

\*ENGL 121 and 122 may be substituted if a 4-year degree is planned.  
 \*\*Prerequisite may be waived for Nursing Home Administration applicant with approval of Psychology Department.

*There is no pre req in book.*

Total Credit Requirements for Associate Degree in Nursing Home Administration ..... 65

### ORNAMENTAL HORTICULTURE

**Degree:** Associate in Applied Science.

**Length:** Four-Semester (two-year) Program.

**Purpose:** The curriculum is designed to benefit students seeking full-time employment, those presently employed, and those preparing for a four year degree in one of the many related Horticulture fields.

**Program Requirements:** The major emphasis of this curriculum is to acquaint the student with the many areas associated with Horticulture. The student is also required to take selected courses in non-related fields preparing himself for a well rounded education. The curriculum is designed to coordinate with the Horticulture programs of the four year colleges and universities in this state.

### ORNAMENTAL HORTICULTURE

#### Associate in Applied Science Degree Program

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>First Semester</b>				
HORT 101	Principles of Horticulture	3	2	4
HORT 111	Plant Materials for Landscape Use	3	2	4
DRFT 110	Fundamentals of Drafting	2	4	3
HIST 141	The United States to 1877	3	0	3
*ENGL 111	Communication Skills I	3	0	3
PHED	Physical Education	0	3	1
<b>Total</b>		<b>14</b>	<b>11</b>	<b>18</b>
<b>Second Semester</b>				
HORT 121	Plant Propagation	3	2	4
HORT 240	Indoor Plants	3	2	4
*ENGL 112	Communication Skills II	3	0	3
HIST 142	The United States since 1877	3	0	3
BIOL 112	Biology II (Botany)	3	3	4
<b>Total</b>		<b>15</b>	<b>7</b>	<b>18</b>
<b>Third Semester</b>				
HORT 221	Chemical Control of Weeds, Plant Diseases and Pests	3	2	4
HORT 250	Vegetable Crops	3	2	4

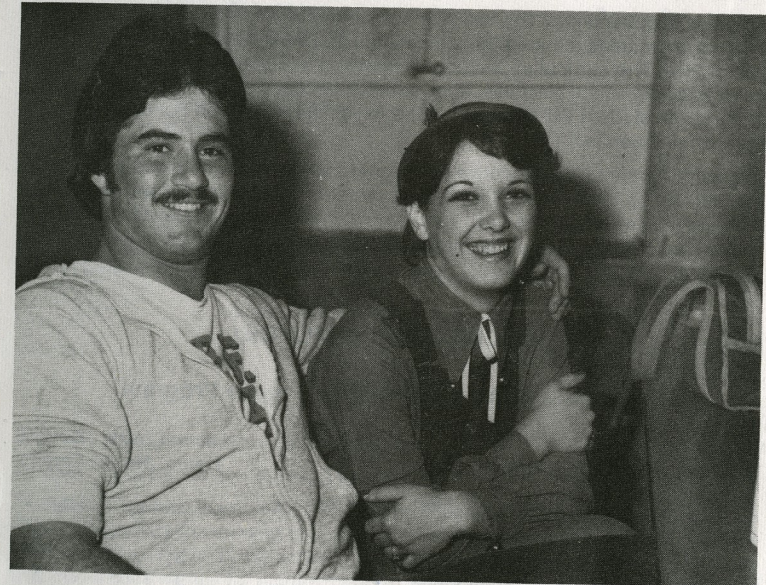
GOVT 211	American National & State Governments I	3	0	3
PSYC 120	General Psychology	3	0	3
CHEM 110	Introductory Chemistry for the Allied Health Sciences	3	2	4
<b>Total</b>		<b>15</b>	<b>6</b>	<b>18</b>

#### Fourth Semester

HORT 201	Soils and Fertilizer	3	2	4
HORT 231	Turf Management	3	2	4
GOVT 212	American National & State Governments II	3	0	3
PHED	Physical Education	0	3	1
SOCI 111	Principles of Sociology	3	0	3
	**Related Elective	3	0	3
<b>Total</b>		<b>15</b>	<b>7</b>	<b>18</b>

\*ENGL 121 and 122 may be substituted if a 4-year degree is planned.  
 \*\*CHEM 121, MATH 152, RETL 260, BIOL 111, HORT 131 and HORT 211 is recommended.

Total Credit Requirements for Associate Degree in Ornamental Horticulture ..... 72





## PRODUCTION

Please see Mid-Management, Production Specialization.

## REAL ESTATE

Please see Mid-Management, Real Estate Specialization; Certificate Program.

## RETAIL

Please see Mid-Management, Retail Specialization; Certificate Program.

## SECRETARIAL SCIENCE

### Executive Secretary

**Degree:** Associate in Applied Science

**Length:** Four-Semesters (Two-Year) Program.

**Purpose:** The Associate in Applied Science degree curriculum in Secretarial Science is designed to offer a background in business courses which will prepare the student for employment in the secretarial field. It is designed for those seeking first employment, and for those seeking promotion in the secretarial field. The program has been developed in response to the needs of businesses in the fast growing Gulf Coast area for efficient executive secretaries.

**Program Requirements:** The two-year curriculum in secretarial science provides instruction in areas required for competence as an executive secretary in a business office. The curriculum includes courses in secretarial science and related courses, plus general electives. Upon satisfactory completion of the two-year curriculum, the student will be awarded the Associate in Applied Science Degree in Secretarial Science.

**Internship Option:** The Executive Secretarial student may choose to serve an internship during the third and fourth semesters of the program, for pay and for college credit. The student desiring to serve an internship will omit two 3-hour courses — the two to be decided on an individual basis in conference with departmental personnel.

## SECRETARIAL SCIENCE

### Associate in Applied Science Degree Program

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>First Semester</b>				
ACCT 110	Office Accounting ✓	2	1	3
BUAD 130	General Business Math ✓	3	0	3
*ENGL 111	Communication Skills ✓	3	0	3
**SECT 111	Shorthand I or II ✓	3	2	3
**SECT 121 ✓	Typewriting I or II ✓	2	3	3
PHED	Physical Education ✓	0	3	1
		—	—	—
		13	9	16

### Second Semester

*ENGL 112 ✓	Communication Skills II ✓	3	0	3
BUAD 110	Introduction to Business ✓	3	0	3
SECT 150	Office Machines ✓	2	3	3
**SECT 112	Shorthand II or III ✓	3	2	3
**SECT 122	Typewriting II or III ✓	2	3	3
PHED	Physical Education ✓	0	2	1
		—	—	—
		13	10	16

### Third Semester

SECT 230	Records Management ✓	2	2	3
SECT 130	Business Communication ✓	3	0	3
SECT 210	Shorthand III or Business Elective <i>SECT SPAN</i>	3	2	3
SOCI 111	Principles of Sociology ✓	3	0	3
GOVT 211 ✓	American National and State Governments I ✓	3	0	3
SECT 220	Typewriting III or Business Elective ✓	2	3	3
		—	—	—
		16	7	18

### Fourth Semester

SECT 140	Secretarial Practice ✓	3	2	3
SECT 240	Office Procedures	3	0	3
SECT 250	Word Processing ✓	2	3	3
SECT 215	Dictation and Transcription	3	2	3
GOVT 212 ✓	American National and State Governments II	3	0	3
BUAD 120	Business Law or Elective	3	0	3
		—	—	—
		17	7	18

\*ENGL 121 and 122 should be substituted if a 4-year degree is planned.

\*\*Placement tests will determine which course needs to be taken.

Total Credit Requirements for  
Secretarial Science Degree ..... 68

## WELDING

**Degree:** Associate in Applied Science.

**Length:** Four-Semester (two-year) Program.

**Purpose:** The Associate in Applied Science Degree Curriculum in Welding is designed to prepare the student for full-time employment upon graduation in the career of welding. The basic objective of the program is to develop the skills in ferrous and nonferrous metals for employment in construction trades and area industrial needs.

**Program Requirements:** In addition to the general requirements for admission to the College, entry into the Welding Program requires a personal interview with the Director of the Welding Program.



## AGRICULTURE

**Degree:** Certificate

**Length:** Two-semester (one-year) program

**Purpose:** The program is designed to prepare the student for entry into an agriculture or related occupation. Completion of this program will also enhance the effectiveness of those presently employed in an agriculture related occupation.

**Program Requirements:** The one-year program in Agriculture combines formal instruction with on-the-job work experience. The certificate in Agriculture will be awarded upon satisfactory completion of the two semester program.

## AGRICULTURE

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credit
<b>First Semester</b>				
ENGL 111	Communication Skills I	3	0	3
BIOL 110	Environmental Conservation	3	0	3
AGRI 110	Animal Husbandry	3	0	3
CO-OP 111	Cooperative Education	0	15	3
		9	15	12
<b>Second Semester</b>				
ENGL 112	Communication Skills II	3	0	3
AGRI 120	Fundamentals of Crop Production	3	0	3
AGRI 130	Agriculture Equipment Technology	2	2	3
CO-OP 112	Cooperative Education	0	15	3
		8	17	12
Total requirements for Agriculture Certificate .....				24



## AIR CONDITIONING AND REFRIGERATION

**Degree:** Certificate.

**Length:** Two-Semester (one-year) Program.

**Purpose:** The one-year certificate in Air Conditioning and Refrigeration is designed to prepare the student for full-time employment immediately upon certification from the Program. The basic objective of the program is to incorporate adequate shop and lab experience of a sufficient duration to develop competencies for employment in the air conditioning and refrigeration field.

**Program Requirements:** In addition to the general requirements for admission to the College, entry in the Air Conditioning and Refrigeration Program requires a personal interview with the Department Head of the Air Conditioning and Refrigeration Program.

## AIR CONDITIONING AND REFRIGERATION

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>First Semester</b>				
ACRH 131	Air Conditioning Fundamentals I	3	0	3
ACRH 133	Air Conditioning & Electrical Circuits I	3	0	3
ACRH 140	Introduction to Refrigeration	3	3	4
MATH 151	Technical Math I	3	0	3
PHYS 133	Technical Physics I	3	3	4
PHED	Physical Education	0	3	1
		15	9	18
<b>Second Semester</b>				
ACRH 132	Air Conditioning Fundamentals II	3	3	4
ACRH 141	Refrigeration Systems Servicing I	3	3	4
ACRH 170	Domestic Refrigeration	3	1	3
ENGL 111	Communication Skills I	3	0	3
PHED	Physical Education	0	3	1
		12	10	15
<b>First Summer Session</b>				
ACRH 135	Air Conditioning and Refrigeration Troubleshooting	1	3	2
Total Credits Required for the Air Conditioning & Refrigeration Certificate .....				35



## AUTOMOTIVE TECHNOLOGY

**Degree:** Certificate.

**Length:** Two semesters or one year.

**Purpose:** The certificate in Automotive Technology is designed to provide students with an introduction to automotive technology repair and to allow persons already engaged in industry to increase their automotive technology knowledge.

**Program Requirements:** The curriculum includes technical courses in automotive mechanics and courses in related subjects as well as general education courses. Each student is urged to consult with the Department Chairman of Automotive Technology in planning his/her program.

A certificate student will take seven courses from Group I. The student will take three courses from Group II. Course selection will be determined by consultation with the Department Chairman, after he/she is familiar with the student's background, abilities, and goals.

### Certificate in Automotive Technology

Course	Lecture Hours	Lab Hours	Course Credits
Group I	14	28	28
Group II	9	0	9
			—
Total			37

#### Group I

Basic Automotive ✓4  
 Internal Combustion Engine ✓4  
 Automotive Electricity and Ignition System ✓4  
 Carburetion and Fuel System ✓4  
 Automotive Transmission ✓4  
 Automotive and Truck Chassis  
 Automotive Air Conditioning ✓4  
 Automotive Diagnosis  
 Repair Shop Organization and Management ✓2

Total Credit Requirements for Automotive Technology Certificate..... 37

#### Group II

✓ Technical Math I  
 Fundamentals of Drafting  
 ✓ Technical Math II  
 Communication Skills I 3  
 ✓ Welding Processes  
 Introduction to Business 3  
 Communication Skills II

## CHILD CARE AND DEVELOPMENT

**Degree:** Certificate

**Length:** Thirty-two semester hours.

**Purpose:** The certificate program is designed for mature persons working in the child care field. A certificate represents the completion of 32 hours of approved course work.

**Program Requirements:** A certificate student will take seven courses from Group I, three courses from Group II and two semesters of physical education. Course selection will be determined by consultation with the Department Chairman, after he is familiar with the student's background, abilities and goals.

### Child Care and Development

Course	Lecture Hours	Lab Hours	Course Credits
Group I	21	0	21
Group II	9	0	9
Physical Education	0	6	2
	—	—	—
	30	6	32

#### Group I

110 Pre-School and Day Care Programs  
 200 Exceptional Children ✓  
 140 Child Care Recreation ✓  
 130 Child Care Services  
 150 Introductory Creative Activities ✓  
 160 Literature for Young Children ✓  
 170 Music for Young Children ✓  
 220 Child Nutrition and Health Care ✓  
 240 Child Care and Development I ✓  
 250 Child Care and Development II ✓  
 260 Seminar and Field Work  
 210  
 230 ADV. CHILD GTD + DEV.

#### Group II

Principles of Sociology  
 Social Problems  
 General Psychology  
 Marriage and Family  
 Communication Skills

Total Credit Requirements for Child Care & Development Certificate..... 32

## COMMUNICATIONS

**Degree:** Certificate

**Length:** Two-Semester (one year) Program

**Purpose:** The program is designed to prepare the student for entry into occupations in radio broadcasting or sound reinforcement and recording. Completion of this program will also enhance the effectiveness of those presently employed in the field of communications.

**Program Requirements:** The student will be awarded a certificate upon completion of the program in his/her particular area of interest.



### Certificate in Broadcasting

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>First Semester</b>				
ENGL 121	Composition & Rhetoric I	3	0	3
SECT 121	Typewriting I	2	3	3
COMM 105	Introduction to Mass Communications	3	0	3
COMM 115	Writing for Mass Media	3	0	3
COMM 210	Radio News Workshop	1	4	3
		—	—	—
		12	7	15

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>Second Semester</b>				
COMM 110	Survey of Radio & TV	3	0	3
COMM 111	Basic Recording Techniques	1	2	3
COMM 211	Radio Production	1	4	3
RETL 240	Advertising	3	0	3
COMM 220	Independent Study	3	0	3
OR				
COOP 211	Seminar & Work Experience	—	—	—
		11	6	15

Total Credit Requirements for  
Communications — Broadcasting Certificate ..... 30

### Certificate in Sound Reinforcement and Recording

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>First Semester</b>				
ENGL 111 ✓	Communication Skills I	3	0	3
COMM 105 ✓	Introduction to Mass Communications	3	0	3
COMM 211 ✓	Radio Production	1	4	3
COMM 111 ✓	Basic Recording Techniques	1	2	3
MUSC 101 ✓	Introduction to Music	3	0	3
		—	—	—
		11	6	15

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>Second Semester</b>				
ELEC 110 ✓	Introduction to Electronics Technology	3	0	3
ELEC 115 ✓	Introduction to Electronics Technology			
	Lab	0	3	1
COMM 112 ✓	Advanced Recording Techniques	1	2	3
BUAD 110 ✓	Introduction to Business	3	0	3
MUSC 105 ✓	Business of Music	3	0	3
COMM 220 ✓	Independent Study	3	0	3

OR  
COOP 211 Seminar & Work Experience

— — —  
13 5 16

Total Credit Requirements for  
Communications — Sound Reinforcement & Recording  
Certificate ..... 31

### COMPUTER SCIENCE TECHNOLOGY

#### General Computer Data Processing

**Degree:** Certificate

**Length:** Two semesters or one year

**Purpose:** The General Computer Data Processing Curriculum is designed to provide students with an introduction to data processing and to allow persons already engaged in business and industry to increase their computer knowledge.

**Program Requirements:** The curriculum includes technical courses in computer science, courses in related subjects, and general education courses. Each student is urged to consult with the Counseling Center and his/her faculty advisor in planning his/her program. Upon satisfactory completion of the two semesters curriculum, with an overall 2.0 grade point average for all computer science courses attempted, the student will be awarded the Certificate in Computer Science (General Computer Data Processing).

#### Computer Science Technology — General Computer Data Processing

Course	Lecture Hours	Lab Hours	Course Credits
Group I	15	15	20
Group II	12	0	12
			—
Total			32





interested non-inservice persons should obtain permission from the Department Chairperson of Corrections.

**Program Requirements:** Approximately one-half of the certificate program will include required courses in Correctional Science and Mid-Management. The remaining courses are selected from related areas.

A certificate student will take the seven required courses from Group I. The student will also take four courses from Group II. Course selection will be determined by consultation with the Department Chairman, after he/she is familiar with the students vocational goals.

Course	Lecture Hours	Lab Hours	Course Credits
Group I	21	0	21
Group II	12	1	13
			—
			Total 34

**Required Courses Group I**

- CSCI 150 Introduction to the Criminal Justice System
- CRSC 220 Institutional Procedures
- CRSC 230 Contemporary Practices in Corrections
- CRSC 240 Organization and Operations
- MMGT 121 Principles of Management
- MMGT 211 Personnel Management
- MMGT 221 Problems in Management

**Elective Courses Group II**

- ACCT 221 Principles of Accounting I
- ACCT 222 Principles of Accounting II
- SOCI 111 Principles of Sociology
- SPCH 140 Business Speech
- AGRI 210 Farm Management
- PSYC 250 Fundamentals of Behavior Pathology

Total Credit Requirements for Correctional Science Certificate..... 34

**DRAFTING TECHNOLOGY**

**Degree:** Certificate

**Length:** Two-semester (one year) program

**Purpose:** The one-year program is designed to prepare the student for entry into the drafting occupation.

**Program Requirements:** The drafting technician is an essential member of the technician-engineering team. He/she should be proficient in both technical knowledge and skills involving drawing instruments as well as schematics, working drawings, and blueprints.

**DRAFTING TECHNOLOGY**

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>First Semester</b>				
DRFT 111	Technical Drafting	2	6	4
<del>DRFT 106</del>	<del>Blueprint Reading I</del>			
DRFT 107	IND. Blueprint RDNG	3	1	3

Course	Lecture Hours	Lab Hours	Course Credits
<del>DRFT 106</del>	<del>2</del>	<del>1</del>	<del>2</del>
DRFT 241	2	6	4
MATH 151	3	0	3
ENGL 111	3	0	3
	12	13	16 or 17

**Second Semester**

DRFT 130	General Drafting	2	6	4
*DRFT	Elective	2	6	4
MATH 152	Technical Math II	3	0	3
ENGL 112	Communication Skills II	3	0	3
PHED	Physical Education or	0	3	1
	**Related Elective			3 or 4
		10	15	18 or 19

\*Approval of Department Head.

\*\*Related Electives may be in areas of Drafting, Math, Physics, Computer Science, Electronic Technology, Air Conditioning, Welding with approval of Department.

Total Credit Requirements for Drafting Technology Certificate..... 34 or 35

**ELECTRONIC TECHNOLOGY**

**Degree:** Certificate

**Length:** Two-semester (one-year) program

**Purpose:** The one-year certificate in Electronic Technology is designed to prepare the student for full-time employment in the field of electronics. The basic objective of the program is to develop electronic skills and knowledge to provide entry level positions in electronics.

**Program Requirements:** A certificate student will take a minimum of five courses from Group I; four laboratory courses from Group II (corequisites of courses in Group I); four courses from Group III; and two semesters of Physical Education or one 3 hour elective.

Course	Lecture Hours	Lab Hours	Course Credits
Group I	15	0	15 ✓
Group II	0	12	4 ✓
Group III	12	0	12 ✓
Physical Education or Elective	0	6	2
	3	0	3
Total	27 or 30	12 or 18	33 or 34

- Group I Electronic Technology Courses
- Group II Corequisite Electronic Technology Laboratory Course
- Group III Composition & Rhetoric  
Mathematics  
Government



U.S. History  
General Psychology

Total Credit Requirements for Certificate  
in Electronic Technology..... 33 or 34

### ELECTRONIC TECHNOLOGY One Year Certificate

#### Group I —

Course Number	Course Title	Course Credit
ELEC 110	Introduction to Electronic Technology	3
ELEC 120	D.C. Theory and Circuit Analysis	3
ELEC 130	A.C. Theory and Circuit Analysis	3
ELEC 140	Electronics I	3
ELEC 150	Electronic Problems	3
ELEC 160	Electronic Drafting and Design	3
ELEC 210	Electronics	3
ELEC 220	Electronics III	3
ELEC 230	Electronic Instrumentation & Measurement Techniques	3
ELEC 240	Electronics Seminar and Project	3
ELEC 250	Electronic Logic Design	3
ELEC 260	Communications Circuits and Systems	3
ELEC 270	Survey of Digital Electronic Systems	3
ELEC 280	Industrial Instrumentation and Control	3
ELEC 290	Computers and Computer Controlled Systems	3
ELEC 291	Microprocessors and Microcomputer Systems	3

#### Group II

ELEC 115	Introduction to Electronic Technology	1
ELEC 125	D.C. Theory and Circuit Analysis Laboratory	1
ELEC 135	A.C. Theory and Circuit Analysis Laboratory	1
ELEC 145	Electronics I Laboratory	1
ELEC 165	Electronic Drafting and Design Laboratory	1
ELEC 215	Electronics II Laboratory	1
ELEC 225	Electronics III Laboratory	1
ELEC 235	Electronic Instrumentation & Measurement Techniques	1
ELEC 245	Electronics Project Laboratory	1
ELEC 265	Communications Circuits & Systems Lab	1
ELEC 295	Computers and Computer Controlled Systems Lab	1
ELEC 296	Microprocessors and Microcomputer System Lab	1

#### Group III

MATH 151	Technical Mathematics	3
MATH 152	Technical Mathematics II	3
MATH 121	College Algebra	3
MATH 132	Plane Trigonometry	3
SOCI 111	Principles of Sociology	3
ENGL 111	Communication Skills I	3
ENGL 112	Communication Skills II	3
ENGL 121	Composition and Rhetoric I	3
ENGL 122	Composition and Rhetoric II	3
HIST 141	The United States to 1877	3

HIST 142	The United States since 1877	3
GOVT 211	American National & State Government	3
GOVT 213	American National and State Governments	3
PSYC 120	General Psychology	3

### LAW ENFORCEMENT AND POLICE ADMINISTRATION

#### LAW ENFORCEMENT

**Degree:** Certificate

**Length:** Thirty semester hours

**Purpose:** The Certificate program is designed for mature persons working in the law enforcement field. A certificate represents the completion of 30 hours of approved course work.

**Program Requirements:** A certificate student will take seven courses from Group I and three courses from Group II and two semesters of physical education. Course selection will be determined by consultation with the Department Chairman, after he/she is familiar with the student's background, abilities and goals.

#### LAW ENFORCEMENT

Course	Lecture Hours	Lab Hours	Course Credits
Group I	21	0	21
Group II	9	0	9
Physical Education	0	6	2
	—	—	—
Total	30	6	32

#### Group I

Introduction to Law Enforcement  
Criminal Investigation  
Legal Aspects of Law Enforcement  
Criminal Procedure and Evidence  
Element of Police Supervision  
Principles of Sociology  
Social Problems  
Criminology  
Juvenile Delinquency  
Police Organization and Administration  
Patrol Administration

#### Group II

Composition and Rhetoric  
General Psychology  
Communication Skills  
American National and State Governments  
U. S. History

Total Credit Requirements for Certificate  
in Law Enforcement..... 32

### LEGAL STENOGRAPHY

**Degree:** Certificate

**Length:** Two-semester (one-year) program



**Purpose:** The one-year certificate in Legal Stenography program is designed to prepare the student for full-time employment immediately in a specialized business occupation. This course will provide a job outlet for those students who desire to work in the legal field, but do not care for pressures of Court Reporting or find they must secure employment within a shorter time.

**Program Requirements:** Students entering upon this program must be high school graduates or possess a GED equivalency certificate. Each student is urged to consult with the Counseling Center and Court Reporting department chairman in planning his/her program. The Legal Stenography Certificate will be awarded upon satisfactory completion of the two-semester program.

### COURT REPORTING

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>First Semester</b>				
SECT 122	Typing II	2	3	3
CTRP 111	Machine Shorthand Theory	6	4	6
CTRP 121	Law and Legal Terminology	4	1	3
ENGL 111	Communication Skills I	3	0	3
CTRP 141	Grammar and Punctuation I	2	0	2
PHED	Physical Education	0	2	1
		17	10	18
<b>Second Semester</b>				
SECT 220	Typing III	2	3	3
CTRP 112	Machine Shorthand I (60-80-100)	6	4	6
CTRP 130	Transcription I	0	5	2
CTRP 122	Medical Terminology	4	1	3
ENGL 112	Communication Skills II	3	0	3
CTRP 142	Grammar and Punctuation II	2	0	2
PHED	Physical Education	0	2	1
		17	15	20

Total Credit Requirements for Legal Stenography Certificate ..... 38



### MID-MANAGEMENT

**Degree:** Certificate

**Length:** Two-semester (one-year) program

**Purpose:** The one-year certificate in Mid-Management is designed to prepare the student for full-time employment in the field of management. The basic objective of the program is to develop management skills and allow the student a chance to utilize these skills at an approved work station.

**Program Requirements:** A certificate student will take six courses from Group 1, three courses from Group 2, two courses from their area of specialization (Retail, Production, Fashion Merchandising, Banking and Real Estate) and two semesters of Physical Education or one three hour elective.

### MID-MANAGEMENT

Course	Lecture Hours	Lab Hours	Course Credits
Group 1	12	40	18
Group 2	9	0	9
Specialization	6	0	6
Physical Education	0	6	2
or			
Elective	3	0	3
<b>Total</b>	<b>27</b>	<b>40 or 46</b>	<b>35 or 36</b>

#### Group 1

- Supervision ✓
- Internship ✓
- Personnel Management ✓
- Principles of Management ✓
- Internship ✓
- Problems in Management

#### Group 2

- Communication Skills
- Business Mathematics
- General Psychology
- or
- Business Psychology ✓
- Principles of Economics
- Principles of Sociology

### Specialization Area

#### Retail

- Principles of Retailing
- Principles of Marketing
- Advertising
- Selling and Salesmanship
- Retail Merchandise Management

#### Fashion Merchandising

- Introduction to Fashion Merchandising
- Fashion Buying and Merchandising
- Textiles
- Fashion Sales Promotion
- Fashion Fundamentals

#### Banking

- Principles of Bank Operations
- Money and Banking
- Analyzing Bank Financial Statements
- Marketing for Bankers
- Bank Investments
- Credit Administration
- Supervision and Personnel Administration
- Installment Credit
- Teller Training Seminars



**Real Estate**

- Principles of Real Estate
- Real Estate Practice
- Real Estate Law
- Real Estate Finance
- Real Estate Brokerage
- Real Estate Appraisal

**Production**

- Industrial Management
- Production Planning and Control
- Materials Management
- Methods Analysis and Work Measurement

Total Credit Requirements for  
Mid-Management Certificate..... 35 or 36

**NURSING ASSISTANT PROGRAM**

**Degree:** Certificate

**Length:** One semester

**Purpose:** The program is designed to provide the individual with the necessary skills and knowledge for performance as an essential member of the nursing team. Theory is integrated with supervised clinical practice.

**Admission Requirements:**

1. An interview with the nursing department.
2. Satisfactory physical and mental health.

**Program Requirements:**

1. Satisfactory clinical and classroom performance.
2. Regular attendance.

**Program Content:**

**COURSE UNITS**

**Pre-clinical:**

- Orientation
- Introduction to the Patient
- The Working Environment
- Communication Skills

**Clinical:**

- The Patient's Unit
- Personal Care of the Patient
- Observing and Recording Vital Signs
- Special Treatments
- Food Service

The above course content is taught over a 10 week period and has the following lecture-lab ratio:

Total nursing lecture	44
Total nursing lab hours	240

Total Liberal Arts hours 36

Total Contact Hours 320

**ORNAMENTAL HORTICULTURE**

**Degree:** Certificate

**Length:** Two-semester (one year) program

**Purpose:** The program is designed to prepare the student for entry into a horticulture or related occupation. Completion of this program will also enhance the effectiveness of those presently employed in all horticulture related occupation.

**Program Requirements:** The one-year program in horticulture combines formal instruction with on-the-job work experience. The certificate in horticulture will be awarded upon satisfactory completion of the two semester program.

**ORNAMENTAL HORTICULTURE**

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
---------------	--------------	---------------	-----------	----------------

**First Semester**

HORT 101	Principles of Horticulture	3	2	4
HORT 111	Plant Materials for Landscape Use	3	2	4
CHEM 110	Introduction Chemistry	3	2	4
DRFT 110	Fundamentals of Drafting	2	4	3
ENGL 111	Communication Skills I	3	0	3
	Total	14	10	18

**Second Semester**

HORT 121	Plant Propagation	3	2	4
HORT 131	Greenhouse Crop Production	3	2	4
MATH 151	Technical Math I	3	0	3
BIOL 112	Biology II (Botany)	3	3	4
PHED	Physical Education or Approved Elective	0	3	1
	Total	15	10	19

**Summer Session I**

HORT 211	Nursery and Garden Center Management	3	2	4
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COMPLETION OF CERTIFICATE LEVEL

**RESPIRATORY THERAPY TECHNICIAN PROGRAM**

**Degree:** Certificate

**Length:** 13½ months



**Purpose:** The purpose of the Alvin Community College Department of Respiratory Therapy Technology is to provide an approved, formalized educational program that will prepare competent men and women for careers in Respiratory Therapy. The certificate recipient of the program will be eligible to become a Certified Respiratory Therapy Technician (C.R.T.T.) by making application and successfully completing the examination administered by the National Board for Respiratory Therapy.

This certificate program is designed to meet the Upward Mobility/Lateral Exit concept. The curriculum involves all phases of Respiratory Care including Intermittent Positive Pressure Breathing, continuous mechanical ventilation, blood gas analysis, and pulmonary function studies. The students spend a minimum of 750 hours in the clinical setting with rotation through Respiratory Therapy Department at clinical affiliates. The program is fully accredited and meets the standards of the American Medical Association.

**Admission Requirements:**

Citizenship: U.S. citizen or legal declaration of intention of becoming a U.S. citizen.

Health: Satisfactory physical and mental health.

Education: High school graduate or its equivalent.

**Admission Procedure:**

1. Pre-Entrance testing, ACT Exam.
2. All students entering the program are required to complete the regular Alvin Community College admission procedures. The proper forms are available from the Program Chairman or the Admission's office.
3. Respiratory Therapy students must meet health requirements of affiliating clinical institutions. A health examination by the student's personal physician is required using the Alvin Community College health form. The physical examination should include chest x-ray, urinalysis, Complete Blood Count (CBC) and VDRL.
4. A personal interview with the Program Chairman is required.
5. Applicants will be notified concerning acceptance to the Respiratory Therapy Program. Admission is limited.
6. Students not admitted to the Program may take courses to enhance their potential for entering the program at a later date.
7. Any student who fails to achieve a passing grade in one or more Respiratory Therapy classes for two semesters will not be permitted to remain enrolled in the program.
8. A transfer student must qualify in accordance with the current RTT Program procedure.
9. The RTT student will abide by the curriculum requirements of the RTT department at the time he is accepted into the program. Curriculum requirements take precedence over the Bulletin under which the student entered Alvin Community College.
10. After the enrollment, the required RTT courses must be completed in proper sequence. No variances unless approved by program chairman.
11. The RTT student is required to satisfactorily complete theory and clinical experience of each RTT course. In the event either theory or clinical is evaluated unsatisfactorily the student will be required to repeat the course in its entirety the next time offered.
12. No grade below "C" will be acceptable in the RTT course.

13. A student may be terminated from the program if clinical performance is unsatisfactory.

14. A student is required to earn at least 24 resident hours at Alvin Community College.

**RESPIRATORY THERAPY TECHNICIAN**

Course Number	Course Title	Lecture Hours	Lab Hours	Clock Hours	Course Credits
<b>Summer Session I (6 weeks)</b>					
BIOL 121	Anatomy and Physiology I	8	8	16	4
HRTT 111	Introduction to Respiratory Therapy	8	8	16	4
HRTT 110	Introduction to Health Sciences (12 weeks)	2		2	1
		18	16	34	9
<b>Summer Session II (6 weeks)</b>					
BIOL 122	Anatomy and Physiology II	8	8	16	4
HRTT 114	Respiratory Therapy Procedures I	8	16	24	4
		16	22	40	8
<b>Fall Semester</b>					
HRTT 116	Clinical Science and Pulmonary Disorders	3	0	3	3
HRTT 120	Pharmacology	3	0	3	3
HRTT 112	Clinical Practical I	3	8	11	4
CHEM 110	Chemistry for Allied Health	3	2	5	4
HMLT 112	Clinical Microbiology	2	8	10	3 1/2
		14	18	32	17 1/8
<b>Spring Semester</b>					
HRTT 118	Clinical Theory	3	0	3	3
HRTT 113	Clinical Practical II	0	25	25	4
HRTT 117	Clinical Applications	3	0	3	3
*ENGL 111	Communication Skills	3	0	3	3
Elective					3
		9	25	34	16
<b>Summer Session I (6 weeks)</b>					
HRTT 119	Clinical Practical III	0	20	20	4

\*If the student intends to pursue the 2 year Associate Degree, substitute ENGL 121.

Total Credit Requirements ..... 54



## SECRETARIAL SCIENCE

**Options: Stenographer** ✓  
**General Office Worker**

**Degree:** Certificate

**Length:** Two-semester (one-year) program

**Purpose:** The one-year program is designed to prepare the student to adequately discharge the responsibilities of stenographic work, office occupations, and general business employment.

**Program Requirements:** The one-year program in "Stenographer" and "General Office Worker" combines instruction in the areas required for competence as a stenographer or office worker. Students are advised to consult with a faculty member in the business department in planning their program and selecting electives. Upon satisfactory completion of the one-year program, the student will be awarded a one-year certificate.

### Stenographer One-Year

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>First Semester</b>				
SECT 230 ✓	Records Management	3	2	3
*BUAD 130 ✓	General Business Mathematics or equivalent	3	0	3
✓ ENGL 111 ✓	Communication Skills	3	0	3
**SECT 111 ✓	Shorthand I or II ✓	3	2	3
**SECT 121 ✓	Typewriting I or II ✓	2	3	3
PHED ✓	Physical Education	0	3	1
		14	10	16

### Second Semester

✓ SECT 130 ✓	Business Communications	3	0	3
SECT 150 ✓	Office Machines	2	3	3
✓**SECT 112 ✓	Shorthand II or III ✓	3	2	3
**SECT 122 ✓	Typewriting II or III ✓	2	3	3
SECT 240 ✓	Office Procedures	3	0	3
PHED ✓	Physical Education	0	3	1
215	210	13	11	16

\*May be waived by demonstrated competency in High School Math.  
\*\*Placement tests will determine which course needs to be taken.

Total Requirements for Stenographer/  
General Office Worker Certificate ..... 32

*Phed 1*  
*Phed 1*

## General Clerical One-Year

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>First Semester</b>				
ACCT 110 ✓	Office Accounting	2	1	3
BUAD 110 ✓	Introduction to Business	3	0	3
*BUAD 130 ✓	General Business Mathematics or equivalent	3	0	3
SECT 121 ✓	Typewriting I or II ✓	2	3	3
ENGL 111 ✓	Communication Skills	3	0	3
PHED ✓	Physical Education	0	3	1
		13	7	16

### Second Semester

SOCI 111 ✓	Principles of Sociology	3	0	3
SECT 150 ✓	Office Machines ✓	2	3	3
SECT 140 ✓	Secretarial Practice ✓	3	2	3
**SECT 122 ✓	Typewriting II or III ✓	2	3	3
SECT 230 ✓	Records Management ✓	3	2	3
PHED ✓	Physical Education	0	3	1
		13	13	16

Total Credit Requirements for a  
General Clerical Certificate ..... 32

\*May be waived by demonstrated competency in high school mathematics.  
\*\*Placement tests will be taken to determine which course needs to be taken.

## LEGAL SECRETARY

**Certificate Program:** Legal Secretary Certificate

**Length:** One year

**Purpose:** The Legal Secretary curriculum is designed to provide students with training necessary for employment in a legal office. It is also designed to update the skills for those already employed in a legal office.

**Program Requirements:** The requirement for the Legal Secretary certificate program includes nine courses listed under Group I and five elective courses listed under Group II for a total of 42 semester hours. Course selection from Group II will be determined by consultation with Department Chairman.

Course	Lecture Hours	Lab Hours	Course Credits
Group I	26	15	27
Group II	14	2	15
			—
Total			42



**Required Courses**

**Elective Courses**

**Group I**

- \*SECT 121, 122 Typing I & II
- \*SECT 111, 112 Shorthand I & II
- SECT 130 Business Communication
- SECT 143 Legal Secretarial Practice
- BUAD 120 Business Law
- SECT 144 Legal Terminology
- SECT 250 Word Processing

**Group II**

- REAL 230 Real Estate Law
- REAL 130 Principles of Real Estate
- LWNF 130 Legal Aspects of Law Enforcement
- REAL 140 Real Estate Math
- SECT 230 Records Management
- SECT 150 Office Machines
- BUAD 150 Business Psychology
- SECT 212 or 222 Secretarial Internship

\*Students may place out of Typing 121 and/or Shorthand 111 by passing advanced standing test.

Total Credit Requirements for  
Legal Secretary Certificate ..... 42

**MEDICAL SECRETARY**

**Certificate Program:** Medical Secretary Certificate

**Length:** One year

**Purpose:** The Medical Secretary curriculum is designed to provide students with training necessary for employment in a medical office. It is also designed to update skills for those already employed in the medical office.

**Program Requirements:** The requirement for the Medical Secretary program includes nine courses listed under Group I and four elective courses from Group II for a total of 42-44 semester hours. Course selection for Group II will be determined by consultation with Department Chairman.

Course	Lecture Hours	Lab Hours	Course Credits
Group I	29	21	32
Group II	10	5	10
			—
			Total 42

**Required Courses**

**Group I**

- \*SECT 121, 122 Typing I & II
- \*SECT 111, 112 Shorthand I & II
- SECT 130 Business Communication
- SECT 141 Medical Secretarial Practice
- SECT 142 Medical Terminology
- SECT 250 Word Processing
- BIOL 111 & 112 General Biology

**Elective Courses**

**Group II**

- SECT 230 Records Management
- SECT 150 Office Machines
- CSCI 110 Introduction to Computer Science
- PSYC 120 General Psychology
- PSYC 130 Child Growth and Development
- BIOL 121 Anatomy and Physiology
- SECT 212 & 222 Secretarial Internship

\*Student may place out of Typing 121 and/or Shorthand 111 by passing advanced standing test.

Total Credit Requirements for  
Medical Secretary Certificate ..... 42

**VOCATIONAL NURSING PROGRAM**

**Degree:** Certificate

**Length:** Twelve Months.

**Purpose:** The purpose of the Alvin Community College Program of Vocational Nursing is to provide an approved educational program designed to prepare the vocational nurse to function as a vital member of the health care team. The vocational nurse gives nursing care to patients in varied situations with the supervision of the registered nurse and/or physician.

Graduates of the twelve-month program are eligible to write the Texas State Board Examination for Vocational Nurses. Those passing the state examination will be issued a license by the State Board of Vocational Nurse Examiners and will qualify to practice as a Licensed Vocational Nurse (L.V.N.) in the state of Texas.

**Admission Requirements:**

1. Be the age of 17-59\* years old. (Those older than 59 will be considered on an individual basis.)
2. Be in good physical and emotional health.
3. Be of good moral character.
4. Be a high school graduate or hold a certificate of equivalency (G.E.D.).
5. Satisfactorily score on the Pre-entrance exam for practical nurses.
6. Have a personal interview with the Chairman of Vocational Nursing.
7. Complete the application for admission into the Vocational Nursing Program, which shall also include submission of three character references, copies of transcripts or G.E.D., and physical examination including blood counts, urinalysis, serology, chest x-ray or tine skin test, and immunizations for diphtheria/tetanus within the last ten years.

**Program Requirements:**

1. Tuition for the twelve-month program is \$150.00 and is due in full at registration. Other fees throughout the year will include books, supplies, uniforms, bandage scissors, name pins, nursing shoes and cap, watch with second hand, testing fees, and malpractice insurance.
2. Students are responsible for their transportation to health agencies and are expected to attend regularly to both class and clinical assignment.
3. All absences must be made up during the allotted vacation or holiday time and/or following graduation.
4. A passing grade of 70 must be attained in each subject. Scores below 70 will constitute grounds for request of student withdrawal from program.
5. Observed holiday and vacation days will include:
  - 1 Day — July 4th
  - 1 Day — Labor Day
  - 2 Days — Thanksgiving
  - 1 Day — Christmas
  - 8 Days — Vacation
  - 1 Day — New Year
  - 5 Days — Spring Vacation
  - 1 Day — Memorial Day
  - 5 Days — Faculty Workshop
6. The Vocational Nursing Program may request at anytime the withdrawal or dismissal of a student whose health, conduct, personal qualities or abilities, and/or scholastic records indicate that it would be inadvisable for the student to continue in the program.



7. Transfer students must spend a minimum of six months in the Alvin Community College Vocational Nursing Program in order to be considered a graduate of this program.
8. A student who withdraws and wishes to be reinstated and receive credit for successfully completed courses must re-enter within one year from the date of withdrawal.

### V.N. PROGRAM

Course Number	Course Title	Minimum* Clinical Experience	Minimum* Class Hours
NURS 001	Personal and Vocational Adjustment		12 hours
NURS 002	Microbiology		12 hours
NURS 003	Anatomy and Physiology		70 hours
NURS 004	Vocational Nursing Skills		165 hours
NURS 005	Nutrition		25 hours
NURS 006	Pharmacology	1 week Functional Medication Administration and/or 8 weeks Total Pt. Care Assignment	70 hours
NURS 007	Mental Health-Mental Illness	2 weeks (If available)	25 hours
NURS 008	Maternal Child Nursing	3 weeks Obstetric 2 weeks Newborn 3 weeks Pediatric	91 hours
NURS 009	Medical-Surgical Nursing	6 weeks Medical 6 weeks Surgical	130 hours
<b>TOTAL</b>		<b>1100 hours*</b>	<b>600 hours*</b>

\*A minimum of 600 hours lecture and 1100 hours preclinical and clinical experience is required in the Vocational Nursing program.

### WELDING

**Degree:** Certificate

**Length:** Two-Semester (one-year) Program

**Purpose:** The one-year certificate in Welding is designed to prepare the student for full-time employment upon certification in the career of welding. The basic objective of the program is to develop the skills in ferrous and non-ferrous metals for employment in construction trades and area industrial needs.

**Program Requirements:** In addition to the general requirements for admission to the College, entry into the Welding Program requires a personal interview with the Director of the Welding Program.

### WELDING

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
<b>First Semester</b>				
✓WELD 110 ✓	Welding Processes	2	6	4
✓WELD 121 ✓	Arc Welding (Plate I)	2	6	4
✓WELD 160 ✓	Shop Equipment and Safety	1	2	2
✓DRFT 110 ✓	Fundamentals of Drafting (including Blueprint Reading)	2	6	4 <sup>3</sup>
✓PHED ✓	Physical Education	0	3	1
		7	23	15 <sup>14</sup>
<b>Second Semester</b>				
✓WELD 131 ✓	Basic MIG and TIG	2	6	4
✓WELD 122 ✓	Arc Welding (Plate II)	2	6	4
✓MATH 151 ✓	Technical Math I	3	0	3
✓ENGL 111 ✓	Communication Skills	3	0	3
✓PHED ✓	Physical Education	0	3	1
		10	15	15

Total Credits Required for the Welding Certificate.....30<sup>29</sup>

### DIPLOMA

The two-year Education Diploma is primarily for the student who wishes to complete his/her academic work at the junior college level and who desires to have maximum flexibility in course selection. He/she completes at least 62 semester hours in a program planned to meet his/her desires and needs. Essentially, the Diploma is designed for the student who does not desire to pursue a specific degree or certificate program.

### CONTINUING EDUCATION PROGRAM

#### Purpose

Alvin Community College is a comprehensive community college offering a wide variety of noncredit courses to area citizens. These courses are designed to provide general education opportunities for personal development, civic responsibility, social-cultural values, family enhancement, and to assist the individual in achieving his personal goals through less than semester length adult noncredit courses.

The college exists to serve the post-high school educational needs of the community. An effort is directed to achieving this purpose by offering adults in the community a program of diversified noncredit courses. This program of continuing education provides the opportunity for adults to improve their knowledge and basic skills while employed, or for pleasure and recreational purposes.



### General Information

Noncredit continuing education courses are generally open to persons of all ages, including school age children. However, certain courses are directed to the adult (18 years or older), while others are specifically directed to the younger student. Courses are scheduled for given dates and hours, and some continue for longer periods of time to fulfill more specific requirements.

Most courses are offered in the evening and range from three to 320 hours in length. Costs vary from \$1.50 to \$95.00 per course. Any course will be offered when there is sufficient demand, suitable meeting space on or off campus, and a qualified instructor. Various types of instruction are implemented to accomplish course objectives, some of them being lecture/laboratory practice formats, as well as seminars, workshops, and conferences. The college is interested in receiving requests for special courses, or for special time frames to offer them, and will attempt to schedule any short course not already identified when there seems to be sufficient interest.

Contact the Director, Continuing Education & Evening School Programs regarding scheduling any program, particularly those of an occupational nature that will provide training, skills, and knowledge for individuals already employed and individuals seeking employment.

### Continuing Education and Adult Non-Credit Courses

Noncredit courses in the following areas are generally scheduled each year.

#### VOCATIONAL

Basic Bookkeeping I	Floral Arranging
Basic Bookkeeping II	Forensic Photography (Basic)
Basic Law Enforcement (Qualifying Certificate)	Forensic Photography (Advanced)
Basic Welding	Gift Wrapping
Blueprint Reading (Industrial Construction & Maintenance)	Income Tax Preparation Skills
Blueprint Reading (Machine)	Medical Terminology
Bomb Handling Seminar	Medication Administration
Cardiopulmonary Resuscitation (CPR)	Medication Administration Refresher
Communications in Industry	Narcotics (Law Enforcement)
Comprehensive Nursing Review	Nursing Assistant
Conversational Spanish I (TDC)	Nursing Home Activities Director
Conversational Spanish II (TDC)	Office Machines Refresher
Crime Scene Search	Payroll Clerk
Effective Supervisor Practices	Police Report Writing
Emergency Care Attendant	Property & Casualty Insurance (State approved licensing approach)
Federal Income Tax for Consultants	Public Health Service Seminar
Filing Clerk	Record Keeping for Small Businesses
Fingerprinting Techniques (Basic)	Retail Management Seminar
Fingerprinting Techniques (Advanced)	Shorthand Review
	Typing Refresher

#### ART APPRECIATION

Ceramics	Macrame
China Painting	Oil Painting (Beg.)
Crafts	Oils & Acrylics
Drawing	Watercolors
Leathercraft	

### CONVERSATIONAL LANGUAGES

Conversational Czech I	Conversational Spanish I
	Conversational Spanish II

### RECREATION & PHYSICAL FITNESS

Aerobic Exercise	Golf (Adv.)
Aerobic Dance	Karate (All Levels) (ages 14 & over)
Ballroom Dancing	Karate Lab (ages 14 & over)
Baseball Fundamentals	Karate (ages 6-13)
Basketball Clinic	Mid-Eastern Dancercize (Beg.I)
Bridge (Beg.)	Mid-Eastern Dancercize (Beg.II)
Bridge (Int.)	Mid-Eastern Dancercize (Int.)
Canine Obedience Training (Beg.)	Racquetball
Canine Obedience Training (Adv.)	Safe Boat Handling (Coast Guard Approved)
Care & Grooming of Horses	Self Defense for Women
Country & Western Dancing	Tennis (Beg.)
Disco (Beg.)	Tennis (Int.)
Disco (Adv.)	Tennis (Adv.)
Exercise for Ladies	Texas Voluntary Hunter Safety
Football Fundamentals for Females	Yoga I
Golf (Beg.)	Yoga II
Golf (Int.)	

### MUSIC

Banjo	Class Guitar (Int.)
Class Piano	Jazz Music Workshop
Class Guitar (Beg.)	

### PSYCHOLOGY

Assertiveness Training	Interpersonal Relations
Human Potential Seminar	Self Hypnosis

### AVOCATIONAL & SPECIAL INTERESTS

Amateur Novice Radio (Ham Radio Novice License Training)	How to Write for Children
Animal Diseases & Sanitation	How to Write Poetry
Antique Furniture Repair	Instrument Ground School
Assertiveness Training for Women	Interior Design for the Layman
Automobile Care	Machine Blueprint Reading
Auto Tune-Up, Drum & Brake Discs	Machine Drafting
Aviation Ground School	Machine Shop
Basic Auto Mechanics	Making Clothes That Fit
Cabinetmaking	Major Appliance Maintenance and Repair
Cake Decorating (Beg.)	Manual Communications I (Sign Language)
Cake Decorating (Adv.)	Manual Communications II (Sign Language)
Career Planning for Women	Metric System
Creative Writing Workshop	Money Game
Defensive Driving (DDC)	Personal Finance Seminar for Women
Defensive Driving Motorcycle Supplement	Personal Income Tax
Deer Horn Plaque Mounting	Photography
Drafting for the Layman	Plumbing Maintenance & Repair
Duck & Goose Calling	Powderpuff Mechanics
Energy Seminar	Practical English for International Students
Estate Planning	
Fashion Fundamentals for Teens	



Firearm Knowledge for Women  
 Flood Loss Tax Relief  
 Free Enterprise System  
 Freelance Writing  
 Furniture Repair & Refinishing  
 Gardening  
 Geo-Thermal Planning Workshop  
 Good Nutrition in Today's Society  
 Gourmet Cooking  
 GED Preparation (General Educational Development)  
 Household Plumbing Repair & Maintenance

Preparing to Face the Working World  
 Seminar for Women  
 Sewing (Ladies' Coats)  
 Small Engine Tune-Up & Minor Maintenance)  
 Solar Energy Workshop  
 Speed Reading  
 Storm Spotting  
 Typing for Beginners  
 Welding (Basic Plate)  
 Welding (Oxyacetylene)  
 Woodworking

### COOPERATIVE EDUCATION

Cooperative Education, a plan whereby students blend theory and practice by working on training assignments in exploratory or career-related areas of professional interest, has had a tremendous growth in recent years. The structure of a cooperative experience may vary, but the underlying philosophy always remains the same: the student's job is an essential and integral part of his/her education.

Opportunities are provided for the student to apply the knowledge and skills learned in the classroom to actual job situations. Cooperative Education contributes greatly to the career development of the students.

Students seeking new careers or job enrichment can benefit from planned work experiences. Through these experiences, the student may move upward into jobs that require increasing skills, knowledges, and responsibilities.

Many students are unsure of their vocational goals. These students could specifically use cooperative education to explore and realistically test different career possibilities.

The Cooperative Education program is also designed to meet the needs of those students who already have jobs but are returning to Alvin Community College to take courses that would enable them to either advance on their present jobs or to make career changes.

The student who has decided to pursue a career and desires to enter the cooperative education, may choose from one of the following study and work calendars:

#### Study and Work Calendar (Plan A — Alternating)

Year in College	Semester of the Year	Study and Work Assignments by Semesters
First Year	Fall	Study
	Spring	Study
	Summer	Work
Second Year	Fall	Study
	Spring	Work
	Summer	Study

#### Study and Work Calendar (Plan B — Alternating)

Year in College	Semester of the Year	Study or Work Assignments by Semesters
First Year	Fall	Study
	Spring	Study
	Summer	Study
Second Year	Fall	Work
	Spring	Study
	Summer	Work

#### (Plan C — Parallel)

Year in College	Semester of the Year	Study or Work Assignments by Semesters
First Year	Fall	Study
	Spring	Study
	Summer	Study/Work
Second Year	Fall	Study/Work
	Spring	Study/Work

Utilizing Advisory Committees of Citizens, students, and educators in the Alvin Community College community, cooperative education closely coordinates work experience with the campus educational program; thus,

- helping the student to greater meaning in his/her studies,
- increasing his/her motivation,
- contributing to his/her sense of responsibility,
- developing a greater understanding of human relations,
- giving them a chance to find out more about specific jobs in relation to their own capabilities,
- providing him/her with earned income, and
- better preparing him/her to enter the working world or advance on his/her present job.

The cooperative education program helps to maintain a flow of trained personnel for public and private enterprises. The program attracts capable students and serves as an actual testing ground, permitting employers to identify and select well-trained personnel. By employing the co-op student, the employer may more effectively use the talents of high-salaried professionals.

Public and private enterprises may participate in and influence the educational process through cooperative education. Closer ties between Alvin Community College and the community often result.





## DESCRIPTION OF COURSES

DESCRIPTION OF COURSES

ACCOUNTING COURSES

ACCOUNTING 101: Introduction to Accounting. This course covers the basic principles of accounting, including the accounting cycle, journalizing, and posting. It also introduces the student to the accounting profession and the role of the accountant.

ACCOUNTING 102: Financial Accounting. This course covers the preparation and interpretation of financial statements, including the balance sheet, income statement, and statement of cash flows. It also discusses the role of the accountant in the business world.

ACCOUNTING 103: Managerial Accounting. This course covers the use of accounting information for internal management purposes, including cost accounting, budgeting, and variance analysis. It also discusses the role of the accountant in the business world.

ACCOUNTING 104: Tax Accounting. This course covers the principles and procedures of tax accounting, including the calculation of taxable income, the determination of tax liability, and the preparation of tax returns. It also discusses the role of the accountant in the business world.

ACCOUNTING 105: Auditing. This course covers the principles and procedures of auditing, including the selection of audit procedures, the performance of audit tests, and the preparation of audit reports. It also discusses the role of the accountant in the business world.

ACCOUNTING 106: International Accounting. This course covers the principles and procedures of international accounting, including the accounting cycle, journalizing, and posting. It also discusses the role of the accountant in the business world.

ACCOUNTING 107: Accounting Information Systems. This course covers the use of accounting information systems, including the design and implementation of accounting systems, and the role of the accountant in the business world.

ACCOUNTING 108: Accounting Ethics. This course covers the principles and procedures of accounting ethics, including the identification of ethical issues, the application of ethical principles, and the preparation of ethical reports. It also discusses the role of the accountant in the business world.



## DESCRIPTION OF COURSES

### ACCOUNTING

Norman Bradshaw, *Department Chairperson*  
Tom Branton

- ACCT 110. Office Accounting** (3 credits). Procedures and techniques used in recording business transactions and preparing financial statements. Course adapted to the needs of those training for secretarial positions. Two lecture hours and one laboratory hour per week.
- ACCT 211. Accounting Internship** (3 credits). The student works in a qualifying firm 20 hours per week in an occupational situation where he/she receives practical training and experience compatible with his/her management career objective. Students may receive credit from an approved full-time job.
- ACCT 212. Accounting Internship** (3 credits). The student works in a qualifying firm 20 hours per week in an occupational situation where he/she receives practical training and experience compatible with his/her management career objective. Students may receive credit from an approved full-time job.
- ACCT 221. Principles of Accounting I** (3 credits). Accounting for merchandise operations, proprietorships, partnerships, negotiable instruments, specialized books of original entry, and the voucher system, including emphasis on the financial aspects of accounting. Prerequisite: None. Recommendation: CSC1 110, MATH 180, 190, particularly for transfer students. Three lecture hours and one laboratory hour per week.
- ACCT 222. Principles of Accounting II** (3 credits). Partnership, corporations, cost accounting, assets, theory, and interpretation of financial statements, with special emphasis on the managerial aspects of accounting. Prerequisite: None. Recommendation: Same as for ACCT 221. Three lecture hours and one laboratory hour per week.
- ACCT 230. Tax and Payroll Accounting** (3 credits). Principles of Federal Income Tax, Social Security taxes, unemployment taxes, sales taxes. Payroll systems and accounting methods used in computing wages. Prerequisite: ACCT 221. Three lecture hours per week.
- ACCT 231. Intermediate Accounting I** (3 credits). Review of accounting principles, current assets and investments, plant assets, and intangibles. Prerequisite: ACCT 222. Three lecture hours per week.
- ACCT 232. Intermediate Accounting II** (3 credits). Study of liabilities, paid in capital, interpretation and analysis of financial statements, cash flow, reorganizations and price level impact on financial statements. Prerequisite: ACCT 231. Three lecture hours per week.
- ACCT 240. Cost Accounting** (3 credits). Basic concepts of cost accounting and how they function within a manufacturing firm. Material cost, labor cost, manufacturing overhead, and marketing costs of the cost accounting system. Prerequisite: ACCT 221. Three lecture hours per week.
- ACCT 250. Auditing** (3 credits). A study of system-based independent audits, including auditing objectives, procedures, interval control, working papers, and reporting on the fairness of financial statements. Prerequisite: ACCT 221. Three lecture hours per week.
- ACCT 260. Oil and Gas Accounting** (3 credits). Accounting oriented toward the production, refining, and distribution of petroleum products. Prerequisite: ACCT 221. Three lecture hours per week.

## AGRICULTURE

Stephen Wheeler, *Department Chairperson*

- AGRI 110. Animal Husbandry** (3 credits). This is a basic course of study to acquaint the student with various types and breeds of livestock: production systems, basic facility requirements, and markets. Basic phases of feeding, breeding, disease control and production of livestock are presented. Three lecture hours per week.
- AGRI 120. Fundamentals of Crop Production** (3 credits). Scientific approach to commonly grown field crops; their importance, value, use, characteristics, classification, distribution, climatic and soil requirements, production, storage, improvement and seed technology. Three lecture hours per week.
- AGRI 130. Agriculture Equipment Technology** (3 credits). Operation, storage, repair, maintenance and economic utilization of farm machinery and tractors. Principles of internal combustion engines, servicing farm engines and tractors, hydraulic systems, and adjustment of tillage and harvesting machines. Two lecture and two lab hours per week.
- AGRI 210. Farm Management** (3 credits). Farm planning for the most efficient use of land, labor and capital in the production of crops and livestock. Attention is given to the problem of becoming established in farming. Class work is based on surveys and analysis of farm or ranch organization for the purpose of more profitable operation. Three lecture hours per week.
- AGRI 220. Soils and Fertilizers** (3 credits). Physical and chemical properties of soils and their relation to soil development. Relationship between crops and soils. Practical use of and conservation of soils. Use of fertilizers and soil fertility. Two lecture and two lab hours per week.

## AIR CONDITIONING AND REFRIGERATION

Alec Huffman, *Department Chairperson*

- ACRH 129. Introduction to Solar Energy** (3 credits). This course is designed to familiarize the student with the use of solar energy as a viable energy resource. This course will cover the theory of solar applications and general use of such applications. Three lecture hours per week.
- ARCH 130. Solar Energy Fundamentals** (4 credits). This course is designed to provide the student with the knowledge and skills necessary to install, service, and maintain solar energy systems. Included will be a study of hot water supply, heat, and cooling systems. Two lecture hours and six laboratory hours.
- ACRH 131. Air Conditioning Fundamentals** (3 credits) Knowledge and skills necessary to install and service air conditioning (cooling) systems. Introduction to air conditioning systems, properties of air, humidity, psychrometric charts, comfort coolers, residential central systems, chilled water systems, evaporators, refrigerant controls, condensers, electrical circuits and controls, air cleaning dehumidifiers, heat pump systems. Three lecture hours per week.
- ACRH 132. Air Conditioning Fundamentals** (4 credits). Knowledge and skills necessary to service and maintain heat pumps, vortex tube comfort cooling, heat loads, air distribution, electronic filters, blue print reading, etc. Three lecture hours and three laboratory hours per week. Prerequisite: ACRH 131.
- ACRH 133. Air Conditioning and Electrical Circuits I** (3 credits). Basic principles of electricity, electron theory, sources of E.M.F., electrical circuits, magnetism, ohms law, conductors and insulators, power transformation, electronic motor



theory, use of electric meters and test equipment. Three lecture hours per week.

**ACRH 134. Industrial Electricity** (4 credits). Fundamentals of direct current and alternating current electron theory resistance, current, voltage, electromagnetism, inductance and capacitance and sinusoidal variations in passive networks of resistors and capacitors, and includes a survey of the field of electrical power distribution. Three lecture and two lab hours.

**ACRH 135. Air Conditioning and Refrigeration Troubleshooting** (2 credits). Additional study in any of three areas of specialization: domestic refrigeration, commercial refrigeration of air conditioning. Problems assigned individually or in groups. One lecture hour and three laboratory hours per week.

**ACRH 140. Introduction to Refrigeration** (4 credits). This course covers fundamentals of refrigeration, cycle theory, basic refrigeration systems, compressor construction, refrigerant controls, safety practices. Three lecture hours and three laboratory hours per week.

**ACRH 141. Refrigeration Systems Servicing I** (4 credits). Knowledge and skills necessary to install and service commercial refrigeration systems. Introduction to commercial refrigeration systems, commercial compressors, condensers, and receivers, water valves, evaporators, suction-liquid lines and manifolds, constant pressure valves, solenoid valves, defrost systems, motors and fans, electrical systems, electrical circuits, heat loads and system capacitors. Three lecture hours and three laboratory hours per week.

**ACRH 170. Domestic Refrigeration** (3 credits). This course covers knowledge and skills necessary to install and service domestic refrigeration systems. Types and construction of cabinets, compressors, controls, evaporators, refrigerant controls, defrosting systems, safety practices. Three lecture hours and one laboratory hour per week.

**ACRH 234. Air Conditioning and Electrical Circuits II** (4 credits). Studies will include generation of three-phase power, its distribution and application. Theory of operation, application and servicing of three-phase motors, relays, solenoids, line starters, time-delay controls, capacitors, pressure switches, thermal relays, sequencing controls, pneumatic controls, motorized operators, low voltage controls, humidity controls and electronic controls and blue print drawing and reading. Two lecture hours and six laboratory hours per week. Prerequisite: ACRH 133.

**ACRH 242. Refrigeration Systems Servicing II** (4 credits). Knowledge and skills necessary to service and maintain vending machines, beverage dispensers, soda fountains, ice machines, cascade systems, etc. Two lecture hours and six laboratory hours per week. Prerequisite: ACRH 141.

**ACRH 250. Heating and Ventilation** (4 credits). Knowledge and skills necessary to install and service air conditioning (heating) systems. Introduction to heating systems, fuels, types of burners, warm air systems, hydronic systems, steam systems, electric heat systems, thermostats, controls, electrical circuits, heat loads, infiltration, air volumes, duct design and humidifiers. Two lecture hours and six laboratory hours per week.

**ACRH 260. Heat Load Calculations** (3 credits). The study of heat loads as prescribed by Air Conditioning Refrigeration Institute (ARI) and American Society of Heating and Refrigeration Engineers (ASHRE). Three lecture hours per week.

**ACRH 280. Automotive Air Conditioning** (4 credits). Training in refrigeration and air conditioning theory and in the installation, servicing and maintaining of all types of automobile air conditioning equipment. Three lecture hours and three laboratory hours per week.

## ARTS

Ziya N. Sever, *Department Chairperson*

**ARTS 110. Art Crafts for Elementary Majors** (3 credits). A survey of art experiences for the elementary child. Laboratory experiences with media and technique and their use at different levels stressed. Philosophy, methodology, and organization included. Course meets requirements for certification. One hour of lecture and five lab hours a week.

**ARTS 111. Design I** (3 credits). This course is intended to familiarize the student with the basic elements and fundamentals of two-dimensional design and their application to works of art. Six lab hours per week.

**ARTS 112. Design II** (3 credits). Prerequisite: Design I or instructor approval. This course is intended to provide the student with a knowledge of the application of design principles to three-dimensional work. Six lab hours per week.

**ARTS 120. Art Appreciation** (3 credits). No Prerequisite. A general course in Art Appreciation open to all college students. Principles of design from the laymans standpoint. Critical evaluation of selected works of painting, sculpture, architecture, and industrial design. Art in relation to every day life. Three lecture hours.

**ARTS 121. Drawing I** (3 credits). A beginning course investigating a variety of media, techniques and subjects, exploring descriptive and perceptual possibilities of drawing. Six lab hours per week.

**ARTS 122. Drawing II** (3 credits). Prerequisite: Drawing I or instructor approval. Expansion of Drawing I stressing the expressive and conceptual aspects of drawing, including the human figure in an environmental setting. Six lab hours per week.

**ARTS 130. Ceramics** (3 credits). An introduction to hand building processes and glaze application. Potters wheel with emphasis on individual self expression.

**ARTS 131. Ceramics II** (3 credits). A continuation of the exploration of clay. Students may concentrate on either the potters wheel or hand building. Emphasis will be given to sculpture concerns. Prerequisite: Ceramics — ARTS 130 or instructor approval.

**ARTS 211. Drawing III** (3 credits). Prerequisite: Freshman Studio Core or instructor approval. An advanced course in two-dimensional design with an emphasis on individual expression. Six lab hours per week.

**ARTS 221. Design III** (3 credits). Prerequisite: Freshman Studio Core or instructor approval. An advanced course in two-dimensional design with an emphasis on individual expression. Six lab hours per week.

**ARTS 231. Painting I** (3 credits) Prerequisite: Freshman Studio Core. Exploring the potentials of various painting media with stress on color and composition. Six lab hours per week.

**ARTS 232. Painting II** (3 credits). A study of the techniques and media used in painting, expression is unrestricted as well as subject matter. These courses are open to all students who wish to paint. Art majors will be expected to attend painting laboratory. Six lab hours per week.

**ARTS 240. Watercolor Painting** (3 credits). The watercolor medium as a means of artistic expression in interpretation of still life, landscape, and figure subjects. Arts 111 or Arts 121 are equivalent. Six lab hours per week.

**ARTS 241. Life Drawing** (3 credits). Study of the techniques in various media usage. Emphasis on individual expression and understanding the fundamentals in portrait painting. Prerequisite: Freshman studio core or instructor approval.



**ARTS 251. Commercial Art I** (3 credits). Prerequisite: Freshman Studio Core. Introduction to processes and techniques of advertising art. Six lab hours per week.

**ARTS 252. Commercial Art II** (3 credits). Prerequisite: Freshman Studio Core. Advanced study of advertising art and production. Six lab hours per week.

**ART 260. Graphic Media** (3 credits). Critical evaluation of graphic media as well as creating works in serigraphy and other print media. Six lab hours per week.

### AUTOMOTIVE TECHNOLOGY

Bruce Westmoreland, *Department Chairperson*  
Alvin Horn, Hasso Schroder, Gary Smith

**AUTO 101. Basic Automotive** (2-4). Credit 4. The course will acquaint the student with service trade information, use and care of shop equipment and tools, standard transmission, brakes, clutches, rear axle, drive line principles, and a limited application of automotive shop practice.

✓ **AUTO 111. Internal Combustion Engine** (2-4). Credit 4. An introduction to the gasoline internal combustion engine. Technique and skill in inspection, repairing and overhauling of engine components, valve timing, use of special tools and equipment. Student will also receive an introduction to diesel engines.

✓ **AUTO 112. Automotive Electricity and Ignition System** (2-4). Credit 4. An introduction into the fundamentals of electricity as applied to the automotive vehicle. Classroom theory and laboratory practices of magnetic principles of electricity, functions of the diode and transistor, the storage battery, D.C. and A.C. charging systems, generators and alternators, and complete wiring systems.

✓ **AUTO 113. Carburetion and Fuel Systems** (2-4). Credit 4. A study of fuels and their applications, requirements, and effect on carburetion. Students will disassemble, clean, overhaul, reassemble, and adjust various types of carburetors.

✓ **AUTO 202. Automotive Transmission** (2-4). Credit 4. An introduction to theory and principle of hydraulic controls. The course will include a study of torque converters, power flow, gear trains, oil circuits, and correct procedures of disassembly, cleaning, inspection, repair, and reassembly of current types of automatic transmissions.

✓ **AUTO 211. Automotive and Truck Chassis** (2-4). Credit 4. A study of designs, construction, and frame alignment fundamentals of the vehicle chassis. Classroom theory and laboratory practices will include front end alignment, shock absorbers, springs, steering mechanism, wheel balancing, and power steering.

✓ **AUTO 212. Automotive Air Conditioning** (2-4). Credit 4. Basic principle of the automotive air conditioning unit. Classroom theory and laboratory practices will include a study of liquids, vapors, gases and heat transfer, and repairing of air conditioning units.

**AUTO 213. Automotive Diagnostics** (2-4). Credit 4. A complete study of diagnostic procedures as used in the analysis of automotive electrical systems, carburetor and combustion systems, and control systems for exhaust emission. Proper use of test equipment for diagnostic purposes will be taught. Prerequisite: AUTO 112, AUTO 113.

✓ **AUTO 214. Automobile Repair Shop Organization and Management** (2-0). Credit 4. A study of record keeping, finance, personnel, equipment and use of facilities is made. Problem areas in auto repair business are analyzed.

**AUTO 215. Accessory Equipment** (2-4). Credit 4. Automatic temperature systems, light sensors, speed control systems, power seats, power windows, clocks and similar types of systems used in modern automobiles are studied, analyzed and repaired. Prerequisite: AUTO 212, AUTO 112.

**AUTO 216. Automotive Technology Internship** (3 credits). The students work in a qualifying dealership or auto repair shop for 20 hours per week in an occupational situation where he receives practical training and experience compatible with his career objectives. Students may receive credit from an approved full-time job. Prerequisite: approval of department head.

### BIOLOGY

Stephen Wheeler, *Department Chairperson*  
John Holst, Bill Horine, Roy Turner

**BIOL 101-102. Contemporary Biology I, II** (3 credits) (3 credits). These courses stress fundamental characteristics of living matter from the molecular level to the ecological community. Basic biological principles relevant to animals are stressed. Contemporary Biology I and those relevant to plants are covered in Contemporary Biology II. Three lecture hours per week.

**BIOL 110. Environmental Conservation** (3 credits). The management of natural resources, considers the problems caused by population and pollution, balance of nature and man's importance in the environment. Three lecture hours per week.

**BIOL 111-112. General Biology I, II** (4 credits) (4 credits). Principle of biology including considerable study of the structure of animals and plants. Biol. 111 includes the study of the animal kingdom, human organ systems, and an introduction to cell physiology and chemistry. Biol. 112 includes a study of flowering plant anatomy and physiology, a survey of plant groups, genetics, ecology and evolution. Three lecture and three laboratory hours per week.

**BIOL 121-122. Anatomy and Physiology I, II** (4 credits) (4 credits). These courses are to be taken in sequence. A study of the structure and function of the organ-systems of the human body. Three lecture and two laboratory hours per week.

**BIOL 230. Entomology** (4 credits). A survey of the insect orders emphasizing the morphology, physiology, taxonomy, ecology, and life cycles of representative insects. Various control methods for harmful insects will be discussed. Three hours of lecture and three hours of laboratory.

**BIOL 225. Basic Microbiology**. (4 credits). A one semester course in microbiology stressing the principles and applications of microbial activity with emphasis given to the bacterial types. The role of microorganisms in disease, ecology, sanitation, industry, and public health will be stressed. Sterilization techniques, pure culture techniques and other aspects of microbial control will also be considered. Recommended for students in biology, pre-med, pre-dental, nursing, and related medical fields. Three lecture and three laboratory hours per week. Prerequisite(s): BIOL 111-112, or BIOL 121-122.

### BUSINESS ADMINISTRATION

Norman Bradshaw, *Department Chairperson*  
Bill Swenty

**BUAD 110. Introduction to Business** (3 credits). An overview of the American system of free enterprise with concentration on business and its environment, organization and management of the enterprise, management of human resources, production, marketing, and finance. Primary emphasis is placed on the way American businesses work, what they can do well and what they do poorly. Lecture three hours per week.



**BUAD 120. Business Law** (3 credits). The Commercial Codes pertaining to contracts, agency, property, sales, modern labor legislation, employment. Lecture three hours per week.

**BUAD 130. General Business Mathematics** (3 credits). A review of the fundamental arithmetic skills needed in the business world with particular emphasis on fractions, decimals, percentages, simple and compound interests, discounts, commissions, inventories, depreciation, installment sales and purchases, notes and interest, and payroll. Lecture three hours per week.

**BUAD 150. Business Psychology** (3 credits). This course will give the student an understanding of how business, governments, and other organizations compete, and get into conflicts over power struggles, they gain a wider view of how organizational psychology is related to other disciplines. The course is designed to help the student acquire some specific understandings, skills, and desires which will prepare them to learn to work with others with increased consideration, understanding, and effectiveness. Three lecture hours per week.

## CHEMISTRY

William R. Bitner, *Department Chairperson*  
Betty Graef

**CHEM 110. Introductory Chemistry for the Allied Health Sciences** (4 credits). A survey of the fundamentals of inorganic, and physiological chemistry. This course is designed for students in nursing and other health related fields. Topics covered include: bonding, acids and bases, salts, the gas laws, chemical equations, ionization, organic chemistry, and physiological chemistry. Three lecture and two hours laboratory each week.

**CHEM 111-112. Introductory Chemistry I, II** (4 credits) (4 credits). These courses are to be taken in sequence. Topics covered include: atomic-molecular theory, valence, formulae, chemical equations, gas laws, solutions and an introduction to the various organic functional groups, systematic organic nomenclature, elementary biochemistry, polymer chemistry, and heterocyclics. Three lecture and two hours laboratory per week.

**CHEM 121-122. General Chemistry and Analysis** (4 credits) (4 credits). These courses are to be taken in sequence. The topics presented include: atomic structure; the periodic classification; the gas laws; reactions involving oxygen and hydrogen; acids, bases, and salts; solutions of electrolytes; ionization, and the halogens. The study of systems involving chemical equilibria and the qualitative analysis of the common cations and anions using semi-micro techniques in the laboratory are also emphasized. Three lecture and four laboratory hours per week.

**CHEM 210. Quantitative Analysis** (4 credits). The fundamental principles of quantitative analysis are emphasized. Determinations are made involving gravimetric and volumetric methods. Acid-base titrations are carried out. Some of the more modern techniques are utilized, which include spectrophotometric and electroanalytical procedures. Two hours of lecture and six hours of laboratory per week. Prerequisite: CHEM 122.

**CHEM 211-212. Organic Chemistry** (4 credits) (4 credits). These courses are to be taken in sequence. Courses cover general principles and theories of elementary organic chemistry with special emphasis on classes, characteristics, structures, preparation, reactions and nomenclature of compounds. Laboratory covers techniques, as well as the study of typical reactions. Organic Qualitative analysis is emphasized in the laboratory the second semester. Prerequisite: A minimum grade of C in Chemistry 121, 122.

## CHILD CARE and DEVELOPMENT

Joan Townsend, *Department Chairperson*  
Shareen Sheehan

**CHCD 110. Pre-School and Day Care Programs** (3 credits). A study of child development through pre-school and day care programs. Includes the history, philosophy and practices of specialized care with emphasis on the educational, recreational and health needs of the child. Three lecture hours a week.

**CHCD 130. Child Care Services** (3 credits). Child care work with troubled, dependent and neglected children and youth away from their own families. Includes history, philosophy and practices of foster care, adoption and related social services agencies. Three lecture hours a week.

**CHCD 140. Child Care Recreation** (2 credits). An introduction to the fundamental principles of child development through physical activity. Physical activities appropriate to motor development and movement education. One lecture and two laboratory hours a week.

**CHCD 150. Introductory Creative Activities** (2 credits). Introduction to art media suitable for use with young children. Includes the process of working with paint, clay, wood, paper and other materials. One lecture and two laboratory hours a week.

**CHCD 160. Literature for Young Children** (2 credits). An introduction to the various forms of children's literature. Examination is made of literature available specifically for the young child. The student is acquainted with authors and illustrations of children's books. One lecture hour and two laboratory hours per week.

**CHCD 170. Music for Young Children** (2 credits). A study of the fundamentals of music, including rhythms, harmonic and melodic concepts, pitch, key determination; the musical interests of the child at early age levels. Emphasis to methods which will encourage musical participation by children. One lecture and two laboratory hours a week.

**CHCD 200. Exceptional Children** (3 credits). An introduction to the understanding of exceptional children — the mentally retarded, the visually handicapped, the auditorially handicapped, the child with speech and language disorders, the brain damaged, the child with behavior disorders and the child with serious emotional disturbances. Includes study of theories relevant to treatment and education of exceptional children and types of services available in special education. Three lecture hours a week. Prerequisite: Psyc 130 or consent of Department.

**CHCD 210. Creative Activities II** (2 credits). Instruction in a variety of simple science media for use with young children. Basic instruction in the use of tools to facilitate the creation and maintenance of play equipment. Techniques for toy making, creative activities for hospitalized children and simple science projects are developed. One lecture and two laboratory hours a week.

**CHCD 220. Child Nutrition and Health Care** (3 credits). Provides students with basic information on human nutrition, the nutritional value of food, and an understanding of food and food habits in relation to nutrition of the young child. Examination of food purchasing, storage, safe handling and sanitation. Importance of good nutrition in maintaining good health is presented. Three lecture hours a week.

**CHCD 230. Advanced Child Growth and Development** (3 credits). Provides the student with an understanding of the physical, social, emotional, and mental development of the young child up to preadolescence, with concentration on



child guidance. Increases student's understanding of the dynamics of behavior, including attitudes, values and knowledge of growth patterns. Three lecture hours a week.

**CHCD 240. Child Care and Development I** (4 credits). The history, philosophy, and ethics of child care, types of child caring facilities, laws and standards governing agency management. Understanding the child and the roles of team members within the agency. Emphasis is placed on the responsibilities, personality and involvement of the child care worker. Includes a two-hour visit each week to designated facilities. Three lecture and two laboratory hours a week.

**CHCD 250. Child Care and Development II** (4 credits). A survey of the differences in children in child caring facilities, special methods of care and study of specific children based upon actual records. A study of communications, reports and agency records on the child. Provides opportunity for extensive observation of curriculum within a selected facility which allows the student to begin specialization in a particular field. Prerequisite: Child Care 240 or consent of instructor. Two lecture and four laboratory hours a week.

**CHCD 260. Seminar and Field Work** (4 credits). On-the-job experience under the supervision of a professional team with opportunities for direct involvement in program activities in the area of specialization. Three lecture and eight laboratory hours a week.

**CHCD 270. Special Project** (4 credits). Opportunity for a student or group of students to pursue a special interest in the area of child care. Special projects which would demonstrate a functional capability within an area of child care will be undertaken with the approval of the instructor. Student projects may include child development models in areas of literature, recreation, music, etc. Three lecture and eight laboratory hours a week.

## COMMUNICATIONS

Thomas E. Bowen, *Department Chairperson*  
Cathy Forsythe

**COMM 105. Introduction to Mass Communications** (3 credits). A study of communication with large groups of people through such media as newspapers, magazines, radio and television. The course examines the nature of the communicator, the audience, the media and their interaction to form the communication experience in modern society. Three hours of lecture per week.

**COMM 110. Survey of Radio and TV** (3 credits). A survey of the broadcasting industry. Historical highlights, technical developments, and regulation of radio and television will be discussed. Operation of radio and TV equipment will be explained. Radio and television programming, cable TV and new electronic media will be covered. Three lecture hours per week.

**COMM 111. Basic Recording Techniques** (3 credits). This course is designed to familiarize the student with modern multi-track recording techniques. The course includes live 8-track recording sessions offering the student the opportunity to apply the related techniques. One hour lecture and two hours of lab per week.

**COMM 112. Advanced Audio Recording Techniques** (3 credits). This class is designed primarily as a recording "projects" course. Under the guidance of qualified instructors, the student will produce approved projects such as demo tapes, radio spots, jingles or master tapes for records. Studies also include sound reinforcement systems and the practical experience of assisting the ACC audio staff with programs and concerts on and off campus. Scheduled studio time will be arranged by appointment. One hour of lecture and two hours of lab per week.

**COMM 115. Writing for Mass Media** (3 credits). Introduction to the fundamentals of writing and fact-gathering skills of journalism, advertising, and public relations for print and electronic media. Creating and writing effective commercials and public service announcements for radio and TV. Three hours of lecture per week.

**COMM 210. Radio News Workshop** (3 credits). Preparation of news and specialized news program copy for radio presentation. News styles for the electronic media, Spot news, interpretive specials, and analysis. Lab will include airing of newscasts on the College radio station. One hour lecture and four hours of lab per week. Prerequisite: ENGL 111 or 121 and instructor approval.

**COMM 211. Radio Production** (3 credits). A practical approach to the presentation of announcements and live programs as encountered in the daily operation of the average radio station. Beginning instruction in audio control. The course will include on-air experience at the College radio station. One hour of lecture and four hours of lab per week. Prerequisite: ENGL 111 or 121, and instructor approval.

**COMM 220-221. Independent Study in Communications** (3 credits) (3 credits). Designed for advanced work in communications, meeting specific needs of the student. The student will, by approval of the instructor and department chairperson, prepare and execute a written contract (proposal for learning). Upon completion of all aspects of the contract, credit will be given by approval of the department. Three lecture hours per week. Prerequisite: Approval of Department Chairperson.

## COMPUTER SCIENCE

Gerald Pullen, *Department Chairperson*  
Don Armstrong

**CSCI 110. Introduction to Computer Science** (4 credits). An introduction to Computer Science with FORTRAN IV. FORTRAN IV programming includes input, output, looping, arrays, and sub-programs. Also includes reading and interpreting FORTRAN IV programs. This course also contains computer science history, number systems, algorithms, flowcharts, block concepts of computer organization, applications, compiles overview, overview of other programming languages, review of cards, papertape, magnetic tape, magnetic disc, and key-punch. Three hours lecture and three hours laboratory per week. Prerequisite: High School algebra or equivalent.

**CSCI 112. Programming for Engineering and Science** (4 credits). Computer programming using FORTRAN IV with emphasis on the solution of engineering and science problems. Three hours lecture and three hours laboratory per week. Prerequisite: MATH 121 or MATH 180 or higher.

**CSCI 114. Computer Programming (BASIC)**. (4 credits). This course is to teach BASIC Computer programming language. BASIC is an interpreter programming language designed for use at a terminal. Three hours lecture and three hours laboratory per week. Prerequisite: None.

**CSCI 116. Intro. Computer Graphics** (4 credits). An introduction to computer graphic hardware, software, and theory, including experience with a graphics terminal, plotter, programs, and subroutines. Three hours lecture and three hours laboratory per week. Prerequisites: CSCI 110 and MATH 121.

**CSCI 120. RPG Programming** (4 credits). Report Program Generator is a compiler language that will process data into a printed report with a minimum of programming effort. The coding forms provided make the programmer's role prin-



cially clerical. Lecture will include a detailed description of the language, forms and use. Several programs are constructed, run, and debugged as an aid to comprehending RPG and its capabilities. Three hours lecture and three hours laboratory per week. Prerequisite: None.

**CSCI 130. Computer Programming (Introductory COBOL)** (4 credits). Students will be required to program, debug, and test specified business problems using COBOL. This high level language is commonly used for business problems. Lectures will cover processing of data from the original document to the final report. Three hours lecture and three hours laboratory per week. Prerequisite: None.

**CSCI 200. Special Topics.** (4 credits). This course consists of special projects designed to meet individual students needs and interests. Three hours lecture and three hours laboratory per week. Prerequisite: Consent of the department.

**CSCI 210. Computer Programming (Advance FORTRAN)** (4 credits). A detailed study of Fortran IV. This high level language is commonly used in scientific computations. One of the basic objectives is providing the student with the knowledge to handle mathematical and statistical problems on a computer. Three hours lecture and three hours laboratory per week. Prerequisite: CSCI 110, MATH 121 or MATH 180, or consent of the department.

**CSCI 215. Digital Computer Fundamentals** (4 credits). A study of digital theory, devices, bus-organized computers, architecture, and programming. Three hours lecture and three hours laboratory per week. Prerequisite: Consent of the department.

**CSCI 220. Computer Programming (Adv. RPG)** (4 credits). This course is a continuing study of CSCI 120 emphasizing array processing, table look-ups, matching records. A treatment of disc files involving file updating. Three hours lecture and three hours laboratory per week. Prerequisite: CSCI 120 or Consent of Department.

**CSCI 230. Computer Programming (Advanced COBOL)** (4 Credits). This course is designed to acquaint the student with the more advanced aspects of COBOL. Complete business application systems will be implemented, coded, programmed, tested, and documented as one would expect to find in a real life environment. Three hours lecture and three hours laboratory per week. Prerequisite: CSCI 130.

**CSCI 240. Business Systems Analysis.** (4 Credits). A study of the area of systems and systems analysis. Topics covered are: scope of systems analysis, systems investigation, input design, output design, designing files, design and documentation, proving the design, communications, justifying the system, implementation, controls and security, hardware, software. Three hours lecture and three hours laboratory per week. Prerequisite: CSCI 230 and Corequisite CSCI 220.

**CSCI 250. Computer Programming** (4 Credits). A study of assembly languages. The student studies assembly language. Three hours lecture and three hours laboratory per week. Prerequisite: CSCI 110, CSCI 115, and consent of the department.

**CSCI 260. Mini/Micro Computers.** (4 credits). A study of mini/micro computers and their use in business and industry. Mini/micro computer programming and hands-on operation. Three hours lecture and three hours laboratory per week. Prerequisite: Consent of the department.

**CSCI 270. Computer Programming (PASCAL)** (4 credits). A study of the PASCAL programming language. Students will be required to program, debug and test problems using the PASCAL language. Three hours lecture and three hours laboratory per week. Prerequisites: Consent of Department.

**CSCI 280. Data Base Systems** (4 credits). An introduction to data based management systems, data organization and structure, and data base design; the student will use a query language for business applications. Three hours lecture and three hours laboratory per week. Prerequisite: Consent of Department.

## COOPERATIVE EDUCATION

Crystal Pancamo, *Department Chairperson*

**COOP 111. Seminar and Work Experience.** (3 credits). Prerequisite: Approval of Coordinator of Cooperative Education. A comprehensive treatment of internship related activities, individualized objectives, and regularly scheduled activities. Concentration on proper interviewing techniques, letters of application and resume writing, developing human relations skill and effective communications on the job, investigating career choices, developing better study habits and time-management techniques.

**COOP 112. Seminar and Work Experience.** (3 credits). Prerequisite: Approval of Coordinator of Cooperative Education. A comprehensive treatment of internship related activities, individualized objectives, and regularly scheduled activities. Concentration of the development of a philosophy towards work including personal life planning, value clarification, and self awareness.

**COOP 211. Seminar and Work Experience.** (3 credits). Prerequisite: Approval of Coordinator of Cooperative Education. A comprehensive treatment of internship related activities, individualized objectives, and regularly scheduled activities. Concentration on long-term employment considerations, continue developing a positive image, investigating the implications of body language, and learning a technique for relaxing.

**COOP 212. Seminar and Work Experience.** (3 credits). Prerequisite: Approval of Coordinator of Cooperative Education. A comprehensive treatment of internship related activities, individualized objectives, and regularly scheduled activities. Concentration on self awareness activities, how to sell one's viewpoint and related career investigation.

## CORRECTIONAL SCIENCE

Deloss A. Miller, *Department Chairperson*

**CRSC 110. Introduction to Corrections.** (3 credits). An examination of the total correctional process from law enforcement through the administration of justice, probation, prisons and correctional institutions. History, philosophy, methods and techniques. Three lecture hours per week.

**CRSC 120. Penology** (3 credits). Analysis and evaluation of contemporary correctional systems; discussion of recent research concerning the correctional institution and the various field services. Three lecture hours per week.

**CRSC 130. American Legal System** (3 credits). The court system of the United States is explained at all levels, emphasizing adversary procedures in the criminal and civil procedures in the juvenile court, together with recent Supreme Court decisions regarding both. Three lecture hours per week.

**CRSC 140. Crime and Delinquency** (3 credits). A survey of the nature and extent of crime and delinquency, together with the major approaches to causation, apprehension, control, and treatment. Three lecture hours per week.

**CRSC 150. Introduction to the Criminal Justice System.** (3 credits). An overview of the total system of the administration justice provided with emphasis on due



process and on the constitution guarantees. Discussion of Texas Criminal Procedure and the Texas Penal Code. Three lecture hours per week.

**CRSC 210. Probation, Pardons, and Parole.** (3 credits). Probation as a judicial process and parole as an executive function are examined as community-based correctional programs and the use of pardons is reviewed. Three lecture hours per week. Prerequisite: CRSC 110 or CRSC 120.

**CRSC 220. Institutional Procedures, Jails and Detention** (3 credits). The function of the custodial staff is examined with special emphasis on the correctional officer. Institutional procedures are reviewed, including reception, classification, program assignment, and release procedures. Three lecture hours per week.

**CRSC 230. Contemporary Practices in Corrections.** (3 credits). Modern trends in corrections, such as the community-based programs in work-release, half-way houses, contract program planning, as well as the therapeutic community and treatment team concept in institutions are described and evaluated. Three lecture hours per week. Prerequisite: CRSC 120, CRSC 140, and CRSC 150.

**CRSC 240. Corrections I: Organization and Operations.** (3 credits). A minimum of three months in an approved correctional setting taken after two semesters of approved work. The organization of correctional institutions is studied. Treatment, custody and support activities are examined. Students utilize functional charts for the various departments within the institution. Prerequisite: Consent of Division Chairman.

**CRSC 250. Corrections II: Theory and Practice.** (3 credits). A minimum of three months in an approved correctional setting taken in conjunction with CRSC 240. Current theory and practice in state correctional institutions are examined with emphasis on the Texas Department of Correction programs. Prerequisite: Consent of Division Chairman.

## COURT REPORTING

Mary Knapp, *Department Chairperson*

Bill Cranford, Laura Noulles, Jim Preston, Nancy Reed, Clayton Williams

**CTRP 111. Machine Shorthand Theory** (6 credits). Theory of machine shorthand, vocabulary development, and skill building through reading and machine practice. Dictation and transcription of machine shorthand notes. Two theory courses are required of the beginning student. Prerequisite: none. Lecture, 6 hours; Laboratory, 4 hours; Total, 10 hours per week.

**CTRP 112. Machine Shorthand I (60-80-100)** (6 credits). Development of vocabulary and skill building through concentrated emphasis on live dictation and transcription of machine shorthand notes. The objective of the course is to attain the speed of 100 words per minute. The student advances at his/her own rate. Prerequisite: CTRP 111. Lecture, 6 hours; Laboratory, 4 hours; Total, 10 hours per week.

**CTRP 120. Machine Shorthand II (120-140)** (6 credits). Emphasis on increased skill and speed. The objective of the course is to attain the speed of 140 words per minute. The student advances at his/her own rate. Prerequisite: CTRP 112. Lecture, 6 hours; Laboratory, 4 hours; Total, 10 hours per week.

**CTRP 121. Law and Legal Terminology** (3 credits). Course objectives are to insure comprehension of meanings and applications of legal terminology, while instructing in the various fields of law encountered in the practice of the court reporter. Emphasis is placed on the judicial system, types of courts, jurisdictions, and appellate procedures. Court practices and responsibilities of the reporter are fully covered, including ethics of the profession. Course also in-

cludes researching of legal reference books and handling of citations in the record. Lecture, 4 hours; Laboratory, 1 hour. Total, 5 hours per week. Prerequisite: None

**CTRP 122. Medical Terminology** (3 credits). Study of human anatomy, skeletal structure, systems of the body, and medical specialties, coupled with lectures, study guides, tests and exercises designed to insure knowledge of the components in building medical vocabulary and application thereof. Lecture, 4 hours; Laboratory, 1 hour; Total, 5 hours per week. Prerequisite: None

**CTRP 130. Transcription I** (2 credits). Supervised activity with continued concentration on dictation and transcription of shorthand notes. 0 lecture hours and 5 laboratory hours per week.

**CTRP 140. Transcription II** (2 credits). Supervised activity with continued concentration on dictation and transcription of shorthand notes. 0 lecture hours and 5 laboratory hours per week.

**CTRP 141. Grammar and Punctuation I** (2 credits). The study of basic grammar as applied to the reporting profession, with emphasis on parts of speech; formation of plurals and possessives, verbal, adverbial, and adjective comparisons; sentence patterns; capitalization, and vocabulary development. This study approaches English grammar from the proofreading aspect rather than from the writing aspect. (This course is to be given on alternate days with ENGL 111 — Communication Skills I — 3 credits.) Two lecture hours and no lab hours per week.

**CTRP 142. Grammar and Punctuation II** (2 credits). Specialized English training applied to the reporting profession, including the study of clauses and phrases, rules of punctuation, capitalization, word division, proper transcription, forms for numerals, use of abbreviations, transcript editing, proofreading, and NSRA Punctuation. The student is given numerous dictations for transcribing and is tutored in voice and speech patterns while reading notes aloud. (This course is to be given on alternate days with ENGL 112 — Communication Skills II — 3 credits.) Two lecture hours and no lab hours per week.

**CTRP 210. Transcription III** (2 credits). Supervised activity with continued concentration on dictation and transcription of shorthand notes. Lecture, 0 hours; Laboratory, 5 hours. Total, 5 hours per week.

**CTRP 211. Machine Shorthand III (160-180)** (6 credits). Continued emphasis on skill and speed building. The objective is to attain the speed of 180 words per minute. Prerequisite: CTRP 120. Lecture, 6 hours; Laboratory, 4 hours; Total, 10 hours per week.

**CTRP 212. Machine Shorthand IV (200-225)** (6 credits). Continued emphasis on skill and speed building, culminating in the attainment of the speed of 225 words per minute. Prerequisite: CTRP 120. Lecture, 6 hours; Laboratory, 4 hours; Total, 10 hours per week.

**CTRP 220. Transcription IV** (2 credits). Supervised activity with continued concentration on dictation and transcription of shorthand notes. 0 lecture hours and 5 laboratory hours per week.

**CTRP 221. Courtroom Procedures I** (3 credits). Untimed simulated courtroom situations are presented, using attorneys, witnesses, and court personnel. Emphasis is placed on varied courtroom practices, such as voir dire examinations, opening and closing statements, objections, marking of exhibits, indexing and filing of notes, citations, read back, and preparation of transcripts in required format. Prerequisite: CTRP 120. Three lecture hours; Two lab hours per week.

**CTRP 222. Courtroom Procedures II** (3 credits). Untimed simulated courtroom situations are continued as described in Courtroom Procedures I. Material is pre-



sented to develop endurance and machine writing techniques. Court Reporting ethics are stressed with emphasis on the responsibilities of a reporter and the profession. At this level arrangements are made when possible for the student to participate in actual court proceedings with an official court reporter in attendance. Three lecture hours; Two lab hours per week. Prerequisite: CTRP 221.

**CTRP 225. Technical Dictation** (3 credits). Dictation emphasizing all aspects of technical terminology, involving medical, legal, surveying, engineering, chemical, maritime, patent, aero-space, etc., with read-back and transcription assignments in correct format, including proper transcription of mathematical and chemical formulae. This course utilizes one- and two-voice dictation material. 3 lecture hours and 2 laboratory hours per week.

**CTRP 240. General Office Practices** (3 credits). The first half introduces the use of office dictation equipment, primarily the Stenorette; stresses dictation from notes, emphasizing enunciation in general and verb tenses, word endings, and punctuation in particular; promotes practice in transcribing from reporters tapes, use of work sheets, marking exhibits, and working with general deposition forms and procedures. The second half introduces techniques of billing, basic bookkeeping and tax records, sample letter writing, indexing and filing of notes, and pertinent office practices. At this level arrangements are made for the student to accompany a practicing court reporter on actual assignments, observing on-the-job techniques and the job preparations at the office. Prerequisite: CTRP 211. Three lecture hours and two lab hours per week.

## DRAFTING

Ben Daw, *Department Chairperson*  
Larry Huffman

**DRFT 105. Blueprint Reading I** (2 credits). A course designed to introduce the beginning draftsman or tradesman with available catalogs, books and vocabulary used in the engineering field. Classroom instruction will consist of reading and interpreting mechanical blueprints, offering a basic knowledge of sketching, dimensioning, section views, assembly drawings and drafting techniques. Two lecture and one laboratory hours per week.

**DRFT 106. Blueprint Reading II** (2 credits). A course designed to introduce the beginning draftsman or tradesman with available catalogs, books and vocabulary used in the architectural and construction fields. The study of house and small building blueprints will be used. Designed for persons in all areas of construction, as well as policemen, firemen, business and finance managers. Two lecture and one laboratory hours per week.

✓ **DRFT 110. Fundamentals of Drafting** (3 credits). A course for students without previous drafting experience or non-drafting majors. A basic course including use of drawing instruments, lettering, geometric construction, orthographic projection with an introduction to specialized areas. Two lecture and four laboratory hours per week.

✓ **DRFT 111. Technical Drafting** (4 credits). The principles of technical drawing as required to express ideas graphically are introduced. Topics include: use of instruments, geometric construction, orthographic projection, sections, auxiliary views, revolutions, dimensioning, axonometric projection, intersections and developments. Recommended for drafting and engineering majors. Two lecture and six laboratory hours per week.

✓ **DRFT 120. Descriptive Geometry** (3 credits). Problems relating to point, lines, and planes; intersection and sheetmetal developments; and auxiliary views. Two

*Delete 105, 106, 170, 212, 222, & 232  
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lecture and four laboratory hours per week. Prerequisite: DRFT 111 or equivalent.

✓ **DRFT 130. General Drafting** (4 credits). Instruction provides a basic introduction to drafting procedures as applied in various areas of drafting. Such topics as pipe, machine, concrete foundations, pressure vessels, structural steel and architectural drafting techniques are introduced to aid the student in his decision toward an area of specialization. Two lecture and six laboratory hours per week. Prerequisite: DRFT 111.

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- **DRFT 170. Industrial Design** (2 credits). A course for students employed in or studying construction trades or related fields. A brief review of basic drafting skills is followed by a study of sheet metal drafting, sizing and placement of ducts, plumbing and electrical layouts. Two lecture and one laboratory hours per week.

✓ **DRFT 211. Pipe Drafting** (4 credits). A basic course designed for the study of engineering standards, pipe and fitting designs, symbols and specifications. Two lecture and two laboratory hours per week. Prerequisite: DRFT 111 or consent of department.

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- **DRFT 212. Pipe Drafting** (4 credits). A continuation of DRFT 211 for students desiring a more comprehensive knowledge and skill in pipe drafting. Two lecture and six laboratory hours per week. Prerequisite: DRFT 211.

✓ **DRFT 221. Structural Drafting** (4 credits). A course designed to cover AISC specifications and standards, design and detail, or structural members and connections. Two lecture and six laboratory hours per week. Prerequisite: DRFT 111, or consent of department.

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- **DRFT 222. Structural Drafting** (4 credits). A continuation of DRFT 221 with emphasis on structural steel design and beams and columns working with kip loads. Attention is also given to column details, erection drawings, skewed connections, and miscellaneous detail. Two lecture and six laboratory hours per week. Prerequisite: DRFT 221.

✓ **DRFT 231. Electrical Drafting** (4 credits). An introduction to electrical schematics and diagrams. Also covers basic electricity and study of electrical and electronic symbols, their application and associated terminology. Two lecture and six laboratory hours per week. Prerequisite: DRFT 111, or consent of Department.

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- **DRFT 232. Electrical Drafting** (4 credits). A continuation of DRFT 231 on an advanced level with emphasis on electrical measurements and codes. A general coverage of voltage, currents, resistance and their relationship is included. Two lecture and six laboratory hours per week. Prerequisite: DRFT 231.

✓ **DRFT 241. Architectural Drafting** (4 credits). Basic drafting techniques as related to the preparation of residential details, with emphasis on floor plans, plot plans, foundations, structural details, sections and elevations. Two lecture and six laboratory hours per week. Prerequisite: DRFT 110 or permission of department.

✓ **DRFT 242. Architectural Drafting** (4 credits). A continuation of DRFT 241 on an advanced level. Two lecture and six laboratory hours per week. Prerequisite: DRFT 241.

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- **DRFT 251. Machine Drafting** (4 credits). Problems relating to detail and assembly drawings of small machines, with emphasis on screw threads, fasteners, gears, and shop processes. Two lecture and six laboratory hours per week. Prerequisite: DRFT 130 or permission of department.

*delete*  
- **DRFT 252. Machine Drafting** (4 credits). A continuation at an advanced level of DRFT 251 developing machine design skills. Two lecture and six laboratory

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hours per week. Prerequisite: DRFT 251.

- ✓ **DRFT 260. Surveying** (3 credits). A course designed to emphasize the principles of surveying, including the use of the tape, level, transit, tabulation of field data, boundary surveys, and basic topography mapping. Two lecture and three laboratory hours per week. Prerequisite: Technical Math I and/or consent of the department.
- ✓ **DRFT 265. Map Drafting** (4 credits). Plotting surveyor's notes, plot plans and plats. Streets, highways, waterways and industrial applications are included. Attention is given to lettering and lettering devices as used in civil drafting. Two lecture and six laboratory hours per week. Prerequisite: DRFT 111 or approval of department.
- ✓ **DRFT 270. Construction Drafting** (4 credits). A course designed to gain insight into all types and methods of construction, the nature of various building materials and their use, and methods of construction. Drafting III or approval of department. Two lecture and six laboratory hours per week.
- ✓ **DRFT 275. Industrial Model Construction** (4 credits). Construction of models are used to introduce the student to the methods of, uses, principles and techniques used in the building of industrial models. Two lecture and six laboratory hours per week. Prerequisite: DRFT 111 or approval of department.
- ✓ **DRFT 281. Special Problems I** (4 credits). A course designed to give the student an opportunity to develop additional skills in an area of major interest or explore an additional specialized field. The student will complete actual job problems in the chosen area of his interest. Two lecture and six laboratory hours per week. Prerequisite: Approval of Department.
- ✓ **DRFT 282. Special Problems II** (4 credits). May be repeated for credit when topics vary. Two lecture and six laboratory hours per week. Prerequisite: Approval of Department.

### DRAMA

C. Jay Burton, *Department Chairperson*  
Clint White

- DRAM 111, 112, 211, 212. Rehearsal and Performance** (2 credits for each course). This course is an activities course in which the student participates in theatre productions either as actor or crew member. Six lab hours per week.
- DRAM 130. Introduction to the Theatre Arts.** (3 credits). This course is the study of the principles of drama and the development of the Theatre as an Art as evidenced through study of styles and forms of productions past and present. Three lecture hours and two laboratory hours per week.
- DRAM 140. Introduction to Acting** (3 credits). This course is designed to study the basic techniques of acting. Included in the course will be character analysis, character movement, and improvisational acting. Two lecture hours and four laboratory hours per week.
- DRAM 145. Movement and Dance for the Performing Arts** (3 credits). This course provides instruction and participation in stage movement and beginning modern dance. One hour of lecture and three hours of lab.
- DRAM 150. Stage Makeup.** (3 credits). A survey of the reasons for stage makeup and the types of makeup available. Principles of defining makeup for characters in a play. Intensive practical application. Two hours of lecture and four hours of laboratory per week.
- DRAM 230. Introduction to Technical Theatre** (3 credits). This course is designed to study the basics for working in the areas of construction, properties, costum-

ing, lighting, and sets. Two hours of lecture and four laboratory hours per week.

- DRAM 235. Intermediate Technical Theatre** (3 credits). This course is designed to study the basic concepts of stage design including set design, costume design, and lighting design. The course also studies the principles of execution of these designs. Three lecture hours and three laboratory hours per week. Prerequisite: DRAM 230.
- DRAM 240. Advanced Acting** (3 credits). This course studies the different styles to perform in all areas of Theatre. Areas of concentration are Greek, Roman comedy, Elizabethan, and Restoration. Two hours of lecture and four hours of laboratory per week. Prerequisite: DRAM 140.
- DRAM 250. Theatre Speech** (3 credits). This course is designed to study the necessary development of the voice for use for the stage. This course includes voice development, placement, projection and diction. Three lecture hours per week. Prerequisite: DRAM 140.
- DRAM 260. Modern Theatre Literature** (3 credits). A survey of the dramatic literature and dramaturgical tendencies in Europe and America since the time of Ibsen. Three lecture hours per week.

### ECONOMICS

Arthur Daniel, *Department Chairperson*  
Bob Higby

- ECON 110. Consumer Economics** (3 credits). How to make the most efficient use of business goods and services; and insight into buying problems such as use and evaluation of advertising; consumer financial problems such as banking, credit, personal accounting and budgeting, and installment buying. Three lecture hours per week.
- ECON 111. Principles of Economics I** (3 credits). Analysis of economic aggregates: inflation, unemployment, economic growth, the distribution of income (including current policies and problems). Principles of fiscal and monetary policy are presented. Primary emphasis placed on critical understanding of the economy's ability to meet the needs of its people participating as workers, consumers, and citizens. Three lecture hours per week.
- ECON 112. Principles of Economics II** (3 credits). Supply-demand relationships; economics of the firm and resource allocation (price and output determination — pure competition, monopolistic competition, oligopoly, monopoly); economic problems (business, agriculture, labor, etc.); international economic relations. Three lecture hours per week.

### ELECTRONICS

Dorothy Burgett, *Department Chairperson*

- ELEC 110. Introduction to Electronic Technology** (3 credits). An introduction to concepts in electronic technology, including a study of basic electronic manufacturing methods and electronic equipment utilization. Lecture three hours per week. Corequisite: ELEC 115.
- ELEC 115. Introduction to Electronic Technology Laboratory** (1 credit). Three laboratory hours per week. Corequisite: ELEC 110.
- ELEC 120. D.C. Theory and Circuit Analysis** (3 credits). A study of direct current electricity involving voltage, current and resistance relationships and basic network equations. Three lecture hours per week. Prerequisite: 2 years HS AL-



GEBRA or equivalent. Corequisite: ELEC 125 and MATH 151.

✓ **ELEC 125. D.C. Theory and Circuit Analysis Laboratory** (1 credit). Three laboratory hours per week. Corequisite: ELEC 120.

✓ **ELEC 130. A.C. Theory and Circuit Analysis** (3 credits). The analysis of passive electronic circuits with respect to time varying d.c. and a.c. waveforms. Three lecture hours per week. Prerequisite: ELEC 120. Corequisite: ELEC 135 and Technical Math II or equivalent.

✓ **ELEC 135. A.C. Theory and Circuit Analysis Laboratory** (1 credit). Three laboratory hours per week. Corequisite: ELEC 130.

✓ **ELEC 140. Electronics I** (3 credits). An introduction to discrete active components and circuit configurations in preparation for the study of amplifier, oscillator, and digital circuit analysis. Three lecture hours per week. Prerequisites: ELEC 120 and 125. Corequisite: ELEC 145.

✓ **ELEC 145. Electronics I Laboratory** (1 credit). Three laboratory hours per week. Corequisite: ELEC 140.

**ELEC 150. Electronic Problems** (3 credits). A study of the application of mathematics and calculations to solve electronic problems. Topics from algebra and trigonometry are selected. Three lecture hours per week.

**ELEC 160. Electronic Drafting and Design** (3 credits). A study of design, documentation, and drafting techniques involved in the production of electronic equipment for industrial and consumer applications. Three lecture hours per week.

**ELEC 165. Electronic Drafting and Design Laboratory** (1 credit). Application of design and drafting principles as related to electronic equipment production. Three laboratory hours per week.

**ELEC 210. Electronics II** (3 credits). Linear amplifier analysis and design including an introduction to oscillators. Three lecture hours per week. Prerequisites: ELEC 140 and 145. Corequisite: ELEC 215.

**ELEC 215. Electronics II Laboratory** (1 credit). Three laboratory hours per week. Corequisite: ELEC 210.

**ELEC 220. Electronics III** (3 credits). An introduction to digital circuit analysis and design with emphasis on integrated circuits. Three lecture hours per week. Prerequisites: ELEC 140 and 145. Corequisite: ELEC 225.

**ELEC 225. Electronics III Laboratory** (1 credit). Three laboratory hours per week. Corequisite: ELEC 220.

✓ **ELEC 230. Electronic Instrumentation and Measurement Techniques** (3 credits). Theory of operation and application of standard laboratory test equipment. Three lecture hours per week. Corequisite: ELEC 235.

✓ **ELEC 235. Electronic Instrumentation and Measurement Techniques Laboratory** (1 credit). Three laboratory hours per week. Corequisite: ELEC 230.

**ELEC 240. Electronics Seminar and Project** (3 credits). A survey of current electronic devices found in industrial applications. Seminar and lecture, three hours per week. Prerequisite: 16 hours of electronics or approval of the department. Corequisite: ELEC 245.

**ELEC 245. Electronics Project Laboratory** (1 credit). Design and construction of an electronic project or a research report related to the student's occupational objectives. Minimum of three laboratory hours per week. Corequisite: ELEC 240.

**ELEC 250. Electronic Logic Design** (3 credits). An advanced study of discrete and integrated circuit applications to electronic logic design. Three lecture hours

per week. Prerequisites: ELEC 220 and 225.

**ELEC 260. Communications Circuits and Systems** (3 credits). A study of the circuits, theory, and operations in modern electronic communications systems. Three lecture hours per week. Prerequisites: ELEC 210, 215, ELEC 230, 235, or approval of the department. Corequisite: ELEC 265.

**ELEC 265. Communications Circuits and Systems Laboratory** (1 credit). Three laboratory hours per week. Corequisite: ELEC 260.

**ELEC 270. Survey of Digital Electronic Systems** (3 credits). An overview of current theory and application of electronics from a systems viewpoint. Three lecture hours per week. Prerequisite: 16 hours of electronics or approval of the department.

**ELEC 280. Industrial Instrumentation and Control** (3 credits). Introduction to industrial measurement and control. Three lecture hours per week. Prerequisite: ELEC 230.

**ELEC 281. (Brazosport No. — INST 214) Principles of Industrial Measurements** (4 credits). Principles and devices for the measurement of pressure, flow, level, and temperature measurements. Prerequisites: PHYS 133-134 or consent of the division chairman.

**ELEC 282. (Brazosport No. — INST 204) Principles of Automatic Control** (4 credits). Control principles, force and moment balance, and feedback. The use of control signals, power positioners, and components of a control system. Controllers, including on-off, proportional, proportional plus reset and rate response. Adjustment of controllers for speed and stability, relays, switching equipment, and control, valves, and start-up operation.

**ELEC 283. (Brazosport No. — INST 224) Advanced Automatic Control** (4 credits). A study of computer techniques for automatic control, ratio controllers, cascade control, electronic controllers. Prerequisite: ELEC 282.

✓ **ELEC 290. Computers and Computer Controlled Systems** (3 credits). A study of digital and analog computer operation and control, including systems organization with respect to hardware, software and interfacing. Prerequisite: 16 hours of electronics or approval of the department.

**ELEC 291. Microprocessors and Microcomputer Systems** (3 credit). A study of microprocessors and microcomputer systems including machine language programming, interfacing and systems design will be studied. Three lecture hours per week. Prerequisite: Elec 220 and 225. Corequisite: Elec 296.

**ELEC 295. Computers and Computer Controlled Systems Laboratory** (1 credit). Three laboratory hours per week. Corequisite: ELEC 290.

**ELEC 296. Microprocessors and Microcomputer System Laboratory** (1 credit). Three laboratory hours per week. Corequisite: Elec 291.

## ENGLISH

Charles Ferguson, *Department Chairperson*  
Mike Bass, Gilbert Benton, Cleo Congrady, James Creel, Pat Klopp, Lynda Vern, Mary Wyllie

**NOTE:** Developmental Writing courses and labs provide instruction in the fundamentals of written English. Such instruction will benefit two groups of students; (1) those needing additional preparation in writing before taking college-level credit courses and (2) those who simply desire to improve their writing skills.

Either one or two semesters of Developmental Writing are required for all



students who score below 14 in English on the ACT and/or who reveal by placement exam a deficiency in writing. Developmental Writing is strongly recommended for students scoring below 16 in English on the ACT. Developmental Writing students must complete their studies successfully before they are eligible to take any other English course at ACC.

**ENGL 101. Developmental Writing Lab** (1 credit). Designed to accompany ENGL 109 and/or 110, this lab provides one hour each week of supervised individual and small-group instruction and practice activities that reinforce 109 and/or 110 class work and deal with specific writing problems.

**ENGL 109. Developmental Writing I** (3 credits). Beginning with identification of basic grammatical elements, this course concentrates on a variety of correct sentence patterns. Some attention is given to the writing of effective paragraphs.

**ENGL 110. Developmental Writing II** (3 credits). After a review of grammatical fundamentals, this course deals with kinds of paragraphs and multiparagraph compositions.

✓ **ENGL 111. Communication Skills I** (3 credits). Designed for the occupational/technical student, this course features intensive practice in composing informative paragraphs and multiparagraph papers on career-related topics. Three lecture hours per week. Prerequisite: Satisfactory score on English proficiency exam.

✓ **ENGL 112. Communication Skills II** (3 credits). In this course the occupational/technical student examines communication theory in detail. Assignments include practice in the techniques of proficient writing, speaking, and group problem-solving. Three lecture hours per week. Prerequisite: Satisfactory score on English proficiency exam.

**ENGL 121. Composition and Rhetoric I** (3 credits). This standard course promotes correct and effective writing through a review of grammar and a progression of written assignments. It includes the study of writing techniques that characterize shorter works of fiction. Three lecture hours per week. Prerequisite: Satisfactory score on English proficiency exam.

**ENGL 122. Composition and Rhetoric II** (3 credits). This course continues the skills and concepts presented in ENGL 121. There is more intensive practice in theme writing, including a research paper, and attention is given to the techniques of drama and poetry as well as prose fiction. Three lecture hours per week. Prerequisite: ENGL 121.

**NOTE:** To fulfill the sophomore English requirements of ACC programs of study, the English Department recommends either ENGL 211-212 or 221-222, taken in sequence. However, a combination of one course from Group A and one from Group B, taken in any order, is acceptable. Group A: 211 or 221. Group B: 212 or 222 or 230.

**ENGL 211. Survey of Literature I** (3 credits). Through a study of masterpieces dating up to the eighteenth century, ENGL 211 features significant contributions of world literature to our cultural heritage. Collateral reports and reading are required. Three lecture hours per week. Prerequisites: ENGL 121 and 122.

**ENGL 212. Survey of Literature II** (3 credits). This course is a continuation of ENGL 211. World literature ranging from seventeenth century Europe to twentieth century America is within the scope of this survey. Collateral reports and reading are required. Three lecture hours per week. Prerequisites: ENGL 121 and 122.

**ENGL 221. Survey of English Literature I** (3 credits). This course is a study of British literature from its beginning to the eighteenth century. Collateral reports and

reading are required. Three lecture hours per week. Prerequisites: ENGL 121 and 122.

**ENGL 222. Survey of English Literature II** (3 credits). As a continuation of ENGL 221, this course is a study of British literature from the Romantic Period to the present. Collateral reports and reading are required. Three lecture hours per week. Prerequisites: ENGL 121 and 122.

**ENGL 230. American Literature** (3 credits). From colonial times to the present, this course surveys significant writings that are part of our national literary heritage. Collateral reports and reading are required. Three lecture hours per week. Prerequisites: ENGL 121 and 122.

**ENGL 250. Creative Writing** (3 credits). This humanities elective course is designed for those interested in writing poetry, fiction, and/or nonfiction. Assignments emphasize the writing of original works, followed by detailed analysis and revision. Techniques of writing are also presented through the examination of contemporary published examples. Prerequisites: ENGL 121 and 122 or consent of the English Department.

**ENGL 260. Technical Communication** (3 credits). Designed primarily for students working toward a four-year science or technology degree, this course stresses accuracy and effectiveness in the writing of one extensive and several short reports and other professional communication forms. Brief attention is also given to the oral report. Three lecture hours per week. Prerequisites: ENGL 111-112 or 121-122 and sophomore standing. (With proper approval, this course may count as one of the two sophomore English courses required by some ACC degree plans.)

## FASHION MERCHANDISING

Patty Hertenberger, *Department Chairperson*

**FASH 130. Introduction to Fashion Merchandising** (3 credits). This course develops an overview of the fashion industry, its principles, and procedures. Production, distribution, and consumption of fashion apparel will be analyzed. Consumer characteristics and their influence and changing demand for fashion goods will be related to fashion marketing activities. Prerequisite: Consent of instructor. Lecture — three hours; Laboratory — 0 hours. Total — three hours per week.

**FASH 140. Fashion Buying and Merchandising** (3 credits). The student will study the fundamental concepts in the buying and merchandising of fashion products. The course will develop an understanding of methods of inventory, elements of profit, pricing, mark-up, mark-down, and terms of sale. Sources of buying information, selection of fashion merchandise and responsibilities of buyers will be covered. Field trips to stores will supplement class lectures. Prerequisite: Consent of instructor. Lecture — three hours; Laboratory — 0 hours. Total — three hours per week.

**FASH 210. Fashion Sales Promotion** (3 credits). This course is designed to introduce the student to general procedures and objectives of sales promotion to stimulate a creative approach to the promotion of fashion merchandise. A study of sales promotion activities, fashion advertisements, media, display, and publicity will be made. Emphasis will be placed on a fashion show presentation as a term project. Prerequisite: Consent of the instructor. Lecture — three hours; Laboratory — 0 hours. Total — three hours per week.

**FASH 220. Textiles** (3 credits). A study of fibers, yarns, weaves, designs, and finishes with emphasis on information applicable to the selection and perfor-



mance of textiles normally used in apparel will be used. Prerequisite: Consent of the instructor. Lecture — three hours; Laboratory — 0 hours. Total — three hours per week.

**FASH 230. Fashion Fundamentals** (3 credits). A course designed to add balance to the Fashion Merchandising curriculum; comprehensive coverage in the personality and grooming fields to help students develop tasteful appearance, attractive personality, and the social refinements that are necessary for success in today's fashion world. Prerequisite: Consent of the instructor. Lecture — three hours; Laboratory — 0 hours. Total — three hours per week.

**FASH 240. Principles of Fashion Design** (3 credits). Provides the student with a general interest in fashion and understanding of the way apparel is created and manufactured. Students will have an opportunity to increase their visual and verbal vocabulary of terms basic to all fashion careers. The course will detail the specific talents and skills required, and how to develop them. Many important areas of fashion design are brought together to show their interrelation in becoming the tools of the professional apparel designer. Prerequisite: Consent of instructor. Lecture — three hours; Laboratory — 0 hours. Total — three hours per week.

**FASH 250. Introduction to Interior Design** (3 credits). Study of basic principles and elements of design. Emphasis is placed on understanding color and design principles and distribution of these principles in a room composition. Course includes window and wall treatments, furniture arrangements, lighting and fabric and furniture selection. Prerequisite: Consent of instructor. Lecture — three hours; Laboratory — 0 hours. Total — three hours per week.

**FASH 260. Professional Application of Interior Design Principles** (3 credits). Professional business procedures and responsibilities related to employment in this field. Study of trade source/designer/client relations including specifications, selling, and basic application. Prerequisite: Consent of instructor. Lecture — three hours; Laboratory — 0 hours. Total — three hours per week.

**FASH 112, 122, 212, 222. Internship** (3 credits, each). The student works in a qualifying firm 20 hours per week in an occupational situation where he receives practical training and experience compatible with his management career objective. Students may receive credit from an approved full-time job.

## FRENCH

Jose' G. Castillo, Jr., *Department Chairperson*

**FREN 111-112. Elementary French** (4 credits) (4 credits). This course is designed for those students who have had no previous instruction in French. Stress is placed on conversational French though care is exercised to teach the essentials of grammar. Three lecture hours and two laboratory hours per week.

**FREN 121-122. Intermediate French** (3 credits) (3 credits). French readings, grammar, and composition based partly on a formal text and partly on selected readings. Stress will be placed on oral work. Three lecture hours and one laboratory hour per week. Prerequisite: FREN 112 or instructor approval.

## GEOGRAPHY

Arthur Daniel, *Department Chairperson*

**GEOG 110. Principles of Geography** (3 credits). A study of the natural and cultural features within the world-wide geographic setting. Emphasis is placed on world climatic regions with discussion and interpretation. Three lecture hours per week.

## GEOLOGY

Dick Graef, *Department Chairperson*

**GEOL 111. General Geology I** (4 credits). An introduction to the study of rocks, minerals, and physical processes that modify the surface of the earth. Special attention will be given to the practical aspects of geology to society, such as mineral, energy, and water resources; volcanism; and geologic factors that influence the environment. Three lecture and two laboratory hours per week.

**GEOL 112. General Geology II** (4 credits). Survey of the evolution of the earth and life through geologic time. Includes such topics as earthquakes and the earth's interior; mountain building; drifting continents; the Ice Ages; solar system; history of life; the geological aspects of the environment and its effect on the future of mankind. Three lecture and two laboratory hours per week.

## GOVERNMENT

Arthur Daniel, *Department Chairperson*  
Ida Blanchette, Marvin Longshore, Bill Taliaferro

**GOVT 211. American National and State Governments I** (3 credits). A study of the origin and development of our federal system of government; analysis of federal and state constitutions with special attention to the Texas Constitution; federal-state and inter-state relations; and special emphasis on problems of citizenship in a modern democratic society. Three lecture hours per week.

**GOVT 212. American National and State Governments II** (3 credits). A study of the functions and services of the government of the United States, the states in general, and Texas in particular. Three lecture hours per week.

## HEALTH MEDICAL LABORATORY TECHNICIAN

Florence Pipes, *Department Chairperson*  
Johneta Pogue

**HMLT 110. Introduction to Medical Technology** (3 credits). Lecture: Study and practice of biomedical and other vocabularies common to health activities. Laboratory: Practical experience and discussion periods providing fundamentals in the areas of: blood collection and preservation, laboratory mathematics and calculations, solution preparation, laboratory safety, use and maintenance of basic laboratory equipment and glassware (example: balances, centrifuges, pipets, etc.), basic quality control, credentials, government regulations. Two lecture and three laboratory hours per week.

**HMLT 111. Clinical Chemistry I** (5 credits). Introduction to Clinical Chemistry. Lecture and laboratory enabling the student to: recognize and perform routine clinical laboratory tests; use and evaluate record keeping systems; evaluate and use laboratory safety practices; instruct nurses and patients regarding proper procedures for the collection, preservation, and storage of specimens for various chemical tests; operate and understand the principles of spectrophotometers, centrifuges, water baths, pH meters and one-test-modular-semi-automated equipment. Student should be able to perform blood urea nitrogen, glucose (blood and spinal fluid and urine), potassium, chloride, sodium, CO<sub>2</sub> content, phosphorous, calcium, creatinine, etc. Three lecture and eight laboratory hours per week. Prerequisite: HMLT 110 and CHEM 121 or equivalent.



117 **HMLT 112. Clinical Microbiology I** (4 credits). Introduction to Clinical Microbiology. Study of the basic concepts of microbiology including taxonomy, morphology and physiology of bacteria, as well as disease(s) produced by them. Methods to isolate, cultivate, and identify bacteria will be studied including routine staining procedures, and biochemical identification tests. Included will be procedures for specimen collection, processing, and shipment, media preparation and quality control. Two lecture and eight laboratory hours per week. Prerequisite: HMLT 110.

✓ **HMLT 113. Hematology I** (4 credits). Lecture and laboratory enabling the student to discuss and perform the following: preparing and staining a blood smear; use and maintenance of automated equipment (Coulter F, B, and/or S); use and maintenance of non-automated equipment (microhematocrit centrifuges, slide stainers, etc.); specimen identification; quality control measures; records and retrieval of results; preparation of LE cell smears; sickle cell screening tests; assay for hemoglobin, hematocrit, sedimentation rate; use and maintenance of the microscope; enumeration and differentiation of cellular elements in cerebrospinal fluid; morphologic study, enumeration and differentiation of leukocytes, erythrocytes, and platelets on blood smears; osmotic fragility of red cells; quality control statistics, methods of tabulation of monthly reports; principles of instrumentation in hematology; calibration, trouble shooting and maintenance of Coulter and/or other cell counters and other semi or automated equipment. Two lecture and eight laboratory hours per week. Corequisite: HMLT 110.

116 **HMLT 130. Urinology** (3 credits). Study of urinalysis procedures including chemical tests, microscopic examination, pregnancy tests, renal function tests, and the correlation of these procedures to disease state(s) and malfunction(s). Two lecture and four laboratory hours per week. Corequisite: HMLT 110.

**HMLT 140. Fluid Analysis.** (1 credit). Body fluids, including gastric, duodenal, synovial, spinal and seminal will be studied and abnormal values will be correlated with pathological conditions. Methods for determining their biochemical and cellular content will be presented. One hour lecture per week. Prerequisite: HMLT 110.

**HMLT 150. Parasitology** (2 credits). Study of the taxonomy, morphology, and specific characteristics of human parasites as well as the disease states produced by them. Microscopic examination, concentration, fixation, staining, and preservation of specimens will be practiced. One lecture and two laboratory hours per week. Prerequisites: HMLT 110 and HMLT 112.

115 **HMLT 210. Serology-Immunology** (3 credits). Study of serological and immunological procedures including agglutination, complement fixation, gold diffusion, hemagglutination, electrophoresis and fluorescent antibody. The student should be able to discuss the immune mechanism and the body's reaction to foreign matter. Two lecture and four laboratory hours per week. Prerequisite: HMLT 110.

112 **HMLT 211. Clinical Chemistry II** (4 credits). Lecture and laboratory experience relating chemical testing to disease and preparing the student to perform tests selected to evaluate organ function and metabolism. The following procedures will be included: liver function tests, blood electrolytes, blood gas analyses, carbohydrate metabolites, enzyme analyses, lipid metabolites, and blood and fluid protein fractionation and identification. Three lecture and four laboratory hours per week. Prerequisite: MATH 121 or equivalent, and HMLT 110, HMLT 111, and CHEM 121 or equivalent.

118 **HMLT 212. Clinical Microbiology II** (4 credits). Study of bacteriology and mycology including procedures to isolate, cultivate and identify acid-fast and anaerobic

bacteria, filamentous fungi and yeast. The student should be able to perform antibiotic susceptibility testing, serological and biochemical identification tests, and to use rapid identified systems for identification of bacteria and yeasts. A general understanding of the relationship of this course to physiology, biochemistry, and immunology as they are associated with disease processes is necessary. Two lecture and eight laboratory hours per week. Prerequisite: HMLT 110 and HMLT 112.

114 **HMLT 213. Hematology II** (3 credits). Lecture and laboratory enabling the student to discuss and perform the following: evaluation of cellular elements in blood smears in disease states including morphologic study, enumeration and differentiation of leukocytes, erythrocytes, and platelets; special stains such as peroxidase; quality control statistics, and their methods of tabulation; principles of instrumentation in hematology including calibration, trouble shooting and maintenance of Coulter and/or other cell counters and other semi or automated equipment; coagulation tests. Two lecture and four laboratory hours per week. Prerequisites: HMLT 110 and HMLT 113.

211 **HMLT 220. Clinical Instrumentation** (3 credits). Study of clinical laboratory instruments including automated chemical analyzers, spectrophotometry, flame emission and atomic absorption spectroscopy, fluometry, nephelometry, electronic cell counters, pH meters and blood-gas analyzers. The students should be able to discuss the principle of operation and to operate, calibrate, trouble-shoot and maintain the instruments. Two lecture and 4 laboratory hours per week. Prerequisites: HMLT 110, HMLT 111, HMLT 211, and CHEM 121 or equivalent.

212 **HMLT 230. Immuno Hematology I** (4 credits). Lecture and laboratory experience enabling the student to: discuss the nature of antigens and antibodies as they relate to blood cell metabolism, blood storage, blood cells and platelets; blood preservation; and enabling the student to: perform the determination of blood type and group; perform a cross match; perform antibody detection and identification procedures; and select appropriate compatible blood components for transfusion. The student should also be able to interview blood donors and perform a phlebotomy. Quality Control in the blood bank to be stressed throughout. Two lecture and eight laboratory hours per week. Prerequisites: HMLT 110, HMLT 113, HMLT 213. Corequisite: HMLT 210.

**HMLT 240. MLT Practicum** (6 credits). Forty hours of supervised work experience each week for eleven weeks in a clinical laboratory. One week of review in the classroom.

## HEALTH NURSING HOME ADMINISTRATION

**HNHA 111. Introduction to Nursing Home Administration** (3 credits). This course assists the administrator in defining and relating the concepts, technology, and other aspects of nursing home operation. This introductory nursing home administrator course includes history and philosophy of the nursing home, organizational structure and application of nursing home standards, and provides guidance in the preparation of job descriptions for nursing home staff. Course also includes functions, methods, and procedures of administering a nursing home with the emphasis on policy writing for admission, discharge, patient care, transfer, and emergency situations. Three lecture hours per week.

**HNHA 112. Psychology of Patient Care** (3 credits). The course will familiarize the administrator with the personality dynamics involved in helping the geriatric patient adjust to his new dependent environment — understanding of problems specifically related to psychological, emotional, and social needs, with an introduction to alternate courses of action to meet these needs. Three lec-



ture hours per week.

**HNHA 113. Principles of Patient Care** (3 credits). The course will consist of a study of gerontology, and various aspects of aging. Emphasis will be directed toward the adjustment and dependency problems associated with institutional life. Other areas, such as patient orientation, pharmacology, medical terminology, medical records, physical therapy and rehabilitation, recreational therapy, nutrition, modified diets, safety, and sanitation, will also be included. Three lecture hours per week.

**HNHA 211. Nursing Home Administration Internship II** (6 credits). Management internship in an approved facility must be supervised by a Preceptor-Administrator approved by the State Board of Licensure for Nursing Home Administrators. Critique of the current job and its related experiences will be correlated with and supplemented by case studies, classroom discussions, and individual conferences between the student and the Preceptor-Administrator and the college coordinator. Three lecture hours plus twenty hours of on-the-job administrative training per week.

**HNHA 212. Nursing Home Administration Internship I** (6 credits). A continuation of Nursing Home Administration Internship I, and a general review of all subjects in preparation for licensure examination. Three lecture hours plus a minimum of twenty laboratory hours per week.

**HNHA 213. Nursing Home Administration Law** (3 credits). This course provides a nursing home administrator with the nature and scope of law, court system, law of contracts, principal and agent, business organizations, community property law, tort, and bailment. The course will also include employer and employee relations involving the legal and ethical aspects relating to union activities, wage and hours, safety and health, civil rights, and equal opportunity. Three lecture hours per week.

**HNHA 214. Financial Management of the Nursing Home** (3 credits). The course includes techniques and strategies of financial information for management decision-making in the nursing home, emphasizing the budgeting process and relationships between statistical and financial data. Provides a study of special accounting requirements of Medicare and other governmental programs. Three lecture hours per week.

**HNHA 215. Dietetic Food Service Supervisor Course** (3 credits). To provide students with the opportunity to develop an understanding of dietetic service supervision and an appreciation of nutrition as essential to the planning, preparing, and serving of food which will contribute to the health and satisfaction of patients, residents, and employees. The course will contribute to understanding the importance of dietetic services, and its application to the nursing home organization as a whole. Three lecture hours per week.

## HEALTH RESPIRATORY THERAPY TECHNICIAN

Ronica Kinser, *Department Chairperson*

**HRTT 110. Introduction to Health Sciences** (1 credit). Designed as the first course for students interested in the health career field. Includes history and philosophies of patient care, development and inter-relationships of health institutions, agencies, health services personnel, ethics and legal aspects related to health activities, lectures and field trips. Two hours lab.

**HRTT 111. Introduction to Respiratory Therapy** (4 credits). An introduction to the Respiratory Therapist's role as a member of the health team. Departmental operation, basic design, function and maintenance of equipment are stressed.

Medical terminology, types of respiration, types of hypoxia, gas laws, and bloodgas interpretation are introduced. Proficiency in administration of basic therapeutic modalities, as well as indications and contraindications are stressed. Three hours lecture, 3 hours lab.

**HRTT 112. Clinical Practical I** (4 credits). Supervised clinical practice at an affiliated hospital. Includes orientation to the hospital's Respiratory Therapy Department, and supervised performance of basic therapy task. The student must learn the art of administering basic Intermittent Positive Pressure Breathing (I.P.P.B.) treatments, including aerosol therapy, oxygen therapy, and physical therapy in this clinical practical. Six hours lecture, twenty-two hours lab. SSII.

**HRTT 113. Clinical Practical II** (3 credits). A continuation of Clinical Practical I, this course stresses the safe and effective administration of basic Respiratory therapeutic modalities; including aerosol therapy, oxygen therapy, physical therapy, and Intermittent Positive Pressure Breathing. Twenty-five hours lab. Prerequisite: HRTT 114.

**HRTT 114. Respiratory Therapy Procedures I** (4 credits). Intensive practice in analyzing performance of equipment, maintenance procedures, safety practices, and classification of equipment is stressed. Includes administration of oxygen and other gases, aerosol and humidification devices, and cylinder usage. Three hours lecture, six hours lab. Prerequisite: HRTT 112.

**HRTT 116. Clinical Sciences and Pulmonary Disorders** (3 credits). This supervisor or physician-taught course applies techniques and theory to medical, obstetric, pediatric, and surgical patients with specific disease entities. Causes, pathogenesis, pathology, natural history, diagnosis, complications, prognosis, occurrence, manifestations, laboratory findings, methods of detection, treatment, and control of various diseases entities relative to the role of the Respiratory Therapist are discussed. Three hours lecture.

**HRTT 117. Clinical Application I** (3 credits). Sterilization, gas analysis, airway management, chest physiotherapy (including postural drainage), physical examination of the chest (including percussion and auscultation), x-rays, pulmonary function studies, and advanced theory and techniques relating to cardiopulmonary resuscitation for adult and pediatric patients are explored in depth. Three hours lecture. Prerequisite: HRTT 114.

**HRTT 118. Clinical Theory** (3 credits). This course is a continuation of theoretical and practical aspects of respiratory therapy. Included cardiopulmonary anatomy and physiology, comprehensive bloodgas evaluation, types of respiration, respiratory centers, types of hypoxia, gas laws, and a comprehensive study of E.K.G.'s. Three hours lecture. Prerequisite: HRTT 114.

**HRTT 119. Clinical Practical III** (4 credits). A continuation of Clinical Practical II, this course is designed to complete the basic learning experience necessary to become a safe and competent Respiratory Therapy Technician. The student rotates through specialty areas of the hospital; including Pulmonary Function, Anesthesiology, Emergency Room, Operating Room, Cardiovascular, Pathology, Pediatrics, Obstetrics, and Intensive Care Units. The student is also introduced to departmental management and supervision. Twenty hours lab. Prerequisite: HRTT 113.

**HRTT 120. Pharmacology** (3 credits). An introduction to the study of drugs, their origin, nature, properties, classification, and effects upon the living organism. Drugs which affect the respiratory system are emphasized. Three hours lecture.



## HISTORY

Arthur Daniel, *Department Chairperson*

Ida Blanchette, Tom Bryan, José Castillo, John Duke, Marvin Longshore,  
Bill Taliaferro

**HIST 111. Western Civilization to 1660** (3 credits). The chief political, social and intellectual developments of occidental civilization from the earliest human cultures to 1660. The origins of languages, literature, governments, and economic and social practices are included. Three lecture hours per week.

**HIST 112. Western Civilization since 1660.** (3 credits). This course is a continuation of HIST 111. Three lecture hours per week.

**HIST 121. History of Latin America I** (3 credits). Spanish and Portuguese colonies from discovery to independence. Three lecture hours per week.

**HIST 122. History of Latin America II** (3 credits). Latin American republics since independence. Three lecture hours per week.

\***HIST 131. History of Texas to 1865.** (3 credits). A study of the growth and development of Texas from 1500 until 1865: the Spanish colonial period; the French influence; the end of Spanish rule; the Mexican colonial period; analysis of the Revolution; the Republic era; the Statehood years; and the role of Texas in the Civil War. Three lecture hours per week.

\***HIST 132. History of Texas since 1865** (3 credits). An analysis of cultural, social, industrial, and political developments in Texas from 1865 to the present. Emphasis will be directed to the Reconstruction period, political history since the Civil War, and the emergence of the modern state of Texas. Studies of governors and their administrations will be included. Three lecture hours per week.

\***HIST 141. The United States to 1877** (3 credits). American history from colonial origins through reconstruction. Exploration and colonization of the new world, the American Revolution, westward expansion, the Civil War and reconstruction. Three lecture hours per week.

\***HIST 142. The United States since 1877** (3 credits). A survey of American history from 1877 to the present. Chief topics: big business, big labor, the United States as a world power, the great depression and the cold war. Three lecture hours per week.

\*Texas law stipulates that three hours in Texas history may be applied toward satisfying the United States history requirement.

## HORTICULTURE

### (ORNAMENTAL)

Stephen Wheeler, *Department Chairperson*

Tom Driskill, James Layton

**HORT 101. Principles of Horticulture** (4 credits). Fundamental principles and practices of structure, growth, development, maintenance and use of horticultural plants. Commercial horticulture industry and occupational opportunities. An introduction to growing, grounds maintenance, planting and transplanting will form the laboratory experience. Three hours lecture and two hours laboratory per week.

**HORT 111. Plant Materials for Landscape Use** (4 credits). Ornamental trees, shrubs, vines and ground covers for landscape use with emphasis on their identification, characteristics, adaptability, use and maintenance. Basic concepts and

practices used in preparing landscape plans. Three hours lecture and two hours laboratory per week. Prerequisite or corequisite: DRFT 110.

**HORT 121. Plant Propagation** (4 credits). Theoretical consideration and practical experiences in producing horticultural plants by sexual and asexual methods. It includes laboratory exercises of cutting, layering, division, growing from seeds, budding and grafting. Three hours lecture and two hours laboratory per week.

**HORT 131. Greenhouse Crop Production** (4 credits). Greenhouse production and marketing of foliage and flowering house plants, holiday pot plants, bedding plants and cut flowers. Construction of greenhouses and other related growing structures, arrangement, heating, cooling, lighting and watering facilities. Three hours lecture and two hours laboratory per week.

**HORT 201. Soils and Fertilizer** (4 credits). Physical and chemical properties of soils and their relation to soil development. Relationship between crops and soils. Use of fertilizers and soil fertility. Three hours lecture and two hours laboratory.

**HORT 211. Nursery and Garden Center Management** (4 credits). Principles and practices involved in production of field and container grown plants including plant growing, planting, transplanting, balling, burlapping. An introduction to nursery and garden center management: garden center plans, the structures needed for growing and selling plants, and the equipment and supplies necessary. Production costs, markets and marketing nursery plants will be considered. Three hours lecture and two hours laboratory per week.

**HORT 221. Chemical Control of Weeds, Plants, Diseases and Pests** (4 credits). The identification, cause and control of common weeds, plant diseases, and pests. Study of equipment for their prevention and control. Three hours lecture and two hours laboratory per week.

**HORT 231. Turf Management** (4 credits). Principles and practices of turfgrass management for such specialized areas as athletic fields, playground areas, golf courses and home lawns. Three lecture hours and two laboratory hours per week.

\***HORT 240. Indoor Plants** (4 credits). Identification, planting and placing foliage and flowering plants suitable for indoor use. Environmental conditions, care and maintenance, insects and diseases, and potting and repotting will be covered. Lecture, 3 hours; Laboratory, 2 hours.

\***HORT 250. Vegetable Crops** (4 credits). Vegetable production including factors that affect production of important fresh market and processing vegetables in different areas of the United States. Lecture, 3 hours; Laboratory, 2 hours.

\*Recommended Related Electives.

## HUMANITIES

Jose' G. Castillo, Jr., *Department Chairperson*

Gilbert Benton, Tom Bryan, Doris Burbank, Cleo Congrady

**HUMN 101. Introduction to Humanities** (3 credits). A study of representative examples of literature, art, and music of the classical, romantic, realistic, impressionistic and expressionistic periods. The interrelationship of the arts and their philosophies is stressed. Three lecture hours per week.

**HUMN 216. American Studies** (3 credits). A multi-media interdisciplinary examination of contemporary American cultures. Using the topical and chronological approaches, the course emphasizes the relationships of history, art, music, literature, philosophy, and science in the mainstream of America's uniqueness



as a nation. The cross-culture exchange of ethnic groups and the impact of women in American life, are major topics of study.

**HUMN 217. Southwest Studies** (3 credits). A multi-media interdisciplinary survey course designed to increase the student's awareness of the major ethnic contributions to the development of the Southwest from earliest times to the contemporary setting. Special emphasis will be placed on three influential cultures of the Southwestern United States: Indian, Mexican, and Black American.

**HUMN 218. Career-Oriented Foreign Languages** (3 credits). Practice in Spanish, French, or another modern language depending on the needs of the persons engaged in community service. Dialogue and useful vocabulary for policemen, corrections officers, firemen, social workers, public health and medical personnel. No prior knowledge of a foreign language is necessary. This course does not fulfill the requirements for foreign languages in the Liberal Arts program.

## JOURNALISM

Charles Ferguson, *Department Chairperson*  
Lynn Rossi

**JOUR 120. Journalism Activities** (1 credit). This course is designed to give basic journalism training to students through experience on college publications. Two laboratory hours per week. Prerequisite: Instructor approval.

## LAW ENFORCEMENT

Deloss A. Miller, *Department Chairperson*

✧ **LWNF 110. Introduction to Law Enforcement.** (Credit: 3 semester hours). An introductory course to law enforcement. Covers the history of the police profession and the development of the English and American police systems. Organization of federal, state, and local law enforcement agencies, their authority, duties, and responsibilities. Includes career opportunities, personnel requirements, and standards. Three lecture hours per week.

✧ **LWNF 120. Criminal Investigation.** (Credit: 3 semester hours). Theories and concepts of the investigator's role in modern criminal investigation; basic skills necessary in conducting an investigation, developing sources of information, the collection and preservation of evidence, and preparation of reports are developed. Three lecture hours per week.

✧ **LWNF 130. Legal Aspects of Law Enforcement.** (Credit: 3 semester hours). History and philosophy of modern law; laws of arrest, search and seizure; determination of probable cause; Texas penal code; emphasis on practical legal problems confronting the law enforcement officer. Three lecture hours per week.

✧ **LWNF 140. Criminal Procedure and Evidence.** (Credit: 3 semester hours). Examination of the rules governing the admissibility of evidence as they may affect the law enforcement officer in the administration of criminal justice, including study of the rules of evidence, kinds and degrees of evidence and their application in the legal processes from arrest through probation and parole procedures to final disposition of the case. Three lecture hours per week.

✧ **LWNF 150. Police Role in Crime and Delinquency.** (Credit: 3 semester hours). Study of deviant behavior and current criminological theories, with emphasis on police applications; crime prevention and the phenomena of crime as it relates to juveniles. Three lecture hours per week.

**LWNF 160. Probation and Parole** (3 credits). The development, organization, operation and result of systems of probation and parole as substitutions for incarceration, methods of selection and prediction scales. Three lecture hours per week.

**LWNF 210. Elements of Police Supervision.** (Credit: 3 semester hours). Duties and problems of the police supervisor; recruitment, training, promotion, discipline and morale, duty assignments and shift supervision, human relations and leadership problems, essentials of organization, types of organizations, planning the work of the department. Three lecture hours per week.

✧ **LWNF 220. Police Organization and Administration.** (Credit: 3 semester hours). An analysis of the duties and responsibilities of police administrators; study of the principles of police organization; police management, coordination and personnel management. Three lecture hours per week.

**LWNF 230. Patrol Administration.** (Credit: 3 semester hours). Study of the philosophy and history of systems of dealing with patrol functions. An analysis of the principles of organization and function of the patrol operation; contemporary operational activities. Three lecture hours per week.

✧ **LWNF 240. Police-Community Relations.** (Credit: 3 semester hours). The interrelationship of law enforcement agencies and the community; problems related to police-community relations; emerging law enforcement concept of active involvement in community relations. Three lecture hours per week.

**LWNF 250. Traffic Law and Investigation.** (Credit: 3 semester hours). A course in the investigation of traffic accidents, laws, and advanced investigation procedures; special emphasis to be placed on the handling of traffic accidents on thoroughfares and expressways. Defensive driving techniques will be given on an individual basis in a college patrol vehicle. Two lecture hours and four laboratory hours each week.

**LWNF 260. Traffic Planning and Administration.** (Credit: 3 semester hours). A course designed to provide the student with an understanding of the magnitude and complexities of the traffic problem. Analysis is made of the methods and techniques used by various agencies to control problems. Three lecture hours per week.

**LWNF 270. Juvenile Delinquency.** (Credit: 3 semester hours). The nature and extent of delinquency. The environments in which juvenile delinquency develops, delinquent sub-cultures and peer groups; evaluation of prevention, control and treatment programs. Prerequisite: SOCI 111 or 122 or approval of instructor. Three lecture hours per week.

**LWNF 280. Penology** (3 credits). The philosophy and objective of jail operation. Also the study of the administrator's role in setting objectives, planning, decision making, and controlling of the jail. Three lecture hours per week.

**LWNF 290. Narcotics Investigation.** (3 credits). Identification of narcotics and dangerous drugs subject to abuse; origin, distribution and control; special investigation techniques, recognition of drug users. Three lecture hours per week.

**LWNF 295. Defensive Measures.** (credit: 4 semester hours). Introduction to the special physical skills and techniques required for the protection and safety of in-service criminal justice personnel and public. Emphasis on individual capabilities and limitations in procedures of arrest, search, suspect control and transportation, defensive tactics and the firing of service weapons; including theory and application. The F.B.I. Tactical Revolver Course will be utilized for course record/score. Prerequisite: Sophomore standing and approval of the Department Chairman. Three lecture hours and three laboratory hours per week.



## MATHEMATICS

### GENERAL MATHEMATICS

Gerald Skidmore, *Department Chairperson*  
Charles Bennett, Don Brown, Jim Corbett, Alice Hagood

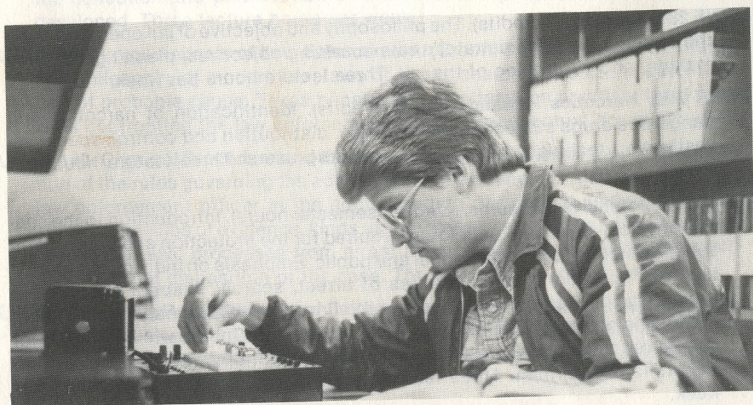
**MATH 101. Developmental Mathematics Lab** (1 credit). The lab is designed to accompany Math 109 and Math 110. It provides one hour each week of supervised individual and small-group instruction and practice activities that reinforce 109 and 110 class work and deal with specific arithmetic or algebra problems.

**MATH 109. Arithmetic** (3 credits). An individualized course offering instruction and practice in the basic arithmetic operations. The student's program of study is based on diagnostic and prescriptive tests as well as personal interviews. This course is required for those students who must take Math 110 and whose diagnostic tests indicate a need for arithmetic preparation.

**MATH 110. Developmental Mathematics-Algebra** (3 credits). A course which includes classroom instruction and work in the learning lab. The materials consist of a textbook and audiotutorial tapes with tutoring and peer counseling provided. Some of the topics included are whole numbers, integers, first degree equations, products, factors, and fractions. The course is intended to improve the algebraic skills of the students. Math 110 is required for the student who scores below 14 in math on the ACT.

**MATH 115. Intermediate Algebra** (3 credits). This course is recommended for those students who have had only one year of high school algebra and/or Math 110 and who need Math 121. An ACT score in math greater than 14 is required if the student has not taken Math 110. Topics included are a review of the arithmetic operations, factoring, fractions, exponents, radicals, linear equations, quadratic equations, inequalities, and systems of equations. Three lecture hours per week. Prerequisite: One year of high school algebra and/or Math 110.

**MATH 121. College Algebra** (3 credits). This course includes a brief review of elementary algebra topics followed by a more intensive study of linear equations in one variable, relations, functions, graphs, products and factoring of polynomials, algebraic fractions, fractional equations, systems of linear equations, exponents, radicals, quadratic equations and inequalities. Three lecture hours per week. Prerequisite: Two years of high school algebra or consent of instructor.



**MATH 125. Informal Geometry** (3 credits). This course is recommended for those students who did not have plane geometry in high school and who plan to pursue a math related curriculum which requires knowledge of geometry. The major emphasis of the course is on Euclidean Geometry. Topics included are proofs, parallel lines, congruent triangles, polygons, similar triangles, circles, area, locus, and space geometry. Three lecture hours per week. Prerequisite: High school algebra or college algebra.

**MATH 132. Plane Trigonometry** (3 credits). Mastery of trigonometric functions with applications; functions of acute angles; functions of obtuse, and multiple angles; identities; derivation of formulas; logarithms; solution of both right triangles and obtuse triangles; practical problems involving heights and distances; graphical representation of trigonometric functions and geometric applications. Three lecture hours per week. Prerequisite: Math 121 or two years of high school algebra.

**MATH 150. Analytic Geometry** (3 credits). A course in the solution of geometric problems through applied algebra by the graphical representation of points, lines, curves and the transformation of coordinates, polar coordinates, transcendental curves, vectors, parametrics and space formulas, with special emphasis on rapid curve sketching. Three lecture hours per week. Prerequisites: MATH 121, 132, or consent of instructor.

**MATH 210. Statistics** (3 credits). Topics included in the course are permutations and combinations, probability, testing hypotheses, sample theory, parameter estimation, frequency functions, correlation and regression. Prerequisite: College Algebra or the equivalent.

**MATH 213-214. Differential and Integral Calculus** (4 credits) (4 credits). These two courses are designed to meet the needs of mathematics, engineering, and science students. Topics of Math 213 include inequalities, functions, limits, the derivative, differentiation of algebraic functions, the differential, and the definite integral. Topics of Math 214 include the trigonometric functions, logarithmic functions, exponential functions, parametric equations, arc length, polar coordinates, formulas and methods of integration, applications of the integral, and solid analytic geometry. Each course is four lecture hours per week. Prerequisite: Math 150 or consent of instructor.

**MATH 215. Calculus Applications** (4 credits). Topics included in Math 215 are elements of infinite series, partial derivatives with applications, multiple integration, vectors, power series, Taylor's series, gradient, and linear algebra. Four lecture hours per week. Prerequisite: Math 214.

**MATH 221. Differential Equations** (3 credits). This course is designed to meet the needs of engineering students. The following topics are included: equations of the first order, singular solutions, linear equations with constant coefficient, miscellaneous methods of solving equations of higher order than the first, with geometric and physical applications. Three lecture hours per week. Prerequisite: Math 215.

### MATHEMATICS FOR LIBERAL ARTS MAJORS

**MATH 111-112. Selected Topics I, II** (3 Credits) (3 Credits). These two courses are designed to satisfy the mathematics requirements for liberal arts majors. The topics included are: the nature of mathematical thought, the nature of numeration systems, the nature of computers, the nature of mathematical systems, the development of our number system, the nature of number theory, the nature of logic, the nature of geometry, the nature of counting, probability, and statistics. Three lecture hours per week.



## MATHEMATICS FOR ALLIED HEALTH PROGRAMS

**MATH 130. Mathematics for Allied Health I.** (3 credits). This course is designed to serve as an introductory course in mathematics for the Allied Health fields. Topics covered will include the use of whole numbers, fractions, percentage, and measurements in both metric and apothecary systems. Other topics will be ratio, proportion, simple equations, and graphs. Three lecture hours per week.

**MATH 131. Mathematics for Allied Health II.** (3 credits). This course is designed to meet the needs of the medical laboratory technology and environmental health technology students. Topics covered will include computations using logarithms, slide rule, and hand calculators. Other topics will be scientific notation, exponents, equations, stated problems, volumes, and statistical measure. Three lecture hours per week. Prerequisite: Math 130 or consent of instructor.

## MATHEMATICS FOR ELEMENTARY EDUCATION MAJORS

**MATH 160. Foundations of Mathematics** (3 credits). Modern methods will be used to develop skill and understanding in the use and meaning of sets, number symbols, operations, properties, equivalence and number relations, modular systems and bases, scientific notation, measurements, coordinate systems, equations, and various number systems. Three lecture hours per week.

**MATH 170. Modern Topics in Mathematics** (3 credits). Topics will include studies in modern geometry, sets, relations and functions, ratio and percent, systems of logic, statistics and graphs, probability, systems of equations, and problem solving with practical applications. Three lecture hours per week. Prerequisite: Math 160 or consent of instructor.

## MATHEMATICS FOR BUSINESS MAJORS

**MATH 180. Finite Mathematics** (3 credits). This course is designed to meet the needs of students majoring in business and other related fields. The course includes a review of the elementary topics of algebra followed by a study of logic, sets, equations, relations, functions, linear systems, vectors, matrices, linear programming, and non-linear functions. Three lecture hours per week. Prerequisite: Math 121.

**MATH 190. Analysis** (3 credits). This course is designed to meet the needs of students majoring in business management, science, quantitative analysis or other related fields. The course includes a review of the real number system, relations and functions, sequences and series, and then follows these topics with a study of the differential and integral calculus. Three lecture hours per week. Prerequisite: MATH 180 or the equivalent.

## MATHEMATICS FOR TECHNICAL PROGRAMS

**MATH 151. Technical Mathematics I** (3 credits). A course for technology students. Topics covered will include a review of arithmetic, and proceed through a treatment of measured data, slide rule operation, tables and interpolation, algebra, analytic geometry, and determinants. Three lecture hours per week.

**MATH 152. Technical Mathematics II.** (3 credits). Topics covered will include logarithms, exponential functions, numerical trigonometry of the right triangle, and analytical trigonometry. Three lecture hours per week. Prerequisite: MATH

151 or consent of instructor.

**MATH 250. Advanced Technical Mathematics** (3 credits). This course is designed for technology students who require a deeper understanding of definitions and procedures used in mathematics. Topics covered will include vector operations, differential calculus, integral calculus, and special functions. Three lecture hours per week. Prerequisite: MATH 152 or consent of instructor.

## MID-MANAGEMENT

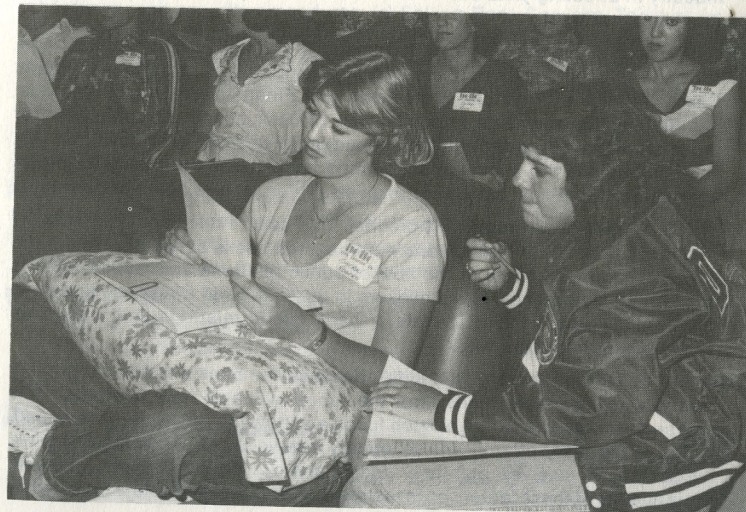
Dick Brigham, *Department Chairperson*

**MMGT 111. Supervision** (3 credits). This course will include emphasis upon behavioral aspects of supervision, up-to-date and inclusive examination of what the supervisor now does and what tools, knowledge, and skills he requires. The course has been designed for those who aspire to be supervisors as well as for those present supervisors who seek a knowledge of developing management theory to supplement and reinforce their accumulating experience. Three lecture hours per week.

**MMGT 112. Internship** (3 credits). The student works in a qualifying firm 20 hours per week in an occupational situation where he receives practical training and experience compatible with his management career objective. Students may receive credit from an approved full-time job.

**MMGT 121. Principles of Management** (3 credits). An overview of organization and human behavior within the organization. Functions of management are presented such as creating, planning, organizing, motivating, communicating, and controlling. Considerable attention is given to management practices. Three lecture hours per week.

**MMGT 122. Internship** (3 credits). The student works in a qualifying firm 20 hours per week in an occupational situation where he receives practical training and experience compatible with his management career objective. Students may receive credit from an approved full-time job.





**MMGT 211. Personnel Management** (3 credits). Principles and practice of personnel management; emphasis on the procurement, development, compensation, integration, and maintenance of the labor force. Prerequisite: MMGT 121. Three lecture hours per week.

**MMGT 212. Internship** (3 credits) The student works in a qualifying firm 20 hours per week in an occupational situation where he receives practical training and experience compatible with his management career objective. Students may receive credit from an approved full-time job.

**MMGT 221. Problems in Management** (3 credits). Extension of management principles to administrative strategy in solving problems. Case studies and simulated games are utilized in a decision-making, problem-solving environment. Prerequisite: MMGT 111 or 121. Three lecture hours per week.

**MMGT 222. Internship** (3 credits). The student works in a qualifying firm 20 hours per week in an occupational situation where he receives practical training and experience compatible with his management career objective. Student may receive credit from an approved full-time job.

### BANK MID-MANAGEMENT

**BANK 130. Principles of Bank Operations** (3 credits). This course presents the fundamentals of bank functions in a descriptive fashion so that the beginning banker may view his/her chosen profession in a broad (and operational) perspective. The descriptive orientation is intentional. Banking is increasingly dependent upon personnel who have the broad perspective so necessary for career advancement. Three lecture hours per week.

**BANK 140. Money and Banking** (3 credits). This course stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student to apply his/her knowledge to his/her particular job. Historical treatment has been kept to a minimum. Emphasis is also placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments, and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios. Three lecture hours per week.

**BANK 150. Analyzing Bank Financial Statements** (3 credits). A fourth edition of the textbook is used for this course and is organized into two main sections: Characteristics of Financial Statements and Financial Statement Analysis. The first section serves as a useful review of basic accounting principles for those students who have studied accounting. For those who have not, this section provides the minimum accounting background necessary for profitable study of financial statement analysis. Three lecture hours per week.

**BANK 230. Marketing for Bankers** (3 credits). This course discusses the basis of public relations, both internal and external, and seeks simply to explain the why, the what, and some of the how of public relations and marketing. It is intended as an overview for all bankers in terms of what everyone in banking should know about the essentials of bank public relations and marketing. Three lecture hours per week.

**BANK 240. Bank Investments** (3 credits). Because the bank's needs for primary reserves and loanable funds limit the funds available for investment, this course describes the nature of such funds and how their uses are determined. It also analyzes the primary and secondary reserve needs of commercial bank, the sources of reserves, and their random and cyclical fluctuations, showing the influence of these factors on investment policy. This analysis is followed by

a study of yield changes as they affect a bank's long-term holdings. Three lecture hours per week.

**BANK 250. Credit Administration.** (3 credits). This course, directed toward the executive level, concerns itself partly with a statement and a discussion of factors influencing and determining loan policy. Methods of credit investigation and analysis, credit techniques, specific credit problems, and regular as well as unusual types of loans are discussed. Three lecture hours per week.

**BANK 260. Supervision and Personnel Administration** (3 credits). This course is designed to aid first-line supervisors in making a smooth transition from expert in a particular to aid first-line supervisors in making a smooth transition from expert in a particular task to the role of a supervisor who must produce results through the efforts of other people. In this role, the first-line supervisor must reflect management attitudes and carry out management policies while at the same time inspiring his/her group to achieve friendly cooperation and maximum production. It should be recognized that the same principles are involved at every level of supervision within the organization. Three lecture hours per week.

**BANK 270. Installment Credit** (3 credits). In this course, the techniques of installment lending are presented concisely. Emphasis is placed on establishing the credit, obtaining and checking information, servicing the loan, and collecting the amounts due. Each phase of a bank's installment credit operation should be carefully scrutinized to be certain that the most efficient methods are employed, for only through an efficient operation can a bank maximize its profits on this particular kind of credit. Other topics discussed are inventory financing, special loan programs, business development and advertising, and the public relations aspect of installment lending. Three lecture hours per week.

**BANK 280. Teller Training Seminars** (3 credits): (a) Loan and Discount. This seminar teaches bank employees the essential facts about promissory notes, including calculating interest and discounting commercial paper; guaranties; general collateral agreements; examining and processing documents accompanying notes secured by stocks, bonds, and savings account passbooks, and the concept of attachment, perfection, priority, default, and foreclosure; (b) Loss Prevention. This seminar focuses on check cashing, check swindles, bank holdups, and security procedures; (c) Selling Bank Services. Teaches tellers and new-accounts personnel how to recognize and meet bank customer needs: checking accounts, saving services, loans to individuals, safe deposit boxes, travelers checks and cross selling. Three lecture hours per week.

### PRODUCTION MID-MANAGEMENT

**PROD 230. Industrial Management** (3 credits). Modern industrial concepts as applied to specific business situations. Course deals with automation, managerial skills, organizational trends, employee motivation, and principles of industrial relations. Three lecture hours per week.

**PROD 240. Production Planning and Control** (3 credits). The function of managerial planning and control are given more detailed treatment. Relationship of objective to different types of planning is presented. Attention is directed to effective control systems, human factors in controlling modern business. Three lecture hours per week.

**PROD 250. Materials Management** (3 credits). A study of manufacturing processes including general procedure, cutting and noncutting processes. Destructive and nondestructive testing of materials, automation, safety, product materials and production materials management will also be encountered. Three lecture



hours per week.

**PROD 260. Methods Analysis and Work Measurement** (3 credits). Operational problems and control of production and logistics systems; application of management tools (both qualitative and quantitative) to operating systems. Three lecture hours per week.

## REAL ESTATE MID-MANAGEMENT

**REAL 130. Principles of Real Estate** (3 credits). A beginning course in real estate fundamentals and principles. The development of real estate in Texas. Introductory study of ownership appraisal, law, practices, financing, land and location values, transfers, trends, regulations and economic effects. Three lecture hours per week.

**REAL 140. Real Estate Mathematics** (3 credits). Provides both student and practitioner the means for acquiring and maintaining a sound proficiency with the mathematics of basic real estate transactions. This course will allow the student to learn how to compute the figures that underlie most real estate transactions: costs, values, income, expenses, profits, taxes and money, money variations and innovations. Three lecture hours per week.

**REAL 220. Real Estate Practice** (3 credits). Deals with the problems of establishing and conducting a real estate business. Includes establishing the office, securing and listing prospects, showing properties and closing sales, financing, property management, rentals and leases, appraisals, and the Texas Real Estate Act. Three lecture hours per week. Prerequisite: REAL 130.

**REAL 230. Real Estate Law** (3 credits). A study of Texas real property law. Includes the history of land titles, real property estates, including acquisition and transfer and methods and incidents of ownership, easements, fixtures, land descriptions, recording, homesteads, land contracts, mortgages, and trust deeds, liens, taxes and assessments, covenants, conditions, and restrictions, zoning ordinances, leases, brokers, and types of listing agreements, escrows, title insurance, and probate proceedings. Three lecture hours per week. Prerequisite: REAL 130.

**REAL 240. Real Estate Finance** (3 credits). Techniques of using security devices, legal aspects of mortgages and related instruments, return mortgage and equity capital, where and how best to obtain funds, procedures in financing and mathematics of real estate finance. Problems, policies, and risks involved in financing of various types of real property. Three lecture hours per week. Prerequisite: REAL 130.

**REAL 250. Real Estate Brokerage** (3 credits). The course emphasizes planning and organizing for brokerage operations, selecting and training real estate sales personnel, and managing sales activities. Treatment is given also to control systems, effective advertising practices, and "professionalism" in real estate brokerage. Prerequisite: REAL 130. Three lecture hours per week.

**REAL 260. Real Estate Appraisal** (3 credits). Methods of real estate appraisal are presented including market value, income, and cost. Emphasis is placed on case studies to provide maximum practice in appraising real estate. Prerequisite: REAL 130. Three lecture hours per week.

**REAL 270. Property Management** (3 credits). This course will provide an overview of the field and describe the major functions of property managers, including their legal, interpersonal, maintenance, accounting, administrative, and other activities. The course will also be concerned with specific practices and problems in the management of various types of property: apartment buildings,

cooperatives and condominiums, office buildings, retail property, industrial property, and subsidized housing. Prerequisite: REAL 130. Three lecture hours per week.

**REAL 280. Residential Selling Strategies** (3 credits). This course will help the agent establish a system of strategies by which an agent can successfully implement the selling activities identified in strategic planning. The emphasis is on the content, strategy, and timing of an agent's communications with his customers. These strategies will include listing, lawyers, negotiating and prospecting. Prerequisite: REAL 130. Three lecture hours per week.

**REAL 290. Real Estate Investment** (3 credits). The purpose of this book is to provide a general background of information essential to successful real estate investment. Some of the topics included in this course will be investment cost, tools of analysis, property income taxation, land use, residential property, and income property investment. Prerequisite: REAL 130. Three lecture hours per week.

## RETAIL MID-MANAGEMENT

**RETL 130. Principles of Retailing** (3 credits). This course is designed to introduce the student to the essential principles of retailing, including consumer motivation, market segmentation, retail research, buying, retail pricing, inventory control, and store location. Three lecture hours per week.

**RETL 230. Principles of Marketing** (3 credits). This course is designed to provide treatment of the broad range of business activities that direct the flow of goods and services of businesses and individuals. Activities considered include product planning, standardization, buying, pricing, promotion, selling, credit, storage, transportation, and marketing research. Three lecture hours per week.

**RETL 240. Advertising** (3 credits). Advertising is considered as an integral part of the overall marketing strategy. Topics covered include marketing planning, evaluating the advertising opportunity, product development, branding, packaging, pricing, marketing research, consumer behavior, and budgeting as these relate to advertising. Prerequisite: RETL 130. Three lecture hours per week.

**RETL 250. Selling and Salesmanship** (3 credits). Attention is given to general principles of successful selling, qualification, and training programs. Role-playing techniques and media center materials complement the classroom and the text. Prerequisite: RETL 130. Three lecture hours per week.

**RETL 260. Retail Merchandise Management** (3 credits). Effective methods of merchandise control are presented including minimizing investment in inventory, guides to use in buying, pricing policies, and computing stock turnover. Merchandise budgeting techniques are also presented. Prerequisite: RETL 130. Three lecture hours per week.

## MUSIC

Andy Anderson, *Department Chairperson*  
Doris Burbank, Jerry Perkins

**MUSIC 105. Business of Music** (3 credits). A guide to the real world of the music industry. Topics include careers in the recording and performing fields, retail music business, publishing, copyrights and other legalities. Agents, managers, plus showmanship and conducting techniques necessary for small and large ensemble work will also be included. Three lecture hours per week.



**MUSC 110. Introduction to Music** (3 credits). This course is designed to familiarize students with the meaning of musical notation through the study of scales, chords, and rhythm. Especially adapted for elementary education majors and other students who wish to gain a working knowledge of music. Enrollment in class piano is recommended when a student enrolls in this course. Three lecture hours per week.

**MUSC 111-112. Survey of Music Literature** (3 credits) (3 credits). A required course for music majors studying the fundamentals of music terminology and standard instrumental and vocal forms. Representative composers and compositions from secular and sacred music of most major eras are studied by means of records, lecture, and reports. Three lecture hours (and one lab hour per week).

**MUSC 113. A History of Jazz** (1 credit). Discussion and listening experiences reflecting the development of jazz music and its impact on American culture. The music is traced from its African roots through ragtime, blues, the big-band swing era, be-bop, cool jazz and free jazz. Meets three hours per week.

**MUSC 120. Music Appreciation** (3 credits). The aim of this general survey course is to provide a foundation for the enjoyment and understanding of music. Representative composers and their works are studied through recorded music. Three lecture hours per week.

**MUSC 121-122-223-224. Ear Training and Sight-Singing** (2 credits for each course). Required courses for music majors. A four semester presentation of basic aural, visual, and vocal experiences in dictation and sight-singing. Three lab hours per week. Prerequisite: Approval of the instructor.



## MUSIC

**MUSC 123-124. Choral Conducting** (2 credits) (2 credits). Basic course for the beginning conductor introduces beat patterns and subdivisions and practical experience in conducting vocal groups. Meets two hours per week.

**MUSC 131-132. Class Piano** (1 credit) (1 credit). Class piano is designed for students with little or no previous experience. A study of basic techniques, scales, chords and basic repertoire. One lecture hour and one lab hour per week. Prerequisite: Instructor approval.

**MUSC 131B. Brass Class** (1 credit). A required course for music education majors with instrumental concentrations. Techniques of performing and instructing beginning instrumentalists on trumpet, french horn, trombone and tuba are examined. Class meets three hours per week.

**MUSC 131W. Woodwind Class** (1 credit). A required course for music education majors with instrumental concentrations. Techniques of performing and instructing beginning instrumentalists on flute, oboe, clarinet, bassoon, saxophone and piccolo are examined. Class meets three hours per week.

**MUSC 131P. Percussion Class** (1 credit). A required course for music education majors with instrumental concentrations. Techniques of performing and instructing beginning instrumentalists on snare drum, tympani, xylophone, cymbals and other percussions instruments are examined. Class meets three hours per week.

**MUSC 131G-132G. Guitar Class** (1 credit) (1 credit). A course designed for beginning guitar students. A study of basic techniques, chords and basic repertoire. Class meets three hours per week.

**MUSC 141-142. Music Theory** (3 credits) (3 credits). A study of the fundamentals of musicianship. Includes a study of scales, intervals, diatonic triads, inversions, written and keyboard harmony and a study of the dominant seventh chords and inversions. Three lecture hours per week.

**MUSC 195. Improvisation** (2 credits). The technique of improvising music through analysis of melodic motives, chordal construction and sequencing is presented and applied to traditional and contemporary materials. Meets three hours per week.

**MUSC 243-244. Music Theory** (3 credits) (3 credits). A continuation of the first year course with advanced aural and written study with emphasis on chromatic harmony and harmonic analysis. Class meets three hours per week. Prerequisite: MUSC 142.

## ENSEMBLES

**MUSC 151, 152, 253, 254. Concert Choir** (1 credit for each course). This choir presents in concert many selections of the world's fine literature. In addition to local concerts, this group will participate in campus activities and will make several concert tours to other cities. In order to obtain credit, members are to attend all called rehearsals and public performances. Five rehearsal hours per week.

**MUSC 153. Opera Workshop** (1 credit). Practical experience for the singing actor in the integration of music, acting and staging of portions of operas. Meets four hours per week.

**MUSC 154. Musical Theatre** (2 credits). The study and performance of works selected from the music theatre repertoire. Meets five hours per week.



**MUSC 161, 162, 263, 264. College Singers** (1 credit for each course). This organization is limited in membership. Students are selected through auditions from the membership of the college choir. Four rehearsal hours per week. Prerequisite: Previous experience in choral music, a member in good standing of the concert choir, ability to sight-read and approval of the instructor.

**MUSC 181, 182, 283, 284. Stage Band** (1 credit for each course). This organization is the largest performing instrumental group. Numerous concerts both on and off campus include contemporary jazz and rock music as well as standard big band literature. Membership is open to all college students by approval of the instructor. Four rehearsal hours per week.

**MUSC 185-186-287-288. Concert Band** (1 credit hour for each course) A concert group of brass, woodwind, and percussion performing traditional repertoire and original works for wind ensembles. Five rehearsal hours per week.

**MUSC 191, 192, 293, 294. Jazz Lab** (1 credit for each course). This organization performs for many special occasions on and off campus. Music includes small band jazz-rock with emphasis on individual improvisation. Membership is open to all college students by approval of the instructor. Three lab hours per week.

#### APPLIED MUSIC

**MUSC 115X, 115Y, 215X, 215Y. Applied Music — Piano** (2 credits for each course). One hour of individual instruction a week. Requires four lab practice hours per week. Prerequisite: Approval of instructor.

**MUSC 117X, 117Y, 217X, 217Y. Applied Music — Piano** (1 credit for each course). One-half hour of individual instruction a week. Requires four lab practice hours per week. Prerequisite: Approval of instructor.

**MUSC 125X, 125Y, 225X, 225Y. Applied Music — Voice** (2 credits for each course). One hour of individual instruction a week. Requires four lab practice hours per week. Prerequisite: Approval of instructor.

**MUSC 127X, 127Y, 227X, 227Y. Applied Music — Voice** (1 credit for each course). One-half hour of individual instruction a week. Requires four lab practice hours per week. Prerequisite: Approval of instructor.

**MUSC 135X, 135Y, 235X, 235Y. Applied Music — Brass** (2 credits for each course). One hour of individual instruction is offered in trumpet, trombone, French horn and tuba. Requires four lab practice hours per week. Prerequisite: Approval of instructor.

**MUSC 145X, 145Y, 245X, 245Y. Applied Music — Woodwind** (2 credits for each course). One hour of individual instruction is offered in bassoon, clarinet, flute, oboe and saxophone. Requires four lab practice hours per week. Prerequisite: Approval of instructor.

**MUSC 155X, 155Y, 255X, 255Y. Applied Music — Percussion** (2 credits for each course). One hour of individual instruction in the use of percussion instruments. Requires four lab practice hours per week. Prerequisite: Approval of instructor.

**MUSC 175X, 175Y, 275X, 275Y. Applied Music — Guitar** (2 credits for each course). One hour of individual instruction is offered in guitar. Required four lab practice hours per week. Prerequisite: Approval of instructor.

## NURSING

Betty Oliver, *Director*

Lydia Biegert, Emeola Curvey, Dee Shields,

Jean Withrow, Deborah Teasley,

Miriam Villageliu, Sally Durand, Patsy Foreman

### ADN — Associate Degree Nursing

**NURS 110. Introduction to Nursing** (8 credit hours). This is the basic course in the nurse curriculum. It provides the foundation upon which the other nursing courses are built. The student is introduced to the more common deviations from wellness so that he/she develops an increased awareness of the health-illness continuum. The foundation for curriculum threads is introduced in this course and integrated throughout subsequent nursing courses. These curriculum threads are: developmental stages, interpersonal relationships, pathology, treatment modalities, nursing process, nursing skills and legal-ethical aspects of nursing. Laboratory and clinical experiences will be provided in the nursing skills laboratory and with the adult patients in health care facilities. Four lecture hours, twelve laboratory hours. Pre- or co-requisites: BIOL 121, PSYC 120.

**NURS 121. Principles and Practice of Pharmacology** (3 credit hours). Principles and Practice of Pharmacology is a course designed to assist the nursing student in the establishment of a firm groundwork in the principles of drug therapy. Broad categories of pharmacologic agents and their interrelationship with various body systems will be discussed. Emphasis will be placed on the role and responsibilities of the nurse in drug therapy. Pre-requisites: Approval of instructor.

**NURS 122. Principles and Practice of Nutrition** (3 credits). This course is designed to offer the student pursuing a career in health care delivery a thorough understanding of the concepts and principles involved in dietary therapeutics. The content will include: the nutrients and the normal diet; special nutritional needs throughout the life cycle; and the modification of the normal diet for medical and surgical conditions. Prerequisites: Approval of instructor.

**\*NURS 130. Psychiatric Nursing** (4 credit hours). This course focuses on individuals whose behavioral patterns are considered to be deviations from the normal. These individuals are identified through their admission to a psychiatric in-patient facility. The role of the nurse in treatment modalities is stressed. Clinical experiences provide opportunities for students to interact therapeutically with patients both individually and in groups. 2 lecture hours, 6 clinical hours. Pre-requisites: BIOL 122, PSYC 120, NURS 211. Co-requisites: PSYC 130.

**NURS 210. Medical Terminology** (3 credits). The course is designed for students pursuing medical and allied health careers. Study and practice of biomedical and other vocabularies common to health activities will be included. Three lecture hours. Prerequisite: Approval of instructor, or BIOL 121.

**NURS 211. Medical-Surgical Nursing I** (8 credit hours)\*This course familiarizes the student with the more common medical and surgical conditions for which patients are hospitalized. It emphasizes the biological, psychological and social components of each patient's situation. The student will utilize the nursing process in the management of the patient with more complex problems. Four lecture hours, twelve clinical hours. Pre-requisite: NURS 110 Pre- or co-requisites: BIOL 122, ENGL 121, PHED.

**NURS 212. Medical-Surgical Nursing II** (8 credit hours). This course is a continuation of Medical-Surgical Nursing I. It provides a more in-depth level of learning



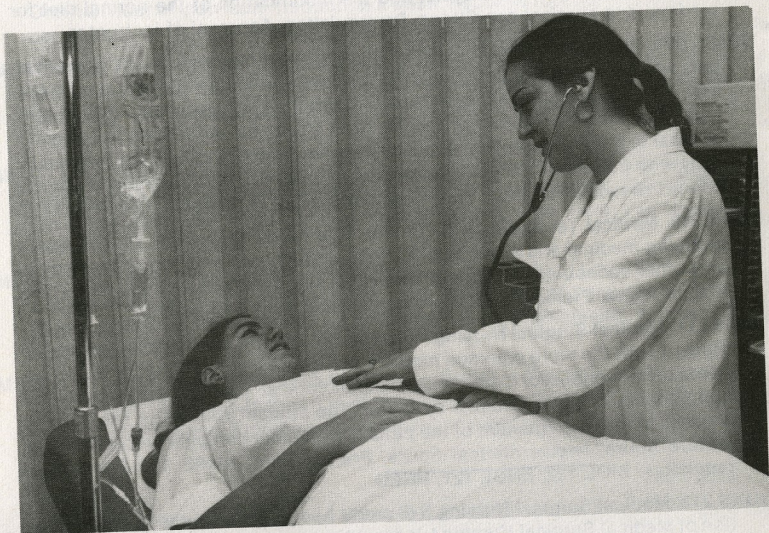
and includes nursing practice in more complex nursing settings. Opportunities are provided for the assumption of increased responsibility in the management of nursing care. The student will synthesize and apply the knowledge and skills from nursing and science courses. Four lecture hours. Twelve clinical hours. Pre-requisites: NURS 130. Pre- or co-requisites: CHEM 110 or CHEM 121, BIOL 225, ENGL 122.

**NURS 213. Maternal Nursing** (4 credits) (8 weeks). This course approaches the family at the establishment phase and includes the antepartal phase, parturition, and the post-partal phase of childbearing. It also includes the care of the newborn. Meeting the physiological and psychological needs of the family is stressed with emphasis on the normal aspects of childbearing. Deviations from normal are included with the focus on the assessment and nursing management. Experiences are provided in clinical agencies for caring for the mother and the newborn. Four (4) lecture hours and twelve (12) laboratory hours. Prerequisites: NURS 212.

**NURS 214. Child Health Nursing** (4 credits) (8 weeks). This course includes the care of the child from birth through adolescence. The stages of growth and development is a prerequisite course which serves as the theoretical foundation for the nursing care. Acute and chronic illnesses of children are studied with emphasis on nursing care. Clinical experiences provide the student with opportunities to care for and observe children in both the hospital and well-child settings. Four lecture hours, twelve clinical hours. Prerequisites: NURS 212.

**NURS 221. Professional Development** (3 credits). This course is designed to offer the student of nursing a better understanding of the nursing profession as it relates to the health care delivery system. The content will include historical, contemporary and future issues in nursing; legal responsibilities; professional behavior and ethics; professional organizations; opportunities and employment responsibilities in nursing; and concepts of management. Co-requisite Nurs. 213/214.

\*Pending TEA Approval



## NURSING

Judy Siefert, *Department Chairperson*  
Glo Ann Cole

### VN — Vocational Nursing

**NURS 001. Personal and Vocational Adjustments.** (12 contact hours). This course introduces vocational nursing, nursing history, nursing ethics, legal aspects, personal hygiene and grooming, licensure, nursing associations, publications, and the role of the vocational nurse as a part of the health team and the health care delivery system.

**NURS 002. Microbiology.** (12 contact hours). This course introduces the student to the world of microscopic organisms with emphasis on disease prevention, disease control programs, and community resources. A brief introduction relates organisms to various communicable diseases.

**NURS 003. Anatomy and Physiology.** (70 contact hours). This is a basic course in normal body structure and function and serves as a background for nursing care principles. Independent and interdependent functioning of the body systems are included, i.e. the cell, body organization, the musculoskeletal systems, nervous, cardiovascular, respiratory, gastrointestinal, genito-urinary, and endocrine systems.

**NURS 004. Vocational Nursing Skills.** (165 contact hours). This course is designed to assist the student develop competency in nursing skills and activities. The student will receive classroom and laboratory instruction and preclinical hospital setting experience. The sequence of study will proceed from simple to complex and in the order of man's basic needs hierarchy.

**NURS 005. Nutrition.** (25 contact hours). This course is designed to provide general knowledge of nutrition in healthy and diseased states of all age groups. The student will study the importances of good nutrition, the nutritional essentials, nutrition planning, and basic diet development for individuals needing diet alteration.

**NURS 006. Pharmacology.** (70 contact hours). This course introduces pharmacology, weight systems, calculation of dosages and introduces the basic drug classification, drug uses, actions, dosages, routes of administration, side effects, precautions and nursing implications. Laboratory demonstrations of correct patient identification, medication preparation, and safety are emphasized. Minimum clinical experiences will be 1 week of Functional Medication Administration or 8 weeks Total Patient Care Assignments.

**NURS 007. Mental Health and Mental Illness.** (25 contact hours). This course defines the basic concepts of positive mental health, coping mechanisms, and the various aspects of emotional behavior due to illness and/or environmental factors. Related pharmacological and nutritional aspects of patient care are integrated. Clinical experience if available will be two weeks psychiatric nursing.

**NURS 008. Maternal Child Nursing.** (91 contact hours). This course approaches the study of the family at the established phase using the nursing process. Normal obstetrics and complications specific to the mother and the newborn are studied in the prenatal, antenatal and post-natal and/or post-partum periods. Normal growth and development of children from birth through adolescence is included. Childhood diseases and disorders, their effects upon normal growth and development, pediatric nursing care measures necessary to meet the emotional, physical, and socio-economic needs of the child are followed through the family life cycle. The minimum clinical experience will be 3 weeks obstetri-



cal nursing, 2 weeks newborn, 3 weeks pediatric nursing.

**NURS 009. Medical-Surgical Nursing.** (130 contact hours). This course is designed to aid the student in the nursing process and in meeting the needs of the adult and geriatric patient in the hospital, or other health care agencies. The student will utilize his basic knowledge of nursing care principles, the nursing process and man's basic needs in administering care to patients with major and minor medical-surgical conditions. Principles of first-aid, pharmacology, and nutrition are included in the development of the total plan of care for each patient condition. The minimum clinical experience will be 6 weeks medical nursing and 6 weeks surgical nursing.

## PHYSICAL EDUCATION

Don Childs, *Department Chairperson/Athletic Director*  
Frankie Blansit, Gary Coffman, John Gilligan

### ACTIVITY COURSES FOR MEN AND WOMEN

**PHED 115-116. Individual and Dual Sports.** (1 credit) (1 credit). This course provides instruction and participation in one of the following: beginning tennis, badminton, archery, gymnastics, karate, handball, racquetball, yoga, scuba diving, bowling, jogging, weight training, water safety instruction, dance, cheerleading and golf for the development of fitness, skills, knowledge and appreciation for all students. Equipment is furnished by the college. Three hours of class instruction and participation per week.

**PHED 117-118. Volleyball.** (1 credit) (1 credit). This course consists of instruction and participation in both beginning and advanced volleyball. Three lab hours per week.

**PHED 121-122. Physical Fitness and Weight Training.** (1 credit) (1 credit). A study of basic fundamental skills and techniques of an overload and strength and conditioning program is included in this course. Three hours of class instruction and participation per week.

**PHED 125-126. Fundamentals of Movement.** (1 credit). This course provides instruction and participation in one of the following: folk dance, country and western dance, aerobic dance, ballet, jazz or beginning modern dance with a brief study of history and philosophy of the dance. Three hours of class instruction and participation per week.

**PHED 137-138. Bowling.** (1 credit) (1 credit). Designed for both the beginner and the advanced bowler. After a four week instruction period, a class league is formed with students receiving experience in league etiquette, procedures, scoring, etc. Three hours of class instruction and participation per week.

**PHED 151-152. Team Sports.** (1 credit) (1 credit). Activities taught may include one or two of the following: flag football, basketball, volleyball, soccer, speedball and softball. Three hours of class instruction and participation per week.

**PHED 165-166. Physical Conditioning.** A planned program of exercise to provide a condition of fitness and figure improvement through increased cardio-vascular activity and large muscle exercise. Three hours of class instruction and participation per week.

**PHED 215-216. Individual and Dual Sports.** (1 credit) (1 credit). Prerequisite: Sophomore standing. Three lab hours per week.

**PHED 217-218. Volleyball.** (1 credit) (1 credit). Prerequisite: Sophomore standing. Three lab hours per week.

**PHED 221-222. Physical Fitness and Weight Training.** (1 credit) (1 credit). Prerequisite: Sophomore standing. Three lab hours per week.

**PHED 225-226. Fundamentals of Movement.** (1 credit) (1 credit). Prerequisite: Sophomore standing. Three lab hours per week.

**PHED 237-238. Bowling.** (1 credit) (1 credit). Prerequisite: Sophomore standing. Three lab hours per week.

**PHED 251-252. Team Sports.** (1 credit) (1 credit). Prerequisite: Sophomore standing. Three lab hours per week.

**PHED 265-266. Physical Conditioning.** (1 credit) (1 credit). Prerequisite: Sophomore standing. Three lab hours per week.

### VARSITY SPORTS

**PHED 131-132, 231-232. Varsity Volleyball.** (1 credit) (1 credit). A course for advanced volleyball players who are competing on a collegiate level. Prerequisite: Instructor approval. Three lab hours per week.

**PHED 161-162, 261-262. Varsity Tennis.** (1 credit) (1 credit). A course for advanced tennis players who are participating on a collegiate level. Prerequisite: Instructor approval. Three lab hours per week.

**PHED 171-172, 271-272. Varsity Baseball.** (1 credit) (1 credit). A course for advanced baseball players who are competing on a collegiate level. Prerequisite: Instructor approval. Three lab hours per week.

**PHED 181-182, 281-282. Varsity Basketball.** (1 credit) (1 credit). A course for advanced basketball players who are competing on a collegiate level. Prerequisite: Instructor approval. Three lab hours per week.

**PHED 191-192, 291-292. Varsity Golf.** (1 credit) (1 credit). A course for advanced golf players who are competing on a collegiate level. Prerequisite: Instructor approval. Three lab hours per week.

### THEORY COURSES:

**PHED 110. Foundations of Physical Education.** (3 credits). Designed for professional orientation in physical education, health and recreation. Brief history, philosophy and modern trends of physical education, teacher qualification, vocational opportunities and skill testing comprise the contents of the course. Three lecture hours per week.

**PHED 120. Personal and Community Health.** (3 credits). This course presents the essential present-day knowledge of personal and community health. Stress is placed on physiological and anatomical background showing the student how to make a sound appraisal of the effects of health practices upon the body. Pollution and prevention and control of diseases are also discussed under community health.

**PHED 130. Coaching Athletics.** (3 credits) A course in the coaching of football, basketball, baseball, tennis, golf, and volleyball for students who would like to assist in this sport, but who prefer to emphasize this phase of physical education. Methods of coaching are studied through lectures, demonstrations, practice, and reading of present day literature on the sports. Three lecture hours per week. Course may be repeated for additional credit when a different sport is covered.

**PHED 210. First Aid.** (3 credits). The theory and practice in the standard and ad-



vanced courses of the American Red Cross in first aid and home and farm study. Three lecture hours per week.

**PHED 220. Officiating.** (3 credits). This course is designed to teach the rules of various sports. Opportunities for experience will be provided in intramurals, practice games and tournaments. Three lecture hours per week.

**PHED 230. Athletic Injuries.** (3 credits) A course in the practical and theoretical study of massage, taping, bandaging, care of sprains, bruises, strains, and wounds. A course designed to acquaint the student with the problems of the athletic training room and to provide him with the practical instruction to aid in the solution of these same problems. Three lecture hours per week.

## PHYSICS

Dick Graef, *Department Chairperson*

**PHYS 111, 112. Physical Science I, II** (4 credits) (4 credits). A survey course of the physical science field. Topics are selected from physics, chemistry, geology, astronomy, and meteorology. Experiments are chosen to illustrate the philosophy and methods of science. This course is designed and taught for the non-science major. Three lecture and two laboratory hours per week.

**PHYS 121-122. General Physics I, II** (4 credits) (4 credits). These courses are to be taken in sequence. An introductory course which includes mechanics, heat, electricity, magnetism, light and nuclear physics. Three lecture and three laboratory hours per week. Prerequisite: MATH 110 or the equivalent.

**PHYS 133-134. Technical Physics I, II** (4 credits) (4 credits). Instruction includes motion, Newton's laws, sound, electricity and magnetism. Students are also introduced to atomic structure, inorganic reactions, bonding, organic nomenclature, heat, spectra, and optical instruments. This course is designed primarily for students in the technology program that need a fundamental understanding of physics and chemistry. Three lecture and three laboratory hours per week. Prerequisite: MATH 110 or the equivalent.

**PHYS 141. Mechanics and Heat** (3 credits). This is a course designed to meet the needs of science and engineering students. Topics covered include: vectors and vector products, equilibrium, moments of force, motion, Newton's laws, and heat. Three lecture hours per week. Corequisite: MATH 212 or 214.

**PHYS 146. Mechanics and Heat Laboratory.** (1 credit). A laboratory course for those students taking PHYS 141. One three-hour meeting per week. Corequisite: PHYS 141.

**PHYS 242. Electricity and Magnetism** (3 credits). A course in electricity and magnetism designed for science and engineering students. Three lecture and three laboratory hours per week. Prerequisite: PHYS 141.

**PHYS 247. Electricity and Magnetism Laboratory** (1 credit). A laboratory course for those students taking Physics 242. One three-hour meeting per week. Corequisite: PHYS 242.

**PHYS 243. Wave-Motion, Sound, Light** (3 credits). A course for students in science, engineering, and other related fields. Topics covered include: nature and propagation of light, reflection interference, diffraction, lens, polarization, natural radioactivity and nuclear energy. Three lecture hours per week. Prerequisite: PHYS 242.

**PHYS 248. Wave-Motion, Sound, Light Laboratory.** (1 credit). A laboratory course for those students taking Physics 243. One three hour meeting per week. Corequisite: PHYS 243.

## PSYCHOLOGY

Arthur Daniel, *Department Chairperson*  
Nancey Lobb

**PSYC 110. Human Development** (3 credits). A course employing the basic principles of psychology, designed to help the student identify personal strengths and career interests, and to develop those interpersonal skills necessary for functioning in the student's chosen field or vocation. Care is taken to identify and build upon the student's strengths, especially as these are related to diverse cultural and/or native language capabilities, that may help assure success in the student's chosen field or vocation. Three lecture hours per week.

**PSYC 120. General Psychology** (3 credits). This course is designed to give the student a broad view of the field and acquaint him with the fundamental laws of behavior that have to do with daily conduct in various life situations. The study of human behavior relating experimental data to practical problems, the measurement of ability, sensory and perceptive processes, organic basis of behavior, heredity, maturation, learning and thinking, motivation, emotion, personality and social factors in behavior. Three lecture hours per week.

**PSYC 130. Child Growth and Development** (3 credits). A study of physical and psychological development from conception to adolescence with emphasis on factors which influence growth and development. Designed to help the individual develop skills in observing and interpreting children's behavior. Three lecture hours per week.

**PSYC 230. Adolescent Psychology** (3 credits). This course will provide a survey of adolescent development including physical, intellectual, social and emotional factors. It will focus on the problems of adjustment and typical manifestations of anti-social behavior during adolescence.

**PSYC 240. Statistical Methods in Psychology** (3 credits). Measures of central tendency and variability; statistical inference; correlation and regression. Prerequisite: PSYC 120.

**PSYC 260. Human Development: Biofeedback Training** (3 credits) This course is designed to provide the student with some simple skills in self-control through the use of biofeedback equipment. It will provide a means for learning appropriate responses to stress and for improving the individual's self-concept. Two lecture and two laboratory hours per week.

## READING

Charles Ferguson, *Department Chairperson*  
Lynda Vern

**NOTE:** Developmental Reading courses and labs provide instruction in the fundamentals of reading. Such instruction will benefit two groups of students: (1) those needing additional preparation in reading before taking college-level credit courses and (2) those who simply desire to improve their reading abilities.

Either one or two semesters of Developmental Reading are required for all students who score below 14 in Social Science on the ACT and/or who reveal by placement exam a deficiency in reading ability. Developmental Reading is strongly recommended for students scoring below 16 in Social Science on the ACT. Developmental Reading students who successfully complete their studies are eligible to take RDNG 115.



**RDNG 101. Developmental Reading Lab I** (1 credit). Designed to accompany RDNG 109 or 110, this lab provides one hour each week of supervised activities that reinforce 109 or 110 class work and deal with specific reading problems.

**RDNG 109. Developmental Reading I** (3 credits). To improve basic reading abilities, this course teaches phonetic and structural analysis skills that enable the student to "decode" unfamiliar words and thus become an independent reader. Comprehension techniques are also stressed. RDNG 109 is offered in a laboratory setting.

**RDNG 110. Developmental Reading II** (3 credits). Through improvement of reading comprehension and speed, vocabulary, and study skills, this course prepares the student to deal more successfully with the study materials required in many college courses. RDNG 110 is offered in a laboratory setting.

**RDNG 115. Speed Reading** (3 credits). This is a transferable course for the average or advanced reader. As in RDNG 110, the focus in RDNG 115 is on reading comprehension and speed, vocabulary development, and study skills. The course is offered in a laboratory setting. Prerequisite: An ACT score of 14 or higher in Social Sciences or a Nelson-Denny Reading Test score of tenth-grade level or higher.

## SECRETARIAL SCIENCE

Dorothy Hitt, *Department Chairperson*  
Pearl Rinderknecht

**SECT 111-112. Shorthand I, II** (3 credits) (3 credits). Aims at mastery of the principles of Gregg shorthand with drills in the correct formation of work outlines and phrase forms; the study of word signs, phrasing, dictation, transcription, and speed building. Lecture three hours, laboratory two hours per week.

**SECT 121-122. Typewriting I, II** (3 credits) (3 credits). The typewriting keyboard and skills essential to obtain employment in an office occupation. Correct typing techniques and practice in production problems such as centering, letters, manuscripts, simple tabulations, and forms. Both courses are structured for individualized learning. Lecture 2 hours, laboratory 3 hours per week.

**SECT 130. Business Communications** (3 credits). A study of the use of correct and forceful English and the application of positive qualities in writing business letters and reports. Lecture three hours per week.

**SECT 140. Secretarial Practice** (3 credits). A study of secretarial occupations and secretarial duties in the business office including handling of mail, filing, personality and human relations, grooming, and office routine. Lecture three hours and laboratory two hours per week. Prerequisite: SECT 112.

**SECT 141. Medical Secretarial Practice** (3 credits). A study of the duties of a medical secretary with actual practice given in all phases. Special attention is given to vocabulary, receptionist's duties, filing, typing, and accounting. Three lecture hours and two lab hours per week.

**SECT 142. Medical Terminology** (3 credits). Study of human anatomy, skeletal structure, systems of the body, and medical specialties, coupled with lectures, study guides, tests and exercises designed to insure knowledge of the components in building medical vocabulary and application thereof. Four lecture hours and one lab hour per week.

**SECT 143. Legal Secretarial Practice** (3 credits). A study of the duties of legal secretary. Special attention is given to vocabulary, legal typing, court documents, filing, accounting, and machine transcription. Three lecture hours and two lab hours per week.

**SECT 144. Legal Terminology** (3 credits). Course objectives are to insure comprehension of meanings and applications of legal terminology, while instructing in the various fields of law encountered in the practice of the course reporter. Emphasis is placed on the judicial system, types of courts, jurisdictions, and appellate procedures. Course also includes researching of legal reference books and handling of citations in the record. Four lecture hours and one lab hour per week.

**SECT 150. Office Machines** (3 credits). Introduction to operations of ten-key adding machine, electronic printing calculator, electronic display calculator, and transcriber. Designed as a survey course to give the student an insight into the use of these machines and to develop sufficient skill for machines to be used later in offices. Lecture two hours and laboratory three hours per week.

**SECT 210. Shorthand III.** (3 credits). Improvement of shorthand speed and office efficiency through practice. Further emphasis is given to widening vocabulary. Accurate transcription is stressed. Lecture three hours and laboratory two hours per week. Prerequisite: SECT 112.

**SECT 212. Secretarial Internship.** (3 credits). The student works in a qualifying firm 20 hours per week in an occupational situation where he receives practical training and experience compatible with his management career objective. Students may receive credit from an approved full-time job.

**SECT 215. Dictation and Transcription.** (3 credits). Intensive training designed to develop additional speed and accuracy in writing and transcribing shorthand to meet the demands for secretarial efficiency. Lecture three hours and laboratory two hours per week. Prerequisite: SECT 210.

**SECT 220. Typewriting III** (3 credits). This advanced typing course places emphasis on production typing with additional training given in letter writing, tabulation, stencil cutting, and creation of office atmosphere. Lecture two hours and laboratory three hours per week. Prerequisite: SECT 122.

**SECT 222. Secretarial Internship.** (3 credits). The student works in a qualifying firm 20 hours per week in an occupational situation where he receives practical training and experience compatible with his management career objective. Students may receive credit from an approved full-time job.

**SECT 230. Records Management** (3 credits). A study of basic filing procedures and records control, providing instruction in the fundamentals that are essential to the managing of the records of a business. Lecture two hours and laboratory two hours per week.

**SECT 240. Office Management and Procedures** (3 credits). Office management and procedures represents a comprehensive survey of the most acceptable methods and practices of office administration with a constant emphasis on two basic concepts of successful business management: satisfactory human relations and continuous cost reduction. This course is designed for the Administrative Secretary.

**SECT 250. Word Processing** (3 credits). Office simulation of business typing, transcribing, and production work utilizing equipment currently found in word processing centers. Develops concept of word processing in business for both the administrative secretary and the corresponding secretary. Includes a review of grammar, punctuation, and vocabulary, as well as training in decision making. Prerequisite: SECT 122 or equivalent. Two lecture hours and three laboratory hours per week.



## SOCIOLOGY

Arthur Daniel, *Department Chairperson*  
Mike Eernisse

**SOCI 110. Marriage and Family Relationships** (3 credits). A contemporary study of the freedom and growth potential of the individual in marriage and family life. The many parameters of the marital and parental relationships are explored and emphasis placed on raising current questions with comprehensive examination of the values and goals of the individual as well as the institution of the family.

**SOCI 111. Principles of Sociology** (3 credits). The scientific examination of the organization of human social life, the unique forms and social order of group life, and the products of group living with special emphasis on social interaction patterns, the processes and institutions developed by man to facilitate his progress.

**SOCI 122. Social Problems** (3 credits). The scientific examination of conditions that are disruptive to society today, those seen as problematic for society as a whole and those that represent violations of the norms of special groups in society: population, poverty, social minorities, mass society, delinquency, crime, drugs, sexual deviance, and disorganization of family, education and religion.

**SOCI 230. Introduction to Anthropology** (3 credits). Principles of physical and cultural anthropology; analysis of the cultures of prehistoric and existing preliterate people; impact of modern western culture on preliterate societies. Prerequisite: SOCI 111.

## SPANISH

José G. Castillo, Jr., *Department Chairperson*

**SPAN 111-112. Elementary Spanish I, II** (4 credits) (4 credits). While this course is definitely aimed toward proficiency in conversational Spanish, care is taken to give the student the necessary background in pronunciation, verb forms, and grammatical construction to enable him to take Intermediate Spanish. Three lecture and two laboratory hours per week.

**SPAN 121-122. Intermediate Spanish I, II** (3 credits) (3 credits). This course includes more complex grammatical points. Reading of classical and contemporary literature with a view to furthering cultural appreciation and gaining a better understanding of international affairs. Three lecture hours and one laboratory hour per week. Prerequisite: SPAN 112 or instructor approval.

**SPAN 211-212. Advanced Conversation and Composition** (3 credits) (3 credits). This course is designed to further the student's study and use of Spanish after the fourth semester of college study in the language. Three lecture hours per week. Prerequisite: instructor approval.

## SPEECH

C. Jay Burton, *Department Chairperson*

**SPCH 110. Fundamentals of Speech**. (3 credits). The Fundamentals of Speech consists of the study of the importance of speech as an aid in social adjustment; the improvement of articulation and pronunciation; the study of the use of bodily activity and its relation to effective speaking; vocabulary development;

the study of the general ends of speech and preparation toward the achieving of these ends. Three lecture hours per week.

**SPCH 120. Public Speaking** (3 credits). Public Speaking is devoted to the methods of organization and the techniques of delivery of the platform speech, emphasis upon explanation and persuasion. Study of group methods of problem solving and parliamentary procedure. Three lecture hours per week. Prerequisite: SPCH 110 or consent of instructor.

**SPCH 130. Oral Interpretation** (3 credits). Oral Interpretation is the study of platform interpretation of literature. Emphasis will be placed upon improvement in voice, pronunciation, and enunciation for interpreting lyric poetry, narrative prose and poetry, descriptive essay, monologue, and dramatic scenes. This course is particularly recommended for English and elementary majors. Three lecture hours per week. Prerequisite: SPCH 110.

**SPCH 140. Business Speech** (3 credits). Business Speech is devoted to the study of the techniques of technical reporting (i. e., speeches to instruct, speeches of special reporting); the study of special situation speeches; the study of techniques of problem-solving through public discussion (i. e., panel discussion, symposium, etc.); the study of the techniques of parliamentary law for purposes of learning to preside at various meetings; to give interview experience. Three lecture hours per week.

## WELDING

Bruce Westmoreland, *Department Chairperson*  
Jon Withrow, Mike Heffernan

**WELD 110. Welding Processes** (4 credits). Theory and practice in techniques of oxy-acetylene welding and cutting. Layout and preparation of commonly used joints. Servicing and regulation of oxy-acetylene equipment and basic shop practice. Basic welding machine theory and set up procedures of electronic arc welding machine. Two lecture and six laboratory hours per week.

**WELD 121. Arc Welding (Plate I)** (4 credits). Metal cutting with oxygen and acetylene equipment. Theory of plate welding. Plate welding in three positions: flat, vertical up, and horizontal. Two lecture and six laboratory hours per week.

**WELD 122. Arc Welding (Plate II)** (4 credits). Advanced theory of plate welding. Plate welding in five positions: flat, vertical up, horizontal, vertical down, and overhead. Root and Face Bend tests for qualifications of plate welders. Advanced theory and troubleshooting procedures for electronic arc welding machines. Two lecture and six laboratory hours per week. Prerequisite: WELD 121 or approval of department head.

**WELD 131. Basic MIG and TIG** (4 credits). Theory of Tungsten Inert Gas Welding and Metallic Inert Gas Welding. Laboratory experiences in gas shielded arc welding. Two lecture and six laboratory hours per week. Prerequisite: WELD 121 or approval of department head.

**WELD 160. Shop Equipment and Safety** (2 credits). An introductory course in safety to be used while in the shop or on the job. Shop and job safety will be taught and carried out at all times. One lecture and two laboratory hours per week.

**WELD 231. Advanced MIG and TIG** (4 credits). Advanced theory of Tungsten Inert Gas Welding and Metallic Inert Gas Welding. Advanced laboratory experiences in gas shielded arc welding. Two lecture and six laboratory hours per week. Corequisite: WELD 131 or approval of department heads.



✓ **WELD 241. Basic Layout Design and Fabrication** (3 credits). Introduction to design and construction of various types of layouts according to specifications. Related welding experiences involved in structure fabrication. One lecture and four laboratory hours per week. Prerequisite: WELD 121 or approval of department head.

✓ **WELD 242. Advanced Layout Design and Fabrication** (3 credits). Advanced design and construction of various types of layouts according to specifications. Related welding experiences involved in structure fabrication. One lecture and four laboratory hours per week. Prerequisite: WELD 241 or approval of department head.

✓ **WELD 251. Pipe Welding I** (4 credits). Theory of pipe welding. Cutting and beveling pipe with oxygen and acetylene equipment. Pipe welding in two positions: Rolling and horizontal. Two lecture and six laboratory hours per week. Prerequisite: WELD 122 or approval of department head.

✓ **WELD 252. Pipe Welding II** (4 credits). Advanced theory of pipe welding. Pipe welding in four positions: Rolling, horizontal, downhill, and overhead. Code test under Section IX, A. W. S. Two lecture and six laboratory hours per week. Prerequisite: WELD 251 or approval of department head.

*Selected*  
✓ **WELD 270. Welding Specifications and Testing** (3 credits). Testing welds by means of coupons cut out of a welded section. Sample testing of weld sections. How to use the bend test machine. The difference between non-destructive and destructive testing. Two lecture and three laboratory hours per week. Prerequisite: WELD 122.



## TEXAS DEPARTMENT OF CORRECTIONS PROGRAMS

### \*AIR CONDITIONING AND REFRIGERATION

Alec Huffman, *Department Chairperson*  
Charles Dolney

**ACRH 111. Principles of Refrigeration.** (3-7). (4 credits). A study of heat concepts, the refrigeration cycle, system component parts design, constructions, and operational characteristics. Lab work: Operating and testing refrigeration units.

**ACRH 120. Electrical Controls for Refrigeration.** (3-7). (4 credits). Electric motor theory, motor controls, temperature controls; service and maintenance techniques. Lab work: Troubleshooting refrigerating equipment.

**ACRH 123. Principles of Air Conditioning.** (3-7). (4 credits). Basic principles of heating and comfort cooling, including psychometrics of air, load calculations, and performance characteristics of cooling and heating equipment. Lab work: Installing, testing, and checking operation of air conditioning equipment.

**ACRH 124. Heat and Air Conditioning.** (3-7). (4 credits). Prerequisite: ACRH 123  
Theory and practice of installing, operating, and testing heating equipment to include heating elements, heat pumps, gas, steam and hot water heating system. Cost estimating procedures and problems.

**ACRH 125. Air Conditioning Controls.** (3-7). (4 credits). Prerequisite: ACRH 123  
A detailed study of electrical and pneumatic controls and circuits. Testing controls and procedures of analyzing troubles in control circuits.

### \*AUTOMOBILE MECHANICS

Bruce Westmoreland, *Department Chairperson*  
Alvin Horn, Hasso Schroder

**AUTO 110. Basic Automotive** (3-6) (4 credits). The course will acquaint the student with service trade information, use and care of shop equipment and tools, standard transmission, brakes, clutches, rear axle, drive line principles, and a limited application of automotive shop practice.

**AUTO 120. Internal Combustion Engine** (3-6) (4 credits). An introduction to the gasoline internal combustion engine. Technique and skill in inspection, repairing and overhauling of engine components, valve timing, use of special tools and equipment.

**AUTO 130. Automotive Electricity and Ignition System** (3-6) (4 credits). An introduction into the fundamentals of electricity as applied to the automotive vehicle. Classroom theory and laboratory practices of magnetic principles of electricity, functions of the diode and transistor, the storage battery, D.C. and A.C. charging systems, generators and alternators, and complete wiring systems.

**AUTO 140. Carburetion and Fuel Systems** (3-6) (4 credits). A study of fuels and their applications, requirements, and effect on carburetion. Students will disassemble, clean, overhaul, reassemble, and adjust various types of carburetors.

**AUTO 150. Automotive and Truck Chassis** (3-6) (4 credits). A study of designs, construction, and frame alignment fundamentals of the vehicle chassis. Classroom theory and laboratory practices will include front end alignment, shock absorbers, springs steering mechanism, wheel balancing, and power steering.



## \*DRAFTING

Ben Daw, *Department Chairperson*  
Larry Huffman

- DRFT 112. Technical Drafting** (3-6) (4 credits). The principles of technical drawing as required to express ideas graphically are introduced. Topics include: use of instruments, geometric construction, orthographic projection, sections, auxiliary views, revolutions, dimensioning, axonometric projection, intersections and developments.
- DRFT 213. Pipe Drafting** (3-6) (4 credits). A basic course designed for the study of engineering standards, pipe and fitting designs, symbols and specifications.
- DRFT 223. Structural Drafting** (3-6) (4 credits). A course designed to cover AISC specifications and standards, design and detail, or structural members and connections.
- DRFT 233. Electrical Drafting** (3-6) (4 credits). An introduction to electrical schematics and diagrams. Also covers basic electricity and study of electrical and electronic symbols, their application and associated terminology.
- DRFT 243. Architectural Drafting** (3-6) (4 credits). Basic drafting techniques as related to the preparation of residential details, with emphasis on floor plans, plot plans, foundations, structural details, sections and elevations.

## \*HORTICULTURE (ORNAMENTAL)

Steve Wheeler, *Department Chairperson*  
James Layton

- HORT 102. Principles of Horticulture** (4 credits). Fundamental principles and practices of structure, growth, development, maintenance, and use of horticultural plants. Commercial horticulture industry and occupational opportunities. An introduction to growing, grounds maintenance, planting, and transplanting will form the laboratory experience. Three hours lecture and six hours laboratory per week.
- HORT 112. Plant Materials for Landscape Use** (4 credits). Ornamental trees, shrubs, vines, and ground covers for landscape use with emphasis on their identification, characteristics, adaptability, use, and maintenance. Basic concepts and practices used in preparing landscape plans. Three hours lecture and six hours laboratory per week.
- HORT 122. Plant Propagation** (4 credits). Theoretical consideration and practical experiences in producing horticultural plants by sexual and asexual methods. It includes laboratory exercises of cutting, layering, division, growing from seeds, budding, and grafting. Three hours lecture and six hours laboratory per week.
- HORT 222. Chemical Control of Weeds, Plants, Diseases, and Pests** (4 credits). The identification, cause, and control of common weeds, plant diseases, and pests. Study of equipment for their prevention and control. Three hours lecture and six hours laboratory per week.
- HORT 251. Vegetable Crops** (4 credits). Vegetable production including factors that affect production of important fresh market and processing vegetables in different areas of the United States. Three hours lecture and six hours laboratory per week.

## \*RADIO AND TELEVISION REPAIR

Dorothy Burgett, *Department Chairperson*  
Lew Garrett

- RATV 120. Basic Television Receivers** (3-7) (4 credits). Study of television circuits as applied to the black and white home and industrial closed circuit receivers. Servicing experiments in lab will be done on actual lab TV receivers using up-to-date equipment and schematics. The use of the VTVM and the scope is emphasized.
- RATV 220. Basic Color Television** (3-7) (4 credits). The study of color television circuits as they are applied to the modern receiver. The student will study color, mixing both additive and subtractive methods, requirement of the composite color signal, makeup of the color picture tube, convergence, and troubleshooting procedures. All lab experiments are performed on live color receivers, using up-to-date equipment and schematics. Prerequisite: RATV 120 or equivalent.
- RATV 230. Advanced Service Techniques** (3-7) (4 credits). A course of study designed for the technician who is familiar with television circuitry and wants to progress to advance servicing techniques. Includes visual alignment and overall response analysis. Corequisite: RATV 120 or equivalent.
- RATV 110. Basic Radio Receivers** (3-7) (4 credits). An introduction to radio receivers and radio circuitry. Prepares the student for radio servicing and is the basic foundation for further study in television servicing of black and white, color and industrial closed circuit as well as home receivers.
- RATV 260. Communications I** (3-7) (4 credits). Theory and application of electronics from basic through transmitters and antennas. Lab includes application, operating and testing of communication equipment. This course prepares students to qualify for the F.C.C. Second Class Radio-Telephone Operator's License.

## \*WELDING

Bruce Westmoreland, *Department Chairperson*

- WELD 111. Welding Processes and Safety** (4 credits). Theory and practice in techniques of oxy-acetylene welding and cutting. Layout and preparation of commonly used joints. Servicing and regulation of oxy-acetylene equipment and basic shop practice. Basic welding machine theory and set up procedures of electrical arc welding machine. This course will also include an introduction to shop and job safety. Three lecture hours and six laboratory hours per week.
- WELD 120. Arc Welding (Plate I)** (4 credits). Metal cutting with oxygen and acetylene equipment. Theory of plate welding. Plate welding in three positions: flat, vertical up, and horizontal. Three lecture and six laboratory hours per week.
- WELD 123. Arc Welding (Plate II)** (4 credits). Advanced theory of plate welding. Plate welding in five positions: flat, vertical up, horizontal, vertical down, and overhead. Root and Face Bend tests for qualifications of plate welders. Advanced theory and troubleshooting procedures for electronic arc welding machines. Three lecture and six laboratory hours per week.
- WELD 132. Basic MIG and TIG** (4 credits). Theory of Tungsten Inert Gas Welding and Metallic Inert Gas Welding. Laboratory experiences in gas shielded arc welding. Three lecture and six laboratory hours per week.
- WELD 253. Pipe Welding I** (4 credits). Theory of pipe welding. Cutting and beveling pipe with oxygen and acetylene equipment. Pipe welding in two positions: Rolling and horizontal. Three lecture and six laboratory hours per week.

\*Courses offered only at the Texas Department of Corrections.



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Edgar Anderson .....	Instructor of Music Department Chairman, Music
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Dan F. Bakke .....	Instructor of Mid-Management Director of Continuing Education & Evening Programs
B.S., Tarleton State University M.Ed., Prairie View A&M University Ed.D., Nova University	
Doug Balkum .....	Counselor
B.S., Texas Christian University M.Ed., Texas Christian University	
Michael R. Bass .....	Instructor of English
B.A., East Texas Baptist College M.A., Southeastern Louisiana University	
Charles Bennett .....	Instructor of Mathematics
B.S., Sam Houston State University M.A., Sam Houston State University	
Jo Bennett .....	Instructor of Speech/English Associate Dean of Student & Instructional Services
B.A., Southwest Texas State University M.A., Southwest Texas State University	
Gilbert Benton .....	Instructor of English
B.A., University of Houston M.A., Sam Houston State University	
John Bethscheider .....	Instructor of Law Enforcement/ Correctional Science and Sociology Associate Dean of Occupational/ Technical Programs
B.S., Sam Houston State University M.A., Sam Houston State University Ed.D., Nova University	
Lydia Biegert .....	Instructor of Nursing
B.S., University of Texas M.A., University of Houston at Clear Lake	
William R. Bitner .....	Instructor of Chemistry Department Chairman, Chemistry
B.S., Sam Houston State University M.A., Sam Houston State University J.D., South Texas College of Law	



Ida Blanchette ..... Instructor of Social Science  
 B.S., Southwest Texas State University  
 M.A., Southwest Texas State University  
 \*D.A., Western Colorado University

Frankie Blansit ..... Instructor of Physical Education/  
 Volleyball Coach  
 B.S., North Texas State University  
 M.S., Lamar University

Judith Boorum ..... Director of Food Services  
 B.S., University of Houston

Thomas E. Bowen ..... Radio Station Manager  
 B.S., Grove City College  
 M.S., Shippensburg State College

Norman Bradshaw ..... Instructor of Business & Accounting  
 B.B.A., Sam Houston State University  
 J.D., South Texas College of Law

John V. Brannon, Jr. .... Instructor of Sociology and Psychology  
 B.A. Baylor University  
 M.A. University of Houston at Clear Lake City

Thomas M. Branton ..... Instructor  
 of Business Administration  
 B.S., Mississippi State University  
 J.D., University of Mississippi School of Law

Richard Brigham ..... Instructor/Coordinator  
 Mid-Management  
 B.S., Austin College

Buddy Brogdon ..... Instructor of Radio & TV Repair

Donald E. Brown ..... Instructor of Mathematics  
 B.B.A., Southwest Texas State University  
 B.S., Southwest Texas State University  
 M.A., Southwest Texas State University  
 Ph.D., Texas A&M University

Thomas L. Bryan ..... Instructor of History  
 B.A., Arkansas Polytechnic College  
 M.A., University of Arkansas

Doris Burbank ..... Instructor of Music  
 B.A., Southwestern University  
 M.Ed., University of Houston

Dorothy Valencich Burgett ..... Instructor of Electronics  
 B.E.E., Cleveland State University  
 M.E.E., University of Houston

C. Jay Burton ..... Instructor of Speech and Drama  
 Department Chairman, Speech & Drama  
 B.A., University of North Carolina at Greensboro  
 M.A., University of North Carolina at Chapel Hill  
 Ph.D., Florida State University

Jerry Carrier ..... Instructor of Psychology,  
 Counselor  
 B.S., North Texas State University  
 M.S., North Texas State University  
 Ph.D., North Texas State University

José G. Castillo, Jr. .... Instructor of Spanish, Humanities, History  
 Department Chairman, Foreign Languages  
 Humanities  
 B.A., University of Texas  
 M.A., Sam Houston State University

Don Childs ..... Department Chairman of Physical Education  
 Director of Athletics  
 B.S., Southwest Texas State University  
 M.Ed., Southwest Texas State University

Gary Coffman ..... Instructor of Physical Education  
 Basketball/Tennis Coach  
 B.S., Eastern New Mexico University  
 M.S., Eastern New Mexico University  
 Ed.D., University of Mississippi

Glo Ann Cole ..... Instructor of Vocational Nursing  
 Diploma — St. Mary's School of Nursing

Cleo Congrady ..... Instructor of English  
 B.A., University of Houston  
 M.A., University of Houston

James Corbett ..... Instructor of Mathematics  
 B.S., Sam Houston State University  
 M.Ed., Sam Houston State University

William Cranford ..... Instructor of Court Reporting  
 B.S., East Texas State University

James M. Creel ..... Instructor of English  
 B.A., Midwestern State University  
 Doctoral Candidate, University of Texas at Austin

Emeola Curvey ..... Instructor of Nursing  
 B.S., Prairie View A&M  
 M.S., Texas Woman's University

Arthur Daniel ..... Instructor of Social Science  
 Department Chairman, Social Science  
 B.A., University of Texas  
 M.Ed., University of Texas  
 M.A., North Texas State University

W. Ben Daw ..... Instructor of Drafting  
 Department Chairman, Drafting  
 B.S., Sam Houston State University  
 M.Ed. Prairie View A&M University

Sharon DeWitt ..... Acting Assistant Registrar  
 B.A., University of Texas

Charles Dolney ..... Instructor of Air Conditioning/  
 Refrigeration

Thomas Driskill ..... Instructor of Horticulture  
 B.S., Sam Houston State University  
 M.A., Sam Houston State University

John Duke ..... Instructor of History  
 B.S., Henderson State University  
 M.A., Northwestern State University of Louisiana  
 Ph.D., Texas A&M University



Sally Durand ..... Instructor of Associate Degree Nursing  
 B.S.N., Northern Michigan University  
 M.S.N., Wayne State University

Michael Eernisse ..... Instructor of Sociology  
 B.S., East Texas State University  
 M.S., East Texas State University

Phyllis Eggleston ..... Instructor of Geology  
 A.A., William & Mary  
 B.S., University of Houston  
 M.A., University of Houston at Clear Lake City  
 M.S., University of Houston at Clear Lake City

Charles Ferguson ..... Instructor of English  
 Department Chairman, Humanities  
 B.A., Texas Christian University  
 M.A., Texas Christian University

Martha Renée Fields ..... Instructor of Psychology/Sociology  
 Counselor  
 B.S., Stephen F. Austin State University  
 M.Ed., Stephen F. Austin State University  
 M.A., University of Houston/Clear Lake

Frank Fisher ..... Instructor of Physical Education  
 Assistant Director Student Financial Aid & Placement  
 B.A., Howard Payne College  
 M.Ed., University of Houston

Patsy Foreman ..... Instructor of Nursing  
 M.S., Texas Woman's University

Lew Garrett ..... Instructor of Radio & TV Repair

James Gebert ..... Instructor of Drafting  
 Assistant Director, Instructional Services  
 B.S., Southwest Texas State Teachers College  
 M.Ed., University of Houston

John Gilligan ..... Instructor of Physical Education/Baseball Coach  
 B.S., Lamar University  
 M.S., Lamar University

Curt Glatt ..... Instructor of Electronics  
 B.S., Wichita State University  
 M.S., Wichita State University

Betty Graef ..... Instructor of Chemistry  
 B.S., Southwest Texas State College

Clemence R. Graef ..... Instructor of Physics  
 Department Chairman, Physics  
 B.S., Southwest Texas State University  
 M.S., Southwest Texas State University

Alice Hagood ..... Instructor of Mathematics  
 B.A., University of Texas

Mike Heffernan ..... Instructor of Welding

Bill Henry ..... Instructor of Physical Education  
 Director, Student Financial Aid & Placement  
 B.S., Howard Payne College  
 M.Ed., University of Texas

Patty Hertenberger ..... Instructor/Coordinator of Fashion Merchandising  
 A.A., Alvin Community College  
 B.A., Sam Houston State University

Robert Higby ..... Instructor of Economics  
 A.A., Alvin Community College  
 B.S., University of Houston  
 M.Ed., University of Houston

Dorothy L. Hitt ..... Instructor of Business  
 Department Chairman, Secretarial Science  
 B.B.A., Sam Houston State University  
 M.Ed., Sam Houston State University

John M. Holst ..... Instructor of Biology  
 B.S., Sam Houston State University  
 M.A., Sam Houston State University

William Horine ..... Instructor of Biology  
 B.S., University of Houston  
 M.S., University of Houston

Alvin Horn ..... Instructor of Auto Mechanics

Wallace Houk ..... Instructor of Entomology  
 Librarian  
 B.S., Purdue University  
 M.S., Michigan State University  
 M.A.L.S., University of Michigan  
 Ph.D., Michigan State University

Alec Huffman ..... Instructor of Air Conditioning/Refrigeration/Heating  
 Department Chairman, Air Conditioning  
 B.S., American Technological University

Larry Huffman ..... Instructor of Drafting

Ronica Kinser ..... Instructor of Respiratory Therapy  
 Department Chairman  
 A.A.S., Houston Community College  
 RRT  
 B.S., University of Houston at Clear Lake City

Louise L. Kittredge ..... Director of Planning and Development  
 B.A., Los Angeles State College  
 M.S., San Diego State University

Patsy M. Klopp ..... Instructor of English  
 B.A., Southwest Texas State University  
 M.A., Southwest Texas State University

Mary Knapp ..... Instructor of Court Reporting  
 Department Chairman/Court Reporting  
 B.S., Rider College



James Layton ..... Instructor of Horticulture  
 B.S., Texas A&M University  
 M.S., Texas A&M University

J. Troy Lewis ..... Instructor of Biology  
 Assistant for Administrative Affairs  
 B.S., Union University  
 M.S., Texas Tech University

Nancey Lobb ..... Instructor of Psychology  
 B.A., University of Texas  
 M.A., University of Texas

Marvin James Longshore ..... Instructor of Government  
 B.S., Texas A&I University  
 M.S., Texas A&I University

Richard H. Marshall ..... Instructor of Economics  
 Director for Fiscal Affairs  
 B.A., East Texas State University  
 M.A., Texas Tech University

James Meadows ..... Instructor of Mathematics  
 Associate Dean of University Parellel Programs  
 B.S., East Texas State University  
 M.Ed., East Texas State University  
 M.A., University of Illinois

Deloss A. Miller, Jr. .... Instructor/Department  
 Chairman of Law Enforcement  
 and Corrections  
 B.S., University of Houston  
 M.A., Sam Houston State University

Margaret Montgomery ..... Instructor of English  
 B.A., University of Houston  
 M.A., Sam Houston State College

Linda Sue Morris ..... Coordinator of Grants &  
 Special Projects  
 B.A., Marietta College  
 M.S.W., Warden School of Social Service

Laura Noulles ..... Instructor of Court Reporting  
 Diploma, McMahon College

Betty Oliver ..... Instructor of Nursing  
 ADN Director  
 B.S., Rutgers University College of Nursing  
 M.S., Texas Woman's University

Crystal Pancamo ..... Coordinator, Cooperative Education  
 A.A.A., Alvin Community College  
 B.S., University of Houston  
 M.Ed., University of Houston

Jerry Perkins ..... Instructor of Music  
 Band Director  
 A.A., Del Mar College  
 B.M.Ed., Sam Houston State University  
 M.A., Sam Houston State University

Francis Joseph Phillips ..... Instructor of Biology  
 Dean of Instruction, Student &  
 Community Services  
 B.S., Sam Houston State University  
 M.S., Texas Tech University

Florence Pipes ..... Instructor of Medical Laboratory Technology  
 Department Chairman, Medical Laboratory Technology  
 B.S., McNeese State University  
 M.S., Louisiana State University  
 M.T., Charity Hospital at New Orleans School of Medical Technology

Johneta Pogue ..... Instructor of Medical Lab Technology  
 B.S., Lamar University  
 M.A., Central Michigan University  
 M.T., Herman Hospital School of Medical Technology

Danny R. Potter ..... Director of Personnel  
 B.S., Stephen F. Austin  
 M.S., Stephen F. Austin  
 Ph.D., Texas A&M

Jim Preston ..... Instructor of Court Reporting  
 Certificate, Alvin Community College

Gerald Pullen ..... Instructor of Computer Science  
 Department Chairman, Computer Science  
 B.S., Texas A&M University  
 B.S., University of Houston  
 M.Ed., Sam Houston State University  
 M.S., East Texas State University

Nancy Reed ..... Instructor of Court Reporting  
 B.B.A., Sam Houston State University

Robert N. Richarz ..... Director of Physical Plant

Pearl Marie Rinderknecht ..... Instructor  
 of Secretarial Science  
 B.B.A., University of Texas  
 M.Ed., University of Houston

Marcello J. Rossano ..... Dean of Financial and  
 Administrative Services  
 B.A., Trinity University  
 M.B.A., Syracuse University  
 Ph.D., University of Texas at Austin

Lynn E. Rossi ..... Coordinator of Student Activities,  
 Student & Public Information  
 A.A., Alvin Community College  
 B.A., Texas A&M University  
 M.S., University of Houston at Clear Lake City

Dottie Saxon ..... Instructor of ADN  
 B.S., Union College  
 M.S., Texas Woman's University

Hasso Schroder ..... Instructor of Auto Technology

Ziya N. Sever ..... Instructor of Art  
 Department Chairman, Art  
 B.A., University of Tulsa  
 M.A., University of Tulsa



Shareen Sheehan ..... Instructor, Child Care & Development  
 B.S., University of North Carolina

Delores Shields ..... Instructor of Nursing  
 B.S., Dominican College

Judy Ann Siefert ..... Instructor of Vocational Nursing  
 Department Chairman, Vocational Nursing  
 B.S., Texas Woman's University

Gerald D. Skidmore ..... Instructor of Mathematics  
 Department Chairman, Mathematics  
 B.S., Sam Houston State University  
 M.A., Sam Houston State University  
 Ed.D., University of Houston

Abe B. Smith ..... Instructor of Spanish  
 Assistant Director Continuing Education  
 Evening Programs  
 B.A., University of Corpus Christi  
 B.D., Southwestern Baptist Theological Seminary  
 M.A., North Texas State University

Gary Smith ..... Instructor of Auto Mechanics

Karl Smith ..... Systems Analyst/Lead Programmer  
 B.S., University of Houston

Susan Sutton ..... Instructor of English  
 Coordinator of Learning Lab  
 B.S., North Texas State University

Kenneth J. Sweeney ..... Instructor of Mid-Management  
 B.B.A., University of Texas at Austin  
 M.B.A., University of Texas at Austin

William Swenty ..... Instructor of Business  
 B.A., Wichita State University  
 M.S., Wichita State University

William Taliaferro ..... Instructor of Government & History  
 A.A., Chipola Junior College  
 B.A., University of Florida  
 M.S., Florida State University  
 Ed.D., University of Houston

Deborah Teasley ..... Instructor of Associate Degree Nursing  
 B.S.N., University of Texas Medical Branch  
 M.S.N., University of Texas Medical Branch

Joan Townsend ..... Chairman, Child Care & Development  
 B.A.E.E., University of Florida

Roy P. Turner ..... Instructor of Biology  
 B.S., Sam Houston State University  
 M.A., Sam Houston State University

Hugo Valdes ..... Counselor  
 B.A., St. Mary's University  
 M.Ed., Lady of the Lake College

Lynda Vern ..... Instructor of English  
 B.A., Baylor University  
 M.Ed., University of Houston  
 Ed.D., University of Houston

Miriam Villageliu ..... Instructor of Nursing  
 B.S., Old Dominion University  
 M.S., Texas Woman's University

Bruce E. Westmoreland ..... Instructor/Department  
 Chairman of Welding  
 B.A., Sam Houston State University

Stephen Wheeler ..... Instructor of Biology  
 Department Chairman, Biology  
 B.S., Stephen F. Austin State College  
 M.S., Stephen F. Austin State College  
 Ph.D., Texas A&M University

Clinton White ..... Technical Production Manager  
 B.S., University of North Carolina at Chapel Hill

Clayton Williams ..... Instructor of Court Reporting

Jon Withrow ..... Instructor of Welding

Marilyn Withrow ..... Instructor of Nursing  
 B.S.N., Ohio State University  
 M.A., University of Houston at Clear Lake

George B. Wright ..... Instructor of Electronic Technology  
 Director of Computer &  
 Information Systems  
 B.S., Tech., University of Houston  
 M.Ed., University of Houston

