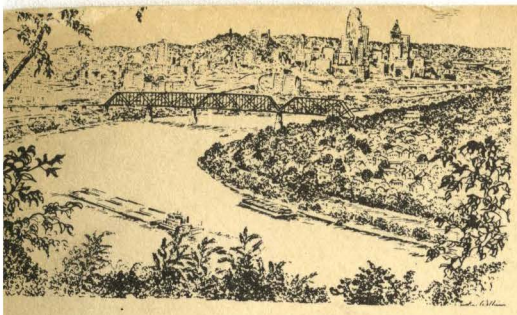
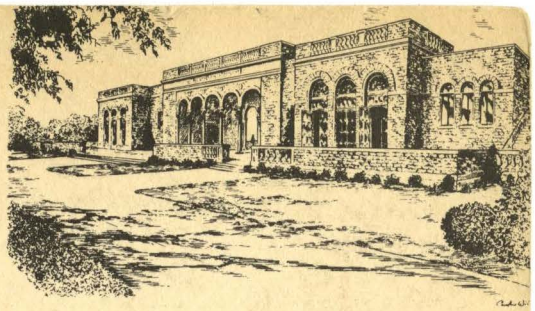
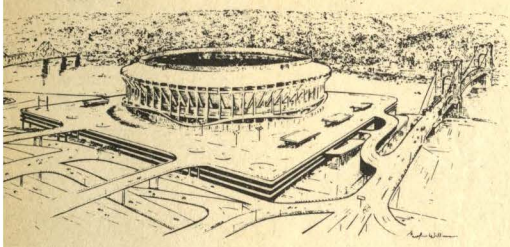
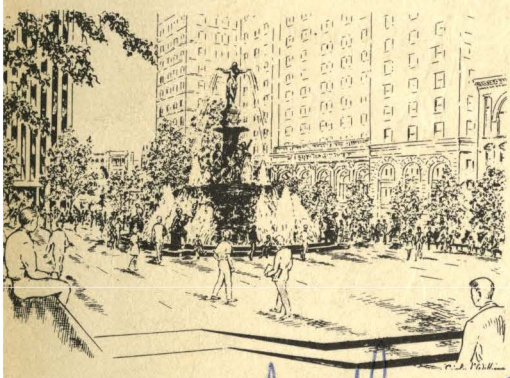


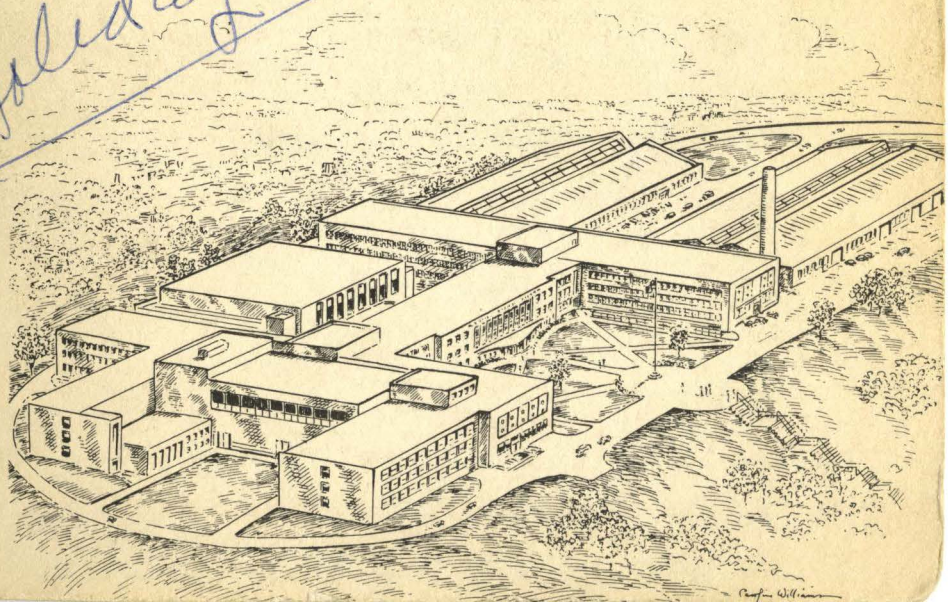






Cincinnati State Technical College

1972 Catalog



The name of the Cincinnati Technical Institute was changed to Cincinnati State Technical College while this edition of the catalog was in production. The former name appears throughout the text.

Five sketches of Cincinnati landmarks grace the cover of the catalog. All were rendered by Caroline Williams, famous Cincinnati artist. Those of Riverfront Stadium, Fountain Square, Ault Park Pavillion, and the Cincinnati Skyline were commissioned by the Tresler Oil Company, of Cincinnati, which has generously permitted their reproduction. The sketch of the Cincinnati Technical Institute was done by Caroline Williams expressly for this catalog.

CINCINNATI TECHNICAL INSTITUTE

BOARD OF TRUSTEES

Appointed By The Governor

Name	Term Expires
The Rev. Herman H. Kenning	August 28, 1972
Joseph Russo	September 14, 1974

Appointed By The Cincinnati Board Of Education

Name	Term Expires
Mrs. Alice P. Bruckmann	September 14, 1972
Mrs. Janet S. Duff	September 14, 1974
The Rev. Tecumseh X. Graham	September 14, 1973
Mrs. Virginia K. Griffin	September 14, 1973
Wayne F. Wilke	September 14, 1974

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CINCINNATI TECHNICAL INSTITUTE

3520 Central Parkway
Cincinnati, Ohio 45223
681-3320

Clifford R. House, President

CONTENTS

CONTENTS

MISSION OF THE CINCINNATI TECHNICAL INSTITUTE

The Cincinnati Technical Institute 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:

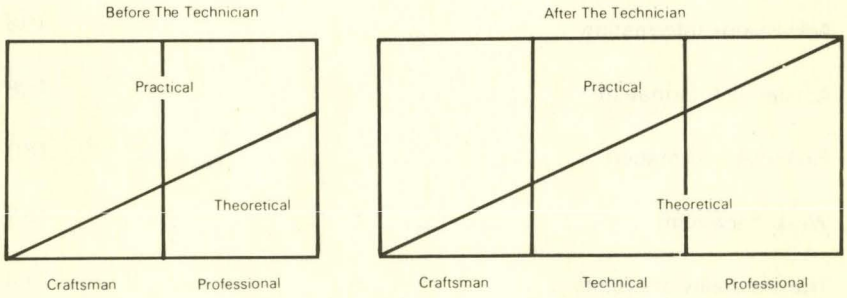
(1) Technical education is a distinctive, relatively new and urgently needed type of higher education.

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

(3) Cincinnati Technical Institute 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 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 func-

tion 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 federal government estimated several years ago that 1,000,000 new technician jobs will have come into existence in the nation by 1975. Hence, the urgent need for expanded technical education.

How technical institutes 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 institute provides that special enviornment.

Ohio has a network of seventeen rapidly growing technical institutes, 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 institutes 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 Institute "co-opportunity" plan.

The Board of Trustees, the administrative staff, and the faculty of the Cincinnati Technical Institute 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 Institute 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 Institute 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. (About 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 institute students. The institute 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 1969 the national median household income was only $8390, according to the Commerce Department. Only two of every five households had incomes of $10,000 or more. 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 techni-

cian training, for relatively few of the 1700 plants in the area can afford training programs. Only 800 in 1963 had 20 or more employees; only 38 had 1,000 or more.

The cooperative education program of the Cincinnati Technical Institute meets both these needs. Only one of three Institute students is certain he could afford to attend the Institute were it not for the co-op earnings. The Institute 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 institute 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 Institute 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 institute is offering 21 associate degree programs in 1971-72. They are: Air Conditioning Technology, Automotive Service Management Technology, Aviation Technology, Business Data Processing Technology, Business Management Technology, Civil Engineering Technology, Electronics Technology, Electro-Mechanical Technology, Executive Secretarial Technology, Graphic Communications Technology, Hotel-Motel-Restaurant Management Technology, Industrial Engineering Technology, Loss Control & Security Administration Technology, Mechanical Design Technology, Medical Laboratory Technology, Medical Assisting Technology, Medical Records Technology, Plastics Technology, Sales Marketing Technology, Surgical Assisting Technology, and Urologic Assisting Technology.

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 institute 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 INSTITUTE

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. Four additional annual payments are to be made as the Institute, which now occupies 40% of the building, moves into additional rooms and the high school operation is phased out.

The Institute began its sixth year of operation, and third as a Regents college, on September 7, 1971. Enrollment, including regular day and Continuing Education Programs, was expected to total 1,700-2,000 in 1971-72.

Division of Continuing Education and Extension Services

Continuing education is one of the most rapidly growing areas of the American educational enterprise. Rapidly changing technology and the consequent need to develop new job skills, knowledge, and attitudes now prompt approximately thirty million persons, no longer attending school on a regular, full-time

basis, to go to college for classes to help them understand the world, to understand themselves, and to develop skills and interests.

The Division of Continuing Education and Extension Services 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 area. A high school diploma or equivalency is required only for enrollment in the credit courses leading to the associate degree. The non-credit or special interest courses carry no prerequisites.

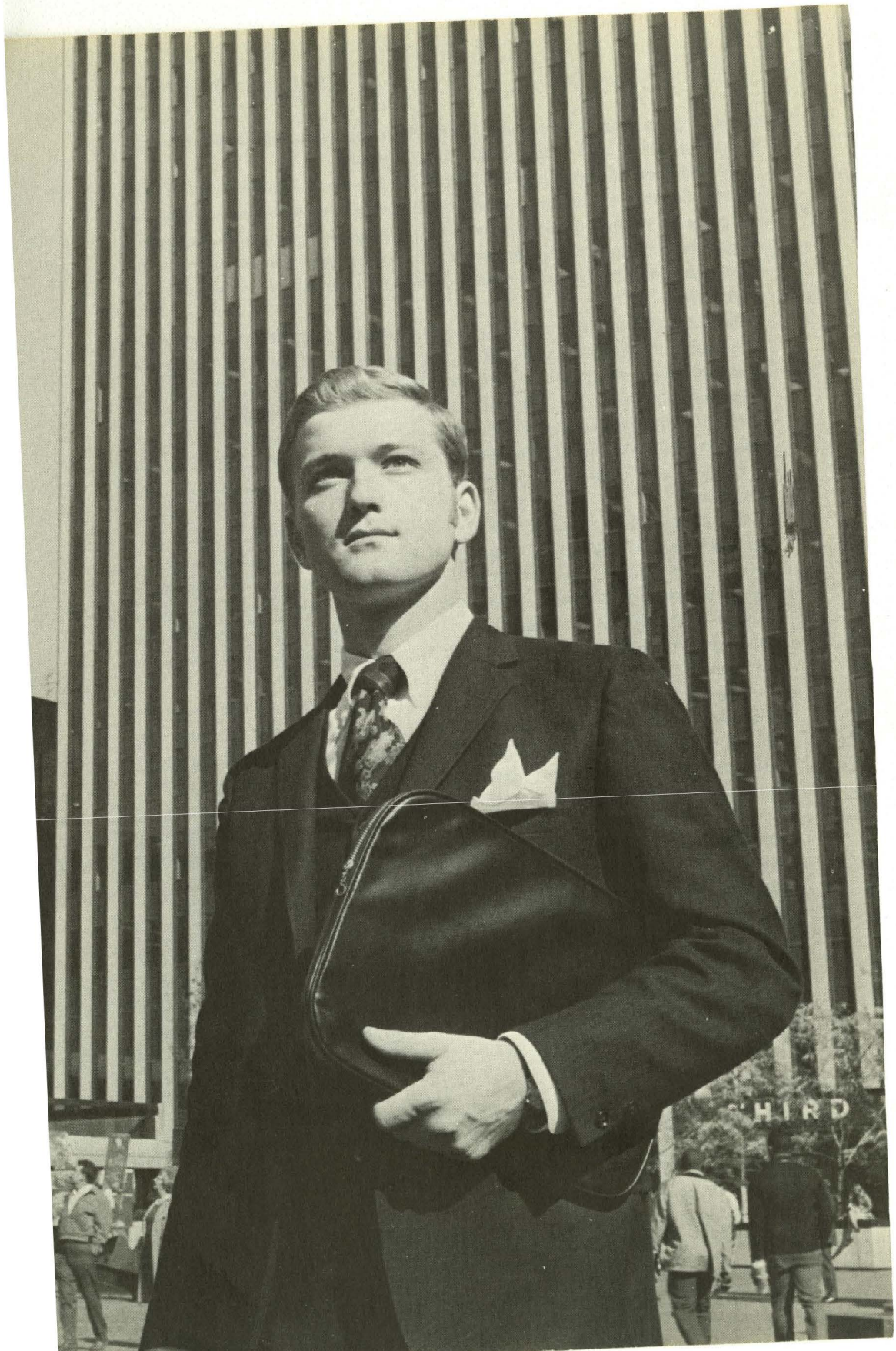
One of the most important functions of Cincinnati Technical Institute is that of service to local business, industry, and government. Where sufficient interest is shown, every effort will be made to offer instruction which will permit an employee to improve, upgrade, or retrain himself through classroom 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, both on and off campus, specialized programs tailored to the needs of public and private agencies, organizations, and groups. Cincinnati Technical Institute, 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.

Changes have occurred with increasing incidence during the last few years that require better educated personnel, and there is every indication that the rate of change will increase. Persons interested in learning more about possible program offerings in their specific areas should contact the Director of Continuing Education for details.

In cooperation with the Northwest Board of Education and Administration, the Cincinnati Technical Institute opened it first extension center in November, 1970 at Colerain High School, for the convenience of adults residing in the northwest sector of Hamilton County. Corses from Institute curricula are offered in response to needs determined by a community survey.

Extension centers will be established at other appropriate locations in the area, to make Institute occupational programs accessible to greater numbers of citizens. Agencies, organizations and companies interested in discussing the possible establishment of an extension center are invited to contact the Institute.


HIRD

DEPARTMENT OF BUSINESS TECHNOLOGIES

The term "business" encompasses a multitude of income-producing activities. As one of the major segments of occupational life, the field of business embraces manufacturing, buying and selling; but the number of services and activities business generates are 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.

The number of managerial workers required by business 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 Institute is meeting the need for specialized business training with six Associate Degree programs: Business Data Processing Technology, Business Management Technology, Hotel-Motel-Restaurant Management Technology, Loss Control & Security Administration Technology, Sales-Marketing Technology, and Secretarial Technology. Organized job experience is a key phase of the learning program in each of these five business programs through cooperative 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.


HONEYWELL

BUSINESS DATA PROCESSING TECHNOLOGY

Occupations in the data processing and computer technology field are numerous, challenging and changing. The use of the electronic computer has yet to reach its potential not only in the business office, but in all of industry as well.

Computers can follow only carefully prepared, step-by-step instructions for each job. It is the programmer who prepares these step-by-step instructions. Every problem that is processed on a computer must first be analyzed carefully to assure the efficient processing of data. There are usually several possible ways of obtaining the correct answer to any given problem; some of them are more direct than others.

Normally a programmer does the preliminary analysis and planning. Once the general plans have been completed, the programmer is ready to start the job of writing the "program," or detailed instructions for processing data on the computer. Exactly how he does this depends on the kind of computer used and the nature of the application being programmed.

The programmer usually starts his task by conferring with professional staff members who are in a position to furnish him with detailed information about the subject matter of the problem. This done, he makes a flow chart, or diagram, showing the order in which the computer must perform each operation; for each operation he prepares detailed instructions, or "routines." These routines, once they have been transferred to the computer's memory, tell the machine exactly what to do with all the data associated with the problem.

A comparatively simple problem can be programmed for a computer within a few hours. A program which deals with a complex problem or is designed to produce many different kinds of information may require thousands of routines and many months of preparation.

The aim of the Business Data Processing Technology program is to prepare students to become proficient programmers and to provide them with a background for possible advancement to positions in systems analysis.

BUSINESS DATA PROCESSING TECHNOLOGY CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1131 Mathematics for Business Data Processing I	5	-	4
1511 Principles of Economics	5	-	4
1701 Introduction to Data Processing	5	5	4
2911 Accounting I	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment	-	40	2
			2
■ Second School Term			
1002 Communication Skills II	5	-	3
1132 Mathematics for Business Data Processing II	5	-	4
1502 Principles of Psychology	5	-	4
1703 Basic Computer Concepts	3	7	4
2912 Accounting II	3	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment	-	40	2
			2
■ Third School Term			
1007 Expository Writing	5	-	3
1133 Mathematics for Business Data Processing III	5	-	4
1704 Computer Programming and Operations	7	8	8
1999 Computer Electronics	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment	-	40	3
			3
■ Fourth School Term			
1004 Technical Writing	5	-	3
1705 Computer Programming and Systems Analysis	12	8	12
1823 Business Law	5	-	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment	-	40	3
			3
■ Fifth School Term			
1005 Effective Speaking	5	-	3
1706 Computer Programming and Research	5	-	4
1707 Installation Management	5	-	3
1708 Case Study Laboratory	5	10	8
			18
■ Fifth Co-op Term			
9005 Cooperative Employment	-	40	3
			3

BUSINESS DATA PROCESSING TECHNOLOGY ADVISORY COMMITTEE

Andrew Atkinson ..... City of Cincinnati
Superintendent of Data Processing

Robert Bridges ..... Billboard Publishing Company
Manager of Systems and Information Services

Clifford Carte ..... Cincinnati Gas and Electric Company
Manager Data Processing

O. V. Herried ..... Fireman's Fund American Insurance Companies
Office Manager

Donald R. Lancaster ..... Central Trust Bank
Vice President of Data Processing Center

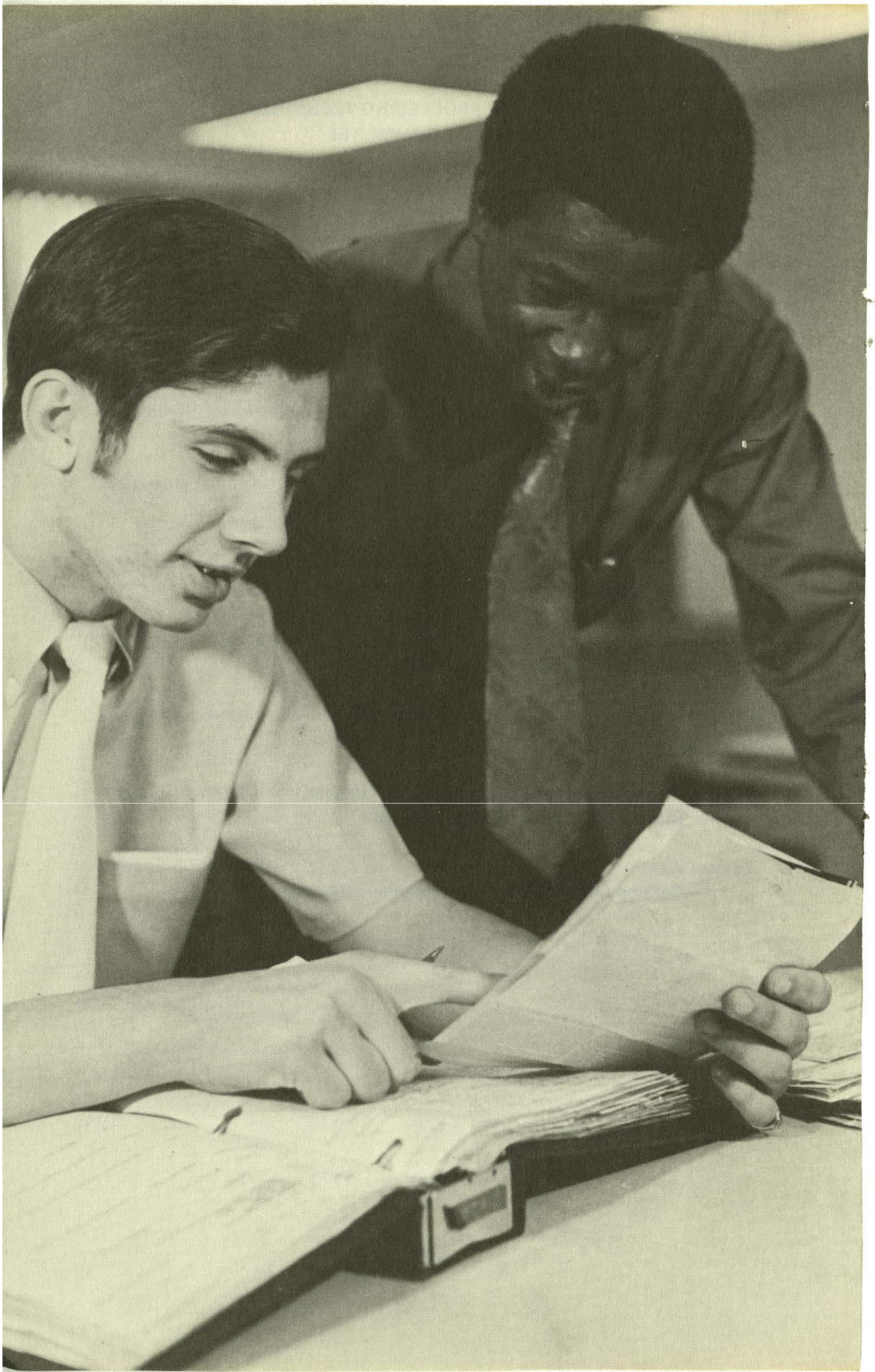
Lowell Mason ..... R. K. LeBlond Machine Company
Supervisor, Data Processing

William McDonald ..... General Electric Company
Manager, Evendale Computer Center

Paul Nerone ..... Western Southern Life Insurance Company
Staff Assistant

Lee Ransick ..... Ohio National Life Insurance Company
Director of Data Processing Operations

Edward Wess ..... MacGregor-Brunswick
Division Manager, Management Information Services



BUSINESS MANAGEMENT TECHNOLOGY

Modern business management requires mature judgment, mastery of management techniques, and a knowledge of modern technology. The Cincinnati Technical Institute Business Management program, offered by a school experienced in technical education, fills the need for mid-management personnel with the technical knowledge so valuable to industry.

Business Management students meet with instructors experienced in management — in an adult atmosphere of mutual respect. In school, they learn the skills and acquire the knowledge necessary for mid-management positions. The latest communication techniques (visual presentation of management concepts, case studies, systems development, field trips, guest experts, for example) are employed.

While engaged in their cooperative work experience Business Management students participate in management training programs in many of Cincinnati's leading firms.

Upon graduation, the Business Management student will be prepared to assume mid-management responsibilities in banking, insurance, and a number of other important industries.

BUSINESS MANAGEMENT TECHNOLOGY CURRICULUM

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills I	5	-	3
1101 Business Mathematics I	5	-	4
1511 Principles of Economics	5	-	4
2901 Principles of Marketing I	5	-	2
2911 Principles of Accounting I	3	2	3
2921 Introduction to Business I	5	-	2
			18
■ First Co-op Term			
9001 Cooperative Employment	-	40	2
			2
■ Second School Term			
1002 Communication Skills II	5	-	3
1102 Business Mathematics II	5	-	4
1804 General and Multiple Line Insurance	5	-	3
2902 Principles of Marketing II	5	-	2
2912 Principles of Accounting II	3	2	3
2922 Introduction to Business II	5	-	2
			17
■ Second Co-op Term			
9002 Cooperative Employment	-	40	2
			2
■ Third School Term			
1007 Expository Writing	3	2	3
1799 Survey of Data Processing	5	-	4
1805 General and Multiple Line Insurance II	5	-	3
3022 Office Machines	1	4	2
2913 Intermediate Accounting	2	3	3
1810 Principles of Salesmanship	5	-	3
			18
■ Third Co-op Term			
9003 Cooperative Employment	-	40	3
			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
2914 Cost Accounting	3	2	3
2924 Principles of Management	5	-	2
			18
■ Fourth Co-op Term			
9004 Cooperative Employment	-	40	3
			3
■ Fifth School Term			
1005 Effective Speaking	3	2	3
1502 Principles of Psychology	5	-	4
1824 Business Law II	5	-	3
2905 Money and Banking	5	-	3
2915 Tax Accounting	3	2	3
2925 Principles of Management II	5	-	2
			18
■ Fifth Co-op Term			
9005 Cooperative Employment	-	40	3
			3

BUSINESS MANAGEMENT TECHNOLOGY ADVISORY COMMITTEE

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Manager, Office Services

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

Norman Hartleb ..... Eagle-Picher Industries
Division Office Manager and Supervisor

George Keller ..... Cincinnati Insurance Board
Executive Vice-President

P. E. Ledonne ..... The David J. Joseph Company
Assistant to the Treasurer

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

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

Burnett Reed ..... Cincinnati Industrial Institute
Executive Manager

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

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. Cincinnati Technical Institute 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 in 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.

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

A student cannot learn solely in a classroom, but neither is he able to learn completely on the job. By integrating these two — work and school — the student receives both the practical and theoretical knowledge necessary for a successful and profitable career in the hospitality industry.

This program was developed with the assistance of an advisory committee representing the hospitality industry, hospitals and nursing homes.

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	3	2	3
2811 Introduction to Hotel-Motel Management	5	-	3
2911 Principles of Accounting I	3	2	3
3022 Office Machines	1	4	2
			18
First Co-op Term			
9001 Cooperative Employment	-	40	2
			2
Second School Term			
1002 Communication Skills II	5	-	3
1102 Business Mathematics II	5	-	4
2802 Restaurant Management II	3	2	3
2812 Hotel-Motel Management II	5	-	3
2821 Sales Techniques	3	2	2
2912 Principles of Accounting II	3	2	3
			18
Second Co-op Term			
9002 Cooperative Employment	-	40	2
			2
Third School Term			
1005 Effective Speaking	5	-	2
1512 Economics	5	-	3
1799 Survey of Data Processing	3	2	4
2803 Restaurant Management III	3	2	3
2813 Hotel-Motel Management III	5	-	3
2928 Hotel-Motel Accounting	3	2	3
			18
Third Co-op Term			
9003 Cooperative Employment	-	40	3
			3
Fourth School Term			
1502 Principles of Psychology	5	-	3
1535 U.S. Labor Relations	5	2	3
1823 Business Law I	5	-	3
2804 Restaurant Management IV	3	-	3
2814 Hotel-Motel Management IV	5	-	2
2820 Purchasing	5	-	4
			18
Fourth Co-op Term			
9004 Cooperative Employment	-	40	3
			3
Fifth School Term			
1006 Technical Writing	3	2	3
1520 Sociology	5	-	4
1824 Business Law II	5	-	3
2805 Restaurant Management V	3	2	3
2815 Hotel-Motel Management V	5	-	3
2830 Decorating & Design	3	2	2
			18
Fifth Co-op Term			
9005 Cooperative Employment	-	40	3
			3

HOTEL-MOTEL-RESTAURANT MANAGEMENT TECHNOLOGY ADVISORY COMMITTEE

Chairman

Randolph Dickins ..... Quality Courts Motels
General Manager

Members

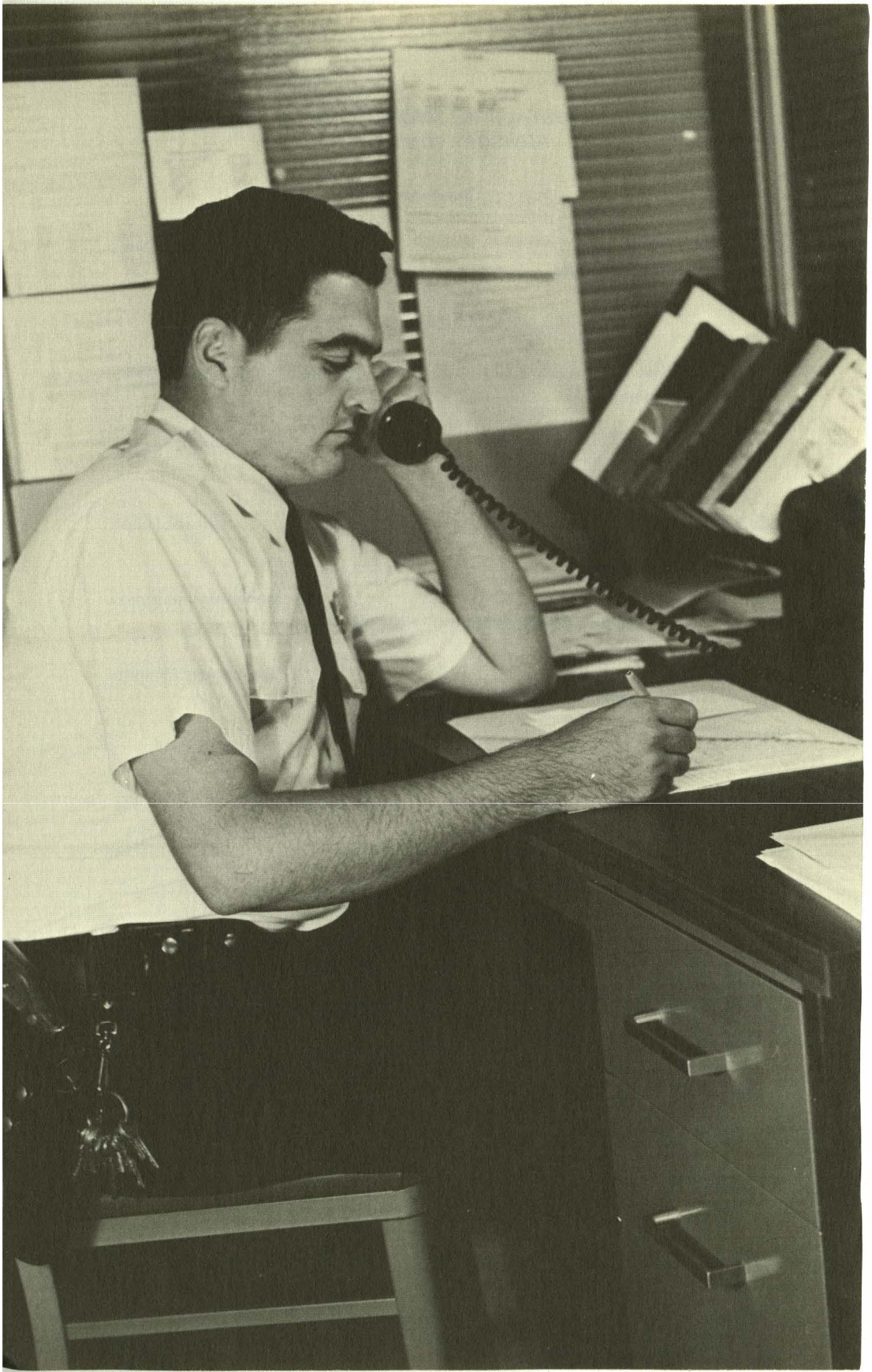
Donald DeVaux ..... Villa Hope Extended Care Facility
Administrator

A. J. Elsaessor ..... Carrousel Motel
General Manager

Ted Kleisner ..... Terrace Hilton
General Manager

Lyle M. Landis ..... Veterans Administration
Chief, Medical Administration — Hospital Division

Leland White ..... Deaconess Hospital
Administrator



LOSS CONTROL AND 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.

LOSS CONTROL AND SECURITY ADMINISTRATION CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1101 Business Mathematics	5	-	4
1201 Private Police Officer's Training Course	9	3	6
1210 Introduction to Loss Control and Security Administration	3	-	2
1501 Human Relations	5	-	3
2926 Principles of Management	5	-	3
			18
■ First Co-op Term			
9001 Cooperative Employment	-	40	2
			2
■ Second School Term			
1001 Communication Skills	3	2	3
1102 Business Mathematics II	5	-	4
1204 Personnel Security Systems	3	2	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
			2
■ Third School Term			
1002 Communication Skills II	3	2	3
1004 Technical Writing	3	2	3
1208 Criminal, Civil, and Administrative Law	5	-	4
1224 Fundamentals of Fire Prevention	3	7	4
1520 Introduction to Sociology	5	-	4
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
			3
■ Fourth School Term			
1205 Interviewing	3	2	3
1209 Criminal, Civil, and Administrative Law II	5	-	4
1216 Security Administration	5	-	3
1230 Safety Management	3	2	2
1233 Emergency Planning	3	2	3
1536 Labor Relations	5	-	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
			3
■ Fifth School Term			
1015 Oral Communications	5	-	3
1217 Security Administration II	5	-	3
1240 Directed Case Study	3	2	3
1507 Introduction to Psychology	5		3
1537 Labor Relations II	5	-	3
2911 Principles of Accounting	3	2	3
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3
			3

LOSS CONTROL AND SECURITY ADMINISTRATION TECHNOLOGY ADVISORY COMMITTEE

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

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

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

Lt. Col. Stanley Grothaus ..... Cincinnati Police Dept.
Personnel Bureau Commander

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

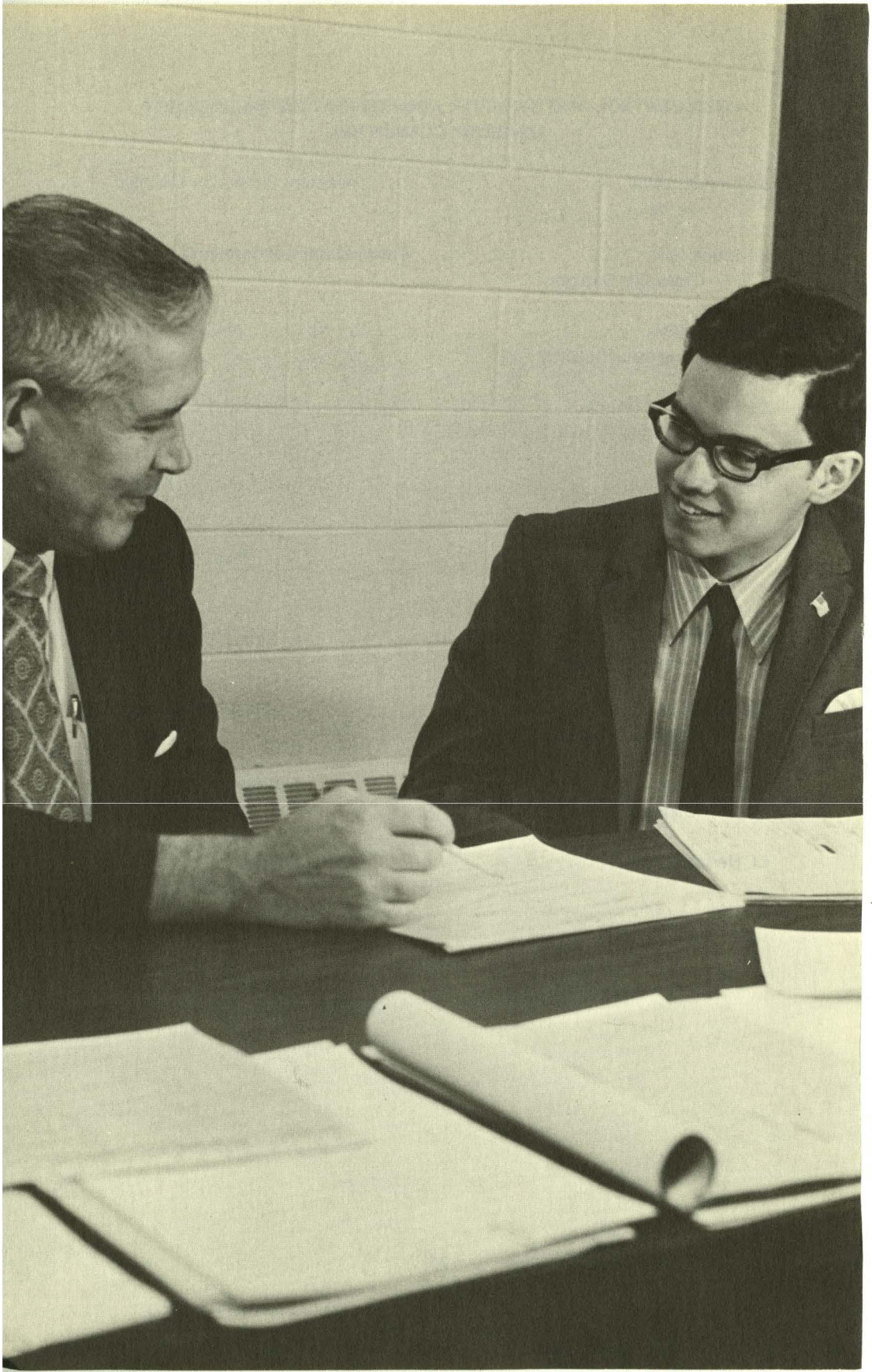
Jack Mack ..... Fifth-Third Bank
Security Officer

Elmer Reis ..... U.S. Shoe
Director, Corporate Security

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

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

Lt. Herbert Vogel ..... Hamilton County Police Dept.



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 Institute, 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, sales promotion, market research analysis, mid-management supervision, data processing, accounting, and other studies develop the attitudes and skills necessary for success.

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 Institute cooperative employment system offers both in the proper proportions for optimum personal and professional growth.

SALES MARKETING TECHNOLOGY CURRICULUM

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills I	5	-	3
1101 Business Mathematics I	5	-	4
1512 Economics I	3	-	3
1811 Salesmanship I	2	-	2
2901 Principles of Marketing I	5	-	2
2921 Introduction to Business I	5	-	2
			16

■ First Co-op Term			
9001 Cooperative Employment		40	2
			2

■ Second School Term			
1002 Communication Skills II	5	-	3
1102 Business Mathematics II	5	-	4
1513 Economics II	3	-	3
1812 Salesmanship II	2	-	2
2902 Principles of Marketing II	5	-	2
2922 Introduction to Business II	5	-	2
			16

■ Second Co-op Term			
9002 Cooperative Employment		40	2
			2

■ Third School Term			
1007 Expository Writing	3	2	3
1505 General Psychology	3	-	3
1832 Personnel Management	5	-	3
1842 Advertising and Display	5	-	3
1833 Business Statistics	5	-	4
1844 Retailing	2	-	2
			18

■ Third Co-op Term			
9003 Cooperative Employment		40	3
			3

■ Fourth School Term			
1006 Technical Writing	3	2	3
1803 Case Studies (Retail)	5	-	3
2924A Principles of Management I	2	-	2
1823 Business Law I	5	-	3
1834 Wholesaling	2	-	2
2911 Principles of Accounting I	3	2	3
			16

■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
			3

■ Fifth School Term			
1005A Effective Speaking	3	-	2
1506 Human Relations	3	-	3
1798 Survey of Data Processing	2	-	2
2925A Principles of Management II	2	-	2
1824 Business Law II	5	-	3
1835 Case Study (Wholesaling)	5	-	3
2912 Principles of Accounting II	3	2	3
			18

■ Fifth Co-op Term			
9005 Cooperative Employment		40	3
			3

SALES-MARKETING TECHNOLOGY ADVISORY COMMITTEE

Ralph Estes ..... Self-Employed
Sales Consultant

Frank Kerley ..... L. J. Buegel Distributing Co.
Asst. Sales Manager

Richard Kuck ..... Greater Cincinnati Chamber of Commerce
Advertising Manager

Michael Link ..... W. D. Gradison Co.
Stock Broker

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

James Schroeder ..... Mutual Mfg. Co.
Personnel Manager

Donald Stamler ..... Swallen's Discount Incorporated
Employment Manager

Ruth VanGorden ..... Crest Crafts
Sales Dept.

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

SECRETARIAL TECHNOLOGY CURRICULUM

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills I	2	3	3
1520 Introduction to Sociology	5	-	4
2921 Introduction to Business	5	-	2
3001 Beginning Typing*	2	3	2
3011 Intermediate Shorthand*	2	3	4
3021 Office Procedures	2	3	3
			18

*Entry level depending on skills at time of admissions test.

■ First Co-op Term			
9001 Cooperative Employment	-	40	2
			2

■ Second School Term			
1002 Communication Skills II	3	2	3
1501 Human Relations	2	3	4
3002 Advanced Typing	2	3	2
3012 Advanced Shorthand	2	3	4
3022 Office Machines	1	4	2
3032 Records Management	2	3	2
			17

■ Second Co-op Term			
9002 Cooperative Employment	-	40	2
			2

■ Third School Term			
1009 Business English	3	2	3
1101 Business Mathematics I	5	-	4
1823 Business Law	5	-	3
3003 Professional Typing	1	4	2
3013 Professional Shorthand	2	3	4
3023 Machine Transcription	1	4	2
3004 Production Typing (Optional)	1	4	2
			18

■ Third Co-op Term			
9003 Cooperative Employment	-	40	3
			3

■ Fourth School Term			
1006 Technical Writing	3	2	3
1102 Business Mathematics II	5	-	4
2911 Principles of Accounting I	3	2	3
3014 Shorthand Transcription	3	7	4
3024 Secretarial Procedures	2	3	3
(or 3025 Legal Secretary Procedures or 3026 Medical Secretary Procedures)			
			17

■ Fourth Co-op Term			
9004 Cooperative Employment	-	40	3
			3

■ Fifth School Term			
1005 Effective Speaking	5	-	3
1511 Principles of Economics	5	-	4
1799 Survey of Data Processing	5	-	4
2912 Principles of Accounting II	3	2	3
3015 Advanced Shorthand Transcription	3	7	4
			18

■ Fifth Co-op Term			
9005 Cooperative Employment	-	40	3
			3

SECRETARIAL TECHNOLOGY

The Secretarial Technology program trains personnel to assist the employer in the effective and efficient operation of an office. The employer is relieved of the routine office duties allowing him to exert his energies toward the major objectives of the business.

Secretarial technicians are professional people in their field, qualified to become private secretaries or administrators of the secretarial force in a business. The secretary must be able to compose written communications and be proficient in record storage and retrieval. Additionally, and equally important, she must be able to meet, converse with, and assist persons within and without her employer's organization.

The opportunities for the secretarial technician upon graduation are numerous. She is able to work in a one-secretary office or she may become, within a short time, a supervisor of others in her field. Due to exposure to executive operations, she can become an executive in her own right if she so desires.

The cooperative work experience program provides real, practical, work experience early in the career of the secretary. Upon graduation students in the Secretarial Technology program will have two years of education — and work experience in one of Cincinnati's major firms, besides an Associate Degree in Secretarial Technology.

SECRETARIAL TECHNOLOGY ADVISORY COMMITTEE

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

William I. Baldwin ..... Cincinnati Bell Telephone Co.
College Employment Supervisor

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

Jack C. Cahall ..... Cincinnati Milacron
Manager, Training & Development

Iva Gillis ..... General Electric Company
Specialist, Salaried Employment Evendale Plant

Lucille Parr ..... Paul Watts, Incorporated
Corporate Secretary

Eileen Robinson ..... Procter & Gamble
Stenographic Supervisor

DEPARTMENT OF BUSINESS TECHNOLOGIES
COURSE DESCRIPTIONS

1001 Communication Skills I — **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 II — **5 Clock Hours — 3 Credit Hours**
A continuation of Communication Skills I, stressing reading improvement — both rate and comprehension.

1004 Technical Writing — **5 Clock Hours — 3 Credit Hours**
Informal and formal written reports. Techniques for collecting and presenting data, particularly as they apply to industry. Some work with business letters.

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

1005A Effective Speaking — **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 compositions, stressing logical and fallacious reasoning.

1009 Business English — **5 Clock Hours — 3 Credit Hours**
Defining commonly used prefixes, suffixes, root words and their combining forms. Vocabulary, pronunciation, and definitions; with emphasis on the spelling of business terms.

1015 Oral Communications — **5 Clock Hours — 3 Credit Hours**
Organization, development, and presentation of the oral report as an everyday form of business communication.

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.

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.

1131 Mathematics For Business Data Processing
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 Mathematics For Data Processing II (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 distributions; 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 Mathematics For Data Processing III **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.

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. Evaluating feedback.

1208 Criminal, Civil, And Administrative Law
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 **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 hazard, 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.

1501 Human Relations **5 Clock Hours — 4 Credit Hours**
Principles of human behavior. Problems of the individual studied in relation to society, group membership, and relationships within the work situation. Development of effective motivation, communication, attitudes, supervision and leadership.

1502 Principles Of Psychology **5 Clock Hours — 4 Credit Hours**
A survey course designed to develop an understanding of basic principles underlying human behavior. Special emphasis is placed on motivation, perception, learning, intelligence, personality, and social interaction.

1505 General Psychology **3 Clock Hours — 3 Credit Hours**
A scientific study of human behavior with emphasis on motivation, learning, individual differences, and personality.

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 Principles Of Economics **5 Clock Hours — 4 Credit Hours**
Basic economics with attention to central problems of price, competition and money; supply and demand; business organizations; firm and family income; labor and industrial relations; government and the economy; gross national product; relationship of income to expenditures; business cycles.

1512 Economics I — **3 Clock Hours — 3 Credit Hours**

An introductory study of the analysis and application of basic economic theory as applied to the problems of labor and industrial relations. Income and spending of the aggregate of individuals, business firms, and various levels of government. Money, commercial, and central banking. Price levels and inflation. The role of the national government in fiscal and monetary policy in a private enterprise economy. Current economic issues introduced and analyzed.

1513 Economics II — **3 Clock Hours — 3 Credit Hours**

An introductory study of the pricing and allocation mechanism of the classical market economy using the theory and analysis of supply and demand on an individual basis in the determining of the nature of production consumption, and distribution of the national output. International trade, the balance of payments, economic growth and development and comparative economic systems.

1520 Introduction To Sociology — **5 Clock Hours — 4 Credit Hours**

A study of fundamental sociological concepts involving socialization, culture, social deviation, social institution, race and ethnic relations and social problems and policy.

1535 Labor 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 — **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 Basic Computer Concepts — **10 Clock Hours — 4 Credit Hours**

Introduction to programming — flow charting, decision tables, input and output formats, documentation, writing, testing and debugging the Honeywell Assembler Language.

1704 Computer Programming and Operations
15 Clock Hours — 8 Credit Hours
Further study of assembler language. Introduction to Cobol programming, writing, testing, debugging and documenting.

1705 Computer Programming And Systems Analysis
20 Clock Hours — 12 Credit Hours
Planning, flow charting, layout forms, encoding, testing and running Cobol programs with emphasis on practical business applications. Use of utility software.

1706 Computer Programming And Research
5 Clock Hours — 4 Credit Hours
Introduction to Fortran programming, writing and testing programs. Use of Fortran in research and statistical computations.

1707 Installation Management 5 Clock Hours — 3 Credit Hours
Personnel policies, office management, and data processing as it relates to general management problems. Scheduling work for unit record and computer equipment.

1708 Case Study Laboratory 15 Clock Hours — 8 Credit Hours
The student is required to design a complete system for a small business. He must select the type of data to be used, design data flow patterns, design input and output formats, flow chart the system, program in Cobol, generate test data and demonstrate the operation of the system.

1798 Survey Of Data Processing 2 Clock Hours — 2 Credit Hours
An overview of data processing and systems analysis.

1799 Survey Of Data Processing 5 Clock Hours — 4 Credit Hours
Terminology and basic concepts of automation. History of punched card data processing, the development of computer systems, the manual methods and the stored program are introduced.

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 Principles Of General And Multiple Line Insurance I
5 Clock Hours — 3 Credit Hours
A study of the principles and practices of insurance including the economic, social and historical background. The need and uses of insurance.

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.

1811 Salesmanship I **2 Clock Hours — 2 Credit Hours**
The personal and economic aspects of selling. An overview of what is necessary for the individual to be successful in selling.

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

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 look at the many facets of personnel management and its contribution to the employer.

1833 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.

1834 Wholesaling I **2 Clock Hours — 2 Credit Hours**
A comprehensive introduction to the wholesaling field in its many phases.

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.

1842 Advertising And Display **5 Clock Hours — 3 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.

1844 Retailing **2 Clock Hours — 2 Credit Hours**
Designed to promote skills and attitudes necessary to achieve success in the important field of distribution.

1999 Computer Electronics **5 Clock Hours — 3 Credit Hours**
Survey of electronic principles as they apply to the operation of computers.

2801 Introduction To Restaurant Management
5 Clock Hours — 3 Credit Hours
History, objectives, economics, scope and social importance of industry.

2802 Restaurant Management II **5 Clock Hours — 3 Credit Hours**
Factors determining food choices, food nutrition needed in each stage of life. Nutritive value of food and food selection to meet economics, nutritive and social needs.

2803 Restaurant Management III **5 Clock Hours — 3 Credit Hours**
Emphasis on operation, design, purchasing, cost systems and personnel.

2804 Restaurant Management IV **5 Clock Hours — 3 Credit Hours**
Food preparation and quantity cookery. Introduction to the kitchen, menu planning, implementation and operation. Aesthetic and social aspects of planning, preparing and serving food.

2805 Restaurant Management V **5 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.

2811 Introduction To Hotel-Motel Management
5 Clock Hours — 3 Credit Hours
Trace early history with emphasis on the last 20 years of expansion and growth as to history, objectives, scope and social importance of the industry.

2812 Hotel-Motel Management II **5 Clock Hours — 3 Credit Hours**
Analysis of front office organization and procedures.

2813 Hotel-Motel 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, costs systems and budgeting.

2820 Purchasing **5 Clock Hours — 2 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 **5 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 System.

2911 Principles Of Accounting I **5 Clock Hours — 3 Credit Hours**
Principles and practices of basic accounting with practical application as related to other fields of business.

2912 Principles Of Accounting II **5 Clock Hours — 3 Credit Hours**
A continuation of Principles of Accounting I. Permits the student to solve accounting problems in supervised accounting lab.

2913 Intermediate Accounting **5 Clock Hours — 3 Credit Hours**
The nature and formation of corporations and their methods of financing. Accounting for department and branch divisions of the parent corporation, including branch operation financial statements — separately and combined with statements of the home office.

2914 Cost Accounting **5 Clock Hours — 3 Credit Hours**
The cost of manufacturing and processing including raw materials, goods in process, and finished products. The analysis of accounting data by management.

2915 Tax Accounting **5 Clock Hours — 3 Credit Hours**
Nature of income taxes and their relationship to accounting. Gross income and filing requirements for individuals and corporations.

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.

2924A Principles Of Management I **2 Clock Hours — 2 Credit Hours**
An overview of the basic managerial functions: planning, organizing, staffing, directing, and controlling.

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.

2925A Principles Of Management II **2 Clock Hours — 2 Credit Hours**
The nature of sales and marketing management with emphasis on staffing problems, methods of establishing sales incentive systems, and quota allocations.

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; types of business ownership, personnel management, long-term and short-term financing.

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**
Covers those problems unique to the industry in capital expenditure for fixed assets, depreciation and replacement of such assets, current assets, liabilities and stockholders equity. Establishing flexible budgets based on percentage of occupancy.

3001 Intermediate Typewriting **5 Clock Hours — 2 Credit Hours**
An introduction to touch typewriting with emphasis on correct techniques and mastery of the keyboard if necessary. Meets the needs of students who have previously had typewriting, needing a term of practice on correct techniques with review on simple business correspondence, tabulation and manuscripts. Objective: 50 words per minute with 95% accuracy.

3002 Advanced Typewriting **5 Clock Hours — 2 Credit Hours**
Develops increased speed, a better control of the machine and a working knowledge of business papers. Emphasis is placed on production typing problems. Speed building attention is given to the development of the student's ability to produce mailable copies. The production units are tabulation, manuscripts, correspondence and business forms. Objective: 60 words per minute with 95% accuracy.

3003 Professional Typewriting **5 Clock Hours — 2 Credit Hours**
Improvement of individual production rates. Planning and typing projects that closely approximate various fields of study. Review of letter forms, methods of duplication, statistical tabulations, reports, manuscripts, and legal documents.

3004 Production Typing **5 Clock Hours — 2 Credit Hours**
Typing emphasis placed on speed, quantity, and accuracy. A finishing course.

3011 Intermediate Shorthand **5 Clock Hours — 4 Credit Hours**
Gregg Diamond Jubilee Shorthand, with emphasis on mastery of brief forms and word building principles. A beginning in the theory and practice of reading and writing shorthand, with immediate dictation.

3015 Advanced Shorthand Transcription **5 Clock Hours — 4 Credit Hours**
Development of expert dictation speed. Integration of office-style dictation. High speed transcription according to office standards. Objective: 120 words per minute with 95% accuracy.

3021 Office Procedures **5 Clock Hours — 3 Credit Hours**
Becoming a member of the office team; office organization; receptionist duties and techniques; telephone etiquette; handling the mail; information sources; travel arrangements.

3012 Advanced Shorthand **5 Clock Hours — 4 Credit Hours**
Review of theory with greater emphasis on dictation and elementary transcription. Objective: 80 words per minute with 95% accuracy.

3013 Professional Shorthand **5 Clock Hours — 4 Credit Hours**
Speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. Objective: 90 words per minute with 95% accuracy. May be taken a second term for four additional hours credit.

3014 Shorthand Transcription **5 Clock Hours — 4 Credit Hours**
Taking dictation and transcribing at the typewriter. Review of theory and dictation of familiar and unfamiliar material at varying rates of speed. Objective: 100 words per minute with 95% accuracy.

3022 Office Machines **5 Clock Hours — 2 Credit Hours**
A general survey of business and office machines. Techniques, processes, operation and applications of office machines.

Machines included are: key-driven, rotary, printing, electronic calculators; ten key adding machine; mimeograph, spirit, photocopy, offset duplication methods.

3023 Machine Transcription **5 Clock Hours — 2 Credit Hours**
A complete familiarity with all types of dictation and transcribing machines with a proficiency for employing them.

3024 Secretarial Procedures **5 Clock Hours — 3 Credit Hours**
A practicum containing five individual projects requiring all the skills of a secretary including judgment, responsibility, individual preparations and supervision.

3025 Legal Secretarial Procedures (elective) 5 Clock Hours — 3 Credit Hours
A practicum containing the general responsibilities required by a legal secretary; including the preparation of legal documents; encompassing general, corporate, real estate law, wills and deeds. Development of a competent legal vocabulary.

3026 Medical Secretarial Procedures (elective)
5 Clock Hours — 3 Credit Hours
A practicum containing the general responsibilities required by a medical secretary.

3032 Records Management **5 Clock Hours — 2 Credit Hours**
Principles and procedures used in organization and control of records. Transfer, storage and retention.

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 hours) 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.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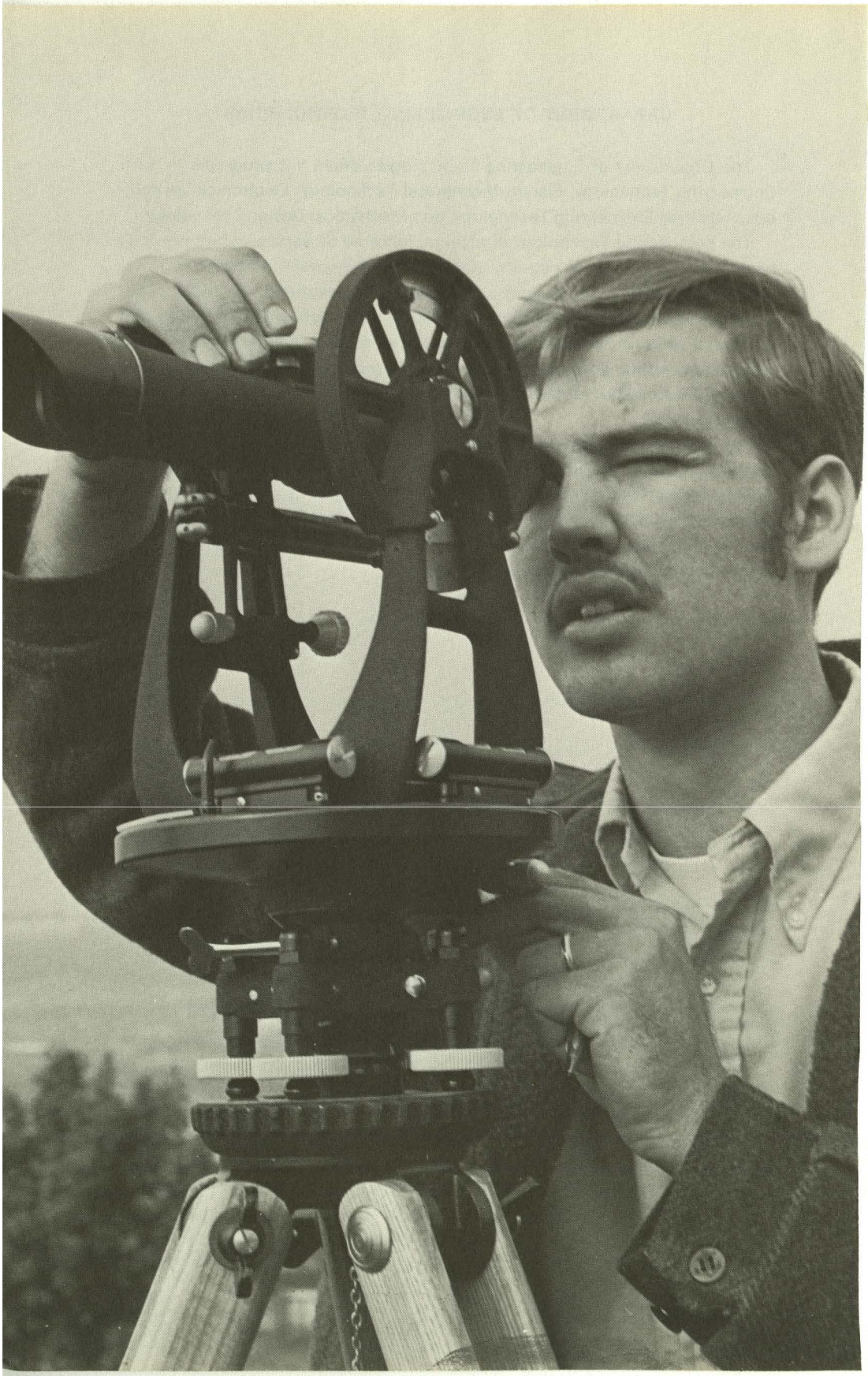
DEPARTMENT OF ENGINEERING TECHNOLOGIES

The Department of Engineering Technologies offers five programs — Civil Engineering Technology, Electro-Mechanical Technology, Electronics Technology, Industrial Engineering Technology, and Mechanical Design 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 managerial position. Engineering Technology programs provided by Cincinnati Technical Institute help to meet the need for competent technicians required by the highly technological society in which we live.



CIVIL ENGINEERING TECHNOLOGY

The increasing complexity of modern structural designs requires well-trained technicians capable of handling construction problems. Civil engineers are in critical need of technicians who are able to prepare and verify construction specifications with a minimum of supervision.

Cincinnati Technical Institute Civil Engineering Technology students make soil, concrete, water pollution, soil mineralogy, and percolation tests. Surveying duties include such activities as marking off building sites, making plot plans, drafting proposed highways, making route surveys, and drafting topographic maps.

The curriculum is designed to give the student a technical knowledge necessary for effective craftsmanship and scientific management skills. Regular classroom instruction is supplemented by laboratory experiments and site training.

The civil engineering technicians will, in most cases, be working with the top men in the field. Others may become part of a highly skilled team, whose joint effort is necessary to cope with today's increasingly complex equipment and construction.

Civil Engineering Technology offers an excellent opportunity for continued advancement to the individual seeking personal growth and development.

CIVIL ENGINEERING TECHNOLOGY CURRICULUM

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills I	5	-	3
1171 Technical Mathematics I	5	-	4
1371 Engineering Graphics I	3	7	5
2271 Physics I	3	2	3
3101 Surveying I	2	3	3
			18
■ First Co-op Term			
9001 Cooperative Employment	-	40	2
			2
■ Second School Term			
1003 Communication Skills III	5	-	3
1172 Technical Mathematics II	5	-	4
1373 Engineering Graphics II	2	5	3
2272 Physics II	3	2	3
3112 Properties of Soils	3	2	3
3114 Municipal Engineering	3	-	2
			18
■ Second Co-op Term			
9002 Cooperative Employment	-	40	2
			2
■ Third School Term			
1511 Economics	5	-	4
1173 Technical Mathematics III	5	-	4
2273 Physics III	3	2	3
3102 Surveying II	3	7	4
3117 Hydrology & Sanitation	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment	-	40	3
			3
■ Fourth School Term			
1004A Technical Writing	3	-	2
1531 Introduction To Political Science	5	-	3
2105 Strength of Materials	4	1	3
2274 Physics IV	3	2	3
3111 Concrete	3	2	3
3129 Codes, Contracts, & Specifications	4	1	3
			17
■ Fourth Co-op Term			
9004 Cooperative Employment	-	40	3
			3
■ Fifth School Term			
1005 Effective Speaking	5	-	3
1504 Industrial Psychology	5	-	4
1772 Introduction To Computer Programming	3	2	3
3115 Construction Management & Estimating	4	1	3
3103 Surveying III (Field Problems)	4	6	5
			18
■ Fifth Co-op Term			
9005 Cooperative Employment	-	40	3
			3

CIVIL ENGINEERING TECHNOLOGY
ADVISORY COMMITTEE

Francis Cornelius ..... City Engineering Department
Principal Public Works Construction Engineer

Roy Federle ..... Building Trade Council
Supervisor, Apprentice Training

Dick Jordan ..... Ohio Department of Highways
Personnel Officer

Henry R. Meyers ..... C. G. & E. Co.
Manager, Engineering & Planning, Gas Department

Stanley Perin ..... Butler County
County Engineer

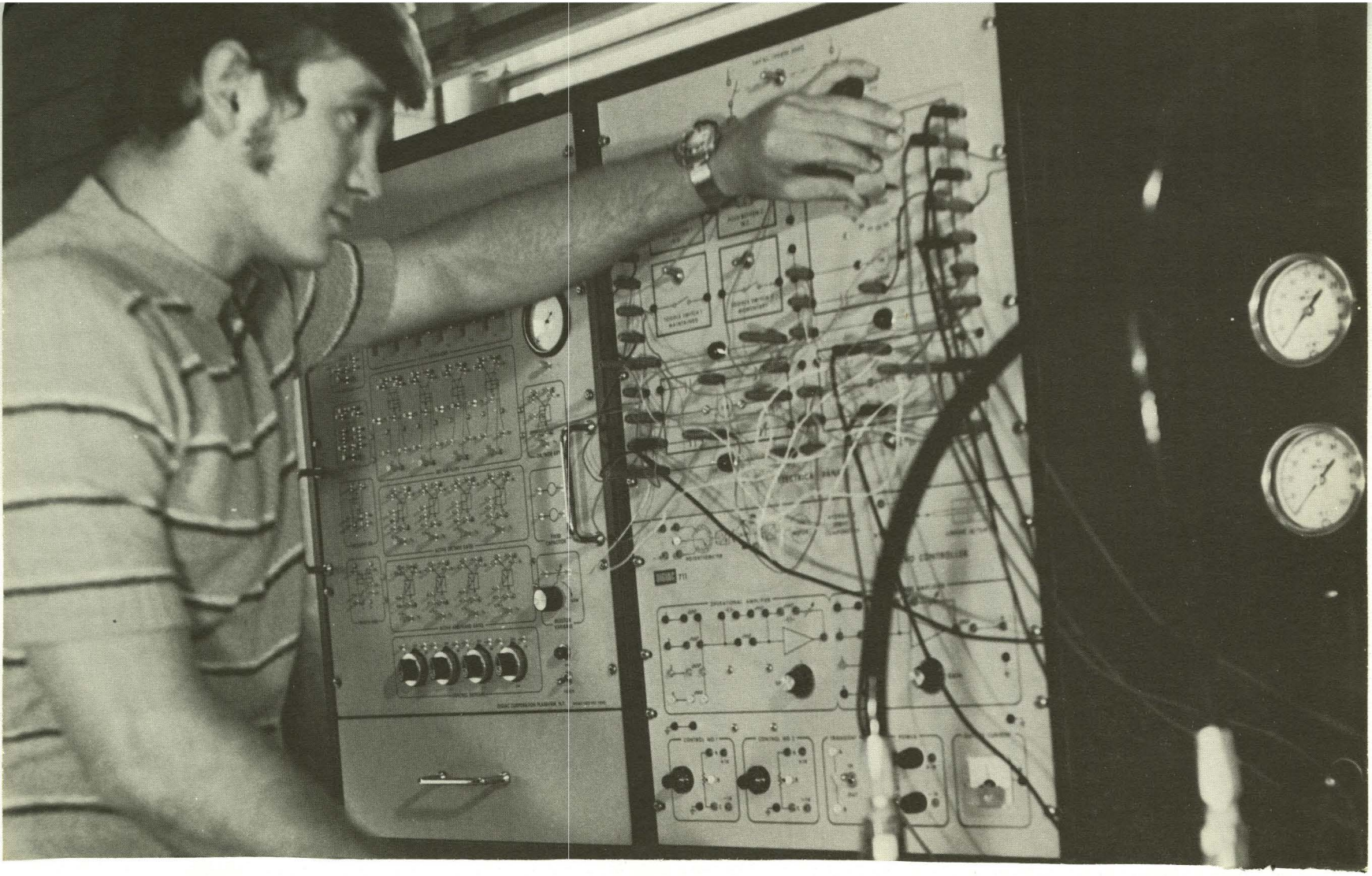
John N. Petrison ..... Allied Contractors
Asst. Manager

Kent Rollins ..... Hamilton County
County Engineer

Matthew Schultze ..... City of Cincinnati
Senior Engineer

Robert C. Vogt ..... Vogt-Ivers & Associates
President

Albert O. Wilson ..... Punshon Engineering Co.
President



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 Institute — 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

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills I	5		3
1171 Technical Mathematics I	5	-	4
2271 Physics I	3	2	3
2401 Electrical Fundamentals	6	4	5
2403 Electro Mechanical Devices	2	3	3
			18
■ First Co-op Term			
9001 Cooperative Employment		40	
■ Second School Term			
1172 Technical Mathematics II	5	-	4
2104 Hydraulics and Pneumatics	3	2	3
2272 Physics II	3	2	3
2402 Electronic Amplifiers	3	4	4
2404 Mechanical Drives and Linkages	3	5	4
			18
■ Second Co-op Term			
9002 Cooperative Employment		40	2
			2
■ Third School Term			
1003 Communication Skills	5	-	3
1173 Technical Mathematics III	5	-	4
1511 Economics	5	-	4
2273 Physics III	3	2	3
2405 Electromechanical Controls I	2	3	2
2408 Transducers	2	3	2
			18
■ Third Co-op Term			
9003 Cooperative Employment		40	3
			3
■ Fourth School Term			
1004A Technical Writing	3	-	2
1531 Introduction to Political Science	3	-	3
2101 Engineering Materials	3	2	3
2271 Physics IV	3	2	3
2406 Electromechanical Controls II	3	2	3
2409 Digital Electonics	2	3	2
2410 Machines	2	2	2
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
			3
■ Fifth School Term			
1005 Effective Speaking	5	-	3
1504 Industrial Psychology	5	-	4
2105 Strength of Materials	3	2	3
2407 Electromechanical Controls III	3	2	3
2411 Electromechanical Design	5	5	5
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3
			3

ELECTRO-MECHANICAL TECHNOLOGY ADVISORY COMMITTEE

Robert Bartheld ..... Allis Chalmers Co.
Assistant Chief Engineer

Al Casselman ..... Cincinnati Milacron, Inc.
Director, Personnel Development

Lou Hobbs ..... General Electric Co. Evendale Plant

Lee Humpert ..... Cincinnati, Inc.
Manager, Project Control

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

George Mead ..... Cincinnati Milacron, Inc.
Supervisor, Program Development

Robert Tozier ..... K.D.I.
Vice-President, Operations

Gary Vollbracht ..... Structural Dynamics Research
Director of Engineering Control Systems Analysis

Tim Wakefield ..... LeBlond Company
Manager, Machine Control

R. F. White ..... Procter & Gamble Co. Ivorydale Technical Center
Department Head, Design Service Division

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.

The electronic technician is a valuable member of the engineering team. He normally assists engineers in designing, building, troubleshooting and testing functions. As his skills grow, it is not unusual to find him in field service work. He uses specialized instruments in his work such as voltmeters, oscilloscopes, signal generators and pulse counters.

Students in the Electronic Engineering Technology program perform their cooperative work in many companies. Typical products of these companies are machine tools, 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.

ELECTRONIC ENGINEERING TECHNOLOGY CURRICULUM

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills I	5	-	3
1171 Technical Mathematics I	5	-	4
1901 Fundamentals of Electronics	6	4	5
1902 Electronic Measurements	3	2	3
2271 Physics I	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment	-	40	2
			2
■ Second School Term			
1003 Communication Skills III	5	-	3
1172 Technical Mathematics II	5	-	4
1379 Electronic Drafting	3	2	3
1903 Electronic Network Analysis	0	3	1
1904 Electronic Devices	3	4	4
2272 Physics II	3	2	3
			18
■ Second Co-op Term			
9002 Cooperative Employment	-	40	2
			2
■ Third School Term			
1173 Technical Mathematics III	5	-	4
1511 Principles of Economics	5	-	4
1905 Fundamentals of Analog Amplifiers	4	6	4
1906 Pulse Circuits	3	2	3
2273 Physics III	3	2	4
			18
■ Third Co-op Term			
9003 Cooperative Employment	-	40	3
			3
■ Fourth School Term			
1004 Technical Writing	3	-	2
1531 Introduction to Political Science	3	-	3
1907 Analog Amplifier Analysis	6	4	5
1908 Digital Circuits	3	2	3
1912 Survey of Machine Tools	1	4	2
2274 Physics IV	3	2	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment	-	40	3
			3
■ Fifth School Term			
1005 Effective Speaking	3	2	3
1504 Industrial Psychology	5	-	4
1909 Electronic Systems	3	2	3
1910 Integrated Circuits	6	4	5
1911 Electrical Machinery	3	2	3
			18
■ Fifth Co-op Term			
9005 Cooperative Employment	-	40	3
			3

ELECTRONIC ENGINEERING TECHNOLOGY
ADVISORY COMMITTEE

J. Anderson ..... AVCO Corporation, Elec. Div.
Supervisory Engineer

Robert Bernhard ..... R. K. LeBlond, Inc.
Staff Engineer

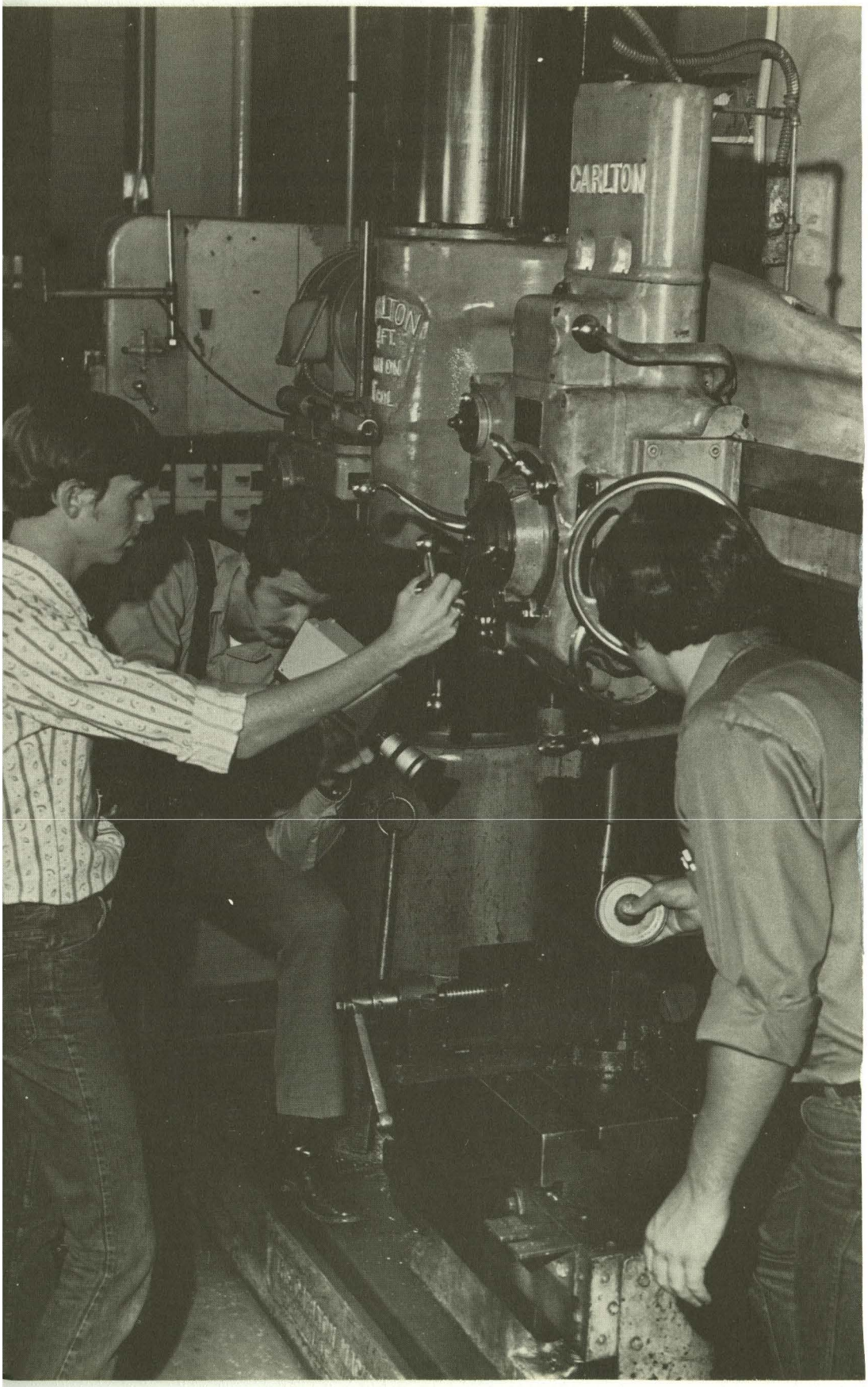
Gary Graf ..... Cincinnati Milacron
Management and Technical Education Supervisor

Paul Houillion ..... Ohmart Corporation
Factory Supervisor

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

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

Clay Strider ..... General Electric Company
Specialist, Education and Training


CARLTON

INDUSTRIAL ENGINEERING TECHNOLOGY

A new plant is to be built. It will receive raw material at one end, turn out finished products at the other.

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 "efficiency expert" 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

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills I	5	-	3
1171 Technical Math I	5	-	4
2001 Industrial Organization & Management	3	-	2
2101 Engineering Materials	2	3	3
2112 Machine Tools & Manf. Processes	3	4	3
2271 Physics I	3	2	3
			18
■ First Co-Op Term			
9001 Cooperative Employment	-	40	2
			2
■ Second School Term			
1003 Communication Skills II	5		3
1172 Technical Math II	5		4
1371 Engineering Graphics I	3	7	5
2002 Materials Handling	3	2	3
2272 Physics II	3	2	3
			18
■ Second Co-Op Term			
9002 Cooperative Employment	-	40	2
			2
■ Third School Term			
1173 Technical Math III	5		4
1511 Economics	5		4
1772 Introduction to Computer Programming	3	2	3
2003 Industrial Processes & Plant Layout	6	4	4
2273 Physics III	3	2	3
			18
■ Third Co-Op Term			
9003 Cooperative Employment	-	40	3
			3
■ Fourth School Term			
1005 Effective Speaking	5		3
1179 Statistics	3		2
2004 Time & Motion Study	3	2	3
2005 Quality Control	3	2	3
2006 Special Problems Seminar	4	3	4
2274 Physics IV	3	2	3
			18
■ Fourth Co-Op Term			
9004 Cooperative Employment	-	40	3
■ Fifth School Term			
1004 Technical Writing	5		3
1504 Industrial Psychology	5		4
1531 Introduction to Political Science	5		3
2007 Production Costs & Control	3	2	3
2008 Pilot Study	3	7	5
			18
■ Fifth Co-op Term			
9005 Cooperative Employment	-	40	3

INDUSTRIAL ENGINEERING TECHNOLOGY ADVISORY COMMITTEE

John Born ..... William Powell Co.
Manager, Time, Study & Motion

Fred Brinkmiller ..... Allis Chalmers Corporation
Senior Quality, Assurance Engineer

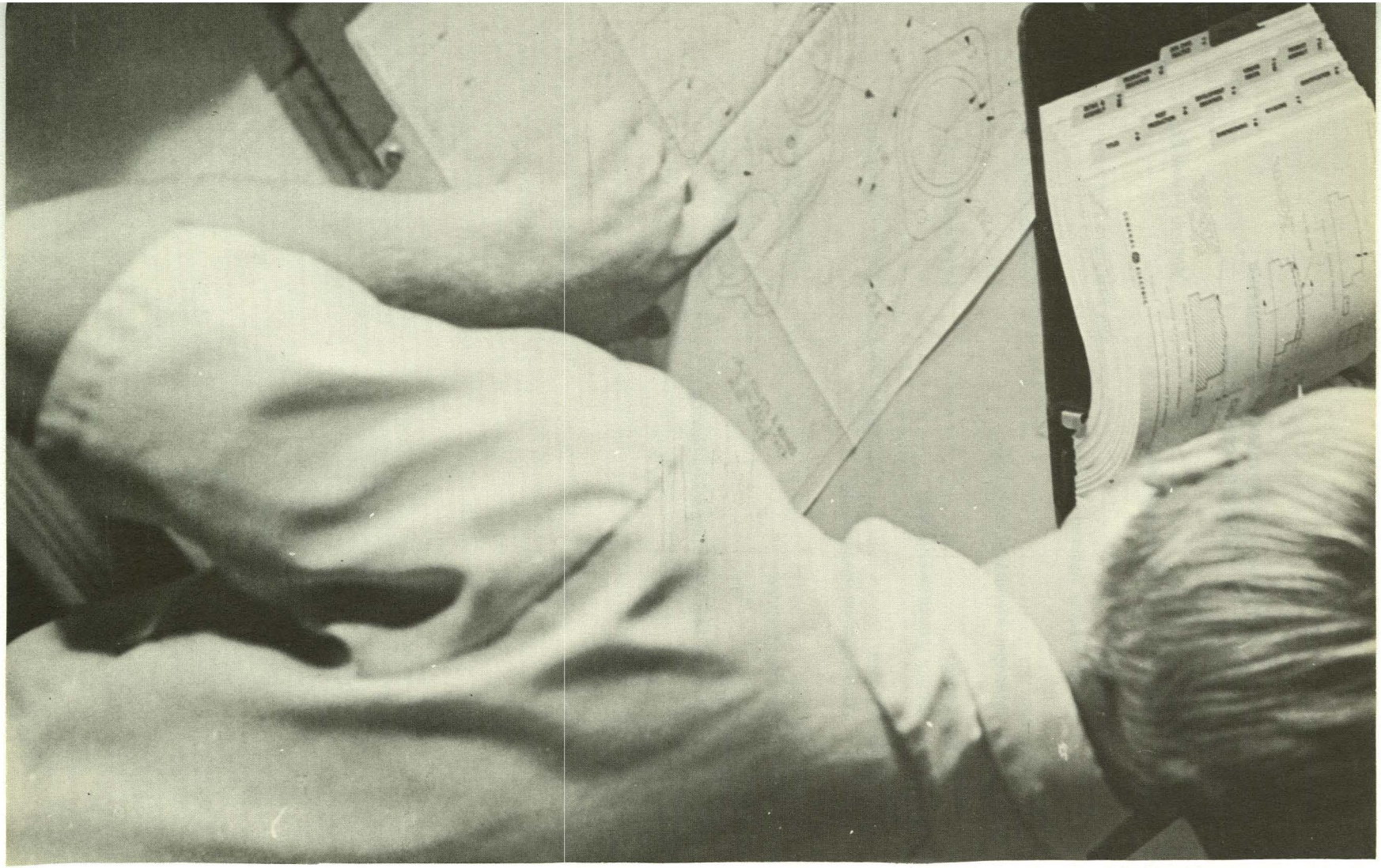
Lee Green ..... Kenner Products
Manager, Manufacturing & Engr.

Herbert George ..... General Electric Co.
Senior Industrial Engineer

Glenn E. Moore ..... O.P.W., Division of Dover Corporation
Vice President, Engineering

A. R. St. Clair ..... Pease Company
Process Engineer

Robert Turner ..... 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. The 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 Institute 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 Institute 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 support 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

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills I	5	-	3
1171 Technical Mathematics I	5	-	4
1371 Engineering Graphics I	5	5	5
2101 Engineering Materials	3	2	3
2271 Physics I	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment	-	40	2
			2
■ Second School Term			
1172 Technical Mathematics II	5	-	4
1372 Engineering Graphics II	2	5	4
1511 Principles of Economics	5	-	4
2112 Machine Tools & Manufacturing Processes	3	4	3
2272 Physics II	2	3	3
			18
■ Second Co-op Term			
9002 Cooperative Employment	-	40	2
			2
■ Third School Term			
1003 Communication Skills III	5	-	3
1173 Technical Mathematics III	5	-	4
1514 Industrial Organization	5	-	2
2104 Hydraulics and Pneumatics	3	2	3
2105 Strength of Materials	4	1	3
2273 Physics III	3	2	3
			18
■ Third Co-op Term			
9003 Cooperative Employment	-	40	3
			3
■ Fourth School Term			
1004 Technical Writing	5	-	3
1504 Industrial Psychology	5	-	4
2106 Machine Design	8	2	5
2113 Mechanism Design	2	3	3
2274 Physics IV	3	2	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment	-	40	3
			3
■ Fifth School Term			
1005A Effective Speaking	3	-	2
1531 Introduction to Political Science	3	-	3
1772 Introduction to Computer Programming	3	2	3
2107 Machine and Product Design	7	3	4
2110 Engineering Laboratory	2	3	3
2111 Tool Engineering Design	3	2	3
			18
■ Fifth Co-op Term			
9005 Cooperative Employment	-	40	3
			3

MECHANICAL DESIGN TECHNOLOGY
ADVISORY COMMITTEE

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

Ashley Glenn ..... Cincinnati Milling Machine Company
Supervisor of Technical Drawing

Kenneth Hagedorn ..... Heekin Can Co.
Personnel Manager

Theodore Herklotz ..... Cincinnati Public Schools
Associate Supervisor

Werner Jessen ..... Alexander and Associates
President

Ben Kearns ..... Keco Industries
Chief Draftsman

Russell Little ..... Little Design Engineering Company
Owner

Ron McDaniel ..... McCleod Company
Chief Draftsman

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

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

DEPARTMENT OF ENGINEERING TECHNOLOGIES
COURSE DESCRIPTIONS

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

1003 Communication Skills III — **5 Clock Hours — 3 Credit Hours**
Continuation of Communication Skills I stressing expository writing.

1004 Technical Writing — **5 Clock Hours — 3 Credit Hours**
1004A — **3 Clock Hours — 2 Credit Hours**
Informal and formal written reports. Techniques for collecting and presenting data, particularly as they apply to industry. Some work with business letters.

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.

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**
Review of the basic concepts of Algebra, simple equations, quadratics and their graphs, fractions, exponents and radicals, logarithms and exponential equations, slide rule.

1172 Technical Math II — **5 Clock Hours — 4 Credit Hours**
Continuation of Math I. Graphical and algebraic solutions of systems of equations. Trigonometry: solution of right triangles, use of tables, indentities. Vectors sine, cosine and tangents laws. Complex numbers and their polar form.

1173 Technical Math III — **5 Clock Hours — 4 Credit Hours**
Miscellaneous topics in Trigonometry. Conic sections, limits, maxima and minima, the derivative, integration, and partial fractions.

1371 Engineering Graphics I — **10 Clock Hours — 5 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 **7 Clock Hours — 4 Credit Hours**
Advanced study in field drawing. Includes: gears, cams, working drawings, piping, electrical, etc.

1373 Engineering Graphics **7 Clock Hours — 3 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.

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.

1379 Electronic Drafting **3 Clock Hours — 1 Credit Hour**
Schematic diagrams, component wiring diagrams, printed circuit boards, and pictorial assembly drawings. Graphs, nomographs and characteristic curves.

1501 Human Relations **5 Clock Hours — 4 Credit Hours**
Principles of human behavior. Problems of the individual studied in relation to society, group membership, and relationships within the work situation. Development of effective motivation, communication, attitudes, supervision and leadership.

1504 Industrial Psychology **5 Clock Hours — 4 Credit Hours**
Behavior in business and industry. Behavior of workers, management, and consumers. Direct application of psychological principles to assist with interpersonal problems. Techniques include role playing and case studies.

1511 Principles of Economics **5 Clock Hours — 4 Credit Hours**
Basic economics with attention given to central problems of price, competition and money; supply and demand; business organizations; firm and family income, labor and industrial relations; government and the economy; gross national product; relationship of income to expenditures; business cycles.

1512 Economics I **3 Clock Hours — 3 Credit Hours**
An introductory study of the analysis and application of basic economic theory as applied to the problems of labor and industrial relations. Income and spending of the aggregate of individuals, business firms, and various levels of government. Money, commercial, and central banking. Price levels and inflation. The role of the national government in fiscal and monetary policy in a private enterprise economy. Current economic issues introduced and analyzed.

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.

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.

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.

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. Prerequisite: Ph 202

1901 Fundamentals of Electronics **10 Clock Hours — 4 Credit Hours**
Application of Ohm's Law and Kirchhoff's Laws to series, parallel, and series-parallel circuits. Network theorems, maximum power transfer, nonlinear resistances, magnetic phenomena, and alternating current fundamentals.

1902 Electronic Measurements **5 Clock Hours — 3 Credit Hours**
Basic DC measurements of E, I, and R using VOM's, VTVM's, and oscilloscopes.

1903 Electronic Network Analysis **7 Clock Hours — 4 Credit Hours**
Ohm's Law and Kirchhoff's Laws reinterpreted to apply to AC circuits. Time constant, resonance, phase, and Q relationships and measurements.

1904 Electronic Devices **5 Clock Hours — 3 Credit Hours**
Basic relationships involving resistors, potentiometers, capacitors, inductors, power supplies, relays, rectifying diodes, zener diodes, tunnel diodes, vacuum tubes, transistors, etc. (Symbols & Characters).

1905 Fundamentals of Analog Amplifiers **10 Clock Hours — 4 Credit Hours**
Introduction to tube and transistor amplifiers and oscillators. Classifications, load line analysis, and frequency response considerations. Power supplies.

1906 Pulse Circuits **5 Clock Hours — 3 Credit Hours**
Study of limiting and clipping, differentiating and integrating circuits. Multivibrators, blocking oscillators, schmitt triggers, etc.

1907 Analog Amplifier Analysis **10 Clock Hours — 5 Credit Hours**
Further considerations of solid state amplifiers and oscillators. Cascading, temperature effects, feedback, small and large signal sub systems.

1908 Digital Circuits **5 Clock Hours — 3 Credit Hours**
Implementation of and, or, nor, nand functions, flip-flops, counters, and shift registers. Timing and control circuits, and interface problems.

1909 Electronic Systems **10 Clock Hours — 5 Credit Hours**
Total system considerations of communications equipment, computers, and industrial control systems.

1910 Integrated Circuits **5 Clock Hours — 3 Credit Hours**
Investigation of numerous IC's performing as linear amplifiers, logic gates, flip-flops, voltage regulators, and logic systems.

1911 Electrical Machinery **5 Clock Hours — 3 Credit Hours**
Investigation of transformers, D.C. and A.C. motors and generators, Principles, construction, and characteristics. Connections, controls, and efficiency.

1912 Survey Machine Tool Operation **5 Clock Hours — 2 Credit Hours**
Standard and special portable tools and equipment used in installation, change-over, maintenance of units requiring metal cutting and unit alignment.

Material processing and conversion power machinery and inspection equipment. Automatic feeds, repetitive automatic precision machining, and automation setups.

2001 Industrial Organization & 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
10 Clock Hours — 4 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.

2006 Special Problems Seminar **7 Clock Hours — 4 Credit Hours**
Application of theories developed in the several industrial technology courses to selected general case problems — to provide practice in the integration of principles.

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.

2008 Pilot Study **10 Clock Hours — 5 Credit Hours**
The student analyzes an industrial product from beginning to end. He recommends the processes to be used, the plant layout, marketing potential, costs, and selling price based on his analysis.

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

2112 Machine Tools & Manufacturing Processes
7 Clock Hours — 3 Credit Hours
Survey of the fundamentals of manufacturing processes. Methods of manufacturing and fabricating metal and plastic parts. The operation of machine tools such as the engine lathe, drill press, shaper, and related measuring and layout tools. Emphasis is placed on machine tool methods. Blueprint reading.

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 gases. Application in design circuits and systems.

2105 Strength of Materials **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 elementary mathematics in analyzing forces, stresses, moments and equilibrium by use of such factors as moment of inertia, radius of gyration; and centroids. Determination of dimensions and material specifications.

2106 Machine Design I **10 Clock Hours — 5 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.

2107 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 student group of Engineering Technology faculty members.

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.

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 occuring in these metal working operations. Provides experience of designing a die to produce a simple sheet metal product. Also includes jig and fixture design.

2113 Mechanisms Design **5 Clock Hours — 3 Credit Hours**
Mathematical and drafting room solutions of problems involving the principles of machine elements. Study of motions of linkages, velocities and acceleration of points within a link mechanism; layout, methods for designing cams, belts, pulleys, gears and gear trains.

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, impluse, momentum, machines, conservation of energy and momentum, collisions.

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.

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 combustion, energy conversion, heat engines, ideal gases, laws of thermodynamics.

Properties of waves, wave equations, energy and waves, resonance, electro magnetic waves, properties of electro magnetic waves, spectroscopy.

2274 Physics IV **5 Clock Hours — 3 Credit Hours**

Electric nature of matter, electric force, electric field, charge separation, motion of charges in vacuum, the electron, electon mechanics, control of energy and power in electric circuits, electric energy conversion, magnetic force, electro magnetism, induction, A.C. circuits, resonant circuits, communication systems.

2401 Electrical Fundamentals **10 Clock Hours — 5 Credit Hours**

An introductory course in basic electrical phenomena including the atomic structure of electrical materials, basic electrical units and circuits. The course is developed on a foundation of practical laboratory experience and forms a basis for subsequent courses in electronics, computers, and communications.

2402 Electronic Amplifiers **7 Clock Hours — 4 Credit Hours**

A thoroughly modern introduction to electronics devices and basic electronic circuits, including small signal and power amplifiers, feedback principles, as well as electronic power supplies and related circuitry. The course features a closely integrated laboratory to provide up-to-date experience in electronic application.

2403 Electromechanical Devices **5 Clock Hours — 3 Credit Hours**

An introduction to devices where both electrical and mechanical principles are utilized. The use of drawings, schematics, hand tools, and common shop equipment forms an important part of the course. Electromechanical components included are switches, relays, solenoids, motors, generators, and actuators as well as several others. Electromagnetic principles and circuits and their application to component operation is the central theme.

2404 Mechanical Drives and Linkages **8 Clock Hours — 4 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 Controls I (Motor Controls) **5 Clock Hours — 2 Credit Hours**
The control of relays, solenoids, contactors, and motors. Modern solid state control devices such as silicon control rectifiers, unijunction transistors, diacs and triacs are used to illustrate the principles of control as they are applied to electromechanical devices.

2406 Controls I (Automated Controls) **5 Clock Hours — 2 Credit Hours**
Electromechanical systems are governed and controlled by many different types of input and produce a vast variety of outputs. Commercial equipment response to pneumatic, hydraulic, and electrical or electronic inputs will be investigated. The purpose of the course is to consider various basic control systems — on-off, proportional plus reset, and proportional plus reset plus rate. Speed response of various types of controllers, relative safety, and distances over which they function are essential elements of the course.

2407 Controls III (Servomechanisms) **5 Clock Hours — 2 Credit Hours**
The control of levels, rates, and position through the use of electromechanical, hydraulic, pneumatic, mechanical, electrical, and electronic devices. Topics include voltage regulators, synchros, amplifiers, open-and close-loop systems, differential controls, integral controls, stability, and response time.

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.

2409 Digital Electronics **5 Clock Hours — 2 Credit Hours**
The electronic logic course is a computer-oriented course emphasizing practical applications of passive wave-shaping networks, solid state electronic logic gates, binary pulse circuits, computer arithmetic and control processes. Emphasis is placed on meaningful laboratory experiences involving actual logic circuitry and computer equipment.

2410 Machines **4 Clock Hours — 2 Credit Hours**
The selection of mechanical components, mechanisms and assemblies to perform specific operations. Factors considered for alternative methods are the initial cost, durability, operating costs, and serviceability.

2411 Electromechanical **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.

3101 Surveying I **5 Clock Hours — 3 Credit Hours**
Theory and practice of plane surveying, including taping, differential and profile leveling, cross sections, earthwork computations, transit, stadia, and trans-tape surveys.

3102 Surveying II **10 Clock Hours — 4 Credit Hours**
Triangulation of ordinary precision; use of plane table; calculation of areas of land; land surveying; topographic surveys and mapping.

3117 Hydrology And Sanitation **5 Clock Hours — 3 Credit Hours**
A study of characteristics of fluid statics, pipe flow, open channel flow, drainage, and run off as they involve water facilities for storage and purification and different treatment operations.

3103 Surveying III (Field Problems) **10 Clock Hours — 5 Credit Hours**
Route surveys by ground and aerial methods; simple, compound, reverse, parabolic and spiral curves; geometric design of highways; highway surveys and plans, including mass diagrams. Railroads.

3111 Concrete **5 Clock Hours — 3 Credit Hours**
Study of the composition of concrete, placing, curing, form work, admixes, standard controls, study of laboratory tests.

3112 Properties of Soils **5 Clock Hours — 3 Credit Hours**
Soil types and their physical properties; tests and mechanical analysis; techniques of subsurface investigation; earth pressure theories; bearing capacity; stability of slopes; hydrostatics of ground water; methods of compaction and consolidation.

3114 Municipal Engineering **3 Clock Hours — 2 Credit Hours**
City and subdivision planning, real estate appraising, property condemnation, drainage control, sewage disposal, pollution of air and water; development of population chart.

3115 Construction Management and Estimating
5 Clock Hours — 3 Credit Hours

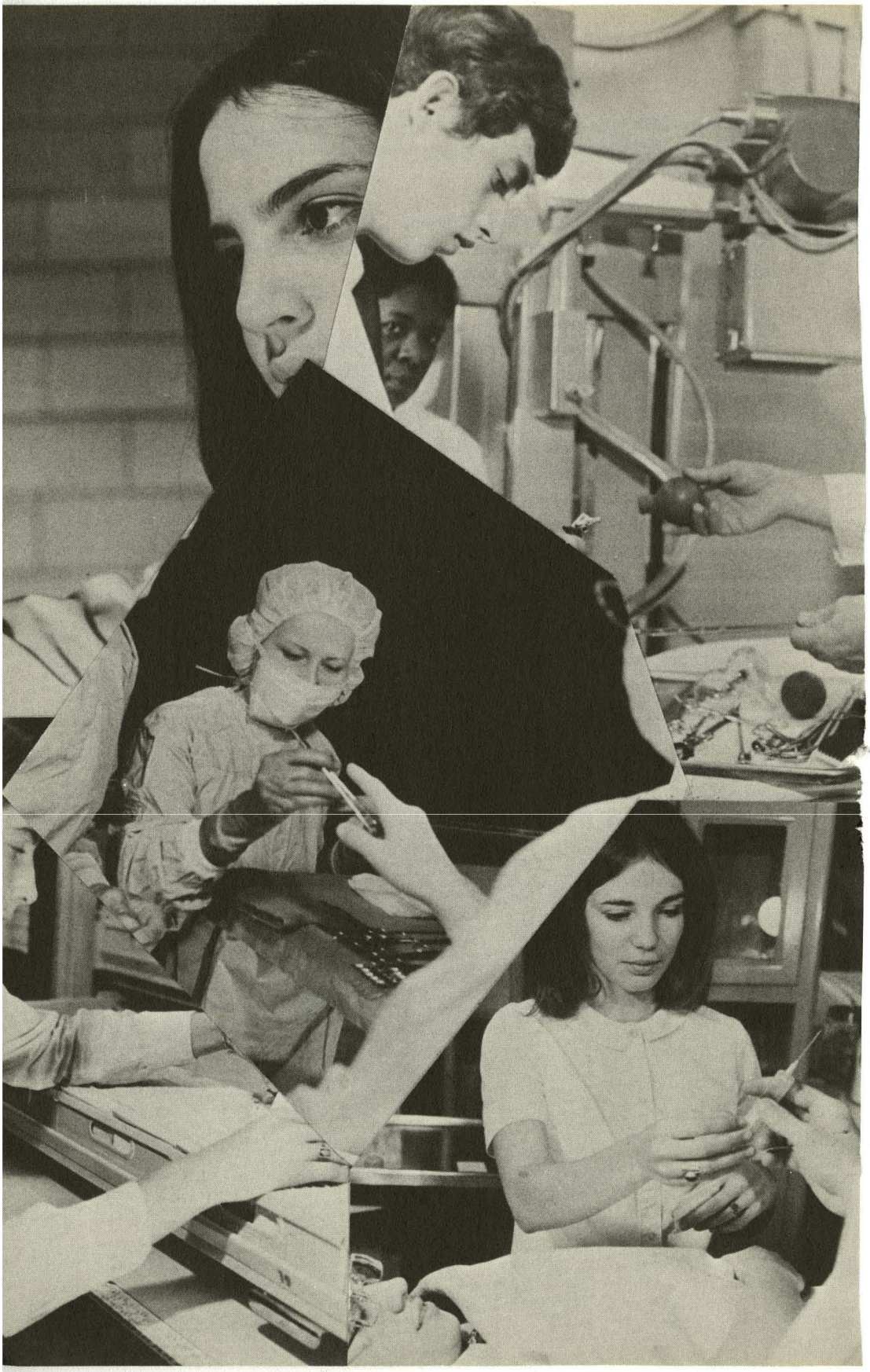
Quantities taken from plans and specifications for bidding purposes. Highways, buildings, subdivisions; study of progress schedules, introduction to the critical path method in construction.

3129 Codes, Contracts, and Specifications
Study in the preparation of contract documents and specifications; study of codes applicable to the city, county and state.

3333 Special Problems Seminar **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 Chairmen.

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 hours) 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 high 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.

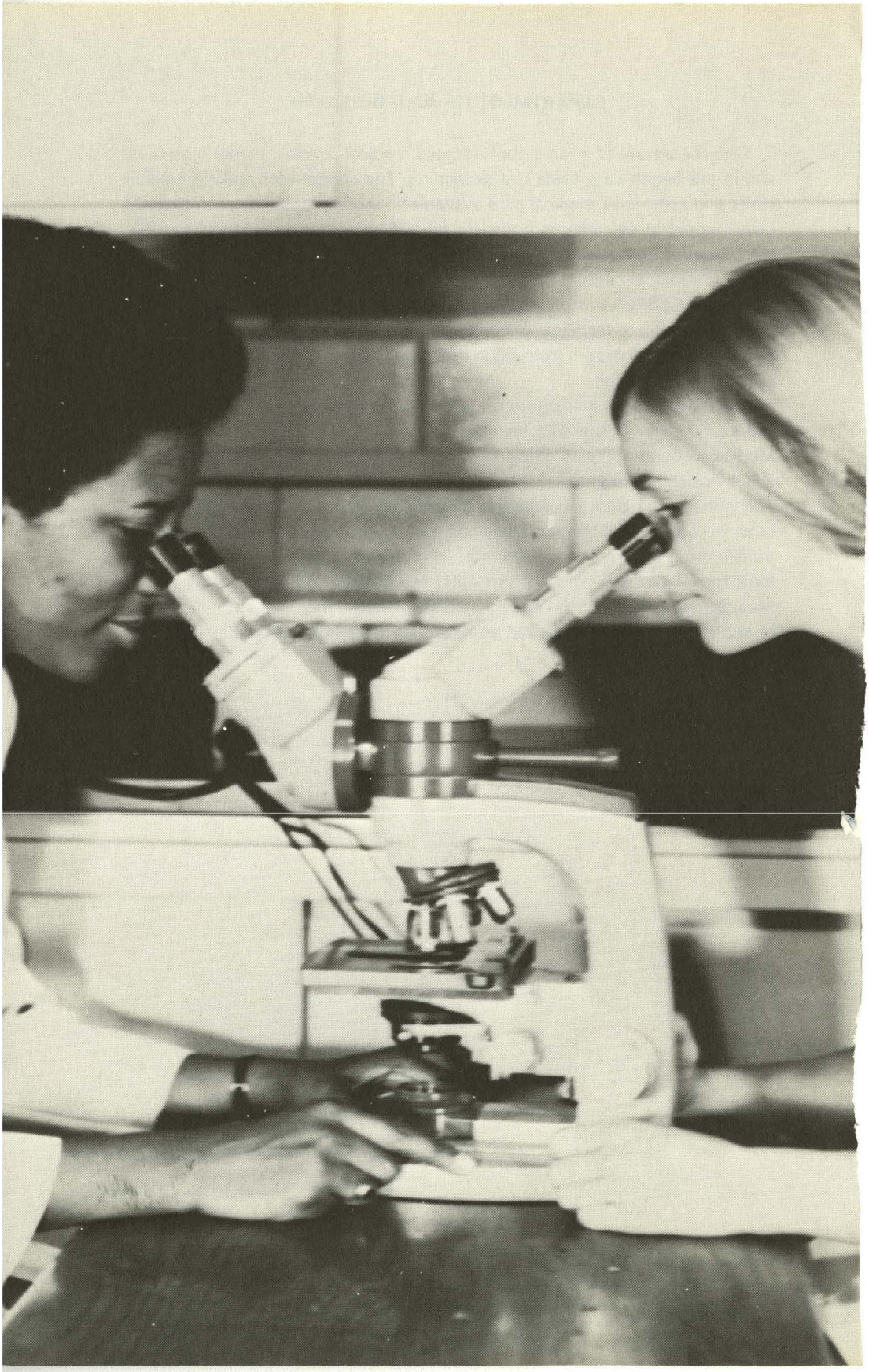


DEPARTMENT OF ALLIED HEALTH

With the advent of a more sophisticated medical science, career opportunities in the health care fields are expanding. The concern for making medical cures and preventive medical 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 Institute to provide the classroom instruction and organization which are a part of good educational programs.

Cincinnati Technical Institute, unique in its development of cooperative education, offers five programs for students interested in allied health careers: Medical Laboratory Technology, Medical Record Technology and three Physician's Assistant Programs — Medical Assisting Technology, Surgical Assisting Technology, and Urologic Assisting Technology. A core curriculum consisting of basic courses in medical science common to all of these programs facilitates transfer from one program to another. All of the programs are designed to conform to national standards of the American Medical Association Council on Medical Education for accreditation. Upon successful completion of the course of study, the student is granted an Associate Degree by Cincinnati Technical Institute.



MEDICAL LABORATORY TECHNICIAN

Medical Laboratory Technicians serve as the detectives of the medical team. They provide much of the information needed by the physician to diagnose and treat his patients. They are desperately needed in the laboratories of hospitals, clinics, research centers and industry. In bio-chemistry, hematology, microbiology, and blood bank laboratories they form a vital part of the health care team. In research laboratories they are assisting in the discoveries that will conquer cancer, heart disease, and birth defects.

The medical laboratory technician employed in a laboratory, in a hospital or clinic may specialize in one or two of the several areas of laboratory work or may rotate through all the departments in the laboratory. In biochemistry he performs chemical analysis of the blood for constituents including glucose, urea, chloride, sodium, potassium and enzymes. In hematology he takes blood samples from patients, counts red and white cells, determines coagulation bleeding and prothrombin times, measures sedimentation rates and determines hemoglobin concentrations. In microbiology he prepares and stains slides, plates cultures from urine, feces and wound specimens, determines the susceptibility of bacteria to antibiotics and examines specimens for parasites. In blood bank, the technician types blood from patients, draws blood from donors and processes it. In the serology department he examines specimens for antibodies against various diseases.

Cooperative training positions are available in hospitals and laboratories in the greater Cincinnati area.

MEDICAL LABORATORY TECHNICIAN 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
2711 Basic Laboratory Techniques II	4	6	4
2720 Survey of The Medical Professions	5	-	4
			18
■ First Co-op Term			
2750 Cooperative Employment	-	40	2
			2
■ Second School Term			
1001 Communication Skills I	5	-	3
1171 Technical Mathematics I	5	-	4
2211-A Clinical Chemistry	5	10	6
2217 Human Anatomy & Physiology II	5	-	3
			16
■ Second Co-op Term			
2751 Cooperative Employment	-	40	2
			2
■ Third School Term			
1003 Communication Skills III	5	-	3
1172 Technical Mathematics II	5	-	4
2218 Human Anatomy & Physiology III	5	-	3
2712 Basic Laboratory Techniques III	3	4	3
2724 Immunology	2	1	2
2725 Microbiology	3	2	3
			18
■ Third Co-op Term			
2752 Cooperative Employment	-	40	3
			3
■ Fourth School Term			
1004 Technical Writing	5	-	3
1511 Principles of Economics	5	-	4
1520 Introduction to Sociology	5	-	4
2713 Basic Laboratory Techniques IV	5	5	4
2722 Pathology I	5	-	3
			18
■ Fourth Co-op Term			
2753 Cooperative Employment	-	40	3
			3
■ Fifth School Term			
1005 Effective Speaking	5	-	3
1501 Human Relations	5	-	4
2244 Physics II	3	2	3
2714 Medical Laboratory Seminar	5	5	4
2721 Emergency Procedures	2	-	1
2723 Pathology II	5	-	3
			18
■ Fifth Co-op Term			
2745 Cooperative Employment	-	40	3
			3

MEDICAL LABORATORY TECHNICIAN ADVISORY COMMITTEE

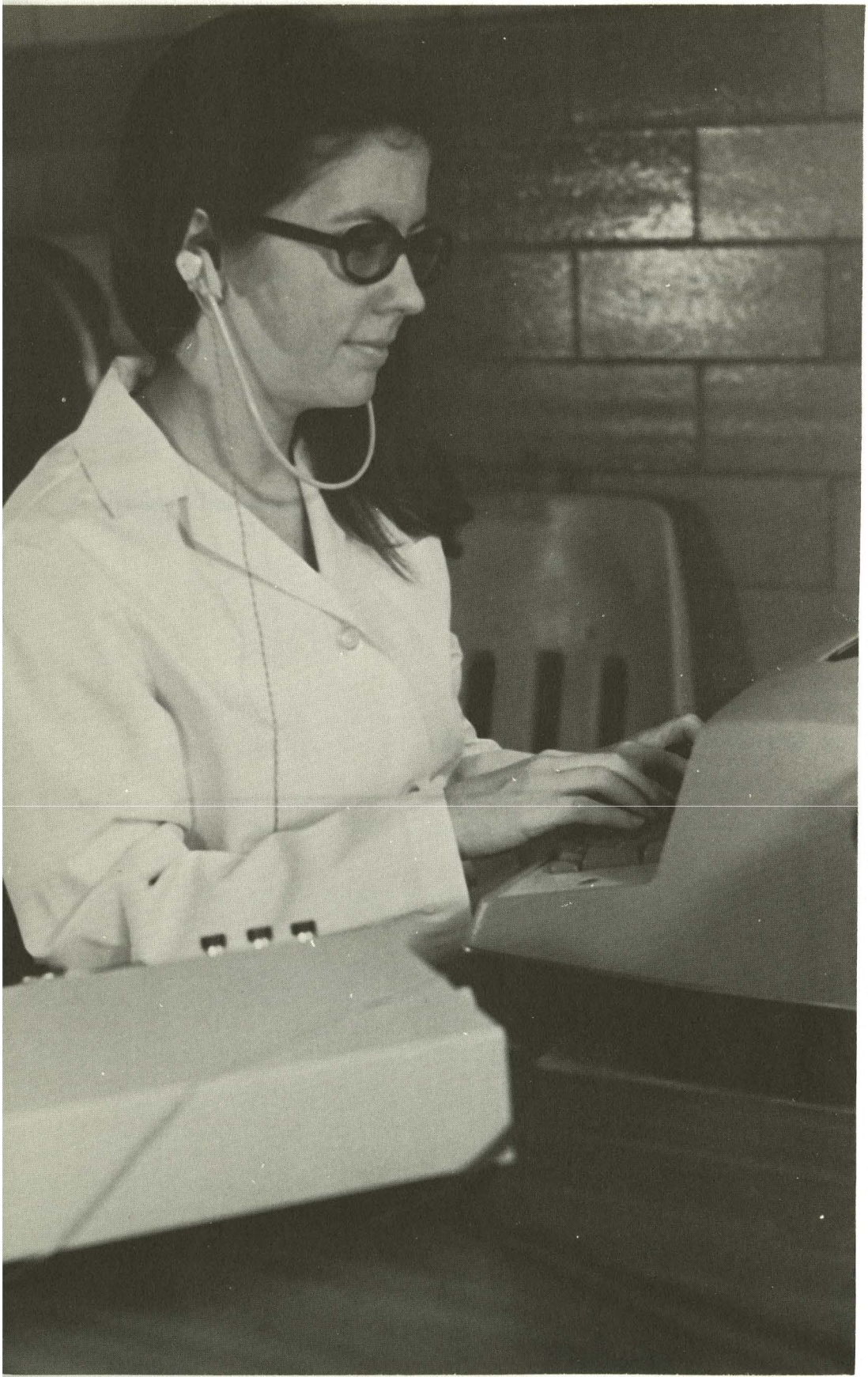
Werner Donath . . . . . Chairman
M.D.

Fran Casey . . . . . Middletown Hospital
MT (ASCP)

R. J. Holzwarth . . . . . Director, Eastern Hills Laboratories, Inc.
B.S.

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

Sally Reichert . . . . . St. Elizabeth Hospital
M.T. (ASCP)



MEDICAL RECORD TECHNICIAN

An accredited record technician is a skilled person, working in medical records administration, 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, doing the quantitative analysis and service analysis, referring charts to the record librarian who further codes and indexes diseases and operations and assists in research.

MEDICAL RECORD TECHNOLOGY CURRICULUM

■ First School Term	Class Hours	Lab Hours	Credit Hours
1101 Business Math	5	-	4
2216A Human Anatomy & Physiology (Including Medical Terminology)	5	-	3
2720 Survey of Medical Profession	5	-	4
2721 Emergency Procedures	2	-	1
2790 Medical Records Science I	5	10	6
			18

■ First Co-op Term			
2770 Cooperative Employment	-	40	2
			2

■ Second School Term			
1001 Communications Skills I	5	-	3
1501 Human Relations	5	-	4
2217A Human Anatomy & Physiology II (Including Medical Terminology)	5	-	3
2791 Medical Record Science II	5	5	5
3050 Office Practice I	3	2	3
			18

■ Second Co-op Term			
2771 Cooperative Employment	-	40	2
			2

■ Third School Term			
1003 Communications Skills III	5	-	3
1799 Survey of Data Processing	5	-	4
1823 Business Law	5	-	3
2792 Medical Record Science III	3	2	3
2793 Medical Records Science IV		10	4
			17

■ Third Co-op Term			
2772 Cooperative Employment	-	40	3
			3

■ Fourth School Term			
1004 Technical Writing	5	-	3
1005A Effective Speaking	5	-	2
1520 Introduction to Sociology	5	-	4
2794 Medical Record Science V	5	-	3
2796 Directed Practice I	5	16	6
			18

■ Fourth Co-op Term			
2773 Cooperative Employment	-	40	3
			3

■ Fifth School Term			
1511 Principles of Economics	5		4
2795 Medical Record Seminar	7	-	5
2797 Directed Practice II	-	16	6
2931 Basic Principles of Managment	5	-	3
			18

■ Fifth Co-op Term			
2774 Cooperative Employment	-	40	3
			3

MEDICAL RECORD TECHNICIAN ADVISORY COMMITTEE

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

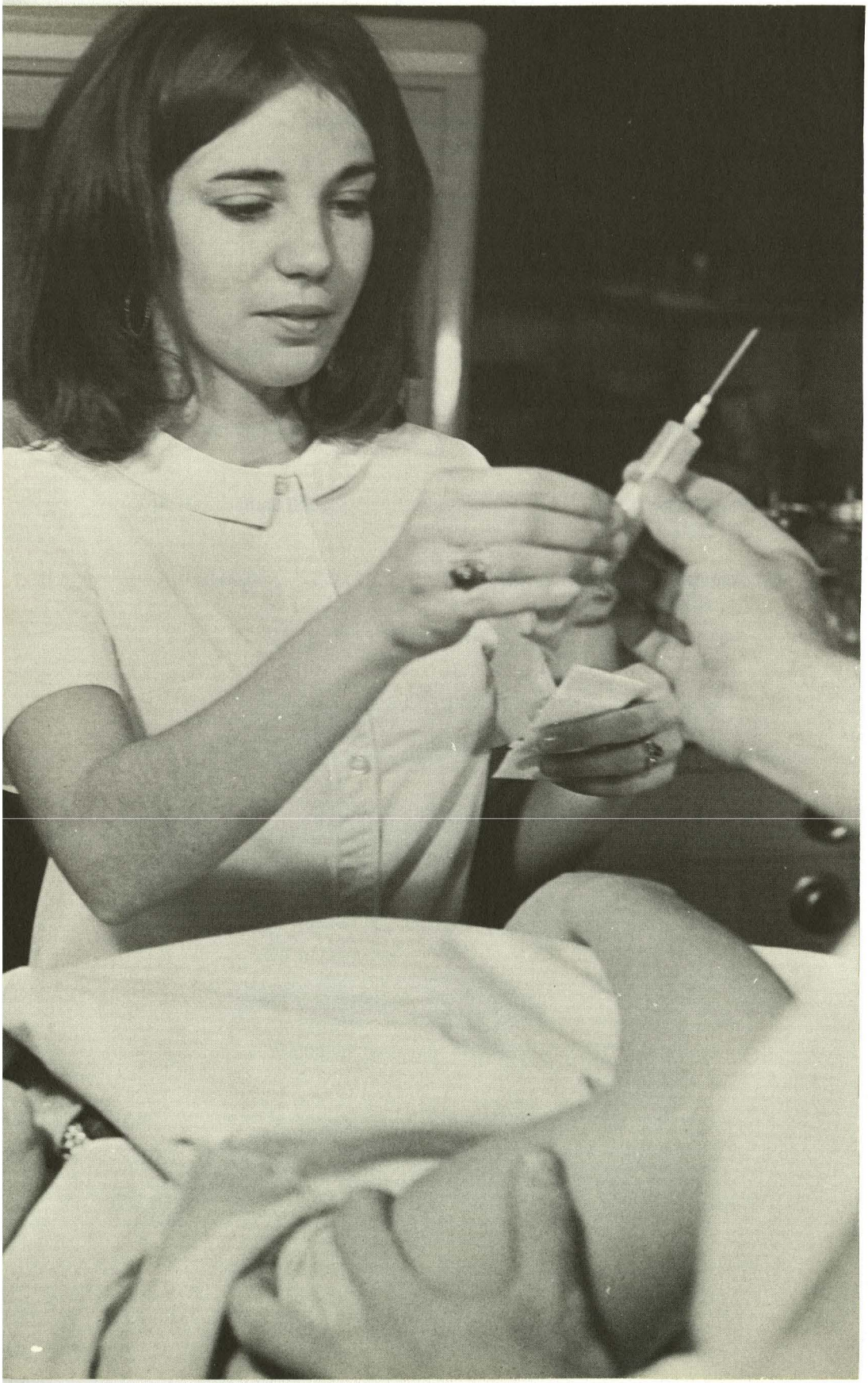
Miss Gertrude Edelman . . . . . .
R.R.L.

Miss Mary Louise Oberwitte . . . . . Childrens Hospital
R.R.L.

Mrs. Niki Price . . . . . Good Samaritan Hospital
A.R.T.

Sr. Rose Denise . . . . . Good Samaritan Hospital
R.R.L.

Mrs. Carolyn Jo Schwartz . . . . . General Hospital
R.R.L.



Physician's Assistant

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 his unique office requirements. As an assistant in his office the duties may include those of a secretary, bookkeeper and receptionist, answering the incoming calls, receiving mail, greeting patients, handling correspondence and filing, arranging for laboratory and x-ray procedures of hospital admissions, 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 his patients.

The technical 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-rays or EKG's and assist the physician in his examination or treatment of a patient, including preparing for the assisting with diagnostic and minor surgical procedures and administration of injections or other medications.

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

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
2710 Basic Lab. Techniques I	4	6	4
2720 Survey of Medical Profession	5	-	4
3050 Office Practice	3	2	3
			17
First Co-op Term			
2755 Cooperative Employment	-	40	2
			2
Second School Term			
1001 Communication Skills I	5	-	3
1101 Business Mathematics I	5	-	4
2217 Human Anatomy & Physiology II	5	-	3
2705 Medical Assisting Procedures	2	3	3
2707 Clinical Office Practice	4	6	4
			17
Second Co-op Term			
2756 Cooperative Employment	-	40	2
			2
Third School Term			
1003 Communication Skills III	5	-	3
1102 Business Mathematics II	5	-	4
2218 Human Anatomy & Physiology III	5	-	3
2709 Pharmacology	4	1	3
2724 Immunology	2	1	2
2725 Microbiology	3	2	3
			18
Third Co-op Term			
2757 Cooperative Employment	-	40	3
			3
Fourth School Term			
1004 Technical Writing	5	-	3
1511 Principles of Economics	5	-	4
1520 Introduction to Sociology	5	-	4
2721 Emergency Procedures	1	4	1
2722 Pathology I	5	-	3
2911 Principles of Accounting	5	-	3
			18
Fourth Co-op Term			
2758 Cooperative Employment	-	40	3
			3
Fifth School Term			
1005 Effective Speaking	5	-	3
1501 Human Relations	5	-	4
2706 Medical Office Administration	3	2	2
2708 Radiology	5	-	3
2723 Pathology II	5	-	3
2912 Principles of Accounting II	5	-	3
			18
Fifth Co-op Term			
2759 Cooperative Employment	-	40	3
			3

MEDICAL ASSISTING TECHNOLOGY ADVISORY COMMITTEE

Arthur T. Evans, M.D.

John G. Fleming, M.D.

Sandie Hopkins, A.A.S.

Mary M. Martin, M.D.

Frank H. Mayfield, M.D.

Manuel H. Mediodia Jr., M.D.

Donna Nobis, A.A.S.

Virgil A. Plessinger, M.D.

Donald Stevens, M.D., J.D.

Edward F. Willenborg,
Executive Director
Academy of Medicine
of Cincinnati

Marvin E Walker (V.P. Blue Cross of Southwest Ohio)

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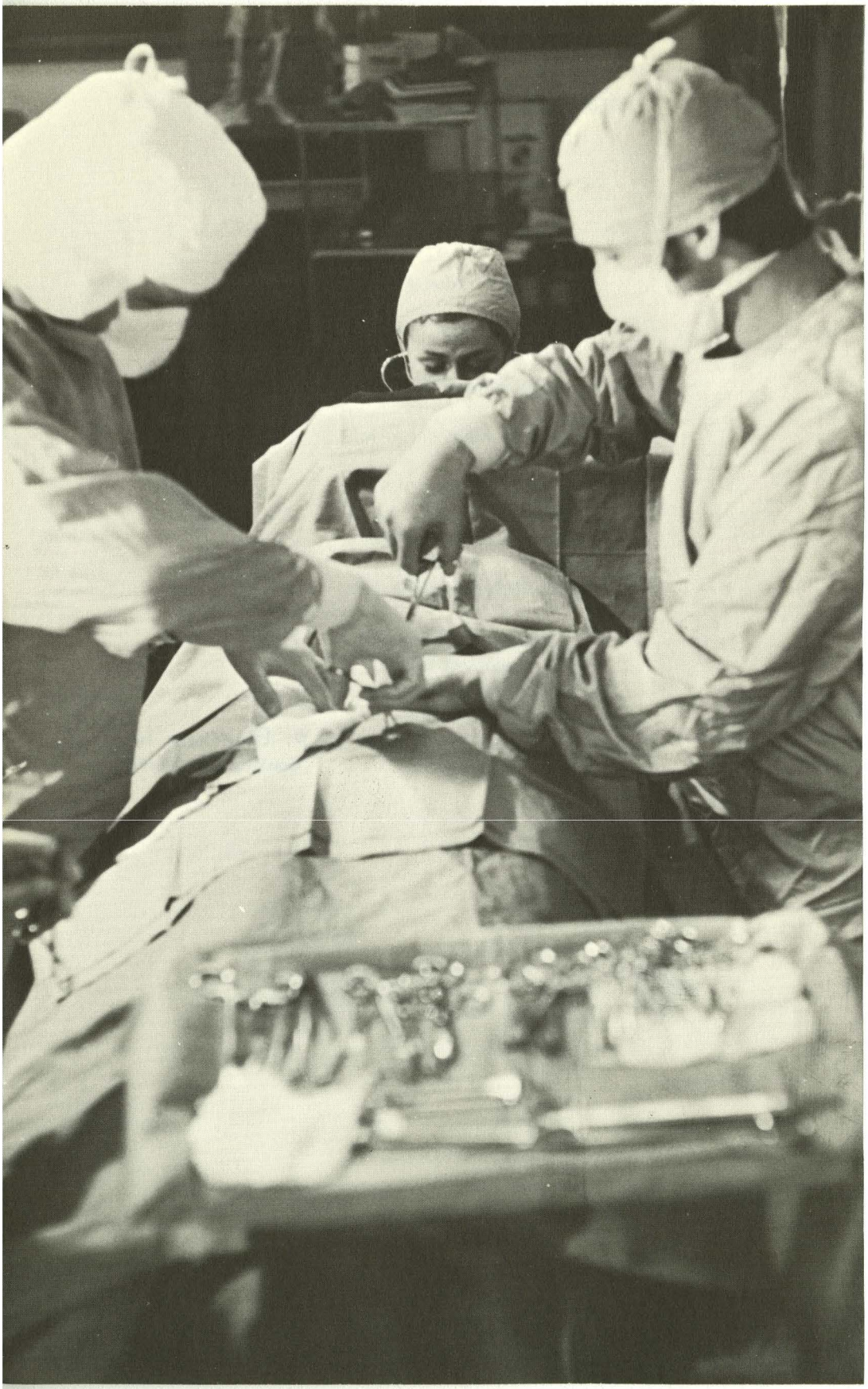


Physician's Assistant

SURGICAL ASSISTING TECHNOLOGY

The surgical assistant, an important member of the "lifesaving" surgical team, is employed either by a surgeon, a group of surgeons, or a hospital or other institution providing surgical and/or emergency care. He or she works in a variety of situations, performing a multitude of challenging duties under the direction of the surgeon. Areas for performance of duties are: operating suites, recovery rooms, intensive care units, surgical wards, emergency rooms, outpatient clinics, surgeons' offices and medical centers.

Generally speaking, a surgical assistant may be in charge of the preparation of the operating room in the sense that he makes certain all equipment is ready and properly placed for the surgeon. He secures the proper patient and prepares the person for the impending operation. This assistant may "scrub-in" or circulate during the case. Post-operatively the surgical assistant assumes many of the routine patient care duties as designated by the surgeon; ones which the doctors and nurses on the surgical wards have done themselves in years past. Also, the surgical assistant may receive the patient in the doctors office when employment circumstances call for this. In the office, this assistant performs both pre-operative and post-operative procedures as approved by his employer.

Cooperative training positions are at major Cincinnati hospitals.

SURGICAL ASSISTING TECHNOLOGY CURRICULUM

■ First School Term	Class Hours	Lab Hours	Credit Hours
2210 General Chemistry	3	2	3
2216 Human Anatomy & Physiology I	5	-	3
2710 Basic Laboratory Techniques I	4	6	4
2720 Survey of Medical Profession	5	-	4
2740 Introduction to Surgery	4	6	4
			18
■ First Co-op Term			
2765 Cooperative Employment	-	40	2
			2
■ Second School Term			
1001 Communication Skills I	5	-	3
1171 Technical Mathematics I	5	-	4
2211 Clinical Chemistry	5	5	4
2217 Human Anatomy & Physiology II	5	-	3
2741 Principles of Surgical Assisting I	1	7	3
			17
■ Second Co-op Term			
2766 Cooperative Employment	-	40	2
			2
■ Third School Term			
1003 Communication Skills III	5	-	3
1172 Technical Mathematics II	5	-	4
2218 Human Anatomy & Physiology III	5	-	3
2709 Pharmacology	4	1	3
2724 Immunology	2	1	2
2725 Microbiology	3	2	3
			18
■ Third Co-op Term			
2767 Cooperative Employment	-	40	3
			3
■ Fourth School Term			
1004 Technical Writing	5	-	3
1511 Principles of Economics	5	-	4
1520 Introduction to Sociology	5	-	4
2722 Pathology I	5	-	3
2742 Principles of Surgical Assisting II	2	8	4
			18
■ Fourth Co-op Term			
2768 Cooperative Employment	-	40	3
			3
■ Fifth School Term			
1005 Effective Speaking	5	-	3
1501 Human Relations	5	-	4
2244 Physics II	3	2	3
2721 Emergency Procedures	2	-	1
2723 Pathology II	5	-	3
2743 Surgical Seminar	5	-	3
			17
■ Fifth Co-op Term			
2769 Cooperative Employment	-	40	3
			3

SURGICAL ASSISTING TECHNOLOGY
ADVISORY COMMITTEE

John Cranley, M.D. . . . . Good Samaritan Hospital
Chairman — Director of Medical Education and
Department of Surgery

John Wulsin, M.D. . . . . Holmes Hospital
Surgeon, Past-President of Health Careers Association of
Greater Cincinnati

(Miss) Mary Lou Roebke, R.N. . . . . Good Samaritan Hospital
Operating Room Supervisor

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.

Physician's Assistant

UROLOGIC ASSISTING TECHNOLOGY

Urologic Assisting Technology is a pioneer physician's assistant program developed with cooperation of and assistance from the Para-Urologic Education Committee of the American Urologic Association.

Urologists are physicians who specialize in the diagnosis and treatment of diseases of the kidneys and urinary tract. The number of urologists is insufficient to meet the demand for their services, which has increased greatly in recent years because of greater longevity and significant advances in urologic techniques. A national survey indicates that the services of 10,000 to 15,000 urologic assistants could be employed now, if they are available, in hospitals and urologists offices.

Urologic assistants will have important responsibilities to fulfill, and in varied settings. They may provide patient care in the outpatient facility, endoscopic suite, operating room, emergency room or wards of a hospital; in a urologist's private office; in an extended care facility; or in the patient's home. They may also care for specialized equipment, help carry out examinations, or diagnostic studies, and assist in surgery. Some graduates may become instructors in urologic assisting. In all cases, the urologic assistant will perform his duties under the supervision of a urologist or a medical care service.

The curriculum provides breadth of learning in the sciences and humanities and depth of training in specific urologic skills. Instruction in urologic assisting is provided at the hospitals during the terms of cooperative employment by physicians.

UROLOGIC ASSISTING TECHNOLOGY CURRICULUM

■ First School Term	Class Hours	Lab Hours	Credit Hours
2210 General Chemistry	3	2	3
2216 Human Anatomy & Physiology I	5	-	3
2710 Basic Laboratory Techniques I	4	6	4
2720 Survey of the Medical Professions	5	-	4
2730 Introduction to Clinical & Laboratory Urology	4	6	4
			18
■ First Co-op Term			
2760 Cooperative Employment	-	40	2
			2
■ Second School Term			
1001 Communication Skills I	5	-	3
1171 Technical Mathematics I	5	-	4
2211 Clinical Chemistry	5	5	4
2217 Human Anatomy & Physiology II	5	-	3
2731 Clinical Urology I	2	3	1
2741 Principles of Surgical Assisting	1	7	3
			18
■ Second Co-op Term			
2761 Cooperative Employment	-	40	2
			2
■ Third School Term			
1003 Communication Skills III	5	-	3
1172 Technical Mathematics II	5	-	4
2218 Human Anatomy & Physiology III	5	-	3
2709 Pharmacology	4	1	3
2725 Microbiology	3	2	3
2732 Clinical Urology II	2	3	2
			18
■ Third Co-op Term			
2762 Cooperative Employment	-	40	3
			3
■ Fourth School Term			
1004 Technical Writing	5	-	3
1511 Principles of Economics	5	-	4
1520 Introduction to Sociology	5	-	4
2722 Pathology I	5	-	3
2733 Clinical Urology III	2	8	4
			18
■ Fourth Co-op Term			
2763 Cooperative Employment	-	40	3
			3
■ Fifth School Term			
1005 Effective Speaking	5	-	3
1501 Human Relations	5	-	4
2244 Physics II	3	2	3
2706 Medical Office Administration	3	2	2
2708 Radiology	5	-	3
2723 Pathology II	5	-	3
			18
■ Fifth Co-op Term			
2764 Cooperative Employment	-	40	3
2734 Urology Seminar	5	-	3
			6

UROLOGIC ASSISTING TECHNOLOGY ADVISORY COMMITTEE

Garfield Suder, M.D.

Mrs. Virginia Cordell ..... Christ Hospital
Receptionist

Robert S. Leake, M.D.

Mrs. Charles Murdock ..... Kidney Foundation of Greater Cincinnati
Advisory Committee

James F. Stewart, M.D.

DEPARTMENT OF HEALTH TECHNOLOGIES GENERAL ADVISORY COMMITTEE

Monica V. Brown
Executive Director,
Health Careers of Ohio

Edna Caywood
Executive Director,
Health Careers Association of Greater Cincinnati

John Cranley, M.D.

Werner Donath, M.D.

Walter Eugee, M.D.

Arthur Evans, M.D.

William Graf, M.D.

George J. Griffin, M.D.

Raymond Hilsinger, M.D.

George Tanner, M.D.

John Wulsin, M.D.

DEPARTMENT OF HEALTH TECHNOLOGIES
COURSE DESCRIPTIONS

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

1003 Communication Skills III **5 Clock Hours — 3 Credit Hours**
Continuation of Communication Skills I, stressing expository writing.

1004 Technical Writing **5 Clock Hours — 3 Credit Hours**
Informal and formal written reports. Techniques for collecting and presenting data, particularly as they apply to industry. Some work with business letters.

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

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

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.

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.

1171 Technical Mathematics I **5 Clock Hours — 4 Credit Hours**
Review of the principles of mathematics basic to the understanding of applied mathematics. To include — basic facts and operations, ratios and proportions, percents, and introduction to statistics.

1172 Technical Mathematics II **5 Clock Hours — 4 Credit Hours**
Application of the basic principles to the related fields of study, in particular, chemistry, pharmacology and lab sciences.

1501 Human Relations **5 Clock Hours — 4 Credit Hours**
Principles of human behavior. Problems of the individual studied in relation to

society, group membership, and relationships within the work situation. Development of effective motivation, communication, attitudes, supervision and leadership.

1511 Principles of Economics **5 Clock Hours — 4 Credit Hours**
Basic economics with attention given to central problems of price, competition and money, supply and demand, business organizations, firm & family income, labor and industrial relations, government and the economy, gross national product, relationship of income to expenditures, business cycles.

1520 Introduction to Sociology **5 Clock Hours — 4 Credit Hours**
A study of fundamental sociological concepts involving socialization, culture, social deviation, social institution, race and ethnic relations and social problems and policy.

1799 Survey of Data Processing **5 Clock Hours — 4 Credit Hours**
Terminology and basic concepts of automation. History of punched card data processing, the development of computer systems, the manual methods and the stored program are introduced.

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

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 **10 Clock Hours — 4 Credit Hours**
A review of general chemistry, organic chemistry and biochemistry as applied to clinical laboratory testing and human physiology. Includes colorimetry, spectrophotometry, quality control and the performance of common clinical chemistry procedures.

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

2216 Human Anatomy & Physiology I (Including Basic Medical Terminology) **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.

2216A Human Anatomy & Physiology I **5 Clock Hours — 3 Credit Hours**
A study of the general plan and structural units of the body: the musculoskeletal system, the nervous system and sense organs. Emphasis on the anatomy and related medical terminology.

2217 Human Anatomy & Physiology II **5 Clock Hours — 3 Credit Hours**
Brief review of the anatomy and study of the physiological functions of the following body systems (including medical terminology as applicable): The skeletal, muscular, cardiovascular and circulatory, respiratory, digestive and urogenital systems.

2217A Anatomy & Physiology (Including Medical Terminology) **5 Clock Hours — 3 Credit Hours**
A study of the curculatory, digestive, respiratory, urinary, reproductive and endocrine systems and emphasis on the anatomy and medical terminology related to these 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.

2244 Physics II (Health related) **5 Clock Hours — 3 Credit Hours**
Properties of waves. Frequency, wavelength, amplitude, types of waves, reflection, refraction. Diffraction, interference, resonance, nature of electro-magnetic radiation. Sources and detectors of infra-red, visible, ultraviolet, x-ray and gamma radiation. Control and uses of radiation. Optical instruments. Emission and absorption. Spectroscopy. X-ray diffraction. Ionizing radiation. Laser radiation. Medical aspects of ionizing radiation.

2705 Medical Assisting Procedures **5 Clock Hours — 3 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.

2706 Medical Office Administration 3 Clock Hours — 2 Credit Hours

Instruction and familiarization with administrational procedures as performed by assistant in charge of any small business or professional office. Includes payroll management, deductions, payment of such withholdings for employer to proper governmental agencies, maintaining and reconciling bank balances, keeping records of tax deductible items for office, insurance coverage, etc. Office housekeeping and budgeting.

2707 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.

2708 Radiology 5 Clock Hours — 3 Credit Hours

Introduction to basic radiologic concepts and the preparation for, basic use of, and self protection involved in the use of x-ray equipment.

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.

Performance of red and white blood cell chamber counts, hemoglobin and hematocrit determinations, sedimentation rates, preparation and staining of blood smears, performance of white blood cell differential, and performance of routine urinalysis.

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, porphyrins, Bence Jones Protein, etc. An introduction to histology and cytology.

Practice in selected advanced hematology and urinalysis procedures to illustrate fundamental principles.

2712 Basic Laboratory Techniques III (Lecture and Laboratory)
7 Clock Hours — 3 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.

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 Survey of Medical Professions **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 **2 Clock Hours — 1 Credit Hour**

Fire safety, disaster planning, and first aid, operating room safety and laboratory safety.

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 is 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 diseases 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 Introduction to Clinical and Lab Urology
10 Clock Hours — 4 Credit Hours
Instruction in techniques applicable to urology including technique, methods of sterilization, care and use of urologic equipment, preparation and care of patients, and techniques of diagnostic procedures.

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 Surgery 10 Clock Hours — 4 Credit Hours
Instruction in surgical techniques including aseptic technique, methods of sterilization, care and preparation of instruments and supplies, preparation and care of patient before, during and after surgery. Includes classroom lectures, demonstrations and practice at hospital.

2741 Principles of Surgical Assisting I 8 Clock Hours — 3 Credit Hours
Basic procedures of the "surgical scrub", draping and positioning patients and

instrument set-ups. Duties of "scrub" and circulating assistants. Assisting with general abdominal surgery, including gynecological and urological procedures and emergency surgery for trauma. Classroom instruction, orientation and practical application at hospital.

2742 Principles of Surgical Assisting II
10 Clock Hours — 4 Credit Hours

Instruction and orientation in assisting with specialized surgical procedures — Orthopedic, Cardiac and other Thoracic Surgery. Eye, Ear, Nose and Throat Surgery, Neurosurgery, etc. Cast room technique.

2743 Surgical Seminar **5 Clock Hours — 3 Credit Hours**

Special seminars conducted by surgeons and surgical assisting instructors in new surgical procedures, methods and techniques. Familiarization with latest surgical developments, practices and techniques.

2750 Medical Laboratory Technician — Cooperative Employment **40 Clock Hours — 2 Credit Hours**

Performance of hematologic procedures (2 weeks) and routine urinalysis (8 weeks), tests under the close supervision of a M.T. (ASCP) registered medical technologist in a clinical laboratory.

2751 **40 Clock Hours — 2 Credit Hours**

Performance of hematologic procedures including coagulation testing under the close supervision of a M.T. (ASCP) registered medical technologist in a clinical laboratory.

2752 **40 Clock Hours — 3 Credit Hours**

Performance of clinical chemistry procedures gastric analysis and routine stool tests, under the close supervision of an M.T. (ASCP) registered medical technologist in a clinical laboratory.

2753 **40 Clock Hours — 3 Credit Hours**

Performance of procedures in clinical chemistry (2 weeks) and blood banking (8 weeks), under the close supervision of an M.T. (ASCP) registered medical technologist in a hospital laboratory.

2754 **40 Clock Hours — 3 Credit Hours**

Performance of procedures in bacteriology, parasitology and serology, under the close supervision of an M.T. (ASCP) registered medical technologist in a clinical laboratory.

2755, 2756, 2757, 2758, 2759 Medical Assisting Technology — Cooperative Employment **2-3 Credit Hours Each Term**

On an alternating term basis, the student is placed on a full-time (32-40 hours) job in a physician's office or related situation. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his class work.

With each succeeding co-operative term, the student is able to assume more responsibility and perform 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.

2760, 2761, 2762, 2763, 2764 Urologic Assisting Technology — Cooperative Employment

Clinical on-the-job training will consist of five 10 week periods. Each trainee will spend three periods in the endoscopic room, one period on a hospital ward service, and the fifth period on an elective service which could be spent on the renal dialysis service, on a hospital ward service, in the endoscopic suite, or on an operative rotation.

2765 Surgical Assisting Technology — Cooperative Employment

Orientation to hospital, operating room, nursing units, etc. Student studies will include trasportation of patients; errands to the central supply, the pharmacy, etc.; helping position patients in the operating room; and helping with circulating duties. The student will observe various x-ray procedures, cystoscopic procedures, etc.

2766

The student will learn to scrub, gown and glove himself. Student duties will include preparing and wrapping supplies; sterilizing; scrubbing to hold retractors; patient preparation; general operating room care and restocking supplies. The student will observe surgical procedures.

2767

The student will scrub for surgical cases and learn to assist. Student duties will include handling instruments and circulating duties. The student will observe doctors with their patients outside of surgery and will learn floor procedures involving care of catheters, leving tubes, I.V.'s, dressings, sutures, etc.

2768

The student will be assigned to one or two groups of surgeons and will scrub to assist them and observe their patients in the recovery room, intensive care unit and on the wards.

2769

This will be an elective period for the student. He will be permitted to choose to

work in the emergency room or in ward service or to take advanced training in a surgical specialty.

2770 Medical Records Technician —

2771 Cooperative Employment

2772 32-40 Hours Per Week — 2-3 Credit Hours

2773, 2774
On an alternating term basis, the student is placed on a full-time job in a medical records department. This affords the student the opportunity to make practical application of the knowledge and skills acquired in his class work.

With each succeeding cooperative term, the student is able to assume more responsibility and perform 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.

2790 Medical Records Science I 15 Clocks Hours — 6 Credit Hours
The History of Medical Records; organization and functions of a medical records department; the function of a medical records technician; the contents, uses and filing of medical records.

Admitting procedures and discharge procedures including preparation of admission forms, index cards, correlation with previous records, quantitative analysis, filing procedures practice in correspondence, receptionist and telephone functions, insurance reports and abstracts.

2791 Medical Record Science II 10 Clock Hours — 5 Credit Hours
Coding and indexing including SNDO, ICDA-8 and H-ICDA coding, and maintenance of patient, disease, operation and physician indexes.

Practice with coding and indexing procedures, and completion of pas abstracts.

2792 Medical Record Science III 5 Clock Hours — 3 Credit Hours
Statistical procedures including calculations of daily census, monthly census and percentages. Analysis of pas and other computer reports.

Practice in preparing daily and monthly statistical reports, birth and death certificates.

2793 Medical Records Science IV 10 Clock Hours — 4 Credit Hours
Machine transcription of medical reports.

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 **7 Clock Hours — 5 Credit Hours**
Discussion of current developments in the medical records field, brief review of the various aspects of medical records, discussion of directed practice in hospitals and assignment of analysis with visual layout and critique of directed practice experience.

2796 Directed Practice I **16 Clock Hours — 6 Credit Hours**
Practice in the hospital medical records department performing the following: Admission procedures in medical records office; Discharge procedures; Coding and indexing.

2797 Directed Practice II **16 Clock Hours — 6 Credit Hours**
Practice in the hospital medical records department performing the following: transcription; statistics; court and secretarial; admitting office.

2911 Principles of Accounting **5 Clock Hours — 3 Credit Hours**
Principles and practices of basic accounting with practical application, as related to other fields of business.

2931 Basic Principles of Management **5 Clock Hours — 3 Credit Hours**
Basic Management technique involving personnel management, reviewing and analyzing procedures to increase efficiency, formal and informal organizational structures both intra-departmental and institutional.

3050 Office Practice I **5 Clock Hours — 3 Credit Hours**
Filing, basic typing, business machines and receptionist duties.

DEPARTMENT OF INDUSTRIAL TECHNOLOGIES

Each of the five programs offered by the Department of Industrial Technologies serves a discrete and rapidly growing industry. Since the industries are dissimilar, the curricula of the programs are dissimilar. Operationally, however, the programs have much in common. Each requires highly specialized equipment, involves sophisticated processes and responds to rapid technological change in the industry it serves. As a result, the five programs have been assigned to a separate department in which their special needs can be given appropriate administrative and instructional attention.

The five programs are Air Conditioning Technology, Automotive Service Management Technology, Aviation Technology, Graphic Communications Technology, Plastics Technology. Because each program prepares technicians for an industry experiencing growth and change, the career opportunities afforded by each are excellent.

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 processses 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.

This associate degree program has been planned and developed with the assistance of representatives of the industry and has been designed to serve the individual who aspires to a career in this growing field.

AIR CONDITIONING TECHNOLOGY CURRICULUM

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills I	5		3
1171 Technical Math I	5		4
1375 Engineering Graphics	2	3	3
2271 Physics I	3	2	3
3201 Elements of Refrigeration & Heating	6	4	5
			18
■ First Co-Op Term			
9001 Cooperative Employment	-	40	2
			2
■ Second School Term			
1172 Technical Math II	5	-	4
1376 Engineering Graphics	1	4	2
1531 Introduction to Political Science	3	-	3
1913 Electrical Fundamentals I	3	2	3
2272 Physics II	3	2	3
3202 Air Conditioning Principles I	3	4	3
			18
■ Second Co-op Term			
9002 Cooperative Employment	-	40	2
			2
■ Third School Term			
1003 Communication Skills III	5	-	3
1173 Technical Math III	5	-	4
1914 Electrical Fundamentals II	3	2	3
2273 Physics III	3	2	3
3203 Air Contitioning Principles II	3	4	3
3210 Hydronics & Pneumatics	2	1	2
			18
■ Third Co-op Term			
9003 Cooperative Employment	-	40	3
■ Fourth School Term			
1005A Effective Speaking	1	2	2
1504 Industrial Psychology	5	-	4
1911 Electrical Machinery & Controls	3	2	3
2274 Physics IV	3	2	3
3204 Air Conditioning Principles III	3	2	3
3205 Air Conditioning Design I	3	4	3
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
			3
■ Fifth School Term			
1004 Technical Writing	5	-	3
1511 Economics	5	-	4
3206 Air Conditioning Design II	5	5	4
3207 Air Conditioning Controls	2	3	3
3208 Air Conditioning Applications	3	4	4
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3
			3

AIR CONDITIONING TECHNOLOGY ADVISORY COMMITTEE

Frederick Dietz ..... Montgomery Heating & Air Conditioning Co.
Manager, Operations & Service

Gene Dilger ..... Airtrol, Inc.
Owner-Manager

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

Thomas Hufford ..... Hufford Heating & Air Conditioning Co.
Manager

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

Floyd Ritchie ..... Equitable Bag Co.
Society of Refrigeration Service Engineers

Tom Wides ..... Bonded Heating Co.
Owner-Manager

Thomas Winstel ..... Ace Heating & Air Conditioning
Manager


Sun 1120
We Test... Not Guess
ELECTRONIC ENGINE TESTER
SERVICE
SUN
EQUIPMENT
SERVICE
SUN
EQUIPMENT

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 Institute 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.

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

AUTOMOTIVE SERVICE MANAGEMENT CURRICULUM

	Class Hours	Lab Hours	Credit Hours
■ First School Term			
1001 Communication Skills I	5	-	3
1121 Technical Mathematics I	5	-	4
2501 Automotive Technology I	5	10	8
2506 Machine and Hand Tool Laboratory	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment	-	40	2
			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
			2
■ Third School Term			
1379 Blueprint Reading and Sketching	2	3	2
1505 General 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
			3
■ Fourth School Term			
1004 Technical Writing	3	2	3
1513 Economics II	3	-	3
1531 American Government	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
			3
■ Fifth School Term			
1005 Effective Speaking	2	3	3
1504 Industrial Psychology	5	-	4
1823 Business Law	5		3
2505 Automotive Technology IV	7	8	8
			18
■ Fifth Co-op Term			
9004 Cooperative Employment	-	40	3
			3

AUTOMOTIVE SERVICE MANAGEMENT TECHNOLOGY ADVISORY COMMITTEE

Robert Behler ..... Behler Oldsmobile
Auto Dealer

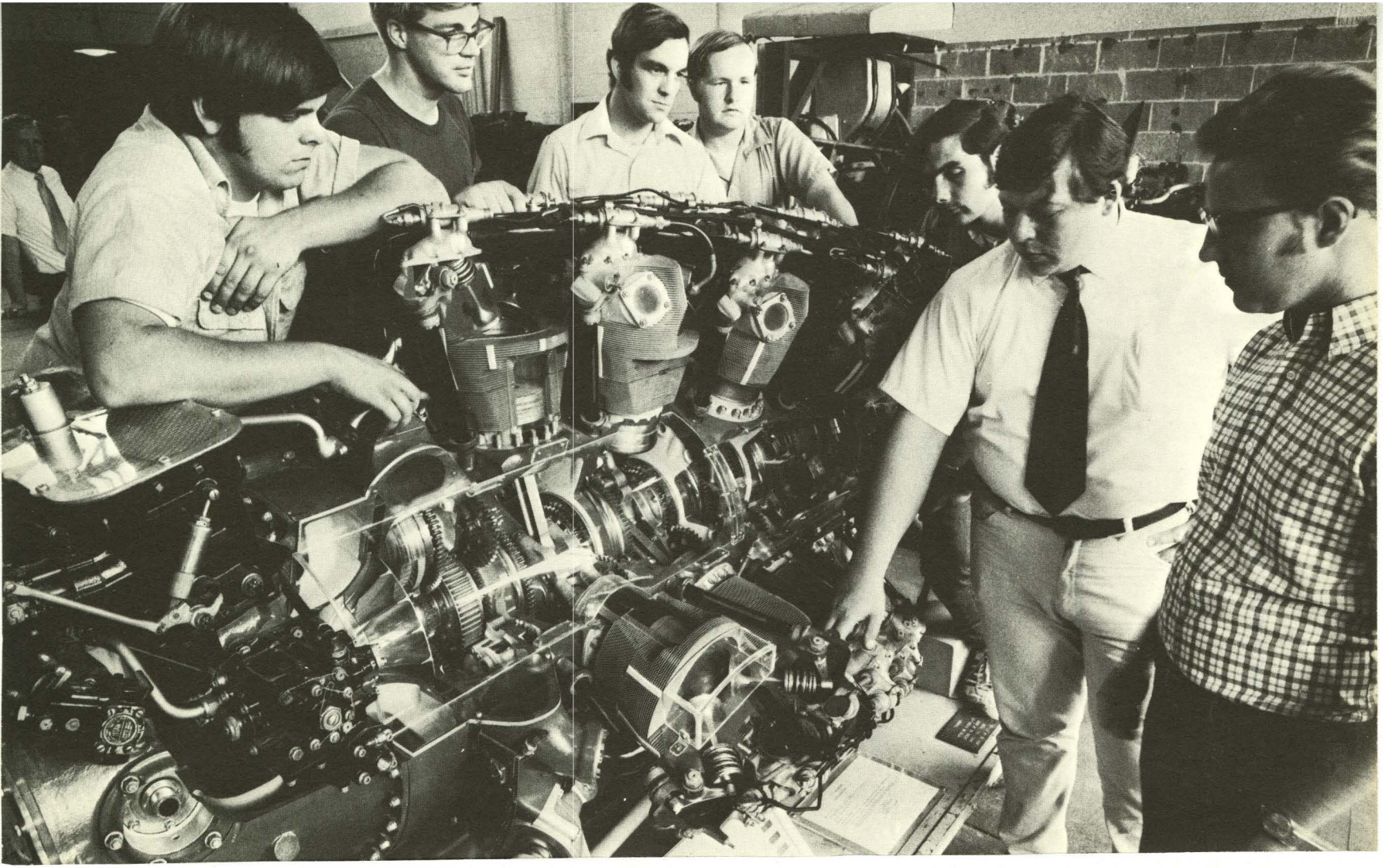
Bruce Markley ..... Lincoln-Mercury
District Manager, Parts and Services

Clifford Metzger ..... General Motors
Buick Zone Service and Parts Manager

James Smith ..... Ford Motor Company
Assistant District Sales Manager

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

Carl Tedesco ..... Cincinnati Automobile Dealers Association
Director



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 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 I	5	-	3
1181 Mathematics I	5	-	4
1381 Aircraft Drawing	1	4	2
2281 Physics I	3	2	3
2601 Welding Processes	3	7	3
2602 Machine and Hand Tools	1	4	3
			18
■ Second School Term			
1182 Mathematics II	5	-	4
2282 Physics II	3	2	3
2603 Basic Aerodynamics & 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			
1183 Mathematics III	5	-	4
2283 Physics II	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			
1531 Introduction to Political Science	3	-	3
2610 Aircraft Electrical Systems	3	7	4
2611 Aircraft Instrument, Communications and Navigational & Utility Systems	3	7	4
2612 Airframe Assembly & Rigging	6	9	7
			18
■ First Co-op Term			
9003 Cooperative Employment	-	40	3
			3
■ Fifth School Term			
1004 Technical Writing	3	2	3
1504 Industrial Psychology	5	-	4
2613 Powerplant Theory	5	15	8
2614 Powerplant Lubrication	2	3	3
			18
■ Second Co-op Term			
9004 Cooperative Employment	-	40	3
			3
■ Sixth School Term			
1005 Effective Speaking	3	2	3
1511 Principles of Economics	5	-	4
2615 Ignition Systems	4	6	4
2616 Flight Line Maintenance	3	7	4
2921 Introduction to Business I or	5/5	-	2/3
2911 Accounting I			
			17/18
■ Third Co-op Term			
9005 Cooperative Employment	-	40	3
			3
■ Seventh School Term			
1009 Business English	5		3
2617 Powerplant Systems and Components	5	20	12
2618 Propellers	1	4	3
			18

AVIATION TECHNOLOGY ADVISORY COMMITTEE

James Collins, Manager ..... General Electric Company, Aviation Service Operation

Ralph Day ..... Blue Ash Airport

R. G. Graham, Supervisor ..... Production Control, American Airlines (Chicago Office)

Louis Glos ..... Co-op Aircraft Service (Blue Ash)

Steve Hanifin ..... Boone County Aviation, (Greater Cinti. Airport)

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

Homer Jones ..... Courter Technical High School, Former Aviation Technology Instructor

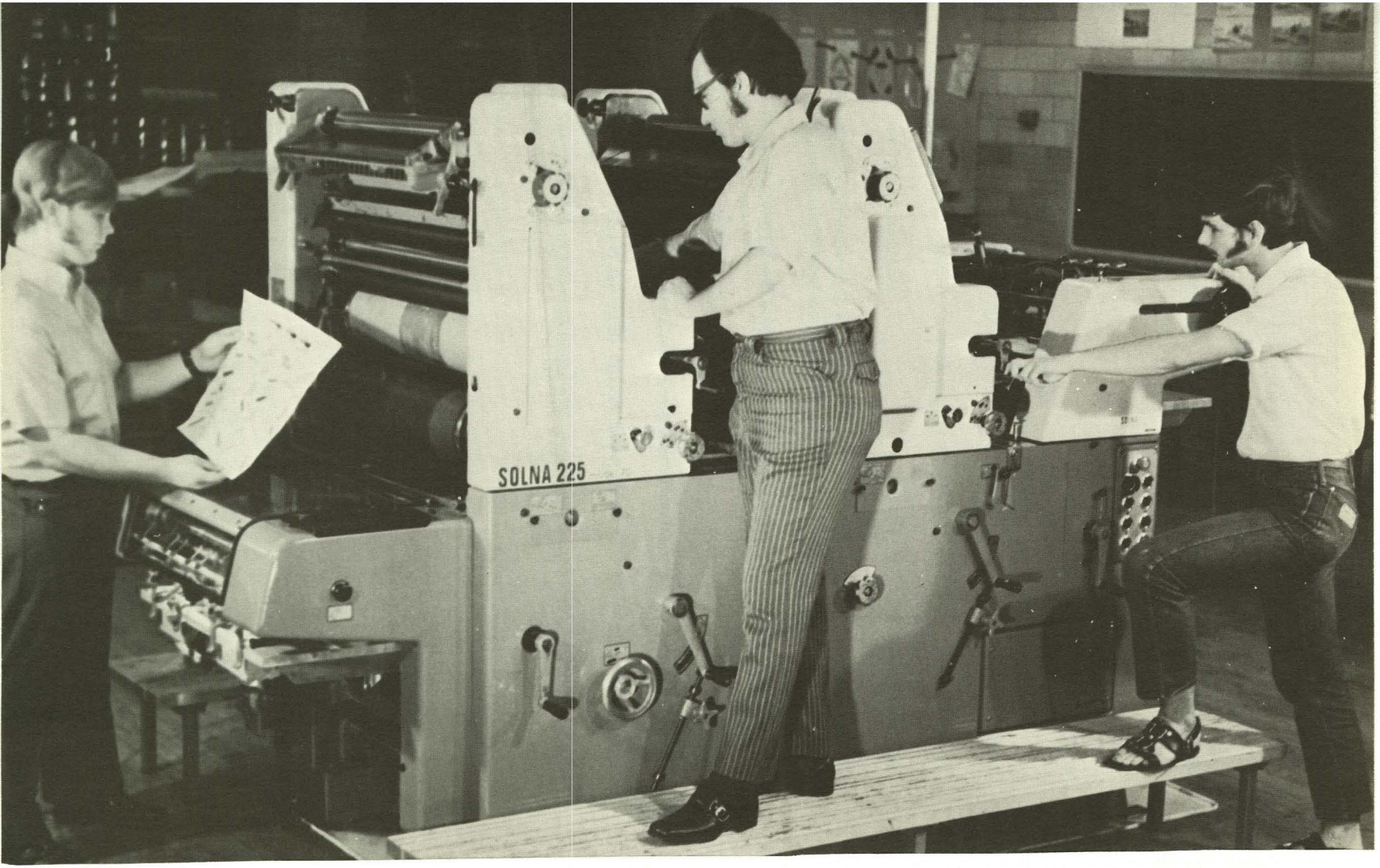
Marvin Judy ..... T. W. Smith Aircraft, (Blue Ash & Lunken Airport)

Owen Phairis ..... American Airlines, (Greater Cinti. Airport)

Charles Poynter ..... Miami Whitewater Flying Service, (Harrison Airport)

T. W. Smith ..... T. W. Smith Aircraft, (Blue Ash & Lunken Airport)

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


SOLNA 225

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 Institute, 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, producting planning, and cost control.

GRAPHIC COMMUNICATIONS TECHNOLOGY CURRICULUM

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills 1	5	-	3
1161 Mathematics for Printers	5	-	4
1512 Economics I	3	-	3
1401 Layout and Design	2	-	2
1402 Typography	5	5	4
1450 Estimating	5	-	2
			18

■ First Co-op Term			
9001 Cooperative Employment	-	40	2
			2

■ Second School Term			
1002 Communication Skills II	5	-	3
1513 Economics II	3	-	3
2261 Printing Science (Chemistry)	3	2	3
1410 Machine Composition	5	5	4
1405 Proofreading and Copy Preparation	2	-	2
1460 Bindery Methods and Procedures	2	3	3
			18

■ Second Co-op Term			
9002 Cooperative Employment	-	40	2
			2

■ Third School Term			
1005 Effective Speaking	3	-	2
1007 Expository Writing	5	-	3
2262 Printing Science II (Physics)	3	2	3
1506 Human Relations	3	-	3
1415 Graphics Arts Processes	2	-	2
1420 Electronic Processes	2	-	2
1421 Cold Type Processes	5	5	3
			18

■ Third Co-op Term			
9003 Cooperative Employment	-	40	3
			3

■ Fourth School Term			
1004 Technical Writing	3	-	2
1419 Survey of Graphics Communications I	3	-	3
1430 Press Work	5	5	4
1480 Photolithography	3	2	3
1823 Business Law I	5	-	3
2911 Accounting I	5	-	3
			18

■ Fourth Co-op Term			
9004 Cooperative Employment	-	40	3
			3

■ Fifth School Term			
1428 Survey of Graphic Communications II	3	-	3
1440 Offset Press Operations	5	10	5
1481 Photolithography II	3	2	3
1520 Introduction to Sociology	5	-	4
2916 Printing Cost Accounting	5	-	3
			18

■ Fifth Co-op Term			
9005 Cooperative Employment		40	3
			3

GRAPHIC COMMUNICATIONS TECHNOLOGY
ADVISORY COMMITTEE

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

William Bedinghaus ..... Bedinghaus Business Forms
President

Harry Brinkman ..... Cincinnati Lithographers
President

Mel Brower ..... Melbro Color Service
President

James Burton ..... Johnston Paper Company
President

Larry Cherricosta ..... Stockton, West, Burkhardt
Production Manager

Charles Dye, Jr. ..... Quality Electrotype
Treasurer

Carl Ford ..... J. W. Ford Company
President

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

Edward Kobman ..... Gibson Greeting Card Company
Supervisor

Wilbert Rosenthal ..... S. Rosenthal Company
President

Hal Stearne ..... S. Rosenthal Company
Production Manager

James Wood ..... Standard Publishing Company
Superintendent of Offset Pressroom

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 Institute 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 iinstruction 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

■ First School Term	Class Hours	Lab Hours	Credit Hours
1001 Communication Skills I	5	-	3
117.1 Technical Mathematics I	5	-	4
1375 Engineering Graphics	2	3	2
2271 Physics I	3	2	3
2277 Chemistry	3	2	3
2302 Plastic Technology	3	2	3
			18
■ First Co-op Term			
9001 Cooperative Employment	-	40	2
			2
■ Second School Term			
1172 Technical Mathematics II	5	-	4
1511 Economics	5	-	4
2272 Physics II	3	2	3
2278 Chemistry	3	2	3
2303 Plastic Processes I	4	6	4
			18
■ Second Co-op Term			
9002 Cooperative Employment	-	40	2
			2
■ Third School Term			
1003 Communication Skills III	5	-	3
1173 Technical Mathematics III	5	-	4
2101 Materials of Engineering	2	3	3
2273 Physics III	3	2	3
2304 Plastic Processes II	4	6	4
			17
■ Third Co-op Term			
9003 Cooperative Employment	-	40	3
			3
■ Fourth School Term			
1004A Technical Writing	3	-	2
2104 Hydraulics & Pneumatics	3	2	3
2105 Strength of Materials	3	2	3
2313 Industrial Controls	3	2	3
2274 Physics IV	3	2	3
2305 Plastic Processes III	4	6	4
			18
■ Fourth Co-op Term			
9004 Cooperative Employment		40	3
			3
■ Fifth School Term			
1005A Speech	3	-	2
1504 Industrial Psychology	5	-	4
1531 Introduction To Political Science	3	-	3
2306 Product Design	5	2	3
2307 Mold & Tool Design	3	2	3
2311 Quality Control	3	2	3
			18
■ Fifth Co-op Term			
9005 Cooperative Employment		40	3
			3

PLASTICS TECHNOLOGY
ADVISORY COMMITTEE

Frank Backscheider ..... Recto Molding Co.
President

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

Al Casselman ..... Cincinnati Milacron, Inc.
Director, Personnel Development

Glen Davis ..... Cincinnati Milacron, Inc.
Senior Development Engineer, Cimastra Division

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

Robert Gerdes ..... Plastics Molding Corp.
President

Stan Harrier ..... General Electric Co.
Manager, Plastics Applications Development Laboratory

Mel Maringer ..... National Distillers
Research Associate

Robert Nagel ..... National Cash Register
Section Head, Plastics Laboratory

Pete Suer ..... Plastics Molding Corp.
Chief Engineer

Robert Sherman ..... Society of Plastic Industries
Mid-West Regional Manager

DEPARTMENT OF INDUSTRIAL TECHNOLOGIES
COURSE DESCRIPTIONS

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

1002 Communication Skills II — **5 Clock Hours — 3 Credit Hours**
A continuation of Communication Skills I, stressing reading improvement — both rate and comprehension.

1003 Communication Skills III — **5 Clock Hours — 3 Credit Hours**
Continuation of Communications Skills I, stressing expository writing.

1004 Technical Writing — **5 Clock Hours — 3 Credit Hours**
Informal and formal written reports. Techniques for collecting and presenting data, particularly as they apply to industry. Some work with business letters.

1004(A) Technical Writing — **3 Clock Hours — 2 Credit Hours**
Informal and formal written reports. Techniques for collecting and presenting data, particularly as they apply to industry.

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

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

1007 Expository Writing — **5 Clock Hours — 3 Credit Hours**
Organization and development of expository compositions, stressing logical and fallacious reasoning.

1009 Business English — **5 Clock Hours — 3 Credit Hours**
Spelling and defining commonly used prefixes, suffixes, root words and their combining forms. Vocabulary, pronunciation, and definitions.

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.

1121 Technical Mathematics I **5 Clock Hours — 4 Credit Hours**
Selected applications of principles and concepts essential for the automotive technician. Stressing accuracy in reading and interpreting units of measurements for efficient understanding of graphs, algebraic formulae, ratios and proportions.

1161 Mathematics for Printers **5 Clock Hours — 4 Credit Hours**
An introduction to printers' units of measure from the standpoint of the composing room, pressroom and the offset lithographic department.

Problems concerning calculation of weights of paper and quantity of paper needed to produce particular projects.

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**
Review of the basic concepts of Algebra, simple equations, quadratics and their graphs, fractions, exponents and radicals, logarithms and exponential equations, slide rule.

1172 Technical Math II **5 Clock Hours — 9 Credit Hours**
Continuation of Math I. Graphical and algebraic solutions of systems of equations. Trigonometry: solution of right triangles, use of tables, identities. Vectors sine, cosine and tangents laws. Complex numbers and their polar form.

1173 Technical Math III **5 Clock Hours — 4 Credit Hours**
Miscellaneous topics in Trigonometry. Conic sections, limits, maxima and minima, the derivative, integration, and partial fractions.

1181 Mathematics I (Aviation) **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 (Aviation) **5 Clock Hours — 4 Credit Hours**
To include basic concepts of algebra; the real number systems, equations, functions, variables, radicals, and exponents.

1183 Mathematics (Aviation) **5 Clock Hours — 4 Credit Hours**
To include weight and balance check and record data. Continuation of mathematics II. Logarithms. Elements of trigonometry.

1321 Basic Blueprint Reading and Sketching
5 Clock Hours — 2 Credit Hours

Provides a working knowledge of bluepring reading and shop sketching with special application for automotive techniques. Technical terminology is defined and applied in logical sequence for each new principle.

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.

1381 Aircraft Drawing **5 Clock Hours — 2 Credit Hours**

Read drawings, symbols, and schematic diagrams. Draw sketches of repairs and alternations. Apply blueprint information. Use graphs and charts. Identify and select AN hardware.

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 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 **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 indi-

vidual research in order to select the best method for a particular kind of work. The basic operations of manually operated machines are also investigated.

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 reproducing 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.

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 Processes **10 Clock Hours — 3 Credit Hours**
Classification of cold type devices — hand assembled paper or plastic alphabets, dry transfer fonts; keyboarded text — on paper machines; keyboarded phototypsetting; photo-lettered displays. Principles and operation of various keyboards.

1428 Survey of Graphic Communications II
3 Clock Hours — 3 Credit Hours
Continuation of Graphic Communications 1419

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.

1450 Estimating **5 Clock Hours — 2 Credit Hours**
Determine job 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.

1504 Industrial Psychology **5 Clock Hours — 4 Credit Hours**
Behavior in business and industry. Behavior of workers, management, and consumers. Direct application of psychological principles to assist with interpersonal problems. Techniques include role playing and case studies.

1505 General Psychology **3 Clock Hours — 3 Credit Hours**
A scientific study of human behavior with emphasis on motivation, learning, individual differences, and personality.

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

1511 Principles of Economics **5 Clock Hours — 4 Credit Hours**
Basic economics with attention given to central problems of price, competition and money; supply and demand; business organizations; firm and family income, labor and industrial relations; government and the economy; gross national product; relationship of income to expenditures; business cycles.

1512 Economics I **3 Clock Hours — 3 Credit Hours**
An introductory study of the analysis and application of basic economic theory as applied to the problems of labor and industrial relations. Income and spending of the aggregate of individuals, business firms, and various levels of government. Money, commercial, and central banking. Price levels and inflation. The role of the national government in fiscal and monetary policy in a private enterprise economy. Current economic issues introduced and analyzed.

1513 Economics II **3 Clock Hours — 3 Credit Hours**
An introductory study of the pricing and allocation mechanism of the classical market economy using the theory and analysis of supply and demand on an individual basis in the determining of the nature of production, consumption, and distribution of the national output. International trade, the balance of payments, economic growth and development and comparative economic systems.

1520 Introduction to Sociology **5 Clock Hours — 4 Credit Hours**
A study of fundamental sociological concepts involving socialization, culture, social deviation, social institution, race and ethnic relations and social problems and policy.

1531 Introduction to Political Science
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 contracts.

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

1911 Electrical Machinery **5 Clock Hours — 3 Credit Hours**
Investigation of transformers, A.C. and D.C. motors and generators, principles, construction, and characteristics. Connections, controls and efficiency.

1913 Electrical Fundamentals I **5 Clock Hours — 3 Credit Hours**
Introduces the student to the fundamental laws and properties of electrical engineering and their application to circuit analysis. Some topics covered include Ohm's Lay, Kirchhoff's Law, series and parallel circuits, network theorems, complex numbers and phases notation.

1914 Electrical Fundamentals II
5 Clock Hours — 3 Credit Hours
A continuation of Electrical Fundamentals I. The various classical types of analysis and solutions networks under conditions of steady state D.C. and sinusoidal excitation from single and multiple power sources. Series and parallel resonant circuits and power relationships in A.C. single phase systems.

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

2113 Industrial Controls **5 Clock Hours — 3 Credit Hours**
The study of modern methods of controlling machinery by electrical circuitry. Machinery controls and electrical mechanisms that automatically operate machines will be studied. Types of motors, generators, control signals and devices, thyratrons, gates, switches, and servomechanisms circuits are a major area of study.

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

2222 Physics I (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 of 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**
Electric 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. Induction; generators and motors. A.C. circuits; inductance; electric resonance. Electron tubes; particle accelerators.

2261 Printing Science I (Chemistry)
5 Clock Hours — 3 Credit Hours
Basic chemical principles as they relate to definite applications in printing.
The chemistry of process photography and platemaking. Chemical basis of offset lithography. The chemistry of paper making.

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.

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.

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.

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 combustion; energy conversion; heat engines; ideal gases; laws of thermodynamics.

Properties of waves; wave equations; energy and waves; resonance; electro magnetic waves; properties of electro magnetic waves; spectroscopy.

2274 Physics IV **5 Clock Hours — 3 Credit Hours**

Electric nature of matter; electric force; electric field; charge separation; motion of charges in vacuum; the electron; electron mechanics; control of energy and power in electric circuits; electric energy conversion; magnetic force; electro magnetism; induction; A.C. circuits; resonant circuits; communication systems.

2277 Inorganic Chemistry **5 Clock Hours — 3 Credit Hours**

A study of fundamental principles — to include the following; atomic structure, Periodic Table of the Elements; elements, compounds, and mixtures; nomenclature and formula writing, chemical bonding, crystalling and molecular substances, reactions, equations, and calculations.

2278 Organic Chemistry **5 Clock Hours — 3 Credit Hours**

A study of carbon compounds and the fundamental theories and reactions of organic chemistry. Includes: the carbon atom and its valence electrons, hydrocarbons — chain and cyclic, structural formulae, organic acids and bases, group nomenclature and identification, polymerization and condensation reactions, crystallinity of polymers, thermoplastic and themosetting plastics.

2302 Plastic Technology **5 Clock Hours — 3 Credit Hours**

An introductory course to acquaint the student with plastics as a class of materials. Terminology, history, definitions, classes, properties, and application of materials. Class visits to industrial firms — supplemented by experts from industry. Comparative study of plastics as an engineering material — figure needs, areas of specialization, etc.

2303 Plastic Processes I **10 Clock Hours — 4 Credit Hours**

Designed to cover the areas of castings, compression and transfer, extrusion, and injection molding. Includes loading devices, core removal fixtures, cooling forms, process flow, press capabilities, etc., — all aspects necessary in application of these areas.

2304 Plastic Processes II **10 Clock Hours — 4 Credit Hours**

Reinforced and specialized plastic applications. Includes foam molding, filament winding, coatings, fiberglass lay-up, preform molding; introduces resins and ancilla materials, preimpregnation, heat treatment, catylysts, fillers, and core materials.

2305 Plastic Processes II **10 Clock Hours — 4 Credit Hours**

Thermoforming, blow molding, laminates, and foams. Instruction to cover materials, machines, procedures — to provide the student with all of the necessary shop knowledge of the procedures.

2306 Product Design **7 Clock Hours — 3 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.

2311 Statistical Quality Control

5 Clock Hours — 3 Credit Hours

Study of industrial practices of applying statistical methods to quality control. Practical applications of previous study of probability and statistics to industrial manufacturing quality control systems. Sampling techniques, chart control, effects of accelerated aging, heat, and cold, and cost consideration in quality planning.

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 Lab I
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 — 4 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

Lift, 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 touch-up paint; cleaning and corrosion controls, inspect and identify defects.

2605 Materials And Processes **5 Clock Hours — 2 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 and 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 **20 Clock Hours — 8 Credit Hours**

Apply theories of reciprocating engines during overhaul practices. Inspect and repair a 14-cylinder or larger radial engine. Overhaul an opposed cylinder engine. Apply theories of turbine engines during overhaul practices. Inspect, check, service, trouble-shoot and repair turbine engine ignition systems.

2614 Powerplant Lubrication **5 Clock Hours — 3 Credit Hours**

Identify and select proper lubricants. Repair powerplants lubrication systems. 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.

2911 Principles Of Accounting I **5 Clock Hours — 3 Credit Hours**

Principles and practices of basic accounting with practical application as related to other fields of business.

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.

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; tube bending, flaring, swaging, soldering, etc.

3202 Air Conditioning Principle I **7 Clock Hours — 3 Credit Hours**
Study of cooling towers, evaporative condensers, water treatment, care of towers, air cooled condensers, refrigeration safety devices, crankcase heaters, water chillers, and pumps. Laboratory experience to emphasize equipment, maintenance and trouble-shooting procedures.

3203 Air Conditioning Principle II **7 Clock Hours — 3 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 — 3 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 — 3 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; industrial ventilation; food preservation and storage; textile processing; low temperature applications; comfort air conditioning applied to transportation vehicles, etc. The requirments, limitations and standards involved in the many applications are investigated.

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.

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 hours) 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.

OTHER INFORMATION

ENTRANCE TEST DATES

All applicants for admission to the Cincinnati Technical Institute must take the required entrance examination before any decision on acceptance can be made. (See page 156 for complete outline of application procedures.)

The exam will be given at the Cincinnati Technical Institute, 3520 Central Parkway, Cincinnati, Ohio 45223, on the dates listed below.

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.

ENTRANCE TEST DATES
1971-72

For applicants planning to enter in the fall of 1971:

Saturday	November 13, 1971	8:30 a.m.
Saturday	February 12, 1972	8:30 a.m.
Saturday	April 15, 1972	8:30 a.m.
Friday	June 23, 1972	8:30 a.m.
Friday	August 4, 1972	8:30 a.m.

PROJECTED CALENDAR

	September 7	1A	3B
	November 15	1B	4A
1971-1972	January 31	2A	4B
	April 10	2B	5A
	June 19	3A	5B
	August 28	Vacation	
	September 5	3B	1A
	November 13	4A	1B
1972-1973	January 29	4B	2A
	April 9	5A	2B
	June 18	5B	3A
	August 27	Vacation	

*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.

STUDENT SCHEDULES

The academic year begins in early September and ends in late August. It consists of five ten-week sessions.

Each associate degree program lasts two full years and consists of ten sessions.

Five sessions are spent in school in a sequence of five academic terms; the alternating five sessions are spent in paid cooperative employment. (An exception is Aviation Technology which requires seven academic terms in order to meet the instructional requirements of the Federal Aviation Administration.)

Each class is divided into an "A" section and a "B" section which follow alternate schedules. In the chart below, sessions are designated by the month in which each begins. The Roman numeral indicates the academic term 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				
Session	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. Schedules for individual students are compacted to avoid undue delays between class assignments and to avoid long hours on campus unnecessarily.

Full time students spent 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.

IMPLICATIONS FOR DRAFT STATUS

The Cincinnati Technical Institute will report the enrollment status of all male students to their appropriate draft boards. Draft status for individual students can, of course, be determined only by Selective Service authorities in each instance. Full-time students doing satisfactory work in technical schools are generally classified 2A.

LIVING ACCOMMODATIONS

The Cincinnati Technical Institute has no student housing facilities of its own as it is primarily a "commuter" institution. However, for individuals living too far from the school 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 L. B. Harrison Club
2368 Victory Parkway
Cincinnati, Ohio 45202

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.

ADMISSIONS INFORMATION

General Admission Requirements

Applicants must meet the following qualifications:

1. High school graduation or equivalent standing in terms of aptitude and achievement tests.
2. Presentation of satisfactory recommendations.
3. Satisfactory scores on entrance examinations.
4. Physical qualifications to perform acceptably in field of training selected.
5. A personal interview with the coordinator of your selected program and/or an admissions counselor.

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. Get the necessary forms 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.) You will need an application form and two recommendation forms.
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 Institute; 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. Ask two adults who have observed your performance at school or at work to complete the recommendation forms and send them to The Cincinnati Technical Institute. If you have never worked, two adults from school will be sufficient.
5. 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 on a preceding page.
6. After you have completed these procedures, wait until you are con-

tacted by the coordinator for your selected area and/or the Admissions Office to arrange a pre-enrollment interview. This will not be done until your records contain the following items:

Application
Two references
High School transcript
Entrance examination scores

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 is later denied admission through failure (1) to acquire the necessary credits, (2) to be graduated from high school, or (3) to meet the physical and health requirements. It may be refunded if the applicant is called to active military duty.

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 either refund or 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 must submit an official transcript of his college record. Courses paralleling Cincinnati Technical Institute courses in which a student has achieved a grade of 'C' or better will be considered for credit.

ACADEMIC INFORMATION

Grading System

Academic standards are maintained at a high level. The following system is used to evaluate student achievement in each subject:

Grade	Quality	Points
A	Superior	4
B	Good	3
C	Average	2
D	Poor	1
F	Failing	0
Inc.	Incomplete	
Wd.	Withdrawn	
S	Satisfactory	
U	Unsatisfactory	

Grading System

Academic standards are maintained at a high level. The following system is used to evaluate student achievement in each subject:

Grade Reports

Grade 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 the school administration and special attention will be given those students to assist them in improving.

Dismissal

A student will be dismissed if his accumulative point-hour ratio is below any of the following levels:

Instruction exists in an adult atmosphere; there are few regulations. In the case of gross or repeated violations of the school's policies, the student will be dismissed.

Make-Up Work

Any student who has missed classwork should be given an opportunity to make it up. Students are reminded that make-up tests, since they must be "tailor-made" and therefore not designed for easy mass scoring, tend to be more difficult than the regular tests.

Academic Recognition

Students whose quality point averages for an academic term are 3.50 or higher receive special recognition for their superior work by being named to the Dean's List.

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.

FINANCIAL INFORMATION

Student Expenses

The Ohio Board of Regents provides a student subsidy to The Cincinnati Technical Institute for each Ohio resident enrolled. The amount received from the Regents equals about two-thirds of the Institute's operating costs. The other third must come from tuition payments. Out-of-state residents pay the highest amount of tuition since the Institute receives no Regent's subsidy for their instruction. (See Appendix for complete explanation of residence determination.)

TUITION CHARGES

Full-time Students	Per School Term	Per Co-op Term
Residents of the Cincinnati Technical Institute District	$125	$30
Out-of-district residents who live in Ohio	$150	$36
Out-of-district residents who live outside Ohio	$250	$60

Part-time Students	12-18 Credit Hours	Per Hour 11 Credit Hours or Less
Residents of Cincinnati Technical Institute District	Full Tuition	$10
Out-of-district residents who live in Ohio	Full Tuition	$12
Out-of-district residents who live outside of Ohio	Full Tuition	$20

Co-op Employment

Two to 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 no later than one week before the co-op term begins.

The tuition charges received for the credit hours granted for the Cooperative Employment Experience help to defray the expenses incurred by the school in securing co-op positions and providing services necessary for co-op employment.

Fees

Application	$10.
Late Registration Fee	$ 5.
Late Payment Fee	$ 5.
Identification Badge Fee	$ 2.
General Fee	$15. per term
Graduation Fee	$20.
Vehicle Registration Fee	$ 1.
Laboratory Fees	Variable

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 equipment at that time that they also use in later terms. The average range of expenses per term is $40-$60.

Refunds

Fees are not refundable. As a general rule, no tuition is refunded to students who withdraw before the end of the term. Exceptions to tuition charge refunds will be made only in cases where students are compelled to withdraw because of personal illness that is verified by a physician's statement.

Application for refund must be made by the student in writing on the proper form at the time of withdrawal.

The Director of Finance will be the final judge as to the validity of the request for tuition refund.

Tuition refunds, when allowed, shall be made on the following basis:

During the first week of term	80%
Second Week	60%
Third Week	40%
Fourth Week	20%

The Cincinnati Technical Institute reserves the right to revise this statement of tuition and fees at anytime.

No degree will be granted or grades released until all financial obligations are cleared.

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 still require financial assistance, there are a limited number of resources available:

1) **Loans** — Under the Ohio Student Loan Commission, some local banks grant guaranteed student loans. These are low-interest loans that are repayable after the student terminates his schooling.
2) **Ohio Instructional Grants** — This program is a financial aid program intended to assist Ohio students having exceptional financial need who are enrolled as undergraduates in an eligible Ohio institution of higher education. Grants are not awarded upon the basis of scholarship as such, but on the basis of relative financial need. The grants are awarded to the average as well as to the superior student.
3) A limited number of small scholarships is also available for qualified students with demonstrated financial need. Applicants who wish more information about financial aid are welcome to check in the Student Services Office, Room 207.

The Cincinnati Technical Institute is recognized and approved by the Veterans Administration. Veterans who qualify for V.A. education benefits are eligible to receive these benefits when attending Cincinnati Technical Institute.

COOPERATIVE EMPLOYMENT PROGRAM POLICIES

Participation in the program of cooperative employment is optional. Students who choose not to participate in it take elective courses to make up for the thirteen quarter credit hours which can be earned in cooperative employment and which are part of the degree requirements at Cincinnati Technical Institute. Since these elective credits can be earned in one quarter of classroom instruction, in effect the non-co-op student takes six quarters of academic instruction instead of the five quarters of academic instruction and the five quarters of employment taken by co-op students. This six quarter non-co-op program meets all of the academic requirements for the associate degree established by the Ohio Board of Regents. From an academic standpoint, the cooperative employment program is an alternative way of earning the thirteen credit hours of technical instruction.

Full time students who choose to participate in the co-op program are selected on the assumption that they will be immediately employable in a beginning job, hopefully related to the technology being studied. While such employment may be only of wage earning value at the very outset, it is expected that the student will merit more challenging job assignments very soon with the same employer, using his newly-acquired technical knowledge.

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 purposes of technical education.

Co-op students accepting co-op employment which does not serve the intended purpose as determined by the school may be asked to withdraw from the co-op program. A liberal interpretation of this regulation may be exercised during the early stages of enrollment, but all co-op students will be expected to find or accept employment directly related to the technology being studied after the second term in school.

While the Cincinnati Technical Institute 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 by the end of the second term in school will 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.

The above is not totally applicable to Aviation Technology students who spend their first four sessions in school taking four consecutive academic terms of the seven required in their program.

Transferability of Credits

The amount of credit that a graduate of the Cincinnati Technical Institute 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 reciving institution; (2) his academic record and promise of success; and (3) the policies of the receiving institution regarding graduation requirements and course requisites.

RESIDENCE OF STUDENTS

In determining whether or not an enrolled student at Cincinnati Technical Institute is an Ohio resident, a determination of fact shall be made in accordance with these standards:

1. A dependent student shall be considered to be a resident of Ohio if his or her parents or legal guardian have resided in Ohio for 12 consecutive months or more immediately preceding enrollment, or if his or her parents reside in Ohio at the time of enrollment and at least one of the parents is gainfully employed on a full-time basis in Ohio.
2. A student shall be considered to be an Ohio resident regardless of the place of residence of the parents or legal guardian at the time of enrollment if the student resides in Ohio and has resided in the state for 12 consecutive months or more immediately preceding enrollment and if the student presents satisfactory evidence that the parents or legal guardian have not contributed to his or her support during the preceding 12 months and do not claim him or her as a dependent for federal government income tax purposes.
3. A student shall be considered to be an Ohio resident regardless of the place of residence of the parents or legal guardian at the time of enrollment if the student is gainfully employed on a full-time basis and resides in Ohio, and is pursuing a part-time program of instruction and if there is reason to believe that the student did not enter Ohio primarily for the purpose of enrolling in an Ohio institution of higher education.
4. The residency status of a married student shall be determined without regard to the residency status of the student's spouse.
5. A person in military service or the dependent of a person in military service shall be considered to be a resident of Ohio during the period of time when that person is on active duty status in Ohio and has established a residence in Ohio.
6. A person who enters upon active duty status in the military service as a resident of Ohio and the dependent children of such a person shall be considered to be residents of Ohio if they provide proof of continued domicile in Ohio and of continued eligibility to vote in Ohio.
7. A student classified as a resident of Ohio whose parents or legal guardian move their residence to another state shall be considered to be a resident of Ohio until completion of the degree program in which the student is currently enrolled.
8. A student who at the time of enrollment enters the State of Ohio from another state for the primary purpose of enrolling in an Ohio institution of higher education shall be considered to be a non-resident student, and shall continue to be so considered during the period of continuous enrollment as a full-time student in an Ohio institution of higher education.

9. An alien student admitted to the United States on a student visa or other temporary visa shall be considered to be a non-resident student. An alien holding an immigrant visa may establish Ohio residency in the same manner as a citizen of the United States.
10. A student classified as a non-resident student may appeal the classification to an appropriate officer or administrative panel duly constituted by an institution of higher education and may be reclassified as a resident of Ohio if:
    a. the dependent student presents conclusive evidence that his or her parents or legal guardian have established a residence in Ohio and at least one of the parents is gainfully employed on a full-time basis in Ohio;
    b. the student, in addition to demonstrating financial independence from parents, presents clear and convincing evidence of exceptional circumstances justifying a change in classification because of having established a separate residence in Ohio for 12 months or more preceding the request for reclassification and because of having made a definite commitment to enter into gainful employment in Ohio upon completion of a degree program within the ensuing 12 months.

ADMINISTRATIVE OFFICERS

Clifford R. House, B.S., M.Ed. . . . . President

Frederick B. Schlimm, B.S., M.Ed. . . . . Vice President

Charles E. Warman, B.S., M.Ed. . . . . Director of Research, Planning and Information

Eugene T. Wieland, B.B.A., M.B.A. . . . . Director of Finance

Robert Gillespie . . . . . Associate Director of Finance

Irvin C. Kuehn, B.S., M.A. . . . . Director of Auxiliary Services

Nick Visnic, A.B., M.A. . . . . Director of Continuing Education

Eleanor Bonner, B.S., M.A. . . . . Associate in Student Services

DEPARTMENT CHAIRMEN

Robert Craigo, B.S., M.S. . . . . Chairman, Department of Engineering Technologies; Department of Industrial Technologies

Clyde Kobberdahl, B.S., M.Ed. . . . . Chairman, Department of Business Technologies

John Lalley, B.S. . . . . Chairman, Department of General Education

Nancy Walters (Mrs.), B.A., Reg. M.T., (ASCP) . . . . . Chairman, Department of Allied Health

FACULTY

Dr. Christos N. Athanasiadis, M.D., Ph.D. . . Instructor — Health Technologies

Helen Ball (Mrs.), B.S. . . . . Instructor — Business, Health Technologies

Carmen Battistone, B.S., M.Ed. . . . . Instructor — Communication Skills — Social Science

Johnnie Boggio (Mrs.) B.S., M.Ed. . . . . Instructor — Business Technologies

Stewart Bonem, B.A., M.BA. . . . . Instructor — Business Technologies

James T. Brown, B.S., M.Ed. . Coordinator — Electro-Mechanical Technology

Jerome X. Cozart . . . . . Instructor — Graphic Communications Technology

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Elmer Flamm, A.B., M.Ed. . . . . Instructor — Communication Skills

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Hal G. Funk, B.S., M.Ed. . . . . Coordinator — Electronics

J. Alfred Gratton, B.B.A., M.B.A. . . . . Instructor — Business Technologies

Marcus Green, B.S. . . . . Instructor — Communication Skills

Fred Hartzel, B.S. . . . . Coordinator — Restaurant Management

Harry Heink, B.A., M.Ed. . . . . Instructor — Communication Skills

James A. Howard . . . . . Coordinator — Electronics

Alvena Ivey, R.N. . . . . Coordinator — Medical Assisting

Deanna James, B.S. (Reg. M.T. (ASCP) . . . Instructor — Health Technologies

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Harold Jones, B.S., M.Ed. . . . . Instructor — Engineering Technologies

Michael Jones, B.F.A. . . . . Instructor — Communication Skills

Robert Keck, A.S. (A & P License) . . . . . Instructor — Aviation Technology

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Bernadette Kell, B.S., M.A. . . . . Instructor — Business Technologies

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- Secretarial Technology

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- Electronics Technology
- Industrial Engineering Technology
- Mechanical Design Technology

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- Medical Record Technology

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- Surgical Assisting Technology
- Urologic Assisting Technology

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- Automotive Service Management Technology
- Aviation Technology
- Graphic Communications Technology
- Plastics Technology