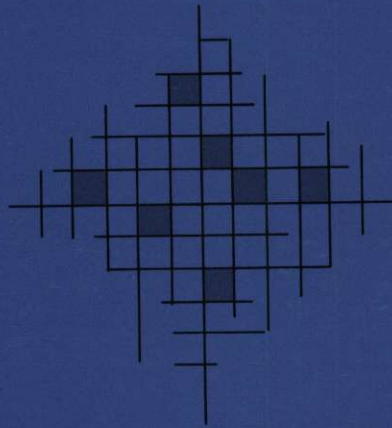


YOUR · COLLEGE · FOR · CAREERS

N · T · I · D

COURSES



1987-88

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

Quick Reference Telephone Directory

	Voice	TDD
NTID Main Phone	475-6400	2181
Career Outreach and Admissions	6700	6173
Institute Director	6418	6672
Career Development Programs Administration	6314	6314
Technical Assistance Programs Administration	6302	6302
School of Business Careers	2993	2993
School of Science and Engineering Careers	6270	6270
School of Visual Communication Careers	6756	6756
Communication Programs	6300	6301
General Education Programs	6552	6552
Educational Support Services Programs	6433	6443
Public Affairs Office	6824	6824
Visitors:		
Prospective Students	6318	6173
All Others	6405	2181
Dormitory 24-Hour Desk	6149	2894
Financial Aid - RIT	2186	6909
VR Billing Coordinator	2080	2960
Housing-RIT	2571	2571
NTID Student Information Center	6527	6867

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. The compliance officer is James Papero.

Academic Calendar 1987-88

	Day College- Open Registration	Classes Begin	Last Day of Classes	Exam Week	No Classes
SVP	July 30 (move-in day) July 31-Aug. 2 (parent/ student orientation)	Aug. 3	Aug. 28		
Fall Quarter	Sept. 1 (new students) Sept. 2 (returning students)	Sept. 3	Nov. 11	Nov. 14-17	Nov. 19-29
Winter Quarter	Nov. 30	Dec. 1	Feb. 22	Feb. 24-27	Dec. 20- Jan. 3 Feb. 28-March 6
Spring Quarter	March 7	March 8	May 16	May 17-20	May 22-June 2
Summer Quarter	June 2	June 6	Aug. 15	Aug. 17-19	July 4

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 *1986-88 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

(716) 475-6631 (Voice)
475-6173 (TDD)

Placement

Historically, more than 94 percent of NTID's graduates entering the labor force have found jobs. Eighty percent work in business and industry; 13 percent in government; and seven percent in education. Of those who were not seeking employment, more than 69 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 *1986-88 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 42 percent emerges in a relatively average position.

Financial Aid

NTID students received more than \$3 million in financial aid in FY86. The average award per student was \$1,938. 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
(716) 475-2186 (Voice)
475-6909 (TDD)

Course Descriptions

(0801)	Accounting Technology.	3
(0802)	Data Processing	5
(0804)	Business Occupations.	8
(0808)	Architectural Technology.	11
(0809)	Civil Technology.	14
(0810)	Industrial Drafting Technology.	16
(0811)	Electromechanical Technology.	18
(0812)	Numerical Control.	20
(0813)	Manufacturing Processes.	20
(0814)	Biology.	22
(0815)	Chemistry.	22
(0816)	Medical Laboratory Technology.	23
(0817)	Technical Mathematics	26
(0818)	Technical Physics.	27
(0819)	Medical Record Technology.	28
(0822)	Printing Production Technology.	30
(0827)	Optical Finishing Technology.	32
(0841)	Communication Instruction Department I (Speech & Audiology).	35
(0842)	Communication Instruction Department II (Sign Communication).	40
(0843)	Communication Instruction Department III (English).	41
(0844)	Communication Instruction Department IV (Technical & Integrative Communication Studies).	43
(0847)	General Education.	44
(0848)	Theater.	47
(0849)	Applied Art	48
(0850)	Interpreting	51
(0851)	Photo/Media Technologies.	54

Course Numbering

Each course is identified by its title and two numbers.

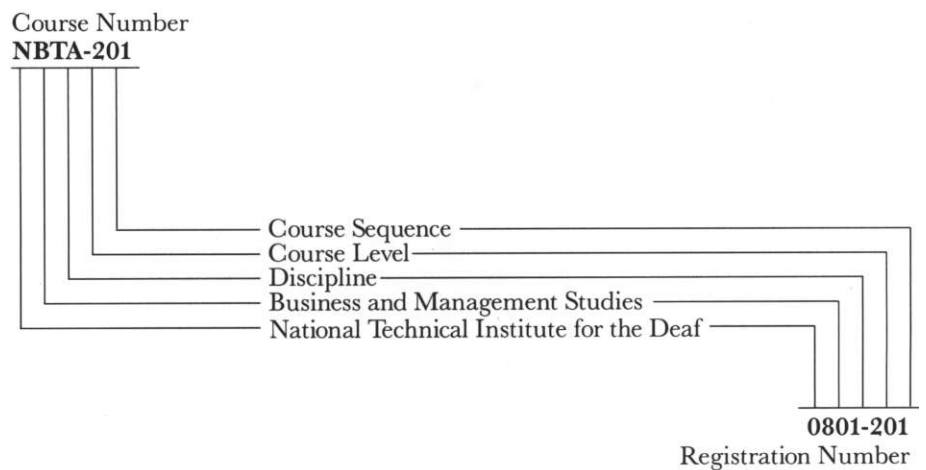
The **alpha-numeric course number** that appears before the course descriptions in each discipline is the official Institute course number. This number will appear on grade reports, transcripts, and other official correspondence. It means:

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 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.



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

COURSES

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.

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, and internal control and the voucher system. Coursework includes a practice set that applies accounting concepts in a simulated business situation.

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)

PREREQUISITE: Applied Accounting Associate student standing and 0804-101

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 and 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: Diploma

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	0817-122	Algebra IA 3
0817-105	Office Procedures Math 3	0847-100	Dimensions of College Life 2		Communication 2
0847-101	Job Search Process 1		Communication 2		English 4
	English 4		English 4		Physical Education 0
	16		Physical Education 0		14
			16		
Summer					
		0801-299	Co-op Work Experience		
Second Year					
0801-201	General Accounting I 3	0801-202	General Accounting II 3	0801-251	Applied Accounting I 4
0804-221	Advanced Typing I 3	0802-210	Data Processing for Business Occupations 3	0804-286	Fundamentals of Marketing 3
0804-284	Fundamentals of Management 3		(Accounting)		or
0817-123	Algebra IB 3		General Education	0847-147	Law and Society 2
	Communication 2		Course Elective 2	0847-102	Life After College 1
	English 4		Communication 2		General Education
	Physical Education 0		English 4		Course Elective (optional) 2
	18		14		Communication 2
					English Elective 4

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.
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.
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 concept. Topics covered include financial analysis, accounting concepts and principles, statement of changes in financial position, corporate accounting, and partnership accounting.
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.
CLASS 6, CREDIT 2 (S)
PREREQUISITE: Grade of C or better in 0801-253

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

Independent Study
Registration#0801-399
CREDIT Variable

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
0817-105	Office Procedures Math	3
0847-101	Job Search Process	1
	English	4
		16

Second Year

0801-201	General Accounting I	3
0804-221	Advanced Typing I	3
0804-284	Fundamentals of Management	3
0817-123	Algebra IB	3
	Communication	2
	English	4
	Physical Education	0
		18

Third Year

0801-252	Applied Accounting II	4
0817-127	Algebra IIB	3
	Liberal Arts	4
	Liberal Arts	4
		15

Winter Term

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

Summer

0801-299	Co-op Work Experience	
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Summer

0801-299	Co-op Work Experience	
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Spring Term

		Cr. Hrs.
0804-113	Beginning Typing III	2
0804-213	Business Procedures III	3
0817-122	AlgebraIA	3
	Communication	2
	English	4
	Physical Education	0
		14

0801-251	Applied Accounting I	4
0804-286	Fundamentals of Marketing	3
0817-126	Algebra IIA	3
	Liberal Arts	4
	Communication	2
		16

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

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, W, S)

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)
PREREQUISITE: Michigan Test Score of 55 or California Reading 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 a possible career 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, S)
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)
PREREQUISITE: 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
0817-122	Algebra IA	3
0847-101	Job Search Process	1
	Communication	2
	English	4
		14

Winter Term

		Cr. Hrs.
0802-170	Utilities/JCL for Computers	2
0804-101	Orientation to Business	3
0817-123	Algebra IB	3
0847-100	Dimensions of College Life	2
	English	4
		14

Spring Term

		Cr. Hrs.
0802-101	Introduction to Business Programming	3
0802-161	Business Computers Systems Facilities	2
0802-390	Data Processing Seminar	1
	Communication	2
	English	4
		12

Summer

0802-299	Co-op Work Experience	
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Second Year

0802-125	Data Processing Technical Communications	2
0802-162	Computer Console Operations	1
0817-104	Business Mathematics	3
	Business Elective	2
	Communication	2
	English	4
	Physical Education	0
		14

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 (F)
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 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 the student 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 of 70, California Reading

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: Diploma

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.			
0802-100	Introduction to Data Processing	2	0802-125	Data Processing Technical Communications	2	0802-101	Introduction to Business Programming	3
0802-157	Beginning Computer Operations	1	0802-170	Utilities/JCL for Computers	2	0802-161	Business Computer Systems Facilities	2
0802-158	Laboratory	1	0804-101	Orientation to Business	3	0802-171	Computer Architecture	1
0817-122	Algebra IA	3	0847-100	Dimensions of College Life	2	0817-123	Algebra IB	3
0847-101	Job Search Process	1		Communication	2		Communication	2
	English	4		English	4		English	4
		14			15			15

Summer

0802-299 Co-op Work Experience

Second Year

0802-120	On-Line Processing/ Programming	2	0802-230	Business COBOL I	3	0802-231	Business COBOL II	3
0802-162	Computer Console Operations	1	0802-260	System Generation for Operators	1	0802-250	Multiprogramming/ Spooling for Operators	2
0817-104	Business Mathematics	3	0802-261	Laboratory	2	0802-251	Laboratory	1
	Business Elective	3		Business Elective	3	0802-390	Data Processing Seminar	2
	English	4		Communication	2			
	Physical Education	0		English	4	0817-126	Algebra IIA	3
		13		Physical Education	0		Business Elective	2
					15		Communication	2
								15

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 Generator 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 II. The sorting process and the concepts of trees and pointers are discussed and programmed. This course is for students interested in continuing for 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

Data Processing: A.A.S. Degree

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
0817-122	Algebra IA	3
0847-101	Job Search Process Communication English	1 2 4
		14

Winter Term

		Cr. Hrs.
0802-125	Data Processing Technical Communications	2
0802-170	Utilities/JCL for Computer!	2
0817-123	Algebra IB	3
0847-100	Dimensions of College Life English Physical Education	2 4 0
		13

Spring Term

		Cr. Hrs.
0802-101	Introduction to Business Programming	3
0802-161	Business Computer Systems Facilities	2
0804-101	Orientation to Business	3
0817-104	Business Mathematics Communication English	3 2 4
		17

Summer

0802-299 Co-op Work Experience

Second Year

0802-120	On-Line Processing/ Programming	2
0802-162	Computer Console Operations	1
0817-126	Algebra IIA Business Elective English Physical Education	3 3 4 0
		13

0802-171	Computer Architecture	1
0802-230	Business COBOL I Business Elective Communication English Physical Education	3 3 2 4 0
		13

0802-231	Business COBOL II	3
0802-250	Multiprogramming/ Spooling for Operators	2
0802-251	Laboratory	1
0817-127	Algebra IIB Liberal Arts Communication Physical Education	3 4 2 0
		15

Summer

0802-299 Co-op Work Experience

Third Year

0802-260	System Generation for Operators	2
0802-261	Laboratory	1
0817-163	Data Processing Mathematics Technical Elective Liberal Arts Communication	3 3 4 2
		15

0802-240	Assembler Language Programming	3
0802-262	Advanced Operating Systems	2
0802-263	Laboratory Business Elective Mathematics Elective Liberal Arts	1 3 3 4
		16

0802-390	Data Processing Seminar Technical Elective Liberal Arts Liberal Arts Communication	1 3 4 4 2
		14

**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/mini computers 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: 0802-162, one 200 series programming course, and 0801-201

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

This is not a structured laboratory. Student projects are done in a combined class and laboratory environment. Financial work, inventory control, and payroll are some of the systems for whose successful management students are responsible.

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)**

Business Occupations/ 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 Practice and Procedures. 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 the student with a basic knowledge of the history, organization, and operation of business and its particular vocabulary. A market simulation using a microcomputer is used.

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. Designed specifically for students enrolled in courses in the Business Occupations Department.

CLASS 3, CREDIT 3 (W, S)

C.O.R.E. Certificate Program — Office Technologies

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.
0804-111	Beginning Typing I	2	0804-101	Orientation to Business	3
0804-211	Business Procedures I	3	0804-112	Beginning Typing II	2
0817-105	Office Procedures Math	3	0804-212	Business Procedures II	3
0847-101	Job Search Process	1	0847-100	Dimensions of College Life	2
	Communication	2		Communication	2
	English	4		English	4
		15			16
					14

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
	General Education			General Education	
	Course Elective* or			Course Elective*	2
	Business Elective"	2		Communication	2
	Communication	2		English	4
	English	4			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 the following courses:
0804-111 for 0804-112
0804-112 for 0804-113

Keyboarding 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 "qwerty" 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 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. 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)

**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 majors and Office Technologies majors 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**

The 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 or job success. Students are expected to participate in planning class sessions.

CLASS 4, CREDIT 2 (S)
PREREQUISITE: Office Technology Diploma student 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

Office Technologies: Diploma

Typical Course Sequence

Fall Term		Winter Term		Spring Term				
First Year								
	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.			
0804-101	Orientation to Business	3	0804-112	Beginning Typing II	2	0804-110	Business English	3
0804-111	Beginning Typing I	2	0804-212	Business Procedures II	3	0804-113	Beginning Typing III	2
0804-211	Business Procedures I	3	0817-122	Algebra IA (optional)	3	0804-213	Business Procedures III	3
0817-105	Office Procedures		0847-100	Dimensions of College Life	2		Communication	2
	Math	3		Communication	2		English	4
0847-101	Job Search Process	1		English	4		Physical Education	0
	English	4		Physical Education	0			14
		16			13-16			

Summer

0804-299 Co-op Work Experience

Second Year								
	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.			
0801-201	General Accounting I	3	0801-202	General Accounting II	3	0804-230	Office Technologies Seminar	2
0804-221	Advanced Typing I	3	0802-210	Data Processing for Business Occupations	3	0804-286	Fundamentals of Marketing	3
0804-284	Fundamentals of Management	3	0804-222	Advanced Typing II	3		or	
	Communication	2		Communication	2	0804-301	Word Processing I	4
	English	4		English	4	0847-102	Life After College	1
		15		Physical Education	0	0847-147	Law and Society	2
					15		General Education Course Elective	2
							Communication	2
							English Elective	4
								17-18

**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

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

This course gives students an opportunity to review skill-oriented coursework on a microcomputer and on an 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.

CLASS 3, CREDIT 2 (S)
PREREQUISITE: Office Technologies, Associate student status and 0804-302

**Co-op Work Experience
Registration #0804-299
CREDIT 0 (Su)**

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
0817-105 Office Procedures Math	3
0847-101 Job Search Process	1
English	4
	16

Winter Term

	Cr. Hrs.
0804-112 Beginning Typing II	2
0804-212 Business Procedures II	3
0817-122 Algebra I A	3
0847-100 Dimensions of College Life	2
Communication	2
English	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
0817-123 Algebra IB	3
Communication	2
English	4
Physical Education	0
	17

Summer

0804-299 Co-op Work Experience

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

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

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

Summer

0804-299 Co-op Work Experience

Third Year

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

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

0804-304 Word Processing IV	4
0804-399 Independent Study	4
Office Practice and Procedures	2
0847-102 Life After College	1
Liberal Arts	4
General Education Course Elective	2
	13

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

Independent Study

Registration #0804-399

CREDIT Variable

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 the work setting.

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 instruction 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

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

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, as well as coursework in Mathematics, English, Communication, and General Education.

C.O.R.E. Year-Engineering Technologies

Typical Course Sequence

Fall Term			Winter Term			Spring Term		
First Year								
		Cr. Hrs.			Cr. Hrs.			Cr. Hrs.
0817-122	AlgebraIA	3	0817-123	Algebra IB	3	0817-126	AlgebraIIA	3
0847-100	Dimensions of College Life	2		Career Exploration*	1		Career Exploration*	1
	Career Exploration*	1		General Education**	3		General Education**	3
	Communication	2		Communication	2		Communication	2
	English	4		English	4		English	4
		12			13			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.

- The departments encourage students to start Physics after completing Algebra IB. Students may register for Technical Physics I instead of General Education.

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 II2		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	3	0817-124	Geometry	3
0847-100	Dimensions of College Life	2	0818-100	Technical Physics I	3	0818-125	Construction Technology	
	Communication	2		English	4		Physics II	3
	English	4		Physical Education	0		Communication*	2
	Physical Education	0			15		Physical Education	0
		17						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		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			

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

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

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

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, steel joists, trusses, light frame, and heavy timber. Students read structural framing plans, details, and schedules.
 CLASS 4, CREDIT 4 (S)
 PREREQUISITE: 0808-212

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	3	0817-124	Geometry	3	0817-128	Trigonometry	3
0847-100	Dimensions of College Life	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		Liberal Arts	4	0808-376	Building Estimating	2
	Liberal Arts	4	0847-102	Life After College	1		Technical Elective	1-3
		16			14		Liberal Arts	4
								14-16

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

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)

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: 0817-128 or 0808-224

Building Equipment
Registration #0808-377

Students learn to identify and understand the basic equipment and operation of the 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

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 the work setting.

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)

PREREQUISITE: 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

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)

PREREQUISITE: 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	3
0847-100	Dimensions of College Life	2
	Communication	2
	English	4
	Physical Education	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	4
	Liberal Arts	4
		17

Winter Term

		Cr. Hrs.
0808-112	Construction Drafting II	2
0808-201	Construction Methods I	3
0817-124	Geometry	3
0818-100	Technical Physics I	3
	English	4
	Physical Education	0
		15
0809-260	Strength of Materials	4
0809-283	Soil Mechanics	4
0809-390	Construction Seminar	2
0817-202	College Algebra, Trigonometry, and Analytic Geometry II	3
	Liberal Arts	4
		17

Summer

0809-299 Co-op Work Experience

Spring Term

		Cr. Hrs.
0808-113	Construction Drafting III	2
0808-202	Construction Methods II	3
0817-128	Trigonometry	3
0818-126	Construction Physics III	3
	Communication'	2
	Physical Education	0
		13
0809-231	Surveying I	4
0809-241	Mapping I	2
0809-284	Engineering Materials	4
0809-290	Computer Program	3
	Liberal Arts	4
		17
0809-322	Structural Design Drafting II	4
0809-350	Highway Design and Construction	4
0847-102	Life After College	1
	Liberal Arts	4
		13
0809-323	Structural Design Drafting III	4
0809-385	Principles of Environmental Technology	4
	Technical Elective	1-3
	Liberal Arts	4
		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

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

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)

Basic Drafting I Registration #0810-101

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: 0817-123

Basic Drafting II Registration #0810-102

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, isometric and pictorial drawings with greater attention to drawing quality, and applied mathematics.
LAB 6, CREDIT 2 (W)
PREREQUISITE: 0810-101, 0817-126

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)
PREREQUISITE:
0817-128 for 0810-131;
0810-131 for 0810-132

Industrial Drafting: Diploma Typical Course Sequence

Fall Term

First Year

		Cr. Hrs.
0810-141	Basic Technical Drafting I	3
0817-127	Algebra IIB	3
0847-100	Dimensions of College Life	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	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	3
0818-135	Technical Physics II	3
	Communication*	2
	English	4
	Physical Education	0
		15

Summer

0810-299	Co-op Work Experience	
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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 Elective	5 2	0810-202	Technical Drafting II Electives	4 4	0847-102	Life After College Electives	1 6
		11			12			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 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: 0817-126, 0818-156

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)
PREREQUISITE: 0810-143

Industrial Drafting Technology: A.A.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.
0810-141	3	0810-142	3	0810-143	3
Basic Technical Drafting I		Basic Technical Drafting II		Basic Technical Drafting III	
0817-127	3	0817-124	3	0817-128	3
Algebra IIB		Geometry		Trigonometry	
0847-100	2	0818-100	2	0818-135	3
Dimensions of College Life		Technical Physics I		Technical Physics II	
0847-101	1	Communication	2	Communication*	2
Job Search Process		English	4	English	4
Communication	2	Physical Education	0	Physical Education	0
English	4		15		15
Physical Education	0				
	15				

Slimmer

0810-299 Co-op Work Experience

Second Year

0810-131	1	0810-132	1	0810-203	4
Manufacturing Processes I		Manufacturing Processes II		Technical Drafting III	
0810-151	3	0810-152	3	0810-211	1
Materials and Processes I		Materials and Processes II		Supervised Study in Drafting	
0810-201	5	0810-202	4	0817-203	3
Technical Drafting I		Technical Drafting II		Algebra, Trigonometry, and Analytic Geometry III	
0817-201	3	0817-202	3	Liberal Arts	4
Algebra, Trigonometry, and Analytic Geometry I		Algebra, Trigonometry, and Analytic Geometry II		Elective	3
Electives	4	Liberal Arts	4		15
	16		15		

Summer

0810-299 Co-op Work Experience

Third Year

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

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

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

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

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

The student designs 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

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)
PREREQUISITE: 0817-202, 0818-135

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 the work setting.

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

Digital and Analog 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)

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)

PREREQUISITE: 0810-101, 0811-368

Computational 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)

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

Electrical Circuits I

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)

PREREQUISITE: 0817-127, 0818-135

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	Computational Techniques	4	0811-211	Mechanical Components	4
0817-126	Algebra IIA	3	0811-241	Tool Skills	2	0811-213	Electrical Circuits I	5
0818-100	Physics I	3	0817-127	Algebra IIB	3	0817-128	Trigonometry	3
0840-100	Communication	2	0818-135	Physics II	3		Communication	2
0847-100	Dimensions of College Life	1		English*	4			14
	English	4		Communication*	2			18
		15			18			

Second Year

0811-304	Electrical Circuits II	5	0811-321	Machines and Power Systems I	4	0811-322	Machines and Power Systems II	4
0811-317	Mechanisms	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			16			16
		17			16			16

Summer

0811-299 Co-op Work Experience

Third Year

0811-171	Digital and Analog Systems	4	0811-325	E/M Devices and Systems II	4	0811-209	Technical Graphics	2
0811-234	E/M Concepts	4	0811-327	E/M Systems Lab I	2	0811-328	E/M Systems Lab II	2
0811-324	E/M Devices and Systems I	4		Technical Elective	4		Technical Elective	4
		4		Liberal Arts	4	0847-102	Life After College	1
0811-370	Electronics III	4			14			13
		16						

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

Electromechanical Concepts

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)

PREREQUISITE: 0811-369

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: 0817-122

Co-op Work Experience

Registration #0811-299

CREDIT 0 (F, W, S, Su)

Electrical Circuits II

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)

PREREQUISITE: 0811-213, 0817-128

Mechanisms

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)

PREREQUISITE: 0811-211, 0817-128

Machines and Power Systems I**Registration #0811-321**

In this course, students learn how power is transmitted by using fluids (liquids and gases). Topics covered include the character of the 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

Machines and Power Systems II**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)

PREREQUISITE: 0811-304

Electromechanical Devices and Systems I**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)

PREREQUISITE: 0811-321, 0811-368

Electromechanical Devices and Systems II**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

Electromechanical Systems Laboratory 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

Electromechanical Systems Laboratory 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

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

Mechanics**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: 0811-317

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

Advanced Electronics**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

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

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 the Compact II programming language on line computer to prepare and verify programs. Pattern translations and rotations, including sets and contouring, are stressed.

CLASS 4, LAB 3, CREDIT 4 (S)

PREREQUISITE: 0812-151

Manufacturing Processes

Career Exploration: Manufacturing Processes

Registration #0813-100

This course provides students with information regarding careers 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 the work setting.

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

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

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, LAB 0, 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, LAB 0, 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

Manufacturing Processes: Diploma**Typical Course Sequence****Fall Term****Winter Term****Spring Term**

0813-131		0813-132		0813-133
	4		4	
0813-139	2	0813-140	2	0813-154
0817-126	3	0817-127	3	
0847-100		0847-101	1	0817-128
	2		2	
	2		4	
	4		0	

Summer

0813-299 Co-op Work Experience

0813-134	Manufacturing Processes IV	4	0812-151	Numerical Control**	4		Control II "	4
0813-151	Industrial Materials Electives	3	0813-135	Manufacturing Processes V	4	0813-136	Manufacturing Processes VI	4
		4	0813-153	Welding I**	2	0813-152	Manufacturing Analysis "	3
		13		Elective		0813-155	Welding II "	2

*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.

Biology

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. Photosynthesis and other biochemical pathways are also treated. The laboratory program is designed to reinforce the principles and concepts learned during class sessions.

CLASS 4, LAB 4, CREDIT 4 (W)

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 learned in this segment of the Biology program. Laboratory activities provide the students with opportunities to apply the 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)

Chemistry

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. Controlling acidity through use of buffers and analysis of the acid and alkali content of some consumer products are conducted. 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 the 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 will include 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

Medical Laboratory Technology

Histologic Assistant: Certificate

Typical Course Sequence

Fall Term

Winter Term

Spring Term

Pre-Technical Requirements

Fall Term			Winter Term			Spring Term		
		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	0815-117	MLT Chemistry III	4
0817-123	Algebra IB	3	0817-126	Algebra IIA	3	0817-127	Algebra IIB	3
0847-100	Dimensions of College Life	2	0847-101	Job Search Process	1		Communication	2
	Communication	2		Communication	2		English	4
	English	4		English	4		Physical Education	0
	Physical Education	0		Physical Education	0			17
		19			18			

First Year

0816-101	Anatomy/Physiology and Disease I	4	0816-102	Anatomy/Physiology and Disease II	4	0816-299	MLT Co-op Work Experience	
0816-111	Basic Histology	6	0816-115	Electrocardiography	2			
0817-170	MLT Mathematics	3	0816-211	Histology II	6			
	Communication	2	0847-102	Life After College	1			
	English	4		Communication	2			
		19		English	4			
					19			

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 of protozoa and metazoa parasites which infect humans. Preserved microscopic slides, 35mm captioned slides, and laboratory preparations are utilized.
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 the 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 the blood.
CLASS 8, CREDIT 4 (F)

Photomicroscopy**Registration #0816-141**

This is a specialized study in photographing histological specimens, animal and plant, in color and black and white. Procedures include not only brightfield, but also dark-field and phase microscopy. The course includes treatment of film processing and printing techniques.

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

PREREQUISITE: 0814-109

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

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

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 specialities 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.

CLASS 12, CREDIT 6 (F)

PREREQUISITE: 0816-131

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 disease and their symptoms.

CLASS 9, CREDIT 5 (W)

PREREQUISITE: 0816-232

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

CREDIT 0 (Su)

Independent Study**Registration #0816-399**

CREDIT Variable

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 is a course to improve 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, compound interest, 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 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)

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 (F, W, S)

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)

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)

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 skill 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, 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 are also 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 technology 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, Law of Moments, rotational motion, and wave theory.

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: 0818-100

Technical Physics II

Registration #0818-135

This is the second course required for Industrial Drafting, Electrical Mechanical 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: Kirchoff's 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, power factor, heat transfer and temperature scales, linear and volumetric expansion and contraction, density and specific gravity, and fluid pressure.

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

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 SVP, or attended SVP but did not sample medical record technology at that time.

CLASS 2, CREDIT 1

Biology I

Registration #0819-106

This is the first in a three-quarter series of courses. Laboratory activities involving microscopic and macroscopic observations of prepared and live specimens are performed to supplement classroom lecture and discussion. Topics covered in this course are basic atomic structure, molecular biology, origin of life, cellular structure and function, cellular respiration, DNA structure, protein synthesis, mitosis, and the relationship of bacteria and viruses to disease. Study skills development and refinement are emphasized and infused with course content.

CLASS 4, LAB 2, CREDIT 4 (F)

Biology II

Registration #0819-107

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

CLASS 4, LAB 2, CREDIT 4 (W)

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 the dissection of a pig embryo as well as reviewing the anatomy of all body systems studied in MRT Biology II and III.

CLASS 4, LAB 2, CREDIT 4 (S)

Medical Record Technology: A.A.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

Pre-Technical Year

Cr. Hrs.			Cr. Hrs.			Cr. Hrs.		
0804-111	Beginning Typing I	2	0804-112	Beginning Typing II	2	0804-113	Beginning Typing III	2
0819-106	Biology I	4	0817-123	Algebra IB	3	0817-109	Medical Record Statistics	3
0817-122	Algebra IA	3	0819-107	Biology II	4	0819-108	Biology III	4
0847-100	Dimensions of College Life	2		Communication	2	0819-145	Health Organization	4
	Communication	2		English	4		English	4
	English	4		Physical Education	0			
		17			15			17

First Year

0819-111	Anatomy/Physiology I	4	0804-221	Advanced Typing I	3	0802-210	Data Processing	2
0819-141	Medical Record Science I	5	0819-112	Anatomy/Physiology II	4	0804-301	Word Processing I	4
0819-161	Medical Terminology I	3	0819-142	Medical Record Science II	5	0819-143	Medical Record Science III	5
	Communication	2	0819-162	Medical Terminology II	3	0819-163	Medical Terminology III	3
	English Composition	4		Communication	2		Liberal Arts	4
		17		Physical Education	0			18
					17			

Summer

0819-299 Co-op Work Experience

Second Year

0819-244	Medical Record Science IV	5	0819-245	Medical Record Science V	5	0819-246	Medical Record Science VI	5
0819-264	Medical Terminology IV	3	0819-251	Pathophysiology I	3	0819-252	Pathophysiology II	3
0847-101	Job Search	1	0847-102	Life After College	1	0819-275	Medical Terminology V	3
	Liberal Arts	4		Liberal Arts	4		Liberal Arts	4
	Communication	2		Communication	2			
		15		Physical Education	0			15
					15			

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, 0819-112-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)

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)

Health Care Organization and Structure
Registration #0819-145

This course gives an overall introduction to the acute health care delivery system. It includes the composition, responsibilities, and functions of the administrative staff, health care providers, allied health professionals, and hospital departments, students will 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

MLT Co-op Seminar
Registration #0819-200

This course provides students with knowledge and skills to prepare them for a successful co-op experience. These include guidelines on professional ethics, employee-employer responsibilities, communication skills, and interpersonal relationship development. Class activities include discussion groups, panel presentations, hospital visitation, lectures, and the preparation of co-op materials.
 CLASS 2, CREDIT 1 (W)
 PREREQUISITE: Completed Pre-technical year

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)

Medical Record Science V
Registration #0819-245

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

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)

Pathophysiology I, II
Registration #0819-251, 252

This is a two-quarter course that combines knowledge of human physiology with disease processes. The etiology, pathological mechanism, characteristic symptoms, clinical manifestations, and diagnostic and therapeutic procedures of common diseases are presented.
 CLASS 3, CREDIT 3 (0819-251-W, 0819-252-S)
 PREREQUISITE:
 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)
 PREREQUISITES: 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, oncology, pharmacology, geriatrics, 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)

Printing Production Technology

Page Creation Methods 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 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 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)

Basic Lithographic Duplicator Operation 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 scope of the job 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

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	Dimensions of College Life	2
	Communication	2
	English	4
	Physical Education	0
		16

Second Year

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

Winter Term

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

Printing Production Technology: Diploma—NVR

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

Typical Course Sequence

Fall Term

First Year

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

Second Year

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

Winter Term

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

0822-	Level I Printing	5
	Elective	2
0822-170	Production Printing I	2
	General Education	2
	Communication	2
		13

Spring Term

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

0822-	Level II Printing	5
0822-	Level III Printing	5
0822-269	Production Printing II	2
	Elective	2
		14

Summer

0822-299	Co-op Work Experience	
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Third Year

0822-	Level II Printing	5
0822-	Level III Printing	5
0822-270	Production Printing III	2
	General Education	2
		14

0822-	Level II Printing	5
0822-	Level III Printing	5
0847-102	Life After College	1
	Communication	2
		13

Computerized Typesetting 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)

PREREQUISITE: Touch typing skill

Electronic Publishing 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 Photocomposition I are used in new, more complex applications.

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

PREREQUISITE: Touch typing skill

Advanced Halftone and Line Technique Registration #0822-255

This course prepares students to be camera operators." Graduates with this job title can do advanced line photography, halftones, 50% 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)

Color Separation Methods Registration #0822-256

This course prepares students to be color separators, color scanner operators, and dry lotetchers. Graduates with these job titles can make duotones; 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)

Flat Color Film Assembly 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)

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; and five Liberal Arts courses.

Typical Course Sequence

Fall Term

First Year

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

Second Year

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

Third Year

0822-	Level II Printing	5
0822-269	Production Printing II	2
0822-	Printing Elective	3
	Liberal Arts	4
	Communication	2
		16

Winter Term

	Cr. Hrs.
0822-	Level I Printing
	Elective
	General Education
	Communication
	English
	Physical Education
	15

0822-	Level I Printing	5
	Elective	2
	Liberal Arts	4
	Communication	2
		13

Summer

0822-299	Co-op Work Experience
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0822-	Level III Printing	5
0822-270	Production Printing III	2
0822-	Printing Elective	3
	Elective	2
	Liberal Arts	4
		16

Spring Term

	Cr. Hrs.
0822-	Level I Printing
	Elective
	General Education
	Communication
	English
	Physical Education
	15

0822-	Level II Printing	5
0822-	Level III Printing	5
0822-170	Production Printing I	2
	Liberal Arts	4
		16

Process Color Film Assembly 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)

Lithographic Press Operator 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)

Advanced Lithographic Press 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)

Co-op Work Experience Registration #0822-299 CREDIT 0 (Su)

Independent Study Registration #0822-399 Credit: Variable (F, W, S, Su)

Optical Finishing Technology

Introduction to Optical Finishing Technology I

Registration #0827-105

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. 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. CLASS 2, CREDIT 2 (F)

Introduction to Optical Finishing Technology II

Registration #0827-106

Students learn the functions and names of various ophthalmic lens systems, vocabulary terms related to vision conditions, and the relationship between a vision condition and the lens system prescribed to correct it. Professional, ethical, and legal limitations governing vision care specialists are introduced.

CLASS 2, CREDIT 2 (W)

Introduction to Optical Finishing Technology III

Registration #0827-107

Students learn accepted safety procedures practiced in ophthalmic laboratories. This course also introduces students to the parts and functions of vertometers/lensometers, calculation of lens powers, and determination of pupillary distance. Students practice analyzing and completing information found on sample Rx invoices.

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, monocular and binocular pupillary distances (P.D.s), and decentration of lenses determining the algebraic and content accuracy of the ophthalmic prescription.

CLASS 4, CREDIT 3 (F)

PREREQUISITES: 0817-122, 0817-123

Optical Finishing Technology Math II

Registration #0827-112

Students learn to apply mathematic functions related to the vertometer, heat treat process, and layout marker. Students restate (transpose) compound prescription powers in alternate dioptric form and receive practice in the use of the lens measure relative to lens curves.

CLASS 4, CREDIT 3 (W)

PREREQUISITE: 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	Dimensions of College Life	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	Dimensions of College Life	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
	General Education	1
	Communication	2
		12

Winter Term

		Cr. Hrs.
0817-122	Algebra IA	3
0827-106	Introduction to OFT II	2
	General Education	2
	Communication	2
	English	4
	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.
0817-123	Algebra IB	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.
0817-123	Algebra IB	3
0827-107	Introduction to OFT III	2
	General Education	2
	Communication	2
	English	4
	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.A.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

Pre-Technical Requirements

Fall Term			Winter Term			Spring Term		
		Cr. Hrs.			Cr. Hrs.			Cr. Hrs.
0817-120	Basic Mathematics	3	0817-122	Algebra IA	3	0817-123	Algebra IB	3
0827-105	Introduction to OFT I	2	0827-106	Introduction to OFT II	2	0827-107	Introduction to OFT III	2
0847-100	Dimensions of College Life	2		General Education	2		Communication	2
	Communication	2		Communication	2		English	4
	English	4		English	4		Physical Education	0
	Physical Education	0		Physical Education	0			11
		13			13			

First 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 or Liberal Arts	4			17
	English	4			18			
		16						

Summer

0827-299 Co-op Work Experience

Second Year

0827-224	Optical Finishing Techniques IV	5	0818-165	Physics I	4	0827-226	Lab Simulation II	5
0827-241	Management of Optical Stockroom		0827-225	Lab Simulation I	5	0827-243	Optical Finishing Inspection/Correction	3
	Procedures	4	0827-251	Optical Finishing Technology Seminar	2		Liberal Arts	4
	Liberal Arts	4	0847-102	Life After College	1		Communication	2
	Liberal Arts	4		Liberal Arts	4			14
		17			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 trouble shooting of selected auto edge machines, layout markers, and blocking systems. Students will complete a term paper describing the procedures used in making prescription eyeglasses.

CLASS 5, CREDIT 3 (F, W, S)
PREREQUISITE: 0827-162

Prescription Analysis I
Registration #0827-115

Students learn the techniques of analyzing effective powers on both single vision and multifocal ophthalmic prescriptions. Students determine the accuracy of the information given and decide if it is sufficient for processing through the optical laboratory.

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

Students learn about lens curves through the use of a series of three-dimensional models and a workbook. Students practice determining lens powers and creating lens systems.

CLASS 5, CREDIT 3 (S)

Optical Finishing Techniques I
Registration #0827-121

Students learn the techniques of using the vertometer, layout marker, heat treat unit, pattern maker, and hand beveling machines, emphasis is placed on reshaping lenses as required.

CLASS 6, CREDIT 5 (W)

Optical Finishing Techniques II
Registration #0827-122

Students learn and practice techniques of defining by hand the characteristics of edged lenses for precise fit into designated frames. The course includes pin beveling and the reshaping of lenses as required by the prescription.

CLASS 6, CREDIT 5 (S)

Optical Finishing Techniques III
Registration #0827-123

This course provides theory and practice in locating the optical center of an uncut lens and determining its positions with respect to mechanical specifications of the prescription. Students use the vertometer and marking and layout procedures. Students 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

The 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 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

**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**

Students process typical prescriptions that evidence the wide variety of detail encountered in actual laboratory practice. They select materials to be used on each prescription and will be expected to show competence in processing tasks, including assembly, repair, and restoration techniques indigenous to frames manufactured with both plastic and metal parts. Students also will be expected to resolve a variety of problems presented by the instructors.

CLASS 9, CREDIT 5 (S)

**Management of Optical Stockroom
Procedures
Registration #0827-241**

Students learn the procedures and methods of stockroom management and inventory control. Emphasis is placed on learning the types of lenses, frames, and frame parts that are available from various manufacturers. Students demonstrate procedures for restocking inventory and selection of materials for prescription preparation.

CLASS 6, CREDIT 4 (F)
PREREQUISITES: 0827-112, 0827-116

**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 upon 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.

CLASS 5, CREDIT 3 (S)

Ophthalmic Optical Finishing Technology: A.O.S. Degree

Typical Course Sequence

Fall Term

First Year		Cr. Hrs.
0817-120	Basic Mathematics	3
0827-105	Introduction to OFT I	2
0847-100	Dimensions of College Life	2
	Communication	2
	English	4
	Physical Education	0
		13

Second 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

Third Year

0827-224	Optical Finishing Techniques IV	5
0827-241	Management of Optical Stockroom Procedures	4
0847-166	Human Experience: An Individual Life Communication	4 2
		15

Winter Term

Winter Term		Cr. Hrs.
0817-122	Algebra IA	3
0827-106	Introduction to OFT II	2
0847-	General Education	2
	Communication	2
	English	4
	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

Spring Term

Spring Term		Cr. Hrs.
0817-123	Algebra IB	3
0827-107	Introduction to OFT III	2
0847-	General Education	2
	Communication	2
	English	4
	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

Summer

0827-299 Internship Work Experience

0827-225	Lab Simulation II	5	0818-168	OFT Physics	3
0827-251	Optical Finishing Tech. Seminar	2	0827-226	Lab Simulation II	5
0847-167	Human Experience: The Individual and Society	4	0827-243	Optical Finishing Inspection/ Correction	3
	Communication	J2	0847-102	Life After College	1
		13	0847-168	Human Experience: The Individual and Technology	4
					16

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

In this seminar, professionals from Rochester's ophthalmic community will discuss their roles in the complex field of visual care. They will 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 man's visual acuity.

CLASS 2, CREDIT 2 (W)

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

CREDIT 0 (Su)

**Independent Study
Registration #0827-399**

CREDIT Variable

In order to offer students a more cohesive and beneficial program, the Communication Division is undergoing a reorganization that involves changing from Communication Instruction Department (CID's) to organization by discipline areas such as Speech, Language, and Hearing Center; Audiology; Speech; Sign Communication; English; and Technical and Integrative Communication Studies. Simultaneously, the curriculum is undergoing a faculty review, a process that should be completed during the '87-'88 school year. In the interim, courses in this Catalog are arranged by discipline, and therefore are not always in numerical sequence.

Speech, Language, and Hearing Center

SPEECH DEPARTMENT

Courses selected from former CID departments I, II, III, and IV.)

Introduction to Communication

Registration #0843-100

This course provides students with insight into their own communication skills and information about communication courses at NTID. They learn the basics of the communication process, English language, sign language, hearing, and speech. Finally, students design a program of courses to improve their communication skills.
CLASS 2, CREDIT 2 (F)

Basic Interpersonal Communication

Registration #0841-101
This course helps students become more 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 the social and employment situations. Students should have a Michigan Test Score less than 70 and have difficulty communicating in one-on-one situations.
CLASS 2, CREDIT 2 (F, W, S)

Building Relationships Through Communication

Registration #0843-101
This course helps students develop effective interpersonal communication skills and confidence. The student will come to understand related concepts and develop skill in the following areas: first impressions, perception, self-disclosure, provisions and use of feedback, listening, sharing opinions, conflict resolution and assertiveness. This course is for students whose preferred mode of communication for class discussion is sign language. Typically students with speech intelligibility scores less than 3.0 and with manual reception scores greater than 74% are appropriate for his section.
CLASS 2, CREDIT 2 (W, S)

Building Relationships Through Communication

Registration #0843-102

This course helps students develop effective interpersonal communication skills and confidence. The student will come to understand related concepts and develop skill in the following areas: first impressions, perceptions, self-disclosure, provision and use of feedback, listening, sharing opinions, conflict resolution and assertiveness. This course is for students whose preferred mode of communication for class discussion is speech or simultaneous communication. Typically students with speech intelligibility scores greater than 3.0 are appropriate for this section.
CLASS 2, CREDIT 2 (S)

Building Relationships Through Communication (speech)

Registration #0843-103

This course is designed to assist students in developing effective interpersonal communication skills and confidence that will help them initiate, maintain, and improve productive relationships with deaf and hearing persons. Class format includes structured experiences, role plays, discussions, self assessment, goal setting, and journal writing. Students with spontaneous speech intelligibility scores from 4.0 to 5.0 may enroll in this course. There is no manual reception score requirement.
CLASS 2, CREDIT 2 (W)

Communication for the Job Interview: Speaking

Registration #0841-105

This course focuses on improving the communication aspect of the job interview. It is for students who have completed the Job Search course and have difficulty communicating during an interview. Students who have speech skills of 3.0 or better and prefer to use speech during an interview are appropriate for this class
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Communication for the Job Interview: Writing

Registration #0841-106

This course focuses on improving the communication aspect of the job interview. It is for students who have completed the Job Search course and have difficulty communicating during an interview. Students who prefer to use writing to communicate during the interview are appropriate for the class.
CLASS 2, LAB 1, CREDIT 2 ((F, W, S)

Group Dynamics and Discussion

Registration #0844-112

This course develops an awareness of group process and group interaction. It introduces the principles and techniques necessary for successful communication in group discussions and other complex situations (e.g. interviewing). Group dynamics and leading and participating in groups are taught. Topics for group discussions include social and job-related situations.
CLASS 2, CREDIT 2 (F, W, S)

Interpersonal Communication in Group Situations — Manual/Simultaneous

Registration #0844-113

This course introduces principles and techniques necessary for successful communication in group discussions and other complex situations. Group dynamics and how to lead and participate are taught. Topics for group discussions include social and job-related situations. This course is recommended for students near the completion of their communication program. Students with spontaneous speech intelligibility scores less than 3.5 and simultaneous reception scores greater than 53% may enroll.
CLASS 2, CREDIT 2 (F, W, S)

Organizing and Presenting Technical and General Reports

Registration #0842-115

This course helps students learn to organize information and present ideas to groups of people. Students learn how to search for information and use it to support their opinions. Activities include written assignments, reports, and short speeches.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Basic Communication for Group Presentation

Registration #0843-115

This course helps students improve ability to search for, organize and present information to groups, including topic selection, library research, organizing/outlining written reports and presentations to an audience. Activities include a library tour, discussions, evaluations of speeches and information regarding interpreting.
CLASS 2, CREDIT 2 (F, W, S)

Advanced Communication for Group Presentation

Registration #0844-117

This course is designed to refine and increase presentation ability by giving further experience in researching and organizing information for presentation to different audiences and for interview situations. Presentations focus on topics related to hearing impairment and its effect on communication, psychosocial development, and habilitation. Students can 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 greater than 4.0 may enroll in this course.
CLASS 2, LAB 1, CREDIT 2 (S)

Speech Therapy I
Registration #0842-120

This course helps students improve their speech. Special tests help the teacher evaluate individual needs. Students meet with a speech instructor for two hours per week and practice in the lab for one hour a week. Instruction may include training in voice pitch control, articulation (speech sounds), and loudness control. Students practice word phrases, sentences, and conversations. Students with speech intelligibility scores less than 4.0 may enroll in this course.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Speech Therapy II
Registration #0842-121

This course is a continuation of Speech Therapy I, in which students work on their individual speech needs. Students must have therapist recommendation.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITE: 0842-120

Speech Therapy III
Registration #0842-122

This course is a continuation of Speech Therapy II, in which students continue to work on their individual speech needs. Students must have therapist recommendation.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITE: 0842-121

Pronunciation
Registration #0842-125

This course helps students develop independent ability to pronounce words correctly. Students practice using the dictionary to learn correct word pronunciation. They also study pronunciation rules that help them pronounce words correctly without a dictionary. Students with speech intelligibility scores greater than 3.0 and a Michigan Test score of less than 60 may enroll in this course.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Pronunciation
Registration #0844-125

This course helps students develop independent ability to pronounce new words correctly. Students study how to use the dictionary and the Merriam-Webster pronunciation symbols to help them pronounce words. They also learn rules to help them achieve correct pronunciation without use of the dictionary. Students with speech intelligibility scores greater than 3.0 and a Michigan Test score greater than 60 may enroll in this course.
CLASS 2, LAB, 1 CREDIT 2 (F, W, S)

Pronunciation — Speech
Registration #0844-126

This course has the same content as Pronunciation, but is designed for students with speech intelligibility scores greater than 3.5
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Speech and Listening Lab I
Registration #0842-128

This course is appropriate for students who wish to improve articulation, listening skills and self monitoring skills with the use of pre-recorded audiotapes. Students who have good speaking skills and do not require the one-to-one intensive approach of Individual Speech Therapy are appropriate for this course. This course is also appropriate for students who have completed Speech Therapy I & II or Pronunciation and wish to maintain skills learned. Students must have a CID auditory reception score greater than 15 and a speech intelligibility score of 3.0 or greater.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Speech and Listening Lab II
Registration #0842-129

This course is a continuation of Speech and Listening Lab I. Students will 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: 0842-128

Language Learning Through
Songs and Poems
Registration #0844-130

This course focuses on the reinforcement and teaching of new concepts in the area of semantics and figurative language. This is done through analyses and class discussions of songs and poems. No previous background in music or poetry is required but the students should have at least a moderate interest level in songs or poems. Students explore the role of language in the various songs and poems and discuss related issues raised in the material. Students must have a Michigan Test score greater than 69, a CID auditory reception score greater than 14, and a speech intelligibility score greater than 3.4.
CLASS 2, CREDIT 2 (F, W, S)

Conversational Speech I
Registration #0844-131

This course helps students develop skill and confidence in functioning as both speaker and listener in oral/aural conversations, using appropriate discourse rules. Students develop an awareness of the characteristics of an effective conversationalist. Students improve self-knowledge and set goals towards becoming effective conversationalists. Students also develop vocabulary and pronunciation skills and refine speech skills. Current issues are used as conversational topics. Students must have a Michigan Test score greater than 59, a speechreading score greater than 35, and a speech score (converted) greater than 2.9.
CLASS 2, CREDIT 2 (F, W)

Conversational Speech II
Registration #0844-132

In this course, which is a continuation of Conversational Speech I, students continue to work toward their personal speech goals. Activities in and out of class and in the Self-Instruction Lab provide opportunities for students to improve their conversational speech skills. Activities include a variety of people in a variety of daily situations. During the course, students evaluate improvement in their daily conversations. At the end of the course, they assess how well they have met their goals.
CLASS 2, LAB 1, CREDIT 2 (W, S)
PREREQUISITE: 0844-131

Speech for Telephone Communication
Registration #0844-134

This course is designed to help students improve their speech and use of telephone strategies so that people can understand them on the telephone. Students practice speech and telephone strategies with pre-recorded audiotapes. Students meet individually with the instructor to review these tapes, practice speech, and make telephone calls.
CLASS 2, LAB 1, CREDIT 1 (F, W, S)
PREREQUISITE: 0843-155 completed or in the same quarter

Basic Strategies to Aid
Functional Communication
Registration #0842-138

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, ordering food in a restaurant, etc. Class activities focus on speaking, speechreading, and using strategies in specific functional situations. Students must have a Michigan Test score greater than 50, a speech reading score less than 34%, and a speech intelligibility score between 1.9 and 3.1.
CLASS 2, LAB 1, CREDIT 2 (F, W)

Vocabulary Development
Registration #0842-174

In this course students will develop strategies to determine vocabulary meaning, through the use of contextual cues and the knowledge of prefixes and suffixes. Approximately 300 vocabulary words are introduced. Speech, speechreading, and listening skills are reinforced. Students must have a Michigan Test score less than 70.
CLASS 2, LAB 1, CREDIT 2 (W, S)

Understanding Vocabulary in Context
Registration#0844-174

This course focuses on and develops the ability to determine the meaning of unfamiliar words encountered in everyday reading. In this course, students determine specific types vocabulary difficulties in their everyday reading. Using newspaper and magazine articles in class, students practice word attack skills based on the context. Implications, connotations and a knowledge of prefixes, suffixes, and roots are used to determine meaning in reading passages. Students must have a Michigan Test score greater than 70.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Advanced Vocabulary— Speech
Registration#0844-175

This course is the same as Advanced Vocabulary, but is designed for students with speech intelligibility scores greater than 3.4 and CID auditory reception scores greater than 0%.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

English for Speech I
Registration#0841-176

This course focuses on the use of spoken English to express information effectively, students who have some intelligible speech practice basic patterns of English structures including asking and answering questions, conveying basic information and brief descriptions. This course uses a text and workbook for grammar development and the self-instruction lab for speech and speechreading practice, students must have a speech intelligibility score greater than 2.9.
CLASS 2, LAB 1, CREDIT 2 (F)

English for Speech II
Registration#0841-177

This course focuses on the organization of spoken discourse. It is for students who have intelligible speech and want experience using English during oral presentations. Students who have grammatical errors which interfere with the intelligibility of their message should take English for Speech I prior to enrolling in this course. Students must have a speech intelligibility score greater than 2.9.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Independent Study
Registration#0842-399

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 that contract must be signed by the student, the instructor, and the chairperson. Students interested in this course should talk to their communication advisor.
CREDIT 1-4 (F, W, S)

In order to offer students a more cohesive and beneficial program, the Communication Division is undergoing a reorganization that involves changing from Communication Instruction Department (CID's) to organization by discipline areas such as Speech, Language, and Hearing Center; Audiology; Speech; Sign Communication; English; and Technical and Integrative Communication Studies. Simultaneously, the curriculum is undergoing a faculty review, a process that should be completed during the '87-'88 school year. In the interim, courses in this Catalog are arranged by discipline, and therefore are not always in numerical sequence.

AUDIOLOGY DEPARTMENT

Speechreading for Complex English Sentences
Registration #0841-136

This course provides practice in speaking and speechreading the grammar structures from Introduction to Complex Sentences. Self-Instruction Laboratory is required. The course is designed for students with speechreading scores greater than 35% and "write-down" speech intelligibility scores greater than 3.5, or who have permission from the instructor.

CLASS 2, LAB 1, CREDIT 2 (W)
COREQUISITE: 0841-192

Speechreading for Complex Sentences in Conversation
Registration #0841-137

This course provides practice in speaking and speechreading the grammar structures from Reading Comprehension and Complex Sentences. Self-Instruction Laboratory is required. This course is designed for students with speechreading scores greater than 35% and "write-down" speech intelligibility scores greater than 3.5, or who have permission from the instructor.

CLASS 2, LAB 1, CREDIT 2 (S)
COREQUISITE: 0841-193

Orientation to Hearing Aids and Listening
Registration #0841-140

This course is designed for students who have not used a hearing aid in a long time. It provides information about aids and an opportunity to use them in supportive and structured situations. It also exposes students to the benefits of amplification through listening practice. The course meets three times each week: twice for class lecture and listening practice, and a third time for individual hearing aid evaluation/listening laboratory practice.

CLASS 2, CREDIT 2 (F, W, S)
PREREQUISITE: Recommendation by an audiologist.

Basic Auditory Training for Auditory Profile 1 and 2 Students
Registration #0841-141

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 a week to receive both group and individual practice in 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. The course is a good follow-up to Orientation to Hearing Aids and Listening.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Strategies and Speech
Registration #0841-142**

This course is recommended for students interested in speech therapy. It is designed to help them improve communication with people who do not know sign language. Basic speech and speechreading skills are introduced and a variety of alternative communication strategies are taught. Particular emphasis is placed on oral strategies to facilitate communication. Students with speech intelligibility scores from 2.0 to 2.9 and speechreading score (with or without sound) of 0-34% and Michigan Test score of less than 69 may enroll in this course.

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

**Intermediate Auditory Training for
Auditory Profile 3 Students I
Registration #0843-142**

The focus of this course is to help students develop hearing discrimination, English vocabulary skills, and oral and written communication skills. Classes meet three times weekly and include individual hearing therapy, vocabulary/word skill activities, role-playing, group discussions, and lectures. Students who have an auditory reception profile of 3, use amplification all or most of the time, and have a speechreading or auditory reception score greater than 30% on the CID Everyday Sentence Test are eligible for this course.

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

**Intermediate Auditory Training for
Auditory Profile 3 Students II
Registration #0842-143**

This course is a continuation of Intermediate Auditory Training (0843-142) in which students continue to work on listening skills for important sounds and words.

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

PREREQUISITE: 0843-142 and recommendation from the instructor.

**Advanced Auditory Training for Auditory
Profile 4 and 5 Students I
Registration #0843-144**

The focus of this course is to help students develop hearing discrimination and English vocabulary skills. Students listen to/study books and stories recorded on audiotape, words containing difficult to understand consonants, and speech recorded in various noisy situations. Classes meet three times weekly and include individual hearing therapy, vocabulary/word building exercises, group discussions, and lectures. Students who have an auditory reception profile of 4 or 5 and use amplification all or most of the time are eligible for this course.

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

**Advanced Auditory Training for Auditory
Profile 4 and 5 Students II
Registration #0842-145**

This course is a continuation of Advanced Auditory Training (0843-141), in which students continue to work on sentence comprehension.

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

PREREQUISITE: 0843-144 and recommendation of instructor.

**Speechreading Sentences for
Everyday Life
Registration #0841-146**

This course gives students practice in speechreading words and sentences used in everyday and on-the-job social communication. The course focuses on visual only training and reviews knowledge of strategies and associational clues. Students with speechreading scores (with or without sound) of 0-34%, Michigan Test score of less than 69, and CID auditory reception profile of 1 or 2 with no hearing aid may enroll in this course.

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

PREREQUISITE: 0841-142, or 0847-147 and instructor recommendation.

**Speechreading and Strategies
Registration #0843-146**

This course is designed to help students use their visual skills to understand speakers. Students practice interpreting 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 practice speechreading hearing people in an interview. Students must have speechreading scores (with or without sound) from 0-34% and Michigan Test score greater than 70.

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

**Survival Strategies for the
Basic Speechreader
Registration #0841-147**

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 to 1.9 or who prefer not to speak and have a speechreading score (with or without sound) of 0-34% and Michigan Test score of less than 69 may enroll in this course.

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

**Speechreading and Listening
Registration #0842-147**

This course uses speechreading and listening to develop speechreading of words and everyday and on-the-job social sentences. Some auditory only exercises are done in class and for laboratory assignments. Knowledge of strategies and associational clues are reviewed. Students must have Michigan Test score of less than 69, speechreading score (with or without sound) of 0-34%, CID auditory reception profile greater than 2 and a working hearing aid.

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

PREREQUISITE: 0841-142, or 0841-147 and instructor recommendation

**Intermediate Speechreading
Registration #0843-148**

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% to 60% and Michigan Test score less than 69 may enroll in this course.

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

**Advanced Speechreading/Listening:
Non-Technical**

Registration #0842-149

This course, designed to improve students' ability to speechread, provides practice with sentences, paragraph length materials, dialogues, and short stories. Students discuss ways to communicate in difficult situations such as in large meetings and noisy environments. Speechreading scores (with or without sound) greater than 61% are required.

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

**Speechreading/Listening: Technical
Registration #0842-150**

This course is designed to improve students' ability to speechread messages in their technical majors. Students practice speechreading key words and sentences related to technical communications in the classroom or professional situations. Practice materials include sentences related to on-the-job social/general communication and job interview questions. Students learn from videotaped self-instruction materials in the speechreading classroom and from individual practice with the instructor. The course is open to students with speechreading scores (with or without sound) above 34%, read speech intelligibility greater than 3 and students must have passed vocabulary definitions test.

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

PREREQUISITE: Students must have completed three quarters in their major.

**Technical Speechreading and Speech
Registration #0843-151**

This course helps students improve their speech and speechreading of technical vocabulary associated with their major. 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, sentences and short paragraphs from technical majors. Students also practice pronouncing technical vocabulary with a speech instructor during individual practice hours. Students with speechreading scores (with or without sound) above 61%,

Michigan Test score greater than 70, and read speech intelligibility greater than 3 can enroll in this course. All students entering the course must pass vocabulary definitions test.

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

PREREQUISITE: Students must have completed at least three quarters in their major.

**Telephone Communication
Registration #0843-155**

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 aid with the telephone, how to make long distance calls, how to get information, what to do if they have problems, how to make appointments over the telephone and what to do in 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 greater than 40% and spontaneous speech intelligibility scores greater 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.

Telecommunication Aids

Registration #0843-156

This course teaches students about different kinds of TDD (TTY) equipment and also about regular telephones. 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 TDD calls using different TDD equipment. Students also have the opportunity to practice 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 less than 39%.

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

**Receptive Social/Academic Communication
Registration #0844-152**

This course uses an experiential learning approach to help students improve their abilities 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% to 60%, and Michigan Test score greater than 70 may enroll in this course.

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

**Receptive Technical Communication
Registration #0844-153**

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 the student's major field. Primary emphasis is on the use of communication strategies for spoken language, with secondary emphasis on written language. Students with a speechreading score of 35% to 60% (with or without sound) on CID Everyday Sentence Test and a Michigan Test score greater than 70 may enroll in this course.

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

PREREQUISITE: Students must have completed at least three quarters in their major.

Independent Study

Registration #0843-399

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. The contract must be signed by the student, the instructor, and the chairperson. Students interested in this course should talk to their communication advisor.

CREDIT 1-4 (F, W, S, Su)

In order to offer students a more cohesive and beneficial program, the Communication Division is undergoing a reorganization that involves changing from Communication Instruction Department (CID's) to organization by discipline areas such as Speech, Language, and Hearing Center; Audiology; Speech; Sign Communication; English; and Technical and Integrative Communication Studies. Simultaneously, the curriculum is undergoing a faculty review, a process that should be completed during the '87-'88 school year. In the interim, courses in this Catalog are arranged by discipline, and therefore are not always in numerical sequence.

Sign Communication Department

(Courses selected from former CID Departments I, II, III, and IV.)

Introduction to Sign Communication Registration #0841-160

This course is designed to assist students in developing basic sign communication skills for social, classroom, and work situations. Students are exposed to approximately 15 sign principles and 300 vocabulary items. Practice in using signs and speech together is included. Students with no or minimal sign skills are most appropriate for this course.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Intermediate Sign Communication Registration #0841-161

This course is offered for students who have basic sign skills and/or have successfully passed Introduction to Simultaneous Communication. It is designed for students who want to improve their sign skills. Students work on sign fluency, fingerspelling, and sign principles, and watch videotapes and read articles related to deaf culture. Students with Sign Instruction Placement Interview Ratings of II may enroll in this course.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Advanced Sign Communication Registration #0841-162

This course is for students who want to improve their sign language skills. The course emphasizes meaning-based signing, advanced-level sign vocabulary, refinement of sign skills, and knowledge and use of sign principles. It also includes descriptions of ASL and approaches to signing English.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITE: Intermediate Sign Communication and/or Sign Instruction Placement Interview rating of III.

Introduction to American Sign Language for Sign English Users Registration #0841-163

This course is for students who have good sign English or Pidgin Sign English (PSE) skills but are not skilled in American Sign Language (ASL). ASL historical, cultural, and linguistic information is included. The goals of the course are to enable students to understand the differences between ASL and English and to provide opportunities for developing expressive and receptive ASL skills.

CLASS 2, CREDIT 2 (F, W, S)
PREREQUISITE: Advanced Sign Communication and/or a Sign Instruction Placement Interview rating of IV.

Understanding English Through Sign Language Registration #0842-165

This course helps students improve their knowledge of English by using sign language. Students learn English words for signs that they already know and use daily as well as learning signs for technical and more difficult English words. Students practice changing from sign language to written English and they compare and discuss English and American Sign Language grammar. Students with manual reception scores greater than 77% may register for this course.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Simultaneous Communication/English: Grammar and Principles I Registration #0841-166

This course is the first in a three-quarter sequence. It is designed to assist students in gaining linguistic knowledge about signing, sign language systems, and basic translation theory. Students are provided opportunities to improve their written English by learning to use references (dictionary, sign language translation theory, grammar notes, etc.) and identifying their own communication and language strengths and weaknesses. Students must have a Sign Instruction Placement Interview rating of IV or V.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)
COREQUISITE: 0841-181

Simultaneous Communication/English: Grammar and Principles II Registration #0841-167

This course is the second in a three-quarter sequence. Students practice using the theory and strategies taught in the first quarter, review basic sentence patterns in sign and printed English, and begin work on structures for expressing compound and complex sentences.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)
PREREQUISITES: 0841-166, 0841-181

Simultaneous Communication/English: Grammar and Principles III Registration #0841-168

This course is the third in a three-quarter sequence. Students who have completed and passed Simultaneous Communication/English: Grammar and Principles II will work on the same strategies and information in a variety of situations (writing directions, sequencing ideas, storytelling, letter writing, memos) requiring written information.
CLASS 2, LAB 1, CREDIT 2 (W, S)
PREREQUISITES: 0841-167, 0841-181

English Idioms and Signing Registration #0842-171

In this course, which emphasizes signing English idioms correctly, students study common spoken, written, and signed idioms and use the *Dictionary of Idioms* and worksheets to help them use idioms correctly. Students with manual reception scores greater than 77% may enroll in this course.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Independent Study Registration #0841-399

This course is designed for students with special needs not served by another communication course. Students are required to write a contract describing what the course will cover. The contract must then 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)

In order to offer students a more cohesive and beneficial program, the Communication Division is undergoing a reorganization that involves changing from Communication Instruction Department (CID's) to organization by discipline areas such as Speech, Language, and Hearing Center; Audiology; Speech; Sign Communication; English; and Technical and Integrative Communication Studies. Simultaneously, the curriculum is undergoing a faculty review, a process that should be completed during the '87-'88 school year. In the interim, courses in this Catalog are arranged by discipline, and therefore are not always in numerical sequence.

English Department

Courses selected from former CID Departments I, II, III, and IV.)

English in Context

Registration #0841-179

This course involves reading a science fiction novel, *Zfor Zachariah*, keeping lists of unfamiliar vocabulary, and completing associated exercises that focus on the description of time and place in English. Students strengthen their receptive abilities of such structures as the perfective aspect in English and complex temporal and locative pronouns. The course includes composition work on the novel.
CLASS 2, CREDIT 2 (F, W, S)

Ideas in English — Speaking/Listening

Registration #0841-180
This course, the first in a three-course sequence, focuses on basic English grammar for reading, writing, speaking, speechreading, and listening. Students study basic patterns of English sentences in reading and writing exercises. Reading and Writing laboratories are required.
CLASS 5, LAB 2, CREDIT 4 (F)
COREQUISITE: 0841-176

Ideas in English — Simultaneous Communication

Registration #0841-181
This is the first of a three-course sequence in which students study basic patterns of English sentences. They practice reading for understanding, writing correct answers to questions, and communicating ideas clearly in writing. Reading and Writing laboratories are required.
CLASS 5, LAB 2, CREDIT 4 (F)
COREQUISITE: 0841-166

Ideas in English/B

Registration #0841-182
This is the second of the three-course sequence. In this course, students study basic patterns of English sentences that are needed for learning in college. They practice reading for understanding, writing correct answers to questions, and communicating ideas clearly in writing. Reading and Writing laboratories are required.
CLASS 5, LAB 2, CREDIT 4 (W)
PREREQUISITE: 0841-180 or 0841-181

Ideas in English/C

Registration #0841-183
This is the third of the three-course sequence. In this course, students work on English needed for their personal goals. They study basic patterns of English sentences, reading for understanding, writing correct answers to questions, and communicating ideas clearly in writing. Reading and Writing laboratories are required.
CLASS 5, LAB 2, CREDIT 4 (S)
PREREQUISITE: 0841-182

Introduction to Complex Sentences — Oral

Registration #0841-190
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. This course is for students with speechreading scores greater than 39% and speech intelligibility scores greater than 3.5.
CLASS 4, LAB 2, CREDIT 4 (W, S)
COREQUISITE: 0841-136
PREREQUISITE: 0841-180

Introduction to Complex Sentences — ASL

Registration #0841-191
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 American Sign Language (ASL) and English. It is designed for students who are fluent in ASL.
CLASS 4, LAB 2, CREDIT 4 (W, S)
PREREQUISITE: 0841-181

Introduction to Complex Sentences

Registration #0841-192
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)
PREREQUISITE: 0841-180 or 0841-181

Reading Comprehension and Complex Sentences — Oral

Registration #0841-193
This course is designed to improve English skills for constructing sentences with new vocabulary. It provides instruction in two different areas: joining two sentences with connectors like *before, after, when, then, because,* and *so,* and flexibility in vocabulary used in sentences. The course concentrates on improving written communication and developing reading skills. Reading and Writing laboratories are required. The course is taught using both American Sign Language (ASL) and English. It is designed for students with speechreading scores greater than 39% and speech intelligibility scores greater than 3.5.
CLASS 4, LAB 2, CREDIT 4 (W)

Reading Comprehension and Complex Sentences — ASL

Registration #0841-194
This course is designed to improve English skills for constructing sentences with new vocabulary. This course provides instruction in two areas: joining two sentences with connectors like *before, after, when, then, because,* and *so,* and flexibility in vocabulary use in writing. The course concentrates on improving writing and developing reading skills. Reading and Writing laboratories are required. The course is taught using both American Sign Language (ASL) and English. This course is for students who are fluent in ASL.
CLASS 4, LAB 2, CREDIT 4 (W)

Reading Comprehension and Complex Sentences

Registration #0841-195
This course is designed to improve English skills for constructing sentences with new vocabulary. The course provides instruction in two areas: joining two sentences with connectors like *before, after, when, then, because,* and *so,* and flexibility in vocabulary use in writing. The course concentrates on improving writing and developing reading skills. Reading and Writing laboratories are required. The course is taught using simultaneous communication and English.
CLASS 4, LAB 2, CREDIT 4 (W)

"Love Story" — Reading Comprehension

Registration #0841-196
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, using the novel, *Love Story*, with practice also in writing skills. Reading and Writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (S)

Reading, Writing, and Speaking
Registration #0841-197

The purpose of this course is to improve skills in reading, writing and speaking. Students practice basic English sentences to answer questions and communicate ideas clearly. Reading, Writing, and Self-Instruction laboratories are required. This course is designed for students with speech intelligibility scores of 3.5 and greater.
CLASS 4, LAB 3, CREDIT 4 (F, W, S)

Self-Expression
Registration #0842-181

In this course, students explore communication and self-expression through discussions, viewing films, reading materials, and practicing reading, writing, signing, and speech-reading. The course uses vocabulary and structural 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)

Mass Communication
Registration #0842-182

This course utilizes selections from literature and current newspaper and magazine essays 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: 0842-186

Visual Arts
Registration #0842-183

This course uses vocabulary and structural forms common in social, academic, and professional situations as well as slides and reading materials, which provide an opportunity to practice complex sentence forms. Students learn idioms and verb forms in connection with art history and photo-journalism. Reading and Writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (S)
PREREQUISITE: 0842-186

English in American Life
Registration #0842-186

This course uses vocabulary and grammar common in social, academic, and professional situations as well as readings in novels and short stories. Reading and Writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (F)

Business in America
Registration #0842-188

This course uses vocabulary and grammar common in social, academic, and professional situations as well as course readings that deal with communication technology and forms of business communication. For example: What are some of the machines used in modern business communication? Are there special ways to communicate person-to-person in business situations? Questions like these also form the basis for writing assignments. Reading and Writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (S)
PREREQUISITE: 0842-186

English for Life and Living
Registration #0842-190

This course uses vocabulary and grammar common in social, academic, and professional situations as well as course readings dealing with the business world, past and present. Two novels also are covered in the course. Reading and Writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (W)
PREREQUISITE: 0842-186

Quantitative Concepts
Registration #0842-191

This course gives students a knowledge of vocabulary and structural forms common in social, academic, and professional situations. Students practice vocabulary used in engineering and science. Required Reading and Writing laboratories center around mathematical word problems.
CLASS 4, LAB 2, CREDIT 4 (F)

Famous Scientists
Registration #0842-192

This course provides reading and writing practice that utilizes vocabulary and sentence structure from the lives and scientific and technical work of famous scientists from ancient times to the Industrial Revolution. Reading and Writing laboratories are required.
CLASS 4, LAB 2, CREDIT 4 (W, S)
PREREQUISITE: 0842-186

The Earth and Universe
Registration #0842-193

This course provides reading and writing practice that utilizes vocabulary and sentence structure from works on astronomy (study of the Universe) and geology (study of the Earth). Reading and Writing laboratories are required in this course.
CLASS 4, LAB 2, CREDIT 4 (W, S)
PREREQUISITE: 0842-186

Vocabulary Skills
Registration #0843-178

This course is designed to help students develop a self-reliant method of acquiring and learning to use new vocabulary. Its principle emphasis is upon teaching students to use the *Longman Dictionary of Contemporary English* in an advanced way. This course is recommended for students who want additional English instruction.
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

Essay Writing
Registration #0843-179

This course focuses on the development of essay writing skills. Essays provide the basis for many types of writing, such as proposals, research papers, or memos to recommend a change in procedure. Skill in writing also is required for the Liberal Arts curriculum. The course includes study of the basic structure of the essay and the paragraph, as well as the best way to express and defend your view or opinion.
CLASS 3, CREDIT 3 (F, W, S)

Social Issues
Registration #0843-180

This introductory English course is designed to help students develop reading and writing skills. Social issues, like child abuse, urban alienation, and drug misuse, are discussed to develop students' understanding and awareness of the world around them. English exercises are related to these topics, and students receive instruction in grammar, vocabulary, composition writing, and reading comprehension. Overheads, drawings, and special slide lessons are used in this course. Reading and Writing laboratories are required.
CLASS 3, LAB 2, CREDIT 4 (F, W, S)

Changing World
Registration #0843-182

This course is designed to help students improve their reading and writing skills. During the first five weeks of the course, students will review phrases, clauses, kinds of sentences, and eight basic parts of speech. During the second five weeks, students will read a variety of articles whose theme is the conflict between idealism and realism in modern life. English exercises are taken from these articles and students will receive instruction in grammar, vocabulary, composition writing, and reading comprehension. Drawings and special slide lessons, including Dr. Martin Luther King's speech "I Have a Dream," also are included in this class. Reading and Writing laboratories are required.
CLASS 3, LAB 2, CREDIT 4 (W, S)
PREREQUISITE: 0843-180

Medical Issues
Registration #0843-183

This course is designed to help students improve their skills in reading and writing technical English. The course emphasis is on helping students understand the language used in hospitals and medical services. Instruction includes vocabulary development, correct grammar, and report writing for use in health service jobs. This course should be of special interest to students in health services and social work. Reading and Writing laboratories are required.
CLASS 3, LAB 2, CREDIT 4 (W, S)
PREREQUISITE: 0843-180

Beginning Scientific English Registration #0843-185

This course introduces students to a broad range of topics related to the technical aspects of our society. Emphasis is placed on developing reading skills, practicing timed readings, and learning skimming and scanning procedures. Instruction also includes vocabulary exercises, grammar drills, writing short compositions, and examining specific points of grammar. This course is most useful to engineering and science majors. Reading and Writing laboratories are required.

CLASS 3, LAB 2, CREDIT 4 (W)
PREREQUISITE: 0843-180

Visual Arts

Registration #0843-186

This course, designed to help students improve their reading and writing skills, affords practice in reading a variety of general interest articles related to photography, including articles about the pictures connected with the 1970 Kent State incident and the Battle of Iwojima in 1945. English exercises are taken from these articles. Students will receive instruction in grammar, vocabulary, composition writing, and reading comprehension. Overheads and many slides are used in this class. A special unit features a captioned slide/music presentation of the song "Ohio." Reading and Writing laboratories are required.

CLASS 3, LAB 2, CREDIT 4 (W)
PREREQUISITE: 0843-180

Writing Scientific English Registration #0843-190

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 and laboratory reports. This course is recommended for engineering and science majors. Reading and Writing laboratories are required.

CLASS 3, LAB 2, CREDIT 4 (S)
PREREQUISITE: 0843-180

American Life Registration #0843-191

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)
PREREQUISITE: 0843-180

English Idioms Registration #0844-170

This course is designed to help students understand and use common English idioms. Students are encouraged to bring idioms they hear or see for discussion in class. Idioms are discussed and practiced in context. Activities include written assignments and student participation. This course is open to students with manual reception scores greater than 77%.

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

Language Structure in Written English Registration #0844-180

This course is designed to provide students with practice using appropriate language structures for different types of written communication. This course has three parts: (1) content analysis of different types of discourse, (2) study of discourse texts, and (3) advanced study of connectives as they relate to paragraph and essay construction. There also is a review of grammar through verb features.

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

Expression of Ideas in Written English Registration #0844-181

This course is designed to help students better express ideas in written English. An equal emphasis is placed on understanding what others have written. This course consists of four parts: (1) reading a novel and other texts and writing several essays, (2) studying the use of connectives, (3) studying the basic construction of paragraphs, and (4) learning a system of analyzing texts called "Networking."

CLASS 3, LAB 1, CREDIT 4 (F, W, S)
PREREQUISITE: 0844-180

Clear Thinking in Written English Registration #0844-182

This course provides practice using inference skills in reading and producing persuasive text at the vocabulary level, the sentence level, and the discourse level. This course covers three areas: (1) the study of how grammar provides inference clues, (2) practice in drawing appropriate inferences from written prose, and (3) a broad spectrum of background knowledge issues through study of a novel.

CLASS 3, LAB 1, CREDIT 4 (F, W, S)
PREREQUISITE: 0844-181

Creative Writing Registration #0844-183

This course is designed for students who need or want to improve their writing skills. Unlike more technical writing courses, Creative Writing focuses on writing from personal experience with creative techniques. Students write poetry, opinion essays, and short stories and do other assignments focused on developing ideas.

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

Professional Writing Registration #0844-184

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)

Independent Study Registration #0844-399

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, the instructor, and the chairperson. Students interested in this course should talk to their communication advisor.

CREDIT 1-4 (F, W, S)

In order to offer students a more cohesive and beneficial program, the Communication Division is undergoing a reorganization that involves changing from Communication Instruction Department (CID's) to organization by discipline areas such as Speech, Language, and Hearing Center; Audiology; Speech; Sign Communication; English; and Technical and Integrative Communication Studies. Simultaneously, the curriculum is undergoing a faculty review, a process that should be completed during the '87-'88 school year. In the interim, courses in this Catalog are arranged by discipline, and therefore are not always in numerical sequence.

Technical and Integrative Communication Studies Department

(Courses selected from former CID Departments I, II, III, and IV.)

Seminar in Postlingual Adventitious Deafness

Registration #0844-118

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

General Education

GENERAL EDUCATION CORE

Required Courses

Dimensions of College Life

Registration #0847-100

This course is designed to assist new students to increase their knowledge and skills as they relate to personal development, academic areas, and the campus community. Activities include class discussions, lectures, and student participation in and out of class events.

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 at NTID, provides students with 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)

Elective Courses

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 persons 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. There are day outings, seasonal activities, a weekend trip, and lectures.

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

Leadership Development

Registration #0847-126

This course assists 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)

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 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)

SOCIAL SCIENCE

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 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, discussion, volunteer service, and individual conference.

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)

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)

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)

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 persons, 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 to prepare them for the personal responsibilities of good citizenship in contemporary society.

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

Religion

The Bible as Literature: A Cultural and Historical Perspective

Registration #0847-145

This course will provide a basic understanding of the contents of the Bible. It will present some of the major events and themes, and will focus 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 will 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 which 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)

Language and Literature

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 will develop the language and thinking skills needed to write effectively. Specifically, students will 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 will develop the language and thinking skills needed to write effectively. Specifically, students will 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, oversimplification, 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

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 skill 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)

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 the 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 courses 0847-166 and 0847-167. 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

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

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

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 lightboard, 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

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

PREREQUISITE: 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

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

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 to develop musical skills in one or more of the following areas: piano, guitar, electric bass, percussion, brass, woodwinds, strings, the 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

Play Production I

Registration #0848-200

This course covers the areas of script analysis, acting for the stage, and stage direction. It lays the foundation for Play Production II, a course that covers set, costume, and lighting design for the stage. Through lectures, demonstrations, class discussion, projects, and films, students encounter a fundamental concern of all theatre 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

Applied Art

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:

0849-111 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:

0849-121 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:

0849-131 for 0849-132

0849-132 for 0849-133

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 will 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:

0849-141 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 will 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

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 a basic 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. This course is an elective.

CLASS 4, CREDIT 2 (F, W)

**Three-Dimensional Applications
Registration #0849-267**

This 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. This course is an elective.

LAB 3, CREDIT 2 (S)

**Air Brush/Retouching
Registration #0849-277**

This 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. This course is an elective.

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. Course experiences include orthographic projection, and one-point 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. This course is an elective.

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. The course includes drawing methods, such as oblique and isometric, based on simple and complex forms. Emphasis is on translating the three-dimensional form into technically accurate drawing. This course is an elective.

CLASS 3, CREDIT 2 (S)

PREREQUISITE: 0849-284

**Applied Art: Diploma
Typical Course Sequence
Fall Term**

0847-100	Dimensions of		Basic Design II	2	0849-113	Basic Design III	2
			Basic Drawing II	3	0849-123	Basic Drawing III	3
0847-101	Job Search Process		Media/Processes II	3	0849-133	Media/Processes III	3
0849-111			Career Seminar II	1	0849-143	Career Seminar III	1
0849-121			Introduction to			Communication	2
0849-131			Computer Graphic			English	4
0849-141	Career Seminar I		Systems"	2			15
			English	4			
0849-			Physical Education	0			
				15			

0849-221	Mechanical Preparation I	3	0849-222	Mechanical Preparation II	3	0849-223	Mechanical Preparation III	3
0849-231	Introduction to Typography I	2	0849-232	Introduction to Typography II	2	0849-233	Introduction to 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 Graphics	2		English	4		English	4
				Physical Education	0	0849-	Applied Art Elective'	2

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

0849-321	Employment Seminar I	3	0849-322	Employment Seminar II	3	0849-323	Applications III Employment Seminar III	5
0849-	Applied Art Elective*	2		Applied Art Elective*	2		Applied Art Elective'	2
	English	4		Communication	2	0849-	Life After College"	1
		14				0847-102		

'See page 50 for Applied Art Technical Electives; 10 or more elective credits are required for the diploma.
* May be waived by department; Career Seminar and Employment Seminar courses are appropriate substitutes.
" C can be taken in either the Winter or Spring term of the first year.

Drawing Applications

Registration #0849-287

This is an advanced 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. This course is an elective.
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 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, letterspacing, wordspacing, linespacing, and rendering of both serif and sans serif letter forms are taught. This course is an elective.
CLASS 3, CREDIT 2 (W)
PREREQUISITE: 0849-131

Finished Lettering

Registration #0849-295

This 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. This course is an elective.
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
0849-150, 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

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	Dimensions of College Life"	2	0849-112	Basic Design II	2
0847-101	Job Search Process"	1	0849-122	Basic Drawing II	3
	Communication	2	0849-132	Media/Processes II	3
	English	4	0849-142	Career Seminar II	1
	Physical Education	0	0849-150	Introduction to Computer Graphic Systems*"	2
0849-111	Basic Design I	2		Communication	2
0849-121	Basic Drawing I	3		English	4
0849-131	Media/Processes I	3		Physical Education	0
0849-141	Career Seminar I	1			
		18			17

Second Year

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

Third Year

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

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

*See this page for Applied Art Technical Electives; 10 or more elective credits are required for the A.A.S. Degree

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

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

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 0849-112 Basic Drawing 0849-122 Media/Processes 0849-132
Mechanical Perspective 0849-284	2	Basic Drawing 0849-121
Mechanical Drawing Methods 0849-285	2	Mechanical Perspective 0849-284
Drawing Applications 0849-287	2	Basic Drawing 0849-123
Freehand Lettering 0849-294	2	Media/Processes 0849-131
Finished Lettering 0849-295	2	Freehand Lettering 0849-294

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 course concentrates on the development of basic knowledge of and beginning skills on the conversational use of American Sign language. 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. This is a required course.

CLASS 2, LAB 2, CREDIT 3

American Sign Language Interpreting I Registration #0850-204

This course requires the use of 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. This is a required course.

CLASS 1, LAB 4, CREDIT 3

PREREQUISITES: 0850-203, 0850-206

American Sign Language Interpreting II Registration #0850-205

This skills development course provides experience in simultaneous and consecutive interpretation. Activities include simulated interpreting experiences, interpreting practice with the use of audiotapes and videotapes, and critiques. This is an elective course.

CLASS 1, LAB 4, CREDIT 3

PREREQUISITES: 0850-203, 0850-204, 0850-206

American Sign Language II Registration #0850-206

This course develops conversational fluency in American Sign Language. Students incorporate appropriate use of ASL classifiers, non-manual grammatical markers, and grammatical features of ASL in a conversational setting. This is a required course.

CLASS 2, LAB 2, CREDIT 3

PREREQUISITE: 0850-203

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, W)

PREREQUISITE: Basic Sign Language skills

Educational Interpreting: Typical Course Sequence

Fall Term

First Year

			Cr. Hrs.
0850-200	Sign Vocabulary Development	1	
0520-220	English Composition	4	
0850-210	Fingerspelling and Number Comprehension	3	
0850-251	Aspects and Issues of Deafness I	3	
0850-261	Theory and Practice of Interpreting I	3	
10-289	Contemporary Science Elective (biology, chemistry, physics, or mathematics)	4	
			18

Second Year

0850-212	Voice Interpreting II	3	
0850-332	Expressive Transliterating II	3	
0850-343	Expressive Oral Transliterating	3	
0850-372	Professional Interpreter II	3	
050	Liberal Arts Science and Humanities Physical Education	4 0	
			16

Winter Term

			Cr. Hrs.
0850-211	Voice Interpreting I	3	
0850-262	Theory and Practice of Interpreting II	3	
0850-331	Expressive Transliterating	3	
0850-391	Principles of Tutoring/Notetaking	3	
051	Liberal Arts Social Science Elective (one of two)	4	
	Physical Education	0	
			16

Spring Term

			Cr. Hrs.
0520-332	Literature	4	
0850-203	American Sign Language I	3	
0850-252	Aspects and Issues of Deafness II	3	
0850-271	Professional Interpreter I	3	
051	Liberal Arts Social Science Elective (two of two)	4	
	Physical Education	0	
			17

Optional Summer Quarter

0850-281	Interpreting Practicum I	5	
0850-283	Interpreting Practicum Seminar I	1	
0850-392	Tutoring/Notetaking Practicum	3	

0850-206	American Sign Language II	3	
0850-213	Voice Interpreting III	3	
0850-281	Interpreting Practicum I	5	
0850-283	Interpreting Seminar I	1	
0850-392	Tutoring/Notetaking Practicum	3	
0850-395	Mainstreaming: Educational Programs and Alternatives	3	
			18

Optional Summer Quarter

0850-382	Interpreting Practicum II	5	
0850-384	Interpreting Seminar II	1	
0850-392	Tutoring/Notetaking Practicum	3	

**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 (W)
PREREQUISITE: 0850-210 and Basic Sign Language skills

**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 (F)
PREREQUISITE: 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 persons are delivered at a faster rate than those in Voice Interpreting I and II. This is a self-paced laboratory course.

CLASS 1, LAB 4, CREDIT 3 (W)
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 (F, S)
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 speech readers, deaf-blind individuals, multiply-handicapped individuals, etc.; resources available to students related to interpreting and mainstreaming; and current issues facing the professional, e.g. multiple roles, mainstreaming specialists.

CLASS 3, CREDIT 3 (F)

**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 (F, W)
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 plays, discussions, reading, 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 must also register for Interpreting Seminar I #0850-283.

CLASS 15, 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 1, 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 with it in a signed English mode. Emphasis is placed on conceptual accuracy, accuracy of finger-spelling, vocabulary development, facial expression and body movement, and self-critiquing skills.

CLASS 2, LAB 2, CREDIT 3 (F, S)
PREREQUISITE: 0850-205

**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 (W)
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 speech of transmission

CLASS 3, CREDIT 3 (F, W)
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 RID Code of Ethics. Other areas of concentration are interpersonal skills, self-critique, professional development, and resume writing. Coursework includes panels, role plays, discussions, readings, and lectures

CLASS 3, CREDIT 3 (S)

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 must also register for Interpreting Seminar II.

CLASS 15, CREDIT 5 (F, W, S)
PREREQUISITES: 0850-212, 0850-252, 0850-332, 0850-372, and 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 1, CREDIT 1 (F, W, S)
PREREQUISITES: 0850-212, 0850-252, 0850-372, and 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 persons in mainstreamed educational settings. The methodology is appropriate for elementary, secondary, and postsecondary education levels.

CLASS 3, CREDIT 3 (W, S)
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, the 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 persons, and covers current demographic, legal, economic and social trends affecting education of hearing-impaired persons. Students identify criteria and processes for the establishment of quality support services for hearing-impaired students.

CLASS 3, CREDIT 3 (W)
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 persons 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 (W)
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, developments of new techniques or technology, in-service training programs for faculty 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)
PREREQUISITE: 0850-281, 0850-392, or permission of instructor

Sign Vocabulary**Registration #0850-398**

This course affords students the opportunity to develop sign language skills that lead toward higher level courses in interpreting.

CLASS 1, LAB 1, CREDIT 1 (F)

Independent Study**Registration #0850-399**

CREDIT 1-3

PREREQUISITE: 0850-205, 0850-252, 0850-262, 0850-331, 0850-391 or permission of advisor

Other courses offered within NTID and RIT may be taken as electives if the student has interests outside the NITP program and time available to take them. For information on these courses and the process for registering for them, the student should see the NITP Academic Advisor.

Photo/Media Technologies

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)

PREREQUISITE: C or better in 0851-101, 0851-111, and 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)

PREREQUISITE: C or better in 0851-101, 0851-111, and 0851-121

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 the 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)

PREREQUISITE: C or better in 0851-101, 0851-111, 0851-121

Media Production: Diploma

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

Fall Term		Winter Term		Spring Term				
	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.			
0847-100	Dimensions of College Life	2	0851-102	Black and White Printing	2	0851-241	Media Graphics I	3
0851-101	Introduction to Photo Printing	4	0851-112	Film Processing	2	0851-261	Media Photo I	3
0851-111	Introduction to Film Processing	2	0851-122	Introduction to Copy Work	2	0851-290	AV Equipment Applications	2
0851-121	Introduction to Cameras	2	0851-132	Orientation to Photo/Media Careers	2		Communication	2
	Communication	2	0851-142	Introduction to Advanced Photographic Studies*	2		English	4
	English	4		Communication	2		Physical Education	0
	Physical Education	0		English	4			14
		16		Physical Education	0			
					14-16			

Second Year

0847-101	Job Search Process	1	0851-251	Basic Computer Graphics	3	0847-102	Life After College	1
0851-242	Media Graphics II	3	0851-271	Videography I	3	0851-283	Slide Production III	3
0851-262	Media Photo II	3	0851-282	Slide Production II	3	0851-296	Media Production Workshop I	6
0851-281	Slide Production I	3		Communication	2		Communication	2
	Communication	2		English	4			12
	English	4			15			
		16						

*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)
PREREQUISITE: 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 Communications 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, photochemistry, 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)

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)

PREREQUISITE: C average or better in

0851-200, 0851-210, 0851-220

COREQUISITE: 0851-211

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)

PREREQUISITE: C average or better in 0851-201, 0851-211, 0851-221

COREQUISITES: 0851-212, 0851-222

Media Production: A.A.S. Degree

Typical Course Sequence

Fall Term

First Year

	Cr. Hrs.
0847-100 Dimensions of College Life	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
Total	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
Total	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
Total	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
Total	14-16

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
Total	14

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

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

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

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)

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)

PREREQUISITE: C average or better in 0851-200, 0851-210, 0851-220

COREQUISITES: 0851-201, 0851-211

**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 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)

Custom Photographic Laboratory Services: Diploma

Typical Course Sequence

Fall Term		Winter Term		Spring Term				
First Year		First Year		First Year				
	Cr. Hrs.		Cr. Hrs.		Cr. Hrs.			
0847-100	Dimensions of College Life	2	0851-102	Black and White Printing	2	0851-200	Basic Color Printing	4
0851-101	Introduction to Photo Printing	4	0851-112	Film Processing	2	0851-210	Mechanized Film Processing	2
0851-111	Introduction to Film Processing	2	0851-122	Introduction to Copy Work	2	0851-220	Print Finishing Communication	2
0851-121	Introduction to Cameras	2	0851-132	Orientation to Photo/Media Careers	2		English	4
	Communication	2	0851-142	Introduction to Advanced Photographic Studies*	2		Physical Education	0
	English	4		Communication	2			14
	Physical Education	0		English	4			
		16		Physical Education	0			
					14-16			
Second Year		Second Year		Second Year				
0847-101	Job Search Process	1	0851-202	Custom Color Printing II	4	0847-102	Life After College	1
0851-201	Custom Color Printing I	4	0851-212	Integrated Custom Lab II	2	0851-203	Custom Color Printing III	4
0851-211	Integrated Custom Lab I	2	0851-222	Introduction to Slide Duplicating	2	0851-213	Integrated Custom Lab III	2
0851-221	Advanced Black and White Printing	2		Communication	2	0851-223	Introduction to Color Copy Work	2
0847-101	Job Search Process	1		English	4		Communication	2
	Communication	2			14		General Education or other elective	2
	English	4						13
		15						

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

**Media Graphics II
Registration #0851-242**

This course teaches 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, 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, video cassette recording, and lighting. Emphasis is on proper operation of video equipment for single camera productions. Students will 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 effect slide variations, 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 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

Audiovisual Equipment Applications

Registration#0851-290

Students learn to set up, operate, and maintain the various types of recorders, projectors, and accessories commonly used in media and media production. Identification and application of various projection and audio formats also will be 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 generate a portfolio.

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

0847-100	Dimensions of College Life	2	0851-102	Black and White Printing	2	0851-200	Basic Color Printing	4
0851-101	Introduction to Photo Printing	4	0851-112	Film Processing	2	0851-210	Mechanized Film Processing	2
0851-111	Introduction to Film Processing	2	0851-122	Introduction to Copy Work	2	0851-220	Print Finishing	2
0851-121	Introduction to Cameras	2	0851-132	Orientation to Photo/Media Careers	2		Communication	2
	Communication	2	0851-142	Introduction to Advanced Photographic Studies*	2		English	4
	English	4					Physical Education	0
	Physical Education	0						14
0851-201	Custom Color Printing I	4		Printing II	4		Printing III	4
0851-211	Integrated Custom Lab I	2	0851-212	Integrated Custom Lab II	2	0851-213	Integrated Custom Lab III	2
0851-221	Advanced Black and White Printing	2	0851-222	Introduction to Slide Duplicating	2	0851-223	Introduction to Color Copy Work	2
	Communication	2		Communication	2		Liberay Arts	4
					4		Communication	2

Summer

0851-299 Co-op Work Experience

	Printing I	4		Printing II	4	0851-303		
0851-314	Integrated Custom Lab IV	2	0851-315	Integrated Custom Lab V	2	0851-316		
	Liberal Arts			Liberal Arts	4			
	General Education or other elective	2		Liberal Arts	4			
		12			14			

*Introduction to Advanced Photographic Studies. An elective for students to evaluate their interest and readiness for advanced program areas.

**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)

PREREQUISITE: C average 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)

PREREQUISITE: C average 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)

PREREQUISITE: C average 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 are 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 titling. Students gain experience working in the television studio and control room.

Videotape editing techniques are introduced 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 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, the creation of animation sequences, and the operation of advanced slide programming equipment.

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, and television. Students must produce appropriate media materials when given projects in a typical working format. Portfolios will be 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.

CLASS 1, LAB 5, CREDIT 2-6 (F, W, S)

PREREQUISITES: 0851-352, 0851-373, 0851-385

**Independent Study
Registration #0851-399**

CREDIT Variable

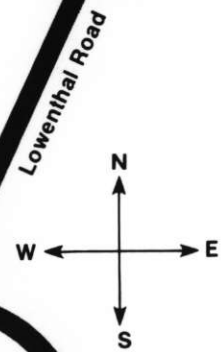
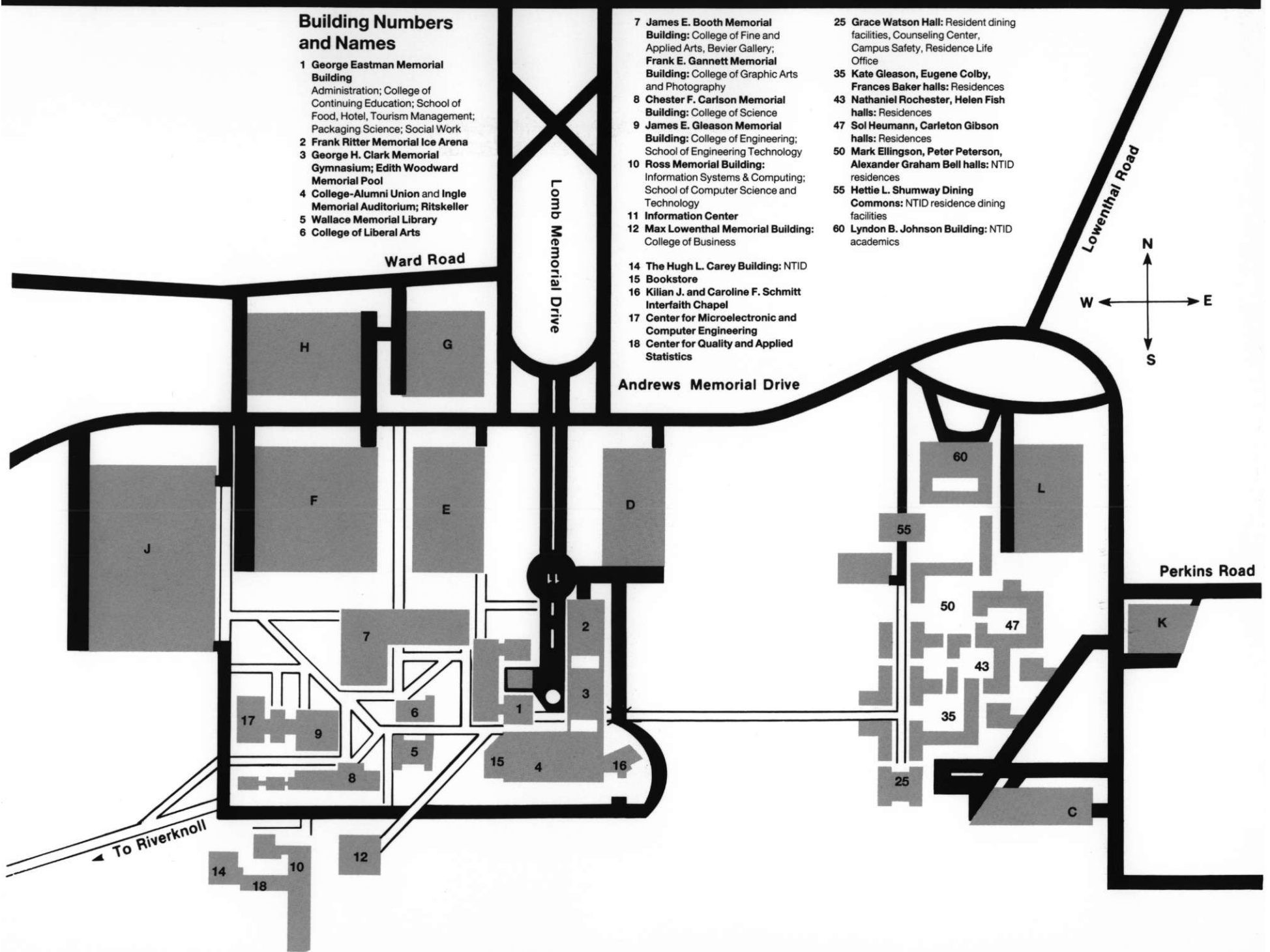
Building Numbers and Names

- 1 George Eastman Memorial Building**
Administration; College of Continuing Education; School of Food, Hotel, Tourism Management; Packaging Science; Social Work
- 2 Frank Ritter Memorial Ice Arena**
- 3 George H. Clark Memorial Gymnasium; Edith Woodward Memorial Pool**
- 4 College-Alumni Union and Ingle Memorial Auditorium; Ritskeller**
- 5 Wallace Memorial Library**
- 6 College of Liberal Arts**

- 7 James E. Booth Memorial Building:** College of Fine and Applied Arts, Bevier Gallery;
- 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

- 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

- 14 The Hugh L. Carey Building:** NTID
- 15 Bookstore**
- 16 Kilian J. and Caroline F. Schmitt Interfaith Chapel**
- 17 Center for Microelectronic and Computer Engineering**
- 18 Center for Quality and Applied Statistics**





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