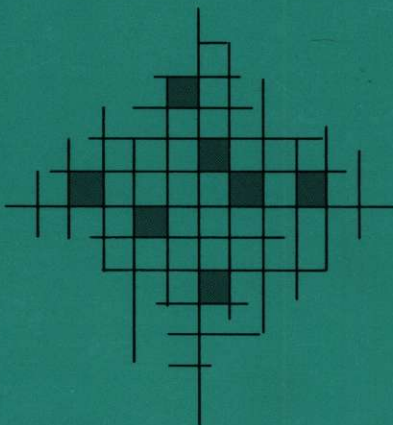


YOUR · COLLEGE · FOR · CAREERS

N · T · I · D

COURSES



1988-89

The National Technical Institute for the Deaf at Rochester Institute of Technology

Quick Reference Telephone Directory

	Voice	TDD
Career Development Programs Administration	475-6314	2181
Career Outreach and Admissions	6700	6173
Communication Programs	6300	6300
Division of Public Affairs.	6824	6824
Educational Support Services Programs.	6433	6433
Financial Aid - RIT.	2186	6909
General Education Programs	6297	6297
Housing - RIT.	2572	2113
Institute Director.	6418	6418
Intercom Office.	4065	4591
NTID Main Phone.	6400	2181
Residence Halls 24-Hour Desk	6149	2894
School of Business Careers.	2993	2993
School of Science and Engineering Careers.	6270	6838
School of Visual Communication Careers.	6756	6367
Technical Assistance Programs Administration	6302	6302
Visitors:		
Prospective Students.	6318	6318
All Others.	6405	2181
VR Billing Coordinator.	2080	2960

Accreditation

The Institute is chartered by the legislature of the State of New York and accredited by the Middle States Association of Colleges and Schools. In addition to institutional accreditation, some curricula are accredited by appropriate professional accreditation bodies.

This bulletin was produced by the National Technical Institute for the Deaf (NTID) at Rochester Institute of Technology (RIT) through an agreement between RIT and the U.S. Department of Education.

RIT admits and hires men and women, veterans and disabled individuals of any race, color, national or ethnic origin, or marital status, in compliance with all appropriate legislation, including the Age Discrimination Act.

Academic Calendar 1988-89

	Day College- Open Registration	Classes Begin	Last Day of Classes	Exam Week	No Classes
SVP	July 28-31 (move-in and orientation)	Aug. 1	Aug. 26		
Fall Quarter	Aug. 31 (new and returning students)	Sept. 1	Nov. 9	Nov. 11-15	Nov. 17-27
Winter Quarter	Nov. 28	Nov. 29	Feb. 20	Feb. 22-25	Dec. 19- Jan. 2 Feb. 26-March 5
Spring Quarter	March 6	March 7	May 15	May 16-19*	May 21-28
Summer Quarter		May 30	Aug. 8	Aug. 10-12	July 4

*Commencement - May 20, 1989

Introduction

This course bulletin provides course listings and examples of typical course sequences for students enrolled in programs at the National Technical Institute for the Deaf at Rochester Institute of Technology. It is meant to be used in conjunction with the *1988-90 NTID Catalog*. For more detailed information about academic policies/rules, financial aid, placement statistics, and academic programs, consult the *Catalog*.

About This Bulletin

This course bulletin does not constitute a contract between Rochester Institute of Technology (RIT) and the students who are admitted to the National Technical Institute for the Deaf (NTID) on either a collective or individual basis. It represents RIT's best academic, social, and financial planning for NTID at the time it was published. In order to keep programs current and relevant, course and curriculum changes, modifications of tuition, fee, dormitory, meal, and other charges, plus unforeseen changes in other aspects of RIT life sometimes occur after the bulletin has been printed, but before the changes can be incorporated in a later edition of the same publication. Because of this, RIT does not assume a contractual obligation with NTID students for the contents of this bulletin.

For more information concerning other programs of study at RIT, write or phone:

Rochester Institute of Technology
National Technical Institute
for the Deaf
Department of Career Outreach
and Admissions
One Lomb Memorial Drive
Post Office Box 9887
Rochester, New York 14623-0887

(716) 475-6700 (Voice)
475-6173 (TDD)

Placement

Historically, more than 95 percent of NTID's graduates entering the labor force have found jobs. Eighty percent work in business and industry; 15 percent in government; and five percent in education. Of those who were not seeking employment, more than 93 percent continued their education. The rest are homemakers, permanently not looking for employment, or temporarily not looking for employment. Graduates are employed nationwide in a variety of positions. For more information about NTID's placement statistics, consult the *1988-90 NTID Catalog* or contact the Division of Career Opportunities at NTID.

Attrition

Attrition is that percentage of a class that withdraws from the college within five years from entering, without receiving any degree. When compared with a national sample of two- and four-year public and private institutions with varying selectivity criteria, NTID's attrition rate of 48 percent emerges in a relatively average position.

Financial Aid

NTID students received more than \$4 million in financial aid in FY88. The average award per student was \$2,141. The types of aid received include the NTID Grant-in-Aid; Vocational Rehabilitation Assistance; Pell Grants; State Grants; State Loans; National Direct Student Loans; private scholarships; NTID Alumni Scholarships; and College Work-Study Programs. For more detailed information about financial aid, contact the NTID Financial Aid Office.

Rochester Institute of Technology
Student Financial Aid Office
RIT/NTID Financial Aid Counselor
One Lomb Memorial Drive
Post Office Box 9887
Rochester, New York 14623-0887
(716) 475-2186 (Voice)
475-6909 (TDD)

Course Descriptions

School of Business Careers

Applied Accounting	3
Business Occupations/Business Technology/Office Technologies	5
Data Processing	9

School of Science and Engineering Careers

Architectural Technology.	13
Biology.	16
Chemistry.	16
Civil Technology.	17
Electromechanical Technology.	19
Industrial Drafting Technology.	21
Manufacturing Processes.	24
Medical Laboratory Technology.	26
Medical Record Technology.	28
Numerical Control.	29
Optical Finishing Technology.	30
Technical Mathematics.	33
Technical Physics.	34

School of Visual Communication Careers

Applied Art	35
Photo/Media Technologies.	38
Printing Production Technology.	43

Division of Educational Support Services Programs

Educational Interpreting	46
------------------------------------	----

Division of General Education Programs

General Education.	49
Theater.	52

Pre-Baccalaureate Studies

College of Science Courses.	53
-------------------------------------	----

Speech, Language, and Hearing Center

Audiology.	56
English	58
Sign Communication	61
Speech-Language	62
Technical and Integrative Communication Studies.	64

Course Numbering

Each course is identified by its title and two numbers.

The **alpha-numeric course number** that appears before the course descriptions in each discipline in other RIT course bulletins is the official RIT course number. This number will appear on grade reports, transcripts, and other official correspondence. It means:

First letter: College offering the course

Second and third letters: School or department of that college

Fourth letter: Discipline of interest

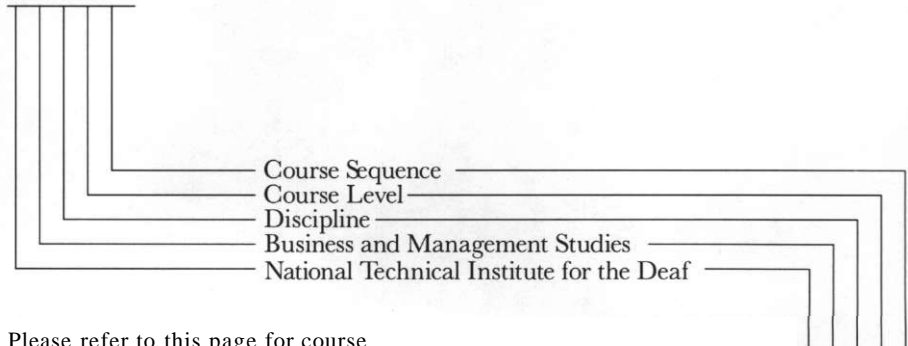
First number: Course level: 0 = Non-credit; 1 = Diploma; 2 or 3 = Lower level degree courses

Second and third numbers: Course differentiation and sequencing

Directly below the course title in the course description in this catalog is the **registration number**. You must use this number when you register for a course because the Institute's computer cannot read the alpha-numeric number.

Course Number

NBTA-201



Please refer to this page for course numbering information on all programs in this catalog.

0801-201

Registration Number

COURSES

School of Business Careers

Applied Accounting

Career Exploration: Accounting Registration #0801-100

This course is designed to help students collect the information necessary to make an appropriate decision regarding a career in accounting. Students learn about the nature of accounting jobs, work environments, career options, and program requirements through a combination of group and individual activities that include presentations by faculty and related professionals, panel discussions, field trips, class observations, and student interviews.

CLASS 1, CREDIT 1 (F, W, S)

General Accounting I Registration #0801-201

This course is an introduction to accounting for both accounting and non-accounting majors. Topics covered are the basic accounting equation, the recording of transactions using debits and credits, general and subsidiary ledgers, and the accounting cycle, including recording transactions for service and merchandising enterprises in general and specialized journals, preparing trial balances, adjusting and closing processes, and preparing basic financial statements. Spreadsheet applications are used on microcomputers.

CLASS 6, CREDIT 3 (F)

General Accounting II Registration #0801-202

This course is a continuation of General Accounting I for both majors and non-majors. Topics covered include the calculation of interest on notes and the discounting of notes, adjustment for uncollectable accounts, merchandise inventory systems and calculations, depreciation or amortization of assets, internal control, and the voucher system. Coursework includes a practice set that applies accounting concepts in a simulated business situation. Spreadsheet applications are used on microcomputers.

CLASS 6, CREDIT 3 (W)

PREREQUISITE: Grade of C or better in 0801-201

Fundamentals of Economics I, II Registration #0801-231, 232

This two-course sequence gives an overview of micro- and macroeconomic concepts. Students examine economic problems in a rational manner by learning the fundamental processes of economic analysis and the skills of economic reasoning regarding phenomena in our world. The course includes selected knowledge and skills from the economic discipline presented in the form of concepts and understandings deemed most important to economic literacy for students.

CLASS 3, CREDIT 3 (0801-231-W, 0801-232-S)

PREREQUISITES: Applied Accounting Associate student standing and 0804-101

Applied Accounting: Diploma

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0804-101	Orientation to Business	3
0804-111	Beginning Typing I	2
0804-211	Business Procedures I	3
0817-120	Basic Mathematics	3
0847-101	Job Search Process	1
	English	4
		16

Winter Term

		Cr. Hrs.
0804-110	Business English	3
0804-112	Beginning Typing II	2
0804-212	Business Procedures II	3
0847-100	Freshman Seminar	2
	Communication	2
	English	4
	Physical Education	0
		16

Spring Term

		Cr. Hrs.
0804-113	Beginning Typing III	2
0804-213	Business Procedures III	3
0817-140	Fundamentals of College Mathematics I	3
	Communication	2
	English	4
	Physical Education	0
		14

Summer

0801-299 Co-op Work Experience

Second Year

0801-201	General Accounting I	3
0804-221	Advanced Typing I	3
0804-284	Fundamentals of Management	3
0817-141	Fundamentals of College Mathematics II	3
	Communication	2
	English	4
	Physical Education	0
		18

0801-202	General Accounting II	3
0802-210	Data Processing for Business Occupations (Accounting)	3
	General Education Course Elective	2
	Communication	2
	English	4
		14

0801-251	Applied Accounting I	4
0804-286	Fundamentals of Marketing or	3
0847-147	Law and Society	2
0847-102	Life After College	1
	General Education Course Elective (optional)	2
	Communication	2
	English Elective	4

13-16

Applied Accounting I
Registration #0801-251

This course for accounting majors is a continuation of General Accounting I and II. Topics covered include a computerized review of the accounting cycle and financial reports, the components of a payroll system, the calculation and recording of employee earnings and employer payroll taxes, and the recording and adjusting of deferrals and accruals. Coursework includes a computerized practice set designed to summarize General Accounting I and II and Applied Accounting I in a simulated business situation.
 CLASS 6, CREDIT 4 (S)
 PREREQUISITE: Grade of C or better in 0801-202

Applied Accounting II
Registration #0801-252

This course introduces students to cost accounting with an emphasis on job order costing. Topics covered include manufacturing statements; cost theory; and integration of materials, labor, and overhead to the computerized job cost situation. The course culminates with practical application of course content through a practice set. Computer applications include spreadsheets.
 CLASS 6, CREDIT 4 (F)
 PREREQUISITE: Grade of C or better in 0801-251

Applied Accounting III
Registration #0801-253

This course is a continuation of cost accounting, with particular concentration on process and managerial aspects of cost accounting. Topics covered include average and FIFO process costing methods, equivalent units, multiple products, changes in units, standard costing, budgeting, cost classification, and computerized applications. Computer applications include spreadsheets, graphics, and data base.
 CLASS 6, CREDIT 4 (W)
 PREREQUISITE: Grade of C or better in 0801-252

Applied Accounting IV
Registration #0801-254

This course consists of managerial accounting topics and concepts. Topics covered include financial analysis, accounting concepts and principles, statement of changes in financial position, corporate accounting, and partnership accounting. Computer applications include spreadsheets.
 CLASS 6, CREDIT 4 (S)
 PREREQUISITE: Grade of C or better in 0801-253

Applied Accounting Techniques
Registration #0801-260

This course gives students an opportunity to reinforce and apply accounting topics and skills previously studied. Students work in a simulated accounting office as accounting clerks and perform a variety of general and process costing duties. Computer applications include cost accounting, general ledger, spreadsheets, graphics, and data base.
 CLASS 6, CREDIT 2 (S)
 PREREQUISITE: Grade of C or better in 0801-253

Applied Accounting: A.A.S. Degree

Typical Course Sequence

Fall Term

First Year

	Cr. Hrs.
0804-101 Orientation to Business	3
0804-111 Beginning Typing I	2
0804-211 Business Procedures I	3
0817-120 Basic Mathematics	3
0847-101 Job Search Process English	1 4
	16

Winter Term

	Cr. Hrs.
0804-110 Business English	3
0804-112 Beginning Typing II	2
0804-212 Business Procedures II	3
0847-100 Freshman Seminar	2
Communication	2
English	4
Physical Education	0
	16

Spring Term

	Cr. Hrs.
0804-113 Beginning Typing III	2
0804-213 Business Procedures III	3
0817-140 Fundamentals of College Mathematics I	3
Communication	2
English	4
Physical Education	0
	14

Summer

0801-299 Co-op Work Experience

Second Year

0801-201 General Accounting I	3
0804-221 Advanced Typing I	3
0804-284 Fundamentals of Management	3
0817-141 Fundamentals of Colleg Mathematics II	3
Communication	2
English	4
Physical Education	0
	18

0801-202 General Accounting II	3
0802-210 Data Processing for Business Occupations (Accounting)	3
General Education Course Elective	2
Communication	2
English	4
	14

0801-251 Applied Accounting I	4
0804-286 Fundamentals of Marketing	3
0817-142 Fundamentals of College Mathematics III	3
Liberal Arts	4
Communication	2
	16

Summer

0801-299 Co-op Work Experience

Third Year

0801-252 Applied Accounting II	4
Liberal Arts	4
Liberal Arts	4
	12

0801-231 Economics I	3
0801-253 Applied Accounting III	4
0847-147 Law and Society	2
Liberal Arts	4
	13

0801-232 Economics II	3
0801-254 Applied Accounting IV	4
0801-260 Applied Accounting Techniques	2
0847-102 Life After College	1
Liberal Arts	4
General Education Course Elective	2
	16

Co-op Work Experience
Registration #0801-299
 CREDIT 0 (Su)

Independent Study
Registration #0801-399
 CREDIT Variable

Business Occupations / Business Technology/Office Technologies

Career Exploration: Office Technologies Registration #0804-100

This course is designed to help students collect the information necessary to make an appropriate decision regarding a career in Office Technologies. Students learn about the nature of office practice and procedures, work environments, career options, and program requirements through a combination of group and individual activities that include presentations by faculty and related professionals, panel discussions, field trips, class observations, and student interviews.

CLASS 1, CREDIT 1 (F, W, S)

Orientation to Business Registration #0804-101

This course is a broad overview of the form and structure of American business. It provides students with a basic knowledge of the history, organization, and operation of business and its particular vocabulary. Students use a microcomputer in a market simulation.

CLASS 3, CREDIT 3 (F, W, S)

Payroll Records Management Registration #0804-108

This course provides practical working knowledge and skills necessary to perform the various recordkeeping, calculating, and reporting activities associated with payroll systems. Students perform both manual and automated (using microcomputers) payroll recordkeeping procedures.

CLASS 4, CREDIT 2 (F, S)
PREREQUISITE: Data Processing diploma status

Business English Registration #0804-110

This self-paced course provides proofreading and editing skills as they relate to typewritten communications. Course content includes rules for word division, capitalization, numbers, abbreviation style, spelling, and personal business letter writing. This course is designed specifically for students enrolled in courses in the Business Occupations Department.

CLASS 3, CREDIT 3 (W, S)

0804-111	Beginning Typing I	2	0804-101	0804-110
0804-211	Business Procedures I	3		0804-113
0817-120	Basic Mathematics	3	0804-112	0804-213
0847-101	Job Search Process	1	0804-212	
	Communication	2	0847-100	
	English	4		
		15		

Summer

0804-299 Co-op Work Experience

Second Year

0804-221	Advanced Typing I	3	0804-222	Advanced Typing II	3
0847-147	Law and Society	2	0847-102	Life After College	1
	Communication	2		Communication	2
	English	4		English	4
	General Education			General Education	
	Course Elective* or			Course Elective*	2
	Business Elective"	2			12
		13			

"Recommended General Education Courses for Business Majors

0847-106	Personal Finance	2
0847-110	Personal Development	2
0847-126	Leadership	
	Development	2
0847-129	Assertiveness Training	2
0847-162	The World of Work	1
0847-163	Interpersonal Relationships on the Job	2

"Recommended Business Electives

0801-201	General Accounting	3
0804-284	Fundamentals of	
	Management	3
0804-286	Fundamentals of	
	Marketing	3

Beginning Typing I, II, III
Registration #0804-111, 112, 113

These courses are for students with limited typing experience and for those who type below 30 net words per minute. The courses focus on keyboard training, established methods to improve rhythm and stroking patterns, and techniques to develop speed and accuracy on a microcomputer and an electric typewriter. Various typing formats and business correspondence will be presented. Students are expected to exit Beginning Typing II with a net speed of 20 words per minute for five minutes and to exit Beginning Typing III with a net speed of 30 words per minute for five minutes.

CLASS 5, CREDIT 2 (F, W, S)

PREREQUISITES: Grade of C or better in: 0804-111 for 0804-112
 0804-112 for 0804-113

Key boarding

Registration #0804-114

This course is offered to students who possess 0-20 words per minute keyboarding speed. The focus of the course is to facilitate inputting of alphabetic, numeric, and other character information on a microcomputer and on an electric typewriter using a standard keyboard. Students are expected to exit this course with a keyboarding speed of 25 words per minute for three minutes. This course is open to all NTID students.

CLASS 4, CREDIT 2 (F, W, S)

Introduction to Data Processing

Registration #0804-124

This course gives students a background in data processing. It presents the concepts and techniques in the processing of data, and is directed to the needs and requirements of students.

CLASS 2, CREDIT 2 (F, W, S)

Business Procedures I, II, III

Registration #0804-211, 212, 213

This sequence of courses develops basic skills in current business procedures related to the basic general office function. Skills include the use of electronic mail; current records management systems; the correct use of business machines; introduction of the accounting equation; and the manual and automated computerized keeping of payroll records, accounts receivable, and accounts payable records using Lotus 1, 2, 3 software. The learner develops skills that are applicable to a variety of office settings.

CLASS 5, CREDIT 3 (0804-211-F, 0804-212-W, 0804-213-S)

Business Technology: A.O.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.			
0804-101	Orientation to Business	3	0804-110	Business English	3	0804-113	Beginning Typing III	2
0804-111	Beginning Typing I	2	0804-112	Beginning Typing II	2	0804-213	Business Procedures III	3
0804-211	Business Procedures I	3	0804-212	Business Procedures II	3	0817-140	Fundamentals of College Mathematics I	3
0817-120	Basic Mathematics	3	0847-100	Freshman Experience	2		Communication	2
0847-101	Job Search Process	1		English	4		English	4
	Communication	2		Physical Education	0		Physical Education	0
	English	4			16			14
		18						

Summer

0801-299 Co-op Work Experience

Fall Term

Winter Term

Spring Term

Second Year

0801-201	General Accounting I	3	0801-202	General Accounting II	3	0801-251	Applied Accounting I	4
0804-221	Advanced Typing	3	0802-210	Data Processing for Business Occupations	3	0804-301	Word Processing I	4
0804-284	Fundamentals of Management	3	0862-144	Clear Thinking and Writing	4	0862-189	Professional Writing	3
0817-141	Fundamentals of College Mathematics II	3		Communication	2		General Education	3
	English	4			12			14
		16						

Summer

0801-299 Co-op Work Experience

Third Year

0801-252	Applied Accounting II	4	0801-253	Applied Accounting III	4	0801-260	Applied Accounting Techniques	2
0804-302	Word Processing II	4	0804-291	Applied Business Techniques	2	0804-286	Fundamentals of Marketing	3
0847-147	Law and Society	3	0847-167	The Human Experience: The Individual and Society	4	0847-102	Life After College	1
0847-166	The Human Experience: An Individual Life	4		Communication	2	0847-168	The Human Experience: The Individual and Technology	4
		15			12		Communication	2
								12

Advanced Typing I

Registration #0804-221

The emphasis of this course is on the improvement of basic skills and their application to a variety of realistic office projects. Students type correspondence, reports, manuscripts, business forms, and tabulations on a microcomputer and on an electric typewriter. Applied Accounting and Office Technologies students are expected to exit with a net speed of 40 words per minute for five minutes.

CLASS 5, CREDIT 3 (F, W, S)

PREREQUISITE: Grade of C or better in 0804-113

Advanced Typing II

Registration #0804-222

This course emphasizes advanced typing skills and their application on a micro-computer. Students complete several projects related to departments such as sales, government, executive, general, and word processing. Students must exit with a net speed of 50 words per minute for five minutes.

CLASS 5, CREDIT 3 (F, W, S)

PREREQUISITE: Grade of C or better in 0804-221

Office Technologies Seminar**Registration #0804-230**

This course gives students an opportunity to prepare for employment through field trips, mentoring, and guest lectures. Topics for discussion are identified by students enrolled in the seminar. Topics covered may include time management, career development, and personal/social development skills necessary for job success. Students are expected to participate in planning class sessions.

CLASS 4, CREDIT 2 (S)

PREREQUISITE: Office Technology Diploma status

Fundamentals of Management**Registration #0804-284**

This course focuses on theory and practice basic to the management process. Students use case studies, lectures, and simulations to study the planning, organizing, directing, staffing, and controlling functions. The course also introduces students to motivation and leadership theory as it relates to the role of a manager.

CLASS 3, CREDIT 3 (F, W)

PREREQUISITE: 0804-101

Fundamentals of Marketing**Registration #0804-286**

This course is an introduction to the field of marketing and its strategy. Topics include consumer behavior and its effect in the marketplace, product research and planning, pricing, distribution channels, marketing institutions, advertising and promotion, and organization.

CLASS 3, CREDIT 3 (S)

PREREQUISITE: 0804-101

Small Business Organization and Management**Registration #0804-290**

This is an elective course designed for business students but available to students from another technical major who have completed the prerequisites and who have a desire to learn entrepreneurial skills for starting a business. Each student will write a business plan describing a selected business.

CLASS 4, CREDIT 3 (S)

PREREQUISITES: 0801-201 and 0804-284 or 0804-286

Applied Business Techniques**Registration #0804-291**

This course gives students an opportunity to review skill-oriented coursework on a micro-computer and electric typewriter prior to graduation and job entry. Skill review includes production and speed typing, business machines, payroll procedures, records management techniques, and word processing operations and applications using various word processing software packages.

CLASS 3, CREDIT 2 (S)

PREREQUISITE: 0804-302

Co-op Work Experience**Registration #0804-299**

CREDIT 0(Su)

Office Technologies: Diploma**Typical Course Sequence****Fall Term****First Year**

	Cr. Hrs.
0804-101 Orientation to Business	3
0804-111 Beginning Typing I	2
0804-211 Business Procedures I	3
0817-120 Basic Mathematics	3
0847-101 Job Search Process English	1 4
	16

Winter Term

	Cr. Hrs.
0804-112 Beginning Typing II	2
0804-212 Business Procedures II	3
0817-140 Fundamentals of College Mathematics I	3
0847-100 Freshman Seminar Communication English	2 2 4
Physical Education	0
	16

Spring Term

	Cr. Hrs.
0804-110 Business English	3
0804-113 Beginning Typing III	2
0804-213 Business Procedures III	3
Communication English	2 4
Physical Education	0
	14

Summer

0804-299 Co-op Work Experience

Second Year

0801-201 General Accounting I	3
0804-221 Advanced Typing I	3
0804-284 Fundamentals of Management Communication English	3 2 4
	15

0801-202 General Accounting II	3
0802-210 Data Processing for Business Occupations	3
0804-222 Advanced Typing II Communication English	2 3 4
Physical Education	0
	15

0804-230 Office Technologies Seminar	2
0804-286 Fundamentals of Marketing or	3
0804-301 Word Processing I	4
0847-102 Life After College	1
0847-147 Law and Society Communication English Elective General Education Course Elective	2 2 4 2

17-18

Word Processing I**Registration #0804-301**

This course provides an introduction to basic word processing concepts and a discussion of various types of word processing office systems and procedures. Students will perform basic applications using an IBM Displaywriter word processing system. Students will create, revise, format, and print one- and two-page documents using magnetic disk storage.

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE: 0804-222

Word Processing II**Registration #0804-302**

This self-paced course provides a continuation of the word processing concepts and applications presented in Word Processing I. Using the IBM Displaywriter system, students will prepare multi-page documents, develop supplemental dictionaries, utilize the system's global function, and produce repetitive correspondence using advanced formatting procedures.

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE: 0804-301

Word Processing III
Registration #0804-303

This self-paced course provides a continuation of the word processing concepts and applications presented in Word Processing II. Using the IBM Displaywriter system, students will create and revise documents using indented format procedures and type style changes. Students also will create and revise tables containing numbers and text.
 CLASS 4, CREDIT 4 (F, W, S)
 PREREQUISITE: 0804-302

Word Processing IV
Registration #0804-304

This self-paced course contains the concepts and applications for creating, maintaining, and printing files. Using the IBM Displaywriter system and microcomputers, students will use files to create repetitive letters, lists, and reports. Students also will be exposed to advanced files.
 CLASS 4, CREDIT 4 (F, W, S)
 PREREQUISITE: 0804-303

Office Typesetting Methods
Registration #0804-310

This elective course, for students specializing in Office Technologies, provides an introduction to the field of typesetting and telecommunications, utilizing word processing, phototypesetting, and microcomputer equipment. Students create documents on word processing equipment and electronically transmit them via the VAX/VMS computer system to the NTID Printing Department where they are converted into typeset copy on phototypesetting equipment. Current typesetting software programs that provide a working knowledge of microcomputer-based desktop typesetting also are introduced. In addition to required projects, students select and design documents of their choice.
 CLASS 4, CREDIT 3 (F, S)
 PREREQUISITES: 0804-302 and English Composition

Independent Study
Registration #0804-399
 CREDIT Variable

Office Technologies: A.A.S. Degree

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0804-101	Orientation to Business	3
0804-111	Beginning Typing I	2
0804-211	Business Procedures I	3
0817-120	Basic Mathematics	3
0847-101	Job Search Process English	1 4
		16

Second Year

0804-201	General Accounting I	3
0804-221	Advanced Typing I	3
0804-284	Fundamentals of Management	3
	Communication	2
	English	4
		15

Third Year

0804-302	Word Processing II	4
0847-147	Law and Society	2
	General Education	
	Course Elective	2
	Liberal Arts	4
		12

Winter Term

		Cr. Hrs.
0804-112	Beginning Typing II	2
0804-212	Business Procedures II	3
0817-140	Fundamentals of College Mathematics I	3
0847-100	Freshman Seminar	2
	Communication	2
	English	4
	Physical Education	0
		16

Summer

0804-299 Co-op Work Experience

0801-202	General Accounting II	3
0802-210	Data Processing for Business Occupations	3
0804-222	Advanced Typing II	3
	Communication	2
	English	4
	Physical Education	0
		15

Summer

0804-299 Co-op Work Experience

0804-303	Word Processing III	4
	Liberal Arts	4
	Liberal Arts	4
		12

Spring Term

		Cr. Hrs.
0804-110	Business English	3
0804-113	Beginning Typing III	2
0804-213	Business Procedures III	3
0817-141	Fundamentals of College Mathematics II	3
	Communication	2
	English	4
	Physical Education	0
		17

0804-230	Office Technologies Seminar	2
0804-286	Fundamentals of Marketing	3
0804-301	Word Processing I	4
	Communication	2
	Liberal Arts	4
		15

0804-291	Applied Business Techniques	2
0804-304	Word Processing IV	4
0847-102	Life After College	1
	General Education	
	Course Elective	2
	Liberal Arts	4
		13

Data Processing

Note: Required laboratories may fall during evening hours or on Saturdays.

Introduction to Data Processing
 Registration #0802-100
 This course provides an overview of the fields of business data processing and computer science. It is intended for students who need skill development prior to full entry into the in-depth data processing major courses. Logic skill development and the use of microcomputers are emphasized.
 CLASS 3, CREDIT 2 (F)

Introduction to Business Programming
 Registration #0802-101
 This course introduces students to the function of programming the computer. Using microcomputers, students learn to read, analyze, flowchart, and program various business applications. The course is the foundation for future programming courses and has a strong emphasis on developing logic skills.
 CLASS 4, CREDIT 3 (F, W, S)

PREREQUISITES: Michigan Test score of 55 or California Reading Test score of 7.5 and 0817-122

Career Exploration — Data Processing
 Registration #0802-105
 This course is designed to help students collect the information necessary to make appropriate decisions about possible careers in data processing. Students are given opportunities to explore their interest in data processing through a combination of hands-on experiences with computers, presentations by faculty and outside professionals, field trips, class observations, and student/faculty interviews. The course offers a unique integration of technical instruction and career counseling that enhances students' decision-making and career-planning abilities.
 CLASS 3, CREDIT 2 (F, W, S)

On-Line Processing/Programming
 Registration #0802-120
 In this course, students learn to build, edit, and list fields on computer terminals. Other topics include types of files, compiling, linking, and running programs on-line. This course is required for most programming courses that use the RIT computer.
 CLASS 2, CREDIT 2(F)
 PREREQUISITE: 0802-101

Data Processing Technical Communications
 Registration #0802-125
 In this course, students learn to read and write technical manuals, forms, instructions, and other types of communication used in the field of data processing.
 CLASS 2, CREDIT 2 (F, W, S)
 PREREQUISITES: California Reading Score of 7.5 and 0802-157

Data Processing: Certificate

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0802-100	Introduction to Data Processing	2
0802-157	Beginning Computer Operations	1
0802-158	Laboratory	1
0817-140	Fundamentals of College Mathematics I	3
0847-101	Job Search Process Communication English	1 2 4
		14

Second Year

0802-125	Data Processing Technical Communications	2
0802-162	Computer Console Operations	1
0817-142	Fundamentals of College Mathematics III	3
	Business Elective	2
	Communication	2
	English	4
	Physical Education	0
		14

Winter Term

		Cr. Hrs.
0802-170	Utilities/JCL for Computers	2
0804-101	Orientation to Business	3
0817-141	Fundamentals of College Mathematics II	3
0847-100	Freshman Seminar English	2 4
		14

Summer

0802-299	Co-op Work Experience	
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Spring Term

		Cr. Hrs.
0802-101	Introduction to Business Programming	3
0802-161	Business Computers Systems Facilities	2
0847-102	Life After College Communication English	1 2 4
		12

**Beginning Computer Operations
Registration #0802-157**

This course provides students with an understanding of the operation of modern computers. Peripheral devices, such as the CPU and off-line equipment, are introduced.
CLASS 1, CREDIT 1 (F, W)
COREQUISITE: 0802-158

**Beginning Computer Operations
Laboratory
Registration #0802-158**

The student is given hands-on experience with one or more computer systems.
LAB 2, CREDIT 1 (F, W)
COREQUISITE: 0802-157

**Business Computer Systems Facilities
Registration #0802-161**

In this course, students study business computer systems. Topics covered include terminology used for hardware and software components and an introduction to concepts such as systems control programs, multi-programming, storage management, and library support. Initial discussions also are conducted on spooling and software creation.
CLASS 2, LAB 1, CREDIT 2 (S)
PREREQUISITE: 0802-101 or concurrent, 0802-157

**Computer Console Operations
Registration #0802-162**

This course is designed to acquaint students with the operator's work area and initial functions. Indicator lights, the console control panel, and the keyboard are discussed. Course content covers the start-up of the computer (from power on) to the point where the operating system takes over.
CLASS 1, LAB 1, CREDIT 1 (F)
PREREQUISITE: 0802-161

**Utilities/JCL for Computers
Registration #0802-170**

In this course, students learn the use of utilities as applicable to the operations environment. The writing of JCL for operations and for the production system is presented. Each student writes and submits a variety of JCLs for operation of utilities as well as for some production work.
CLASS 2, LAB 1, CREDIT 2 (W, S)
PREREQUISITE: 0802-157

**Computer Architecture
Registration #0802-171**

In this course, students learn the hardware that makes up computer systems. Topics include channels, busses, transmission over lines, modems, and general hardware.
CLASS 1, CREDIT 1 (F, W, S)
PREREQUISITES: 0802-157, 0802-158

**Data Processing: Diploma
Typical Course Sequence**

Fall Term

First Year

		Cr. Hrs.
0802-100	Introduction to Data Processing	2
0802-157	Beginning Computer Operations	1
0802-158	Laboratory	1
0817-140	Fundamentals of College Mathematics I	3
0847-101	Job Search Process Communication English	1 2 4
		14

Second Year

0802-120	On-Line Processing/ Programming	2
0802-162	Computer Console Operations	1
0817-142	Fundamentals of College Mathematics III Business Elective English Physical Education	3 3 4 0
		13

Winter Term

		Cr. Hrs.
0802-125	Data Processing Technical Communications	2
0802-170	Utilities/JCL for Computers	2
0804-101	Orientation to Business	3
0847-100	Freshman Seminar Communication English	2 2 4
		15

Summer

0802-299 Co-op Work Experience

0802-230	Business COBOL I	3
0802-260	System Generation for Operators	1
0802-261	Laboratory Business Elective Communication English Physical Education	2 3 2 4 0
		15

Spring Term

		Cr. Hrs.
0802-101	Introduction to Business Programming	3
0802-161	Business Computer Systems Facilities	2
0802-171	Computer Architecture	1
0817-141	Fundamentals of College Mathematics II Communication English	3 2 4
		15

0802-231	Business COBOL II	3
0802-250	Multiprogramming/ Spooling for Operators	2
0802-251	Laboratory	1
0847-102	Life After College Business Elective Communication Mathematics Elective	1 2 2 3
		14

Data Processing for Business Occupations

Registration #0802-210

This course is an introduction to the use of computers in business-related applications. Concepts of interacting with the computer function of a business as well as hands-on use of computers are presented.

CLASS 3, CREDIT 3 (W)

PREREQUISITE: Second-year standing in the Business Occupations Department

Applications Software

Registration #0802-213

This course is an introduction to the use of computer application software in a variety of work settings. Students work on computers to solve a variety of problems.

CLASS 3, CREDIT 3 (F, W, S)

PREREQUISITE: Second-year standing

Business Programming in COBOL I & II

Registration #0802-230, 231

This is a two-quarter sequence in COBOL programming. Students learn print reports, general processing of files, and the updating of random access files. The two-course sequence is intended to give students beginning skills in COBOL programming.

CLASS 4, CREDIT 3 (W, S)

PREREQUISITES:

0802-120, 0817-123 for 0802-230, 0802-230 for 0802-231

Programming for Computer Science Students I, II

Registration #0802-235, 236

This two-quarter sequence in programming teaches the language currently used by the RIT Computer Science School. Emphasis is placed on the use of tables/arrays and sorting. This course is intended for students who plan to pursue a baccalaureate degree in computer science.

CLASS 4, CREDIT 3 (W, S)

PREREQUISITES:

Michigan Test score of 70, California Reading Test score of 9.0, and 0802-120, 0817-123 for 0802-235, 0802-235 for 0802-236

Assembler Language Programming

Registration #0802-240

In this course, students learn to use assembler language to program the computer on a low-level basis. The major emphasis of the course is on the actual machine language of the computer and how the CPU works. The language taught (BAL) is not intended for use as a business programming language.

CLASS 4, CREDIT 3 (F, W)

PREREQUISITES: 0802-101, 0817-163

Advanced Assembler Programming

Registration #0802-241

Designed as a sequence to Assembler Language Programming, this course teaches students how to use assembler language as a programming language for business applications.

CLASS 4, CREDIT 3 (W, S)

PREREQUISITE: 0802-240

Data Processing: A.A.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.
0802-100	2	0802-125	2	0802-101	3
0802-157	1	0802-170	2	0802-161	2
0802-158	1	0817-141	3	0804-101	3
0817-140	3	0847-100	2	0817-142	3
0847-101	1		4		3
	2		0		2
	4		13		4
	14				17

Second Year

0802-120	2	0802-171	1	0802-231	3
0802-162	1	0802-230	3	0802-250	2
	3		3		1
	1		2		2
	3		4		1
	4		0		2
	3		13		4
	0				3
	13				0
					15

Third Year

0802-260	2	0802-240	3	0847-102	1
0802-261	1	0802-262	2		2
0817-163	3	0802-263	1		4
	2		3		4
	4		4		3
	3		13		14
	15				

Summer

0802-299 Co-op Work Experience

Summer

0802-299 Co-op Work Experience

Multiprogramming/Spooling for Operators**Registration #0802-250**

This course provides students with an in-depth discussion of computer systems that operate in multiprogramming mode. Queue control and general control of a spooling system are the main topics covered.

CLASS 2, CREDIT 2 (F, S)

PREREQUISITES: 0802-101, 0802-162, 0802-170

COREQUISITE: 0802-251

Multiprogramming/Spooling Laboratory**Registration #0802-251**

This laboratory provides hands-on experience related to Multiprogramming/Spooling for Operators. Students develop skills in working with queues and spooling programs.

LAB 2, CREDIT 1 (F, S)

COREQUISITE: 0802-250

System Generation for Operators**Registration #0802-260**

Students learn the various parameters as well as the design and actual development of a medium-scale operating system from an operator's viewpoint. Students are required to create their own operating system.

CLASS 2, CREDIT 2 (F, W)

PREREQUISITES: 0802-125, 0802-162

COREQUISITE: 0802-261

System Generation Laboratory**Registration #0802-261**

Students are led through a complete system creation on a medium-scale computer. Since students do most of the actual machine operation, they receive hands-on experience in working as members of a team.

LAB 3, CREDIT 1 (F, W)

COREQUISITE: 0802-260

Advanced Operating Systems**Registration #0802-262**

Designed as a continuation of System Generation for Operators, this course focuses on the software that makes up a total computer system. Installation of compilers, utilities, and related software are major topics covered.

CLASS 2, CREDIT 2 (W, S)

PREREQUISITE: 0802-260

COREQUISITE: 0802-263

Advanced Operating Systems**Laboratory****Registration #0802-263**

Students in this laboratory install the software related to operating systems.

LAB 1, CREDIT 1 (W, S)

COREQUISITE: 0802-262

Co-op Work Experience**Registration #0802-299**

CREDIT 0 (Su)

All 300 number courses require that the student is enrolled in Written Communication I or above.

Data Base Systems**Registration #0802-325**

This course introduces students to the use of data base systems on computers. Students design a data base for an information system of their choice.

CLASS 4, CREDIT 4 (W, S)

PREREQUISITES: Two-quarter sequence in programming (language is not important), English Composition Placement Test

File Management**Registration #0802-330**

In this course, students learn to store and use maintenance information in files. Major topics include the various forms of storage and organization of files as well as backup and restore, and areas such as security and confidentiality.

CLASS 4, CREDIT 3 (F)

PREREQUISITES: 0802-162, one programming course (200 level), English Composition Placement Test

Data Organization**Registration #0802-335**

This course is a continuation of Programming for Computer Science Students II. The sorting process and the concepts of trees and pointers are discussed and programmed. This course is for students interested in pursuing a baccalaureate degree in computer science.

CLASS 4, CREDIT 4 (F)

PREREQUISITES: 0802-236, 0817-127

Maintenance Programming**Registration #0802-340**

In this course, students learn the maintenance process of the programming environment and how to recognize other individuals' styles, logic, and standards needed to alter existing programs. Students are given language syntax to correct and programs to alter, correct, and revise following a set of standards.

This course is for students interested in COBOL business programming.

CLASS 4, CREDIT 3 (F)

PREREQUISITE: 0802-231

Large Scale Systems**Registration #0802-350**

In this course, students are introduced to large scale systems and their operation. The content of this course varies depending on the systems available. The topics are related to the support functions in large computer installations.

CLASS 2, CREDIT 2 (W)

PREREQUISITES: One 200 series programming course, 0801-201, 0802-250

COREQUISITE: 0802-351

Large-Scale Systems Laboratory**Registration #0802-351**

This lab supports the concepts of Large-Scale Systems. Students are assigned to set up and operate a medium- to large-scale system and have the opportunity to work in a large-scale computer installation. Laboratory meetings will be based on availability of systems.

LAB 2, CREDIT 1 (W)

COREQUISITE: 0802-350

Small Business Systems**Registration #0802-360**

In this course, students learn the use of micro- and minicomputers in the small business environment. Students are assigned to operate a small business computer for a normal business cycle. This course requires extensive laboratory work outside of class.

CLASS 2, CREDIT 2 (F, S)

PREREQUISITES: 0801-201, 0802-162, and one 200 series programming course

COREQUISITE: 0802-361

Small Business Systems**Laboratory****Registration #0802-361**

This is not a structured laboratory. Student projects are done in a combined class and laboratory environment. Students are responsible for successful management of financial work, inventory control, and payroll systems.

LAB 3, CREDIT 1 (F, S)

COREQUISITE: 0802-360

Data Processing Seminar (optional)**Registration #0802-390**

The seminar provides a relevant framework for students' previous data processing courses and, by emphasizing new directions in data processing, also prepares students for continued growth on the job. Students may study independently a topic agreed upon with the instructor.

CLASS 1-3, CREDIT Variable (F, W, S)

Independent Study**Registration #0802-399**

CREDIT Variable (F, W, S)

School of Science and Engineering Careers

Architectural Technology

Career Exploration: Architectural Technology

Registration #0808-100

This course provides students with information regarding careers in architectural technology. Activities may include field trips, hands-on experiences, career information presentations, and interaction with graduates of the program and professionals in the field. These experiences will help students understand work activities, working conditions, and work settings.

LAB 3, CREDIT 1 (F, W, S)

Construction Terminology

Registration #0808-110

This course introduces students to the basic technical vocabulary for the construction industry. Topics include drafting equipment and procedures, materials, structural components, mechanical and electrical systems, site work, construction equipment, and procedures.

CLASS 4, CREDIT 4(F)

Construction Drafting I

Registration #0808-111

This course introduces students to the basic drafting techniques for construction projects. Topics include line quality, lettering, scale measurement, dimensioning, drafting media and equipment, graphic reproduction methods, sheet layout, floor plans, site plans, sections, and isometric views. Students will start to develop a portfolio of their best work.

LAB 6, CREDIT 2 (F)
COREQUISITE: 0808-110

Construction Drafting II

Registration #0808-112

In this course, students continue to learn and practice basic drafting techniques for construction projects. Topics include field measurement and measured drawings, preliminary drawings, basic rendering, base maps, perspectives, and site plans. Students also begin learning basic computer-assisted drafting (CAD) skills.

LAB 6, CREDIT 2 (W)
PREREQUISITE: 0808-111
COREQUISITE: 0808-201

School of Science and Engineering Careers

C.O.R.E. Year Experience

Most students are required to enroll in the C.O.R.E. year sequence (Career Orientation and Exploration). This experience is three quarters in length and includes an in-depth sampling of program offerings within Engineering Technologies (Architectural Technology, Civil Technology, Electromechanical Technology, Industrial Drafting Technology, Manufacturing Processes), as well as coursework in mathematics, English, communication, and general education.

Typical Course Sequence

Fall Term		Winter Term		Spring Term	
First Year					
	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.
0817-140	Fundamentals of College Mathematics I	3	0817-141	Fundamentals of College Mathematics II	3
0847-100	Freshman Seminar	2		Career Exploration*	1
	Career Exploration*	1		Communication	2
	Communication	2		English"	4
	English"	4		General Education**	3
		12			13

*Students must choose at least three of the following career exploration courses: 0808-100 (Architectural Technology), 0809-100 (Civil Technology), 0810-100 (Industrial Drafting Technology), 0811-100 (Electromechanical Technology), 0813-100 (Manufacturing Processes). Students must sample a program to be admitted to it.

"Students may be required to register for more than one English course per quarter depending on their entry level skills.
**The departments encourage students to start Physics after completing Fundamentals of College Mathematics I. Students may register for Technical Physics I instead of General Education.

Construction Drafting III

Registration #0808-113

Students continue to learn and practice basic drafting techniques. They also learn to make three-dimensional models. Topics include building models, topographic models, presentation drawings from sketches, free-hand drawings, measured drawings from field measurements, topographic contour maps from spot elevations, and design development drawings from preliminary drawings. Students also continue CAD skill development.

LAB 6, CREDIT 2 (S)
PREREQUISITE: 0808-112
COREQUISITE: 0808-202

Construction Methods and Procedures I

Registration #0808-201

This is the first of two courses that orient students to the processes of building project development in design offices and at construction sites. This course concentrates on the processes of preliminary design, design development, production of contract documents, and bidding. Topics include roles of owners, consultants, and contractors; working drawings; specifications; analysis of total project; and bidding.

CLASS 3, CREDIT 3 (W)
PREREQUISITE: 0808-110
COREQUISITE: 0808-112

Construction Methods and Procedures II

Registration #0808-202

This course continues the orientation of students to the total building project development. In this course, students learn about construction processes. Topics include fabrication, placement, support, and fastening of building parts; identification and understanding of construction equipment; and scheduling of construction operations.

CLASS 3, CREDIT 3 (S)
PREREQUISITE: 0808-201
COREQUISITE: 0808-113

Architectural Materials I

Registration #0808-211

This course provides information about materials used in construction. Students learn the characteristics, origins, sources, standard shapes, sizes, and units of measure for materials and manufactured products. Students use the standard referencing and indexing system for materials and products.

CLASS 3, CREDIT 3 (F)
PREREQUISITE: 0808-202

Architectural Materials II
Registration #0808-212

In this course, students apply information from the previous course, Architectural Materials I. Topics include building codes, comparison of materials, selection of materials and products for specific applications, and detailing.

CLASS 3, CREDIT 3 (W)
 PREREQUISITE: 0808-211

Principles of Structural Systems
Registration #0808-220

Students identify and describe the major structural systems and their components. These systems include steel-frame, cast-in-place concrete, pre-cast concrete, masonry, steeljoists, trusses, light frame, and heavy timber. Students read structural framing plans, details, and schedules.

CLASS 4, CREDIT 4 (S)
 PREREQUISITE: 0808-212

Architectural Design Drafting I, II, III
Registration #0808-221, 222, 223

In this sequence of three courses, students learn drafting production techniques, production scheduling, and self-monitoring of progress. Students will produce drawings for one or more building projects during the three courses. The process will include preliminary drawings, design development, architectural working drawings, and working drawings for the mechanical, electrical, or structural elements of the project. Drawings may include cover sheets; site plans; floor plans; interior and exterior elevations; building, wall, and detail sections; interior and exterior perspectives; axonometric views; schedules; and diagrams. Students apply both manual and CAD drafting skills.

LAB 12, CREDIT 4 (0808-221-F, 0808-222-W, 0808-223-S)
 PREREQUISITES:
 0808-113 for 0808-221
 0808-221 for 0808-222
 0808-222 for 0808-223

Construction Computations
Registration #0808-224

This course introduces students to the basic techniques for calculating linear, area, volume, and angular quantities. Students apply basic math, algebra, geometry, right angle trigonometry, law of sines, and law of cosines.

CLASS 2, CREDIT 2 (W)
 PREREQUISITES: 0817-124, 0817-127

Co-op Work Experience
Registration #0808-299

CREDIT 0 (Su)

Architectural Drafting: Diploma

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.
0808-110 Construction Terminology	4	0808-112 Construction Drafting II	2	0808-113 Construction Drafting III	2
0808-111 Construction Drafting I	2	0808-201 Construction Methods and Procedures I	3	0808-202 Construction Methods and Procedures II	3
0817-126 AlgebraIIA	3	0817-127 AlgebraIIB or equivalent	3	0817-124 Geometry or equivalent	3
0847-100 Freshman Seminar	2	0818-100 Technical Physics I	3	0818-125 Construction Technology	0
Communication	2	English'	4	Physics II	3
English	4	Physical Education	0	Communication'	2
Physical Education	0			Physical Education	0
	17		15		13

Second Year

0808-211 Architectural Materials I	3	0808-212 Architectural Materials II	3	0808-220 Principles of Structural Systems	4
0808-221 Architectural Design Drafting I	4	0808-222 Architectural Design Drafting II	4	0808-223 Architectural Design Drafting III	4
0808-377 Building Equipment	3	0808-224 Construction Computations	2	0808-375 Architectural History	2
0818-126 Construction Technology	3	0808-390 Architectural Technology Seminar	2	0808-376 Building Estimating	2
Physics III	3	General Education	2	0809-241 Mapping I	2
0847-101 Job Search Process	1			0847-102 Life After College	1
	14		13		15

*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

Planning Project
Registration #0808-340

This course introduces students to the basic techniques for planning surveys. These include base map preparation, data collection from field surveys and public records, data base management, data analysis, graphic presentation of data, project organization, and work discipline skills. Students work as a team to perform an original planning survey. The team cooperates with a local planning agency. Students work in the field and in the lab.

LAB 15, CREDIT 5(F)
 PREREQUISITE: 0808-223

Architectural Projects I, II
Registration #0808-351, 352

In this sequence of two courses, students complete one or more building design projects. Activities may include field inspection and measurement, measured drawings, preliminary design, presentation drawings, design development, models, and working drawings. The courses simulate the environment of an architectural office.

LAB 15, CREDIT 5 (0808-351-W, 0808-352-S)
 PREREQUISITES:
 0808-340 for 0808-351
 0808-351 for 0808-352

Architectural History

Registration #0808-375

Students learn the major elements of architectural styles and building technologies throughout the history of Western architecture. This provides a background for discussion of current topics in the field of building design and construction.

CLASS 2, CREDIT 2 (S)

Building Estimating

Registration #0808-376

Students learn and apply basic concepts and skills for calculating the cost of a building project. Topics include elements of project cost, quantity survey techniques, material costs, installation costs, unit cost information sources, cost analysis, adjustments for locality, historical cost indexes, contingencies, overhead, and profit.

CLASS 2, CREDIT 2 (S)

PREREQUISITE: 0808-224 or 0817-128

Building Equipment

Registration #0808-377

Students learn to identify and understand the basic equipment and operation of mechanical and electrical systems in a building. These systems include water supply, drainage, fire protection, heating, ventilating, air conditioning, power, lighting, and conveying systems. Students become acquainted with the graphic representation for these systems in working drawings.

CLASS 3, CREDIT 3(F)

PREREQUISITE: 0808-202

Architectural Technology Seminar

Registration #0808-390

This course helps students prepare for the job search and for employment. Topics related to job search include applications, resumes, interviews, and use of a portfolio. Topics related to the world of work include taxes, insurance, employee benefits, credit ratings, marriage, and deaf professionals.

CLASS 1, LAB 3, CREDIT 2 (W)

Independent Study

Registration #0808-399

CREDIT Variable

Architectural Technology: A.A.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

		Cr. Hrs.			Cr. Hrs.			Cr. Hrs.
0808-110	Construction Terminology	4	0808-112	Construction Drafting II	2	0808-113	Construction Drafting III	2
0808-111	Construction Drafting I	2	0808-201	Construction Methods I	3	0808-202	Construction Methods II	3
0817-127	Algebra IIB or equivalent	3	0817-124	Geometry or equivalent	3	0817-128	Trigonometry or equivalent	3
0847-100	Freshman Seminar	2	0818-100	Technical Physics I	3	0818-125	Construction Physics II	3
	Communication	2		English*	4		Communication*	2
	English	4		Physical Education	0		Physical Education	0
	Physical Education	0			15			13
		17						

Second Year

0808-211	Architectural Materials I	3	0808-212	Architectural Materials II	3	0808-220	Principles of Structural Systems	4
0808-221	Architectural Design Drafting I	4	0808-222	Architectural Design Drafting II	4	0808-223	Architectural Design Drafting III	4
0817-201	College Algebra, Trigonometry, and Analytic Geometry I	3	0808-390	Architectural Technology Seminar	2	0809-241	Mapping I	2
0818-126	Construction Physics III	3	0817-202	College Algebra, Trigonometry, and Analytic Geometry II	3		Liberal Arts	4
0847-101	Job Search Process	1		Liberal Arts	4			14
		14			16			

Summer

0808-299 Co-op Work Experience

Third Year

0808-340	Planning Project	5	0808-351	Architectural Project I	5	0808-352	Architectural Project II	5
0808-377	Building Equipment	3	0809-260	Strength of Materials	4	0808-375	Architectural History	2
0809-250	Statics	4	0847-102	Life After College	1	0808-376	Building Estimating	2
	Liberal Arts	4		Liberal Arts	4		Liberal Arts	4
		16			14		Technical Elective	1-3
								14-16

*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

MLT Biology I**Registration #0814-107**

This course is a preparatory program for students interested in pursuing the Medical Laboratory Technology program. Principles of inorganic and organic chemistry are studied as they relate to biology. The metric system, cell theory, cellular transport mechanisms, mitosis, meiosis, and nucleotides are among the topics treated. Laboratory activities include the microscopic study of plant and animal cells, the performance of experiments related to concepts learned during class sessions, and additional activities that emphasize the application of the scientific method.

CLASS 4, LAB 4, CREDIT 4 (F)

MLT Biology II**Registration #0814-108**

This course is a continuation of MLT Biology I. It is designed to introduce the student to principles of biochemistry: the synthesis and metabolism of carbohydrates, proteins, and lipids; DNA; and ATP. The laboratory program is designed to reinforce principles and concepts learned during class sessions.

CLASS 4, LAB 4, CREDIT 4 (W)

PREREQUISITE: 0814-107

MLT Biology III**Registration #0814-109**

This course is a continuation of MLT Biology II. The principles of general genetics, anatomy, physiology, histology, hematology, and microbiology are studied in this segment of the Biology program. Laboratory activities provide students with opportunities to apply principles learned in class and to acquire the basic and transitional skills needed for the Medical Laboratory Technology program.

CLASS 4, LAB 4, CREDIT 4 (S)

PREREQUISITE: 0814-108

MLT Chemistry I**Registration #0815-115**

This course is for students preparing to pursue the Medical Laboratory Technology program. The course includes an introduction to exponential notation, measurement, the fundamental laws and concepts of matter and energy, formula writing, chemical bonding, and the mole concept. Laboratory work includes general techniques of metric measurement, density, physical properties, and evidence of chemical reactions. Introduction to radiochemistry, volume, temperature-pressure relationships of gases, reactivity of metals, and factors that affect reaction rates are measured qualitatively.

CLASS 4, LAB 4, CREDIT 4 (F)

MLT Chemistry II**Registration #0815-116**

This is a continuation of MLT Chemistry I. Solubility, concentration of solutions, calculations involving acid-base titrations, and pH are covered. Introduction to organic chemistry begins with hydrocarbon nomenclature. Discussion of the alcohols, phenols, ethers, aldehydes, and ketones as well as organic acids and their derivatives are included. Laboratory experiences related to these topics focus on the various methods of pH measurement and the use of indicators, including control of acidity through use of buffers and analysis of the acid and alkali content of some consumer products. Chemical and physical properties of some organic compounds are examined. These include the alcohols, phenols, mercaptans, aldehydes, and ketones as well as carboxylic acids and esters.

CLASS 4, LAB 4, CREDIT 4 (W)

PREREQUISITE: 0815-115

MLT Chemistry III**Registration #0815-117**

This is a continuation of MLT Chemistry II. This part of the Chemistry program lays the foundation for the relationship between chemistry and living organisms. Topics include the amines, carbohydrates, and lipids as well as amino acids and proteins. Description of the structure and function of nucleic acids, vitamins, and hormones bring together the interrelationships of biochemical reactions. Laboratory procedures include preparation, identification, and qualitative tests for the amines, amides, carbohydrates, triglycerides, and amino acids. Preparation and examination of aspirin, nylon, and soaps, and analysis of a peanut conclude this portion of the course. If time permits, students may explore instrumental analysis involving use of spectrophotometers and gas chromatography.

CLASS 4, LAB 4, CREDIT 4 (S)

PREREQUISITE: 0815-116

Introduction to College Chemistry I**Registration #0815-215**

This course is for students enrolled in programs requiring review or preparation for College of Science chemistry courses. The course includes principles of measurement, composition of matter, energy changes, behavior of gases, atomic structure, and bonding. Laboratory work includes experiments related to topics covered.

CLASS 4, LAB 4, CREDIT 4 (F)

PREREQUISITE: Math completion or concurrent registration in 0817-127

Introduction to College Chemistry II**Registration #0815-216**

This is a continuation of Introduction to College Chemistry I with the study of solutions and equilibrium principles. Also included are stoichiometric solution calculations involving ionization and solubility, product constants, and acid-base pH calculations. Laboratory work includes qualitative analysis of common cations and anions.

CLASS 4, LAB 4, CREDIT 4 (W)

PREREQUISITES: 0815-215, 0817-127

Introduction to College Chemistry III**Registration #0815-217**

This course provides an introduction to quantitative analysis utilizing both gravimetric and volumetric techniques. Topics include evaluation of analytical data, gravimetric analysis, acid-base titrations, redox titrations, and principles of colorimetry and spectrophotometry.

CLASS 4, LAB 4, CREDIT 4 (S)

PREREQUISITES: 0815-216, 0817-127

Civil Technology

Career Exploration: Civil Technology Registration #0809-100

This course provides students with information regarding a career in civil technology. Activities may include field trips, hands-on experiences, career information presentations, and interaction with graduates of the program and professionals in the field. These experiences help students understand work activities, working conditions, and work settings.

LAB 3, CREDIT 1 (F, W, S)

Surveying I Registration #0809-231

This is the first of two courses in which students learn the basic techniques of land measurement. Topics include technical vocabulary, distance measurement, angular measurement, differential leveling, traverse surveying, and computations. Students have hands-on experience with surveying equipment in the field.

CLASS 3, LAB 3, CREDIT 4 (S)
PREREQUISITE: 0817-128
COREQUISITE: 0809-241

Surveying II Registration #0809-232

Students continue to learn the basic techniques of land measurement. Topics include electronic distance measurement (EDM), theodolites, modern levels, deed descriptions, deed research, tape locations, horizontal and vertical curves, aerial surveying, and surveying computations. Students have hands-on experience with surveying equipment in the field.

CLASS 1, LAB 6, CREDIT 3 (F)
PREREQUISITES: 0809-231, 0809-241
COREQUISITE: 0809-242

Mapping I Registration #0809-241

Students learn the basic techniques of making drawings to describe land and land improvements. Topics include computation of angles, distances, bearings, area, coordinates, and closure error; reduction of field notes; contour mapping; profiles, slopes, and drainage networks; cut and fill calculations; and site planning. Students draw with pencil and ink on a variety of media.

CLASS 1, LAB 3, CREDIT 2 (S)
PREREQUISITE: 0808-113
COREQUISITE: 0809-231

Mapping II Registration #0809-242

Students apply skills learned in Mapping I to complete a site planning project. Requirements for the project include topographic, traverse, and highway mapping; cut and fill calculations; drafting with pencil and ink on a variety of media; and graphic reproduction.

CLASS 1, LAB 3, CREDIT 2 (F)
PREREQUISITES: 0809-231, 0809-241
COREQUISITE: 0809-232

Civil Technology: A.A.S. Degree

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0808-110	Construction Terminology	4
0808-111	Construction Drafting I	2
0817-127	Algebra IIB or equivalent	3
0847-100	Freshman Seminar Communication English Physical Education	2 2 4 0
		17

Second Year

0809-250	Statics	4
0809-285	Civil Technology Seminar	2
0817-201	College Algebra, Trigonometry, and Analytic Geometry I	3
0818-125	Construction Physics II	3
0847-101	Job Search Process	1
		13

Third Year

0809-232	Surveying II	3
0809-242	Mapping II	2
0809-321	Structural Design Drafting I	4
0809-340	Fundamentals of Fluid Mechanics Liberal Arts	4 4 4
		17

Winter Term

		Cr. Hrs.
0808-112	Construction Drafting II	2
0808-201	Construction Methods I	3
0817-124	Geometry or equivalent	3
0818-100	Technical Physics I English* Physical Education	3 4 0
		15

Summer

0809-299	Co-op Work Experience	
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Spring Term

		Cr. Hrs.
0808-113	Construction Drafting III	2
0808-202	Construction Methods II	3
0817-128	Trigonometry or equivalent	3
0818-126	Construction Physics III Communication* Physical Education	3 2 0
		13

0809-322	Structural Design Drafting II	4
0809-350	Highway Design and Construction	4
0847-102	Life After College Liberal Arts	1 4
		13

0809-323	Structural Design Drafting III	4
0809-385	Principles of Environmental Technology Liberal Arts Technical Elective	4 4 1-3
		13-15

*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

Statics**Registration #0809-250**

This course requires students to apply physical concepts of equilibrium in co-planar force systems to structural members. Topics include vectors, forces, moments, equilibrium, distributed forces, centroids, and centers of gravity. Students calculate reactions, moments, and internal forces in beams, trusses, and frames.

CLASS 3, LAB 3, CREDIT 4 (F)

PREREQUISITES: 0817-124, 0817-128, 0818-126

Strength of Materials**Registration #0809-260**

Students apply physical concepts of matter to calculate how forces affect structural members. Topics include stress, strain, behavior of common engineering materials, moment of inertia, section modulus, and basic beam theory. Students calculate the maximum tensile, compressive and shear stresses, and deflection in simple members. They also calculate deflection of beams and select simple tension, compression, and bending members and their connections.

CLASS 3, LAB 3, CREDIT 4 (W)

PREREQUISITE: 0809-250

Soil Mechanics**Registration #0809-283**

This course introduces students to the characteristics of soils related to construction projects. Topics include visual and laboratory classification of soils, compaction, sub-surface investigation, percolation, and soil nomenclature. Students perform laboratory experiments and tests and write laboratory reports.

CLASS 3, LAB 3, CREDIT 4 (W)

Engineering Materials**Registration #0809-284**

Students investigate the basic engineering properties of portland cement concrete, portland cement mortar, and asphaltic cement concrete. They learn and practice standard laboratory testing procedures and write laboratory reports.

CLASS 2, LAB 6, CREDIT 4 (S)

PREREQUISITE: 0809-283

Civil Technology Seminar**Registration #0809-285**

This course provides an overview of the field of civil technology. Students learn how the field is related to the profession of civil engineering. The course also introduces research and laboratory report writing, resume writing, and interviewing skills.

CLASS 1, LAB 3, CREDIT 2 (F)

Programming for Civil Technicians**Registration #0809-290**

This course introduces basic computer skills. Topics include keyboard operation, expressions, variables, programs, branching, input, subscripted variables, and loops. Students have hands-on experience on the computer.

CLASS 2, LAB 3, CREDIT 3 (F, W, S)

Co-op Work Experience**Registration #0809-299**

CREDIT 0 (Su)

Structural Design Drafting I, II, III**Registration #0809-321, 322, 323**

In this sequence of courses, students apply the principles of statics and strength of materials and drafting skills. Students learn the basic principles of structural analysis and design, estimating quantities, preparation of structural and shop drawings, and construction. The first course and half of the second course concentrate on steel structures. The rest of the second course and the third course concentrate on concrete structures.

CLASS 2, LAB 6, CREDIT 4
(0809-321-F, 0809-322-W, 0809-323-S)

PREREQUISITES:

0809-260 for 0809-321

0809-321 for 0809-322

0809-322 for 0809-323

Fundamentals of Fluid Mechanics**Registration #0809-340**

This course introduces students to the basic principles of fluid statics and fluid flow. Topics include hydrostatic pressure, forces on submerged surfaces, buoyancy, laminar and turbulent flow of incompressible fluids, fluid measurements, and open channel flow. Students perform experiments in the laboratory.

CLASS 3, LAB 3, CREDIT 4 (F)

Highway Design and Construction**Registration #0809-350**

This course introduces students to the basic practices in the study, design, plan preparation, and construction of transportation facilities. Topics include horizontal and vertical alignments, typical sections, hydrology, quantity estimating, intersection design, and traffic control devices.

CLASS 3, LAB 3, CREDIT 4 (W)

PREREQUISITE: 0809-232

Principles of Environmental Technology**Registration #0809-385**

This course introduces students to the factors affecting the quality of the environment. Topics include testing, regulation, and management of water supplies, waste water, soil erosion, solid wastes, atmospheric pollutants, and noise; energy measurement and conservation; visual resource analysis; and environmental impact analysis. Field observations are an important part of this course.

CLASS 3, LAB 3, CREDIT 4 (S)

PREREQUISITE: 0809-340

Construction Seminar**Registration #0809-390**

This course helps students prepare for their job search and for employment. Topics related to job search include applications, resumes, interviews, and use of a portfolio. Topics related to the world of work include taxes, insurance, employee benefits, credit ratings, marriage, and deaf professionals.

CLASS 1, LAB 3, CREDIT 2 (W)

Independent Study**Registration #0809-399**

CREDIT Variable

Electromechanical Technology

Career Exploration: Electromechanical Technology

Registration #0811-100

This course provides students with information regarding a career in electromechanical technology. Activities may include field trips, hands-on experiences, career information presentations, and interaction with graduates of the program and professionals in the field. These experiences will help students understand work activities, working conditions, and work settings.

LAB 3, CREDIT 1 (F, W, S)

Basic Drafting I

Registration #0811-101

This course provides instruction in the principles and techniques of basic drafting. The emphasis is on understanding how drawings are made and used in industry.

LAB 6, CREDIT 2 (F)

PREREQUISITE: 0817-141

Digital Systems

Registration #0811-171

This course is an introduction to logic components and how they are used in machines. Students will study gates, switches, counters, flip-flops, multiplexers, demultiplexers, truth tables, Boolean algebra, logic families, and the difference between analog and digital systems.

CLASS 3, LAB 4, CREDIT 4 (W)

PREREQUISITE: 0811-368

Technical Graphics

Registration #0811-209

This course is an introduction to electronic and mechanical drawings. Students learn how to draw using drafting standards. They also learn about electronic symbols, component outlines, block diagrams, schematic diagrams, cable drawings, military standards, and integrated circuits.

LAB 6, CREDIT 2 (S)

PREREQUISITES: 0810-101, 0811-368

Computer Techniques

Registration #0811-210

This course emphasizes how the computer can be used to solve problems. Students learn a programming language and develop programming skills. Students are required to solve engineering problems through hands-on computer experiences.

CLASS 3, LAB 3, CREDIT 4 (F)

PREREQUISITE: 0818-100

Mechanical Components

Registration #0811-211

This course introduces mechanical devices used in electromechanical equipment. The basic topics covered include torque, work, power, gears, cams, and drive systems. Students will develop basic breadboarding skills.

CLASS 3, LAB 4, CREDIT 4 (S)

PREREQUISITES: 0817-127, 0818-100

Electromechanical Technology: A.A.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.			
0810-101	Basic Drafting I	2	0811-210	Computer Techniques	4	0811-211	Mechanical Components	4
0817-142	Fundamentals of College Mathematics III	3	0811-241	Tool Skills	2	0811-213	DC Circuits	5
0818-100	Physics I	3	0817-127	Algebra IIB or equivalent	3	0817-128	Trigonometry or equivalent	3
0847-100	Freshman Seminar	1	0818-135	Physics II	3		Communication*	2
	Communication	2		Communication	2			
	English	4		English*	4			14
		15						
					18			

Second Year

0811-304	AC Circuits	5	0811-321	Fluid Power	4	0811-322	Electrical Power Systems	4
0811-317	Kinematics	4	0811-368	Electronics I	4	0811-369	Electronics II	5
0817-201	Algebra, Trigonometry, and Analytic Geometry I	3	0817-202	Algebra, Trigonometry, and Analytic Geometry II	3	0817-203	Algebra, Trigonometry, and Analytic Geometry III	3
0847-101	Job Search Process	1		Liberal Arts	4		Liberal Arts	4
	Liberal Arts	4			15			16
		17						

Summer

0811-299 Co-op Work Experience

Third Year

0811-171	Digital Systems	4	0811-325	Control Systems	4	0811-209	Technical Graphics	2
0811-234	Optical Systems	4	0811-327	Microprocessor Control Systems I	2	0811-328	Microprocessor Control Systems II	2
0811-324	Transducers	4		Liberal Arts	4	0847-102	Life After College	1
0811-370	Electronics III	4		Technical Elective	4		Liberal Arts	4
		16			14		Technical Elective	4
								13

*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

DC Circuits**Registration #0811-213**

This course introduces students to the theory and use of direct current circuits. Students learn about direct current units and measurements, basic circuit laws, networks, Thevenin's Theorem, and superposition theorem.

CLASS 3, LAB 6, CREDIT 5 (S)

PREREQUISITES: 0817-127, 0818-135

Optical Systems**Registration #0811-234**

This course introduces students to the use of optics in engineering applications. Students learn about refraction, reflection, imaging, fiber optics, light emitting diodes, lasers, and optically controlled solid state electronic devices.

CLASS 3, LAB 2, CREDIT 4 (S)

PREREQUISITES: 0811-369, 0817-128

Tool Skills**Registration #0811-241**

This course introduces students to the use of basic hand tools used by electromechanical technicians. Students learn about safety, measuring, layout techniques, cutting, finishing metal, fasteners, drilling, counter-boring, countersinking, tapping, soldering, and wiring. The course requires the completion of several projects.

LAB 6, CREDIT 2 (W)

PREREQUISITE: 0817-141

Co-op Work Experience**Registration #0811-299**

CREDIT 0 (F, W, S, Su)

PREREQUISITES: 0811-321, 0811-368

AC Circuits**Registration #0811-304**

This course emphasizes the theory and use of alternating current circuits. Students learn about inductance, capacitance, alternating current circuits, series, and parallel resonant circuits.

CLASS 3, LAB 6, CREDIT 5 (F)

PREREQUISITES: 0811-210, 0811-213

Kinematics**Registration #0811-317**

This course emphasizes the motion of machine parts. Students learn about linkages and levers, and the relation of these parts to velocities, accelerations, and forces.

CLASS 3, LAB 4, CREDIT 4 (F)

PREREQUISITES: 0811-211, 0817-128

Fluid Power**Registration #0811-321**

In this course, students learn how power is transmitted by using fluids (liquids and gases). Topics covered include the character of fluids, pumps, valves, cylinders, motors, and the piping used. Students also learn how digital logic is used to control fluid power valves and equipment.

CLASS 3, LAB 4, CREDIT 4 (W)

PREREQUISITE: 0811-317

Electrical Power Systems**Registration #0811-322**

In this course, students learn how power is transmitted by electricity. Basic topics covered include generators, motors, transformers, and distribution lines. Both alternating and direct current machines are covered.

CLASS 3, LAB 4, CREDIT 4 (F)

PREREQUISITES: 0811-304, 0811-317

Transducers**Registration #0811-324**

This course introduces students to automatic controls. Students learn about electrical, thermal, hydraulic, and mechanical transducers. Emphasis is on the similar operating characteristics of all kinds of transducers. Students express results using mathematics and graphics.

CLASS 3, LAB 4, CREDIT 4 (S)

PREREQUISITES: 0811-321, 0811-368

Control Systems**Registration #0811-325**

This is the second course in a sequence on the topic of automatic controls. Students learn about the effects on a controlled process when different ways are used to connect the input transducer to the output transducer. The course covers open loop and closed loop systems. Graphic techniques are used to help understand systems.

CLASS 3, LAB 4, CREDIT 4 (F)

PREREQUISITE: 0811-324

Microprocessor Control Systems I**Registration #0811-327**

This is the first course in a two-quarter sequence. The course introduces students to the theory of microprocessor-based control systems. Students learn about software techniques applied to electromechanical systems. This laboratory course emphasizes systems analysis and troubleshooting.

LAB 6, CREDIT 2 (W)

PREREQUISITES: 0811-171, 0811-370

Microprocessor Control Systems II**Registration #0811-328**

This course emphasizes the construction, testing, and troubleshooting of microprocessor-based systems. Students identify and solve problems and report solutions independently. This course is project-based and ties together many of the concepts learned in the Electromechanical Technology program.

LAB 6, CREDIT 2 (W)

PREREQUISITE: 0811-327

COREQUISITE: 0811-334

Circuit Analysis**Registration #0811-330**

This course emphasizes the analysis of complex circuits. Students learn about Kirchoff's Laws, independent and dependent sources, power, equivalent sources and resistances, Thevenin's Theorem, Norton's Theorem, superposition theorem, mesh analysis, and nodal analysis.

CLASS 4, CREDIT 4 (W)

PREREQUISITE: 0811-370

Statics**Registration #0811-332**

This elective course covers characteristics of forces and force systems. Emphasis is placed on vectors, levers, moments, free body diagrams, couples, friction, and structure analysis. Problem-solving techniques are stressed throughout the course.

CLASS 4, CREDIT 4 (W)

PREREQUISITE: 0811-321

Strength of Materials**Registration #0811-333**

This course introduces students to the reactions of engineering materials to different types of loading. The course emphasizes the use of standard handbooks, stress and strain relationships, Poisson's Ratio, safe loading, and expected deflection of beam and column-shaped machine parts.

CLASS 3, LAB 3, CREDIT 4 (S)

PREREQUISITE: 0811-332

Electromechanical Systems**Registration #0811-334**

This course emphasizes the interface between microprocessors and electromechanical devices. Students work on projects that include circuit design, software design, breadboarding skills, and troubleshooting techniques.

CLASS 3, LAB 3, CREDIT 4 (S)

PREREQUISITES: 0811-325, 0811-327

COREREQUISITE: 0811-328

Electronics I**Registration #0811-368**

This course introduces students to basic diode and transistor circuits. Students learn about semiconductor theory, diode circuits, bipolar transistors, transistor biasing circuits, and AC signal amplifiers. Students develop basic measurement and breadboarding skills.

CLASS 3, LAB 6, CREDIT 4 (W)

PREREQUISITE: 0811-304

Electronics II**Registration #0811-369**

This course introduces students to AC amplifiers and their characteristics. Topics of study include transistor AC equivalent circuits, small signal amplifiers, power amplifiers, push-pull amplifiers, and field effect devices. Students develop basic measurement and breadboarding skills.

CLASS 3, LAB 6, CREDIT 5 (S)

PREREQUISITE: 0811-368

Electronics III**Registration #0811-370**

This course introduces students to the theory and application of linear integrated circuits. Students learn about operational amplifier characteristics and applications, regulators and control circuits, and a variety of linear integrated circuits. Students are required to use manufacturers' data sheets and to develop proper breadboarding skills.

CLASS 3, LAB 4, CREDIT 4 (F)

PREREQUISITE: 0811-369

Independent Study**Registration #0811-399**

CREDIT Variable

Industrial Drafting Technology

Career Exploration: Industrial Drafting Registration #0810-100

This course provides students with information regarding a career in industrial drafting. Activities may include field trips, hands-on experiences, career information presentations, and interaction with graduates of the program and professionals in the field. These experiences will help students understand work activities, working conditions, and the work setting.

LAB 3, CREDIT 1 (F, W, S)

Introduction to Computer-Aided Drafting (CAD)

Registration #0810-103

In this introductory course, students will acquire basic competency in computer-aided drafting that may include using the B & L Producer system software and AutoCAD and PlanCAD programs on the IBM PC or DEC Rainbow computers. Students will create basic computer drawings, add dimensions and lettering, and learn some useful functions of these systems. They also will have the opportunity to work on select special applications.

CLASS 1, LAB 3, CREDIT 2 (F, W, S)

Manufacturing Processes I, II

Registration #0810-131, 132

Students are exposed to various traditional and non-traditional manufacturing operations. Students develop an appreciation for tolerancing of manufactured parts.

LAB 3, CREDIT 1 (0810-131-F, 0810-132-W)

PREREQUISITES:

0817-128 for 0810-131

0810-131 for 0810-132

Basic Technical Drafting I

Registration #0810-141

Students learn basic skills of engineering drawing through instruction and drafting projects. Students are introduced to the use of tools and equipment, constructions, orthographic projection, lettering, and basic dimensioning practices.

CLASS 1, LAB 6, CREDIT 3 (F)

PREREQUISITE: 0817-142

Industrial Drafting: Diploma

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0810-141	Basic Technical Drafting I	3
0817-127	Algebra IIB or equivalent	3
0847-100	Freshman Seminar	2
0847-101	Job Search Process	1
	Communication	2
	English	4
	Physical Education	0
		15

Winter Term

		Cr. Hrs.
0810-142	Basic Technical Drafting II	3
0817-124	Geometry or equivalent	3
0818-100	Technical Physics I	3
	Communication	2
	English	4
	Physical Education	0
		15

Spring Term

		Cr. Hrs.
0810-143	Basic Technical Drafting III	3
0817-128	Trigonometry or equivalent	3
0818-135	Technical Physics II	3
	Communication*	2
	English*	4
	Physical Education	0
		15

Summer

0810-299 Co-op Work Experience

Second Year

0810-131	Manufacturing Processes I	1
0810-151	Materials and Processes I	3
0810-201	Technical Drafting I Elective	5 2
		11

0810-132	Manufacturing Processes II	1
0810-152	Materials and Processes II	3
0810-202	Technical Drafting II Electives	4 4
		12

0810-203	Technical Drafting III	4
0810-211	Supervised Study in Drafting	1
0847-102	Life After College	1
	Electives	6
		12

*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

Basic Technical Drafting II

Registration #0810-142

The major topics of this course are orthographic projection and dimensioning systems. Auxiliary views, sections, and developments are introduced through the use of instruction and projects. Students produce industrial quality drawings.

CLASS 1, LAB 6, CREDIT 3 (W)

PREREQUISITE: 0810-141

Basic Technical Drafting III

Registration #0810-143

Students develop the skills necessary to produce industrial-quality working drawings, including assembly and detail drawings. Students solve problems related to tolerances, mating parts, fasteners, and standard engineering fits through the use of projects.

CLASS 1, LAB 6, CREDIT 3 (S)

PREREQUISITE: 0810-142

Materials and Processes I**Registration #0810-151**

Students develop a working knowledge of the various materials and related manufacturing processes used in industry.

CLASS 3, CREDIT 3 (F)

PREREQUISITE: 0818-156

Materials and Processes II**Registration #0810-152**

Students investigate the properties of metals and plastics and their characteristics and methods of fabrication.

CLASS 3, CREDIT 3 (W)

PREREQUISITE: 0810-151

Technical Drafting I**Registration #0810-201**

Students measure and draw parts for machines. In this laboratory course, students produce toleranced working drawings for simple assembly drawings.

LAB 15, CREDIT 5 (F)

PREREQUISITES: 0810-143, 0818-100

Technical Drafting II**Registration #0810-202**

Students prepare sub-assembly drawings, final assembly drawings, and check layouts of selected mechanical equipment based on detail drawings. This laboratory simulates group participation in an industrial setting.

LAB 13, CREDIT 4 (W)

PREREQUISITE: 0810-201

Technical Drafting III**Registration #0810-203**

Students draw schematics, wiring diagrams, and harnesses found in industrial, electrical, and electronic drafting.

CLASS 1, LAB 10, CREDIT 4 (S)

PREREQUISITE: 0810-202

COREQUISITE: 0810-211

Technical Drafting IV**Registration #0810-204**

Students design welded structures from realistic engineering requirements. They work in the laboratory to produce a team-based welding assembly and supporting detail drawings.

LAB 8, CREDIT 3 (F)

PREREQUISITE: 0810-203

Technical Drafting V**Registration #0810-205**

Students solve a complex design problem from realistic engineering data, applying knowledge of power transmission components and mechanisms. This laboratory course creates a concept layout supported by engineering data.

LAB 9, CREDIT 3 (W)

PREREQUISITE: 0810-204

Technical Drafting VI: Seminar Project**Registration #0810-206**

Students design a working layout of a complex power transmission problem based on an engineering concept layout. This laboratory course provides a fully documented layout suitable for drafters to draw all individual parts.

LAB 15, CREDIT 5 (S)

PREREQUISITE: 0810-205

Industrial Drafting Technology: A.O.S. Degree**Typical Course Sequence****Fall Term****Winter Term****Spring Term****First Year**

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.
0810-141 Basic Technical Drafting I	3	0810-142 Basic Technical Drafting II	3	0810-143 Basic Technical Drafting III	3
0817-126 Algebra I A or equivalent	3	0817-127 Algebra I B or equivalent	3	0817-124 Geometry or equivalent	3
0847-100 Freshman Seminar	1	0818-100 Technical Physics I	3	0818-135 Technical Physics II	3
0847-101 Job Search Process Communication	2	Communication	2	Communication	2
English	4	English	4	English	4
Physical Education	0	Physical Education	0	Physical Education	0
	15		15		15

Summer

0810-299 Co-op Work Experience

Second Year

0810-131 Manufacturing Processes I	1	0810-132 Manufacturing Processes II	1	0810-203 Technical Drafting III	4
0810-151 Materials and Processes I	3	0810-152 Materials and Processes II	3	0810-211 Supervised Study in Drafting	1
0810-201 Technical Drafting I	5	0810-202 Technical Drafting II	4	0817-202 Algebra, Trigonometry, and Analytic Geometry II	3
0817-128 Trigonometry or equivalent	3	0817-201 Algebra, Trigonometry, and Analytic Geometry I	3	Elective	3
Communication	2	Communication*	2	General Education	4
English	4	English*	4		15
	18		17		

Summer

0810-299 Co-op Work Experience

Third Year

0810-204 Technical Drafting IV	3	0810-205 Technical Drafting V	3	0810-206 Technical Drafting VI	5
0810-213 Statics	5	0810-214 Strength of Materials	5	0810-222 Machine Design II	4
0810-215 Mechanisms	4	0810-221 Machine Design I	4	0847-102 Life After College	1
General Education	4	General Education	4	General Education	4
	16		16	Technical Elective	3
					17

*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

Supervised Study in Drafting Registration #0810-211

Students learn about electrical and electronic component selection and application. They design printed circuit boards from simulated industrial specifications and with the help of individualized instruction.

LAB 2, CREDIT 1 (S)

PREREQUISITE: 0810-202

COREQUISITE: 0810-203

Statics

Registration #0810-213

Students learn the basic principles of statics, including reactants and equilibrium of force systems, trusses containing two-force members, structures containing three-force members, centroids, moments of inertia, and dry friction.

CLASS 6, CREDIT 5 (F)

PREREQUISITES: 0817-202, 0818-135

Strength of Materials

Registration #0810-214

Students learn the basic concepts of strength of materials, including stress and strain analysis, both elastic and plastic, with emphasis on elastic analysis of axially loaded members, connectors, beams, and columns. The laboratory experience includes testing of materials utilizing appropriate machines. Field trips to see test demonstrations also occur.

CLASS 3, LAB 3, CREDIT 5 (W)

PREREQUISITE: 0810-213

COREQUISITE: 0810-221

Mechanisms

Registration #0810-215

Students learn about basic mechanical components such as linkages and levers, and combinations of these devices as they are applied in machines. Analysis of force, deflection, velocity, and acceleration is stressed. The lab experience includes mathematical and graphical solution of problems.

CLASS 3, LAB 4, CREDIT 4 (F)

PREREQUISITE: 0817-202

Machine Design I

Registration #0810-221

This is a study of the analytical design of bearings, clutches, couplings, brakes, springs, gearing systems, and power shafting.

CLASS 3, LAB 3, CREDIT 4 (W)

PREREQUISITE: 0810-213

COREQUISITE: 0810-214

Machine Design II

Registration #0810-222

Students learn methods of constructing machine parts and specifications of materials and manufacturing processes.

CLASS 3, LAB 3, CREDIT 4 (S)

PREREQUISITE: 0810-221

Co-op Work Experience

Registration #0810-299

CREDIT 0 (Su)

Independent Study

Registration #0810-399

CREDIT Variable

Industrial Drafting Technology: A.A.S. Degree

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0810-141	Basic Technical Drafting I	3
0817-127	Algebra IIB or equivalent	3
0847-100	Freshman Seminar	2
0847-101	Job Search Process	1
	Communication	2
	English	4
	Physical Education	0
		15

Winter Term

		Cr. Hrs.
0810-142	Basic Technical Drafting II	3
0817-124	Geometry or equivalent	3
0818-100	Technical Physics I	3
	Communication	2
	English	4
	Physical Education	0
		15

Spring Term

		Cr. Hrs.
0810-143	Basic Technical Drafting III	3
0817-128	Trigonometry or equivalent	3
0818-135	Technical Physics II	3
	Communication*	2
	English	4
	Physical Education	0
		15

Summer

0810-299 Co-op Work Experience

Second Year

0810-131	Manufacturing Processes I	1
0810-151	Materials and Processes I	3
0810-201	Technical Drafting I	5
0817-201	Algebra, Trigonometry, and Analytic Geometry I	3
	Elective	4
		16

0810-132	Manufacturing Processes II	1
0810-152	Materials and Processes II	3
0810-202	Technical Drafting II	4
0817-202	Algebra, Trigonometry, and Analytic Geometry II	3
	Liberal Arts	4
		15

0810-203	Technical Drafting III	4
0810-211	Supervised Study in Drafting	1
0817-203	Algebra, Trigonometry, and Analytic Geometry III	3
	Elective	3
	Liberal Arts	4
		15

Summer

0810-299 Co-op Work Experience

Third Year

0810-204	Technical Drafting IV	3
0810-213	Statics	5
0810-215	Mechanisms	4
	Liberal Arts	4
		16

0810-205	Technical Drafting V	3
0810-214	Strength of Materials	5
0810-221	Machine Design I	4
	Liberal Arts	4
		16

0810-206	Technical Drafting VI	5
0810-222	Machine Design II	4
0847-102	Life After College	1
	Liberal Arts	4
	Technical Elective	3
		17

*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

Manufacturing Processes

Career Exploration: Manufacturing Processes

Registration #0813-100

This course provides students with information regarding a career in manufacturing processes. Activities may include field trips, hands-on experiences, career information presentations, and interaction with graduates of the program and professionals in the field. These experiences will help students understand work activities, working conditions, and work settings.

LAB 3, CREDIT 1 (F, W, S)

Basic Drafting I

Registration #0813-101

This course provides instruction in the principles and techniques of basic drafting for students majoring in other technical programs. The emphasis is on understanding how drawings are made and used in industry.

LAB 6, CREDIT 2 (F)

PREREQUISITE: 0817-142

Basic Drafting II

Registration #0813-102

This course is a continuation of Basic Drafting I and is designed for students who desire or need greater depth of knowledge of drafting in industry. Topics include auxiliary views, sections, applied mathematics, and isometric and pictorial drawings with greater attention to drawing quality.

LAB 6, CREDIT 2 (W)

PREREQUISITES: 0813-101, 0817-127

Manufacturing Processes I, II, III

Registration #0813-131, 132, 133

Students develop the basic skills necessary to use traditional machine tools. Laboratory instruction simulates an industrial environment. Emphasis on safety in the operation of machines is an integral part of the program. CLASS 1, LAB 8, CREDIT 4 (0813-131-F, 0813-132-W, 0813-133-S)

PREREQUISITES:

0817-123 for 0813-131

0813-131 for 0813-132

0813-132 for 0813-133

Manufacturing Processes IV, V, VI

Registration #0813-134, 135, 136

Students will be able to apply the theory associated with the set-up and operation of lathes, milling machines, drill presses, grinders, and bench operations. Students also are introduced to non-traditional machining. Greater emphasis will be placed on accuracy and tolerance of machine parts. Safety is stressed throughout all courses.

CLASS 1, LAB 8, CREDIT 4 (0813-134-F, 0813-135-W, 0813-136-S)

PREREQUISITES:

0813-133 for 0813-134

0813-134 for 0813-135

0813-135 for 0813-136

Manufacturing Processes: Diploma

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.
0813-131	Manufacturing Processes I	4	0813-132	Manufacturing Processes II	4
0813-139	Blueprint Reading I	2	0813-140	Blueprint Reading II	2
0817-140	Fundamentals of College Mathematics I	3	0817-141	Fundamentals of College Mathematics II	3
0847-100	Freshman Seminar	2	0847-101	Job Search Process	1
	Communication	2		Communication	2
	English	4		English	4
	Physical Education	0		Physical Education	0
		17			16
					15

Summer

0813-299 Co-op Work Experience

Second Year

0810-101	Basic Drafting I	2	0810-102	Basic Drafting II "	2	0812-152	Numerical Control II "	4
0813-134	Manufacturing Processes IV	4	0812-151	Numerical Control I "	4	0813-136	Manufacturing Processes VI	4
0813-151	Industrial Materials	3	0813-135	Manufacturing Processes V	4	0813-152	Manufacturing Analysis "	3
0817-128	Trigonometry Electives	3 4	0813-153	Welding I "	2	0813-155	Welding II "	2
		16		Elective	2	0847-102	Life After College	1
					14			14

*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

"Technical Electives: During the final two quarters, students are required to take two or three suggested courses, and their total number of credit hours must equal no less than 12.

Blueprint Reading I, II**Registration #0813-139, 140**

Students develop the skills necessary to read and interpret prints of engineering drawings of details and assemblies.

CLASS 1, LAB 3, CREDIT 2 (0813-139-F, 0813-140-W)

PREREQUISITES:

0817-123 for 0813-139

0813-139 for 0813-140

Industrial Materials**Registration #0813-151**

This course introduces students to the many materials used in industry and the reasons why the final cost of producing a part is influenced by material selection. Metals, plastics, and ceramics will be covered from the perspective of physical, mechanical, and dimensional properties.

CLASS 3, CREDIT 3 (W)

PREREQUISITE: 0813-134

Manufacturing Analysis**Registration #0813-152**

This course introduces students to manufacturing concepts. Students learn about production, management, and sales. The text and class discussions focus on problem solving and industrial operations.

CLASS 3, CREDIT 3 (S)

PREREQUISITE: 0813-134

Welding I**Registration #0813-153**

Students learn about basic oxyacetylene and shielded metal arc welding processes. They will be able to set up and operate equipment properly. Safety rules pertaining to welding are emphasized.

LAB 4, CREDIT 2 (W)

PREREQUISITE: 0813-134

Precision Measurement**Registration #0813-154**

Students develop the skills necessary to measure to the highest tolerances commonly used in industry. They measure parts or groups of parts using industrial methods and equipment. Analysis of measurements and problem solving is stressed.

CLASS 1, LAB 3, CREDIT 2 (S)

PREREQUISITE: 0813-132

Welding II**Registration #0813-155**

Students develop skills in gas tungsten arc welding, gas metal arc welding, and resistance welding. The course emphasizes proper operation of equipment and related safety measures.

LAB 4, CREDIT 2 (S)

PREREQUISITE: 0813-153

Co-op Work Experience**Registration #0813-299**

CREDIT 0 (Su)

Independent Study**Registration #0813-399**

CREDIT Variable

Medical Laboratory Technology

Anatomy/Physiology and Disease I, II Registration #0816-101, 102

This course provides students with the fundamentals of human anatomy with emphasis on physiology and related diseases. Students perform a variety of experiments and dissections in the laboratory portion of the course.
CLASS 2, LAB 2, CREDIT 4 (0816-101-F, 0816-102-W)

Introduction to Medical Parasitology Registration #0816-105

This course introduces students to the host/parasite relationship, life cycle, and identification procedures for intestinal and atrial protozoa, nematodes, cestodes, and trematodes. Classes include discussion of diseases and use of preserved microscopic slides, 35mm captioned slides, and laboratory preparation.
CLASS 1, LAB 2, CREDIT 2 (S)

Basic Histology Registration #0816-111

Theory and practice in tissue preparation for paraffin techniques are presented. Laboratory techniques include preparation of solutions, stains, sectioning, slide mounting, and staining of various tissues. Students develop skills in the operation, use, and care of histologic instruments.
CLASS 12, CREDIT 6 (S)

Electrocardiography Registration #0816-115

This course emphasizes use of machine techniques for selecting and monitoring tracings of simple heart maladies.
CLASS 4, CREDIT 2 (W)

Urinalysis Registration #0816-121

This course provides theory and practice in the estimation of urinary constituents, microscopic examination, and additional tests of clinical significance.
CLASS 4, CREDIT 2 (F)

Hematology Registration #0816-122

This course is a study of routine blood tests, including white count, red count, hematocrit, hemoglobin, sedimentation rate, differential count, and the calculations of the hemacytometer. Emphasis also is placed on recognition of normal and abnormal cellular elements of blood.
CLASS 8, CREDIT 4 (F)

Advanced Hematology Registration #0816-123

This course provides instruction and practice in automated methods of cell counting, quality control, red cell description, reticulocyte counts, and test procedures in coagulation. The course emphasizes the correlation between laboratory work and diseases such as anemia, leukemia, bleeding, and coagulation disorders.
CLASS 9, CREDIT 5 (W)
PREREQUISITE: 0816-122

Histologic Assistant: Certificate

Typical Course Sequence

Fall Term

Pre-Technical Requirements

	Cr. Hrs.
0814-107 MLT Biology I	4
0815-115 MLT Chemistry I	4
0817-140 Fundamentals of College Mathematics I	3
0847-100 Freshman Seminar	2
Communication	2
English	4
Physical Education	0
Total	19

First Year

0816-101 Anatomy/Physiology and Disease I	4
0816-111 Basic Histology	6
0817-170 MLT Mathematics Communication	2
English	4
Total	19

Winter Term

	Cr. Hrs.
0814-108 MLT Biology II	4
0815-116 MLT Chemistry II	4
0817-141 Fundamentals of College Mathematics II	3
0847-101 Job Search Process	1
Communication	2
English	4
Physical Education	0
Total	18

0816-102 Anatomy/Physiology and Disease II	4
0816-115 Electrocardiography	2
0816-211 Histology II	6
0847-102 Life After College	1
Communication	2
English	4
Total	19

Spring Term

	Cr. Hrs.
0814-109 MLT Biology III	4
0815-117 MLT Chemistry III	4
0817-142 Fundamentals of College Mathematics III	3
Communication	2
English	4
Physical Education	0
Total	17

Microbiology I Registration #0816-131

This course is an introduction to the study of microscopic organisms such as viruses, bacteria, yeast, protozoa, fungi, and algae. The course also includes clinical procedures for the study of common disease-causing organisms with concentration in bacteriology. Techniques in the laboratory include media preparation, sterilization, culturing, mounting, staining, agglutination, antimicrobial susceptibility testing, and biochemical reactions.
CLASS 9, CREDIT 5 (S)

Immunology/Serology Registration #0816-132

The nature of immunity, the basic principles of the immune system, immunoassay, immunopathology, histocompatibility, and oncoimmunology are among the topics considered in this course. A variety of routine and special immunological procedures are learned during laboratory sessions.
CLASS 2, LAB 3, CREDIT 3 (W)

Blood Banking Registration #0816-133

The theory of blood banking and routine procedures is presented in this course. Emphasis is placed on quality control, ABO grouping, sub-grouping, Rh testing, anti-globulin testing, antibody screening, antibody detection and identification, transfusion reactions, compatibility testing, erythroblastosis fetalis, preparation and storage of blood components, and recordkeeping.
CLASS 2, LAB 3, CREDIT 3 (S)

Electron Microscopy Registration #0816-140

Electron optics and the mechanics of the electron microscope are studied prior to any work on the electron microscope. The principles of specimen preparation, fixation, embedding, microtomy, staining, and photographic processing are studied in depth. The course grade is based on the quality of the final products.
CLASS 2, LAB 5, CREDIT 3 (F, W, S)
PREREQUISITES: 0814-109, 0816-111

MLT Co-op Seminar**Registration #0816-200**

This course provides students with knowledge and skills to prepare them for a successful co-op experience, including guidelines on professional ethics, employee-employer responsibilities, communication skills, and interpersonal relationship development. Class activities include discussion groups, panel presentations, hospital visitations, lectures, and the preparation of co-op materials.

CLASS 2, CREDIT 1 (W)

PREREQUISITE: Completed Pre-Technical

Clinical Chemistry I, II, III**Registration #0816-201, 202, 203**

This three-quarter sequence provides theory and practice in the quantitative and qualitative analyses of physiochemical parameters. The sequence includes fundamental concepts of clinical analysis, theory and practical application of clinical instrumentation, and the relationship of clinical analysis to methodology and the diagnostic process. The winter and spring quarters include a hospital affiliation in clinical instrumentation twice weekly.

CLASS 12, CREDIT 6 (0816-201-F)

CLASS 9, CREDIT 5 (0816-202-W,

0816-203-S)

PREREQUISITES:

0816-201 for 0816-202

0816-202 for 0816-203

Histology II**Registration #0816-211**

This course is a continuation of Basic Histology with emphasis on histochemistry, special stains, and tissue preparation techniques.

CLASS 12, CREDIT 6 (W, S)

PREREQUISITE: 0816-111

Laboratory Simulation**Registration #0816-224**

This course is a review and summary of all specialties included in the total Medical Laboratory Technology program. Students rotate into all departments in the clinical laboratory environment. Students meet one hour per week with Medical Laboratory Technology faculty on campus. The remaining six hours each week are spent on rotation in an affiliated hospital or clinical laboratory under supervised conditions.

CLASS 1, LAB 6, CREDIT 3 (S)

Microbiology II**Registration #0816-232**

This course is an in-depth study of medical bacteriology and the related diseases. Theory and practice are provided in specimen collection, culturing, staining, media preparation and selection, normal flora, identification procedures for disease-producing organisms, susceptibility testing, agglutination reactions, and reporting results. This occurs on campus and in affiliated hospital laboratories.

CLASS 12, CREDIT 6(F)

PREREQUISITE: 0816-131

Medical Laboratory Technology: A.A.S. Degree**Typical Course Sequence****Fall Term****Winter Term****Spring Term**

Pre-Technical Requirements

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.			
0814-107	MLT Biology I	4	0814-108	MLT Biology II	4	0814-109	MLT Biology III	4
0815-115	MLT Chemistry I	4	0815-116	MLT Chemistry II	4	0815-116	MLT Chemistry III	4
0817-140	Fundamentals of College Mathematics I	3	0817-141	Fundamentals of College Mathematics II	3	0817-142	Fundamentals of College Mathematics III	3
	Communication	2	0847-100	Freshman Seminar	2		Communication	2
	English	4		English	4		English	4
	Physical Education	0		Physical Education	0		Physical Education	0
		17			17			17

First Year

0816-101	Anatomy/Physiology and Disease I	4	0816-102	Anatomy/Physiology and Disease II	4	0816-131	Microbiology I	5
0816-121	Urinalysis	2	0816-123	Advanced Hematology	5	0816-133	Blood Bank Procedures	3
0816-122	Hematology	4	0816-132	Immunology	3		MLT Elective (optional)	3-6
0817-170	MLT Math	3	0816-200	Pre-Co-op Seminar	1	0816-111	Basic Histology	6
0847-101	Job Search Process	1		English or Liberal Arts	4	0816-140	Electron Microscopy	3
	English	4			17		Liberal Arts	4
		18						15-18

Summer

0816-299 Co-op Clinical Experience

Second Year

0816-201	Clinical Chemistry I	6	0816-115	Electrocardiography	2	0816-105	Medical Parasitology	2
0816-232	Microbiology II	6	0816-202	Clinical Chemistry II	5	0816-203	Clinical Chemistry III	5
	Communication	2	0816-233	Microbiology III	5	0816-224	Laboratory Simulation	3
	Liberal Arts	4		Communication	2	0847-102	Life After College	1
		18		Liberal Arts	4		Communication	2
					18		Liberal Arts	4
								17

Microbiology III**Registration #0816-233**

This course is a continuation of Microbiology II, with an emphasis on special techniques for anaerobic organisms, mycobacteriology, mycology, and virology. The theory portion of the course includes the study of diseases and their symptoms.

CLASS 9, CREDIT 5 (W)

PREREQUISITE: 0816-232

Co-op Clinical Experience**Registration #0816-299**

CREDIT 0 (Su)

Independent Study**Registration #0816-399**

CREDIT Variable

Medical Record Technology

Career Exploration: Medical Record Technology

Registration #0819-100

This course provides a general overview and experiences related to the medical record profession. It is offered to students who want to explore their interest in selecting Medical Record Technology as a career major. Students enrolled in the course typically have not attended the Summer Vestibule Program (SVP), or attended SVP but did not sample Medical Record Technology at that time.
CLASS 2, CREDIT 1 (S)

Biology I

Registration #0819-106

This is the first in a three-quarter series of courses. Topics covered in this course are basic atomic structure, molecular biology, cellular structure and function, cellular respiration, DNA structure, protein synthesis, mitosis, and the relationship of bacteria and viruses to disease. Laboratory activities involving microscopic and macroscopic observations of prepared and live specimens are performed to supplement classroom lectures and discussion. Study skills development and refinement are emphasized.
CLASS 4, LAB 2, CREDIT 4 (F)

Biology II

Registration #0819-107

This course concentrates on human biology. Topics covered include hematology and the digestive, excretory, cardiovascular, respiratory, immune, and nervous systems. Laboratory activities, including the use of prepared specimens, supplement classroom lectures and discussion. Medical terminology is introduced through discussion of exemplary pathological conditions.

CLASS 4, LAB 2, CREDIT 4 (W)

PREREQUISITE: 0819-106

Biology III

Registration #0819-108

The final course in this sequence continues to focus on human biology. Topics covered are the endocrine system, reproduction, embryology, meiosis, and cellular and human genetics. Basic medical terminology related to each topic is discussed. Laboratory activities include dissecting a pig embryo as well as reviewing the anatomy of all body systems studied in this course and Biology II.

CLASS 4, LAB 2, CREDIT 4 (S)

PREREQUISITE: 0819-107

Medical Record Technology: A.A.S. Degree

Typical Course Sequence

Fall Term

Pre-Technical Year

		Cr. Hrs.
0804-111	Beginning Typing I	2
0817-140	Fundamentals of College Mathematics I	3
0819-106	Biology I	4
0847-100	Freshman Seminar	2
	Communication	2
	English	4
		17

First Year

0819-111	Anatomy/Physiology I	4
0819-141	Medical Records Science I	5
0819-161	Medical Terminology I	3
	Communication	2
	English Composition	4
		18

Second Year

0819-244	Medical Records Science IV	5
0819-264	Medical Terminology IV	3
0847-101	Job Search	1
	Communication	2
	Liberal Arts	4
		15

Winter Term

		Cr. Hrs.
0804-112	Beginning Typing II	2
0819-107	Biology II	4
	Communication	2
	English	4
	Physical Education	0
		12

0804-221	Advanced Typing I	3
0819-112	Anatomy/Physiology II	4
0819-142	Medical Records Science II	5
0819-162	Medical Terminology II	3
	Communication	2
	Physical Education	0
		17

Summer

0819-299	Co-op Work Experience	
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Spring Term

		Cr. Hrs.
0804-113	Beginning Typing III	
0819-108	Biology III	
0819-145	Health Organization English	
		14

0802-213	Data Processing	2
0804-301	Word Processing I	4
0819-143	Medical Records Science III	5
0819-163	Medical Terminology III	3
	Liberal Arts	4
		18

0819-245	Medical Records Science V	5
0819-251	Pathophysiology I	3
0847-102	Life After College	1
	Communication	2
	Liberal Arts	4
	Physical Education	0
		15

0819-246	Medical Records Science VI	5
0819-252	Pathophysiology II	3
0819-267	Medical Terminology V	3
	Liberal Arts	4
		15

Numerical Control

Numerical Control I Registration #0812-151

This course introduces students to computer-controlled machine tools. Students develop the skills required to program a machine, using several canned cycles, and to develop programs that include point to point, linear, and circular interpolation operations.
CLASS 4, LAB 3, CREDIT 4 (W)
PREREQUISITES: 0813-134, 0817-128

Numerical Control II Registration #0812-152

Students use on-line computers to prepare and verify programs. Students are introduced to advanced concepts through computer numerical control programming of a CNC milling machine.
CLASS 4, LAB 3, CREDIT 4 (S)
PREREQUISITE: 0812-151

Anatomy/Physiology and Disease I, II Registration #0819-111, 112

This is a two-quarter, in-depth study of human anatomy and physiology using a systematic approach to basic disease processes. Emphasis is placed on related medical terminology and clinical procedures.
CLASS 6, CREDIT 4 (0819-111-F, 3819-112-W)
PREREQUISITE: 0819-111 for 0819-112

Medical Record Science I Registration #0819-141

The career in medical record technology is introduced through discussion and laboratory practice. Topics covered are the medical record content, record numbering and filing systems, and the medical record profession. Procedures in the laboratory include filing, admissions, chart assembly and analysis, and chart deficiencies.
CLASS 9, CREDIT 5 (F)

Medical Record Science II Registration #0819-142

This course includes coding rules and laboratory experience in practical application of coding diseases and operations.
CLASS 9, CREDIT 5 (W)
PREREQUISITE: 0819-141

Medical Record Science III Registration #0819-143

This unit uses the content of patient records to continue the practical experience in manual and automated coding. Students learn manual and computerized abstracting of statistical data to compute health statistics; they also learn to interpret computerized statistical reports.
CLASS 9, CREDIT 5 (S)
PREREQUISITE: 0819-142

Health Care Organization and Structure Registration #0819-145

This course gives an overall introduction to health care delivery systems. It includes the composition, responsibilities, and functions of the administrative staff, health care providers, and allied health departments and professionals. Students discuss the purposes of and responsibility for the health record.
CLASS 5, CREDIT 4 (S)

Medical Terminology I, II, III Registration #0819-161, 162, 163

These are the first three quarters of a five-quarter sequence. Etymology, definition, pronunciation, spelling, and correct utilization of medical terms are stressed. Common medical terms are discussed in relation to disorders and diseases of each body system. Pronunciation and correct utilization of medical terms are reinforced.
CLASS 3, CREDIT 3 (0819-161-F, 0819-162-W, 0819-163-S)
PREREQUISITES:
0819-161 for 0819-162
0819-162 for 0819-163

Medical Record Science IV Registration #0819-244

Students study data regulations and activities associated with health information control and quality, as well as legal aspects of medical records.
CLASS 9, CREDIT 5 (F)
PREREQUISITE: 0819-143

Medical Record Science V Registration #0819-245

This course includes the medical staff organization and its responsibilities; management and supervision of health information departments; and health facilities/records in long term care, ambulatory care, home care, hospice, and mental health care.
CLASS 9, CREDIT 5 (W)
PREREQUISITE: 0819-244

Medical Record Science VI Registration #0819-246

This final course includes clinical affiliations in long term, ambulatory, and mental health care at local facilities; cancer registry with abstracting of cases; trends in health care delivery systems; and review/evaluation of medical record technology knowledge and skills.
CLASS 9, CREDIT 5 (S)
PREREQUISITE: 0819-245

Pathophysiology I, II Registration #0819-251, 252

This two-quarter course combines knowledge of human physiology with disease processes. The etiology, pathological mechanisms, characteristic symptoms, clinical manifestations, and diagnostic and therapeutic procedures of common diseases are presented.
CLASS 3, CREDIT 3 (0819-251-W, 0819-252-S)
PREREQUISITES:
0819-111, 112 or equivalent for 0819-251
0819-251 for 0819-252

Medical Terminology IV Registration #0819-264

This is a review of terms encountered in Medical Terminology I, II, and III supplemented by secondary vocabulary selected from the same topics. Etymology, definition, spelling, pronunciation, and correct utilization of medical terms are reinforced.
CLASS 3, CREDIT 3 (F)
PREREQUISITE: 0819-163

Medical Terminology V Registration #0819-267

In this course, terms related to disorders, diagnosis, treatment, and surgical procedures are selected from a variety of specialty topics. These topics include anesthesiology, microbiology, oncology, ontology, pharmacology, psychiatry, radiology, nuclear medicine, and radiation therapy. Etymology, definition, spelling, pronunciation, and correct utilization of medical terms are reinforced.
CLASS 3, CREDIT 3 (S)
PREREQUISITE: 0819-264

Co-op Work Experience Registration #0819-299 CREDIT 0(Su)

Optical Finishing Technology

Introduction to Optical Finishing Technology I

Registration #0827-105

This course emphasizes a continuation of sampling in Optical Finishing Technology, including an overview of the career, admissions, and graduate requirements, sources of employment, and expectations of students in the program. Students learn the titles, roles, and responsibilities of vision care personnel, including the M.D., O.D., dispensing optician, and optical finishing technologist. Laws and regulations governing the ophthalmic laboratory industry are introduced.

CLASS 2, CREDIT 2 (F)

Introduction to Optical Finishing Technology II

Registration #0827-106

This course teaches the function and use of a variety of optical laboratory equipment necessary to the production of single vision eyewear. Students learn the basic concepts of sphere, cylinder, axis, and geometric center and how to fabricate single vision uncut lenses into finished eyewear.

CLASS 2, CREDIT 2 (W)

Introduction to Optical Finishing Technology III

Registration #0827-107

This course introduces the concept of writing functions of given vertometer parts. Students learn the process of writing step-by-step sequential procedures for equipment operation. They practice determining lens powers from vertometer readings and calculating decentration from given prescription information. They also learn the meanings of various optical terms found on a given prescription form.

CLASS 2, CREDIT 2 (S)

Optical Finishing Technology Math I

Registration #0827-111

This course focuses on the rules of transposition, including transposition of lens powers. Students learn to apply mathematic functions solving for binocular, monocular RD.s, near vision prescriptions, and bifocal segment height and inset. The concepts of plus and minus cylinder prescription powers is discussed and definitions and determinations of lens powers from given base curves, cross curves, and inside curves are taught.

CLASS 4, CREDIT 3 (F)

PREREQUISITE: 0817-140

Optical Finishing Technology Math II

Registration #0827-112

This course teaches how to select and determine appropriate base curves, cross curves, and inside curves of given lens powers. Students learn mathematical formulas used in determining effective diameter, smallest lens blank, and prism. They also learn to apply functions related to vertometer power readings, heat treat times, and lens measurer readings.

CLASS 4, CREDIT 3 (W)

PREREQUISITES: 0817-140, 0817-141, 0827-111

Optical Finishing Technology: Certificate

Typical Course Sequence

Fall Term

Pre-Technical Requirements

		Cr. Hrs.
0817-120	Basic Mathematics	3
0827-105	Introduction to OFT I	2
0847-100	Freshman Seminar	2
	Communication	2
	English	4
	Physical Education	0
		13

First Year

0827-111	OFT Math I	3
0827-115	Prescription Analysis I	3
0827-161	Optical Finishing Terminology I	3
	Communication	2
	English	4
		15

Optical Finishing Technology: Diploma

Typical Course Sequence

Fall Term

Pre-Technical Requirements

		Cr. Hrs.
0817-120	Basic Mathematics	3
0827-105	Introduction to OFT I	2
0847-100	Freshman Seminar	2
	Communication	2
	English	4
	Physical Education	0
		13

First Year

0827-111	OFT Math I	3
0827-115	Prescription Analysis I	3
0827-161	Optical Finishing Terminology I	3
0847-101	Job Search Process	1
	Communication	2
	English	4
		16

Second Year

0827-224	Optical Finishing Techniques IV	5
0827-241	Management of Optical Stockroom Procedures	4
	Communication	2
	General Education	1
		12

Winter Term

		Cr. Hrs.
0817-140	Fundamentals of College Mathematics I	3
0827-106	Introduction to OFT II	2
	Communication	2
	English	4
	General Education	2
	Physical Education	0
		13

0827-112	OFT Math II	3
0827-116	Prescription Analysis II	3
0827-121	Optical Finishing Techniques I	5
0827-162	Optical Finishing Terminology II	3
	English	4
		18

Winter Term

		Cr. Hrs.
0817-140	Fundamentals of College Mathematics I	3
0827-106	Introduction to OFT II	2
	Communication	2
	English	4
	General Education	2
	Physical Education	0
		13

0827-112	OFT Math II	3
0827-116	Prescription Analysis II	3
0827-121	Optical Finishing Techniques I	5
0827-162	Optical Finishing Terminology II	3
	English	4
		18

Summer

0827-299 Co-op Work Experience

0818-165	Physics I	4
0827-225	Lab Simulation I	5
0827-251	Optical Finishing Technology Seminar	2
0847-102	Life After College	1
		12

Spring Term

		Cr. Hrs.
0817-141	Fundamentals of College Mathematics II	3
0818-168	Physics I (optional)	4
0827-107	Introduction to OFT III	2
0847-101	Job Search Process	1
	Communication	2
	English	4
	Physical Education	0
		12-16

0827-122	Optical Finishing Techniques II	5
0827-123	Optical Finishing Techniques III	6
0827-163	Optical Finishing Terminology III	3
0847-102	Life After College	1
	Communication	2
		17

Spring Term

		Cr. Hrs.
0817-141	Fundamentals of College Mathematics II	3
0827-107	Introduction to OFT III	2
	Communication	2
	English	4
	General Education	2
	Physical Education	0
		13

0827-117	Lens Design	3
0827-122	Optical Finishing Techniques II	5
0827-123	Optical Finishing Techniques III	6
0827-163	Optical Finishing Terminology III	3
		17

Optical Finishing Technology: A.O.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.
0817-120	Basic Mathematics	3	0817-140	Fundamentals of College Mathematics I	3
0827-105	Introduction to OFT I	2			
0847-100	Freshman Seminar	2	0827-106	Introduction to OFT II	2
	Communication	2		Communication	2
	English	4		English	4
	Physical Education	0		General Education	2
		13		Physical Education	0
					13

Second Year

0827-111	OFT Math I	3	0827-112	OFT Math II	3	0827-117	Lens Design	3
0827-115	Prescription Analysis I	3	0827-116	Prescription Analysis II	3	0827-122	Optical Finishing Techniques II	5
0827-161	Optical Finishing Terminology I	3	0827-121	Optical Finishing Techniques I	5	0827-123	Optical Finishing Techniques III	6
0847-101	Job Search Process	1	0827-162	Optical Finishing Terminology II	3	0827-163	Optical Finishing Terminology III	3
	Communication	2		English	4			
	English	4			18			17
		16						

Summer

0827-299	Co-op Work Experience	
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Third Year

0827-224	Optical Finishing Techniques IV	5	0827-225	Lab Simulation II	5	0818-168	OFT Physics	3
0827-241	Management of Optical Stockroom Procedures	4	0827-251	Optical Finishing Tech. Seminar	2	0827-226	Lab Simulation II	5
0847-166	Human Experience: An Individual Life Communication	4	0847-167	Human Experience: The Individual and Society	4	0827-243	Optical Finishing Inspection/Correction	3
		2		Communication	2	0847-102	Life After College	1
		15			13	0847-168	Human Experience: The Individual and Technology	4
								16

Optical Finishing Terminology II

Registration #0827-162

This course emphasizes the comprehension, spelling, and application of terminology related to the vertometer, lensometer, pattern maker, heat treat units, and ceramic and diamond head beveling wheels.

CLASS 5, CREDIT 3 (F, W, S)

PREREQUISITE: 0827-161

Optical Finishing Terminology III

Registration #0827-163

This course emphasizes the comprehension, spelling, and application of terminology related to lens tolerances, functions, procedures, operation and troubleshooting of selected auto edge machines, layout markers, and blocking systems. Students will complete a paper describing the procedures used in making prescription eyeglasses.

CLASS 5, CREDIT 3 (F, W, S)

PREREQUISITE: 0827-162

Optical Finishing Techniques IV

Registration #0827-224

Concepts taught in Optical Finishing Techniques III are further developed, with an emphasis on layout techniques, including multifocal and specialized vocational lens systems. Students learn to identify metal frame types by generic names. Procedures for lens insertion, frame alignment, and proper use of assembly-alignment tools are emphasized.

CLASS 9, CREDIT 5(F)

PREREQUISITE: 0827-123

Prescription Analysis I

Registration #0827-115

This course teaches the meaning of various optical terms found on given prescription forms. Students learn what information should be on a complete prescription and how to analyze single vision and multifocal

Descriptions for laboratory processing.

CLASS 4, CREDIT 3 (F)

Prescription Analysis II

Registration #0827-116

Students continue to analyze and write ophthalmic prescriptions in various forms with an emphasis on ortholite plastic, cataract, and trifocal prescriptions.

CLASS 4, CREDIT 3 (W)

PREREQUISITE: 0827-115

Lens Design

Registration #0827-117

This course teaches students how to design lens systems based on specific optical factors such as frame selection, lens material, lens thickness, index of refraction, size of lens, lens power, blank manufacturer, and cosmetic appeal. Students learn trade names of lenses, percentages of lens transmission, multifocal segment placement, and occupational and recreational lens forms.

CLASS 5, CREDIT 3 (S)

PREREQUISITES: 0827-111, 0827-112

Optical Finishing Techniques I

Registration #0827-121

This course teaches students the techniques of using the vertometer, layout marker, heat treat units, and pattern maker, and develops hand-beveling skills.

CLASS 6, CREDIT 5 (W)

Optical Finishing Techniques II

Registration #0827-122

This course teaches students how to block and edge lenses using a variety of automatic edging machines. Students learn how to edge given lenses with a Vee bevel, rimless bevel, and hide-a-bevel. Edging concepts and operational techniques are emphasized.

CLASS 6, CREDIT 5 (S)

PREREQUISITE: 0827-121

Optical Finishing Techniques III

Registration #0827-123

This course teaches students the use of the vertometer and various layout markers to prepare lenses for edging. Students learn to process uncut ophthalmic lenses according to ANSI standards.

CLASS 12, CREDIT 6 (S)

PREREQUISITES: 0827-112, 0827-122

Optical Finishing Terminology I

Registration #0827-161

This course emphasizes comprehension, spelling, and application of terminology related to the optical profession, including the laboratory environment, function and disorders of the eye, and optics/lens characteristics.

CLASS 5, CREDIT 3 (F, W, S)

**Optical Finishing Laboratory Simulation I
Registration #0827-225**

This course provides practice in the total processing of actual eyeglass prescriptions from uncut stage through completion and final inspection. Students practice various methods of assembling lenses into plastic (Zylonite) frames, symmetrical alignment of the finished product, and repair and restoration techniques for damaged or distorted plastic frames. Students rotate positions to demonstrate competence in all phases of operation.
CLASS 9, CREDIT 5 (W)

**Optical Finishing Laboratory
Simulation II**

Registration #0827-226

This course teaches the techniques of rimless mounting, notching, drilling, grooving, frame repair (soldering), lens dyeing, use of Shave computer, and the operation of Kirk Chemical Unit. Students select frame and lens for layout and processing to finished product.
CLASS 9, CREDIT 5 (S)
PREREQUISITE: 0827-225

**Management of Optical Stockroom
Procedures**

Registration #0827-241

In this course, students learn to identify the function and job responsibilities of stockroom personnel, suppliers of laboratory products, consumers (customers) of laboratory products, and flow of operations. Emphasis is concentrated on basic ophthalmic frames, receipt of orders, picking stock, stock check-in, and related administrative procedures.
CLASS 6, CREDIT 4 (F)

**Optical Finishing Inspection and
Correction**

Registration #0827-243

Students evaluate finished prescription orders as final inspector, comparing all optical and mechanical details with written specifications. Emphasis is placed on accuracy, quality of workmanship, and the inspector's ability to recommend and produce any changes he/she may find necessary. Study will include acceptable tolerance levels and prism beveling.
CLASS 5, CREDIT 3 (S)

**Professional Optic Seminar
Registration #0827-251**

In this seminar, professionals from Rochester's ophthalmic community discuss their roles in the complex field of visual care. They offer valuable background information on the many kinds of services, instrumentation techniques, and technologies that comprise the unending efforts to maintain and improve the quality of visual acuity.
CLASS 2, CREDIT 2 (W)

**Co-op Work Experience
Registration #0827-299**

CREDIT 0(Su)

**Independent Study
Registration #0827-399**

CREDIT Variable

Optical Finishing Technology: A.A.S. Degree

Typical Course Sequence

Fall Term

Pre-Technical Requirements		Cr. Hrs.
0817-120	Basic Mathematics	3
0827-105	Introduction to OFT I	2
0847-100	Freshman Seminar	2
	Communication	2
	English	4
	Physical Education	0
		13

First Year

0827-111	OFT Math I	3
0827-115	Prescription Analysis I	3
0827-161	Optical Finishing Terminology I	3
0847-101	Job Search Process	1
	Communication	2
	English	4
		16

Second Year

0827-224	Optical Finishing Techniques IV	5
0827-241	Management of Optical Stockroom Procedures	4
	Liberal Arts	4
	Liberal Arts	4
		17

Winter Term

Pre-Technical Requirements		Cr. Hrs.
0817-140	Fundamentals of College Mathematics I	3
0827-106	Introduction to OFT II	2
	Communication	2
	English	4
	General Education	2
	Physical Education	0
		13

0827-112	OFT Math II	3
0827-116	Prescription Analysis II	3
0827-121	Optical Finishing Techniques I	5
0827-162	Optical Finishing Terminology II	3
	English or Liberal Arts	4
		18

Summer

0827-299	Co-op Work Experience	
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Spring Term

Pre-Technical Requirements		Cr. Hrs.
0817-141	Fundamentals of College Mathematics II	3
0827-107	Introduction to OFT III	2
	Communication	2
	English	4
	Physical Education	0
		11

0827-117	Lens Design	3
0827-122	Optical Finishing Techniques II	5
0827-123	Optical Finishing Techniques III	6
0827-163	Optical Finishing Terminology III	3
		17

0827-226	Lab Simulation II	5
0827-243	Optical Finishing Inspection/Correction	3
	Communication	2
	Liberal Arts	4
		14

Technical Mathematics

Business Mathematics **Registration #0817-104**

This course covers all the topics described in Office Procedures Mathematics with the addition of the following: retailing and marketing mathematics, depreciation, merchandise inventory valuation, discounting notes, and business insurance.
CLASS 3, CREDIT 3 (F, W, S)

Office Procedures Mathematics **Registration #0817-105**

This course improves students' fundamental skills in arithmetic. Students learn to apply these skills to situations in office procedures. Topics covered are basic mathematical computations; a review of fractions and decimals; calculations involving percentages, simple interest, and compound interest; and methods of remuneration, commissions, and payroll records. The use of calculators is stressed.
CLASS 3, CREDIT 3 (F, W, S)

Basic Mathematics **Registration #0817-120**

This course improves students' fundamental skills in arithmetic. Topics covered are basic mathematical computations, a review of fractions and decimals, and calculations involving percentages. Use of calculators is stressed.
CLASS 3, CREDIT 3(F)

Algebra IA, IB **Registration #0817-122, 123**

This is a two-quarter sequence of basic introductory courses in algebra. The topics taught include numbers and sets, algebraic operations, linear equations and inequalities, products and factors, algebraic fractions, powers and roots, quadratic equations, and graphing.
CLASS 5, CREDIT 3 (F, W, S)
PREREQUISITE: 0817-122 for 0817-123

Geometry **Registration #0817-124**

This is a basic course in Euclidean plane geometry that includes the topics of congruence, similarity, area, parallel lines, circles, regular polygons, and right triangle trigonometry.
CLASS 3, CREDIT 3 (W)

Algebra IIA, IIB **Registration #0817-126, 127**

This is the second two-quarter sequence of basic courses in algebra. The topics taught are much the same as Algebra I except that the depth of study is greater. Additional topics covered are logarithms, complex numbers, quadratic functions with their graphs, ratios and proportions, and higher order factoring.
CLASS 5, CREDIT 3 (F, W, S)
PREREQUISITE: 0817-126 for 0817-127

Trigonometry **Registration #0817-128**

This is a basic course in trigonometry. Topics covered include an introduction to the six trigonometric functions, use of trigonometric tables, graphs of trigonometric functions, trigonometric identities, solution of right and oblique triangles, trigonometric equations, and area of a triangle.
CLASS 5, CREDIT 3 (F, W, S)

Fundamentals of College Mathematics I **Registration #0817-140**

This course is an introduction to the application of mathematics as a problem-solving tool. Emphasis is placed on measurement, use of proportion, approach to verbally expressed problems, and computation with and without a calculator. Elementary topics from geometry and statistics are included.
CLASS 5, CREDIT 3 (F, W)
PREREQUISITE: 0817-120 or approval of the offering department

Fundamentals of College Mathematics II **Registration #0817-141**

This course deals with the application of the basic tools of algebra, geometry, and trigonometry as solutions to problems. The course deals with the concepts of an algebraic variable as well as techniques of solving simple equations and inequalities. Simple applications of geometric principles are taught, as well as elementary applications of right-angle trigonometry. Attention also is paid to graphic display of data.
CLASS 5, CREDIT 3 (W, S)
PREREQUISITE: 0817-140 or approval of the offering department

Fundamentals of College Mathematics III **Registration #0817-142**

This course deals with the application of a variety of algebraic and geometric techniques to problem solving. Emphasis is placed on the concepts of function and relation and on graphing linear relations. Concepts of area and volume, powers and radicals, and geometry on the coordinate plane are included, as well as an introduction to the use of vectors.
CLASS 5, CREDIT 3 (F, S)
PREREQUISITES: 0817-141 or approval of the offering department

Mathematics for Data Processing **Registration #0817-163**

This course provides basic mathematical skills relevant to the field of data processing. The course emphasizes arithmetic operations in various number systems and logical formulation of problems.
CLASS 3, CREDIT 3 (F, W, S)

Medical Laboratory Mathematics **Registration #0817-170**

This course provides mathematical skills supporting medical laboratory procedures. Topics taught include use of electronic calculators, use of logarithms for computation, conversion between English and metric unit systems, temperature conversions, and calculations with molar and percentage solutions.
CLASS 3, CREDIT 3 (S)

College Algebra, Trigonometry, and Analytic Geometry **Registration #0817-201, 202, 203**

This is a three-course sequence in college algebra and trigonometry. Topics covered are similar to those studied in 0817-126, 127, and 128, but in some cases are more detailed. Additional topics covered are natural logarithms, solutions of systems of non-linear equations, series and sequences, limits, theory of equations, and selected topics in analytic geometry.

CLASS 3, CREDIT 3 (F, W, S)

Precalculus **Registration #0817-204**

Precalculus is offered to students who intend to take a calculus course in the future. Topics include functions and graphing and provide exposure to the wide variety of functions encountered in calculus. Limits also are introduced.
CLASS 4, CREDIT 3 (F, S)
PREREQUISITES: 0817-201 and 0817-202 or permission of instructor

Independent Study **Registration #0817-399** CREDIT Variable

Technical Physics

Technical Physics I

Registration #0818-100

This course is required for all Engineering Technologies students as well as for students preparing for study in the Colleges of Science and Engineering. The course provides background in measurement techniques and use of metrics, vector problem solutions, rectilinear motion, dynamic and static forces, Newton's Laws of Motion, work, energy, power, energy conservation laws, torque, and Law of Moments.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0817-123

Construction Technology Physics II

Registration #0818-125

The following concepts are taught in this career-integrated course: heat; temperature; heat transfer; linear and volumetric expansion and contraction; insulation materials; specific heat capacities; calorimetry; fusion and vaporization; energy costs; electrical resistance; DC circuits; fuses and circuit breakers; Ohm's Law; electrical metering; electrical power and cost of electricity; transformers; properties of light; reflection and refraction; Snell's Law; photometry and lighting; properties of sound; and acoustical principles.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0818-100

Construction Technology Physics III

Registration #0818-126

A variety of topics are covered in this final course: work; friction; machines; physical properties of matter, stress, and strain; Young's Modulus; Hooke's Law; concurrent forces; vector analysis; linear equilibrium; density and specific gravity; fluid pressure; Pascal's Principle; fluid dynamics; Bernoulli's Equation; Torricelli's Law; viscous drag; and pressure and velocity in parallel and series pipe systems.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0818-125

Technical Physics II

Registration #0818-135

This is the second course required for Industrial Drafting, Electromechanical Technology, and College of Science students. Course topics include magnetism, electrostatics, magnetic and electrostatic forces, static and current electricity, electromagnetic induction, AC and DC motors, electrical meters, photoelectric effect, potential difference and voltage drop, electrical resistance and resistivity, resistor code, electrical circuits, fuses and circuit breakers, Ohm's Law, use of electrical meters, Gauss' Law, principles of capacitors and circuitry, dielectrics, electrical power, and cost of electricity.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0818-100

Technical Physics III

Registration #0818-136

This course includes the following topics: Kirchoffs Voltage and Current Laws; mesh circuit problem solutions using the determinant and superposition methods; current division and voltage division rules for circuits; Wheatstone bridge; mutual and self inductance; Oersted fields; Lenz's Law; inductance in circuits; electrical transformers; alternating current; rms current and voltage in AC circuits; inductive and capacitive circuits; electrical resonance; and power factor.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0818-135

Technical Physics IV

Registration #0818-137

This elective course includes topics on characteristics and transmission of sound waves, acoustics and applications of sound, radio communication principles, wave theory and transmission principles, Fourier's Theorem, standing waves, resonance and harmonics, principles of reflection and refraction, Snell's Law, lenses and prisms, geometrical and wave optics, Gaussian Formula, lens power, optical instruments, use of oscilloscope, and formation of Lissajous Figures.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0818-136

Optical Finishing Physics

Registration #0818-168

This course involves the study of light, reflection, and refraction. These principles are applied to the study of the behavior of spherical and piano mirrors, prisms, and lenses. The usefulness and application of dioptric power, the lensmaker's equation, image and object dimensions, and focal length measurements are addressed. Also included are basic optical instruments and a study of the electromagnetic spectrum. Emphasis is placed on geometrical (ray) optics. The course includes a comprehensive laboratory experience that supplements and closely follows classroom instruction.

CLASS 4, LAB 1, CREDIT 3 (W, S)

PREREQUISITE: 0817-123

Independent Study

Registration #0818-399

CREDIT Variable

School of Visual Communication Careers

Applied Art

Career Exploration: Applied Art Registration #0849-100

This course is designed to help students collect the information necessary to make appropriate decisions about a possible career in the art field. Students receive opportunities to explore their interests and skills in art through structured hands-on experiences with art tools and equipment. Emphasis is on increasing students' awareness of their art skills, applied art career options, working conditions, salaries, and job responsibilities.
STUDIO 2, CREDIT 1 (F, W, S)

Basic Design I, II, III Registration #0849-111, 112, 113

This course is an introduction to the concepts and elements of design as they relate to a vocation in applied art. Emphasis will be on exploration and analysis of all design principles such as point, line, shape, texture, space, and color as they apply to two- and three-dimensional applications.

LAB 3, CREDIT 2 (F, W, S)

PREREQUISITES:

0849-100 for 0849-111
0849-111 for 0849-112
0849-112 for 0849-113

Basic Drawing I, II, III Registration #0849-121, 122, 123

This is a fundamental course that introduces students to various freehand drawing concepts, methods, and techniques. Emphasis is placed on eye-hand coordination, rendering techniques, one- and two-point perspective, and various drawing media. A variety of forms are used, including still life objects, architectural forms, landscape, and the human figure.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITES:

0849-100 for 0849-121
0849-121 for 0849-122
0849-122 for 0849-123

Media Processes I, II, III Registration #0849-131, 132, 133

The basic tools, materials, and equipment used in the professional applied art studio are introduced to students. Emphasis is placed on identification, vocabulary, maintenance, and correct use of media, mechanical tools, photostat equipment, typesetting machines, and a variety of materials.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITES:

0849-100 for 0849-131
0849-131 for 0849-132
0849-132 for 0849-133

Applied Art: Diploma Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.
0847-100 Freshman Seminar*	2
0847-101 Job Search Process*	1
0849-111 Basic Design I	2
0849-121 Basic Drawing I	3
0849-131 Media/Processes I	3
0849-141 Career Seminar I	1
Applied Art Elective"	1
Communication	2
Physical Education	0
Total	16

	Cr. Hrs.
0849-112 Basic Design II	2
0849-122 Basic Drawing II	3
0849-132 Media/Processes II	3
0849-142 Career Seminar II	1
0849-150 Introduction to Computer Graphic Systems**	2
English	4
Physical Education	0
Total	15

	Cr. Hrs.
0849-113 Basic Design III	2
0849-123 Basic Drawing III	3
0849-133 Media/Processes III	3
0849-143 Career Seminar III	1
Communication	2
English	4
Total	15

Second Year

0849-211 Layout Applications I	2
0849-221 Mechanical Preparation I	3
0849-231 Introduction to Typography I	2
0849-241 Art Survey I	2
0849-250 Computer Production Graphics"	2
Communication	2
Total	13

0849-212 Layout Applications II	2
0849-222 Mechanical Preparation II	3
0849-232 Introduction to Typography II	2
0849-242 Art Survey II	2
English	4
Physical Education	0
Total	13

0849-213 Layout Applications III	2
0849-223 Mechanical Preparation III	3
0849-233 Introduction to Typography III	2
0849-243 Art Survey III	2
Applied Art Elective"	2
English	4
Total	15

Third Year

0849-311 Graphic Applications I	5
0849-321 Employment Seminar I	3
Applied Art Elective"	2
English	4
Total	14

0849-312 Graphic Applications II	5
0849-322 Employment Seminar II	3
Applied Art Elective"	2
Communication	2
Total	12

0847-102 Life After College*	1
0849-313 Graphic Applications III	5
0849-323 Employment Seminar III	3
Applied Art Elective"	2
Communication	2
Total	13

*May be waived by department; Career Seminar and Employment Seminar courses are appropriate substitutes.

** See page 50 for Applied Art Technical Electives; 10 or more elective credits are required for the diploma.

*** Can be taken in either the Winter or Spring term of the first year.

"" Students are required to take Computer Production Graphics in either the Fall, Winter, or Spring term of the second year or Fall or Winter term of the third year.

Career Seminar I, II, III
Registration #0849-141, 142, 143

This course provides experience in the development of a personal career plan in art and assists with the development of college survival skills. Students explore personal interests, aptitudes, art program opportunities, and college adjustment issues, through presentations, field trips, discussions, and research of art careers. This course emphasizes systematic decision making related to art careers.

CLASS 2, CREDIT 1 (F, W, S)

PREREQUISITES:

0849-100 for 0849-141

0849-141 for 0849-142

0849-142 for 0849-143

Introduction to Computer Graphics Systems

Registration #0849-150

This course is an introduction to computer graphics systems. Emphasis is placed on learning how to use hardware and software for visual problem solving. Specific vocabulary related to computer terminology also is covered. In this course, students have hands-on experience using various types of hardware and software.

LAB 3, CREDIT 2 (F, W, S)

PREREQUISITES: 0849-111, 0849-121,

0849-131

Layout Applications I, II, III

Registration #0849-211, 212, 213

This is an advanced course applying design concepts, principles, and methods developed in first-year courses. The emphasis is on practices and procedures evident in a professional art studio, such as the use of grid systems, production of accurate comps, indication of typographic specifications, and use of computer systems to develop design solutions. The course also stresses quality workmanship related to the graphics field.

LAB 3, CREDIT 2 (F, W, S)

PREREQUISITES:

0849-113, 0849-123, 0849-133, 0849-150

for 0849-211

0849-211 for 0849-212

0849-212 for 0849-213

Mechanical Preparation I, II, III

Registration #0849-221, 222, 223

The fundamentals of mechanical construction are taught in this course. Emphasis is on vocabulary, techniques, and printing production methods. The course involves simulated on-the-job projects using a variety of production skills, including one-color mechanicals, multi-color mechanicals, imposition set-up, form ruling, diecut drawing, package mechanicals, and computer applications.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITES:

0849-133, 0849-150 for 0849-221

0849-221 for 0849-222

0849-222 for 0849-223

Applied Art: A.A.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

		Cr. Hrs.			Cr. Hrs.			Cr. Hrs.
0847-100	Freshman Seminar*	2	0849-112	Basic Design II	2	0849-113	Basic Design III	2
0847-101	Job Search Process*	1	0849-122	Basic Drawing II	3	0849-123	Basic Drawing III	3
0849-111	Basic Design I	2	0849-132	Media/Processes II	3	0849-133	Media/Processes III	3
0849-121	Basic Drawing I	3	0849-142	Career Seminar II	1	0849-143	Career Seminar III	1
0849-131	Media/Processes I	3	0849-150	Introduction to			Applied Art Elective***	2
0849-141	Career Seminar I	1		Computer Graphic			Communication	2
	Communication	2		Systems**	2		English	4
	English	4		Communication	2			17
	Physical Education	0		English	4			
		18		Physical Education	0			
					17			

Second Year

0849-211	Layout Applications I	2	0849-212	Layout Applications II	2	0849-213	Layout Applications III	2
0849-221	Mechanical		0849-222	Mechanical		0849-223	Mechanical	
	Preparation I	3		Preparation II	3		Preparation III	3
0849-231	Introduction to		0849-232	Introduction to		0849-233	Introduction to	
	Typography I	2		Typography II	2		Typography III	2
0849-241	Art Survey I	2	0849-242	Art Survey II	2	0849-243	Art Survey III	2
0849-250	Computer Production			English	4		Applied Art Elective***	2
	Graphics****	2			13		Communication	2
	Communication	2					Liberal Arts	4
	English	4						17
		17						

Third Year

0849-311	Graphic Applications I	5	0849-312	Graphic Applications II	5	0847-102	Life After College*	1
0849-321	Employment Seminar I	3	0849-322	Employment		0849-313	Graphic	
	Applied Art Elective**	2		Seminar II	3		Applications III	5
	Liberal Arts	4		Applied Art Elective**	2	0849-323	Employment	
	Physical Education	0		Liberal Arts	4		Seminar III	3
		14		Liberal Arts	4		Applied Art Elective***	2
					18		Liberal Arts	4
								15

*May be waived by department; Career Seminar and Employment Seminar courses are appropriate substitutes.

**See page 37 for Applied Art Technical Elective; 10 or more elective credits are required for the diploma.

***Can be taken in either Winter or Spring term of the first year.

****Students are required to take Computer Production Graphics in either the Fall, Winter, or Spring term of the second year or Fall or Winter term of the third year.

Introduction to Typography I, II, III

Registration #0849-231, 232, 233

This is a study of the use of typography in applied art: the origins of typographic form; type classifications; production processes; measurement systems; and type specification methods. Students gain experience in design, copy marking, planning formats, copy fitting, and the use of various sources of type.

LAB 3, CREDIT 2 (F, W, S)

PREREQUISITES:

0849-113, 0849-133, 0849-150 for 0849-231

0849-231 for 0849-232

0849-232 for 0849-233

Art Survey I, II, III

Registration #0849-241, 242, 243

This is a survey of major historical developments in the visual arts as they relate to applied art. Students are introduced to research methods used in the field of art as the basis for design concept development.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITES:

0849-143 for 0849-241

0849-241 for 0849-242

0849-242 for 0849-243

Computer Production Graphics Registration #0849-250

This is an advanced course in the use of computers for production graphics. Emphasis is placed on learning to use hardware and software for creating production art. Students in this course will be given extensive hands-on experience using computers as an art tool for various stages of production.
LAB 3, CREDIT 2 (F, W, S)
PREREQUISITES: 0849-113, 0849-123, 0849-133, 0849-150

Applied Art Photography Registration #0849-258

This is an elective course in the use of photographic processes as they relate to the applied artist. Emphasis is on understanding and using the camera, black and white film processing, contact printing, and enlarging. Students practice darkroom procedures and methods for obtaining a basically well-crafted photographic image.
CLASS 4, CREDIT 2 (F, W)

Three-Dimensional Applications Registration #0849-267

This elective course extends basic concepts, principles, and methods as they apply to the three-dimensional form. Emphasis is on material characteristics, tool/material processes, construction techniques, and basic model making.
LAB 3, CREDIT 2 (S)

Air Brush/Retouching Registration #0849-277

This elective course provides basic experience with the air brush as a tool for original art, retouching, and illustration. Emphasis is on care and maintenance, dyes, paints, masks, working surfaces, and a variety of working techniques.
CLASS 3, CREDIT 2 (F, S)
PREREQUISITES: 0849-112, 0849-122, 0849-132

Mechanical Perspective Registration #0849-284

Students learn the use of mechanical drawing methods for visualizing three-dimensional form in perspective. Experiences in this elective course include orthographic projection and one- and two-point perspective, based on forms ranging from simple geometric solids to complex forms. Emphasis is on mastery of basic methods for constructing a technically accurate drawing.
CLASS 3, CREDIT 2 (W)
PREREQUISITE: 0849-121

Mechanical Drawing Methods Registration #0849-285

Students are introduced to mechanical processes for depicting three-dimensional forms on a flat surface. This elective course includes drawing methods, such as oblique and isometric, based on simple and complex forms. Emphasis is on translating the three-dimensional form into a technically accurate drawing.
CLASS 3, CREDIT 2 (S)
PREREQUISITE: 0849-284

Applied Art Technical Electives

	Credit Hours	Prerequisites
Applied Art Photography 0849-258	2	None
Three-Dimensional Applications 0849-267	2	None
Air Brush/Retouching 0849-277	2	Basic Design II0849-112 Basic Drawing II0849-122 Media/Processes II0849-132
Mechanical Perspective 0849-284	2	Basic Drawing 10849-121
Mechanical Drawing Methods 0849-285	2	Mechanical Perspective 0849-284
Drawing Applications 0849-287	2	Basic Drawing III 0849-123
Freehand Lettering 0849-294	2	Media/Processes 10849-131
Finished Lettering 0849-295	2	Freehand Lettering 0849-294

Drawing Applications Registration #0849-287

This is an advanced elective course refining the freehand and technical drawing concepts, methods, and techniques developed in Basic Drawing I, II, and III. Emphasis is on development of advanced drawing skills, using various types of subject matter, media, and processes.
CLASS 3, CREDIT 2 (F)
PREREQUISITE: 0849-123

Freehand Lettering Registration #0849-294

Students are introduced to the basic processes of freehand lettering. The emphasis of this elective course is on identification, care, and the use of various lettering tools such as carpenter's pencil, speedball pen, and lettering brush. Use of basic methods of stroking, letter-spacing, word-spacing, linespacing, and rendering of both serif and sans serif letterforms are taught.
CLASS 3, CREDIT 2 (W)
PREREQUISITE: 0849-131

Finished Lettering Registration #0849-295

This elective course is an introduction to the processes, tools, equipment, and methods for producing finished lettering for reproduction. Included are exercises designed to develop skills in rendering script, serif, sans serif, and decorative letterforms.
CLASS 3, CREDIT 2 (S)
PREREQUISITE: 0849-294

Graphic Applications I, II, III Registration #0849-311, 312, 313

This is an advanced course stressing layout and mechanical skills within the context of a professional studio environment. The course involves practical work experience, with an emphasis on studio procedures, work habits, professional skills, and dealing with clients, as well as refinement of individual portfolios.
LAB 10, CREDIT 5 (F, W, S)
PREREQUISITES:
0849-213, 0849-223, 0849-233, 0849-243 for 0849-311
0849-311 for 0849-312
0849-250, 0849-312 for 0849-313

Employment Seminar I, II, III Registration #0849-321, 322, 323

Students are oriented to the total working/living environment of the professional applied art field, with an emphasis on processes for securing and maintaining employment. Experiences include resume preparation, interviewing techniques, guest lectures, field trips, presentations, discussions, and personally directed job-seeking.
CLASS 3, CREDIT 3 (F, W, S)
PREREQUISITES:
0849-213, 0849-223, 0848-233 for 0849-321
0849-321 for 0849-322
0849-322 for 0849-323

Independent Study Registration #0849-399 CREDIT Variable

Photo/Media Technologies

Career Exploration: Photo/Media Technologies

Registration #0851-100

This course explores a photo/media career to help students make well-informed decisions regarding their college area of specialization. Students have opportunities to explore their interest in the field through hands-on experiences with photo/media equipment and tools. Opportunities are provided for students to increase their awareness of necessary photo/media skills, the industries, the program, and the expectations of the Photo/Media Technologies Department. Technical areas of study include color negative printing and film processing, computer graphics, special effects slides, storyboards from 35mm slides, and video equipment.

LAB 2, CREDIT 1 (F, W, S)

Introduction to Photographic Printing

Registration #0851-101

Students learn proper use of equipment and how to process, enlarge, and evaluate black and white prints.

LAB 8, CREDIT 4 (F, W, S)

COREQUISITES: 0851-111, 0851-121

Black and White Printing

Registration #0851-102

This course builds on previously learned basic printing skills. Students use a variety of negative sizes to develop more advanced skills in controlling print contrast and exposure. The making of a quality photographic print will be emphasized.

LAB 4, CREDIT 2 (F, W, S)

PREREQUISITES: grade of C or better in 0851-101, 0851-111, 0851-121

Introduction to Film Processing

Registration #0851-111

This course introduces and gives students practice techniques for processing and process control of black and white roll film. Emphasis is on consistency and high quality film processing through control of processing variables.

LAB 3, CREDIT 2 (F, W, S)

COREQUISITES: 0851-101, 0851-121

Film Processing

Registration #0851-112

This course extends the skills learned in Introduction to Film Processing. Various types and sizes of black and white films are used and deep tank processing is introduced. Emphasis is placed on control and repeatability.

LAB 4, CREDIT 2 (F, W, S)

PREREQUISITES: grade of C or better in 0851-101, 0851-111, 0851-121

Custom Photographic Laboratory Services: Diploma

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0847-100	Freshman Seminar	2
0851-101	Introduction to Photo Printing	4
0851-111	Introduction to Film Processing	2
0851-121	Introduction to Cameras	2
	Communication	2
	English	4
	Physical Education	0
		16

Second Year

0847-101	Job Search Process	1
0851-201	Custom Color Printing I	4
0851-211	Integrated Custom Lab I	2
0851-221	Advanced Black and White Printing	2
	Communication	2
	English	4
		15

Introduction to Cameras

Registration #0851-121

This course introduces students to the proper operation of the camera and the control and manipulation of exposure through use of a light meter. Students have the opportunity to demonstrate their ability by photographing assigned subjects.

LAB 3, CREDIT 2 (F, W, S)

COREQUISITES: 0851-101, 0851-111

Introduction to Copy Work

Registration #0851-122

Students use and extend basic camera skills to meet the special needs of copy work. They use 35mm and 4x5 copy cameras with a variety of film types and are introduced to special lighting and exposure techniques.

LAB 4, CREDIT 2 (F, W, S)

PREREQUISITES: grade of C or better in 0851-101, 0851-111, 0851-121

Winter Term

		Cr. Hrs.
0851-102	Black and White Printing	2
0851-112	Film Processing	2
0851-122	Introduction to Copy Work	2
0851-132	Orientation to Photo/Media Careers	2
0851-142	Introduction to Advanced Photographic Studies*	2
	Communication	2
	English	4
	Physical Education	0
		14-16

Spring Term

		Cr. Hrs.
0851-200	Basic Color Printing	4
0851-210	Mechanized Film Processing	2
0851-220	Print Finishing	2
	Communication	2
	English	4
	Physical Education	0
		14
0847-102	Life After College	1
0851-203	Custom Color Printing III	4
0851-213	Integrated Custom Lab III	2
0851-223	Introduction to Color Copy Work	2
	Communication	2
	General Education or other elective	2
		13

*This elective is for students who need to evaluate their interest and readiness for advanced program areas.

Orientation to Photo/Media Careers

Registration #0851-132

This course teaches students more about careers in custom photographic laboratory services and media production through field trips, class discussions, and hands-on experiences. After completing this course, students are expected to choose their major area of study (Custom Photographic Laboratory Services or Media Production options). CLASS 1, LAB 3, CREDIT 2 (F, W, S) PREREQUISITES: grade of C or better in 0851-101, 0851-111, 0851-121

Introduction to Advanced Photographic Studies

Registration #0851-142

This course teaches students about majors and career areas offered by the School of Photographic Arts and Sciences. Students develop both creative and technical skills in still photography and have an opportunity to evaluate their interest and readiness for advanced program areas. Class time is spent reviewing services offered by the Visual Communication Support Department. CLASS 2, CREDIT 2 (W)

Introduction to Materials and Processes of Photography

Registration #0851-151

This course is designed for, and its enrollment is limited to, students who plan to apply to the School of Photographic Arts and Sciences. Students are introduced to the technical and theoretical aspects of photography, including variability, tone reproduction, photo chemistry, color, and light. These skills prepare them to meet the challenges of a similar course in the School of Photographic Arts and Sciences. CLASS 2, CREDIT 2 (S)

Preparation for the School of Photographic Arts and Sciences

Registration #0851-161

This course is designed for, and its enrollment is limited to, students who plan to apply to the School of Photographic Arts and Sciences. Through a variety of photographic assignments, students will learn creative and technical photographic skills. They also practice academic skills such as test taking, time management, classroom participation, understanding instructions, and use of support services that are essential to effective learning in a mainstreamed educational setting. CLASS 2, LAB 5, STUDIO 5, CREDIT 7 (S)

Machine Printing I

Registration #0851-171

Students develop basic skills at operating machine color printers and color paper processors as well as operation of a roll paper printer and mini-printer. They also learn how to set up printers, classify and print color negatives, process paper, cut prints and negatives, and inspect orders.

LAB 16, CREDIT 8 (F, W, S)

Machine Printing II

Registration #0851-172

Students learn additional skills using the roll paper printer and mini-printer as well as learning to organize work flow, sort film, set up and check printers, and monitor paper processing.

LAB 16, CREDIT 8 (F, W, S)

PREREQUISITE: 0851-171

Basic Color Printing

Registration #0851-200

This course introduces techniques for printing color negatives and evaluating color prints. Students learn principles of color theory and materials and relate these to making prints from color negatives.

LAB 8, CREDIT 4 (F, W, S)

COREREQUISITES: 0851-210, 0851-220

Custom Color Printing I

Registration #0851-201

This course builds on skills learned in Basic Color Printing and Mechanized Film Processing. It introduces additional concepts in color negative printing, mechanized film processing, and custom lab practices.

LAB 8, CREDIT 4 (F, W, S)

PREREQUISITES: grade of C or better in 0851-200, 0851-210, 0851-220

COREQUISITES: 0851-211, 0851-221

Custom Photographic Laboratory Services: A.A.S. Degree

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0847-100	Freshman Seminar	2
0851-101	Introduction to Photo Printing	4
0851-111	Introduction to Film Processing	2
0851-121	Introduction to Cameras	2
	Communication	2
	English	4
	Physical Education	0
		16

Second Year

0847-101	Job Search Process	1
0851-201	Custom Color Printing I	4
0851-211	Integrated Custom Lab I	2
0851-221	Advanced Black and White Printing	2
	Communication	2
	English	4
		15

Third Year

0851-301	Advanced Custom Color Printing I	4
0851-314	Integrated Custom Lab IV	2
	General Education or other elective	2
	Liberal Arts	4
		12

Winter Term

		Cr. Hrs.
0851-102	Black and White Printing	2
0851-112	Film Processing	2
0851-122	Introduction to Copy Work	2
0851-132	Orientation to Photo/Media Careers	2
0851-142	Introduction to Advanced Photographic Studies*	2
	Communication	2
	English	4
	Physical Education	0
		14-16

Summer

0851-299	Co-op Work Experience	
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Spring Term

		Cr. Hrs.
0851-200	Basic Color Printing	4
0851-210	Mechanized Film Processing	2
0851-220	Print Finishing	2
	Communication	2
	English	4
	Physical Education	0
		14

0851-203	Custom Color Printing III	4
0851-213	Integrated Custom Lab III	2
0851-223	Introduction to Color Copy Work	2
	Communication	2
	Liberal Arts	4
		14

0847-102	Life After College	1
0851-303	Advanced Custom Color Printing III	4
0851-316	Integrated Custom Lab VI	2
	General Education or other elective	2
	Liberal Arts	4
		13

*This elective is for students who need to evaluate their interest and readiness for advanced program areas.

Custom Color Printing II

Registration #0851-202

This course, a continuation of Custom Color Printing I, introduces additional skills related to color negative printing, mechanized film process (E-6, C-41), and concepts related to reversal printing materials.

LAB 8, CREDIT 4 (F, W, S)

PREREQUISITES: grade of C or better in 0851-201, 0851-211, 0851-221

COREQUISITES: 0851-212, 0851-222

Custom Color Printing III

Registration #0851-203

This course continues to build on concepts learned in Custom Color Printing II. The use of a Video Color Negative Analyzer (VCNA) and related translators is introduced and custom photographic laboratory practices are studied in depth. In addition, students prepare a portfolio of finished work.

LAB 8, CREDIT 4 (F, W, S)

PREREQUISITES: 0851-202, 0851-212, 0851-222

COREQUISITES: 0851-213, 0851-223

Mechanized Film Processing
Registration #0851-210

This course teaches students how to operate automatic processing equipment for C-41 (color negative) and E-6 (color transparency) materials. Process monitoring and chemical mixing also are included.

LAB 4, CREDIT 2 (F, W, S)

COREQUISITES: 0851-200, 0851-220

Integrated Custom Lab I
Registration #0851-211

This course gives students real and simulated custom production work to prepare them for work in the photographic laboratory industry. Students practice and maintain skills learned in Custom Color Printing I and are expected to work from job tickets and to perform job requirements.

LAB 4, CREDIT 2 (F, W, S)

COREQUISITES: 0851-201, 0851-221

Integrated Custom Lab II
Registration #0851-212

This course gives students real and simulated custom production work to prepare them for work in the photographic laboratory industry. Students practice and maintain skills learned in Custom Color Printing II and are expected to work from job tickets and perform job requirements.

LAB 4, CREDIT 2 (F, W, S)

COREQUISITES: 0851-202, 0851-222

Integrated Custom Lab III
Registration #0851-213

This course gives students real and simulated custom production work to prepare them for work in the photographic laboratory industry. Students practice and maintain skills learned in Custom Color Printing III and are expected to work from job tickets and perform job requirements.

LAB 4, CREDIT 2 (F, W, S)

COREQUISITES: 0851-203, 0851-223

Print Finishing
Registration #0851-220

This course teaches students how to retouch color prints to remove dust spots and other defects and introduces the use of Flexichrome dyes to color large print areas. Students practice the proper method for dry mounting black and white and color prints.

LAB 4, CREDIT 2 (F, W, S)

COREQUISITES: 0851-200, 0851-210

Advanced Black and White Printing
Registration #0851-221

This course continues the development of skills taught in Black and White Printing and extends skills to cover a variety of paper types and processes. Students learn the relationship between black and white and color printing.

LAB 4, CREDIT 2 (F, W, S)

PREREQUISITES: grade of C or better in 0851-200, 0851-210, 0851-220

COREQUISITES: 0851-201, 0851-211

Media Production: Diploma

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0847-100	Freshman Seminar	2
0851-101	Introduction to Photo Printing	4
0851-111	Introduction to Film Processing	2
0851-121	Introduction to Cameras	2
	Communication	2
	English	4
	Physical Education	0
		16

Second Year

0847-101	Job Search Process	1
0851-242	Media Graphics II	3
0851-262	Media Photo II	3
0851-281	Slide Production I	3
	Communication	2
	English	4
		16

Winter Term

		Cr. Hrs.
0851-102	Black and White Printing	2
0851-112	Film Processing	2
0851-122	Introduction to Copy Work	2
0851-132	Orientation to Photo/Media Careers	2
0851-142	Introduction to Advanced Photographic Studies'	2
	Communication	2
	English	4
	Physical Education	0

Spring Term

		Cr. Hrs.
0851-241	Media Graphics I	3
0851-261	Media Photo I	3
0851-290	AV Equipment Applications	2
	Communication	2
	English	4
	Physical Education	0
		14

14-16

0847-102	Life After College	1
0851-283	Slide Production III	3
0851-296	Media Production Workshop I	6
	Communication	2
	English	4
		12

*This elective is for students who need to evaluate their interest and readiness for advanced program areas.

Introduction to Slide Duplicating
Registration #0851-222

Students learn basic slide duplicating techniques and how to use equipment and materials related to this field. Evaluation methods related to slide duplication techniques also are presented.

LAB 4, CREDIT 2 (F, W, S)

COREQUISITES: 0851-202, 0851-212

Introduction to Color Copy Work
Registration #0851-223

Students learn the camera skills necessary for color copy work and use 35mm and 4 x 5 copy cameras with a variety of color film types and sizes. The concept of calibration is introduced and practiced.

LAB 4, CREDIT 2 (F, W, S)

COREQUISITES: 0851-203, 0851-213

Media Graphics I
Registration #0851-241

Students learn to use electronic and hand drawing tools to produce charts, graphs, and work for slide or video reproduction. Methods used to produce typography are taught and practiced and the basics of graphic composition are introduced. Good work habits are emphasized.

LAB 6, CREDIT 3 (F, W, S)

Media Graphics II
Registration #0851-242

This course teaches students advanced techniques of preparing graphics for use in media as well as design principles that can be used to focus attention and convey concepts for TV graphics and slide applications. Students gain practice in the use of photoletering equipment, photostat machines, digital typesetters, and other production equipment.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITE: 0851-241

**Basic Computer Graphics
Registration #0851-251**

This course introduces students to computer applications used in producing graphic displays and teaches the use of menu-driven graphics packages.

LAB 6, CREDIT 3 (F, W, S)
PREREQUISITE: 0851-242

**Media Photography I
Registration #0851-261**

This course provides students in the Media Production option with an opportunity to increase their skills with cameras, exposure, and light meters. Students are expected to use these skills to meet the needs of specific media-related assignments. Supporting skills in film processing and printing also are practiced.

LAB 6, CREDIT 3 (F, W, S)

**Media Photography II
Registration #0851-262**

This course teaches advanced methods of studio and location photography for creating product, portrait, titling, and scenic images. It also teaches multi-image photography techniques.

LAB 6, CREDIT 3 (F, W, S)
PREREQUISITE: 0851-261

**Videography I
Registration #0851-271**

This course introduces students to videography, cameras, videocassette recording, editing, and lighting. Emphasis is on proper operation of video equipment for single camera productions. Students have hands-on experience in making a single camera production.

LAB 6, CREDIT 3 (F, W, S)
PREREQUISITE: 0851-262

**Slide Production I
Registration #0851-281**

This course introduces students to the production of duplicate, captioned, video, and basic special effect slides as well as the production of slides from flat art. Emphasis is on the correct use of equipment and appropriate choice of materials.

LAB 6, CREDIT 3 (F, W, S)
PREREQUISITES: 0851-122, 0851-241

**Slide Production II
Registration #0851-282**

This course presents advanced slide duplication techniques, filmstrip production, special effects slide variations, digital film recorders, and film calibration techniques.

LAB 6, CREDIT 3 (F, W, S)
PREREQUISITE: 0851-281

**Slide Production III
Registration #0851-283**

Students calibrate and use 35mm inter-negative film and 35mm print film and produce intermediate special effects slides requiring computer-generated mattes and counter-mattes. This course, which introduces the operation of basic slide programming equipment and dissolvers, emphasizes quality control and testing of films and materials.

LAB 6, CREDIT 3 (F, W, S)
PREREQUISITES: 0851-262, 0851-282

Media Production: A.A.S. Degree

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0847-100	Freshman Seminar	2
0851-101	Introduction to Photo Printing	4
0851-111	Introduction to Film Processing	2
0851-121	Introduction to Cameras	2
	Communication	2
	English	4
	Physical Education	0
		16

Second Year

0847-101	Job Search Process	1
0851-242	Media Graphics II	3
0851-262	Media Photo II	3
0851-281	Slide Production I	3
	Communication	2
	English	4
		16

Third Year

0851-343	Media Graphics III	3
0851-372	Videography II	3
0851-384	Slide Production IV	3
	Liberal Arts	4
	Liberal Arts	4
		17

Winter Term

		Cr. Hrs.
0851-102	Black and White Printing	2
0851-112	Film Processing	2
0851-122	Introduction to Copy Work	2
0851-132	Orientation to Photo/Media Careers	2
0851-142	Introduction to Advanced Photographic Studies*	2
	Communication	2
	English	4
	Physical Education	0
		14-16

0851-251	Basic Computer Graphics	3
0851-271	Videography I	3
0851-282	Slide Production II	3
	Communication	2
	English	4
		15

Summer

0851-299	Co-op Work Experience	
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Spring Term

		Cr. Hrs.
0851-241	Media Graphics I	3
0851-261	Media Photo I	3
0851-290	AV Equipment Applications	2
	Communication	2
	English	4
	Physical Education	0
		14

0851-283	Slide Production III	3
0851-296	Media Production Workshop I	6
	Communication	2
	Liberal Arts	4
		15

0847-102	Life After College	1
0851-396	Media Production Workshop II	6
0851-397	Media Seminar	2-6
	Liberal Arts	4
		13-17

*This elective is for students who need to evaluate their interest and readiness for advanced program areas.

**Audiovisual Equipment Applications
Registration #0851-290**

Students learn to set up, operate, and maintain the various types of recorders, optical cameras, projectors, computers and electronic accessories, and accessories commonly used in media and media production. Identification and application of various projection and audio formats also are covered.

LAB 4, CREDIT 2 (F, W, S)

**Media Production Workshop I
Registration #0851-296**

Students apply previously learned skills to user-oriented media projects in a simulated work environment where the emphasis is on good work habits, material use, working with others, and professionally produced media products. Students use job tickets and interact with clients.

LAB 12, CREDIT 6 (F, W, S)
PREREQUISITES: 0851-251, 0851-271, 0851-282

**Co-op Work Experience
Registration #0851-299**

This required cooperative work experience lasts for one quarter (10 weeks) and is devoted to real work under the supervision of qualified technicians and professionals. It is intended for students matriculated in the associate degree programs in Custom Photographic Laboratory Services or Media Production. CREDIT 0 (F, W, S, Su)
PREREQUISITE: Completion of technical courses required for a diploma in Custom Photographic Laboratory Services or Media Production

**Advanced Custom Color Printing I
Registration #0851-301**

Students begin working with advanced color printing techniques and with various methods of calibration for representative types of equipment and materials. They also learn the E-6, C-41, and EP-2 process monitoring systems.
LAB 8, CREDIT 4 (F, W, S)
PREREQUISITES: grade of C or better in 0851-203, 0851-213, 0851-223
COREQUISITE: 0851-314

**Advanced Custom Color Printing II
Registration #0851-302**

Students continue to build advanced color printing skills including specialized techniques such as masking and multiple printing, replenishment and processor utilization calculations, and advanced theories related to these topics.
LAB 8, CREDIT 4 (F, W, S)
PREREQUISITES: grade of C or better in 0851-301, 0851-314
COREQUISITE: 0851-315

**Advanced Custom Color Printing III
Registration #0851-303**

This course, which prepares students for work in custom photographic laboratories, emphasizes critical color printing skills and techniques and presents the psychology of color. Students work to develop a portfolio.
LAB 8, CREDIT 4 (F, W, S)
PREREQUISITES: grade of C or better in 0851-302, 0851-315
COREQUISITE: 0851-316

**Integrated Custom Lab IV
Registration #0851-314**

This course prepares students for work in the photographic laboratory industry by giving them real and simulated custom production work. Students practice and maintain skills learned in Advanced Custom Color Printing I. They are expected to work from job tickets and to perform job requirements.
LAB 4, CREDIT 2 (F, W, S)
COREQUISITE: 0851-301

**Integrated Custom Lab V
Registration #0851-315**

This course prepares students for work in the photographic laboratory industry by giving them real and simulated custom production work. Students practice and maintain skills learned in Advanced Custom Color Printing II and are expected to work from job tickets and perform job requirements.
LAB 4, CREDIT 2 (F, W, S)
COREQUISITE: 0851-302

**Integrated Custom Lab VI
Registration #0851-316**

This course prepares students for work in the photographic laboratory industry by giving them real and simulated custom production work. Students practice and maintain skills learned in Advanced Custom Color Printing III and are expected to work from job tickets and perform job requirements.
LAB 4, CREDIT 2 (F, W, S)
COREQUISITE: 0851-303

**Media Graphics III
Registration #0851-343**

In this course, students produce graphics for slide and computer applications and prepare multi-cell graphics for optical effect slides. A series of graphs is designed for computer application.
LAB 6, CREDIT 3 (F, W, S)
PREREQUISITE: 0851-251

**Computer Graphics II
Registration #0851-352**

In this course, students continue to solve graphic problems and use computer graphic systems as tools to create images.
LAB 6, CREDIT 3 (F, W, S)
PREREQUISITE: 0851-343

**Videography II
Registration #0851-372**

This course teaches operation of television studio cameras, lighting, switching, and digital titling. Students gain experience working in the television studio and control room. Post-production techniques are taught and productions are made.
LAB 6, CREDIT 3 (F, W, S)
PREREQUISITE: 0851-271

**Videography III
Registration #0851-373**

This course combines single camera remotes with studio productions and teaches advanced post-production techniques. Students produce their own television programs and are encouraged to try new video techniques.
LAB 6, CREDIT 3 (F, W, S)
PREREQUISITE: 0851-372

**Slide Production IV
Registration #0851-384**

This course emphasizes the production of advanced special effects slides and introduces the production of in-camera matte techniques and the creation of animation sequences. Optical and digital cameras are used for slide production.
LAB 6, CREDIT 3 (F, W, S)
PREREQUISITE: 0851-283

**Slide Production V
Registration #0851-385**

In this course, students produce a catalog of special effects slides and document slide production procedures, materials, and equipment.
LAB 6, CREDIT 3 (F, W, S)
PREREQUISITE: 0851-384

**Media Production Workshop II
Registration #0851-396**

This course, taken in the last quarter of the program, requires practical solutions to problems in media graphics, still photography, computers, television, and slide products. Students must produce appropriate media materials when given projects in a typical working format. Portfolios are expanded.
LAB 12, CREDIT 6 (F, W, S)
PREREQUISITES: 0851-352, 0851-373, 0851-385

**Media Seminar
Registration #0851-397**

This course, taken during the last quarter of the associate degree option in Media Production, provides a relevant framework for students' previous media production courses. It also prepares students for continued growth on the job by emphasizing new directions in media production. Students may study independently a topic agreed on with their instructor. Portfolios are expanded.
CLASS 1, LAB 5, CREDIT 2-6 (F, W, S)
PREREQUISITES: 0851-352, 0851-373, 0851-385

**Independent Study
Registration #0851-399**
CREDIT Variable

Printing Production Technology

Printing Production Career Exploration Registration #0822-100

This course explores printing as a career choice to help students make well-informed decisions regarding the area in which they will concentrate their studies. Students receive opportunities to explore their interest in printing through hands-on experiences with printing equipment and tools. Although non-technical in nature, this course does provide opportunities for students to increase their awareness of necessary printing skills, the industry as a whole, the program, and the expectations of the Printing Production Technology Department. Technical areas of study include experiences in composition and paste-up, reproduction photography, stripping and platemaking, and press and finishing. CLASS 2, CREDIT 1 (F, W, S)

Page Creation Methods — Level I Registration #0822-141

This course prepares students to be paste-up artists and photolettering machine operators. Students learn the use of layout grids, adhesives, and mechanical drawing tools. State-of-the-art headline and special-effect typographic equipment will be used and maintained. The course includes an introduction to direct input phototypesetters. CLASS 4, LAB 4, CREDIT 5 (F, W, S)

Fundamentals of Reproduction Photography — Level I Registration #0822-142

This course prepares students to be entry-level camera operators. Workers with this job title make films and paper prints used in the preparation of printed products. Students learn chemical mixing, lith and rapid access tray processing, machine processing, basic contact printing, basic halftone negative and print productions, camera maintenance, and how to determine basic exposures and change copy size. CLASS 4, LAB 4, CREDIT 5 (F, W, S)

Basic Film Assembly and Platemaking — Level I Registration #0822-143

This course prepares students to be single color strippers and platemakers in the offset printing industry. Students learn single color stripping, including halftones, tints, reverse, and surprint type, manual step, and various signature impositions. Students will learn to use contact and duplicating film and proofing methods to calibrate, expose, and process subtractive and direct photo plates. CLASS 4, LAB 4, CREDIT 5 (F, W, S)

Printing Production Technology: Certificate

Students must complete a Level I course from each of the four areas of offset lithography and Integrated Printing Lab I.

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0817-120	Basic Mathematics	3
0822-	Level I Printing	5
0847-100	Freshman Seminar	2
	Communication	2
	English	4
	Physical Education	0
		16

Second Year

0822-	Level I Printing	5
0847-101	Job Search Process	1
	Communication	2
	English	4
	General Education	2
		14

Winter Term

		Cr. Hrs.
0822-	Level I Printing	5
	Communication	2
	English	4
	General Education	2
	Physical Education	0
		13

0822-	Level I Printing	5
0822-170	Production Printing I	2
0847-102	Life After College	1
	Communication	2
	English	4
		14

Spring Term

		Cr. Hrs.
0822-	Level I Printing	5
	Communication	2
	Elective	2
	English	4
	General Education	2
	Physical Education	0
		15

Basic Lithographic Duplicator Operation — Level I

Registration #0822-144

This course prepares students to be duplicator operators. Included is instruction on various duplicators that are widely used by in-plant and commercial printers. A systematic method of preparation, operation, and maintenance is emphasized. The operation of small power stitchers, paper drills, paper cutters, and commercial type folders is taught as part of this course.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)

Production Printing I, II, III, IV, V Registration #0822-170, 0822-269, 0822-270, 0822-271, 0822-272

The production printing laboratory is a simulated work experience where each student is expected to work from a job ticket. Job procedures, good skills, production rates, and work habits are emphasized. Previously learned skills are reinforced. The complexity of jobs increases in each production course.

LAB 4, CREDIT 2 (F, W, S)

PREREQUISITES:
0822-170 for 0822-269
0822-269 for 0822-270
0822-270 for 0822-271
0822-271 for 0822-272

Computerized Typesetting — Level II Registration #0822-251

This course prepares students to be keyboard operators and phototypesetter operators. Special keyboard functions of various machines are presented and practiced for familiarity. Special function codes are used to drive different phototypesetters. Complete operation of several phototypesetters is required.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)
PREREQUISITES: Touch-typing skills,
0822-141

Electronic Publishing — Level III Registration #0822-252

This course prepares students with advanced keyboarding procedures for complex typographic formats. Included are skills in telecommunication with computers and word processors. The layout and paste-up skills learned in Page Creation Methods are used in new, more complex applications.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)
PREREQUISITES: Touch-typing skills,
0822-251

Advanced Halftone and Line Technique — Level II

Registration #0822-255

This course prepares students to be camera operators. Graduates with this job title can do advanced line photography, halftones, 50 percent dot placement for tone reproduction, related contacting, proofing, and film processing as required by in-plant printing departments, newspapers, and commercial printing companies.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)

PREREQUISITE: 0822-142

Color Separation Methods — Level III

Registration #0822-256

This course prepares students to be color separators, color scanner operators, and dry dot etchers. Graduates with these job titles can make duotones; make direct color separations; make color corrections by dry-dot etching; make the required color proofs; and with their limited on-the-job training, operate a color scanner.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)

PREREQUISITE: 0822-255

Color Scanning Methods — Level IV

Registration #0822-257

This course prepares students to enter the printing industry as color scanner operators. Areas of study include copy evaluation, color separation of transparencies and reflection copy, scanner linerization, scanning problem copy, color proofing and correction, gray component replacement, and color separation for different reproduction methods.

CLASS 4, LAB 4, CREDIT 5

PREREQUISITE: 0822-256

Flat Color Film Assembly — Level II

Registration #0822-261

This course continues students' preparation for the offset printing industry. Students learn skills necessary for stripping, proofing, and platemaking flat color. Skills learned include multi-tone and multi-color work using tints, duotones, special effects, and spot color. Students use a precision pin register system throughout the stripping, proofing, and platemaking operations for all jobs. Additional skills include determining imposition planning and quality control systems for film, proof, and plate exposures and processing.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)

PREREQUISITE: 0822-143

Process Color Film Assembly — Level III

Registration #0822-262

This course prepares students in process color stripping procedures and considerations. Included are various methods of aligning negatives, stripping multiple sets on the same form, matching color using process color tints, stripping reverse and surprint type in process color areas, split-page/form stripping, making spread and choked negatives and positives, and making composite negatives and positives.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)

PREREQUISITE: 0822-161

Printing Production Technology: Diploma

Students must complete the following requirements: one Level I course from each of the four areas of offset lithography; two Level II and two Level III courses from any two of those areas; and Production Printing I, II, and III. In addition, a co-op work experience is required.

Typical Course Sequence

Fall Term			Winter Term			Spring Term		
First Year			Cr. Hrs.			Cr. Hrs.		
0817-120	Basic Mathematics	3	0822-	Level I Printing	5	0822-	Level I Printing	5
0822-	Level I Printing	5		Communication	2		Communication	2
0847-100	Freshman Seminar	2		Elective	2		Elective	2
	Communication	2		English	4		English	4
	English	4		General Education	2		General Education	2
	Physical Education	0		Physical Education	0		Physical Education	0
		16			15			15
Second Year			Cr. Hrs.			Cr. Hrs.		
0822-	Level I Printing	5	0822-	Level II Printing	5	0822-	Level III Printing	5
0847-101	Job Search Process	1	0822-170	Production Printing I	2	0822-269	Production Printing II	2
	Communication	2		Communication	2		Elective	2
	Elective	2		Elective	2			9
	English	4		General Education	2			
		14			13			
Third Year			Cr. Hrs.			Cr. Hrs.		
0822-	Level II Printing	5	0822-	Level III Printing	5			
0822-270	Production Printing III	2	0847-102	Life After College	1			
	General Education	2		Communication	2			
		9			8			

Summer

0822-299 Co-op Work Experience

Film Assembly Systems and Quality Control — Level IV

Registration #0822-263

This course continues the study of process color film assembly techniques and related applications. Areas of study include computer-aided masking methods, use of a precision line-up table, web offset film assembly considerations, quality control targets, and auto stripping/register systems.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)

PREREQUISITE: 0822-262

Lithographic Press Operator — Level II

Registration #0822-265

This course is an introduction to the small press. Systematic methods of small press preparation and operation are taught. Students are taught how to read and use a micrometer. Adequate practice time is provided for students to reach a level of competence required for placement as beginning press operators.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)

PREREQUISITE: 0822-144

Advanced Lithographic Press — Level III

Registration #0822-266

This course emphasizes the use of close registration systems. Four-color process printing is done, but not at normal production rates. Students learn how to use a packing gauge and are instructed in the use of a densitometer for measuring ink densities. Opportunity to gain sufficient skills to do routine troubleshooting is provided.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)

PREREQUISITE: 0822-265

Production Presswork — Level IV

Registration #0822-267

This course continues the study of lithographic press operation in a production-related setting. Areas of study include blanket squeeze and its effect on image length, systematic methods of solving press-related problems, and development of production skills. It will reinforce skills developed in prerequisite press courses. The course simulates on-the-job training, using sheet fed single- and multi-color offset presses.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)

PREREQUISITE: 0822-266

Co-op Work Experience

Registration #0822-299

CREDIT 0 (Su)

Independent Study

Registration #0822-399

Credit: Variable

Printing Production Technology: A.A.S. Degree

Students must complete the following requirements: one Level I course from each of the four areas of offset lithography; two Level II and Level III courses from any two of those areas; Production Printing Lab I, II, III, and IV; nine additional printing credits; five Liberal Arts courses; and a co-op work experience.

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0817-120	Basic Mathematics	3
0822-	Level I Printing	5
0847-100	Freshman Seminar	2
	Communication	2
	English	4
	Physical Education	0
		16

Second Year

0822-	Level I Printing	5
0847-101	Job Search Process	1
	Communication	2
	Elective	2
	English	4
		14

Third Year

0822-	Level II Printing	5
0822-269	Production Printing II	2
	Communication	2
	Liberal Arts	4
	Printing Elective	3
		16

Winter Term

		Cr. Hrs.
0822-	Level I Printing	5
	Communication	2
	Elective	2
	English	4
	General Education	2
	Physical Education	0
		15

0822-	Level II Printing	5
	Communication	2
	Elective	2
	Liberal Arts	4
		13

Summer

0822-299	Co-op Work Experience	
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Spring Term

		Cr. Hrs.
0822-	Level I Printing	5
	Communication	2
	Elective	2
	English	4
	General Education	2
	Physical Education	0
		15

0822-	Level III Printing	5
0822-170	Production Printing I	2
	Liberal Arts	4
		11

0822-271	Production Printing IV	2
0847-102	Life After College	1
	Elective	2
	Liberal Arts	4
	Printing Elective	3
		12

Division of Educational Support Services Programs

Educational Interpreting

Sign Vocabulary Development Registration #0850-200

This course allows students to develop, expand, and refine sign vocabulary skills that prepare them for future courses in interpreting. Vocabulary introduced will include at least 300 signs.

CLASS 1, LAB 1, CREDIT 1

American Sign Language I Registration #0850-203

This required course concentrates on the development of basic knowledge of and beginning skills in the conversational use of American Sign Language (ASL). Students describe ASL as it fits into a general language model. Students learn to recognize and accurately produce ASL sentence types with appropriate non-manual behaviors and grammatical features.

CLASS 2, LAB 2, CREDIT 3

American Sign Language Interpreting I Registration #0850-204

This required course uses skills and principles learned in American Sign Language I and II. Students practice interpreting from English to American Sign Language using consecutive interpreting. Using the body of knowledge available from foreign language interpreting, students examine the theoretical aspects of the interpreting process.

CLASS 1, LAB 4, CREDIT 3

PREREQUISITE: 0850-206

American Sign Language Interpreting II Registration #0850-205

This skills development elective course provides experience in simultaneous and consecutive interpretation. Activities include simulated interpreting experiences, interpreting practice with the use of audio- and video-tapes, and critiques.

CLASS 1, LAB 4, CREDIT 3

PREREQUISITE: 0850-204

American Sign Language II Registration #0850-206

This required course develops conversational fluency in American Sign Language (ASL). Students incorporate appropriate use of ASL classifiers, non-manual grammatical markers, and grammatical features of ASL in a conversational setting.

CLASS 2, LAB 2, CREDIT 3

PREREQUISITE: 0850-203

Educational Interpreting: A.A.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.
0520-220 English Composition	4	0850-211 Voice Interpreting I	3	0520-332 Literature	4
0850-200 Sign Vocabulary Development	1	0850-262 Theory and Practice of Interpreting II	3	0850-203 American Sign Language I	3
0850-210 Fingerspelling and Number Comprehension	3	0850-331 Expressive Transliterating	3	0850-252 Aspects and Issues of Deafness II	3
0850-251 Aspects and Issues of Deafness I	3	0850-391 Principles of Tutoring/Notetaking	3	0850-271 Professional Interpreter I	3
0850-261 Theory and Practice of Interpreting I	3	Liberal Arts Social Science Elective (one of two)	4	Liberal Arts Social Science Elective (two of two)	4
10-289 Contemporary Science Elective (biology, chemistry, physics, or mathematics)	4	Physical Education	0	Physical Education	0
	18		16		17

Optional Summer Quarter

0850-281 Interpreting Practicum I	5
0850-283 Interpreting Seminar I	1
	6

Second Year

0850-212 Voice Interpreting II	3	0850-206 American Sign Language II	3	0502-520 College Vocabulary Skills	4
0850-332 Expressive Transliterating II	3	0850-213 Voice Interpreting III	3	0850-204 American Sign Language Interpreting I	3
0850-343 Expressive Oral Transliterating	3	0850-281 Interpreting Practicum I	5	0850-382 Interpreting Practicum II	5
0850-372 Professional Interpreter II	3	0850-283 Interpreting Seminar I	1	0850-384 Interpreting Seminar II	1
Liberal Arts Science and Humanities	4	0850-392 Tutoring/Notetaking Practicum	3	0850-396 Support Service Professional	3
Physical Education	0	0850-395 Mainstreaming: Educational Programs and Alternatives	3		16
	16		18		

Optional Summer Quarter

0850-382 Interpreting Practicum II	5
0850-384 Interpreting Seminar II	1
	6

Fingerspelling and Number Comprehension**Registration #0850-210**

Students improve their ability to comprehend fingerspelled words and manually signed numbers within messages signed at a conversational rate of speed. Instructional activities include games, drills, and voice interpreting. LAB 6, CREDIT 3 (F)

Voice Interpreting I**Registration #0850-211**

This course will increase students' ability to receive the spoken and signed messages of hearing-impaired people and will refine students' ability to use vocal modulation to prepare for the voice interpreting task. This is a self-paced laboratory course. Students learn by viewing videotapes and completing a series of exercises. The videotapes contain hearing-impaired people communicating orally, in signed English, or in American Sign Language.

CLASS 2, LAB 2, CREDIT 3

PREREQUISITE: 0850-210

Voice Interpreting II**Registration #0850-212**

This course develops students' ability to generate a spoken English equivalent while viewing/listening to a hearing-impaired person's signed/spoken message. This is a self-paced laboratory course.

CLASS 1, LAB 4, CREDIT 3

PREREQUISITES: 0850-211, 0850-331

Voice Interpreting III**Registration #0850-213**

This course continues development of the voicing task. More complex videotaped samples of signed/spoken messages of hearing-impaired people are delivered at a faster rate than those in Voice Interpreting I and II. This is a self-paced laboratory course.

CLASS 1, CREDIT 3

PREREQUISITE: 0850-212

Aspects and Issues of Deafness I, II**Registration #0850-251, 252**

Students learn the communication and psychosocial/cultural aspects of deafness through panel and class discussions, readings, and field trips.

CLASS 3, CREDIT 3

PREREQUISITE: 0850-251 for 0850-252

Theory and Practice of Interpreting I**Registration #0850-261**

This course addresses the current theory and practices of the profession of interpreting.

Topic areas include: general communication principles and their application to the interpreting task; the history of the profession of interpreting; different types of interpreting and related terminology; general skills required in interpreting and current applications by professional interpreters; overview of the professional code of ethics and its rationale; population serviced by interpreters, e.g. hearing-impaired speechreaders, deaf-blind individuals, multiply disabled individuals, etc.; resources related to interpreting and mainstreaming available to students; and current issues facing the professional, e.g. multiple roles and mainstreaming specialists. CLASS 3, CREDIT 3

Theory and Practice of Interpreting II**Registration #0850-262**

Students use a communication process model to acquire a theoretical base for the interpreting task. Topics addressed are the linguistic principles associated with sign language and the interpreting task and skills in positioning and lighting. This course includes lectures and student participation in small and large group activities.

CLASS 3, CREDIT 3

PREREQUISITE: 0850-261

The Professional Interpreter I**Registration #0850-271**

Students develop a broad understanding of interpreting as a profession, national standards for certification, and the concepts contained in the Registry of Interpreters for the Deaf (RID) Code of Ethics. Other areas of concentration are interpersonal skills, self-critique, professional development, and resume writing. Coursework includes panels, role playing, discussions, readings, and lectures.

CLASS 3, CREDIT 3 (S)

Interpreting Practicum I**Registration #0850-281**

This course provides the opportunity to acquire knowledge about the profession of interpreting through observation of and discussion with professional interpreters. The practicum student will be assigned a mentor who will supervise the practicum experience. Students enrolled in Interpreting Practicum I also must register for Interpreting Seminar I.

CLASS 10, CREDIT 5 (F, W, S)

PREREQUISITES: 0850-211, 0850-251, 0850-262, 0850-271, 0850-331

COREQUISITE: 0850-283

Interpreting Seminar I**Registration #0850-283**

This course is designed as part of the practicum experience. Students come together and share observations and experiences gained from the practicum placement. Class discussion focuses on analyzing ethical or situational problems, behavioral alternatives, and outcomes.

CLASS 2, CREDIT 1 (F, W, S)

COREQUISITE: 0850-281

Expressive Transliterating I, II**Registration #0850-331, 332**

These two courses concentrate on expressive transliteration as it relates to conceptually accurate English. Students develop skills required to present a spoken message in a signed English mode. Emphasis is placed on conceptual accuracy, accuracy of fingerspelling, vocabulary development, facial expression and body movement, and self-critiquing skills.

CLASS 2, LAB 2, CREDIT 3 (F, S)

PREREQUISITES: 0850-205 for 0850-331, 0850-331 for 0850-332

Deaf-Blind Interpreting**Registration #0850-342**

Students are prepared to interpret for deaf-blind consumers. Topics concerning deaf-blindness include causes and effects, aspects and issues of deaf-blindness, information and resources, and interpreting modes and methods of communication.

CLASS 3 CREDIT 3

PREREQUISITES: 0850-212, 0850-271, 0850-331

Expressive Oral Interpreting/**Transliterating****Registration #0850-343**

This course concentrates on the skill of expressive oral transliteration. Students develop the skill of receiving an auditory message and reproducing it in a highly visual modality by applying the principles of clear speech production and support techniques. Emphasis is placed on speech production principles, natural gestures, body language, facial expressions, and speed of transmission.

CLASS 3, CREDIT 3

PREREQUISITE: 0850-252

The Professional Interpreter II**Registration #0850-372**

Students develop a broad understanding of interpreting as a profession, national standards for certification, and the concepts contained in the Registry of Interpreters for the Deaf Code of Ethics. Other areas of concentration are interpersonal skills, self-critique, professional development, and resume writing. Coursework includes panels, role playing, discussions, readings, and lectures.

CLASS 3, CREDIT 3

PREREQUISITE: 0850-271

**Interpreting Practicum II
Registration #0850-382**

This course provides the opportunity to integrate skills and knowledge through practicum situations. Experiences are gained by observation and actual interpreting in a variety of settings. The practicum student will be assigned a mentor who will supervise the practicum experience. Students enrolled in Interpreting Practicum II also must register for Interpreting Seminar II.

CLASS 12, CREDIT 5 (F, W, S)

PREREQUISITES: 0850-212, 0850-252, 0850-332, 0850-372, 0850-395

COREQUISITE: 0850-384

**Interpreting Seminar II
Registration #0850-384**

This course is designed as part of the practicum experience. Students come together and share observations and experiences gained from the practicum placement. Class discussion focuses on analyzing ethical or situational problems, behavioral alternatives, and outcomes.

CLASS 2, CREDIT 1 (F, W, S)

PREREQUISITES: 0850-212, 0850-252, 0850-372, 0850-395

COREQUISITE: 0850-382

**Principles of Tutoring/Notetaking
Registration #0850-391**

This course prepares students to provide tutoring and notetaking support for hearing-impaired people in mainstreamed educational settings. The methodology is appropriate for elementary, secondary, and postsecondary education levels.

CLASS 3, CREDIT 3

PREREQUISITE: 0850-251

**Tutoring/Notetaking Practicum
Registration #0850-392**

Students provide tutoring and notetaking services to hearing-impaired students. A minimum of 10 hours per week is devoted to taking notes in class and tutoring outside of class. Practicum sites include the Rochester City School District, Monroe County Board of Cooperative Educational Services (BOCES) program, colleges of RIT, and other Rochester-area universities and colleges. Supervision is provided.

CLASS 10, CREDIT 3 (F, W, S)

PREREQUISITE: 0850-391

**Mainstreaming: Educational Programs
and Alternatives**

Registration #0850-395

This course explores the goals and processes of education of hearing-impaired people, and covers current demographic, legal, economic, and social trends affecting education of hearing-impaired people. Students identify criteria and processes for the establishment of quality support services for hearing-impaired students.

CLASS 3, CREDIT 3

PREREQUISITE: 0850-251

**The Support Service Professional
Registration #0850-396**

This course addresses the knowledge and skills necessary for functioning in a variety of educational or non-educational settings where the support service provider will have more than one major responsibility. Presentations by people with practical experience in the field will be used to enhance students' awareness of what it means to be a support service professional.

CLASS 3, CREDIT 3

PREREQUISITES: 0850-281, 0850-283, 0850-391, or permission of instructor

**Contemporary Studies in Support Services
Registration #0850-397**

This course addresses the dynamic nature of support services and special education. As changes and growth occur in the field, this course will address "state-of-the-art" issues. Some examples are court decisions, state or federal legislation, research findings, development of new techniques or technology, in-service training programs for faculty members and/or service providers, and management of support services. The course will be offered as new topics arise, or if a lecturer with specific expertise in support services is available to conduct the course.

CLASS 1-3, CREDIT 1-3 (S)

PREREQUISITES: 0850-281, 0850-392, or permission of instructor

**Independent Study
Registration #0850-399**

CREDIT 1-3

PREREQUISITES: 0850-205, 0850-252, 0850-262, 0850-331, 0850-391, or permission of instructor

Other courses offered within NTID and RIT may be taken as electives if the student has interests outside the Educational Interpreting program and time available to take them. For information on these courses and the process for registering for them, the student should see the Educational Interpreting academic advisor.

Division of General Education Programs

General Education

Required Courses

Freshman Seminar

Registration #0847-100

This course is designed to provide entering students with opportunities to enhance intellectual, academic, personal, social, and ethical decision-making skills in order to maximize their college experience. Students have opportunities to explore and negotiate the college environment, expand critical thinking skills, learn and use academic skills, confront questions of identity and social roles, and deal with ethical issues with faculty members and senior-level students who serve as mentors. CLASS 3, CREDIT 2 (F, W)

Job Search Process

Registration #0847-101

This course is designed for students who are preparing for their first co-op experience or permanent job. Students learn about resume writing, employment letters, sources of employment information, job applications, interviews, and ways to find a job. Learning activities include lectures and written assignments.

CLASS 2, CREDIT 1 (F, W)

Life After College

Registration #0847-102

This course, designed for students in their last year, provides information that will help them after they graduate. Topics include budgeting, housing, birth control, and keeping a job. Learning activities include lectures, videotapes, and individual conferences with the instructor.

CLASS 2, CREDIT 1 (F, W, S)

CAREER/JOB DEVELOPMENT

SIGI Decision Making

Registration #0847-160

This course helps students learn about themselves and about potential careers by using the career computer SIGI. Topics will be decision making, value clarification, and self-assessment. Activities include lectures, discussions, small group activities, and presentations.

CLASS 2, CREDIT 2 (F, W, S)

Career Decision Making

Registration #0847-161

This course, designed for students who are not sure about their educational and career goals, teaches them how to plan careers and lives. Work is on an individual or small-group basis. Activities include independent study, field trips, role playing, lectures, and discussions.

CLASS 2, CREDIT 2 (F, W, S)

The World of Work

Registration #0847-162

This course prepares students for a co-op experience or permanent employment. Students learn skills important to success at any job. Class activities include lectures, student presentations, and discussions.

CLASS 2, CREDIT 1 (S)

Interpersonal Relationships on the Job

Registration #0847-163

This course teaches students the importance of good work relationships to careers. Topics include employer-employee relationships, co-worker relationships, and how work relationships affect job satisfaction. Activities include role playing, discussions, and presentations.

CLASS 2, CREDIT 2 (F, W, S)

FINE ARTS AND HUMANITIES

History

Deaf Heritage

Registration #0847-148

This course examines many topics related to deafness. Students survey "the deaf experience" from ancient times to the present by tracing the social and cultural heritage of deaf people and by examining important events and developments. Deaf individuals who have made important and remarkable contributions and achievements also are studied.

CLASS 3, CREDIT 3 (F, W, S)

American Past

Registration #0847-149

This course gives students an understanding of American history, beginning in 1607 and continuing through the 20th century. It introduces students to a history of the country's past (heritage) and helps prepare them for the personal responsibilities of good citizenship in contemporary society.

CLASS 2, CREDIT 2 (F, W, S)

European History

Registration #0847-201

This course is an introduction to political, social, and cultural history from 1600 through the 20th century and serves as a bridge to Modern European History offered in the College of Liberal Arts. Emphasis is placed on the major historical developments that have influenced the development of modern Europe.

CLASS 3, CREDIT (W)

Current Events Seminar

Registration #0847-202

This course examines the major news events as they occur, through identification of underlying issues and their historical foundations.

CLASS 3, CREDIT 3 (F)

Elective Courses

Language and Literature

Introduction to Dramatic Literature

Registration #0847-215

This course provides a basic introduction to dramatic literature, as well as a bridge to the study of dramatic literature in the College of Liberal Arts. It introduces students to the play script as literature and to play script analysis, focusing on vocabulary and basic skills.

CLASS 3, CREDIT 3 (F, W)

Introduction to Prose Literature

Registration #0847-216

This course serves as a survey course for students desiring a basic knowledge of prose fiction and nonfiction and as a bridge to the study of prose in the College of Liberal Arts. It introduces students to the genres of the short story, novel, autobiography, and essay.

CLASS 3, CREDIT 3 (W)

Written Communication I

Registration #0847-218

This course is designed for students who need to improve their reading and writing skills before entering Written Communication II. Using a variety of readings and topics, students develop the language and thinking skills needed to write effectively. Specifically, students learn the conventional structures of paragraphs and essays; generate ideas through a variety of invention strategies; use basic development techniques and order choices in writing; use a variety of analytic strategies for both reading and writing; and write paragraphs and essays using narration, exposition, and summary forms.

CLASS 3, CREDIT 4 (F, W, S, Su)

PREREQUISITE: Appropriate score on NTID Liberal Arts Placement Test

Written Communication II

Registration #0847-219

This course is designed for students planning to take English Composition and who need an introduction to the basic concepts of good writing. Using a variety of readings and topics, students develop the language and thinking skills needed to write effectively. Specifically, students learn the conventional structures of documented reports; generate ideas through a variety of invention strategies; review basic development techniques and order choices and learn more complex forms; use a variety of analytic strategies for both reading and writing; enhance critical thinking skills by recognizing assumptions, overgeneralizations, oversimplifications, etc.; and write essays using exposition, summary, critique, persuasion, and argumentation forms.

CLASS 3, CREDIT 4 (F, W, S, Su)

PREREQUISITE: Completion of Written Communication I or appropriate score on the NTID Liberal Arts Placement Test

Religion

The Bible as Literature: A Cultural and Historical Perspective

Registration #0847-145

This course provides a basic understanding of the contents of the Bible. It presents some of the major events and themes and focuses on the cultural and historical circumstances in which the biblical literature grew. Students with a variety of religious interests may take this course. The course does not approach the literature from any particular belief or lack thereof.

CLASS 2, CREDIT 2 (F)

Our Judeo-Christian Heritage

Registration #0847-150

This course gives students an understanding of the historical and literary roots of two major religions of the world, Judaism and Christianity. The foundations of Western culture also are explored. A study of these roots begins with a geographical and sociological view of the Ancient Near East 6,000 years ago, and continues with a study of factors that encouraged the later development of Jewish/Christian religious thought and understanding. Students have an opportunity to become more familiar with their own heritage so that they can better form values, opinions, and answers to religious questions in their own lives.

CLASS 2, CREDIT 2 (F, W, S)

INTERDISCIPLINARY

The Human Experience: An Individual Life

Registration #0847-166

This course introduces the major challenges faced by human beings throughout the life cycle. It explores the factors that affect healthy and unhealthy adjustments to the circumstances of an individual's life, including biological inheritance, thoughts, feelings, and environment. Students examine contemporary issues related to the challenges of adolescence, adulthood, and old age in order to understand how unconscious adjustment and conscious decision making help in attaining and maintaining psychological health. Selected contemporary issues are explored through self-reflection; group discussions; writing; examination of scientific, literary, and periodical materials; guest speakers; and campus and community activities. Alternative solutions to life's challenges are generated, shared, and evaluated by students. Through these experiences, students are introduced to the knowledge, communication skills, and critical thinking skills important for making responsible decisions throughout their adult lives.

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE: Permission of department chairperson or instructor

The Human Experience: The Individual and Society

Registration #0847-167

This course focuses on the individual's relationships with others, starting from a study of primary groups and moving through a study of secondary groups (peers, school, work, and citizenship groups) to a study of world awareness and responsibility. The course involves the perception and evaluation of values, morals, ethics, human rights, and responsibilities. The study of selected social issues is accomplished through self-reflection, group and panel discussions, reading of periodicals and teacher-created materials, and participation in campus and community activities. Students are introduced to the knowledge, communication skills, and critical thinking skills important for making responsible decisions throughout their lives.

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE: Permission of department chairperson or instructor

The Human Experience: The Individual and Technology

Registration #0847-168

This course explores the social, political, economic, and ethical dimensions of the relationship between the individual and technology in modern society. It provides a specific focus for the application of the general understanding of human development, society, and the possibilities for personal self-determination that students acquire in The Human Experience: An Individual Life and The Human Experience: The Individual and Society. Drawing on this knowledge and using the skills in communication and critical thinking that they have developed, students analyze selected current issues that affect their lives, present and future, and develop a course of responsible actions based on their analysis. This activity will be grounded in a consideration of the nature of science and technology, the role of human values in determining the course of scientific inquiry and the social uses of technology, and some major areas of controversy in this field.

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE: Permission of department chairperson or instructor

MATHEMATICS AND SCIENCE

Reading and Thinking in Science and Technology

Registration #0847-220

This course is offered to cross-registered science and engineering students who are interested in raising their academic achievement level and to other students who wish to improve their skills and increase their knowledge in those areas. The course helps students evaluate their strengths and weaknesses in areas of thinking such as comparing, analyzing, reasoning, and problem solving. With an emphasis on making thinking overt, strategies are modeled and practiced. Expansion of both background knowledge and scientific vocabulary are additional benefits.

CLASS 3, CREDIT 3 (S)

PERSONAL DEVELOPMENT

Learning Strategies

Registration #0847-105

This course is designed to help students evaluate their strengths and weaknesses and to improve their learning efficiency and effectiveness through appropriate training. Students have the opportunity to improve their learning skills in areas such as reading, test taking, questioning, and general study habits. Activities include lectures, discussions, and individual conferences.

CLASS 2, CREDIT 2 (F, W, S)

Health Self-Care**Registration #0847-107**

This course teaches students the importance of health and how to make responsible health care decisions. Information about choosing and using health care products and services is presented. Activities include lectures, field trips, and discussions.

CLASS 2, CREDIT 2 (F, W, S)

Drug and Alcohol Usage**Registration #0847-108**

This course is designed to give a general overview of various drugs that are commonly used among college-age populations. Upon completion of this course, students should be able to identify and describe the effects on the body from using each drug covered, both short and long term; classification; dependence; and tolerance. Students will study the following drug-related topics: social impact; peer pressure; economy of drugs; and personal values related to drugs.

CLASS 2, CREDIT 2 (F, W, S)

Adjusting to Deafness**Registration #0847-109**

This course is designed to assist students who are postlingually deafened, individuals who prefer using an oral method of communication and have had little or no contact with other hearing-impaired people, and prelingually deaf people who have grown up in normally hearing environments. The course will cover topics about deafness, including social issues, how deafness affects individuals and their families, and ways that an individual adjusts to deafness.

CLASS 2, CREDIT 2 (F, W, S)

Personal Development**Registration #0847-110**

This course helps students learn about themselves. Students learn to understand their actions, needs, desires, and relationships with other people. Topics include personal goals, planning time, choosing friends, and choosing a career. Class activities include lectures, group activities, discussions, and individual conferences.

CLASS 2, CREDIT 2 (F, W, S)

Introduction to Outdoor Living**Registration #0847-125**

This course helps students develop personal and social skills. Some of the topics taught are decision making, communication, group interaction, and environmental awareness. This course can prepare students for other outdoor programs. Day outings, seasonal activities, a weekend trip, and lectures are included.

CLASS 2, CREDIT 2 (F, W, S)

Leadership Development**Registration #0847-126**

This course helps students develop managerial/leadership skills. A required project and class activities assist them in improving leadership skills. Course topics include one- and two-way communication, group leadership and followership, styles of leadership, delegating responsibility, planning skills, helping behaviors, establishing goals, and problem-solving techniques.

CLASS 2, CREDIT 2 (F, W, S)

SOCIAL SCIENCE**Economics and Political Science****Personal Finance****Registration #0847-106**

This course introduces students to basic money management. Topics for in-depth discussion are based on student interest and selected from income tax, banking, credit, budgeting, inflation, and shopping wisely to save money.

CLASS 2, CREDIT 2 (F, W, S)

Economic Basics**Registration #0847-203**

This course serves as a bridge to Introduction to Economics offered in the College of Liberal Arts. It is designed to introduce students to basic background knowledge in economic concepts and methods of analysis. Emphasis is placed on the application of basic methods of economic analysis, economic theories, and contemporary economic issues of the United States.

CLASS 3, CREDIT 3 (S)

PREREQUISITE: 0817-142 or the equivalent is recommended

Psychology**Basic Human Sexuality****Registration #0847-111**

This course provides information and helps students to understand human sexuality. Topics addressed include feelings and attitudes toward sexuality, values, and sensitivity to the feelings of others. Activities include lectures, discussions, and projects.

CLASS 3, CREDIT 2 (F, W, S)

Psychology and Your Life**Registration #0847-113**

This course presents a life stages model of human development that emphasizes psychological aspects of development, including emotional, self-concept, and interpersonal relationship development. Students use this model to identify important life issues for themselves and others and also to better understand their own behavior, as well as that of children, teenagers, parents, and older people.

CLASS 3, CREDIT 3 (F, W, S)

Psychology of Religion**Registration #0847-146**

This course is designed to help students understand how religion may relate to their lives and how they can develop a mature, reflective, and critical view of religion as a life influence. Topics for study include religion as a type of human behavior, methods of studying religious experiences, the psychology of conversion, mysticism, and human development in religious understanding and practice.

CLASS 2, CREDIT 2 (S)

Sociology and Anthropology**Love, Marriage, and the Family****Registration #0847-112**

This course examines the potentials and problems of married life. Students are introduced to such relevant topics as love, sexuality, singlehood, marital roles, conflict resolution, and parenting. The course challenges students to recognize their rights and responsibilities in relationships and offers them opportunities to clarify their thinking with peers and faculty.

CLASS 3, CREDIT 3 (F, W, S)

Community Service I**Registration #0847-127**

This course is designed to give students an opportunity to learn some basic helping skills and to use these skills in a supervised community service experience. Students explore different volunteer and professional helping roles and the use of this information in making personal and career choices. Activities include lectures, discussions, volunteer service, and individual conferences.

CLASS 2, CREDIT 2 (F, W, S)

Community Service II**Registration #0847-128**

This course is a continuation of Community Service I. Each student investigates and reports on a community or social problem. Students also learn how personal goals and values affect a community. Activities include discussions, field trips, and individual conferences.

CLASS 2, CREDIT 2 (W, S)

PREREQUISITE: 0847-127

Law and Society**Registration #0847-147**

This course is designed to assist students in understanding the basic rules and applications of practical law as it applies to personal rights and responsibilities. Topics covered are how laws affect a society, civil rights, legal rights, torts, marriage, family relations, and criminal law. Activities include lectures and field trips.

CLASS 2, CREDIT 2 (F, W, S)

Theater

Technical Theater I

Registration #0848-100

This course covers the methods and materials used in technical theater. Topics include scenery construction, properties, and the responsibilities of different theater personnel. Activities include lectures, demonstrations, discussions, and involvement in theater productions.

CLASS 2, CREDIT 2 (F, W, S)

Technical Theater II

Registration #0848-101

This is a course for students who want to learn more about technical theater. Activities include independent projects, supervision of crews, and shopwork.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITE: 0848-100

Stage Lighting

Registration #0848-102

This course introduces students to theater lighting and teaches them how to use each piece of lighting equipment. Activities include hanging lights for plays, running the light board, and using color in lighting.

CLASS 2, CREDIT 2

PREREQUISITE: 0848-100

Acting I

Registration #0848-120

This course explores communication by using pantomime, sign mime, body language, facial expression, character study, and role playing. Students learn to perform in front of an audience with confidence and skill.

CLASS 2, CREDIT 2 (F, W, S)

Acting II

Registration #0848-121

This course helps students perfect acting skills. Activities include advanced character development and preparation of scenes with a partner.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITES: 0848-120 and permission of instructor

Introduction to Theater

Registration #0848-130

This course, designed to teach students about theater production, encourages them to take part in theatrical experiences while they learn about acting, writing, directing, and designing (lights, scenery, costumes, make-up). Activities include lectures, demonstrations, and discussions.

CLASS 2, CREDIT 2

Creative Translation into Sign Language

Registration #0848-131

This course covers translation forms used by the Department of Performing Arts. Students learn to translate poems and plays into American Sign Language. They also learn to present their translated works in sign. Activities include lectures, discussions, drills, and group workouts.

CLASS 2, CREDIT 2

Sign Mime

Registration #0848-132

This course teaches students to translate plays, poems, and stories into sign mime. Topics include how to develop and use sign mime in theater and how to express original ideas in sign mime. Activities include lectures, demonstrations, and a laboratory.

CLASS 2, CREDIT 2

Theater Practicum

Registration #0848-133

This course is for students who are accepted for a role (performance or crew) in a faculty-directed theater production. Acting students analyze a script, develop a character, rehearse, memorize, and perform. Crew students build a specific scene or costume element and serve as members of the running crew. This course may be taken more than once.

CLASS 3-8, CREDIT 1-3

Dance Performance I

Registration #0848-140

This course teaches students the basic terminology and techniques of modern dance. Basic body structure and creative movement are studied by the class. Individuals and groups perform in the studio. Activities include lectures, demonstrations, exercises, and performances.

CLASS 2, CREDIT 2 (F, W, S)

Dance Performance II

Registration #0848-141

This intermediate-level modern dance course teaches technique, group work, and performance standards. Activities include lectures, discussions, exercises, and performances.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITE: 0848-140, dance experience, or permission of instructor

Sign Dance

Registration #0848-142

In this basic dance class that includes warm-up, barre, center, and cross-the-floor movement, sign language and modern dance become the base from which students make compositions. Students do not need to know sign language to take the course. Activities include lectures, demonstrations, and performances.

CLASS 2, CREDIT 2

Special Topics in Dance

Registration #0848-143

This course teaches different styles of dance. Possible topics include Afro-Caribbean dance, ballet, jazz, and tap. This course may be taken more than once.

CLASS 2, CREDIT 2

Music Introduction/Instruction Practicum

Registration #0848-150

This course helps students develop musical skills in one or more of the following areas: piano; guitar; electric bass; percussion; brass; woodwinds; strings; organ; and voice. Students may begin with basic instruction and progress to more advanced levels. Lessons are offered on an individual or small-group basis. This course may be taken more than once.

CLASS 2, CREDIT 2 (F, W, S)

Play Production I

Registration #0848-200

This course covers the areas of script analysis, acting for the stage, and stage direction. Through lectures, demonstrations, class discussions, projects, and films, students encounter a fundamental concern of all theater artists — how to transform the printed word into living theater? The topics presented not only acquaint students with stage practices, but through contrast and comparison, clarify those areas in which television and motion picture production require different imaginative techniques than are used for stage production.

CLASS 4, CREDIT 4 (W)

Independent Study

Registration #0848-399

CLASS 3-9, CREDIT 1-3

Pre-Baccalaureate Studies

College of Science Courses

Biology

General Biology Registration #1001-201

This course describes the characteristics and origin of life; basic principles of modern cellular biology, including cell organelle structure; chemical basis and functions of life, including enzyme systems, respiration, and photosynthesis; and nutrient procurement in plants and animals.

CLASS 3, CREDIT 3(F)
COREQUISITE: 1001-205

General Biology Registration #1001-202

This course is a study of the physiological processes of gas exchange, internal transport, osmoregulation, excretion, and hormonal control in plants and animals; the nervous system and behavior in animals also are studied.

CLASS 3, CREDIT 3 (W)
COREQUISITE: 1001-206

General Biology Registration #1001-203

This course includes a study of cellular and organismal reproduction; the principles of genetics and developmental biology; and an introduction to evolution and ecology.

CLASS 3, CREDIT 3 (S)
COREQUISITE: 1001-207

General Biology Laboratory Registration #1001-205, 206, 207

Laboratory work complements the lecture material of General Biology (1001-201, 202, 203). The experiments are designed to illustrate concepts; develop laboratory skills and techniques; and improve ability to make, record, and interpret observations.

LAB 3, CREDIT 1 (1001-205, F; 1001-206, W; 1001-207, S)
COREQUISITE: 1001-201, 202, 203

Pre-Baccalaureate Studies, Science

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs. ¹		Cr. Hrs.		Cr. Hrs.
0847-218	Written Communication I**	4	0847-219	Written Communication II	4
0853-100	Freshman Seminar	2	0853-105	Learning Strategies	2
0817-126	Algebra IIA or	3	0817-127	Algebra IIB or	3
1016-204	College Algebra and Trigonometry***	(4)	1016-214	Intro. to Calculus or	(4)
1016-251	Calculus I	(4)	1016-252	Calculus II	(4)
1010-251	General Chemistry or	3	1010-252	General Chemistry or	3
1001-201	General Biology and	(3)	1001-202	General Biology and	(3)
1001-205	General Biology Lab or	(1)	1001-206	General Biology Lab or	(1)
1017-200	Physics	(2)	1017-311	University Physics I and University Physics Lab I	(3)
	Communication	2	1017-371	University Physics and University Physics Lab I	(1)
	Physical Education	0		Communication	2
		14-16		Physical Education	0
					14-16
					15-18

*AU 100- and 200-level NTID courses are acceptable for credit in registered NTID A.A.S. programs. The 200- and 300-level courses in the Colleges of Science and Liberal Arts cited on this page are acceptable for credit in College of Science programs. "Students judged as proficient, those having a Michigan Test score higher than 80 and a 10th grade California Achievement Test score, start the English Composition series assigned by the NTID Liberal Arts Placement Test (LAPT). Students judged as provisionally qualified take at least one quarter of NTID English.

¹Credits shown in parentheses () are substituted for those directly above without parentheses, depending on which course is taken by the student.

Chemistry

Introduction to Chemical Analysis I Registration #1008-261

This course offers an introduction to quantitative analysis, solubility of ionic compounds and the equilibria involved, activity concepts, and statistical treatment of data. Laboratory experiments include gravimetric and precipitation methods.

CLASS 2, LAB 5, CREDIT 3 (F)
COREQUISITE: 1010-251

Introduction to Chemical Analysis II Registration #1008-262

This course discusses systematic treatment of acid-based equilibria, titrations, analytical oxidation-reduction processes, and complexometric methods.

CLASS 2, LAB 5, CREDIT 3 (W)
PREREQUISITE: 1008-261
COREQUISITE: 1010-252

Introduction to Chemical Analysis III Registration #1008-263

This course introduces electrochemical and spectroscopic methods and potentiometric and spectrometric titrations. Electrodeposition and pH measurements are included in lab.

CLASS 2, LAB 5, CREDIT 3 (S)
PREREQUISITE: 1008-262
COREQUISITE: 1010-253

General Chemistry I Registration #1010-251

This course includes a detailed study of fundamental tools of chemistry, atomic theory and nuclear chemistry, stoichiometry (elements, compounds, reactions), and properties of gases and thermochemistry (first law).

CLASS 3, CREDIT 3 (F)
COREQUISITE: 1008-261

General Chemistry II

Registration #1010-252

This course describes structure and properties of the atom; periodic relationships; basic concepts of chemical bonding, kinetics, and equilibrium; and thermodynamics (free energy, second and third laws).

CLASS 3, CREDIT 3 (W)

PREREQUISITE: 1010-251

COREQUISITE: 1008-262

General Chemistry III

Registration #1010-253

This course describes oxidation-reduction and electrochemistry; descriptive chemistry of selected elements; properties of liquids and solids; chemical bonding theories; transition elements and coordination chemistry; introduction to organic chemistry, biochemistry, and polymers; and introduction to the use of chemical literature.

CLASS 3, CREDIT 3 (S)

PREREQUISITE: 1010-252

COREQUISITE: 1008-263

College Chemistry I

Registration #1011-208

This course is primarily for, but not limited to, engineering students. Topics include an introduction to some basic concepts in chemistry, stoichiometry, first law of thermodynamics, thermochemistry, electronic theory of composition and structure, and chemical bonding.

CLASS 4, CREDIT 4 (F, W)

College Chemistry II

Registration #1011-209

This course is a continuation of College Chemistry I. Topics include chemical equilibrium, properties of acids and bases, aqueous equilibria, free energy, entropy and equilibrium, electrochemistry, nuclear chemistry, and the chemistry of metals.

CLASS 4, CREDIT 4 (S)

PREREQUISITE: 1011-208

Mathematics

College Algebra and Trigonometry

Registration #1016-204

Topics in this course include a review of the fundamentals of algebra; solution of linear, fractional, and quadratic equations; functions and their graphs; polynomial, exponential, logarithmic, and trigonometric functions; and systems of linear equations.

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE: 2 years of high school algebra

Pre-Baccalaureate Studies, Engineering

Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.*
0847-218	Written Communication I**	4
0853-100	Freshman Seminar	2
1011-208	Chemistry	4
1016-251	Calculus I	4
	Communication	2
	Physical Education	0
		16

Winter Term

		Cr. Hrs.
0847-219	Written Communication II	4
0853-105	Learning Strategies	2
1016-252	Calculus II	4
1017-311	University Physics I	3
1017-371	University Physics Lab I	1
	Communication	2
	Physical Education	0
		16

Spring Term

		Cr. Hrs.
0502-220	English Composition	4
0853-200	Reading and Thinking in Science and Technology**	3
1016-253	Calculus III	4
1017-312	University Physics II	3
1017-372	University Physics Lab II	1
	Physical Education	0
		15

**All 100- and 200-level NTID courses are acceptable for credit in registered NTID A. AS. programs. The 200- and 300-level courses in the Colleges of Science and Liberal Arts cited on this page are acceptable for credit in College of Engineering programs.

*Students judged as proficient, those having a Michigan Test score higher than 80 and a 10th grade California Achievement Test score, start the English Composition series assigned by the NTID Liberal Arts Placement Test (LAPT). Students judged as provisionally qualified take at least one quarter of NTID English.

**Chemistry 1011-209 may be included in student's schedule if he/she is deferred from Reading and Thinking in Science and Technology during the Spring term.

Introduction to Calculus I

Registration #1016-214

This course is a non-rigorous introduction to the study of differential calculus. The following topics will be covered: functions and graphs; limits; continuity; the derivative and its significance; the algebra of derivatives; chain rule; related rates; and maxima and minima.

CLASS 3, CREDIT 3 (F, W, S)

PREREQUISITE: 1016-204 or equivalent

Introduction to Calculus II

Registration #1016-215

This course, a continuation of Introduction to Calculus I, deals with an introduction to integral calculus. The following topics will be covered: definite integral; area; work and distance problems; volumes; fundamental theorem of calculus; approximation techniques; exponential and logarithmic functions; applications; and introduction to differential equations.

CLASS 3, CREDIT 3 (W, S)

PREREQUISITE: 1016-214

Calculus I

Registration #1016-251

This standard first course in calculus is intended for students majoring in mathematics, science, or engineering, with the major emphasis on understanding the concepts and using them to solve a variety of physical problems. The subject matter includes two-dimensional analytic geometry, functions, limits, continuity, the derivative and its formulas, and applications of the derivative.

CLASS 4, CREDIT 4 (F, W, S, Su)

PREREQUISITE: 3 years of high school mathematics

Calculus II

Registration #1016-252

This standard course in calculus is intended for students majoring in mathematics, science, or engineering, with the major emphasis on understanding the concepts and using them to solve a variety of physical problems. The subject matter includes anti-derivatives by various methods, the definite integral with applications to calculation of area, arc length, volumes of revolution, transcendental functions, and numerical integration.

CLASS 4, CREDIT 4 (F, W, S, Su)

PREREQUISITE: 1016-251

Calculus III**Registration #1016-253**

This standard course in calculus is intended for students majoring in mathematics, science, or engineering, with the major emphasis on understanding the concepts and using them to solve a variety of physical problems. The subject matter includes improper integrals, formal limits of sequences, infinite series, Taylor series, polar coordinates, and conic sections.

CLASS 4, CREDIT 4 (F, W, S, Su)

PREREQUISITE: 1016-252

*Physics***Physics Orientation****Registration #1017-200**

This course is an introduction to the nature and scope of physics for freshmen interested in physics as a profession. Topics include: what is physics; professional opportunities in physics; the physics profession; literature of physics; and communicating in physics. Laboratory includes safety instruction, measurement and recording techniques, graphics analysis, error analysis, and report writing. Each student will present a formal written or oral report on some topic of interest at the end of the course.

CLASS 1, LAB 2, CREDIT 2 (F)

University Physics I**Registration #1017-311**

This intensive course in general physics, using calculus, is for majors in the sciences and engineering. Mechanics: kinematics and dynamics of a particle and rigid body; work and energy; momentum and impulse; rotational motion; oscillatory motion; and gravitation are studied. (See 1017-371 for three-hour lab).

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE OR COREQUISITE:
1016-252

COREQUISITE: 1017-371

University Physics II**Registration #1017-312**

This course discusses fluids and elastic properties, heat and thermodynamics, wave motion, sound, and geometrical and physical optics. (See 1017-373 for three-hour lab).

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE: 1017-311

PREREQUISITE OR COREQUISITE:
1016-253

COREQUISITE: 1017-372

University Physics III**Registration #1017-313**

This course discusses electrostatics, Gauss' Law, electric field and potential, dielectrics, DC circuits, magnetic fields, Ampere's Law, Faraday's Law, inductance and capacitance, magnetism in matter, and AC series circuits. (See 1017-373 for three-hour lab).

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE: 1017-312

PREREQUISITE OR COREQUISITE:
1016-253

COREQUISITE: 1017-373

University Physics Lab I**Registration #1017-371**

This laboratory course includes experiments related to the principles and theories discussed in corresponding lectures.

LAB 3, CREDIT 1 (F, W, S)

PREREQUISITE OR COREQUISITE:
1017-311

University Physics Lab II**Registration #1017-372**

This laboratory course includes experiments related to the principles and theories discussed in corresponding lectures.

LAB 3, CREDIT 1 (F, W, S)

PREREQUISITE OR COREQUISITE:
1017-312

University Physics Lab III**Registration #1017-373**

This laboratory course includes experiments related to the principles and theories discussed in corresponding lectures.

LAB 3, CREDIT 1 (F, W, S)

PREREQUISITE OR COREQUISITE:
1017-313

Speech, Language, and Hearing Center

Audiology

Strategies and Speech Registration #0861-101

This introductory course is recommended for students interested in speech therapy. It is designed to help students improve communication with people who do not know sign language. The course introduces basic speech and speechreading concepts as well as a variety of alternative communication strategies. Particular emphasis is placed on oral strategies to facilitate communication. Students with speech intelligibility scores from 2.0 to 2.9, speechreading scores (with or without sound) of 0-34 percent, and a Michigan Test score lower than 70 may enroll in this course. CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Survival Strategies for the Basic Speechreader Registration #0861-103

This course is designed to help students improve their communication with people who do not know sign language. Students are introduced to speechreading and learn a variety of alternative communication strategies. Particular emphasis is placed on writing to facilitate communication. Students with speech intelligibility scores from 1.0-1.9 or who prefer not to speak, speechreading scores (with or without sound) of 0-34 percent, and a Michigan Test score lower than 69 may enroll in this course. CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Practicing Communication Strategies Registration #0861-105

This course provides review, practice, and integration of newly acquired listening, speechreading, speech, and strategy skills. It is a follow-up course for students who have completed any basic speechreading or strategy courses. Students role play a variety of everyday and work-related situations with hearing people who do not know sign language. Overall communication success is evaluated by videotaping role play situations. Students focus on methods of using writing to succeed in basic conversations and problem situations with non-signers. To enroll in this course, students must have speechreading scores between 0-34 percent (with or without sound). CLASS 2, CREDIT 2, (F, W, S)
PREREQUISITE: One of the following: 0860-177, 0861-101, 0861-103, 0861-155, or 0861-157

Communication for the Job Interview: Writing Registration #0861-115

This course focuses on improving the communication aspect of the job interview. It is designed for students who have completed the Job Search course and have difficulty communicating during an interview. Students should complete one year in their major or have had a cooperative work experience prior to taking this course. This course is appropriate for students who prefer to use writing to communicate during the interview. For students with speech intelligibility scores higher than 3.0 and who prefer to use speech during an interview, the Speech-Language Department offers Communication for the Job Interview: Speaking.

CLASS 2, LAB 1, CREDIT 2 (W, S)
PREREQUISITE: 0847-101

Auditory Training for Auditory Profile 1 and 2 Students Registration #0861-120

This auditory training course is designed to help students learn the meaning of sound. Since students in Basic Auditory Training often are part-time hearing aid users, the major goal is to help them become better listeners. Students meet three times each week to receive both group and individual practice listening for syllables, stress, and duration. Practice with these materials helps students' speechreading skills. Environmental sound training, with special emphasis on warning sounds and music, also is included. Students who have a working hearing aid and an auditory reception profile of 1 or 2 may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Auditory Training I for Profile 3 Students Registration #0861-130

The goal of this course is acquisition of listening skills. Listening materials include words, sentences, short stories, and songs. Development of vocabulary skills is integrated into all listening activities. Classes meet twice weekly and a weekly one-hour lab is held for additional listening activities and lectures on topics related to audition and amplification. Students with an auditory reception profile of 3, who use amplification all or most of the time and have speechreading scores (both with and without sound) lower than 30 percent in the CID Everyday Sentence Test, may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITES: 0861-101, 0861-103, or instructor approval

Auditory Training II for Profile 3 Students Registration #0861-135

This course for Profile 3 students is a continuation of Auditory Training I and continues auditory training for the acquisition of listening fluency and comprehension. CLASS 2, LAB 2, CREDIT 2
PREREQUISITES: 0861-130 and recommendation of instructor

Auditory Training I for Profile 4 and 5 Students Registration #0861-140

The focus of this course is to help students acquire listening fluency and auditory comprehension skills. Classes meet twice weekly for group listening activities, group discussions, and lectures on special topics related to audition and amplification. A one-hour listening lab is held weekly for individual listening activities. Auditory activities for this course include books and short stories on audiotapes, music listening, and speech perception in noise. Vocabulary skill development also is emphasized.

CLASS 2, LAB 2, CREDIT 2 (F, W, S)
PREREQUISITES: Auditory reception profile 4 and 5 and amplification use all or most of the time.

Auditory Training II for Profile 4 and 5 Students Registration #0861-145

This course is a continuation of Auditory Training I. The focus of the course is to continue auditory training for the acquisition of listening fluency and auditory comprehension skills. Vocabulary skill development is emphasized, and listening activities include music and books on audiotape. Special emphasis is placed on auditory skills and strategies for successful communication in social and vocational situations. Classes meet twice weekly for group lectures, discussions, and listening activities, and a one-hour lab is held weekly for individual listening activities.

CLASS 2, LAB 2, CREDIT 2 (F, W, S)
PREREQUISITES: 0861-140 and recommendation of instructor

Speechreading and Strategies Registration #0861-157

This course is designed to help students use their visual skills to understand speakers. Students practice interpreting verbal and non-verbal information, facial expressions, eye glances, gestures, and body movements as people talk. Practice activities include speechreading and listening to individual words and everyday sentences. Students may be required to speechread hearing people during a practice interview. Students must have speechreading scores (with or without sound) from 0-34 percent and a Michigan Test score higher than 70.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Intermediate Speechreading Registration #0861-160

In this course, speechreading and listening are used to help students understand sentences and short paragraphs. Strategies to assist communication are reviewed and practiced in conversational interviews with hearing staff members. Students with speechreading scores (with or without sound) from 35-60 percent and a Michigan Test score lower than 70 may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Receptive Technical Communication
Registration #0861-167**

This course uses an experiential learning approach to help students improve their ability to understand other people in technical on-the-job situations. Deaf faculty and staff members share their own communication strategies and discuss the importance of attitude for effective communication. Students gain experience in various communication settings and develop personal goals/strategies through discussions with peers. Practice materials include vocabulary sentences and paragraphs from students' areas of specialization. Primary emphasis is on the use of communication strategies for spoken language, with secondary emphasis on written language. Students with speechreading scores of 35-60 percent (with or without sound) on the CID Everyday Sentence test may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (W, S)
PREREQUISITE: Students must have completed at least three quarters in their major

**Receptive Social/Academic Communication
Registration #0861-168**

This course uses an experiential learning approach to help students improve their ability to understand other people in social and academic settings. Deaf faculty and staff members share their own communication strategies and discuss the importance of attitude in communication settings. Students develop personal goals/strategies through discussions with peers. Practice materials include vocabulary and sentences commonly found in social and academic environments. Primary emphasis is on the use of communication strategies for spoken language, with secondary emphasis on written language. Students with speechreading scores (with or without sound) of 35-60 percent and a Michigan Test score higher than 70 may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W)

**Advanced Speechreading: Non-Technical
Registration #0861-170**

The intent of this course is threefold: to improve students' ability to speechread in noisy environments and to speechread difficult speakers; to develop factual knowledge to optimize receptive communication skills; and to develop useful strategies for communicating with hearing people. Students are challenged by a variety of speechreading exercises with and without sound. They learn pronunciation techniques, practical strategies for communicating in social and job environments, and skills for speechreading sentences and paragraphs. Class participation is strongly emphasized. Students with speechreading scores higher than 60 percent and a desire to use amplification may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Technical Speechreading and Speech
Registration #0861-177**

This course is designed to help students improve their speech and speechreading of technical vocabulary associated with their areas of specialization. This is a small group class, with one discussion hour, one individual practice hour, and one homework laboratory hour weekly. Group discussions are provided on work communication, strategies, associational cues, and interviews. Individual practice includes speechreading key vocabulary, as well as sentences and short paragraphs from technical areas of specialization. Students also practice pronouncing technical vocabulary with a speech instructor during individual practice hours. Students with speechreading scores (with or without sound) higher than 60 percent and speech intelligibility scores higher than 3 may enroll in this course. All students entering the course must pass vocabulary definitions on the first day of class.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITE: Students must have completed at least three quarters in their major

**Technical Speechreading and Strategies
Registration #0861-178**

This course helps students improve their speechreading of technical vocabulary in their areas of specialization. It focuses on the use of writing strategies for communicating at work. The class consists of a small group with one discussion hour, one individual practice hour, one homework hour, and up to two laboratory hours weekly. Group discussions are provided on work communication strategies, associational cues, and job interviews. Individual practice includes speechreading key vocabulary, sentences, and short paragraphs from technical areas of specialization. Students also practice writing strategies with the instructor during individual practice hours. This course is open to students with speechreading scores higher than 60 percent and speech intelligibility scores of 2.9 or lower. Students take a vocabulary test the first day of class and those who score low are encouraged to delay enrollment.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITE: Students must have completed three quarters in their major

**Telecommunication Aids
Registration #0861-180**

This course teaches students about regular telephones and about different kinds of TDD (TTY) equipment. Students use a TDD to make long distance and emergency calls and appointments. They learn what to do if they have a bad connection or are disconnected. Each student makes calls using amplifiers and pay telephones. They are taught special codes for listening and speaking on the telephone. This course is open to students who have CID auditory reception scores lower than 40 percent.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Telephone Communication
Registration #0861-186**

This course is offered to help students improve their ability and confidence in using the telephone with strangers. Students learn a variety of techniques, including the best way to use their hearing aids with the telephone, how to make long distance calls, get information, make appointments over the telephone, and what to do if they have problems or an emergency. Students practice using special strategies to improve their talking and listening over the telephone. They also practice with pay phones and TDDs (TTYs). Students are required to practice making telephone calls every week. The instructor works with each student individually during four special appointments. Students with CID auditory reception scores of 40 percent or higher and spontaneous speech intelligibility scores higher than 3.4 may enroll in this course. Students must have a telephone in their room or apartment and use a hearing aid all or most of the time.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITE: Students must have completed at least two quarters in their major

English

Entry Courses

Ideas in English/A Registration #0862-100

This course includes work on basic English sentence structure for reading, writing, speaking, and speechreading; practice with vocabulary and comprehension skills needed to read about contemporary topics; and the use of writing to report events. Reading and writing laboratories are required. The course is for students with basic English skills.
CLASS 5, LAB 2, CREDIT 4 (F)
COREQUISITE: 0860-136

English in American Life Registration #0862-103

This is a summary course that attempts to integrate four communication skills — reading, writing, grammar, and vocabulary. Materials in each area provide reinforcement, follow-up activity, or context for the three other areas. To this end, the grammar and vocabulary all are contained in the reading assignments; the reading is expected to provide inspiration for the writing assignments; and the writing assignments are expected to contain vocabulary and structures taught in the grammar portion. Reading and writing laboratories are required. This course is for students with low to intermediate English skills.
CLASS 4, LAB 2, CREDIT 4 (F)

Social Issues Registration #0862-105

This intermediate English course is designed to help students develop better reading and writing skills. Social issues such as child abuse and drug misuse are discussed. Students have opportunities to improve communication skills by completing a variety of vocabulary, grammar, and writing exercises. Summary writing is stressed and is preceded by a variety of prewriting exercises. Reading and writing laboratories are required. This course is for students with high to intermediate English skills.
CLASS 3, LAB 2, CREDIT 4 (F)

Language Structure in Written English Registration #0862-107

This course provides students with instruction and practice in using appropriate language structures for different writing purposes. The course has three parts: reading and studying the content and meaning of different modes of writing; analyzing and practicing the various grammatical and/or structural strategies used in different modes; and writing and editing papers in the various modes. Generally, descriptive, narrative, and several forms of expository writing are reviewed. This course is appropriate for students with high-level English skills.
CLASS 4, CREDIT 4(F)

Integrative Courses

Ideas in English/B Registration #0862-110

In this course, students study English grammar for compound and beginning complex sentences. Reading materials and vocabulary practice include world knowledge needed for college learning. Students are expected to write paragraphs and longer compositions about reading materials and short films. Reading and writing laboratories are required.
CLASS 5, LAB 2, CREDIT 4 (W)
PREREQUISITES: 0862-100, 0862-101, or teacher recommendation

Ideas in English/C Registration #0862-111

In this course, students work on English needed for college reading and writing activities. Students study complex sentences and advanced verb patterns, reading for understanding, summarizing information, and communicating ideas clearly in longer writing assignments. Reading and writing laboratories are required.
CLASS 5, LAB 2, CREDIT 4 (S)
PREREQUISITE: 0862-110 or teacher recommendation

Using Written Communication to Organize Ideas and Solve Problems Registration #0862-112

In this course, students study English skills needed to solve problems in situations related to their technical coursework in college and to their employment environment after graduation. Students are expected to work individually and in small groups to read and prepare written descriptions, requests, recommendations, and short reports.
CLASS 3, CREDIT 3 (W, S)
PREREQUISITES: Reading scores of 6.5-8.5, 12 credits of NTID English, and one year in an area of specialization

Verbs and Complements Registration #0862-113

This course deals with verb tense, agreement, and active and passive voice. It includes a detailed study of complementation, which involves the writing of several short passages. Students also work on vocabulary development.
CLASS 4, LAB 1, CREDIT 4 (S)
PREREQUISITE: 0862-174

Reading English Dialogue Registration #0862-114

This course is designed to help students improve their skills in writing English and using English words. It provides instruction in two areas: the use of verbs in different kinds of sentences and the independent analysis of vocabulary words. There is heavy emphasis on reading with practice also in writing skills. Reading and writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (F, W, S)
PREREQUISITE: Michigan Test score lower than 60 and reading score from 7.0 to 9.0

Self-Expression Registration #0862-118

In this course, students explore communication and self-expression through discussions; viewing films; reading materials; and practicing reading, writing, signing, and speechreading. The course uses vocabulary and structure forms that are common in social, academic, and professional situations. Vocabulary clues, reading skills, and descriptive phrases are important parts of this course. Reading and writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (W)
PREREQUISITE: Reading score of 7.5 or higher

Mass Communication Registration #0862-119

This course utilizes selections from literature and current newspaper and magazine articles to give students an idea of the power of language and to teach them sentence structure and paragraph organization in popular literature. Reading and writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (W)
PREREQUISITE: Reading score of 7.5 or higher

English and the Arts Registration #0862-120

This course uses vocabulary and structural forms common in social, academic, and professional situations as well as slides and reading materials that provide an opportunity to practice complex sentence forms. Students learn idioms and verb forms in connection with art history and photojournalism. Reading and writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (S)
PREREQUISITE: Reading score of 7.5 or higher

English for Life and Living Registration #0862-121

This course is a continuation of English in American Life. As such, it continues with the focus of integrating the four communication skills — reading, writing, vocabulary, and grammar — with each component reinforcing the others. Reading and writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (W)
PREREQUISITE: 0862-103

Quantitative Concepts Registration #0862-122

This course uses vocabulary and sentence structures that are used in mathematical word problems. Classroom lessons practice reading, writing, and performing calculations for word problems dealing with subjects that include wages, taxes, working hours, and cost of products. Reading and writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (F)
PREREQUISITE: Reading score of 7.0 to 8.5

Famous Scientists**Registration #0862-123**

This course uses vocabulary and sentence structures that are used in technical reading and writing. Students read a specially prepared textbook covering the lives of 36 famous scientists of ancient times. Classroom lessons use electronic media to practice reading and writing biographical information about these famous scientists. Reading and writing laboratories are required.

CLASS 4, LAB 2, CREDIT 4 (F, W, S)

PREREQUISITE: Reading score of 7.0 to 8.5

The Earth and Universe**Registration #0862-124**

This course uses vocabulary and sentence structures that are used in technical reading and writing. Students read two commercial textbooks covering 16 topics in geology and 20 topics in astronomy. Classroom lessons use electronic media to practice reading and writing compositions on geology and astronomy. Reading and writing laboratories are required.

CLASS 4, LAB 2, CREDIT 4 (F, W, S)

PREREQUISITE: Reading score of 7.0 to 8.5

Changing World**Registration #0862-131**

This course reviews parts of speech, selected phrases and clauses, and kinds of sentences. It attempts to apply this review to the practical task of understanding a variety of texts related to the theme of idealism and reality in American life. Texts have included *Of Mice and Men*, "I Have a Dream," personal accounts of commercial living, and a science fiction short story. Reading and writing laboratories are required.

CLASS 3, LAB 2, CREDIT 4 (F, W, S)

PREREQUISITE: 0862-105

Medical Issues**Registration #0862-132**

This is an advanced technical English course designed to help students develop better reading and writing skills. Students discuss medical issues, including the cause, spread, and prevention of disease, and have opportunities to become familiar with the language of everyday medical science. Reading and writing laboratories are required.

CLASS 3, LAB 2, CREDIT 4 (S)

PREREQUISITE: 0862-105

Visual Arts**Registration #0862-133**

Students in this course read a variety of texts that develop the human dimensions of issues related to photography. The course attempts to stimulate students to improve their English through use of captioned and uncaptioned slides; famous photos, including shots of Iwo Jima and Kent State; song lyrics; and "art" on overheads. Reading and writing laboratories are required.

CLASS 3, LAB 2, CREDIT 4 (W)

PREREQUISITE: 0862-105

Beginning Scientific English**Registration #0862-134**

This course introduces students to a broad range of topics related to the technical aspects of society. Emphasis is placed on developing reading skills, acquiring new vocabulary in context, and skimming and scanning procedures. This course is most useful to engineering and science majors. Reading and writing laboratories are required.

CLASS 3, LAB 2, CREDIT 4 (F, W)

PREREQUISITES: Michigan Test score higher than 60 and reading score higher than 8.0

Writing Scientific English**Registration #0862-135**

In this course, designed to improve reading and writing skills, students discuss measurements, dimensions, and properties of objects used in experiments. General reading and grammar drills also are used and homework includes writing short compositions. This course is recommended for engineering and science majors. Reading and writing laboratories are required.

CLASS 3, LAB 2, CREDIT 4 (W, S)

PREREQUISITES: Michigan Test score higher than 60 and reading score higher than 8.0

The American Dream**Registration #0862-136**

In this course, designed to improve reading and writing skills, students read articles about topics related to American life and complete English exercises for each article. Students practice grammar, vocabulary, composition writing, and reading comprehension. Reading and writing laboratories are required.

CLASS 3, LAB 2, CREDIT 4 (W, S)

PREREQUISITE: 0862-105

Clear Thinking and Writing**Registration #0862-144**

This critical thought course includes critical reading, using language for personal analysis, writing for persuasive purposes, and studying the vocabulary of inference and implication.

CLASS 4, CREDIT 4 (W, S)

PREREQUISITE: 0862-107

*Emphasis Courses — Reading***English in Context****Registration #0862-150**

This course focuses on reading a novel and discussing the structures of English involved in the description of location (setting) and sequence of events (plot) in a narrative. It also touches on the organization and sequencing of facts in a composition.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITE: Reading score of 7.0 to 9.0

Reading a Novel**Registration #0862-152**

This course, which emphasizes the reading process, offers instruction in the elements of a novel. It provides experience discussing and writing about a novel in terms of its setting, characterization, and conflict. To encourage reading for details, drawing conclusions, and making inferences, the course also provides experience with an interactive computer novel.

CLASS 4, CREDIT 3 (F, W, S)

PREREQUISITE: Reading score lower than 8.5

Reading for Language Learning**Registration #0862-153**

This course is designed to help students use reading as a means of improving general English skills. The course emphasizes the skills needed to acquire information and improve understanding during the reading process. The course also teaches the skills involved in using dictionaries and encyclopedias to increase world knowledge while reading. Some of the reading assignments involve the use of interactive computer materials that require problem solving and use of information during the reading process.

CLASS 3, CREDIT 3 (F, W, S)

PREREQUISITES: Reading score between 7.0 and 9.0 and a Michigan Test score of 50 or higher.

Reading for Comprehension in the Liberal Arts**Registration #0862-155**

This course allows students to practice higher-level reading skills while they learn vocabulary and develop reading strategies for learning abstract ideas and acquiring information from reading. Materials in this course emphasize important background knowledge and vocabulary useful for a variety of liberal arts courses while sampling from traditional liberal arts disciplines such as anthropology, history, religion, and science. Vocabulary units include key concepts from these disciplines. The course includes practice reading and studying textbooks, outlining, taking lecture notes, and using reference books to provide background knowledge and help in solving reading comprehension problems.

CLASS 3, CREDIT 3 (F, W, S)

PREREQUISITE: Reading score higher than 9.2 or a grade of A or B in another reading emphasis course

*Emphasis Courses — Vocabulary***Vocabulary Through ASL****Registration #0862-160**

This course is for students whose preferred method of communication is American Sign Language (ASL). The course is designed to develop ability and confidence in translating ASL vocabulary into English equivalents. It includes translation principles, ASL vocabulary items, and English idioms.

CLASS 2, LAB 1, CREDIT 2

PREREQUISITES: ASL knowledge and a rating of 4 or 5 on the Sign Instruction Placement Interview (SIPI)

**Business Vocabulary
Registration #0862-161**

In this course, students read nine stories of famous businesspeople/inventors. Each week, more than 60 vocabulary words are chosen for students to use in various vocabulary-practice exercises and games and weekly tests are given on half of these words. Other exercises include weekly reading comprehension, determination of anaphoric references, derivational morphology, and some inductive syntax. All vocabulary, grammatical, morphological, and anaphoric exercises relate to the context of the readings.

CLASS 3, LAB 2, CREDIT 4 (S)

PREREQUISITE: Reading score higher than 8.0

**Vocabulary/Dictionary Skills
Registration #0862-162**

This course helps students develop self-reliant methods for improving their vocabulary. To achieve the course's primary goal of developing advanced dictionary skills, students use the *Longman* and *Merriam-Webster* dictionaries.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITES: Michigan Test score from 60 to 80 and reading score from 7.5 to 9.9

**English Idioms
Registration #0862-163**

This course is designed to help students understand and use common English idioms. Students are encouraged to bring to class for discussion idioms that they hear or see. Idioms are discussed and practiced in context. Activities include written assignments and student participation.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITE: Reading score higher than 8.5

**Popular Film and English
Registration #0862-164**

This course is designed to expose students to popular films and readings related to films in order to develop vocabulary skills and general world knowledge. Students then use the vocabulary in essays that express opinions about a variety of film genres. By viewing captioned films, students are introduced to the concept of genre and learn about the connection between film and literature through genre study.

CLASS 4, LAB 4, CREDIT 4 (F, S)

PREREQUISITES: Reading score of 9.0 or higher and Michigan Test score of 65 or higher, or completion of a writing emphasis course with a grade of B or better, or permission of the instructor

Emphasis Courses — Grammar

**Introduction to Complex Sentences
Registration #0862-171**

This course is designed to improve English skills for constructing sentences and using new vocabulary. It provides instruction in two areas: the structure of sentences with two verbs and a connector and analyzing vocabulary words independently. The course concentrates on improving written communication and developing reading skills. Reading and writing laboratories are required. The course is taught using both simultaneous communication and English.

CLASS 4, LAB 2, CREDIT 4 (W, S)

PREREQUISITES: 0862-100 or 0862-101

**Basic English Phrase Structure
Registration #0862-173**

This course emphasizes grammar and deals with phrase structure, including noun, verb, and adjective phrases. Gerunds and prepositions also are introduced. Students are required to read a short novel and work on vocabulary development.

CLASS 4, LAB 1, CREDIT 4 (F)

**Adverbials and Basic Clause Structure
Registration #0862-174**

This course emphasizes grammar and deals with adverbials, including single word and adverb phrases; basic clause structure, including adjective and adverb clauses; and noun clause complements. Students also are introduced to coordination. In addition, students are required to read a short novel and work on vocabulary development.

CLASS 5, LAB 1, CREDIT 4 (W)

PREREQUISITE: 0862-173

**English Phrase Structure
Registration #0862-175**

This course, the first in a sequence of two, deals with parts of speech and phrase structure, including noun, verb, adjective, and adverb phrases. In addition, students are required to read a short novel and work on vocabulary development. This course is *not* for students who have completed Verbs and Complements, Basic English Phrase Structure, Adverbials and Basic Clause Structure.

CLASS 4, LAB 1, CREDIT 4 (F, W, S)

PREREQUISITES: Reading score of 7.0-8.5 and Michigan Test score of 55-65

**English Clause Structure, Tense, and
Passive Voice
Registration #0862-176**

This course, which emphasizes grammar, is the second in a sequence of two. It deals with English clause structure, including adjective, adverb, and noun clause complements. Coordination also is introduced, and verb tense, agreement, and active and passive voice are covered. In addition, students are required to read a short novel and work on vocabulary development.

CLASS 4, LAB 1, CREDIT 4 (F, W, S)

PREREQUISITE: 0862-175

**English Discourse Grammar
Registration #0862-178**

This course is designed to help students better express ideas in written English. Two hours a week, formal grammar is studied, including the semantic function of sentence constituents and classical grammar (fragments, run-ons, pronoun reference, subject/verb agreement, consistent tense, etc.). One hour each week is devoted to composition, which then is evaluated for discourse and grammar components. One hour each week is devoted to reading for comprehension through grammatical cues (passive voice, tense, etc.).

CLASS 4, CREDIT 4 (W, S)

PREREQUISITE: 0862-107

Emphasis Courses — Writing

**Basic Composition
Registration #0862-180**

The course provides instruction in composition writing at the basic level. Students work on the grammatical structures that make a composition coherent, the use of synonyms in varying levels of vocabulary, and the different types of composition organization.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITE: Michigan Test score of 60 or lower

**Organizing Paragraphs
Registration #0862-181**

This course offers instruction and practice in developing short, well-organized compositions. The course focuses on two parts: intensive practice in developing specific writing skills, such as topic sentences, detail (supporting) sentences, outlining and transition words; and learning to use different composition styles such as description, classification, cause-effect, comparison/contrast, and personal opinion.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITES: Reading score of 7.5 or higher and Michigan Test score of 5.5 or higher; or 0862-180.

**Essay Writing
Registration #0862-183**

This course focuses on the development of essay-writing skills. Essays provide the basis for many types of writing: proposals; research papers; memos to recommend a change in procedure; etc. Skill in writing essays also is required for the Liberal Arts curriculum.

This course includes basic paragraph structure; structure of essays; how to express a view or opinion, and how to defend it logically with reason or examples.

CLASS 3, CREDIT 3 (F, W, S)

PREREQUISITES: Reading score of 8.5 and Michigan Test score of 60, or grade of B or higher in 0862-181

Creative Writing**Registration #0862-187**

This course is designed for students who need or want to improve their creative thinking and writing skills. The focus of the course is on stories and poetry. Students learn the mechanics of short stories and poetry and participate in assignments designed to improve their ability to think and write using imagination, imagery, descriptions, and feelings.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITE: Michigan Test score higher than 60

Practical Writing**Registration #0862-188**

This course is designed to help students become skilled in practical, everyday writing. Students practice writing directions, forms, letters, notes, memos, ads, and reports that are encountered in both the workplace and their personal lives. There is an emphasis on form, content, and special grammatical structures necessary for the various kinds of professional writing.

CLASS 3, CREDIT 3 (F, W, S)

PREREQUISITE: Michigan Test score from 50 to 65

Professional Writing**Registration #0862-189**

This course examines various types of letters, memos, and reports that students will encounter in the workplace. There is an emphasis on form, content, and special grammatical structures that are necessary for various kinds of professional writing.

CLASS 3, CREDIT 3 (F, W, S)

PREREQUISITE: Michigan Test score higher than 65

Independent Study**Registration #0862-399**

This course is designed for students with special needs that cannot be met by another English course. Students are required to write a contract describing what the course will cover. The contract must be signed by the student, instructor, and chairperson. Students interested in this course should talk to their communication advisor.

CREDIT 1-4 (F, W, S)

Sign Communication

Sign Communication I**Registration #0863-101**

This course is designed to assist students to develop basic receptive and expressive sign and simultaneous communication skills. The course focuses on natural sign English as used for communication by skilled signers. Also, strategies for effective use of signs and speech together are discussed and practiced, and information on the use of sign communication in academic and social environments is discussed. This course is appropriate for students with a Sign Instruction Placement Interview (SIPI) rating of 1.

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

Sign Communication II**Registration #0863-103**

This course is designed to assist students to continue their development of sign communication skills, with a focus on natural sign English. Information on the use of sign communication in academic and social situations is discussed. Practice in using signs and speech together is included. This course is appropriate for students with a Sign Instruction Placement Interview (SIPI) rating of 2 and/or who have successfully completed Sign Communication I.

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

Sign Communication III**Registration #0863-105**

This course is designed to assist students to develop advanced-level natural sign English skills and to improve simultaneous communication skills. Information on the use of sign communication in academic and social environments is discussed. This course is appropriate for students who have successfully completed Sign Communication II and/or have a Sign Instruction Placement Interview (SIPI) rating of 3.

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

American Sign Language for Sign English Users**Registration #0863-111**

This course is designed to assist students to develop expressive and receptive American Sign Language (ASL) skills. ASL historical, cultural, and linguistic information is included. This course is appropriate for students with a Sign Instruction Placement Interview (SIPI) of 4 and/or who have successfully completed Sign Communication III.

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

Signing Basic English Idioms**Registration #0863-131**

This course is designed to assist students to develop skills to receive and express English idioms in using natural sign English and ASL. In addition, strategies are discussed and practiced for effective use of these sign skills to assist in reading and writing English idioms. This course is appropriate for students with a Sign Instruction Placement Interview (SIPI) or Language Background Questionnaire (LBQ) rating of 4 or 5 and an English status of Marginally Qualified (MQ) or Preparatory (PP).

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

Signing Idiomatic English**Registration #0863-133**

This course is designed to assist students to develop skills to receive and express English idioms in using natural sign English and ASL. In addition, strategies are discussed and practiced for effective use of these sign skills to assist in reading and writing English idioms. This course is appropriate for students with a Sign Instruction Placement Interview (SIPI) or Language Background Questionnaire (LBQ) rating of 4 or 5 and an English status of Proficient (PF) or Provisionally Qualified (PQ).

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

Understanding American Sign Language as a Language**Registration #0863-141**

This course, designed to assist students in developing basic knowledge about the linguistic structure of American Sign Language (ASL), also introduces and deals with basic information about the historical and cultural aspects of ASL.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

PREREQUISITES: Sign Language Instruction Placement Interview (SIPI) rating of 5 and Michigan Test score of 60 or higher

Speech - Language

Speech Therapy I Registration #0860-101

This course helps students improve their speech. Special tests help the teacher evaluate individual needs. Students meet with a speech instructor for two hours each week and practice in the lab for one hour each week. Instruction may include training in articulation (speech sounds), voice, pitch control, and loudness control. Students practice words, phrases, sentences, and conversations. Students with a speech priority rating of C may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Speech Therapy II Registration #0860-102

This course is designed to help students improve their speech. Special tests help the teacher evaluate individual needs. Students meet with a special instructor for two hours each week and practice in the lab for one hour each week. Instruction may include training in articulation (speech sounds), voice, pitch control, and loudness control. Students must have a therapist's recommendation to enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITE: 0860-101

Speech Therapy III Registration #0860-103

This course is designed to help students improve their speech. Special tests help the teacher evaluate individual needs. Students meet with a speech instructor for two hours each week and practice in the lab for one hour each week. Instruction may include training in articulation (speech sounds), voice, pitch control, and loudness control. Students must have a therapist's recommendation to enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITE: 0860-102

Pronunciation A Registration #0860-115

Students practice pronunciation of vocabulary via use of the *Merriam-Webster Dictionary* and knowledge of pronunciation rules. Students with speech intelligibility scores between 2.0 and 3.5 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Pronunciation B Registration #0860-116

Students practice independent pronunciation of vocabulary via use of the *Merriam-Webster Dictionary* and knowledge of pronunciation rules. Students with speech intelligibility scores higher than 3.5 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Speech and Listening Lab I Registration #0860-120

This course is appropriate for students who wish to improve articulation, listening, and self-monitoring skills. Students meet with a speech instructor to establish goals. Students work individually at their own pace using a variety of pre-recorded audiotapes. The speech instructor monitors students and provides feedback. Students with speech intelligibility scores higher than 3.5 and auditory reception scores higher than 16 percent may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Speech and Listening Lab II Registration #0860-121

This course is a continuation of Speech and Listening Lab I. Students continue to work on speaking and listening skills. They must receive a recommendation from the instructor of Speech and Listening Lab I to enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITE: 0860-120

Speech Improvement Using Songs and Poems Registration #0860-124

In this class, students use singing and poetry readings to improve their speech. Exercises in pitch control, loudness control, and breath support are used to improve voice, vocal quality, and listening skills. Students with speech intelligibility scores higher than 3.0 and auditory reception scores higher than 16 percent may enroll.

CLASS 2, LAB 1, CREDIT 2 (S)

Vocabulary Development Registration #0860-132

In this course, students use a workbook, textbook, and computer lab practice to develop vocabulary. They develop strategies to determine vocabulary meaning through use of contextual clues and knowledge of prefixes and suffixes. Students with Michigan scores lower than 70 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Understanding Vocabulary in Context Registration #0860-133

This course focuses on and develops the ability to determine the meaning of unfamiliar words encountered in everyday reading. Students identify specific types of vocabulary difficulties in their reading. Using newspaper and magazine articles in class, students practice word attack skills based on context. Implications, connotations, and a knowledge of prefixes, suffixes, and roots are used to determine meaning in reading passages. Students with Michigan scores higher than 70 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Spoken Language Learning IA Registration #0860-136

This course, designed for students with some intelligible speech, focuses on the use of spoken English to express information effectively. Students study basic patterns of English structures, questions and answers, conveying basic information, and brief descriptions. Students with speech intelligibility scores higher than 3.0 and California Reading Test scores lower than 7.0 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F)
COREQUISITE: 0862-100

Spoken Language Learning IIA Registration #0860-137

This course focuses on using spoken English correctly in the organization and expression of personal experiences. Practice is provided in some common complex sentence forms. This course uses the self-instruction lab for speech and speechreading practice.

CLASS 2, LAB 1, CREDIT 2 (W)
PREREQUISITE: 0860-136

Spoken Language Learning IB Registration #0860-138

This course, designed for students with some intelligible speech, focuses on the use of spoken English to express information effectively. Students practice basic patterns of English structures, including questions and answers, conveying basic information, and brief descriptions. Students with speech intelligibility scores higher than 3.0 and California Reading Test scores between 7.1 and 8.5 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F)

Spoken Language Learning IIB Registration #0860-139

This course, designed for students with some intelligible speech, focuses on using English correctly in the organization and expression of personal experiences. Practice is provided in some common complex sentence forms. Students who tend to make grammatical errors that interfere with the intelligibility of their spoken message should take Spoken Language Learning IB prior to this course.

CLASS 2, LAB 1, CREDIT 2 (W)

Spoken Language Learning IC Registration #0860-140

This course, designed for students with some intelligible speech, focuses on the use of spoken English to express information effectively. Students practice basic patterns of English structure, including questions and answers, conveying basic information, and brief descriptions. Students with speech intelligibility scores higher than 3.0 and California Reading Test scores higher than 8.5 may enroll.

CLASS 2, LAB 1, CREDIT 2 (S)

Interpersonal Communication Registration #0860-160

This course helps students become aware of the communication process and their role in it. Students examine their communication skills and evaluate how successfully they communicate expressively and receptively. Students develop strategies to help them take control and communicate effectively in social and employment situations. Some traditional interpersonal communication concepts are dismissed, including first impressions, opinions, points of view, clarification of information, problem solving, anger, assertiveness, and consideration. Classes include lectures, discussions, labs, films and videos, and role playing. Students must have the recommendation of a speech pathologist to enroll.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Building Relationships Through Communication A Registration #0860-162

This course helps students develop effective interpersonal communication skills and confidence. Students come to understand related concepts and develop skills in areas including first impressions, perception, self-disclosure, provision and use of feedback, listening, sharing opinions, conflict resolution, and assertiveness. An experiential approach is used, including structured experiences, role playing, and journal writing. Students with speech intelligibility scores 3.0 or lower may enroll.
CLASS 2, CREDIT 2 (F, W, S)

Building Relationships Through Communication B Registration #0860-163

This course helps students develop effective interpersonal communication skills and confidence. Students come to understand related concepts and develop skills in areas including first impressions, perception, self-disclosure, provision and use of feedback, listening, sharing opinions, conflict resolution, and assertiveness. An experiential approach is used, including structured experiences, role playing, and journal writing. Students with speech intelligibility scores 3.0 or higher may enroll.
CLASS 2, CREDIT 2 (F, W, S)

Group Presentation Registration #0860-170

This course helps students improve their ability to search for, organize, and present information to groups. It deals with topic selection, library research, organizing, outlining written reports, and making presentations to an audience. Activities include a library tour, discussions, evaluations of speeches, and information regarding interpreting. Students with speech intelligibility scores of 3.5 or higher and California Reading test scores of 7.0 or higher may enroll.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Public Speaking Registration #0860-171

This course is designed to refine and increase presentation ability by giving further experience in researching and organizing information for presentation to different audiences. Presentations focus on topics related to hearing impairment and its effect on communication, psychosocial development, and habilitation. Students may serve as presenters representing NTID. The course is highly recommended for students enrolled in Social Work and those preparing for managerial positions. Students should have some experience in public speaking before taking this course. Students with speech intelligibility scores higher than 4.0 and California Reading Test scores higher than 10.0 may enroll.
CLASS 2, LAB 1, CREDIT 2 (W, S)

Group Discussion Techniques Registration #0860-172

This course develops an awareness of group process and interaction. It introduces the principles and techniques necessary for successful communication in group discussions and other complex situations such as interviewing. Group dynamics and leading and participating in groups are taught. Topics for group discussions include social and job-related situations. Students with speech intelligibility scores higher than 4.0, speechreading scores higher than 65 percent, and California Reading Test scores higher than 9.0 may enroll.
CLASS 2, CREDIT 2 (F, W, S)

Conversational Speech Registration #0860-175

Students develop skills and confidence in using appropriate discourse rules to function both as speakers and listeners in oral/aural conversations. Students develop an awareness of the characteristics of an effective conversationalist, improve their self-knowledge, and set goals toward becoming effective conversationalists. The course also helps students develop vocabulary and pronunciation skills and refine speech skills. Current issues are used as conversational topics. The course is structured to promote learning and reliance on individual and peer feedback. Students with speech intelligibility scores higher than 3.0, speechreading scores higher than 36 percent, and Michigan Test scores higher than 60 may enroll.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Strategies to Aid Functional Communication Registration #0860-177

This course is suitable for students who want to develop and practice receptive and expressive strategies to aid in oral/aural communication with a non-signing person. Students develop strategies for communicating in specific dialogue situations, such as renting an apartment and ordering food in a restaurant. Class activities focus on speaking, speechreading, and using strategies in specific functional situations. Lab work includes viewing videotapes and practicing speech. Students produce and critique videotapes of simulated situations. Journals are used to describe out-of-class conversational practice. Students with speech intelligibility scores between 1.9 and 3.1, speechreading scores of 34 percent or higher, and Michigan Test scores of 50 or higher may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

PREREQUISITE: This course is not appropriate for students with severe voice disorders as noted by a speech-language pathologist

Communication for the Job Interview: Speaking Registration #0860-178

This course focuses on improving the communication aspect of the job interview through a series of practice interviews. It is for students who have difficulty communicating during an interview. The course concentrates on using speech effectively. This course is appropriate for students with some speech skills and who prefer to use them during an interview. For students who plan to use writing during an interview, the Audiology Department offers Communication for the Job Interview: Writing. Students who have completed one year in their major and have speech intelligibility scores of 3.0 or higher may enroll.
CLASS 2, LAB 1, CREDIT 2 (W, S)
PREREQUISITE: 0847-101

Independent Study Registration #0860-399

This course is designed for students with special needs that cannot be met by another communication course. Students are required to write a contract describing what the course will cover and the student's responsibilities. Students interested in this course should talk to their communication advisor.
CREDIT 1-4 (F, W, S)

Technical and Integrative Communication Studies

Seminar in Postlingual Adventitious Deafness

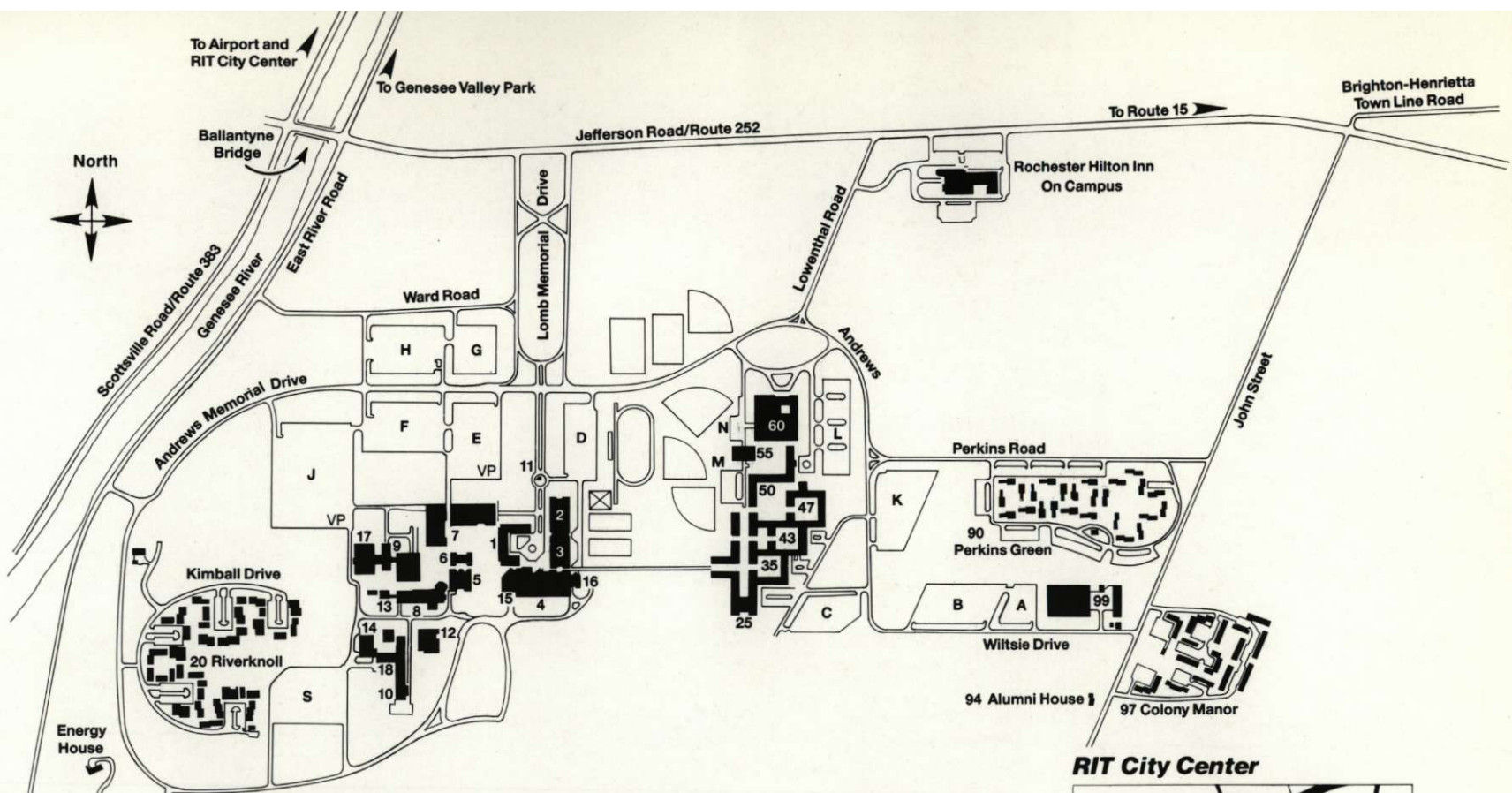
Registration #0864-118

This course is intended to provide students who have an acquired hearing loss with an understanding of their deafness educationally, socially, culturally, and communicatively. Communication strategies for social and classroom settings are discussed and discussion of feelings, attitudes, and issues related to the psychosocial and cultural implications of deafness are stressed.

CLASS 2, DISCUSSION GROUP 1,

CREDIT 3 (F, W, S)

PREREQUISITE: 0841-160 or interview
with instructor



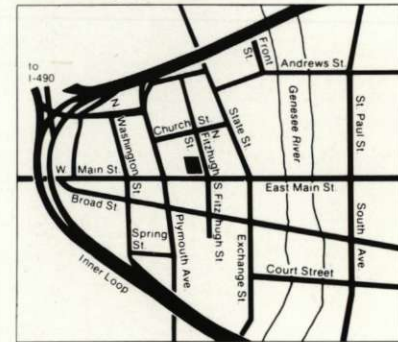
Building Numbers and Names

- 1 **George Eastman Memorial Building**
Administration; Admissions; Bursar; College of Continuing Education; Cooperative Education and Placement; School of Food, Hotel, Tourism Management; Packaging Science; Registrar; Social Work
- 2 **Frank Ritter Memorial Ice Arena**
- 3 **George H. Clark Memorial Gymnasium; Edith Woodward Memorial Pool**
- 4 **College-Alumni Union and Ingie Memorial Auditorium; Ritskeller Wallace Memorial Library**
- 5 **College of Liberal Arts**
- 6 **James E. Booth Memorial Building:** College of Fine and Applied Arts, Bevier Gallery; Webb Auditorium
- 7 **Frank E. Gannett Memorial Building:** College of Graphic Arts and Photography

- 8 **Chester F. Carlson Memorial Building:** College of Science
- 9 **James E. Gleason Memorial Building:** College of Engineering; School of Engineering Technology
- 10 **Ross Memorial Building:** Information Systems & Computing; School of Computer Science and Technology
- 11 **Information Center**
- 12 **Max Lowenthal Memorial Building:** College of Business
- 13 **Facilities Office**
- 14 **The Hugh L. Carey Building:** NTID
- 15 **Bookstore**
- 16 **Kilian J. and Caroline F. Schmitt Interfaith Center**
- 17 **Center for Microelectronic and Computer Engineering**
- 18 **Link Building:** Center for Quality and Applied Statistics
- 20 **Riverknoll:** Campus apartment housing
- 25 **Grace Watson Hall:** Resident dining facilities, Counseling Center, Campus Safety, Residence Life Office

- 35 **Kate Gleason, Eugene Colby, Frances Baker halls:** Residences
- 43 **Nathaniel Rochester, Helen Fish halls:** Residences
- 47 **Sol Heumann, Carleton Gibson halls:** Residences
- 50 **Mark Ellingson, Peter Peterson, Alexander Graham Bell halls:** NTID residences
- 55 **Hettie L. Shumway Dining Commons:** NTID residence dining facilities
- 60 **Lyndon B. Johnson Building:** NTID academics
- 90 **Perkins Green:** Campus apartment housing
- 94 **Alumni House:** 415 John Street
- 97 **Colony Manor:** Campus apartment housing
- 99 **Physical Plant buildings**
- VP: visitors' parking areas

RIT City Center



RIT City Center, located at 50 West Main Street can be reached from campus via Scottsville Road to 390N, to 490E. Exit at Plymouth Avenue.

To Eastman Kodak Co. Educational Center
To Racquet Club

Bailey Road

To U.S. Route 15 and Thruway exit 46



Rochester Institute of Technology

National Technical Institute for the Deaf
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SHAFFER, JOELLEN
SYSTEMS DEV. & OPERATIONS
BLDG LBJ ROOM 02295 X 6233