Private Police Officer's Training Course **12 Clock Hours — 6 Credit Hours**
This complete 120-hour training course fulfills the requirements for certification for Peace Officers Training Council for Private Security Police.

1204 Personnel Security Systems **5 Clock Hours — 3 Credit Hours**
Philosophical and legal basis for personnel security, history, the need controls, operational requirements, and practices. Use of Polygraph in investigations. Methods and legal aspects of personnel clearances, psychological checks, background checks, and other employee investigations.

1205 Interviewing **5 Clock Hours — 3 Credit Hours**
Applicable interviewing techniques and concepts. Practical interviewing considerations in agreement with current legal stipulations. Evaluation feedback.

1208 Criminal, Civil, and Administrative Law I **5 Clock Hours — 4 Credit Hours**
A study of legal aspects of security in a context of criminal acts, espionage, sabotage, vandalism, and theft, collection, etc.

1209 Criminal, Civil, and Administrative Law II **5 Clock Hours — 4 Credit Hours**
A continuation of Criminal, Civil, and Administrative Law I. Emphasis on the law and its ramifications for the practitioner in the security field.

1210 Introduction To Loss Control And Security Administration
3 Clock Hours — 2 Credit Hours
An overview of the significance of security and loss prevention programs in areas of industrial, business and government complexes. Review of examples of effective loss control programs in existence; a study of career opportunities in the field, personnel requirements, standards, and current remuneration levels.

1211 Industrial Security **5 Clock Hours — 3 Credit Hours**
Introduction to the historical, philosophical, and legal aspects of security. The role of security in our modern industrial society. Survey of the administrative, personnel, and physical requirements of the security field integrated with management systems.

1216 Security Administration I **5 Clock Hours — 3 Credit Hours**
Administration, organization, and management of security and plant protection programs. Policy and decision making by the security professionalist.

1217 Security Administration II **5 Clock Hours — 3 Credit Hours**
Study of new approaches to the field of security and loss prevention resulting from technological change. In-depth study of diverse programs in areas of manufacturing, warehousing, retailing, transportation, and public institutions. Personnel and budgeting. Private guard and alarm services.

1220 Fundamentals Of Fire Protection **5 Clock Hours — 2 Credit Hours**
History and philosophy of fire protection; history of loss of life and property by fire; economic losses occasioned by fire; review of fire defenses. Study of the organization and function of Federal, State, County, City, and private fire protection agencies. Examination of educational and training requirements requisite to employment among the various agencies including an analysis of efforts being made to professionalize the field.

1224 Fundamentals Of Fire Prevention **10 Clock Hours — 4 Credit Hours**
Organization and function of the fire prevention organization; chemistry of fire; inspections, surveying and mapping procedures, recognition of fire hazards, engineering a solution of the hazards, enforcement of the solution. Public relations as affected by fire prevention efforts.

1230 Safety Management **5 Clock Hours — 2 Credit Hours**
Organization of safety and accident prevention programs; publicity and promotion, award programs. Study of leading causes of business and industrial accidents involving lost-time and/or property damage. Consequences of accidents in terms of down-time and effects on local community. Reporting procedures.

1233 Emergency Planning **5 Clock Hours — 3 Credit Hours**
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.

1240 Directed Case Study **5 Clock Hours — 3 Credit Hours**
Supervised individual study of a topic related to the security field selected by the student with staff approval.

1321 Blueprint Reading and Sketching **5 Clock Hours — 2 Credit Hours**
Provides a working knowledge of blueprint reading and shop sketching with special application for automotive techniques. Technical terminology is defined and applied in logical sequence for each new principle.

***1344 Engineering Graphics IV** **5 Clock Hours — 2 Credit Hours**
Architectural and structural drafting.

1371 Engineering Graphics I **6 Clock Hours — 3 Credit Hours**
Techniques and functions of drafting. Use of technical terms, modern drafting equipment, sections, multi-view projection and basic reference materials. Development of individual skills and techniques.

1372 Engineering Graphics II **5 Clock Hours — 2 Credit Hours**
Advanced study in field drawing. Includes: gears, cams, working drawings, piping, electrical, etc. Prerequisite: 1371 or 1375.

1373 Engineering Graphics (Civil) **5 Clock Hours — 2 Credit Hours**
Plat rules and plat information as required by law for a plat to be fully registered; highway intersection layouts; construction drawings (steel & wood); topographic maps; profiles; basic descriptive geometry. Includes: pencil and ink work. Prerequisite: 1371.

1374 Engineering Graphics III **5 Clock Hours — 2 Credit Hours**
Graphic analysis of space positions involving points, lines, planes, connectors and a combination of these. Practical design problems stressed with analytical verification where applicable. Prerequisites: 1191, 1371 or 1375 and 1372.

1375 Engineering Graphics **5 Clock Hours — 2 Credit Hours**
Techniques and functions of drafting. Use of technical terms, modern drafting equipment, multi-view projection, and basic reference materials. Emphasis on reading a drawing including schematic and wiring diagrams.

1376 Engineering Graphics **5 Clock Hours — 2 Credit Hours**
Architectural drawing — electrical and plumbing layouts. Pictorial and schematic drawings. Introduction to sheet metal layouts. Prerequisite: 1371 or 1375.

1377 Electrical Drafting **5 Clock Hours — 2 Credit Hours**
Schematic diagrams, component wiring diagrams, pictorial assembly drawings. To include: architectural drawing, electrical and plumbing layouts.

1379 Basic Blueprint Reading and Sketching **5 Clock Hours — 2 Credit Hours**
Provides a working knowledge of blueprint reading and shop sketching with special application and emphasis for different technologies. Technical terminology is defined and applied in logical sequence for each new principle.

1380 Structural Drafting/Detailing **6 Clock Hours — 3 Credit Hours**
Preparation of plans and shop drawings for steel structural members and for reinforced concrete structures.

1381 Aircraft Drawing **5 Clock Hours — 2 Credit Hours**
Read drawings, symbols, and schematic diagrams. Draw sketches of repairs and alterations. Apply blueprint information. Use graphs and charts. Identify and select AN hardware.

1385 Engineering Graphics (Sheet Metal Layout) **5 Clock Hours — 2 Credit Hours**
Straight line, parallel line and radial line developments; triangulations and intersections; layout measurements and fabrication of sheet metal. Prerequisite: 1371 or 1375.

1401 Layout and Design **2 Clock Hours — 2 Credit Hours**
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 folders, broadsides and booklets.

1402 Typography **10 Clock Hours — 4 Credit Hours**
History of the alphabet; evolution and development of movable type. Selection of proper type styles and sizes. Study and comparison of metal type and cold type. Methods of type setting — hand and machine composition. Copyfitting of text matter to space allocation. Basic requirements of hot metal, punched tape for cold composition (photographic and strikeon composition), hot metal and cold type display for composition.

1405 Proofreading and Copy Preparation **2 Clock Hours — 2 Credit Hours**
Checking the typesetter's work; use of special symbols to mark changes, corrections, additions, or eliminations. How to check copy for errors. Duties of the proofreader and the copyholder. Reference books for the proofreader. Rules of syllabication of words. Acquiring speed and accuracy in proofreading.

1410 Machine Composition and Newspaper Designing **10 Clock Hours — 4 Credit Hours**
An extended study of various typesetting machines, both magnetic tape controlled and punched tape controlled, utilizing hot metal, photographic, and strike-on machines. Analysis, evaluation and recommendations based on individual research in order to select the best method for a particular kind of work. The basic operations of manually operated machines are also investigated. Fundamentals & techniques of sound newspaper designing are presented through general problems of page size, news head selection, from page make-up, illustrations, etc.

1415 Graphic Arts Process **2 Clock Hours — 2 Credit Hours**
Development and evaluation of printing devices. Graphic arts processes in use today — letterpress, gravure, flexographic, offset and silk screen presses; newspaper and rotary presses. How they work, and the kinds of work for which they were designed.

1419 Survey of Graphic Communications I **3 Clock Hours — 3 Credit Hours**
Descriptions and discussions concerning the various forms of printing and reproduction copies to include letterpress, lithography, gravure, silk screen and other. New forms of printing such as dry offset and screenless halftone printing will be studied with emphasis on the feasibility of

implementation of such systems into present systems. In-depth study of printing papers and inks.

***1420 Electronic Processes** **2 Clock Hours — 2 Credit Hours**
The use of electronics, computers and tape operated controls. Use of precise measuring instruments, darkroom instruments, pressroom and quality control equipment.

1421 Cold Type Process **10 Clock Hours — 3 Credit Hours**
Classification of cold type devices — hand assembled paper or plastic alphabets, dry transfer fonts; keyboard text — on paper machines; keyboarded phototypesetting; photo-lettered displays. Principles and operation of various keyboards. The use of electronics, computers, and tape operated controls.

1428 Management Survey **3 Clock Hours — 3 Credit Hours**
Principles used in printing management — use of the production board in planning control — planning a job and following through all phases of production.

1430 Presswork **10 Clock Hours — 4 Credit Hours**
Survey and justification studies of press equipment to assist in suggesting capital expenditures for future growth and replacement cycles for letterpress, offset, and flexographic systems. Press usage and depreciation methods, replacement policies.

1440 Offset Press Operation **15 Clock Hours — 5 Credit Hours**
Techniques of operation and control, study of various moistening systems, comparison of wet and dry forms of lithography. Plate comparisons to include wipe on, presensitized, albumin surface, deep etch, bi-metal, tri-metal, dycril and other synthetics, grained and grainless. Understanding the required adjustments necessary for top quality printing. Use of pressroom and quality control equipment.

1450 Estimating **5 Clock Hours — 2 Credit Hours**
Determine jobs costs; elements of job costs — labor, materials, burden, profit and markup. Conversion of manuscript copy to specific type sizes and styles. Characteristics and types of paper; paper sizes; selection and purchase of paper; determining proper cuts from mill size sheets; use of manufacturers' catalogues and price books.

1460 Bindery Methods And Procedures **5 Clock Hours — 3 Credit Hours**
Drilling, stitching and cutting. Investigations into the more complex operations of page imposition, automatic signature assembly and book finishing. Automatic tape operated cutters demonstrated and explained. Automatic folders with pile feed and continuous feed.

1480 Photolithography I **5 Clock Hours — 3 Credit Hours**
Types and uses of photo-copy and process camera. General and special uses of films. Use of precise measuring darkroom instruments. Darkroom techniques. Making line and half-tone negatives. Comparing and making single color proofs. Simple stripping.

1481 Photolithography II **5 Clock Hours — 3 Credit Hours**
Follow-up of Photolithography I using advanced techniques. Making color separations and color proofs. Stripping techniques related to multi-color jobs.

1501 Human Relations **5 Clock Hours — 4 Credit Hours**
Problems of the individual studied in relation to group membership and the work situation. Development of effective motivations, communication, attitudes, supervision and leadership. Techniques used include role playing, case studies, and discussion of co-op work experiences.

1502 Human Relations **3 Clock Hours — 3 Credit Hours**
See description of course 1501. The course number 1502 covers the first twenty-five (25) clock hours of course 1501.

1504 Psychology **5 Clock Hours — 4 Credit Hours**
A scientific study of human behavior appropriate to the needs of business and industry. Special emphasis is placed on perception, learning, individual differences, motivation, intelligence, personality and social interaction.

1505 Psychology **3 Clock Hours — 3 Credit Hours**
See description of course 1504. The course number 1505 covers the first twenty-five (25) clock hours of course 1504.

***1506 Human Relations** **3 Clock Hours — 3 Credit Hours**
Human behavior individually and in groups. Supervisory relationships.

***1507 Introduction to Psychology** **5 Clock Hours — 3 Credit Hours**
A study of "conflict management" appropriate to the needs of business and industry; human stress, understanding, communication. Analysis of human behavior with emphasis on mental aberrations of import in the field of security. Study of personality, perception, motivation, social interaction.

1511 Economics **5 Clock Hours — 4 Credit Hours**
Basic economics relates to the central problems of production, income, and employment. It deals with the operation of the free enterprise system, price determination, forces of supply and demand, and income distribution among the productive factors. Analysis of price level and inflation, unemployment, competition and the role of government in monetary and fiscal policy. Emphasis is placed upon decision making processes.

1512 Economics I **3 Clock Hours — 3 Credit Hours**
See description of course 1511. The course number 1512 covers the first twenty-five (25) clock hours of course 1511.

1513 Economics II **3 Clock Hours — 3 Credit Hours**
See description of course 1511. The course number 1513 covers the remaining twenty-five (25) hours of course 1511.

***1514 Industrial Organization** **5 Clock Hours — 2 Credit Hours**
History, characteristics, and productivity of modern manufacturing in the United States. Manufacturing processes, plant location and equipment, manufacturing control, purchasing production planning, quality, etc.

1520 Sociology **5 Clock Hours — 4 Credit Hours**
A look at sociology as a young science occupied with classifying and defining group behavior. Emphasis will be placed on several of the basic institutions necessary to the processes of socialization and acculturization. Apart from a general introduction to sociology, every effort will be made to select those topical areas that will best meet the needs of the students' major areas of concentration.

1521 Sociology **3 Clock Hours — 3 Credit Hours**
See description of course 1520. Covers first half of 1520.

1531 Introduction To Political Science **3 Clock Hours — 3 Credit Hours**
A survey of the nature of political science; its various branches; methods of analysis used; basic characteristics and problems of government and politics; the theories and practices which describe and explain man's behavior in the national and international community.

1535 Labor Management Relations **3 Clock Hours — 3 Credit Hours**
Origin and development of the labor movement. State and federal labor laws and regulations. Collective bargaining practices and procedures today. Issues and problems in negotiation of contracts.

***1536 Labor Relations I** **5 Clock Hours — 3 Credit Hours**
Development of trade unionism in the United States; philosophical and legal basis of collective bargaining. Illegal practices. Study of union organizations and management.

***1537 Labor Relations II** **5 Clock Hours — 3 Credit Hours**
Labor market analysis. Study of management philosophy in regard to labor unionism. Legislative controls, past and present; public policy with respect to protective and labor-management legislation.

1701 Introduction To Data Processing **10 Clock Hours — 4 Credit Hours**
An overview of the entire field of data processing. Instruction in the theory of punched card equipment with laboratory exercises. Operation of the Honeywell-200 computer on premises, function and use of the central processor and the peripheral devices.

***1703 Business Applications Laboratory** **10 Clock Hours — 5 Credit Hours**
Instruction in the theory of punched card equipment, with lab exercises involving panel wiring and operations of the following machines: card punch, sorter, interpreter, reproducing punch, collator, and accounting machine. Practical exercises will be typical of those performed in existing installations.

***1704 Case Study Laboratory** **10 Clock Hours — 8 Credit Hours**
Students are required to make complete case studies. Presentations include card forms, flow charts, systematic problem solving, etc.

***1705 Basic Computer Concepts** **5 Clock Hours — 4 Credit Hours**
Introductory Programming. This sequence of two courses, 1705 and 1706, is designed to give the student a complete knowledge of computers. Specifics: machine coding, symbolic languages, utility programs, table look up, address modification, program switches, program checks, sub-routines, etc.

***1706 Computer Programming and Operation** **20 Clock Hours — 12 Credit Hours**
Symbolic languages which have broad application are studied and used. Programs are written for, and tested on, the college computer.

***1707 Installation Management** **5 Clock Hours — 3 Credit Hours**
The study of personnel policies, office management, and data processing as it is related to general management problems.

***1708 Computer Programming and Systems Analysis** **20 Clock Hours — 8 Credit Hours**
The student is required to design a complete system around a given set of applications. He must select the type of data to be used, devise data flow patterns, design input and output formats, flow chart the system, program, generate test data, and demonstrate the operation of the system.

1711 Introduction to Data Management and Computer Operations
10 Clock Hours — 6 Credit Hours
An overview of the entire field of data processing with emphasis on the field of Data Management. Instruction in the operational function of key-operated equipment and introduction to the computer. Laboratory work will reinforce these principles.

1712 Data Entry Systems **5 Clock Hours — 3 Credit Hours**
Instruction is given in the operation of card-punch, key-type, and key-disk equipment. Laboratory work will reinforce the above instruction.

1721 Advanced Programming Design And Control **5 Clock Hours — 3 Credit Hours**
Techniques for designing programs using auxiliary memory, tables, sorts and advanced assemblers are discussed. Program checking and debugging techniques and efficiency evaluation are covered in detail.

1722 Assembly Programming II **10 Clock Hours — 5 Credit Hours**
The full range of assembly language instructions and coding techniques are introduced with programs written using auxiliary storage, interrupt processing and table processing. All programs are tested and thoroughly documented. Program linkage and operating systems are introduced.

1731 Peripheral-Equipment Operations **10 Clock Hours — 5 Credit Hours**
Instruction is given in the operating procedures of both on-line and off-line equipment. Laboratory work will reinforce the above instruction by providing exposure to normal operator maintenance functions.

1733 Data Preparation and Control **5 Clock Hours — 2 Credit Hours**
Instruction is given in the efficient coding and editing of source documents and use of desk controls applied to data processing documents. Input-Output control functions are emphasized. Laboratory work will reinforce above instruction.

1741 Operating Systems **5 Clock Hours — 3 Credit Hours**
The standard functions of supervisory routines, including intro-run control, I/O control, multiprogramming and service routines, are discussed and explained. Job control languages are introduced with exercises.

1741A Operating Systems A **10 Clock Hours — 6 Credit Hours**
Designed for those students who have elected the Data Management program. Greater emphasis is placed on the functions of an operating system in this program. The student is required to demonstrate advanced techniques in operating a computer under Operating Systems.

1742 COBOL Programming I **15 Clock Hours — 8 Credit Hours**
COBOL programming with emphasis on American National Standard compatibility. The student will write several programs ranging from basic to complex using punched card, magnetic tape, and sequential disk files.

***1751 Systems Models and Modeling Techniques** **5 Clock Hours — 3 Credit Hours**
The development of computer simulation models and the solutions using systems analysis techniques and the digital computer. Applications are taken from the fields of production, accounting, finance, marketing, inventory control and business organization. Prerequisite: 1762.

***1752 Real-Time Systems and Data Communications I** **5 Clock Hours — 3 Credit Hours**
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: 1722, 1763A.

***1753 Applied Systems Analysis and Design I** **10 Clock Hours — 5 Credit Hours**
Emphasis is placed on the total systems concept and the development of management information systems. Laboratory projects will analyze the present flow of information in a simulated business establishment. The student will analyze the simulated company's present system functions and design on alternate, more efficient and more practical system. The end product will be a management information system providing timely, useful decision-making data. The student will be required to display proficiency in the areas of system analysis, system design, performing a feasibility study, installation planning and system implementation. The laboratory projects will require two school quarters to complete. Prerequisites: 1762, 1763A.

1761 Programming Systems I **5 Clock Hours — 3 Credit Hours**
Designed for the student with limited programming experience. Concepts and usage of high-level languages such as COBOL, RPG, and BASIC.

1762 COBOL Programming II **10 Clock Hours — 6 Credit Hours**
Advanced COBOL techniques using randomly processed disk files. The student is taught to access indexed-sequential and direct-access files using keys and algorithms.

1763 Systems Analysis And Design **10 Clock Hours — 5 Credit Hours**
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.

***1763A Systems Analysis and Design** **5 Clock Hours — 3 Credit Hours**
The System Analysis student will be instructed in the complete methodology of analyzing and designing computer oriented information processing systems. Instruction and exercises involve data collecting, input and output file structure and design and interpretation of processing requirements. Laboratory projects will reinforce the instruction in the areas of data accuracy controls, data system analysis techniques, correct design procedures and documentation techniques. This course prepares the student to expand upon and apply the appropriate principles of systems analysis and systems design in courses 1752, 1753, 1791 and 1792.

1772 Introduction to Computer Programming **5 Clock Hours — 3 Credit Hours**
Terminology and basic concepts of automation. Introduction to Fortran programming and its application to engineering. Laboratory experience in writing programs. Prerequisite: 1191.

1773 Data Preparation and Control **5 Clock Hours — 2 Credit Hours**
Instruction is given in the efficient coding and editing of source documents and use of desk controls applied to data processing documents. Input-Output control functions are emphasized. Laboratory work will reinforce above instruction.

1781 Programming Systems II **10 Clock Hours — 5 Credit Hours**
This course continues instruction in language processor techniques. A basic PL 1 compiler is designed and the edit and translator program written using the assembly language and COBOL.

1782 Installation Management **5 Clock Hours — 3 Credit Hours**
Instruction in basic management principles leads to detailed analysis of the data processing environment and effective methods of managing it.

1783 Research Project **5 Clock Hours — 3 Credit Hours**
Independent research is conducted by each student. The only limitations applied are that the research must be directly related to data processing and must not concern itself directly with any other material covered by the curriculum.

***1791 Real-Time Systems and Data Communications II** **5 Clock Hours — 3 Credit Hours**
The theory and experience the Systems Analysis student acquired in 1752 Real-Time Systems and Data Communications I will be expanded and reinforced. Instruction will include the justification of data communication applications, effective data transfer systems, data concentration and decoding techniques, interrupt schemes, master control scheduling, self-recovering networks and data communication systems maintenance and management. Laboratory projects will be scheduled to reinforce the instruction. Prerequisites: 1722, 1752.

***1792 Applied Systems Analysis and Design II** **10 Clock Hours — 5 Credit Hours**
The continuation and completion of the projects that were initiated in 1753. Prerequisites: 1762, 1763A, 1753.

1798 Survey Of Data Processing **3 Clock Hours — 2 Credit Hours**
Terminology and basic concepts of data processing with emphasis on the application of the electronic computer system.

1799 Survey Of Data Processing **5 Clock Hours — 4 Credit Hours**
Introduction to the three principal data processing systems; manual, unit record, and electronic computer, with practical applications.

***1803 Case Study (Retail)** **5 Clock Hours — 3 Credit Hours**
Individual projects and studies related to actual cases which provide opportunities for the student to develop better understandings of the principles of retailing as they are practically applied in retail stores in this community.

1804 Risk and Insurance **5 Clock Hours — 3 Credit Hours**
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.

***1805 Principles of General and Multiple Line Insurance II** **5 Clock Hours — 3 Credit Hours**
A continuation of Insurance I, including legal principles, the insurance contract, insurers, underwriters and re-insurance.

1810 Principles Of Salesmanship **5 Clock Hours — 3 Credit Hours**
Analysis of the general principles and techniques of effective selling. Principles and problems that include background information a salesman needs, and analysis of the selling process.

1812 Salesmanship **2 Clock Hours — 2 Credit Hours**
Study of the selling process. A point by point observation of the steps of a sale and on introduction to industrial and wholesale selling.

1815 Audiovisual Sales Techniques **5 Clock Hours — 4 Credit Hours**
Planning and executing sales presentations using audiovisual media. Emphasis is placed on video camera/playback equipment and other equipment employing sight and sound.

1820 Sales Management **5 Clock Hours — 4 Credit Hours**
A study of the many and varied duties and responsibilities of the sales manager including: selection of sales personnel, leadership, records, and reports, training, motivation, as well as the sales function in the structure of the company.

***1822 Business Statistics** **5 Clock Hours — 4 Credit Hours**
Fundamentals of statistics. Application of statistical decision theory in business. Construction, use, and interpretation of statistical data. Probability theory, sampling distributions, risk and uncertainty. Marketing applications stressed.

1823 Business Law I **5 Clock Hours — 3 Credit Hours**
Treatment of fundamental principles of business law, including contracts, negotiable instruments, and agencies.

1824 Business Law II **5 Clock Hours — 3 Credit Hours**
A continuation of Business Law I with a treatment of government regulations, trust, and insurance.

1832 Personnel Management **5 Clock Hours — 3 Credit Hours**
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.

***1835 Case Study (Wholesale)** **5 Clock Hours — 3 Credit Hours**
Individual projects and studies related to actual cases which provide opportunities for the student to develop better understandings of the principles of wholesaling as they are practically applied in wholesale companies in this community.

1836 Principles of Wholesaling **5 Clock Hours — 4 Credit Hours**
A comprehensive analysis of the wholesaling function and guidance in the treatment of practical difficulties that arise in the course of applying textbook principles to operational situations.

1842 Advertising And Display **5 Clock Hours — 4 Credit Hours**
Advertising media and their effects upon business. Practical applications of display theories as they relate to window and internal displays. Display and its relation to interior decorating and design.

1845 Principles of Retailing **5 Clock Hours — 4 Credit Hours**
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.

1846 Industrial Product Marketing I **5 Clock Hours — 4 Credit Hours**
Study of the nature and characteristics of industrial markets, procedures involved in industrial purchases and sales, psychology in industrial buying, distribution channels, and service policies and operating plans.

1847 Industrial Product Marketing II **5 Clock Hours — 4 Credit Hours**
Techniques for pricing industrial products and services; product line planning; product policy, short-range and long-range planning; market research and development.

1850 Computerized Business Applications **5 Clock Hours — 3 Credit Hours**
The computer as a management tool. Accounts Receivable, Accounts Payable, Inventory Control, Payroll, Accounting Statements, and other business application models are studied using the medium-sized computer.

1900 Electrical & Electronic Fundamentals **5 Clock Hours — 3 Credit Hours**
Covers the general principles of electrical and electronic circuits and equipment and relates these principles to engineering applications. Particular consideration is given to electrical and electronic based instruments.

1901 Electronics I **10 Clock Hours — 5 Credit Hours**
Electricity. Ohm's Law. Resistors, conductors and insulators. Series circuits. Parallel circuits. Series-parallel circuits. Kirchoff's law. Maximum power transfer. Loaded and unloaded voltage dividers. Network theorems. Magnetism. Magnetic units. Electro-magnetic introduction. Alternating voltage and current. Introduction to generators and motors.

1902 Electronics II **10 Clock Hours — 5 Credit Hours**
Inductance. Inductive reactance. Inductive circuits. Capacitance. Capacitive reactance. Capacitive circuits. RC and RL time constants. Alternating-current circuits. Reasonance. Filters. Electron Tubes. Transformers. Transformer impedance matching. Diodes and transistors. Prerequisite: 1901.

1903 Electronics III **10 Clock Hours — 5 Credit Hours**
Semiconductor theory, pn junctions. Diode equivalent circuits. Rectifier circuits. Bipolar transistors. Transistor biasing circuits. AC equivalent circuits. Small signal amplifiers. Class A power amplifiers. Class B push-all amplifiers. Class C power amplifiers. Prerequisite: 1902.

1904 Electronics IV **7 Clock Hours — 4 Credit Hours**
Field-effect transistors. FET circuit analysis. Decimal and Miller's theorem. Frequency effect. Integrated. Negative feedback. Feedback oscillators. Frequency domain. Voltage regulation. Prequisite: 1903.

1905 Industrial Control Electronics **7 Clock Hours — 3 Credit Hours**
Transistor amplifiers. Feedback amplifiers. Operational amplifiers. Phase-shift control of an SCR. Thyratron characteristics. Phase-shift control of a thyratron. The unijunction transistor as a control device. UJT controlled SCR time delay circuits. Relays. Transducer principle. Introduction to the commonly used transducers. Introduction to the electromechanical components such as: accelerameter, LVDT, thermocouples, strain gauges, limit switches, solenoids, and actuators. Prerequisite: 1902.

1906 Pulse Circuits **5 Clock Hours — 3 Credit Hours**
Pulse waveforms. RC networks. Diode characteristics. Transistor characteristics. Transistor switching characteristics. Amplifier switching circuits. Logic and logic circuits. Multivibrators. Counters. Matrices. Special circuits and devices. Prerequisite: 1903.

1907 Electrical Motor Control **5 Clock Hours — 3 Credit Hours**
Electrical components for control circuits. Manual starters for D-C and A-C motors. Automatic starters and control circuits for polyphase motors. Speed control of D-C and A-C motors. Control of single-phase motors. Static Switching circuits and control. Prerequisite: 1901.

1908 Digital Systems I **5 Clock Hours — 3 Credit Hours**
Binary and octal numbers. Binary code. BCD code. Gray code. Excess-3 code. Review of Boolean algebra. Karnaugh map simplification. Logical operators. Logical problem formation. Combinational circuits and its design rules. Adders. Introduction to sequential circuits. Flip-flops. Counter techniques. Special counters and registers. Input-output devices. D/A and A/D conversion. Magnetic devices. Prerequisites: 1902 or 1905.

1909 Digital Systems II **5 Clock Hours — 3 Credit Hours**
Introduction to computer organization. Programming elements techniques. Single-address instruction. Multiple-address instruction. Logic circuits for arithmetic and control units. Computer elements. Integrated circuits. Prerequisite: 1908.

1910 Digital Systems III **9 Clock Hours — 6 Credit Hours**
Introduction to computer memory systems. Magnetic core memory and its circuits. Analysis of the read-restore cycle. Analysis of the clear-write cycle. Coincident-current selection. Address decoding logic. ROM circuits. Computer peripheral devices. Display systems. Prerequisite: 1909.

1911 Introduction to Communication Systems **7 Clock Hours — 3 Credit Hours**
RF amplifiers, oscillators, mixers, IF amplifiers, crystals, radiation and propagation of waves. Amplitude modulation, detectors, AM transmitters and receivers. Single-sideband techniques. Prerequisite: 1903.

1912 Communication Systems II **8 Clock Hours — 4 Credit Hours**
Antennas, Transmission lines. Microwave transmissions. FM transmitters and receivers. Black and white and color TV. Multiplexing. Prerequisite: 1911.

1913 Electrical Fundamentals I **5 Clock Hours — 3 Credit Hours**
Introduces the student to the basic laws of AC and DC electricity, and the implementation of theory. Basic power distribution and control system fundamentals are developed along with practiced application techniques.

1914 Electrical Fundamentals II **5 Clock Hours — 3 Credit Hours**
A continuation of Electrical Fundamentals I. AC power factor, polyphase relationships, and control systems functions are examined in greater depth. Abilities of the student to plan, assist, and supervise electrical power, and control system installations, and modifications are developed. Prerequisite: 1913.

1915 Electrical Lighting and Wiring Design I **7 Clock Hours — 4 Credit Hours**
A-C and D-C review. Power factor. Transformer. Basic devices and circuits. Overcurrent devices. Types and sizes of wires. Selection of proper wire sizes. Wire connections and joints. Grounding. Outlet and switch boxes. Different wiring methods. Adequate wiring. Service entrance and branch circuits. Good lighting. Residential and farm motor wiring. Prerequisite: 1902.

1916 Electrical Lighting and Wiring Design II **7 Clock Hours — 4 Credit Hours**
Wiring residential and farm: planning and installation, installation of service entrance and ground, installation of specific outlets and installation of switches and other devices. Miscellaneous wiring. Wiring of heavy appliances. Modernizing an installation. Farm wiring. Isolated and standby power plants. Wiring apartment houses. Planning nonresidential lighting. Wiring for motors. Wiring schools and churches. Wiring stores. Wiring miscellaneous occupancies. Prerequisite: 1915.

1917 Electrical Machines **5 Clock Hours — 3 Credit Hours**
D-C generator and motor principles. D-C generator characteristics. D-C motor characteristics. A-C generators. Polyphase induction motors. Single-phase motors. Synchronous motors. Prerequisite: 1902.

1918 Electrical Power Distribution **5 Clock Hours — 3 Credit Hours**
Transformers and substations. Single-phase and three-phase transformer. Electrical power transmission and distribution systems including relay and control devices and circuit protective devices. Grounding systems. Power factor correction. Elementary short circuit analysis. Prerequisite: 1902.

1920 Electrical Estimating **5 Clock Hours — 3 Credit Hours**
The fastest means for estimating the cost of electrical systems in residential and commercial buildings. Introduction to the charts techniques which determine prices of installed equipment, allowing the estimator to get the cost of an installed wiring system without breaking it down into its various components.

1921 Electrical Code **3 Clock Hours — 2 Credit Hours**
A study of the electrical codes applicable to electrical construction and equipment, including their coverage, limitations and interpretation.

1922 Industrial Instrumentation **5 Clock Hours — 3 Credit Hours**
A study of the basic approach to pressure, temperature, flow, humidity, liquid level measurement and control by mechanical, electrical and pneumatic means. By emphasizing the fundamental similarity among specific makes of instruments, the student will be taught the knowledge necessary for installing, maintaining and altering the most widely used instruments in industry.

1923 Biomedical Instrumentation I **5 Clock Hours — 3 Credit Hours**
Transducer principle. Introduction to the commonly used transducers. Introduction to the man-instrument system. Courses of bioelectric potentials. Bio potential electrodes. Biochemical transducers. Electrocardiography. Electrosphygmomanometer. Magnetic blood flow meter. Cardiac output computer. Patient monitoring system. Surgical monitoring system. Internal and external pacemaker. Prerequisites: 1908 and 2216.

1924 Biomedical Instrumentation II **10 Clock Hours — 5 Credit Hours**
Digital blood gas analyzer. Thermovision system. Ultrasonic system. Electroencephalographs. Instrumentation for sensory measurements. Biotelemetry. Instrumentation for the clinical laboratory. X-ray and radioisotope instrumentation. The computer in biomedical instrumentation. Prerequisite: 1923.

1926 FCC License Preparation **3 Clock Hours — 2 Credit Hours**
Preparation for the FCC first class radio-telephone operators license. Technical and legal aspects. Prerequisite: 1910 or 1912.

1940 Electronics Project **8 Clock Hours — 4 Credit Hours**
Application project involving specifications, design, construction, testing, trouble shooting and formal report. Prerequisite: 1910 or 1912.

1999 Special Problems Seminar **2 to 4 Credit Hours**
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 Department Chairman.

***2001 Industrial Organization and Management** **3 Clock Hours — 2 Credit Hours**
Covers the levels of responsibility in management, the basic economic factors involved in a profit making enterprise and the organization and functions of the major departments in an industry.

2002 Materials Handling **5 Clock Hours — 3 Credit Hours**
Survey of material handling elements such as unit load, packaging, bulk handling, economic improvement procedures, shipping and warehousing.

2003 Industrial Processes and Plant Layout **7 Clock Hours — 3 Credit Hours**
Study of factory planning with emphasis on the most efficient arrangement of work areas to achieve lower manufacturing costs. Arrangements of stock, machine, layout of aisles, and use of space to include layouts for small and medium size plants. Industrial manufacturing operations including automatic control loop design and the peculiarities of industrial processes and how instrumentation is used for process control.

2004 Time and Motion Study **5 Clock Hours — 3 Credit Hours**
Principles of motion economy, tools for motion study — to include: process and operation charts, the movie camera, stop watch, etc. Includes study and application of the basic principles used to develop better methods of performing work.

2005 Quality Control **5 Clock Hours — 3 Credit Hours**
Application of Statistics and probability to basic quality control problems. Functions, responsibilities, structure, costs, reports, records, personnel and vendor-customer relationships in quality control. Sampling inspections, process control and tests for significance. Prerequisite: 1191.

2006 Industrial Engineering Project **7 Clock Hours — 3 Credit Hours**
Application of theories developed in several industrial technology courses to selected general case problems — to provide practice in the integration of principles. Prerequisites: 2003, 2004 and 2005.

2007 Production Costs and Control **5 Clock Hours — 3 Credit Hours**
Development of cost estimating techniques, practical application of production cost theory, control of material and labor costs, determination of time requirements, estimation of production prices. Prerequisites: 2004 and 2005.

2009 Industrial Safety **2 Clock Hours — 1 Credit Hour**
Study of industrial safety programs, safety codes and standards, compensation, and safety inspection. Occupational health hazards, typical industrial policies and facilities for accidents and injuries. Safety devices for equipment and safety education programs. Special emphasis given to "The Occupational Safety and Health Act."

2010 Industrial Hygiene Measurements **5 Clock Hours — 3 Credit Hours**
Gas and vapor volume calculations and sampling, sampling for particulars, air flow measurements and quality standards, toxic concentrations. To include: area ventilation heat stress, noise characteristics, electromagnetic energy measurements and illumination. Prerequisite: 2009.

2101 Engineering Materials **5 Clock Hours — 3 Credit Hours**
Metallic, organic and inorganic non-metallic substances. Testing, uses, heat treatment and fabrication of these materials. Emphasis on testing procedures and interpretation of test data. Introduction to stress and strain. Use of various testing machines.

2102 Manufacturing Processes **3 Clock Hours — 2 Credit Hours**
Survey of the fundamentals of manufacturing processes. Methods of manufacturing and fabricating metal and plastic parts. To include: powder metallurgy, cermets, electro-chemical, automatic metal working machines, welding, etc.

2104 Hydraulics and Pneumatics **5 Clock Hours — 3 Credit Hours**
Basic principles of hydraulics and pneumatics. Distribution and control. Application of fluid mechanics, including pressure, density and viscosity. Basic physical laws governing fluids and gasses. Application in design circuits and systems. Prerequisites: 1171 or 1191 and 2271.

2105 Statics and Strength of Materials I **5 Clock Hours — 3 Credit Hours**
Effects of forces and stresses on materials in various forms and configurations found in engineering and mechanical constructions. Use of mathematics in analyzing forces, stresses, moments and equilibrium by use of such factors as moment of inertia and centroids. Determination of dimensions and material specifications. Prerequisite: 1192.

2106 Strength of Materials II **5 Clock Hours — 3 Credit Hours**
Continuation of 2105. Topics of study include combined stresses, statically indeterminate beams, deflection of beams and column theory. Torsional stress, experimental stress analysis and strain gage instrumentation are discussed. Prerequisites: 2105 and 1193.

2107 Machine Design I **7 Clock Hours — 3 Credit Hours**
Principles of mechanics and strength of materials as applied to components of mechanisms and power trains as well as beams, pressure vessels, and other bodies under static load. Shafts, gears, couplings, threaded units, and riveted constructions are treated in detail. Prerequisite: 2105.

2108 Machine and Product Design **10 Clock Hours — 4 Credit Hours**
Application of principles of mechanics and strength of materials to design of machine elements. Dynamic loading condition. Research to solve a problem in design by consulting various manuals, periodicals, and through laboratory experiments. To include a written technical report as well as all sketches, drawings, and specifications as required. Evaluation and critique of all problems by a selected group of Engineering Technology faculty members. Prerequisites: 1371 and 2107.

***2110 Engineering Lab** **5 Clock Hours — 3 Credit Hours**
Laboratory problems. Performance tests conducted on various machines as studied in hydraulics, thermodynamics, strength of materials, etc. Open to second year students.

2111 Tool Engineering Design **5 Clock Hours — 3 Credit Hours**
A study and analysis of cutting, forming, and drawing sheet metal, using modern tools and dies. Application of mathematics and mechanics to determine forces and stresses occurring in these

metal working operations. Provides experience of designing a die to produce a simple sheet metal product. Also includes jig and fixture design. Prerequisite: 2105.

2112 Fluid Power Systems I **3 Clock Hours — 2 Credit Hours**
An in-depth study of hydraulic and pneumatic schematics and circuitry. A comprehensive study in the fundamental concepts of servo hydraulics, air logic and control systems, application in design circuits and systems.

2113 Mechanisms Analysis & Design **5 Clock Hours — 3 Clock Hours**
Mathematical and drafting room solutions of problems involving the kinematics that govern mechanisms and the interaction of their components. Study of the motions, velocities, and acceleration of points within a linkage mechanism. Cam analysis and design with particular emphasis on pressure angles and follower motions. Also, a study of the many types of gears and gear train. Prerequisites: 1192 and 2272.

2114 Machine Processes **5 Clock Hours — 2 Credit Hours**
An introductory course designed to acquaint the student with basic hand tools, safety procedures and machine processes in our modern industry. It will include a study of measuring instruments, characteristics of metals, and cutting tools. The student will become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming.

2115 Industrial Controls **5 Clock Hours — 3 Credit Hours**
The study of modern methods of controlling, programming, and modifying automated processes. Equipment controls and electrical devices which automatically operate machines will be studied. Topics include not only process sequencing control system function, but also how to utilize the control system for highest productivity and quality.

2116 Electromechanical Control I (Servomechanisms) **10 Clock Hours — 5 Credit Hours**
Covers the basic ideas incorporated in numerically controlled (NC) Machines. Introduction to transducer feedback systems. Analog control of levels, velocities, positions, etc. of output devices such as hydraulic actuators and D.C. drives. Servo-control techniques through the use of digital computers. Topics to include: Open and close loop systems, feedback, resolution, accuracy, repeatability, transient response analysis, stabilization circuits, dampening, types of comparators, gray code encoders, leadscrew control, core memory applications and stepping motors. Prerequisites: 1905 and 2104.

2117 Electromechanical Design **10 Clock Hours — 5 Credit Hours**
A course intended to exercise the student's knowledge of electro-mechanical systems. It provides the time and opportunity for student to work on the design, fabrication, assembly, and troubleshooting of electro-mechanical devices and systems. The design is to include ideas covered in most of the student's previous core courses of study. The purpose is to promote independent study, initiative, and creativity by requiring the student to develop the design problem with minimal staff supervision. Prerequisites: 1908, 2112, and 2116.

2119 Systems Development-NC **3 Clock Hours — 2 Credit Hours**
Introduction to automated or numerical control equipment. Emphasis on tape control systems — writing of programs and lab experience in implementing these programs — machine tool and graphic applications. Prerequisites: 2114 and 1191.

2120 Metal Joining I **8 Clock Hours — 4 Credit Hours**
Introduces the student to joining of metals — based on fusion, diffusion, chemical and mechanical procedures. Primary emphasis upon lab experience in Arc and Gas Welding.

2121 Metal Joining II **7 Clock Hours — 3 Credit Hours**
Continuation of 2120. More lab experience in gas and arc welding, resistance welding, brazing

and soldering. Joint design, stresses in welds, codes, standards, inspection, testing, and the economics of joining methods are considered. Prerequisite: 2120.

2123 Materials Selection **3 Clock Hours — 2 Credit Hours**
Emphasis upon selection of a material for a particular end product. Based on prior knowledge of production and processing methods. To stress properties and cost of such materials. Details regarding procurement of starting materials, processing steps and specifications are formulated. Prerequisite: 2102.

2124 Layout and Design Project **7 Clock Hours — 3 Credit Hours**
Application and implementation of principles and procedures involved in following a metal fabrication project from its inception to the completed product. Only open to fourth and fifth term students.

2198 Career Planning and Personal Development **3 Clock Hours — 2 Credit Hours**
Have your future your way. Learn a practical "How To" method of developing yourself and your career. You will learn: where to search for opportunities to plan your self-development program; to perform better at your job interviews; where to obtain the continuing education you want or need; to develop your time schedule and concepts that should help you get ready for the next job.

2199 Special Problems Seminar **2 to 4 Credit Hours**
Individual and independent study and special projects pertaining to the particular technology in which the student is enrolled. Open to fourth and fifth term students, by special arrangement with the Coordinator and Department Chairman.

2210 General Chemistry **5 Clock Hours — 3 Credit Hours**
Fundamental concepts of chemistry, including atoms and molecules, valence and chemical equations, oxidation and reduction, physical and chemical properties of matter, gases, liquids and solids, water, solutions, acids, bases and salts, electrolytes and ionization.

2211 Clinical Chemistry **3–15 Clock Hours — 3–6 Credit Hours**
Chemistry principles and procedures related to health and disease.

2211A Clinical Chemistry **15 Clock Hours — 6 Credit Hours**
Same as Clinical Chemistry 221 with the additional performance of intricate clinical chemistry procedures and including an introduction to clinical laboratory automation.

2212 Clinical Laboratory Procedures **3 Clock Hours — 1 Credit Hour**
A survey of testing procedures commonly used in clinical laboratories and physicians' offices. Background information on chemical testing and the abnormal conditions which are detected using chemistry tests.

2213 Clinical Chemistry **6 Clock Hours — 3 Credit Hours**
Familiarization with organic and biochemical relationships of gases, solids, and liquids which are used in medical settings. Applications of chemical principles to biomedical instrumentation currently in use will be stressed.

2216 Human Anatomy & Physiology I **5 Clock Hours — 3 Credit Hours**
Familiarization with the entire anatomical structure of the human body as a whole, the organs involved in the various body systems. Thorough study of surface anatomy (including the skin, the eyes and the ears). Anatomy of word-building and general terminology as it applies to the human body and to medicine in general.

2217 Human Anatomy & Physiology II **5 Clock Hours — 3 Credit Hours**
Brief review of the anatomy and study of the physiology functions of the following body systems

(including medical terminology as applicable): The skeletal, muscular, cardiovascular and circulatory, respiratory, digestive and urogenital systems.

2218 Human Anatomy & Physiology III **5 Clock Hours — 3 Credit Hours**
Brief review of the anatomy and study of the physiological functions of the following body systems (including the medical terminology applicable to each): The endocrine and metabolic systems, including their influence on the respiratory, excretory, digestive, reproductive and other systems. Study of cell structure and genetics in depth.

2221 Physics I (Automotive) **5 Clock Hours — 3 Credit Hours**
Fundamental principles of heat and electricity treated with emphasis on heat engines, electronic theory, circuits and instruments with special application to the motor vehicle.

2222 Physics II (Automotive) **5 Clock Hours — 3 Credit Hours**
Fundamental principles of mechanics, treated with emphasis on the kinematics and dynamics of machines and fluids with special application to the motor vehicle.

2241 Physics I (Aviation) **5 Clock Hours — 3 Credit Hours**
Measurement techniques: functions and scaling. Kinematics; vectors; motion near the earth; forces; laws of force and motion. Friction as a force; moments of forces. Equilibrium; work; energy; power. Conservation of energy and momentum. Uniform circular motion. Rotational Kinematics; simple harmonic motion.

2242 Physics II (Aviation) **5 Clock Hours — 3 Credit Hours**
Structure of matter; density; pressure; buoyancy; streamlining; temperature scales; expansion; molecular energy; airfoils; specific heat; change of state; heat combustion; energy conversion; heat engines; ideal gases; laws of thermodynamics; properties of waves; doppler effect; electromagnetic waves.

2243 Physics III (Aviation) **5 Clock Hours — 3 Credit Hours**
Electrical nature of matter; electric force; the electric field. Capacitance and dielectrics; electric units. Charges in motion. Electric energy and power. D.C. electric circuits. Magnetic force; the magnetic field; electro-magnetism. Introduction, principles of generators and motors and fundamentals of A.C. electricity.

2244 Physics **4 Clock Hours — 2 Credit Hours**
Pressure and other related topics as applied to the medical profession; Forces, and addition of vector quantities pertaining to biologic systems; Properties of waves, including frequency, wavelength, speed, amplitude, reflection, refraction, diffraction, interference; Optical instruments, including basic principles of geometric optics; atomic spectra and spectroscopic techniques as applied to the medical profession.

2245 Physics **5 Clock Hours — 3 Credit Hours**
Electromagnetic radiation, including basic sources detection schemes and medical application of infra-red, visible, ultra-violet, X-ray, and gamma radiation; fundamental nuclear particles and applications of nuclear techniques both as diagnostic and theraputic tools; the electron, fundamental forces with emphasis on the electric field, potential energy and voltage, current, resistance, and simple DC circuits; the potentiometer, the transformer; schematics and simple circuit layout; basic components of various medical instruments.

2261 Printing Science I (Chemistry) **5 Clock Hours — 3 Credit Hours**
Concepts of chemistry related to production procedures, converting raw materials to finished product in the graphic communication field.

2262 Printing Science II (Physics) **5 Clock Hours — 3 Credit Hours**
Fundamental principles of mechanics, heat, color and electricity with special applications to the field of graphic communications.

2270 Pre-Technical Physics **5 Clock Hours — 3 Credit Hours**
Fundamentals of Physics; laboratory procedures; the controlled experiment; methods of measurement; techniques of data collection and analysis; interpretation of experimental results.

2271 Physics I **5 Clock Hours — 3 Credit Hours**
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; collisions. Co-requisite: 1191.

2272 Physics II **5 Clock Hours — 3 Credit Hours**
Translational equilibrium; center of gravity; moments of forces; force analysis of structures; beams; trusses; booms; shear; elasticity; friction as a force; uniform circular motion; rotational kinematics; simple harmonic motion; rigid body kinematics; energy types; energy conversion. Prerequisites: 1191 and 2271.

2273 Physics III **5 Clock Hours — 3 Credit Hours**
Structure of matter; density; pressure; temperature scales; expansion; molecular energy; specific heat; change of state; heat of combusion; heat energy; energy conversions; the ideal gases; properties of waves; wave equations; sound energy; light energy and color; vision and the eye; radiant energy; electromagnetic radiation.

2274 Physics IV **5 Clock Hours — 3 Credit Hours**
Electrical Track
Radiant energy and spectral analysis; refractions; fundamentals of optics; simple lenses and ray tracing; simple optical instruments; the inverse square law; the nature of forces; the electric force; the electric field; the magnetic field; fundamental properties of the electron; the mechanics of the electron; electron beam deflection using electrostatic and magnetic fields; instruments using electron beam deflection.

Mechanical Track
Radiant energy and spectral analysis; refraction; fundamentals of optics; simple lenses and ray tracing; simple optical instruments; the inverse square law; the nature of forces; gravitational, magnetic, and electric forces; the electric field; electrical potential; resistance and electrical energy flow; simple DC circuits, work, power, and electrical energy.

2276 Science of Materials **5 Clock Hours — 3 Credit Hours**
Study of the principles basic to the physical properties of materials; examination of materials; techniques of testing materials.

2277 Chemistry **5 Clock Hours — 3 Credit Hours**
Emphasis on the basic concepts of chemistry to lead to an understanding of the quantitative and qualitative aspects of chemical reactions.

2278 Chemistry **7 Clock Hours — 3 Credit Hours**
A study of carbon chemistry as related to the physical and chemical properties of the common polymers of the plastics industry.

2285 Geometric Calculations **5 Clock Hours — 3 Credit Hours**
Techniques, organization, and procedure for solving complex problems; directed to the technology but includes other types of technical problems.

2301 Compression, Transfer, Casting **5 Clock Hours — 2 Credit Hours**
Molding methods used for conversion of thermoset materials into useful products. Properties of thermosets, such as mechanical, physical, thermal, and test methods. Chemistry of thermoset polymers.

2302 Injection and Extrusion Molding **5 Clock Hours — 2 Credit Hours**
Molding methods used to convert thermoplastic materials into designed products. Properties, materials evaluation, test methods chemistry of thermoplastic materials.

2303 Fiber Reinforced Plastics **6 Clock Hours — 3 Credit Hours**
Comprehensive review of resin systems and fiber reinforcement for use in production of FRP products. Fabrication procedures. Comparative properties.

2304 Plastic Composites and Foams **5 Clock Hours — 3 Credit Hours**
Materials and processes used to produce laminates by a variety of methods. Plastics foams, their production and applications.

2305 Thermoforming Methods **5 Clock Hours — 2 Credit Hours**
Special molding methods used to produce plastic articles from film and sheets by a variety of procedures; review of thermoplastic sheets and film materials and their properties.

2306 Plastic Product Design **5 Clock Hours — 2 Credit Hours**
A course designed to enable the student to involve himself with the total aspects of the plastics industry. Case studies of actual parts; which carry through from initial function concept, through part design, costs process planning, tooling, production and quality assurance.

2307 Mold and Tool Design **5 Clock Hours — 3 Credit Hours**
Design of molds and tools for plastics processing. Emphasis on part design, mold design, also design of production aids such as tools, jigs and fixtures, for after-finishing and quality control of molded and fabricated plastics products.

2308 Blow Molding **5 Clock Hours — 2 Credit Hours**
Techniques employed to generate hollow parts, articles using thermo-plastics materials principally by injection and extrusion methods.

***2404 Mechanical Drives and Linkages** **5 Clock Hours — 3 Credit Hours**
A study of basic mechanical components such as gears, pulleys, belts, chains, sprockets. Mechanical principles and application of these devices and mechanical systems employing them. Also to include: cams, cam followers, levers, and linkages. The combination of drives and linkages to form complex mechanical systems.

***2405 Electro-Mechanical Controls I** **5 Clock Hours — 3 Credit Hours**
Introduction to digital controls. The control of relays, solenoids, contactors and motors. The purpose of the course is to investigate means of automating hydraulic, pneumatic, and mechanical systems, utilizing concepts of previous courses such as: hydraulics and pneumatics, electro-mechanical devices, mechanical drives and linkages, etc. Topics include horsepower, torque, fluidics, digital logic, motors and generators, and hydraulic, pneumatic and mechanical controls. Prequisites: 1905 and 2104.

***2406 Electro-Mechanical Controls II (Servomechanisms)** **5 Clock Hours — 3 Credit Hours**
Analog control of levels, velocities, and positions of hydraulic actuators and electrical motors through the use of electronic devices. Utilization of transducer systems. Topics to include: Servo valves, open and closed loop systems, feedback, resolution, response time, inertia of output devices, stability and damping. Prerequisites: 1905 and 2108.

***2407 Electro-Mechanical Controls III** **5 Clock Hours — 3 Credit Hours**
Analog and servo control techniques through the use of digital computers. Covers the basic ideas incorporated in numerically controlled machines. Topics include digital to analog converters, shift registers, gray code, leadscrew control, tachometer stabilization. Prerequisites: 1905 and 2406.

***2408 Transducers** **5 Clock Hours — 2 Credit Hours**
The measurement of pressure, temperature, viscosity, humidity, dew point, density, flow, level, weight, thickness, velocity, acceleration, and forces. Transducer principles and construction as well as examples of practical measurement applications. Prerequisites: 2104 and 2271.

***2411 Electromechanical Design** **10 Clock Hours — 5 Credit Hours**
A course intended to exercise the student's knowledge of electromechanical technology. It provides the time and opportunity for students to work on the design, fabrication, assembly and testing of electromechanical devices or systems. The purpose is to promote independent study, initiative and creativity by requiring the student to develop the design problem with minimal staff supervision open to second year students.

2501 Automotive Technology I **15 Clock Hours — 8 Credit Hours**
Principles of the internal combustion engine. Repair and rebuilding modern automotive engines, including valves, rings, bearings, cooling and lubrication systems. Emphasis on the proper use of hand tools and special equipment.

2502 Automotive Technology II **15 Clock Hours — 8 Credit Hours**
Principles of carburetion: cleaning, rebuilding and adjusting representative types of carburetors and other fuel components. Fundamentals of auto electrics; construction, operation and repair of the electrical system, including batteries, ignition, starting, generating and accessory circuits.

2503 Automotive Technology III **10 Clock Hours — 4 Credit Hours**
Fundamentals and repair of the automobile chassis; includes suspension, braking system, steering and ventilation systems. Emphasis on the use of special equipment used to measure, repair and adjust these units.

2504 Automotive Technology IV **10 Clock Hours — 4 Credit Hours**
A study of the design, construction, operation and servicing of automotive drive line components. These components include clutches, transmissions, rear axles and differentials.

2505 Automotive Technology V **10 Clock Hours — 4 Credit Hours**
Automotive service and trouble-shooting. Procedures and techniques for diagnosing and repairing electrical, engine and carburetion problems. The latest types of automotive testing equipment are studied together with standard repair procedures as practiced in the modern automotive shop. Work will be performed on live equipment.

2506 Machine and Hand Tool Laboratory **5 Clock Hours — 3 Credit Hours**
Principles and processes which underlie the use of hand tools, cutting tools, portable equipment and accessories, measuring devices and gauges. Emphasis placed on developing sound trade judgment, safe work habits, and correct work procedures.

2508 Techniques Of Welding **5 Clock Hours — 2 Credit Hours**
Fundamental understanding and skill in the use of oxyacetylene, arc welding, and cutting equipment is developed. Such typical operations as butt, lap, and fillet welds and the making of a bead are performed.

2510 Automotive Management I **5 Clock Hours — 3 Credit Hours**
Organization, design, lay-out, administration and operation of an automobile dealership, trucking company or automotive leasing operation. Recruiting, hiring and retaining personnel.

2511 Automotive Management II **5 Clock Hours — 3 Credit Hours**
A continuation of Automotive Management I. Engineering traffic flow, building parts and accessory sales, customer relations, measuring local parts and accessory market. Service selling and automotive warranties.

2601 Welding Processes (Aviation) **10 Clock Hours — 3 Credit Hours**
To include soldering, brazing and arc-welding steel. Fabrication of tubular structures, soldering of stainless steel, welding stainless steel and aluminums, magnesium and titanium. Inspect and check welds.

2602 Machine And Hand Tools **5 Clock Hours — 3 Credit Hours**
Identify and select aircraft hardware and materials. Fabricate and install rigid and flexible fluid lines and fittings.

2603 Basic Aerodynamics & FAA Regulations **3 Clock Hours — 1 Credit Hour**
List, thrust and drag. Stability of aircraft. Effects of balance. Write descriptions of aircraft condition and work performed. Complete required maintenance forms, records and inspection reports. Select and use FAA and manufacturer's aircraft maintenance specifications, data sheets, manuals, and publications, and related Federal Aviation Regulations. Exercise technician privileges within the limitations prescribed by FAR 65.

2604 Airframe Structures **10 Clock Hours — 5 Credit Hours**
Identifying of wood defects, inspect wood structures, service and repair wood structures, fabric and fiberglass covering materials. Trim, lettering and tough-up paint; cleaning and corrosion controls, inspect and identify defects.

2605 Materials And Processes **5 Clock Hours — 3 Credit Hours**
Identify and select aircraft hardware and materials. Perform precision measurements. Perform penetrant, chemical etching, and magnetic particle inspections. Identify and select appropriate nondestructive testing methods. Perform basic heat-treating processes. Inspect and check welds.

2606 Airframe Hydraulic And Pneumatic Systems **5 Clock Hours — 2 Credit Hours**
Repair hydraulic and pneumatic power system components. Inspect, check, service, trouble-shoot and repair hydraulic and pneumatic power systems.

2607 Airframe Systems, Hydraulics And Pneumatic Landing Gears
12 Clock Hours — 5 Credit Hours
Inspect, check, service and repair landing gear. Retraction systems, shock-struts, brakes, wheels, tires and steering systems. Inspect, check and service of warning systems of antiskid electrical brakes. Controls, landing gear position indicating and warning systems.

2608 Airframe Structures, Sheet Metal **10 Clock Hours — 4 Credit Hours**
Install special rivets and fasteners. Inspect bonded structures. Inspect and repair plastics, honeycomb and laminated structures. Inspect and repair sheet metal structures. Hand form, layout, bends sheet metal and install conventional rivets. Flush riveting. N.A.G.A. riveting, high-shear rivets, cherry lock rivets.

2609 Aircraft Fuels And Fuel Systems **5 Clock Hours — 2 Credit Hours**
Inspect, check and repair pressure fueling, transfer, defueling, and fuel dump systems. Repair of fuel systems components. Inspect, check, service, trouble-shoot, and repair aircraft fuel systems. Inspect, check, service, trouble-shoot, and repair powerplant fuel systems.

2610 Aircraft Electrical Systems **10 Clock Hours — 4 Credit Hours**
Repair aircraft electrical system components. Install, check and service airframe electrical wiring, controls, switches, indicators, and protective devices. Inspect, check, trouble-shoot, service, and repair alternating current and direct current electrical systems. Service compound and shunt generators, alternators, starters, and starter-generators. Check and adjust generating output regulation. Repair and/or replace fuses, circuit-breakers, switches, high and low tension wiring, terminals and terminal blocks, magnetic switches and transformers.

2611 Aircraft Instrument, Communication And Navigation, And Utility Systems
10 Clock Hours — 4 Credit Hours

Installation, marking, swinging of instruments. Testing of pitot and static air systems and filter systems. Install and check pressure, vacuum, mechanical instruments. Inspect, check, and service auto-pilot, approach control and communication and navigation systems. Inspect and repair antenna and electronic equipment. Inspect, check and service speed and take-off warning system electrical brake controls, anti-skid system and carbon monoxide detection system. Inspect, check and service ice and rain control system. Inspect, check, trouble-shoot, service and repair landing gear position and warning system and aircraft fire detection and extinguishing systems.

2612 Airframe Assembly & Rigging **15 Clock Hours — 7 Credit Hours**

Rig fixed-wing aircraft. Rig rotary-wing aircraft. Assemble, balance and rig aircraft and control surface. Using inspection forms, perform a 100 hour inspection. Perform check of aircraft pertaining to specifications and A.D. note compliance. Make repairs and adjustments found to be necessary during inspection. Check and perform weight and balance of aircraft.

2613 Powerplant Theory, Reciprocating **10 Clock Hours — 5 Credit Hours**

Introduction to the design, manufacture, overhaul and repair of piston and engines and their installation. Overhaul of an opposed engine. Inspect and repair a 14-cylinder or larger radial piston engine.

2614 Powerplant Lubrication **5 Clock Hours — 3 Credit Hours**

Identify and select proper lubricants. Inspect, check, service, trouble-shoot and repair powerplants lubrication systems.

2615 Powerplant Ignition Systems **10 Clock Hours — 4 Credit Hours**

Overhaul magneto and ignition harness. Repair engine ignition system components. Inspect, check, service, trouble-shoot and repair powerplant ignition systems.

2616 Flightline Maintenance **10 Clock Hours — 4 Credit Hours**

Identify and select cleaning materials, perform cleaning and corrosion control, protect battery compartment. Move aircraft employing hand signals and tie down aircraft. Perform airframe and powerplant conformity and airworthiness inspection.

2617 Powerplant Systems and Components **25 Clock Hours — 12 Credit Hours**

Inspect, check and service water injection systems. Overhaul a carburetor. Repair fuel metering components. Inspect, check, service, trouble-shoot and repair reciprocating and turbine engine fuel metering systems. Inspect, check, service, and repair heat exchangers, superchargers and air intake and induction manifolds. Repair engine cooling system components. Inspect, check, trouble-shoot, service and repair engine cooling system. Repair engine exhaust system components. Inspect, check, trouble-shoot, service and repair engine exhaust systems.

2618 Propellers **5 Clock Hours — 3 Credit Hours**

Inspect, check, service and repair propeller synchronizing and ice control systems. Identify and select propeller lubricants. Balance propellers. Repair propeller control system components. Inspect, check, service and repair fixed pitch constant speed and feathering propellers and propeller governing systems. Install, trouble-shoot, and remove propellers.

2619 Powerplant Theory, Turbine **10 Clock Hours — 4 Credit Hours**

Introduction to the design, manufacture, overhaul and repair of turbine engines and their installation. Inspect, check, service, troubleshoot and repair turbine engine installation, fuel control and ignition systems.

2620 Turbine Powerplant Systems and Components **10 Clock Hours — 4 Credit Hours**

Introduction to the design, function, repair and servicing of Turbine fuel controllers. Practice of

installation of control units and trimming of turbine fuel control units. Practice of adjustment of idle speed, and use of charts to determine Standard day engine output. Inspect, check, service, and repair turbine air inlet and exhaust systems.

2701 Medical Terminology **5 Clock Hours — 4 Credit Hours**
Prefixes, suffixes, word roots and their combining forms, building a basic medical vocabulary. Development of a vocabulary in medical specialties including dermatology, pathology, neurology and psychiatry. Development of a vocabulary in surgical specialties including urology, orthopedics, neurosurgical and cardiovascular surgery.

2702 Transcription and Related Medical Terminology **13 Clock Hours — 5 Credit Hours**
(Advanced Medical Terminology and Medical Transcription) Medical terminology related to diseases and operations encountered in transcription of history and physical examinations, discharge summaries, operative reports, laboratory, x-ray, pathology and autopsy reports.

Transcription from modern dictation machines of histories and physicals, x-ray, pathology, operative and autopsy reports and discharge summaries. Prerequisite: Typing ability of 40 words per minute. Students will be tested prior to enrollment in the course.

2703 Medical Assisting Procedures **10 Clock Hours — 3–6 Credit Hours**
Instruction, familiarization, demonstration and practice in practical procedures required of an assistant in various types of physician's offices and hospitals. Includes taking and recording of all vital signs (temperatures, pulse, blood-pressure, etc.). Assisting with different types of examinations and minor surgical and diagnostic procedures, injections, basic procedures of giving medication.

2704 Clinical Office Practice **10 Clock Hours — 4 Credit Hours**
Filing, typing and transcription, involving medical terminology, medical records, including patient records, insurance forms including government medical care programs, hospital forms including admission and discharge records.

2705 Clinical Experience I (Clinical Procedures) **15 Clock Hours — 6 Credit Hours**
Practice in clinics and other health facilities where the students have direct contact with patients performing the following duties: taking vital signs, the methods for taking histories, preparing patients for physical examinations, practicing unconditional positive regard, using correct terminology and medical ethics. Calculation and administration of drugs, scrubbing, gowning, and gloving to assist doctors with sterile procedures, catheterizing, using sterile equipment and sterile techniques. Includes emergency procedures.

2706 Clinical Experience II (Med. Office Procedures) **15 Clock Hours — 4 Credit Hours**
Practice in physician offices or other health care centers handling appointments, insurance forms, patient records, filing, handling correspondence, greeting patients, arranging for laboratory and x-ray procedures and other office duties.

2707 Clinical Experience III (Clinical or Office Option) **15 Clock Hours — 4 Credit Hours**
The student has an opportunity to select the area in which he is most interested. The activities are more extensive than those in 2705 or 2706.

2708 Medical Assisting Seminar **5 Clock Hours — 4 Credit Hours**
Discussion of current developments in the medical assisting and medical field in general, a brief review of various functions such as history and physical taking, and the development of a research paper in a related aspect.

2709 Pharmacology **5 Clock Hours — 3 Credit Hours**
Therapeutic uses, doses, and properties of drugs, toxic reactions and their prevention and treatment. Preparation and administration of drugs. The legal aspect of drug administration.

2710 Basic Laboratory Techniques I (Lecture and Laboratory)
10 Clock Hours — 4 Credit Hours

Introduction to the clinical laboratory with emphasis on basic hematologic procedures, including red and white blood cell counts, hemoglobin, hematocrit and sedimentation rate determination, discussion of blood cell morphology and the differential; routine urinalysis; collection and proper handling of specimens; procedures for ordering laboratory tests. Introduction to other clinical procedures including chemistry, EKG, EEG, X-ray, radioisotopes.

2711 Basic Laboratory Techniques II (Lecture and Laboratory)
10 Clock Hours — 4 Credit Hours

Advanced hematology including reticulocyte and platelet counts plus coagulation procedures such as the Lee White, prothrombin time, etc. Advanced urinalysis including PSP, diagnex blue, prophyrins, Bence Jones Protein, etc.

Practice in selected advanced hematology and urinalysis procedures to illustrate fundamental principles.

2712 Basic Laboratory Techniques III (Lecture and Laboratory)
10 Clock Hours — 4 Credit Hours

A study of blood banking procedures and theory including the inheritance of blood group determinants and donor procedures.

Performance of routine typing, crossmatching, antibody screening and cell panels.

2713 Basic Laboratory Techniques IV **10 Clock Hours — 4 Credit Hours**

Study of diagnostic microbiology with stress on the proper preparation and use of media, aerobic and anaerobic culturing techniques and preparation and staining of slides. Discussion of serological procedures. Includes parasitology and mycology.

Performance of selected microbiological and serological procedures to illustrate fundamental principles.

2714 Medical Laboratory Seminar **10 Clock Hours — 4 Credit Hours**

Discussion of current developments in the medical laboratory, brief review of the various departments of the clinical laboratory and assignment of a research paper on a laboratory related development in medicine.

2720 Trends and Issues in Health Care **5 Clock Hours — 4 Credit Hours**

Introduction to background of medical profession and personal attributes required of all medical personnel. Includes history of medicine, medical ethics, medical jurisprudence, familiarization with hospital departmental structure and administration, various health agencies and related medical professions and organizations.

2721 Emergency Procedures **5 Clock Hours — 1 Credit Hour**

Students will develop skill in diagnosis and all emergency treatment procedures with his scope. Skills will also be developed in the use of and care for all equipment required to accomplish emergency care.

2722 Pathology I **5 Clock Hours — 3 Credit Hours**

Study of diseases and their background in general, including various basic physiologic body types and their susceptibility to disease. Study of diseases resulting from physical trauma (injuries, burns, etc.), metabolic diseases, heredofamilial diseases, infectious diseases.

2723 Pathology II **5 Clock Hours — 3 Credit Hours**

Study of diseases of the various body systems individually, their cause, effect and treatment. Review of basic cell structure and its role in combating disease. Diseases affecting various age groups, including pediatrics and geriatrics.

2724 Immunology (Lecture and Laboratory) **3 Clock Hours — 2 Credit Hours**
Fundamental concepts in immunology, discussion of serology and immunohematology, discussion of infectious disease and their prevention and detection. Performance of blood typing, slide agglutination tests and individual immunizing procedures.

2725 Microbiology (Lecture and Laboratory) **5 Clock Hours — 3 Credit Hours**
Fundamental microbiology and parasitology, the role of micro-organisms in disease and their control. Preparation and use of media, preparation, staining and examination of slides, culturing techniques, preparations for parasitology. Includes sterilization and aseptic technique.

2730 Hospital Safety Regulations **2 Clock Hours — 2 Credit Hours**
A study of the hospital safety regulations applicable to biomedical equipments and electrical facilities in hospitals. Introduction to OSHA.

***2731 Clinical Urology I** **5 Clock Hours — 1 Credit Hour**
Application of anatomy and physiology to urologic problems. Discussion of renal function tests.

***2732 Clinical Urology II** **5 Clock Hours — 2 Credit Hours**
Urologic diseases, diagnosis and treatment as well as hospital care of urologic patient.

***2733 Clinical Urology III** **10 Clock Hours — 4 Credit Hours**
Further study and participation in the diagnosis, care and treatment of urology patients with special emphasis on clinical procedures related to the field of urology.

***2734 Urology Seminar** **5 Clock Hours — 3 Credit Hours**
Observation and participation in the urology patient areas. Study of urologic cases.

2740 Introduction to Medicine and Surgery **10 Clock Hours — 4 Credit Hours**
Study of the information to be obtained in the medical history and the technique of the physical examination, with clinical application.

Instruction in all aspects of operating room function including sterile technique, surgical instrumentation, individual staff responsibilities, and care of the patient in surgery. Introduction to basic pathophysiology and correlation with basic sciences. Includes use of simulated operating room environment and gross anatomy.

2741 Medical And Surgical Clinical Application I **8 Clock Hours — 3 Credit Hours**
Patient/disease interaction. Data collection and preliminary evaluation of physical findings. Problem definition and recording of data. Basic procedures of assisting in the operating room including general surgery.

2742 Medical and Surgical Clinical Application II **10 Clock Hours — 4 Credit Hours**
General patient management including pre-and post-operative complications. Emphasizes the natural history of disease and brief summary of therapeutic intervention and physical diagnosis.

2743 Medical/Surgical Seminar **10 Clock Hours — 4 Credit Hours**
Exploration of controversial areas of medicine and surgery using literature, research, and student participation in discussion and debate. Designed to develop and maintain a flexible attitude and approach to medicine and the health care field.

2750 Patient Care Skills **5 Clock Hours — 2 Credit Hours**
Verbal and non-verbal communication, body mechanics, procedures for assisting patients to walk, use of walkers, etc., patient positioning, general isolation procedures, use of restraints, vital signs.

2751 Cardiopulmonary Anatomy and Physiology **5 Clock Hours — 2 Credit Hours**
Includes detailed anatomy and physiology of the respiratory and circulatory systems. Special emphasis is placed on ventilation, diffusion, oxygen and CO transport, and acid base balance.

2752 Respiratory Therapy Science I **5 Clock Hours — 3 Credit Hours**
History of Respiratory Therapy. Introduction to equipment including medical gas cylinders, regulators, flow meters, oxygen therapy devices, analyzers, humidifiers and nebulizers. Discussion of indications and contraindications of oxygen therapy, humidity therapy, airway management, CPR. Introduction to IPPB.

2753 Respiratory Therapy Science II **5 Clock Hours — 4 Credit Hours**
Clinical medicine including etiology, symptomology, diagnosis, therapy and prognosis of pathological processes.

2754 Respiratory Therapy Science III **5 Clock Hours — 4 Credit Hours**
Pharmacology of respiratory therapy, neonatal respiratory therapy acid-base chemistry and blood gases, rehabilitative procedures.

2755 Respiratory Therapy Science IV **5 Clock Hours — 4 Credit Hours**
Mechanical ventilators, classification, use, maintenance and operation.

2756 Clinical Practice I **10 Clock Hours — 2 Credit Hours**
Practical application of oxygen delivery apparatus, cleaning, disinfection, sterilization techniques, emphasis on airway management, CPR, IPPB.

2757 Clinical Practice II **10 Clock Hours — 4 Credit Hours**
Pulmonary function testing, IPPB, humidity, Aerosol therapy, chest physiotherapy.

2758 Clinical Practice III **30 Clock Hours — 5 Credit Hours**
Continuation of Clinical Practice II including gas therapy, humidity therapy and aerosol therapy, check physiotherapy. Some emphasis on neonatal applications.

2759 Clinical Practice IV **30 Clock Hours — 5 Credit Hours**
Care of patients on ventilators including applications of physiological relationships, blood gases, monitoring equipment, medications and calculations.

2780 Dietetic Orientation **3 Clock Hours — 2 Credit Hours**
The student is introduced to the role of the dietitian and food and nutritional needs of people. Organization, job potential in food systems, technicians' role in management and administration are discussed. Responsibilities of the technician as an adjunct to the dietitian working in food service areas, or with the public health nutritionist are explored.

2781 Fundamentals of Normal Nutrition **15 Clock Hours — 3 Credit Hours**
A basic introduction to the science of nutrition and the concept of the team approach in serving human needs. Fundamental study of food nutrients, their digestion and absorption, metabolism, and the relationship of food to development and maintenance of health.

A scientific study of nutrition involving digestion and metabolic processes and products, selection of an optimum diet for health and recent investigations of nutritional deficiency diseases.

2782 Dietetic Seminar **2 Clock Hours — 1 Credit Hour**
Review and analysis of dietary and nutrition management techniques procedures and purposes in institutional settings. Evaluation of field experiences, job trends and opportunities, community resources, communication media and services.

2783 Human Growth and Development **5 Clock Hours — 3 Credit Hours**
The development of the normal body from pre-natal stages to geriatric persons as studied. Included will be motor and social development with resulting psychological and nutritional needs for each age group. Some observational field trips will be included to supplement the theory. The course is designed so the student can readily recognize normal responses before learning of abnormal conditions.

2784 Nutrition and Diet Therapy **5 Clock Hours — 3 Credit Hours**
Application of the principles of nutrition as related to specific disease conditions requiring dietary modifications. Planning and evaluating of dietary patterns and meal plans for individuals of various ages, institutional cultural groups.

2790 Medical Records Science I **7 Clock Hours — 4 Credit Hours**
(Introduction to Medical Record Technology and Case Record Analysis) The history of advances in medicine and medical education, hospitals and the profession of Medical Records; organization of hospitals and medical staff; function of Medical Record Department; roles of RRA and ART; admitting office procedures and numbering and filing systems.

The content and format of the hospital medical record. Joint Commission requirements for medical records. Medicare conditions of participation for hospitals. Utilization review.

2791 Medical Records Science II **5 Clock Hours — 3 Credit Hours**
(Coding and Related Medical Terminology) Coding according to ICDA-8; classification systems including SNDO, SNOP, CPT, DSM-11 and H-ICDA; classification of indexes and registers; and Cancer Registry and Manual of Tumor Nomenclature and Coding.

2792 Medical Records Science III **5 Clock Hours — 3 Credit Hours**
(Health Statistics) Statistical procedures including calculations of daily census, monthly census and percentages. Analysis of reports including simple narration of comparative data. Vital statistics including preparation of birth and death certificates and reporting of communicable diseases. Health data retrieval.

2793 Medical Records Science IV **5 Clock Hours — 3 Credit Hours**
(Legal Aspects of Medical Records for Health Care Facilities) The medical record as a legal document; confidential communications; consents and authorizations for release of medical information; and preparation of records for court and presenting the record in court. Microfilming and record retention.

***2794 Medical Records Science V** **5 Clock Hours — 3 Credit Hours**
Legal aspects of medical records including preparation of records for court and release of information.

2795 Medical Record Seminar **5 Clock Hours — 3 Credit Hours**
Current developments in the medical record field including POMR and PSRO. Brief review of various aspects of medical records in preparation for the accreditation examination. Continuing education for the Accredited Record Technician.

2796 Directed Practice I **16 Clock Hours — 4 Credit Hours**
Practice in the hospital medical records department performing the following: Admission procedures, preparation of index cards, charts, maintenance of patient index, correlation of records, coding and index by ICDA-8.

2797 Directed Practice II **16 Clock Hours — 4 Credit Hours**
Practice in the hospital medical records department performing the following: Statistical procedures, daily analysis and record completion procedures, preparing records for court, preparing medical abstracts, insurance reports, and answering other medical correspondence.

2798 Directed Practice III **16 Clock Hours — 4 Credit Hours**
Practice in nursing homes, clinics, other health care areas in medical records departments performing the following: Statistical procedures, daily analysis, completion of Medicare forms, reports.

2801 Introduction To Restaurant Management **10 Clock Hours — 3 Credit Hours**
History, objectives, economics, scope and social importance of the industry with occupational laboratory and shop training.

2802 Restaurant Management II **10 Clock Hours — 3 Credit Hours**
Factors determining food choices, food nutrition needed in each stage of life. Nutritive value of food selection to meet economics, nutritive and social needs. In addition, occupational laboratory and shop training.

2803 Restaurant Management III **10 Clock Hours — 3 Credit Hours**
Emphasis on operation, of occupational laboratory and shop training. Also, design, purchasing, cost systems, and personnel.

2804 Restaurant Management IV **10 Clock Hours — 3 Credit Hours**
Food preparation and quantity cookery, menu planning, implementation and operation, aesthetic and social aspects of planning, preparing and serving food in the occupational laboratory.

2805 Restaurant Management V **10 Clock Hours — 3 Credit Hours**
Food preparation and quantity cookery by departments or stations. Studies in raw materials, standard recipes, menu planning, and use of the equipment in the occupational laboratory.

2806 Beverage Management **3 Clock Hours — 1 Credit Hour**
Management functions involving purchasing, pricing and cost controls of the beverage operation; basic principles of the preparation and service of wines and spirits.

2811 Introduction to Hotel-Motel Management **5 Clock Hours — 3 Credit Hours**
Evolution of hotel-motel industry with emphasis on the last ten years. Explanation of the complex interrelationships involved in this industry, an insight into the variety of available vocational opportunities, and a look into the future.

2812 Hotel-Motel Management II **5 Clock Hours — 3 Credit Hours**
Study of front office management and operation with emphasis on the use of various front office equipment, supplies, and procedures.

2813 Hotel-Hotel Management III **5 Clock Hours — 3 Credit Hours**
Studies in housekeeping and its administration, control of supplies, sanitation, cleaning techniques, decoration, equipment and related subjects.

2814 Hotel-Motel Management IV **5 Clock Hours — 3 Credit Hours**
Maintenance and proper care of hotel-motel facilities and equipment.

2815 Hotel-Motel Management V **5 Clock Hours — 3 Credit Hours**
Special problems in management of hotels, motels, restaurants and institutions. Planning, coordinating, and controlling of factors and personnel. Emphasis on operations, design, purchasing, cost systems and budgeting.

2820 Purchasing **5 Clock Hours — 3 Credit Hours**
Method and information on present sources of supply, including edibles, semi-durable and durable goods from foods to furniture to heating or air conditioning equipment, with emphasis on quantity, quality and price.

2821 Sales Techniques **3 Clock Hours — 2 Credit Hours**
Establishing a sales department and sales personnel for the hotel-motel-restaurant industry, their purposes and goals. An analysis of your prospects, competition, your company or organization and yourself.

2830 Decorating & Design **5 Clock Hours — 2 Credit Hours**
Learning appreciation of "period" and functional furniture with a practical study of the usage of such furniture. A study and evaluation of fabrics, including upholstering materials, drapes, linen, carpeting — their construction, types of material, durability, color, availability and price.

2901 Principles Of Marketing I **5 Clock Hours — 2 Credit Hours**
Details the principles and functions of marketing. The essential concepts of competition, demand, and the structure of distribution. The roles of marketing management and the marketing executive are emphasized.

2902 Principles Of Marketing II **5 Clock Hours — 2 Credit Hours**
The analysis, interpretation, application, and forecasting of research findings in marketing management. The case study method is used in relating these techniques to actual marketing problems.

2904 Office Management **5 Clock Hours — 3 Credit Hours**
Administrative management and organization of office departments; methods used in selection and training of office personnel, office planning and layout, cost controls, types and uses of office appliances, office forms. and an analysis of office procedures.

2905 Money And Banking **5 Clock Hours — 3 Credit Hours**
The processes of modern banking, including capital, deposits, loans, investments, and reserves. Credit expansion and contraction. The operation of the Federal Reserve Systems.

2906 Credits and Collections **5 Clock Hours — 3 Credit Hours**
Sources of credit information, understanding credit and alternatives to successful collections including procedures of small claims courts, bankruptcy and court settlements. Study of types of credit, analyzing credit and computation of the dollar cost of credit, aging accounts receivable, telephone collections, collection letters and personal contact collections, including repossession procedures.

2911 Principles of Accounting I **5 Clock Hours — 3 Credit Hours**
Principles and practices of basic accounting, including journalizing, posting, adjusting accounts, preparing financial statements, cash and banking procedures, and a study of the uses of special journals with practical applications as they relate to each program.

2912 Principles of Accounting II **5 Clock Hours — 3 Credit Hours**
A continuation of Principles of Accounting I. The uses of subsidiary ledgers, classified financial statements, and payroll accounting and associated payroll tax returns are studied. Practical accounting problems as they relate to everyday business are discussed as part of daily class routines.

2913 Principles of Accounting III **5 Clock Hours — 3 Credit Hours**
The more advanced aspects of accounting principles are reviewed. Valuation of assets, methods of depreciation, depletion and amortization associated with fixed assets, the effects of prepayments and deferrals of income and costs on a company's financial operations are some of the aspects studied.

2914 Cost Accounting I **5 Clock Hours — 3 Credit Hours**
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.

2915 Cost Accounting II **5 Clock Hours — 3 Credit Hours**
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.

2916 Cost Accounting For The Printing Industry **5 Clock Hours — 3 Credit Hours**
Introduction to cost accounting principles as they apply to the printing and graphic arts industry. Accounting for materials, Labor, factory burden, job cost accounting, process cost principles and procedures, estimated costs, standard costs principles and procedures.

2917 Tax Accounting **5 Clock Hours — 3 Credit Hours**
Nature of income taxes and their relationship to accounting. Income Tax withholding, FICA tax, requirements for filing income tax return, study of the individual tax return, adjustments to income, itemized deductions, exemptions, and supporting tax schedules and forms.

***2918 Managerial Accounting** **5 Clock Hours — 3 Credit Hours**
Determining cost and revenue relationships for management, managerial uses of quantitative techniques and financial statement analysis in managerial decision making.

2920 Business Principles **5 Clock Hours — 4 Credit Hours**
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.

2921 Introduction To Business I **5 Clock Hours — 2 Credit Hours**
A broad concept of business and the development of an awareness of the economic framework which constitutes our capitalistic system.

2922 Introduction To Business II **5 Clock Hours — 2 Credit Hours**
Personnel functions, methods of finance, controls for decision making, and the legal and regulatory environment of business.

2924 Principles Of Management I **5 Clock Hours — 2 Credit Hours**
Formal and informal organizational structures including line and staff relationships indicating authority and responsibility.

2925 Principles Of Management II **5 Clock Hours — 2 Credit Hours**
The psychological areas of management with a study of procuring, processing, appraising and compensating executives.

2926 Principles Of Management **5 Clock Hours — 3 Credit Hours**
Meaning, scope, and place of management functions; study of formal and informal organizational structures including line and staff relationships indicating authority and responsibility. Introduction to organization for management in government, business, institutions.

2927 Principles Of Management II **5 Clock Hours — 3 Credit Hours**
Staffing, the psychological areas of management with a study of procuring, processing, appraising, and compensating executives. Direction: a study of leadership motivation. Control: Budgeting, auditing, evaluation, reporting, securing adequate return on invested capital. Insurance coverage, losses.

2928 Hotel-Motel Accounting **5 Clock Hours — 3 Credit Hours**
Capital expenditures for fixed assets of a hotel or motel and associated methods of depreciation

and amortization, prepayments and deferrals of income and expense, break-even analysis as related to room occupancy, purpose of the night audit, and the uniform account classification prevailing in the hotel-motel industry.

2929 Audit Procedures And Operation **5 Clock Hours — 3 Credit Hours**
Practical operating procedures of the NCR 4200 in performing the night audit. Operation of posting machines and peripheral office equipment.

2930 Hotel-Motel Accounting II **5 Clock Hours — 3 Credit Hours**
Impact of price-level changes and pricing decisions encountered in the hotel-motel industry; budgetary control and budget implications in profit planning; sources and uses of funds.

2931 Principles Of Property Management I **3 Clock Hours — 3 Credit Hours**
Introduction to the field of property management. Types of properties requiring such management. Organization and functions of the management team.

2932 Principles Of Property Management II **3 Clock Hours — 3 Credit Hours**
Management of large residential properties: high rise buildings; apartment complexes; condominiums; government subsidized projects. Techniques of attracting tenants. Services provided tenants. Supervision of staff. Legal rights and responsibilities of tenants and property owners. Budgeting. Selecting sites and developing plans for new residential properties.

2933 Principles Of Property Management III **3 Clock Hours — 3 Credit Hours**
Management of large commercial properties. Techniques of attracting leasees. Services provided tenants. Legal rights and responsibilities of tenants and owner. Supervision of staff. Budgeting. Selecting sites and developing plans for new commercial properties.

2934 Principles Of Property Management IV **3 Clock Hours — 3 Credit Hours**
Management of maintenance staffs of industrial plants, or large public buildings (educational, governmental, etc.). Staff organization, deployment and supervision. Personnel relations. Budgeting. Functions of the supervisor of buildings and grounds employed in industrial plants or large public buildings (educational, governmental, etc.). Organization, deployment and supervision of the building and grounds staff. Personnel relations. Planning. Budgeting.

2951 Real Estate Principles And Practices I **3 Clock Hours — 3 Credit Hours**
An introduction to real estate economics and administration. Physical, legal, locational, and economic characteristics or real estate. Real estate markets and credit. The concept of value in property investment. Analysis of national, regional, and local economic influences on real estate values.

2952 Real Estate Principles And Practices II **3 Clock Hours — 3 Credit Hours**
Real estate economics, brokerage, and administration. Property ownership and rights. Real estate brokerage and construction, marketing, and production. Land development and construction of buildings. Effects of marketing and production systems in our economy.

2953 Real Estate Law **3 Clock Hours — 3 Credit Hours**
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.

2954 Real Estate Finance **3 Clock Hours — 3 Credit Hours**
Institutions, methods, instruments, and procedures involved in the financing of real estate. Nature and characteristics of mortgage loans, government influence on real estate finance, and the nature of the mortgage market. Effects of monetary and fiscal policies on real estate financing.

2955 Real Estate Appraisal I **3 Clock Hours — 3 Credit Hours**
Methodology of appraising: residential property. Theory of appraisal techniques. The three basic approaches of appraising: market comparison, cost of replacement, and income capitalization.

2956 Real Estate Appraisal II **3 Clock Hours — 3 Credit Hours**
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.

2957 Real Estate Development And Investment Case Study **3 Clock Hours — 3 Credit Hours**
Areas requiring specialized knowledge, taxation, investment analysis, industrial real estate, commercial real estate, investment trusts, syndicates, land contracts, sale-leaseback, equity participation, specialized financing arrangements. Issues and problems facing the real estate industry. Ethics and professionalism. Legislative activities. Long range planning.

2960 Principles of Finance **5 Clock Hours — 3 Credit Hours**
Study of consumer finance, small business and large business finance, including scheduling, transporting and flow of goods.

3001 Typewriting I **5 Clock Hours — 2 Credit Hours**
A beginning course in typewriting including keyboard mastery, machine parts, introduction to the business letter, and simple tabulation exercises.

3002 Typewriting II **5 Clock Hours — 2 Credit Hours**
Brief review of keyboard and techniques; intensified drills on improvement of speed and accuracy; progress through business letters, forms, and tabulation. Prerequisite: Minimum grade of "C" in Typewriting I or permission from coordinator.

3003 Typewriting III **5 Clock Hours — 2 Credit Hours**
The development of skills, knowledges, and techniques applicable to typewriting. Opportunity is provided for the student to experience situations in which problem solving is necessary, advanced typing problems and techniques, knowledge and skills involved in production typewriting. Prerequisite: Minimum grade of "C" in Typewriting II or permission from coordinator.

3004 Typewriting IV **5 Clock Hours — 2 Credit Hours**
Application of the basic processes to problems of typewriting. The adaptation of job-analysis data to letter writing, manuscripts, forms, duplication, statistical tabulation, reports, legal documents, and rough draft material. Prerequisite: Minimum grade of "C" in Typewriting III or permission from coordinator.

3005 Administrative Typewriting **5 Clock Hours — 2 Credit Hours**
An introduction to touch typewriting with problem-solving emphasis on business correspondence, tabulation, telegrams, duplicating masters, and the special typing assignments encountered in administrative positions.

***3011 Shorthand I** **7 Clock Hours — 4 Credit Hours**
Designed for those students who have no previous shorthand training. Gregg Diamond Jubilee Shorthand, with emphasis on rapid reading of plate material and mastery of principles of theory including brief forms. An introduction to writing shorthand and transcribing on the typewriter from shorthand notes.

3012 Shorthand II **7 Clock Hours — 4 Credit Hours**
Designed for those students who have had previous shorthand training. A continuation of the theoretical principles from 3011, and an introduction to dictation from unfamiliar material. Emphasis is on speed development. Prerequisite: Minimum grade of "C" in 3011 or permission of the coordinator.

3013 Shorthand III **5 Clock Hours — 4 Credit Hours**
An advanced course designed for those students who have had previous shorthand training. Emphasis is on speed development from both familiar and unfamiliar material. Prerequisite: Minimum grade of "C" in 3012 or permission of the coordinator.

3014 Transcription I **7 Clock Hours — 4 Credit Hours**
A continuation of the study of shorthand fundamentals and a development of transcription skill. Emphasis is on the development of mailable transcription, with a review of punctuation and spelling. Prerequisite: Minimum grade "C" in Shorthand 3013 or permission of the coordinator.

3014A Transcription IA **10 Clock Hours — 4 Credit Hours**
Designed for those students who have elected to transfer to Option II, Secretarial/Machine Transcription. Emphasis is on the development of mailable transcription from a transcribing machine, vocabulary building, and a review of punctuation and spelling. Prerequisite: Permission of the coordinator.

3015 Transcription II **7 Clock Hours — 4 Credit Hours**
Continuation of 3014. Emphasis is on mailable transcription. Integration of office-style dictation and the mailable letter to meet office standards. Prerequisite: Completion of Transcription I or permission of coordinator.

3015A Transcription IIA **10 Clock Hours — 4 Credit Hours**
Continuation of 3014A. Emphasis is on mailable transcription to meet office standards. Prerequisite: Completion of Transcription IA with minimum grade of "C" or permission of coordinator.

3021 Office Procedures **5 Clock Hours — 3 Credit Hours**
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.

3022 Office Machines **3 Clock Hours — 2 Credit Hours**
A general survey of the techniques, processes, operations, and applications of business and office machines. Machines included are: keydriven, rotary, printing, electronic, and ten-key calculators; mimeograph; spirit duplication; photocopying.

***3022A Office Machines** **3 Clock Hours — 1 Credit Hour**
A general survey of the techniques, processes, operations and applications of these business and office machines: NCR-4200 nineteen key posting machine, ten key posting machine, mimeograph, spirit duplicator, photocopier.

3023 Machine Transcription **5 Clock Hours — 2 Credit Hours**
A survey course to introduce the student to transcribing machines and to the techniques of machine transcription.

3024 Secretarial Procedures **3 Clock Hours — 3 Credit Hours**
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.

3025 Legal Secretarial Procedures I **10 Clock Hours — 4 Credit Hours**
Practice in legal dictation and transcription, including legal terms, judicial procedures and legal office procedures; preparation of legal instruments and documents. Prerequisites: Shorthand 3013, Typing 3003 with grade of "B" or better and Business Law I. (60 Clock Hours minimum requirement for externship.)

3026 Legal Secretarial Procedures II **10 Clock Hours — 4 Credit Hours**
Continuation of 3025. (60 Clock Hours minimum requirement for externship.)

3027 Office Practicum **8 Clock Hours — 3 Credit Hours**
Designed for the student who has elected to follow Option III or IV. Each student's program is to be individually designed to further develop the necessary skills required to secure a position in his chosen field, including basic office routines, human relations, and individual responsibility.

3028 Secretarial Practicum **10 Clock Hours — 4 Credit Hours**
An intensive course in secretarial practicum emphasizing the area of business that is of particular interest to the student. Each student's program is to be individually designed to provide an opportunity to strengthen those areas where he may need additional training as well as to provide realistic practice in his chosen field, including decision-making responsibility, creative work, and human relations.

3032 Records Management **3 Clock Hours — 3 Credit Hours**
A foundation in the methods and systems of storing and retrieving information. The course includes the principles governing what records to keep, how to store them, and how to apply the criteria for determining the disposition and retention of records.

3035 Medical Secretarial Procedures (elective) **5 Clock Hours — 3 Credit Hours**
An introduction to the general responsibilities required by a medical secretary, including the preparation of medical documents and development of a competent medical vocabulary. (Not offered academic 74–75).

3045 Legal Research Projects I **10 Clock Hours — 4 Credit Hours**
Individualized projects to equip the student with the techniques for law search and research. Prerequisite: Business Law I and permission of the secretarial coordinator.

3100 Civil Engineering Orientation **2 Clock Hours — 1 Credit Hour**
Introduction to the Civil Engineering profession. May include lectures, demonstrations, field trips, etc.

3101 Surveying I **6 Clock Hours — 3 Credit Hours**
Elementary surveying — theory & practice of plane surveying; units of measurement, distance taping; horizontal & vertical angles, bearings, azimuths; differential leveling, adjustments of levels; simple lot closures, coordinates, calculations of land areas; notekeeping; taping field problems.

3102 Surveying II **6 Clock Hours — 3 Credit Hours**
Advanced surveying; magnetic declineation; transit-tape surveying; space traverses and triangulation, unadjusted closures; adjustments of transit; profile leveling, stadia, grades, topographic surveys; beginning level and transit field problems. Prerequisites: 1191 and 3101.

3103 Surveying III **6 Clock Hours — 3 Credit Hours**
Route surveying; route surveys by ground and aerial methods; simple curves, compound curves, parabolic curves (symmetrical & unsymmetrical); geometrics of highway design, highway surveying and plans, highway curves and right-of-way calculations; advanced level and transit field problems; introduction to mini-computer & time-sharing problem solving methods. Prerequisite: 3102.

3104 Surveying Calculations **5 Clock Hours — 3 Credit Hours**
An introduction to the theory of probability, triangulation and astronomy, involved with transportation right-of-ways. To include: horizontal and vertical curves. Prerequisites: 1192 and 3101.

3105 Design Problems **7 Clock Hours — 3 Credit Hours**
Specialized problems utilizing fundamental theories and standard practices involved in right-of-way construction. To include: horizontal and vertical curves, grades, drainage systems, traffic design, intersections, etc. Prerequisites: 3103 and 3104.

3108 Materials of Construction **3 Clock Hours — 2 Credit Hours**
A study of the use and basic properties of construction materials, including concrete, bituminous materials, steel, wood, non-ferrous metals, and plastics. The student is introduced to basic laboratory procedures in materials testing.

3109 Construction Methods **4 Clock Hours — 2 Credit Hours**
Introduces the student to the various of methods of construction. To include excavation and equipment, foundation systems and forming, floor-wall-roof framing systems. To also include the principles of reinforced concrete and methods of structural steel design.

3111 Transportation Planning and Design I **6 Clock Hours — 3 Credit Hours**
Introduction to transportation systems and organizations; economic analysis, construction justifications; engineering criteria; geometric design; traffic engineering; intersection design. Prerequisites: 1192, 1373, and 3103.

3116 Heavy Construction **5 Clock Hours — 2 Credit Hours**
Extension of 3151 with emphasis on commercial and industrial installations. To include multilevel structural installations; piles, cassions, retaining wall, etc.

3118 Construction Management & Operation **5 Clock Hours — 2 Credit Hours**
An analysis of a contractor's operation from the initial purchase of land to the completion of a project. Contractor's relationship with the architect, engineers, client, etc., are also discussed along with coordination, progress charts and subcontracts.

3121 Structural Design I **6 Clock Hours — 3 Credit Hours**
Design and selection of steel and reinforced concrete structural members; steel truss design; basic timber design. Prerequisite: 2106.

3122 Structural Design II **6 Clock Hours — 3 Credit Hours**
Design of concrete beams, floor and roof systems, and columns. Prerequisites: 2106 and 3121.

3127 Estimation and Inspection **7 Clock Hours — 2 Credit Hours**
Development of skills in estimating amount and cost of labor and materials for various types of construction. Prerequisite: 1193.

3129 Contracts & Specifications **3 Clock Hours — 2 Credit Hours**
Common usage and practice in law and preparation of contracts and specifications for construction work and engineering services.

3132 Hydrology and Hydraulics **5 Clock Hours — 2 Credit Hours**
A study of rainfall runoff and drainage design including open channel and pipe flow relating to facilities for disposal of storm water. Prerequisites: 1191, 1373, 3103.

3138 Municipal Engineering **6 Clock Hours — 3 Credit Hours**
City and subdivision planning; study of regulatory ordinances, subdivision rules and regulations, zoning ordinances, building codes; parks and recreation. Prerequisites: 3103, 3132.

3144 Properties of Soils **5 Clock Hours — 2 Credit Hours**
Soil types and their physical properties; tests and mechanical analysis; techniques of subsurface investigation; bearing capacity; report writing, field project. Prerequisites: 1192, 3102.

3151 Light Construction **6 Clock Hours — 3 Credit Hours**
Forest products and their characteristics, carpentry, roofing, etc.; footings; foundations; bracing; retaining walls; construction material and methods; lightweight steel construction; use of AISC manual. Prerequisite: 1192.

3152 Heavy Construction **5 Clock Hours — 3 Credit Hours**
Emphasis on commercial and industrial installations. To include multilevel structural installations, piles, cassions, and retaining walls. Construction materials and methods. Prerequisite: 3121.

3161 Construction Management and Operation **5 Clock Hours — 2 Credit Hours**
An analysis of a contractor's operation from the initial purchase of land to the completion of a project. Contractor's relationship with the architect, engineer, client, and public agencies. Planning coordination, progress charts, and subcontracts are emphasized.

3175 Civil Engineering Project **8 Clock Hours — 4 Credit Hours**
Specialized and individualized or group projects utilizing theories and practices involved in the technology. Investigation, analyses and reports on projects in surveying, transportation, structures or construction. Prerequisite: Fifth Term Standing.

3199 Special Problems Seminar **2 to 4 Credit Hours**
Individual and independent and special projects pertaining to the particular technology in which the student is enrolled. Open to fourth and fifth term students, by special arrangement with Academic Advisor and the Department Chairperson.

3201 Elements of Refrigeration and Heating **10 Clock Hours — 5 Credit Hours**
Introduction to the field and terminology of Refrigeration and Heating. Topics to include the basic laws of refrigeration, heat and the methods of heat transfer, use and care of servicing tools, equipment, tubing, and fittings, compressors, refrigerants, temperature controls, special testing and service equipment. Laboratory sessions provide experience in basic service procedures.

3202 Air Conditioning Principles I **6 Clock Hours — 3 Credit Hours**
Study of cooling towers, evaporative condensers, water treatment, air cooled condensers, refrigeration safety devices, crankcase heaters, water chillers, and pumps. Laboratory experience to emphasize equipment, maintenance and trouble-shooting procedures. Introductory sheetmetal layout and fabrication.

3203 Air Conditioning Principle II **10 Clock Hours — 5 Credit Hours**
Psychrometrics, heat transfer and fluid handling equipment. Fans and fan laws, centrifugal water pumps, sizing of piping and duct work, procedures for determining building heat losses, and methods of rating and selecting equipment as presented in manufacturer's catalogs. Laboratory sessions provide detailed investigations of the operating characteristics of the equipment discussed in the theory courses.

3204 Air Conditioning Principles III **5 Clock Hours — 3 Credit Hours**
An advanced study of refrigeration systems, especially of industrial equipment. Thermodynamic principles, cycle analysis, operational and construction features, and system applications are covered. Specific subjects include low temperature systems such as cascade and two-stage units, absorption systems, heat-pumps, centrifugal compressors and control systems. Procedures for sizing, selection and layout of refrigeration system components and piping.

3205 Air Conditioning Design I **7 Clock Hours — 4 Credit Hours**
The application of air conditioning principles to design. Emphasis on selection of equipment, consideration of applicable codes, and functional handling of air conditioning design problems. In the laboratory sessions the student designates heating and cooling systems. Incorporated are design calculations, equipment selection and system layout.

3206 Air Conditioning Design II **10 Clock Hours — 4 Credit Hours**
This subject involves the calculation of the conditioning load, system design and layout, equipment selection, and complete specifications for such applications as year-round comfort air conditioning systems, industrial processing plants, and special environment control units. Code limitations, control requirements, humidity control, solar load calculations human comfort and industrial conditioning problems are included.

3207 Air Conditioning Controls **5 Clock Hours — 2 Credit Hours**
The theory and methods of controlling conditioned air systems. Types, functions and applications of controls for heating, cooling, humidity, and ventilation requirements. Laboratory sessions allow the student to make connections of systems components and simulate operational characteristics of electric, pneumatic, and electronic control systems.

3208 Air Conditioning Applications **7 Clock Hours — 4 Credit Hours**
A survey of commercial and industrial applications of heating, refrigeration and air conditioning; ventilation; food preservation and storage; industrial processing; low temperature applications; comfort air conditioning applied to transportation vehicles, etc. The requirements, limitations and standards involved in the many applications are investigated.

3209 Air Conditioning Installation Techniques **5 Clock Hours — 3 Credit Hours**
A study of some of the more common problems encountered during installations and modifications, particularly the mechanical and field fabrication problems involved in duct work, piping, and electrical work.

***3210 Hydronics & Pneumatics** **3 Clock Hours — 2 Credit Hours**
Fundamental concepts of fluids, including fluid laws and components. A study is made of thermodynamics and fluid flow as applied to the various components of air conditioning systems. Topics include thermodynamic properties of fluids such as air, steam and refrigerants.

3301 Principles of Maintenance I **5 Clock Hours — 3 Credit Hours**
Principles of operation and maintenance of electrical and heating systems, kitchen appliances, plumbing and sewage systems. Survey of maintenance functions employed in maintaining apartment and office structures including cleaning, painting, and the use of mechanical cleaning equipment.

3302 Principles Of Maintenance II **5 Clock Hours — 3 Credit Hours**
Principles of operation and maintenance of air-conditioning systems. Procedures of preparing job descriptions, hiring, and supervising a maintenance staff. Principles of purchasing and inventory control.

3303 Principles Of Maintenance III **5 Clock Hours — 3 Credit Hours**
Care of landscaped areas, maintenance of paved areas, swimming pools, recreation areas, tot-lots, and other property exteriors including: roofing, siding, gutters, flood-lighting systems. Principles of making a physical inspection and utilization of information in preparing the operating budget.

3501 Horticulture Soils And Applications **10 Clock Hours — 6 Credit Hours**
The study of soil texture, structure, organic matter, and plant nutrients as they are related to the use of lime, fertilizers, manures, peats, and soil conditioners to raise horticultural soils to high levels of production. An orientation course to provide field experience in the various phases of horticulture. Tools, materials, procedures, techniques, and standards of workmanship are described and demonstrated.

3502 Horticulture Science I **5 Clock Hours — 3 Credit Hours**
To provide an elementary understanding of the fundamentals of plant growth, anatomy, taxonomy, reproduction and genetics.

3503 Horticulture Science II **5 Clock Hours — 3 Credit Hours**
Fundamental concepts which apply to soils, fertilizers, herbicides and pesticides with emphasis given to ecological implications. Biochemical processes within living plants as they affect growth, health, commercial forms of reproduction and cultivation.

3504 Woody Plants I **5 Clock Hours — 3 Credit Hours**
An introductory study of woody plants grown in nurseries for landscape purposes and, secondarily, of those found in arboretums, woodlands, and fields within the state and adjacent states. Emphasis is on deciduous shrubs and small trees, their identification, culture, uses, flowers and fruits, and ecological relationships.

3505 Herbaceous Plants I **5 Clock Hours — 3 Credit Hours**
Classification, identification, and general cultural of perennials, bulbs, and roses commonly used in garden planting.

3506 Nursery Operation I **5 Clock Hours — 3 Credit Hours**
An introduction to techniques and practices used in the commercial production of herbaceous perennials, ground covers, deciduous shrubs and trees, conifers, and broadleaf evergreens. Greenhouse and nursery procedures and practices are emphasized.

3507 Arboriculture **5 Clock Hours — 3 Credit Hours**
A study of the commercial arboriculture business. The diagnosis and treatment of tree ills, study of principles and techniques used to protect trees from disease and damage, common insects, diseases, and standard control practices; pruning, removal, etc.

3508 Turf Grass Management I **5 Clock Hours — 3 Credit Hours**
An introductory course about grasses, ground covers, and weeds including the elementary information and techniques on identification, installation, and care of equipment.

3509 Landscaping I **5 Clock Hours — 3 Credit Hours**
A course in landscape development and appreciation. Elementary drawing, lettering and the principles of art for creative design are taught.

3510 Horticultural and Turfgrass Equipment **10 Clock Hours — 6 Credit Hours**
A study of the operation and maintenance of equipment used in various horticultural enterprises, especially small gasoline engines; tractors, sprayers, chain saws, and various other equipment and hand tools are demonstrated with emphasis on safety and skill.

3511 Landscape Planning and Construction **5 Clock Hours — 3 Credit Hours**
A study of landscape, nursery, and turf cost finding, contracts and specifications, and methods of estimating landscape and construction costs. Calculating areas and volumes and estimating plant quantities for horticultural projects is emphasized.

3512 Nursery Operation II **5 Clock Hours — 3 Credit Hours**
A study emphasizing plant growth patterns and plant responses in relation to soils, water, fertility, planting techniques and spacing, top and root pruning, plus elaborations of previously taught concepts from nursery operation.

3513 Horticulture Science III **5 Clock Hours — 2 Credit Hours**
A study of plant pests and diseases, methods of control and chemicals and equipment, used principally in greenhouses, plus additional plant identification and growing techniques.

3514 Garden Store Operations **5 Clock Hours — 3 Credit Hours**
A study of the importance of garden store location and the management and operation of this type of business. Corsages, pieces for special ordering, advising and guiding customer choice, and sales techniques are covered.

3515 Woody Plants II **5 Clock Hours — 3 Credit Hours**
A continuation of Woody Plants I, covering additional deciduous shrubs and trees. Emphasis is placed on broadleaved and narrow-leaved evergreens.

3516 Herbaceous Plants II **5 Clock Hours — 3 Credit Hours**
A continuation of Herbaceous Plants I, with emphasis on annual and biennial flowers, and fall flowering perennials. Landscape use of herbaceous plants is studied and design and growth of flower borders is practiced.

3517 Turfgrass Management II **5 Clock Hours — 3 Credit Hours**
A continuation of turfgrass management, including special and large-scale, specialized applications as in turf farms or golf courses.

3518 Landscaping II **5 Clock Hours — 3 Credit Hours**
A continuation of Landscaping I, with progressively difficult problems. Emphasis is placed on basic details of landscape architectural construction. Grading, construction, planting and staking plans are studied and prepared as a part of the laboratory work. Drainage and irrigation factors are examined and utilized in plan development.

3519 Landscaping Contracts And Specifications **5 Clock Hours — 3 Credit Hours**
A study of planting design, and plan presentations as done by nurseries. Typical plantings are examined in the field; model recommendations, cost estimates and performance contracts are studied and developed.

***3520 Drainage and Irrigation** **5 Clock Hours — 3 Credit Hours**
A study of various types of drainage and irrigation systems, including materials and equipment, their cost, unkeep and design and application of watering systems.

3521 Entomology And Plant Disease Control **5 Clock Hours — 3 Credit Hours**
A study of the nature, structure, growth, habits and injurious effects of insects and related forms. The indentification of common plant pests, diseases transmitted by insects and their injuries to plants. Insect and disease control measures and application equipment are also studied.

3522 Nursery Operation III **5 Clock Hours — 3 Credit Hours**
A continuation of the study of commercial plant reproduction, dealing with programming plant production and nursery land use, as related to nursery layout in sections and blocks. Cost finding techniques, and establishing price and profits are studied.

3701 Grades and Plans I **5 Clock Hours (3 in Class; 2 in Lab) — 3 Credit Hours**
Introductory earth-moving; plans, nomenclature, and methods for building fills and excavations.

3702 Grades and Plans II **5 Clock Hours (3 in Class; 2 in Lab) — 3 Credit Hours**
Advanced earth-moving theory and practice. Emphasis is on alignment, curves, slopes, drainage, and grade stakes used for fills, excavations, and road-building.

9001, 9002, 9003, 9004, 9005 Cooperative Employment Program
2–3 Credit Hours Each Term
On an alternating term basis, the student is placed on a full-time (32–40 hour) job that relates to his class work. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his class work. With each succeeding co-op term, the student is able to assume more responsibility and performs higher level duties on the job because of what he has learned from the previous term(s) of employment and the added knowledge and skills acquired in each school term.

*Possible electives for students enrolled in Associate of Individualized Studies program.

ADMISSIONS INFORMATION

General Admission Requirements

Applicants must meet the following qualifications:

1. Submit a transcript of credits earned in high school.
2. Satisfactory scores on entrance examinations.
3. Physical qualifications to perform acceptably in field of training selected.
4. A personal interview with the coordinator of your selected program.

Application For Admission

Apply early! Each year some programs are filled by early spring. Applicants for these programs who subsequently score well on the admission examination may be placed on stand-by lists.

To apply, follow these steps carefully:

1. Detach the application which appears in the back of this catalog or obtain an application from your high school counselor or by writing or calling the Admissions Office. (The address and telephone number are on the first page of the catalog.)
2. Complete the application form and mail or take it to the Admissions Office with the ten dollar application fee. This fee partially covers the cost of administering the entrance test, counseling, and registering the student if he is accepted. It is not refundable.
3. Ask your high school counselor to send a transcript to The Cincinnati Technical College; he will have one sent at any time during your senior year. This should be done as soon as you have decided to apply for admission.
4. Take the entrance examination on the earliest possible date. No action can be taken on your application until the examination has been taken and scored. The dates on which the examination will be administered are listed in the catalog.
5. After you have completed these procedures, wait until you are contacted by the Admissions Office to arrange a pre-enrollment interview. This will not be done until your records contain the following items:

Application	Entrance test scored
$10 Application fee	High School transcript

This interview will give you an opportunity to discuss enrollment, school, and cooperative work experience.

Student Deposit

A deposit of at least $30.00, payable when an applicant receives notice of tentative acceptance, will apply toward fees later charged to the full-time day student when he enrolls. Payment of the deposit when due assures the applicant of a place in class and is considered as evidence of good faith that he will register.

The student fee deposit will not be refunded if the applicant decides not to enter Cincinnati Technical College.

Credit for the fee deposit may be extended for (1) twelve months when an applicant fails to register due to illness or other causes entirely beyond his control or (2) the period of active duty when an applicant enlists in military service. Upon registration within the specified time limits, the credit will apply toward fees charged to the same person only when he enrolls as a full-time student in any program.

Application for credit must be made in writing at the time of the admission cancellation. Proof of any extenuating circumstances may be required. The Director of Finance is authorized to make decisions on these matters in accordance with school regulations.

Advanced Standing

A student desiring advanced standing by transfer of credits from other colleges must request any colleges previously attended to forward directly to the Director of Admissions a transcript of his academic record. Courses paralleling Cincinnati Technical College courses in which a student has achieved a grade of "C" or better will be considered for credit.

Foreign Students

Foreign applicants must follow the prescribed application procedure as set forth on the preceding page. In addition they must submit TOFEL examination results or prove their ability to speak, read and write the English language to the satisfaction of the program coordinator.

A Declaration and Certification of Finances shall be supplied to the college before a Certificate of Eligibility (Form I-20 or DSP-66) will be authorized. Therefore all foreign students should contact the Director of Students Services as soon as possible in order to facilitate enrollment.

Veterans

Cincinnati Technical College maintains an Office of Veterans' Affairs to aid persons attending school on G.I. Benefits. This office is open from 9:00 a.m. to 5:00 p.m. weekdays and evenings by appointment. The Veterans' Affairs Coordinator will help you with your official paperwork, benefits counseling, and personal and scholastic counseling. All courses at Cincinnati Technical College are fully approved by the Veterans Administration. Upon being accepted by CTC, veterans should contact this office for full information concerning application for Veterans' Educational Benefits.

The Office of Veterans' Affairs arranges tutorial services for veterans in need of academic assistance. The Veterans Administration will reimburse the veteran for this cost. Fair and reasonable charges for this service are as follows:

$ 5.00 per hour for a student tutor
$10.00 per hour for a faculty or graduate student tutor.

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, other than the course instructor. Please contact the Veterans' Affairs Office for further information.

ENTRANCE TEST

All applicants for admission to the Cincinnati Technical College must take the required entrance examination before any decision on acceptance can be made. (See the section on admissions information.)

The exam will be administered at the Cincinnati Technical College, 3520 Central Parkway, Cincinnati, Ohio 45223, on the dates listed below. The test takes about 3½ hours.

Applicants are urged to take the exam on the earliest date possible and to submit all other necessary forms since many programs are filled by early spring.

Applicants living outside of the Greater Cincinnati area, who cannot arrange to take the exam in Cincinnati, should write the Admissions Office as early as possible so special arrangements might be made through the applicant's high school or his educational officer if the applicant is in military service.

ENTRANCE TEST DATES
1975—76

For applicants planning to enter in the fall of 1976:

Saturday	October 11, 1975	8:15 a.m.
Saturday	November 1, 1975	8:15 a.m.
Saturday	November 22, 1975	8:15 a.m.
Saturday	December 13, 1975	8:15 a.m.
Saturday	January 10, 1976	8:15 a.m.
Saturday	Januay 31, 1976	8:15 a.m.
Saturday	February 21, 1976	8:15 a.m.
Saturday	March 13, 1976	8:15 a.m.
Saturday	April 10, 1976	8:15 a.m.
Saturday	May 8, 1976	8:15 a.m.
Saturday	June 5, 1976	8:15 a.m.

(Test by appointment after June 5.)

The examination will begin promptly at 8:30 a.m. Make arrangements to be present by 8:15 a.m. to check in if the application fee is prepaid, or no later than 8:00 a.m. if payment must be made and an application completed.

FINANCIAL INFORMATION

Student Expenses

The Ohio Board of Regents provides a student subsidy to The Cincinnati Technical College for each Ohio resident enrolled. The amount received from the Regents equals about two-thirds of the College's operating costs. The other third must come from tuition payments. Out-of-state residents pay the highest amount of tuition since the College receives no Regent's subsidy for their instruction. (See page 164 for complete explanation of residence determination.)

Tuition Charges

	12–18 Credit Hours per School Term	2 through 11 Credit Hours per School or Co-op Term*
Residents of the Cincinnati Technical College District	$125	$10 per Cr. Hour
Out-of-district residents who live in Ohio	$150	$12 per Cr. Hour
Out-of-district residents who live outside Ohio	$250	$20 per Cr. Hour

Any student taking credit hours in excess of 18, in a quarter, will be charged for the additional hours at the established hourly rate unless the administration of the college has created an excess of credit hours in its quarterly scheduling procedure.

*Two (2) credit hours for approved co-operative work experience are granted for terms 1 and 2, and three (3) credit hours for terms 3, 4 and 5 in all technologies other than Aviation and Ornamental Horticulture. Please refer to the specific curriculum in which you are interested to determine co-op credits required.

Co-op Employment

Two or three credit hours are granted for each term of cooperative work experience. The charge for these credit hours will be based on the amount listed per credit hour for part-time students. This charge must be paid in advance on the established registration date.

If a student elects not to co-op he/she must take additional class room credit hours, and thus incur the same charge as if he/she had co-oped.

Fees

Application Fee	$10	
Late Registration Fee	$ 5	(First Two days; $10 thereafter)
Partial Payment Fee	$ 5	
Identification Badge Fee	$ 2	(First Term of New Academic Year)
General Fee	$20	per quarter
Graduation Fee	$25	(Non-Refundable)
Vehicle Registration Fee	$ 1	
Campus Parking Permit Fee	$15	per quarter
Laboratory Fees		Variable
Check Fee	$ 5	For any check made out incorrectly or returned by the bank

The general fee finances non-instructional services to students for which instructional subsidies cannot be used.

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 range of expenses per term is $50–$60.

Refunds

1. Fees are not refundable. A refund of basic tuition may be requested by any student that withdraws from the College according to the schedule detailed below.
2. Requests for refunds will only be considered if the student completes and signs the official CTC Student Transaction form in conjunction with the coordinator of his/her technology.
3. Students who do not follow the established withdrawal procedure of the College will not be eligible for a refund.
4. Withdrawal of a student who had been permitted to make only a partial payment at registration will be handled precisely as it would have been had complete payment been made.
5. If a student has a financial obligation or balance due the College and leaves without following the established withdrawal procedure, the entire balance is due immediately and no refund or credit is possible.
6. The official date of withdrawal is the date recorded on the CTC Student Transaction form, when it is signed by the student and his/her coordinator.
   Tuition refunds, when allowed, are made on basic tuition only at the following rates:

During the first week of term	80%
Second week	60%
Third week	40%
Fourth week	20%

The Cincinnati Technical College reserves the right to revise this statement of tuition refunds at any time.

No degree will be granted, no grades released or transcript provided until all financial obligations are completely paid.

Most students earn more than enough in cooperative employment to finance their education at the institute. In fact, the majority contribute regularly to the family income.

FINANCIAL AIDS

For students who have need for financial assistance, there are a limited number of resources available.

1) OHIO INSTRUCTIONAL GRANTS — These grants are intended to provide eligible students with a supplemental source of financial aid in order to attend an eligible Ohio college or university. Consideration and awarding of grants shall be determined and provided by the Ohio Board of Regents and such grants shall be applied to the instructional and general fees of the college or university in which the

student is enrolled. Applications may be obtained from your high school counselor and filed with the Ohio Board of Regents in Columbus.

2) SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS — Federal Educational Opportunity Grants (SEOG) provide a source of assistance for limited-income families in particular. The grants range from $200 to $1,000 a year, but none may exceed 50 percent of the college's estimate of the student's financial need. No repayment is required.

3) COLLEGE WORK-STUDY — The College Work-Study Program established by the Economic Opportunity Act of 1964 provide jobs for students from low-income families. The jobs are provided through the college, either on the campus or off. Preference is given to students from families receiving, or eligible to receive, public or private welfare assistance or from families with limited income.

4) FEDERALLY SPONSORED LOANS — There now are two types of federally sponsored loans generally available:

A. Loans under the *National Direct Student Loan Program*. Eligible students may borrow up to an aggregate of $2500 during the first two years of college. Repayment and interest charges do not begin until nine months after the student leaves school. Repayment may be extended over a ten-year period.

B. Partly subsidized loans made through local lending institutions under the *Guaranteed Loan Program*. Information on these loans is available from local banks, savings associations, credit unions, and other lending institutions.

5) THE BASIC EDUCATIONAL OPPORTUNITY GRANT PROGRAM — This is a Federal Aid Program designed to provide financial assistance to students who need it to attend post-high school educational institutions. The maximum award is $1400 minus the amount the family is expected to contribute toward the cost of college education. Applications may be secured from the college.

6) SCHOLARSHIPS — A limited number of scholarships are provided by private organizations and community groups for the use of deserving and needy students. These awards are made on the basis of academic performance with some consideration to need.

FOR CONSIDERATION FOR THESE PROGRAMS, THE STUDENT SHOULD FILE (1) APPLICATION FOR FINANCIAL AID, (2) A PARENTS' CONFIDENTIAL STATEMENT, (3) OHIO INSTRUCTIONAL GRANT APPLICATION, (4) BASIC EDUCATIONAL OPPORTUNITY GRANT APPLICATION. APPLICATIONS SHOULD BE COMPLETED BY JUNE 1 TO INCREASE YOUR POSSIBILITIES FOR SECURING AID.

VETERANS ADMINISTRATION — The Veterans Administration has approved Cincinnati Technical College for the education and training of veterans under the 1966 GI Bill and Orphans of Veterans under Public Laws 634 and 88-361. Contact your local VA office.

LIVING ACCOMMODATIONS

The Cincinnati Technical College has no student house facilities of its own as it is primarily a "commuter" institution. However, for individuals living too far from the College to commute, reputable, efficiently operated living accommodations are available at reasonable cost. A partial list of those that can be recommended are:

FOR MEN:	The Fenwick Club 435 Commercial Square Cincinnati, Ohio 45202
	The Friars Club 65 W. McMillan Street Cincinnati, Ohio 45219
	The Central YMCA Central Parkway & Elm Street Cincinnati, Ohio 45202
FOR WOMEN:	Anna Louise Inn 300 Lytle Cincinnati, Ohio 45202
	The Fontbonne Club 425 E. 5th Street Cincinnati, Ohio 45202
	The YWCA 9th & Walnut Streets Cincinnati, Ohio 45202

All of these facilities are located on public transportation lines.

Further information regarding costs, reservations, etc., can be obtained by contacting the facility.

RESIDENCE OF STUDENTS

In determining whether or not an enrolled student at Cincinnati Technical College is an Ohio resident, a determination of fact shall be made in accordance with these standards: A non-resident student may have his or her residency status reviewed after living for twelve consecutive months in Ohio.

A. Authority, History, and Effective Date.

1. It is the intent of the Ohio Board of Regents in promulgating this Rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the State of Ohio primarily for the purpose of receiving the benefit of a state supported education while insuring that that same benefit is conferred on all bona fide domiciliaries of this State whose permanent residence and legal citizenship is in Ohio, and whose actual source of financial support is subject to Ohio taxation.
2. This Rule is adopted pursuant to Chapter 119, Ohio Revised Code, and under the authority conferred upon the Ohio Board of Regents by Am. Sub. H.B. 155 of the 111th Ohio General Assembly making general appropriations for the biennium beginning July 1, 1975 and ending June 30, 1977.
3. This Rule operated to rescind and replace Rule R.G.-1-2(D) adopted by this Board on August 17, 1973.
4. This Rule shall be effective as of September 1, 1975, and shall continue in effect until its rescission or amendment.

B. Definitions

For purposes of this Rule:

1. A resident of Ohio "for all other legal purposes" shall mean any person who maintains a 12 month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under Section 5747.02 of the Revised Code; provided such person has not, within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.

2. "Financial support" as used in this Rule, shall not include grants, scholarships and awards from persons or entities which are not otherwise related to the recipient.

3. An "institution of higher education" as used in this rule shall mean any university, community college, technical institute or college, general and technical college, medical college or private medical or dental college which receives a direct subsidy from the state of Ohio.

C. General Residency from Subsidy Purposes.

The following persons shall be classified as residents of the State of Ohio for subsidy and tuition surcharge purposes:

1. Dependent students, at least one of whose parents or legal guardian has been a resident of the State of Ohio for all other legal purposes for 12 consecutive months or more immediately preceding the enrollment of such student in an institution of higher education.

2. Persons who have resided in Ohio for all other legal purposes for at least 12 consecutive months immediately preceding their enrollment in an institution of higher education and who are not receiving, and have not directly or indirectly received in the preceding 12 consecutive months, financial support from persons or entities who are not residents of Ohio for all other legal purposes.

3. Persons who live and are gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who are pursuing a part-time program of instruction at an institution of higher education, their spouses and dependents.

4. Persons who have been reclassified as residents under provisions of Section D.6 of this rule.

D. Specific Exceptions and Circumstances.

1. A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents shall be considered residents of Ohio for these purposes.

2. A. person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.

3. Any alien holding an immigration visa shall be considered a resident of the State of Ohio for state subsidy and tuition surcharge purposes in the same manner as any other student.

4. No person holding a student or other temporary visa shall be eligible for Ohio residency for these purposes.

5. A dependent person classified as a resident of Ohio who is enrolled in an institution of higher education when his or her parents or legal guardian remove their residency from the State of Ohio, shall be considered a resident of Ohio for these purposes during continuous full-time enrollment and until his or her completion of any one academic degree program.

6. Any person once classified as a non-resident, upon the completion of 12 consecutive months of residency in Ohio for all other legal purposes, may apply to the institution he or she attends for reclassification as a resident of Ohio for these purposes. Should such person present clear and convincing proof that no part of his or her financial support is, or has in the preceding 12 consecutive months been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes, such person shall be reclassified as a resident.

Evidentiary determinations under this Rule shall be made by the institution which may require, among other things, the submission of information regarding the sources of a student's actual financial support to that end.

7. Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.

E. Procedures.

Institutions of higher education charged with reporting student enrollment to the Ohio Board of Regents for state subsidy purposes and assessing the tuition surcharge shall provide individual students with a fair and adequate opportunity to present proof of their Ohio residency for purposes of this Rule. Such institution may require the submission of affidavits and other documentary evidence which it may deem necessary to a full and complete determination under this Rule.

G. Non-Resident Status.

The boundary of the Cincinnati Technical College District is identical to the boundary of the Cincinnati Public School District. A resident student is defined as one whose legal residence has been within this area for the 12 month period prior to enrollment. A non-resident student is defined as one whose legal residence is within the state of Ohio but not within the boundaries of the Cincinnati Technical College District. A review of a student's residence status will be made upon proof of proper documentation that the student has been a resident of the Cincinnati Technical College District for 12 consecutive months prior to the request for residency review.

ADMISSIONS ADVISORY COMMITTEE

Hildegard Babbs ..... Glen Este High School
Guidance Counselor

Brother Conrad Brombach ..... Newport Catholic High School
Guidance Director

Betty Brown ..... Scarlet Oaks Joint Vocational Schools
Guidance Counselor

Thomas Bushman ..... Elder High School
Guidance Director

Thomas Cahill ..... Norwood High School
Guidance Counselor

Vic Carman ..... Aiken High School
Chairman of Guidance Department

Robert Castelli ..... McAuley High School
Director of Guidance Department

Larry Diersing ..... Taft High School
Guidance Counselor

Mary Ann Jervis ..... Oak Hills High School
Senior Counselor

Evelyn Mercer ..... Forest Park High School
Guidance Counselor

Margaret Smith ..... Bellevue High School
Guidance Counselor

ACADEMIC INFORMATION

1975–76 CALENDAR

September 1	3B	1A
November 10	4A	1B
January 26	4B	2A
April 5	5A	2B
June 11	Vacation	
June 28	5B	3A

1976–77 CALENDAR

September 6	3B	1A
November 15	4A	1B
January 31	4B	2A
April 11	5A	2B
June 17	Vacation	
June 27	5B	3A

The numeral refers to the term in the curriculum being offered; the letter refers to the group in school. The group starting the first year in September is Section A; the group starting the first year in November is Section B. The sequence of classes in school is 1A, 1B, 2A, 2B, 3A, 3B, 4A, 4B, 5A, 5B.

REGISTRATION

Registration for each term takes place on the first day of the term. (See calendar above.) Several weeks before the term begins each student receives a letter listing the time, place of registration, and the tuition and fees which must be paid. There is a late registration fee of $5.00 charged for the first two days and $10.00 charged thereafter. A student may register no later than the Friday of the first week of the term.

STUDENT SCHEDULES

The academic year begins in early September and ends in late August. It consists of five ten-week quarters.

Each associate degree program lasts two full years and consists of ten quarters.

In most programs, students spend five quarters in school in a sequence of academic instruction and five alternating quarters in paid cooperative employment. Exceptions: Aviation Technology, which requires seven academic terms in order to meet the instructional requirements of the Federal Aviation Administration, and Ornamental Horticulture, which consists of three consecutive quarters in school, followed by two in cooperative employment, each of the two academic years.

Each class, with the exceptions noted, is divided into an "A" section and a "B" section which follow alternate schedules. In the chart below, quarters are designated by the month in which each begins. The Roman numeral indicates the academic quarter number. "E" indicates co-op sessions.

Schedule "A" students have a one-week vacation in August the first year and in December the second. Schedule "B" students have a one-week vacation in December the first year and in August the second.

	FIRST YEAR					SECOND YEAR				
Quarter	Sept	Nov	Feb	Apr	June	Sept	Nov	Feb	Apr	June
Schedule "A"	I	E	II	E	III	E	IV	E	V	E
Schedule "B"	E	I	E	II	E	III	E	IV	E	V

Classes may be scheduled at any time between 7:55 a.m. and 5:00 p.m. The average daily load will include five to six hours of instruction.

Full time students spend from twenty-five to thirty hours per week in classrooms and laboratories plus ten to fifteen hours on outside study and preparation.

Part time schedules can also be arranged on an individual basis if special circumstances warrant it. For example, an individual who has family responsibilities and must be employed on a continuous, year round basis, may arrange a part-time schedule to fit his working hours. In such cases, a co-op job, as such, is not held by the student.

ACADEMIC REQUIREMENTS

Grading System

A student successfully completing the course requirements and having the stipulated cumulative grade point average in the programs at Cincinnati Technical College is granted an Associate Degree in his area of study. The student must have an accumulative grade point average of 2.00 or higher to meet graduation requirements. Courses graded I, W, WP, S, U, and EC are not included in this computation. Courses graded F and WF are included unless they are not part of the curriculum applicable to the degree program being pursued or if that course has been retaken and a higher grade has been earned.

Academic standards are maintained at a high level. The following system is used by instructors to evaluate student achievement in each subject:

Grade	Quality	Points Per Credit Hour
A	Superior	4
B	Good	3
C	Average	2
D	Poor	1
F	Failing	0
I	Incomplete	Not Computed
W	Withdrawal	Not Computed
WF	Withdrawal, Failing	0
WP	Withdrawal, Passing	Not Computed
X	Audit	Not Computed
EC	Credit by Examination	Not Computed
K	Transfer Credit	Not Computed
S	Satisfactory	Not Computed
U	Unsatisfactory	Not Computed
N	No Grade From Instructor	Not Computed

ADVANCED STANDING TO A MAXIMUM OF 45 CREDIT HOURS CAN BE GAINED THROUGH THE FOLLOWING WAYS:

- Transfer of Credit (K): A student desiring advanced standing by transfer of credits from other colleges must request any colleges previously attended to forward directly to the Director of Admissions a transcript of his academic record and the college catalog. Courses paralleling those of Cincinnati Technical College in which a student has achieved a grade of "C" or better will be considered for credit.

  To apply for a credit transfer, a student must do so with his coordinator before the end of the *first term*. If transfer credit is to be applied to first term, the student must see his coordinator before the end of the first week of the term. After the transfer form is completed and is approved by the departmental chairperson, the student will receive a copy of the transfer form.

- Credits earned through the Advanced Placement Program of the College Entrance Examination Board (K). Only courses which can be substituted for courses in the

curriculum to be followed at Cincinnati Technical College can be accepted. A score of "3" or better must have been earned in each such course.

- Credits earned through the College Level Examination Program (CLEP) (K). Only courses which can be substituted for course in the curriculum to be followed at Cincinnati Technical College can be accepted.
- Credits earned through Cincinnati Technical College's Credit-By-Examination Programs (EC). Students who have completed high school vocational or academic courses or courses offered in business and industrial training programs which may "match up" in content with courses in their Cincinnati Technical College curriculum are advised to inquire about the Basic Examination Program (BEP) and the Technical Examination Program (TEP) offered by the Business Technologies Department and the comparable credit-by-examination programs of the Allied Health Technologies Department and the Engineering Technologies Department.
- Credit through proficiency examination (EC). Students who believe they have achieved the necessary level of competency are advised to inquire about proficiency examinations which are available for skill-oriented courses in Cincinnati Technical College curricula.
- Credit Waived for Documented Valid Academic or Work Experience (EC). Each academic department will evaluate documentation which either (a) indicates course content and hours such as that provided by military programs, industrial programs and hospital programs, or (b) provides evidence that the applicant has already demonstrated through successful work experience those skills or competencies which are the desired end-product of one or more courses the applicant would ordinarily take in his Cincinnati Technical College curriculum. A fee of $25 is charged for each course for which EC credit is granted.

Course Withdrawal (W, WP, WF)

A student may withdraw from any course before the end of the fourth week without penalty and receive a "W" grade for the course. A grade of "WP" will be given a student who withdraws after the fourth week with a passing average at the time of withdrawal. A grade of "WF" will be given the student who withdraws after the fourth week with a failing average at the time of withdrawal. A grade of "F" is assigned as the final grade in a course if the student discontinues attendance without officially dropping the course.

Incomplete (I)

An incomplete grade indicates that a student has met the attendance requirements but has not completed the academic requirements of the course. An incomplete grade may be removed from a student's record through arrangements with the instructor. If the incomplete is not removed by the end of the student's following in-school term, normally it will automatically become an "F" grade upon confirmation by the instructor.

Audit (X)

A student may audit a course without credit. However, a student may not request a transfer from "credit" to "audit," or vice versa, after the completion of the second week of the academic term. Regular tuition is charged for audit registration.

Academic Probation and Dismissal

Academic standards require that a student maintain at least a 1.50 point average in each term and the following cumulative grade point average:

Credit Level	Credits	Average
I	1 to 18	1.50
II	19 to 36	1.75
III	37 to 90	2.00
IV	91 and over	2.00

Students not maintaining the above cumulative averages will be placed on academic probation. Any student placed on academic probation is subject to dismissal if his cumulative average is not brought up to the above standards at the time that the next credit level is reached.

In addition to the above listed overall requirements, a student is also subject to a probationary status or is dismissed if his accumulative grade point average in the core courses of his program falls below 2.00. The courses generally considered to be "core" within a program are those that are classified as "Technical" by the Ohio Board of Regents.

Removal of Grade Deficiencies

Deficiencies may be cleared by:

1. Repeating the course at Cincinnati Technical College.
2. Repeating the course at another school approved by the coordinator.
3. Tutorial work presented by the instructional staff.

In any above instance, the student should contact the coordinator for reinstatement information.

Reinstatement

In order to be reinstated, a student who has been dismissed because of unsatisfactory academic standing must submit his request in written form to the appropriate Department Chairperson for re-admission in the College at an opportune time. Final permission will be decided by the Department Chairperson.

Grade Reports

Term reports will be mailed to the student's home at the end of each term. Mid-term grades of students who are failing will be reported to Department Chairpersons and special attention will be given those students to assist in improving them.

Dean's List

In recognition of academic excellence, a Dean's List is compiled each academic term. To qualify a student must have an average in the term of 3.50 or greater and must have completed 15 or more credit hours in that term.

Transcripts

Upon the student's request, an official transcript of his academic record will be forwarded to any employer or education institution. Evaluation of the record is

entirely in the hands of the receiver. A nominal fee will be charged for each transcript after the first one has been issued.

Graduation Honors

Students who achieve a cumulative grade point average of 3.50 or higher for five terms will graduate with honors. "Honor" awards will be designated on transcripts and degree and will be classified as follows:

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

Graduation

A student successfully completing the course requirements and having the stipulated cumulative grade point average in any of the programs is granted an Associate Degree in his area of study. Upon request, a transcript of the student's record will be forwarded to any employer or educational institution. Evaluation of the record is entirely in the hands of the reviewer.

Transferability of Credits

The amount of credit that a graduate of the Cincinnati Technical College can transfer to another institution of higher learning depends upon these factors: (1) the academic relationship of the curriculum he has completed to that which he intends to pursue at the receiving institution; (2) his academic record and promise of success; and (3) the policies of the receiving institution regarding graduation requirements and course requisites.

COOPERATIVE EDUCATION PROGRAM: OPTIONS, REQUIREMENTS, POLICIES

Options

Students attending Cincinnati Technical College may meet their associate degree requirements in any of three different ways:

(1) Participating in CTC's full co-op program, in which students alternate full-time quarters in the classroom with full-time quarters of co-op employment. All but a small percentage of the student body elect this option.

(2) Attending classes on a half-day schedule for ten consecutive quarters and co-oping in a half-time (or longer) position. A small percentage of co-ops choose this option.

(3) Pursuing a non co-op, totally academic program. Students wishing not to co-op may attend CTC ten consecutive academic quarters on a reduced load basis, averaging slightly more than ten quarter credits each quarter. This approach provides a more leisurely pace and a shorter day than that of the typically college program. It also provides the possibility of more academic electives than are available to students enrolled in the co-op program. Students who wish to complete a degree program in less than ten quarters should consult the appro-

priate department chairman to ascertain the feasibility of their desire, since some programs (specifically the health technologies) require work experience as clinical training.

A part-time program leading to graduation in more than two years can generally be arranged without difficulty.

Co-ops Must Measure Up on the Job Just as Other Employees

Students who wish to participate in the co-op program must be able to demonstrate to prospective co-op employers that they have achieved a level of social and emotional maturity that qualifies them for employment. The decision to hire (and at what level) or not to hire a student rests solely with the employer.

The employer is solely responsible for decisions regarding the retention or dismissal, promotion or demotion, of a co-op. The merit of the co-op's work performance determines the degree of success he achieves.

As the co-op acquires more technical knowledge and more work experience, his chances of obtaining more challenging job assignments are enhanced. In short, a co-op is in a real work situation which requires him to meet all of the standards set by his employer. He enjoys no special privileges because of his student status.

Every effort will be made to place early enrollees on work-experience jobs during the summer months prior to the opening of the fall term. Students are encouraged to locate employment for themselves within a framework which serves the purpose of technical education.

While the Cincinnati Technical College has been quite successful in placing students on cooperative work jobs, there can be no ABSOLUTE GUARANTEE. Cooperative employment and continued employment depend on what the individual student can offer to employers. Students who have not demonstrated employability in some form may be advised to discontinue the co-op program.

Violations of the work placement procedures are harmful to the student, to the cooperative employer, to the school, and to the business-industrial community. No student nor any employer should attempt, under any circumstances, to influence the other for permanent employment until the student has completed the entire two-year program.

Types of Co-op Jobs

The College classifies co-op positions in three categories: A — directly related to the technology; B — indirectly related; C — unrelated.

In 1974–75, the vast majority of co-ops were employed in A category jobs developed by their coordinators.

The College would like to place all students in A type jobs if possible, in B jobs as a second choice, and in C jobs as the third choice. However, it should be recognized that both B and C jobs have many values. The work experience gained in such jobs helps the student mature socially and emotionally, helps him educationally, and prepares him for occupational advancement.

The lowest-paid, most menial, least related co-op job is better than no co-op experience at all; some of the most precious insights gained in life come from those experiences that accurately reflect both the frustrations and the rewards of the real world.

A more complete explanation of the benefits of co-op work experience appears in the first section of the catalog.

Services Provided in the Co-op Program

The fees charged to co-ops help to defray the expenses incurred in the operation of the co-op program including: services the coordinating staff spent to develop co-op jobs, to refer students for placement interviews, to maintain coordination contacts with employers, to maintain records, and to provide reports relating to the co-op program, to handle evaluation of co-ops by their employer, to provide co-op grades, etc.

A student who has a full-time job before entering the College and for whom a more desirable co-op job is not available at that time may elect to have this job serve as a cooperative employment position and receive co-op credit.

A student wishing not to receive credit for the work he is performing in a job may request to take an elective course equal in credit value to the credits that would normally be earned for the co-op term. The request must be approved by the Chairperson and Supervisor of the department in which the student is enrolled.

STUDENT ACTIVITIES

Student Senate

Because most of our students co-op, the Student Senate is divided into two groups, one for each of the two school sections, A and B. In order to promote continuity of action, both Senates use the same Construction and Guide Lines. The Senate is composed of two students from each Technology in the college. Officers are elected annually.

The Student Senate sponsors all social activities and serves as the liaison between students and the college.

Athletics

The Tigers of Cincinnati Technical College are working to build a winning tradition in athletics. As members of the Junior College League, the Tigers compete in an ever expanding Inter-collegiate sports program.

In Basketball, the Tigers have won several league championships and two tournament championships. Beginning in 1970, the Tigers have compiled a record of 93 wins and 24 losses. In Softball, the Tigers have won four league championships with a record of 67 wins and 9 losses.

Along with the intercollegiate competition, Cincinnati Technical College offers an expanding intra-mural program. Class competition is intense in Basketball and Softball. We hope to add more programs in the future. The gymnasium and swimming pool are open for student use each day.

The success or failure of any of the athletic programs at the College depends upon the leadership and maturity of the students at Cincinnati Technical College. We depend on the students to help organize, conduct, and participate in all the activities sponsored by the college. If you want to continue the winning traditions at Cincinnati Technical College, participate and support the athletic program.

ALUMNI ASSOCIATION

The Students of Cincinnati Tech have always displayed a special type of loyalty and support.

Upon graduation, many continue to support the school's philosophy of cooperative career education and the traditions established in our brief history.

Following the school's fourth graduating class, the graduates of C.T.C. formed the Cincinnati Technical College Alumni Association in early 1972. The association was organized to promote the general welfare of the college and to create and maintain an active interest among alumni in extending the influence of the college. The association also provides a means of perpetuating friendships among alumni and in the future will aid the college in providing facilities to meet the educational needs of our society.

Cincinnati Tech is one of the very few Technical Colleges which can boast of an organized alumni association.

Our graduates are definitely of a special kind.

STUDENT SERVICES

The Office of Student Services includes counseling, financial aids, student activities and veterans affairs. Under the leadership and coordination of the Director of Student Services, professional staff members work together to provide a diversity of out-of-class activities and services designed to promote the personal development of each student.

LIBRARY

The Library is located on the second floor and contains a growing collection of materials including books, pamphlets, and periodicals. The attractive Developmental Laboratory is located in Room 254. Its chief function is to provide self-instructional materials for those students who have deficiencies in Mathematics, Reading, and English. Teachers with expertise in these subject areas are scheduled in the laboratory daily for consultations and assistance to individual students.

The laboratory is equipped with dry and wet carrels complete with electricity and viewing screen; Didactor teaching machines for self-paced individualized training; controlled reading machines, cassette tapes; microfilm readers for periodicals and a variety of programmed learning materials.

HOURS: 7:45 A.M.–4:30 P.M. DAILY
6:00 P.M.–9:30 P.M. M, T, W, TH

STUDENT BOOKSTORE

The Student Bookstore is located in Room 133. All textbooks, manuals, workbooks, and supplies needed for scheduled classes are sold there. The Bookstore also handles

used textbooks and miscellaneous supplies.

A college bookstore receipt must be presented with the request for a refund.

STUDENT PARKING

A number of parking spaces are available in the upper lots each term. Details concerning the price and how to obtain parking stickers are sent with the registration materials to students each term. Students can park in the lower lot for twenty-five cents. There is also ample on-the-street parking.

GREATER CINCINNATI CONSORTIUM OF COLLEGES AND UNIVERSITIES

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

PROJECT AHEAD

Cincinnati Technical College cooperates with the U.S. Army in an educational program called Project Ahead that permits an enlisted person to accumulate college credit at C.T.C. while serving a tour of duty elsewhere. The course credit may come from courses taken at colleges near the military bases where the student is stationed, special military training approved by the Coordinator and the Department Chairperson, or through the College Level Examination Program (CLEP). An applicant who is enlisting in or is already an enlisted member of the U.S. Army and who meets the C.T.C. entrance requirements is eligible. Contact the Director of Admissions and Records for full details.

ADMINISTRATIVE OFFICERS

Clifford R. House, B.A., M.Ed. ..... President

Frederick B. Schlimm, B.S., M.Ed.... Vice President of Administrative Operations

Charles E. Warman, B.S., M.Ed..... Vice President of Academic Affairs

Craig Ballard, A.S., B.A..... Director of Student Activities

Johnnie Mae Berry (Mrs.), B.A., M.L.S. ..... Director of Library Services

Herbert Bom, B.S. ..... Accountant

Eleanor V. Bonner, B.S., M.A. ..... Director of Student Services

Hal G. Funk, B.S., M.Ed. . Director of Special Programs and Continuing Education

Robert E. Gillespie, (ASM) .....Director of Management Services

Charles Jonas, B.S., M.Ed. .....Director of the Associate of Individualized Studies Program

Irvin C. Kuehn, B.S., M.A. .....High School Liaison Officer

John Lalley, B.S. .....Director of Planning

Donald Olberding, B.S. ..... Director of Facilities

Louis E. Owsley, B.S. .....Director of Veterans Affairs

Ann I. Rasche, B.S., B.Ed., M.Ed. ..... Director of Admissions and Records

A. Wayne Vaughn, B.S., B.A. ..... Controller

Ross O. von Volbroth, B.S., M.A. .....Assistant to the Director of Library Services

James Werbel, B.A., M.S. ..... Director of Financial Aid

Eugene T. Wieland, B.B.A., M.B.A. ..... Director of Finance

DEPARTMENT CHAIRPERSONS

(Departmental Responsibility: Supervision of Instruction)

Johnnie Boggio (Mrs.), B.S., M.Ed. ..... Business Technologies

Timothy D. Nolan, A.B. ..... Communications Skills and Social/Behavioral Sciences

Thomas Stark, B.S., M.Ed. ..... Mathematics/Physical Science

Nancy Walters (Mrs.), B.A., M.T. (ASCP) ..... Allied Health Technologies

La Verne Winkle, B.S.E.E. .....Engineering Technologies

SUPERVISORS OF COOPERATIVE EDUCATION

(Departmental Responsibility: Supervision of Cooperative Education)

Richard D. Brown, A.S., B.S. ..... Business Technologies

DeLois Johnson (Mrs.), B.S., M.S. ..... Allied Health Technologies

La Verne Winkle, B.S.E.E. ..... Engineering Technologies

INSTRUCTIONAL TEAMS
BUSINESS TECHNOLOGIES DEPARTMENT

Management/Data Processing — Related Program Team

Caroline Tatem (Mrs.), B.S., M.Ed. (C.P.S.) ..... Instructional Team Leader

Carl Sulek, B.S.Sc., M.Ed. ..... Coordinator of Cooperative Education

Paul Callahan, B.S., M.Ed. ..... Coordinator

Randell Corgan, A.S., B.S., M.Ed. ..... Coordinator

Robert Fairbanks, B.S. ..... Coordinator

J. Alfred Gratton, B.B.A., M.B.A. ..... Instructor

Harry Heink, B.A., M.Ed ..... Instructor

Clyde Kobberdahl, B.S., M.Ed. ..... Coordinator

Verale Phillips, A.S., B.S. ..... Coordinator

Sales & Secretarial Program Team

Sharon Reynolds (Mrs.), B.S.,Ed. ..... Instructional Team Leader

Bernadette Kell (Mrs.), B.S., M.A. ..... Coordinator of Cooperative Education

Stewart Bonem, B.A., M.B.A. ..... Instructor

Paul W. Kinzie, B.S., M.Ed. ..... Coordinator

Joe R. Lower, B.S., M.A. ..... Coordinator

Margaret Matamoros (Mrs.), B.B.A. ..... Coordinator

Daniel O. Mellinger, A.B., M.Ed. ..... Instructor

Katye L. Mindhardt (Mrs.), A.S., B.S., M.Ed. ..... Instructor

Lloyd P. Pitman, B.S., M.Ed. ..... Instructor

Half-Day/Adult Programs Team

Anne Boeckley (Mrs.), B.B.A., M.Ed. ..... Instructional Team Leader

Robert Elmer, B.S., M.Ed. ..... Coordinator of Cooperative Education

Donald Cayse, B.S., M.B.E. ..... Instructor

Elmer Flamm, A.B., M.Ed. ..... Instructor

Fred Hartzel, A.AS., (C.F.E.), (Chef License) ..... Coordinator

Richard Hendrix, B.S., M.Ed. ..... Coordinator

Briggetta E. Stewart (Mrs.) ..... Coordinator

Lawrence Strikman, B.B.A., (GPM) ..... Coordinator

Joseph L. Theisen, L.L.B, ... Coordinator

Management-Oriented Industrial Program Team

Donald Dadey, B.S., M.Ed., M.A. ..... Instructional Team Leader

Tommy Miller, B.S., Printing Plant Mgt. ... Coordinator of Cooperative Education

Michael Jones, B.F.A. ..... Instructor

Joseph Keenan, B.S., M.Ed. ..... Coordinator

Jerry A. Krismer, B.S., B.A. ..... Coordinator

John Krismer, B.S., B.A. ..... Instructor

Albert G. Leicht, B.S., M.S. ..... Instructor

Karl von Kampen, B.S., M.S. ..... Coordinator

ENGINEERING TECHNOLOGIES DEPARTMENT

Electrical/Electronics Technologies Team

Billy D. Mullins, B.S.E.E. ..... Group Coordinator

Gary Graff, A.E.E., B.S. ..... Coordinator of Cooperative Education

Patrick McKelvey, B.S. ..... Instructor

Larry Moore, B.S.E.E. ..... Instructor

Robert Speckert, A.S., B.S. ..... Coordinator

Kenneth Stoll, B.S., M.Ed. ..... Instructor

Mechanical Technologies Team

Donald Meyer, B.S.I.E. ..... Group Coordinator

V. Kenneth Steidley, B.S. ..... Coordinator of Cooperative Education

Robert Craigo, B.S., M.S. ..... Instructor

William G. Rhein, B.S.I.M., M.B.A. ..... Instructor

Richard Strait, B.S., M.E. ..... Instructor

Civil/Construction Technologies Team

Walter J. Klayer, B.S.I.D., M.Ed. ..... Group Coordinator

James Farrer, A.E., B.S., M.A. ..... Coordinator

Robert J. Schneider, B.S., (Reg. Surveyor, Ohio & Ky.) ..... Coordinator

Clayton Van Camp, (R.S.E.S.) ..... Coordinator

Aviation Technology Team

Vincent J. DeVol (A & P License), (D.M.E.) ..... Coordinator

H. Anthony Rinck, B.S., M.Ed., (A & P License), (D.M.E.) ..... Coordinator

Ralph Sanders, (A & P License) ..... Instructor

ALLIED HEALTH TECHNOLOGIES DEPARTMENT

Florence C. Amato (Mrs.), B.S., (R.R.A.), M.S., Ph.D. ..... Coordinator

Bruce Barnhart, B.S. ..... Coordinator

Rosemary Clark, B.A., M.A., (R.R.A.) ..... Coordinator

Eileen Coffee, (Mrs.), B.S., (R.D.).....Coordinator

John Csonka, P.A.....Coordinator

Ronald Davidson, B.S., M.T. (ASCP).....Instructor

Carolyn Laemmle (Mrs.), B.A., M.T. (ASCP).....Coordinator

Jude James Norton, A.A.S., B.A., (GSA) .....Coordinator

Terry Rauch, B.S. .....Instructor

Olivia Watts, B.S.N. (R.N.).....Coordinator

COMMUNICATION SKILLS

Elmer Flamm, A.B., M.Ed.....Instructor

Terry Glenn, B.S., M.Ed. .....Instructor

Marcus Green, B.S.....Instructor

Harry Heink, B.A., M.Ed.....Instructor

Michael Jones, B.F.A. .....Instructor

Mary Lee Keller, B.A. .....Instructor

Daniel O. Mellinger, A.B., M.Ed. .....Instructor

SOCIAL BEHAVIORAL SCIENCES

Leonard Penn, B.A., M.Ed. .....Instructional Team Leader

Carmen Battistone, B.S., M.Ed.....Instructor

Lawrence Ziegler, B.A., M.Ed. .....Instructor

MATHEMATICS/PHYSICAL SCIENCES

James T. Brown, B.S., M.Ed.....Coordinator

Robert Duffy, B.S., B.E., M.Ed. .....Instructor

Herman Randell, B.A., M.A. ..... Instructor

Rodney Rupp, B.S., B.Ed. ..... Instructor

Ralph Schlueter, B.S., M.Ed. ..... Instructor

William S. Tulloss, B.E.E., M.S.E.E., M.S. ..... Instructor

Complete the 4 page application, detach and mail to: Director of Admissions
Cincinnati Technical College
3520 Central Parkway
Cincinnati, Ohio 45223

APPLICATION FOR ADMISSION
(Please PRINT all information)

NAME _____
Last First Middle

CURRENT
ADDRESS _____
Number and Street City County State Zip

TELEPHONE
NUMBER_____LENGTH OF RESIDENCE CURRENT ADDRESS_____yrs._____mos.

PERMANENT
ADDRESS _____
Number and Street City County State Zip

SOCIAL SECURITY
NUMBER_____LENGTH OF RESIDENCE PERMANENT ADDRESS_____yrs._____mos.

ARE YOU A RESIDENT OF THE CINCINNATI SCHOOL DISTRICT? Yes_____ No_____

ARE YOU A RESIDENT OF OHIO? Yes_____ No_____

ARE YOU A UNITED STATES CITIZEN? Yes_____ No_____

CITIZENSHIP IF NOT U.S. _____

(OVER)

UNIVERSITY, COLLEGE OR BRANCH COLLEGE PREVIOUSLY ATTENDED:

Name _____ Major Fields _____ Dates _____

Name _____ Major Fields _____ Dates _____

*DO YOU PLAN TO TRANSFER ANY OF THESE CREDITS TO CTC IF APPLICABLE? Yes_____ No_____

EMPLOYMENT HISTORY

Employer	Type of Work	Dates

NOTE: Are any of the educational or employment records named above in another or previous name? If so, place an asterisk (*) by the specific record(s) and enter the name here.

_____

Do you wish financial aid information? Yes_____ No_____

Do you plan to receive "GI Bill" Educational Benefits while at CTC? Yes_____ No_____

Do you have any health problems or physical disabilities that might affect your educational process?
Yes_____ No_____

If yes, please indicate:_____
We ascribe to the State and Federal Laws which prohibit discrimination due to physical disabilities.

(Continued on next page)

HIGH SCHOOL ATTENDED _____ YEAR OF GRADUATION_____

HIGH SCHOOL ADDRESS _____

If you did not graduate and are not now attending high school, have you successfully completed the High School Equivalency Examination (GED)? Yes_____ No_____

HIGH SCHOOL MAJORS _____

HAVE YOU PREVIOUSLY APPLIED TO ENTER CTC? Yes_____ No_____ Year_____

WERE YOU PREVIOUSLY ENROLLED IN CTC? Yes_____ No_____ Program_____

Day_____ Evening_____ Withdrawal Date_____

I AM INTERESTED IN THE FOLLOWING PROGRAMS AT CTC: 1st Choice _____

WHEN DO YOU WISH TO ENTER CTC? _____ 2nd Choice _____

The following information is needed in order to complete federal and state enrollment reports. This portion of the application will be detached as soon as it is received in the Admissions Office. The information will not be a part of your college record.

SEX:

Male _____

Female _____

MARITAL STATUS:

Single _____

Married _____

DATE OF BIRTH:

_____

Month Day Year

RACE:

_____Afro American
_____American Indian
_____Oriental American
_____Spanish Surnamed American
_____Other American
_____Foreign

(OVER)

FOR FOREIGN STUDENTS ONLY:
SPONSOR IN THE UNITED STATES _____
Last Name First Middle

Address _____
Number and Street City State Zip

Telephone_____ Occupation _____

PERSON TO BE NOTIFIED IN CASE OF HEALTH OR ACCIDENT EMERGENCY:

Name _____
Last Name First Middle

Address _____
Number and Street City State Zip

Telephone_____

I HEREBY CERTIFY THAT THE INFORMATION PROVIDED IN THIS APPLICATION IS TRUE AND ACCURATE.

_____ 19____ _____
Date Signature

A $10.00 APPLICATION FEE (NON-REFUNDABLE) MADE PAYABLE TO CINCINNATI TECHNICAL COLLEGE MUST BE SUBMITTED WITH THIS APPLICATION. IF THIS APPLICATION IS TO BE MAILED, PLEASE DO NOT SEND CASH: A CHECK OR MONEY ORDER IS PREFERRED.

*IF YOU PLAN TO TRANSFER COLLEGE CREDIT TO CTC AN ORIGINAL COLLEGE TRANSCRIPT MUST BE SUBMITTED BEFORE YOUR INITIAL REGISTRATION.

Cincinnati Technical College does not discriminate on the basis of race, color, natural origin or sex in the admission of students or in any activity conducted by Cincinnati Technical College.

Orientation Day to Co-op Program for New Students

Students who wish to participate in the cooperative education program must attend an Orientation Day relating to the program. The Orientation Day for students who plan to enroll in 1976–77 will be held in June and repeated in August.

All students receiving co-op credit are required to attend a seminar at the end of each co-op term. Seminar details will be sent with the registration information each term.

CO-OPPORTUNITY MONTH

Each year Cincinnati Technical College, with the cooperation of the high school counselors and employers of technicians, offers a series of Co-Opportunity Days in the month of March to help high school juniors learn firsthand about the technical careers in which they are interested.

CO-OPPORTUNITY MONTH SCHEDULE

Tuesday, March 2	Medical Lab
Wednesday, March 3	Medical Assisting & Respiratory Therapy
Thursday, March 4	Medical Records
Friday, March 5	Operating Room Technician
Monday, March 8	Automotive Service Management
Tuesday, March 9	Graphic Communications
Wednesday, March 10	Ornamental Horticulture
Thursday, March 11	Hotel-Motel-Restaurant, Dietetics
Friday, March 12	Secretarial (First Group)
Monday, March 15	Business Management, Managerial Accounting
Tuesday, March 16	Secretarial (Second Group)
Wednesday, March 17	Data Processing, Data Management
Thursday, March 18	Sales Marketing
Friday, March 19	Real Estate/Property Management
Monday, March 22	Industrial Engineering, Mechanical Design, Plastics
Tuesday, March 23	Aviation
Wednesday, March 24	Civil-Construction Engineering (Building Option, Highway Option)
Thursday, March 25	Air Conditioning
Friday, March 26	Electronics, Electrical Design, Electro-Mechanical, Bio-Medical Electronics, Communications Electronics

Juniors are asked to contact their high school counselors if they are interested in attending one of the co-opportunity days on the schedule.

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ASSOCIATE DEGREE PROGRAMS AND OPTIONS
1976–77

BUSINESS DEPARTMENT TECHNOLOGIES

ENGINEERING DEPARTMENT TECHNOLOGIES

ALLIED HEALTH TECHNOLOGIES

Admissions Office
Cincinnati Technical College
3520 Central Parkway
Cincinnati, Ohio 45223

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