

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
First Semester				
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
Second Semester				
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
First Summer Session				
ACRH 135	Air Conditioning and Refrigeration Troubleshooting	1	3	2
Total Credits Required for the Air Conditioning & Refrigeration Certificate 35				

CERTIFIED LABORATORY ASSISTANT

Degree: Certificate

Length: Three Semesters (One-Year Program)

Purpose: The curriculum is designed to prepare individuals for careers associated with allied health fields by providing an approved, formalized educational program directed toward Medical Laboratory Technology. After satisfactorily completing the requirement of the first year (3 semesters), a certificate will be awarded, and the individual may apply to the American Society of Clinical Pathologists for the Board of Registry examination for Certified Laboratory Assistant (CLA).

Admission Requirements: In addition to the general requirements for admission to Alvin Community College, entry into the Medical Laboratory Technology program requires the following:

1. All students will be required to write the American College Test.
2. A composite score of 16 must be achieved on the ACT, or a grade point average of 2.5 in nine or more semester hours of credit in courses approved for the Medical Laboratory Technology curriculum.
3. A transfer student must qualify in accordance with the current Department of Medical Laboratory Technology procedures.
4. A complete physical examination which includes chest x-ray, urinalysis, serology, and immunizations for poliomyelitis and diphtheria/tetanus is to be submitted with the application for admission.
5. An interview with the Director of Medical Laboratory Technology is required. The applicant will be notified of the decision of the Admissions Committee.
6. A MLT student will abide by the curriculum requirements of the MLT department at the time they are accepted into the MLT program. Curriculum requirements of the MLT program take precedence over the Bulletin under which the student entered Alvin Community College.
7. After a student has enrolled, the required MLT courses must be completed in proper sequence.
8. Prior to entering the MLT program, a student may take several or all of the general liberal arts courses required in the MLT program.
9. Any required course completed more than five years previous to the time the student is accepted may not satisfy degree requirements.
10. A MLT student is required to satisfactorily complete both theory and clinical experience of the MLT 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.
11. No grade below a "C" will be acceptable in MLT or biology courses.

12. A MLT student must maintain a grade point average of at least 2.00 in order to progress in the MLT program.
13. A student may be terminated from the program if clinical performance is unsatisfactory.
14. A student not successfully completing a MLT course for the second time will be subject to redirection.
15. If a student is not enrolled in a MLT course for a semester, application for readmission to the MLT program is required.
16. A student is required to earn at least 24 resident semester hours at Alvin Community College.
17. Hospitalization insurance, malpractice insurance, laboratory uniforms, and transportation to and from the various health facilities are the responsibilities of the student.

CERTIFIED LABORATORY ASSISTANT

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester				
BIOL 121	Anatomy and Physiology I	3	2	4
CHEM 110	Chemistry for Allied Health Sciences	3	2	4
ENGL 111	Communication Skills	3	0	3
PHED	Physical Education	0	3	1
HMLT 111	Clinical Chemistry I	2	4	3
HMLT 113	Hematology I	2	12	5
		13	23	20
Second Semester				
BIOL 122	Anatomy and Physiology II	3	2	4
MATH 130	Mathematics for Allied Health Sciences	3	0	3
PSYC 110	Human Relations	3	0	3
PHED	Physical Education	0	3	1
SOCI 111*	Principles of Sociology	3	0	3
HMLT 115	Phlebotomy-Serology-Immunology	1	4	2
HMLT 116	Urinology and Clinical Microscopy	1	4	2
		14	13	18

Total Credit Requirements for Certified
Laboratory Assistant Certificate 45

Summer Semester (12 weeks)

HMLT 117	Clinical Microbiology I	2	4	3
HMLT 119	Clinical Seminar	3	4	3
HMLT 120	Concepts of Medical Laboratory Sciences	1	0	1
		6	8	7

*Students pursuing Certified Laboratory Assistant (CLA) may substitute SOSC 111, Contemporary American Civilization I (3 credits).

*Pending Agency approval.

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

Pre-School and Day Care Services
 Exceptional Children
 Child Care Recreation
 Child Care Services
 Introductory Creative Activities
 Literature for Young Children
 Music for Young Children
 Child Nutrition and Health Care
 Child Care and Development I
 Child Care and Development II
 Seminar and Field Work

Group II

Principles of Sociology
 Social Problems
 Human Relations
 Marriage and Family
 Communication Skills

Total Credit Requirements for
Child Care & Development Certificate 32



COMPUTER SCIENCE TECHNOLOGY
General Computer Data Processing*

Degree: Certificate

Length: Two semesters or one year

Purpose: The Computer Operations Curriculum is designed to provide the student with occupational experience which will qualify them for job opportunities in business and industry. Individuals completing this curriculum will be qualified to intelligently operate such equipment as computers, data transmission equipment in a teleprocessing environment, and selected unit record equipment such as keypunches, verifiers, and sorters.

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 (Computer Operations).

*Pending TEA approval

**Computer Science Technology — General Computer
 Data Processing**

Course	Lecture Hours	Lab Hours	Course Credits
Group I	15	11	16
Group II	15	0	15
			—
		Total	31

Group I

- CSCI 105 Key punch Operations
- CSCI 110 Intro. to Computer Science
- CSCI 115 Computer Operations
- CSCI 120 RPG Programming
- CSCI 130 COBOL Programming
- CSCI 210 FORTRAN Programming
- CSCI 225 Special Topics
- CSCI 230 Advanced COBOL
- CSCI 240 System Analysis
- CSCI 250 Assembly Programming
- CSCI 270 Structured Programming

Group II

- BUAD 110 Intro. to Business
- BUAD 130 General Business Mathematics
- ACCT 110 Office Accounting
- ACCT 221 Accounting I
- ACCT 222 Accounting II
- PSYC 110 Human Relations
- MATH 180 Finite Mathematics
- MATH 190 Analysis
- MATH 121 College Algebra
- MATH 132 Plane Trigonometry
- ENGL 111 Communication Skills
- ENGL 112 Communication Skills
- ENGL 121 Composition & Rhetoric I
- ENGL 122 Composition & Rhetoric II
- HIST 111 Western Civilization to 1660
- HIST 112 Western Civilization since 1660
- GOVT 211 American National and State Government
- GOVT 212 American National and State Government
- PHYSICAL EDUCATION

CORRECTIONAL SCIENCE

Certificate Program: Certificate in Correctional Science

Length: Thirty-two semester hours

Purpose: The Certificate Program is designed for mature persons working in the correctional field. A certificate represents the completion of hours of approved course work including an appropriate internship.

Program Requirements: Approximately one-half of the certificate program will include courses in Correctional Science with the remaining courses in related areas. In the event that any student who has first enrolled in a "Certificate Only" program desires to thereafter enter a degree program, he/she must meet all prerequisites and requirements met by the degree student.

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

Certificate in Correctional Science

Course	Lecture Hours	Lab Hours	Course Credits
Group I	21	4	23
Group II	9	0	9
			—
		Total	32

Group I

Introduction to Corrections
 Penology
 American Legal System
 Crime and Delinquency
 Probation, Pardons,
 & Parole
 Institutional Procedures, Jails,
 & Detention
 Contemporary Practices in
 Correction
 Corrections I. Organization
 and Operations
 Corrections II. Theory
 and Practice
 Physical Education

Group II

Composition and Rhetoric
 General Psychology
 Human Relations
 Communication Skills
 American, National, &
 State Government
 U.S. History

Total Credit Requirements for
 Correctional Science Certificate 32



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.

*Pending TEA approval

DRAFTING TECHNOLOGY

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester				
DRFT 110	Technical Drafting	2	6	4
DRFT 105	Blueprint Reading I			
	or			
DRFT 106	Blueprint Reading II	2	1	2
DRFT 241	Architectural Drafting I	2	6	4
MATH 151	Technical Math I	3	0	3
ENGL 111	Communication Skills I	3	0	3
		—	—	—
		12	13	16

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

Total Credit Requirements for
 Drafting Technology Certificate 34 or 35

* 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.

ELECTRONIC TECHNOLOGY*

Degree: Certificate

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

Purpose: the one year program is provided to allow the student to become familiar with basic electronics. The required electronics background for general field maintenance is stressed.

Program Requirements: The certificate in Electronics will be awarded upon satisfactorily completing the two semester program.

*Pending TEA approval

ELECTRONIC TECHNOLOGY

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester				
MATH 151	Technical Mathematics I	3	0	3
ELEC 120	DC Theory and Circuit Analysis	3	0	3
ELEC 125	DC Theory and Circuit Analysis Lab	0	3	1
ELEC 110	Introduction to Electronic Technology	3	0	3
ELEC 115	Introduction to Electronic Technology Lab	0	3	1
ENGL 111	Communication Skills I	3	0	3
*PSYC 110	Human Relations or approved elective	3	0	3
*PHED	Physical Education or approved elective	0	3	1
		15	9	18
Second Semester				
MATH 152	Technical Mathematics II	3	0	3
ELEC 130	AC Theory and Circuit Analysis	3	0	3
ELEC 135	AC Theory and Circuit Analysis Lab	0	3	1
ELEC 230	Electronic Tests and Measurements	3	0	3
ELEC 235	Electronic Tests and Measurements Lab	0	3	1
ELEC 140	Electronics I	3	0	3
ELEC 145	Electronics I Laboratory	0	3	1
*PHED	Physical Education or approved elective	0	3	1
		12	12	16
Total Credit Requirements for Electronic Technology Certificate				34

*See advisor prior to registration.

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
	30	6	32
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
- Human Relations
- Communication Skills
- American National and State Governments
- U. S. History

Total Credit Requirements for Certificate in Law Enforcement 32

***MID-MANAGEMENT I**

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.

*Pending TEA approval

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
Total	27	40 or 46	35 or 36

Group 1

- Introduction to Mid-Management
- Internship
- Personnel Management
- Principles of Management
- Internship
- Problems in Management

Group 2

- Communication Skills
- Business Mathematics
- Human Relations
- 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.
3. A pre-entrance test is required.

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 semester period and has the following lecture-lab ratio:

Total nursing lecture hours	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.

*Pending TEA approval

ORNAMENTAL HORTICULTURE

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester				
HORT 101	Principles of Horticulture	2	6	4
HORT 111	Plant Materials for Landscape Use	2	6	4
CHEM 121	General Chemistry and Analysis	3	4	4
DRFT 110	Fundamentals of Drafting	2	4	3
ENGL 111	Communication Skills I	3	0	3
Total		—	—	—
Total		12	20	18
Second Semester				
HORT 121	Plant Propagation	2	6	4
HORT 131	Greenhouse Crop Production	2	6	4
MATH 151	Technical Math I	3	0	3
BIOL 112	Biology II (Botany)	3	2	4
PHED	Physical Education or Approved Elective	0	3	1
Total		3	0	3
Total		—	—	—
Total		10 or 1317 or 1416 or 18		
Summer Session I				
HORT 211	Nursery and Garden Center Management	2	6	4

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 Alvin Community College program and curriculum has been coordinated with Houston Community College. Those students desiring to continue with the Upward Mobility Concept are afforded the opportunity to transfer to Houston Community College to pursue the Associate Degree of Applied Sciences in Respiratory Therapy Technology.

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.
2. All students entering the program are required to complete the regular Alvin Community College admission procedures. The proper forms are available from the Admission's Office.
3. Respiratory Therapy Technician 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. Applicants will be notified concerning admission to the Respiratory Therapy Technology Program. There is a limit on the number to be accepted.
5. Applicants who are not admitted to the Respiratory Therapy Technician Program may take courses to enhance their potential for entering the program at a later date.

RESPIRATORY THERAPY TECHNICIAN

Course Number	Course Title	Lecture Hours	Lab Hours	Clock Hours	Course Credits
Summer Session I (6 Weeks)					
BIOL 121	Anatomy and Physiology I	8*	6*	14	4
HRTT 111	Introduction to Respiratory Therapy	8*	8*	16	4
		—	—	—	—
		16	14	30	8
Summer Session II (6 weeks)					
HRTT 116	Clinical Science and Pulmonary Disorders	8*	0*	8	3
HRTT 112	Clinical Practical I	6*	22*	28	3
		—	—	—	—
		14	22	36	6
Fall Semester					
HRTT 110	Introduction to Health Sciences	3	0	3	3
CHEM 110	Chemistry for Allied Health	3	2	5	4
HRTT 117	Clinical Applications I	3	0	3	3
HRTT 120	Pharmacology	3	0	3	3
HRTT 114	Respiratory Therapy Procedures I	3	6	9	4
		—	—	—	—
		15	8	23	17
Spring Semester					
HMLT 117	Clinical Microbiology I	2	4	6	3
HRTT 118	Clinical Applications II	3	0	3	3
HRTT 115	Adv. Respiratory Procedures II	2	3	5	3
HRTT 113	Clinical Practical II	0	25	25	6
NURS 210	Medical Terminology	3	0	3	3
		—	—	—	—
		10	32	42	18
Summer Session I (6 weeks)					
ENGL 111**	Communication Skills	8*	0*	8	3
HRTT 119	Clinical Practical III	0*	20*	20	3
		—	—	—	—
		8	20	28	6

*The student will attend class for this number of hours per week during the length of the Summer Session shown.

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

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
First Semester				
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
		13	11	16

Total Requirements for Stenographer/
General Office Worker Certificate 32

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

General Clerical One-Year

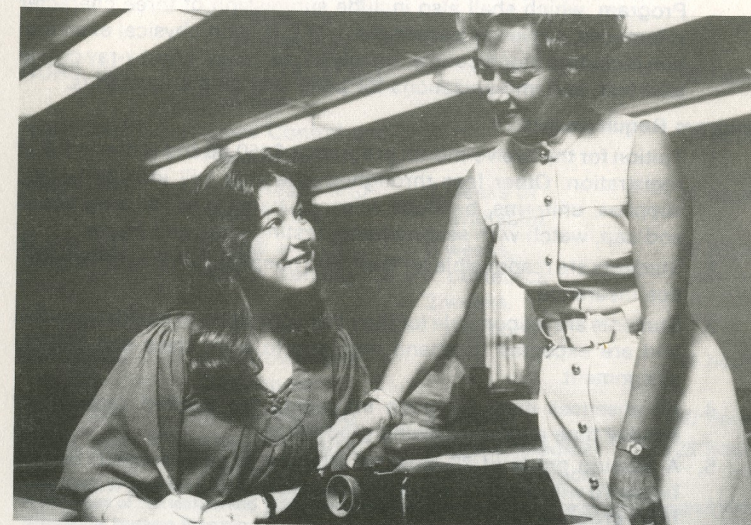
Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester				
ACCT 110	Office Accounting	2	1	3
BUAD 110	Introduction to Business	3	0	3
BUAD 130	General Business Mathematics or equivalent*	3	0	3
SECT 121	Typewriting I or II	2	3	3
ENGL 111	Communication Skills	3	0	3
PHED	Physical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

Second Semester

PSYC 110	Human Relations	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.



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. Must apply for admission to Alvin Community College and fulfill all admission requirements for enrollment in the college. This includes taking the American College Testing Program exams (A.C.T.).
2. Be the age of 17-59* years old. (Those older than 59 will be considered on an individual basis.)
3. Be in good physical and emotional health.
4. Be of good moral character.
5. Be a high school graduate or hold a certificate of equivalency (G.E.D.).
6. Satisfactorily score on the Pre-entrance exam for practical nurses.
7. Apply at least one semester in advance and have a personal interview with the Director of Vocational Nursing.
8. 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 polio and diphtheria/tetanus.

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 photo.
2. Students are responsible for their own hospitalization and malpractice insurance.
3. Students are responsible for their transportation to health agencies and are expected to attend regularly to both class and clinical assignment.
4. All absences must be made up during the allotted vacation or holiday time and/or following graduation.
5. A passing grade of 70 must be attained in each subject. Scores below 70 will constitute grounds for request of student withdrawal from program.

6. Observed holidays 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

7. 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.
8. 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.
9. 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 Relationships		10 hours
NURS. 002	Introduction to Vocational Nursing Skills, including Nutrition and Pharmacology	40 hours medication administration	225 hours
NURS. 007	Body Structure and Function		50 hours
NURS. 008	Disease Control and Prevention		10 hours
NURS. 005	Mental Health and Mental Illness	2 weeks (if available)	20 hours
NURS. 003	Maternal and Child Health Nursing	3 weeks, obstetrics 2 weeks, newborn	50 hours
NURS. 009	Child Growth and Development		10 hours
NURS. 004	Pediatric Nursing	3 weeks	50 hours
NURS. 006	Medical - Surgical Nursing	6 weeks, medical 6 weeks, surgical	125 hours

*A minimum of 550 lecture and 1250 pre-clinical and clinical experience hours 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
First Semester				
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
PHED	Physical Education	0	3	1
		7	23	15
Second Semester				
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

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 non-credit courses to area citizens. These courses are designed to provide general education opportunities for personal development, civic responsibility, social-cultural values, and to assist the individual in achieving his personal goals through adult non-credit courses. The college exists to serve the post-high school educational needs of the community.

The college hopes to achieve this purpose by offering adults in the community a program of diversified non-credit 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

Non-credit 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 \$2.50 to \$95.00 per course. Any course will be offered when there is sufficient demand, suitable meeting space, and a qualified instructor. The college is interested in receiving requests for special courses, or for special time-frames for offering them, and will attempt to schedule any short course not already identified when there seems to be sufficient interest.

Contact the Director, Avocational and Evening School Programs, regarding scheduling any program, particularly programs 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

Non-credit courses in the following areas are generally scheduled each year. Any course will be offered when there are sufficient demand, suitable meeting space and a qualified instructor.

OCCUPATIONAL

Advance Key Punch	Real Estate Principles I
Data Preparations Clerk	Real Estate Principles II
Filing Clerk	Real Estate Principles III
Office Machines Refresher	Introduction to Air-Conditioning and Refrigeration
Shorthand Review	Air Conditioning Lab
Typing Refresher	Commercial Refrigeration Lab
Alterations & Tailoring	

Basic Law Enforcement
(Qualifying Certificate)
Floral Design
Gift Wrapping
Conversational Spanish I (TDC)
Conversational Spanish II (TDC)
Conversational Spanish III (TDC)
Dietary Food Supervisor
Medication Administration
Nursing Assistant
Pediatric Nursing
Pharmacology for Nurses
Team Nursing
Trends in Nursing
(The) Role of the Nurse in the
Community
Federal Income Tax for
Consultants
Fundamentals of Apartment
Managing
Income Tax Preparation Skills
Property & Casualty Insurance
Fundamentals of Casualty
Rating
Real Estate Math

Heating & Ventilation Lab
Thermostat Control Workshop
Troubleshooting Heat Pumps
Blueprint Reading
Basic Welding
Introduction to Arc Welding
of Plate
Introduction to Arc Welding
of Pipe
Boilermaking-Pipefitting-
Welding
Orientation to Industrial
Welding, Pipefitting &
Boilermaking
Mechanical Maintenance I
Mechanical Maintenance II
Test Equipment Repair
Test Equipment Utilization
Electrical Maintenance
Use of the Slide Rule
Human Relations in Industry
(Seminar)
Human Relations & Instruction
Training

GENERAL EDUCATION

Action Course in Practical
Politics
Aerobic Dancing (Women)
Aviation Ground School
Basic Auto Mechanics
Biblical Archaeology
Bio-Feedback Training
CGA Safe Boat Handling
Conversational Czech I
Conversational Czech II
Conversational French
Conversational German
Conversational Spanish I
Conversational Spanish II
Creative Writing Workshop
Defensive Driving (DDC)
Estate Planning
Family Financial Planning and
Investments
Firearm Knowledge for Women
Furniture Upholstery
GED Preparation
Handicrafts and Media as
Teaching Devices

Mid-Eastern Dancercise
(Beginner I)
Mid-Eastern Dancercise
(Beginner II)
Mid-Eastern Dancercise
(Intermediate)
New Testament History
Old Testament History
Personal Income Tax
Personal & Professional Woman
Personal Typing
Physical Fitness (Men)
Physical Fitness (Women)
Pocketbook Protection
Reading Improvement
Self Defense for Women
Sewing (Basic)
Sewing (Intermediate)
Sewing (Patterns & Alterations)
Sewing T-Shirts
Sewing (Finishing Touches)
Sewing (Ladies Coats)
Sewing (Men's Pants)
Slimnastics (Women)

How to Buy, Build, or Add to
a Home
Instrument Ground School
Interior Decorating
Investments
Karate (Beginner)
Karate (Advanced)
Kodaly Music Methods I
Kodaly Music Methods II
Kodaly Music Methods III
Law for the Layman
Man and His Changing World

Small Engine Tune-Up and
Minor Maintenance
Speed Reading
Stocks and Investments
Texas Voluntary Hunter Safety
Tumbling: Physical Fitness for
Women
Verbal & Non-Verbal
Communications
Yoga
Psychodrama

AVOCATIONAL-RECREATIONAL

Amateur Novice Radio
Antiques Worth Dusting
Archery Fundamentals
Art Appreciation
Art (Beginning Oil Painting)
Art (Beginner Drawing)
Art (Beginning Watercolor)
Art (Blockprinting)
Art (Portrait Painting)
Basic Canoeing
Bridge (Advanced)
Bridge (Beginners)
Canine Obedience Training
(Beginner)

Canine Obedience Training
(Advanced)
Care and Grooming of Horses
CB Radio
Football Fundamentals for
Females
Gardening (Landscaping and
Horticulture)
Golf
Gourmet Cooking
Guitar (Beginners)
Guitar (Intermediate)
Macrame
Open Gym for Adults



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

ACCOUNTING

- 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. Lecture 2 hours; laboratory 1 hour: Total 3 hours 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: DAPR 110, MATH 180, 190, particularly for transfer students. Lecture 3 hours; Laboratory 1 hour. Total 4 hours 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. Lecture 3 hours; Laboratory 1 hour. Total 4 hours 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 112. Lecture 3 hours; Laboratory 0 hours: Total 3 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. Lecture 3 hours; Laboratory 0 hours; Total 3 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. Lecture 3 hours; Laboratory 0 hours; Total 3 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 112. Lecture 3 hours; Laboratory 0 hours: Total 3 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 112. Lecture 3 hours; Laboratory 0 hours: Total 3 hours per week.

ACCT 260. Oil and Gas Accounting (3 credits). Accounting oriented toward the production, refining, and distribution of petroleum products. Prerequisite: ACCT 112. Lecture 3 hours; Laboratory 0 hours: Total 3 hours per week.

AGRICULTURE

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

ACRH 131. Air Conditioning Fundamentals I (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 II (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, electric motor theory, use of electric meters and test equipment. Three lecture hours per week.

ACRH 135. Air Conditioning and Refrigeration Troubleshooting (2 credits). Additional study in any of three areas of specialization: domestic refrigeration, commercial refrigeration or 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 200. 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

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. 6 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. 6 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. 6 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. 6 lab hours per week.

ARTS 211. Drawing III (3 credits). Prerequisite: Freshman Studio Core. A course in life drawing with emphasis on structure and action of the human figure. 6 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. 6 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. 6 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. 6 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. 6 lab hours per week.

ARTS 251. Commercial Art I (3 credits). Prerequisite: Freshman Studio Core. Introduction to processes and techniques of advertising art. 6 lab hours per week.

ARTS 252. Commercial Art II (3 credits). Prerequisite: Freshman Studio Core. Advanced study of advertising art and production. 6 lab hours per week.

ARTS 260. Graphic Media (3 credits). Critical evaluation of graphic media as well as creating works in serigraphy and other print media. 6 lab hours per week.

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. 3 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. 3 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. 3 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. 3 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 in-

vestment, 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. 3 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. 3 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. 3 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. 3 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, savings services, loans to individuals, safe deposit boxes, travelers checks and cross selling. 3 lecture hours per week.

Additional courses will be offered if demand is indicated and there is mutual agreement between Alvin Community College and the banking community.

BIOLOGY

- 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). These courses are to be taken in sequence. Fundamental characteristics of living matter from the molecular level to the ecological community with emphasis on general biological principles. Diversity of living organisms, their structure, physiology and evolution. Three lecture and two 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

- BUAD 110. Introduction to Business** (3 credits). A survey of modern business organization, principles, procedures and practices with emphasis on opportunities in business. 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.

CHEMISTRY

- 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. A general course which is designed for those students who do not plan to do further work in science or engineering. 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. The chemistry of aliphatic hydrocarbons, mono- and poly-functional aliphatic compounds, amino acids, proteins, and carbohydrates is considered. Emphasis is placed on the preparation, interrelations, nomenclature, properties, and uses of various compounds. The chemistry of aromatic compounds, heterocyclic compounds, dyes, terpenes, organo-metallic compounds, and polymers are also included. Three lecture and four laboratory hours per week. Prerequisite: CHEM 122.

CHILD CARE and DEVELOPMENT

- 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.

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.

COMPUTER SCIENCE

CSCI 105. Key punch Operations (3 credits). Introduction to key punch operations. Designed to train students in the efficient use of the card punching equipment. Primary emphasis will be placed on "hand-on" operation of equipment using a series of exercises which increase in complexity as the student progresses. Program control card preparation using two program levels will be stressed. Lecture 2 hours, laboratory 3 hours. Prerequisite: none.

CSCI 110. Introduction to Computer Science (4 credits). This is an introduction to computers, algorithms, and computation. Lectures will include an introduction to problem organization, detailed coverage of storage media, fundamentals of flow charting and block diagramming, fundamentals of input and output operations, and elementary programming techniques. This course is intended to provide a foundation for future detailed study of specific systems. Basic FORTRAN will be used in solving problems on the computer. Three hours lecture and three hours laboratory per week. Prerequisite: High School Algebra or equivalent.

CSCI 115. Computer Operations (3 credits). The study of a third generation computer system. Lecture will cover computer fundamentals, history, computer mathematics, basics of programming, Boolean algebra, introduction to logic circuitry, arithmetic section of a computer, computer storage, control section, and input-output section. Laboratory exer-

cises are executed involving planning and operation of the equipment. Practical exercises include use of the keypunch, verifier, and computer. Three hours lecture and two hours laboratory per week. Prerequisite: None.

CSCI 120. RPG Programming (3 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 principally 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 two hours laboratory per week. Prerequisite: None.

CSCI 130. Computer Programming (Introductory COBOL) (3 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 two hours laboratory per week. Prerequisite: None.

CSCI 210. Computer Programming (FORTRAN) (3 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 two hours laboratory per week. Prerequisite: CSCI 110, MATH 121 or MATH 180, or consent of the department.

CSCI 220. Seminar & Project. (3 Credits). A study of problems of an advance type. Problems chosen to enhance students' background and to give experience on the system analysis level. The student will design a system and write the necessary programs to implement the system under the supervision of a sponsoring instructor. Three hours lecture and laboratory two hours per week. Corequisite: CSCI 240.

CSCI 225. Special Topics. (3 credits). This course consists of special projects designed to meet individual students needs and interests. Three hours lecture and two hours laboratory per week. Prerequisite: Consent of the department.

CSCI 230. Computer Programming (Advanced COBOL) (3 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 two hours laboratory per week. Prerequisite: CSCI 130.

CSCI 240. Systems Analysis. (3 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 two hours laboratory per week. Prerequisite: CSCI 230 and Corequisite CSCI 220.

CSCI 250. Computer Programming (3 Credits). A study of assembly languages. The student studies assembly language. Three hours lecture and two hours laboratory per week. Prerequisite: CSCI 110, CSCI 115, and consent of the department.

CSCI 270. Structured Programming. (3 credits). A study of the field of software development with special emphasis on reliability, maintainability, extensibility, and programming style. Three hours lecture and two hours laboratory per week. Prerequisite: Consent of the department.

COOPERATIVE EDUCATION

COOP 111. Seminar and Work Experience. Prerequisite: Approval of Coordinator of Cooperative Education. A comprehensive treatment of internship related activities, individualized objectives, and regularly scheduled seminars. Concentration on proper interviewing techniques, letters of application and resume writing, case study method towards human relations and effective communications on the job, investigation of the career and work environment, and an analysis of the chosen career, which includes appropriate curriculum requirements. (3 Credits)

COOP 112. Seminar and Work Experience. Prerequisite: Approval of Coordinator of Cooperative Education. A comprehensive treatment of internship related activities, individualized objectives, and regularly scheduled seminars. Concentration of the development of a philosophy towards work including personal life planning, effective time management, value clarification, professional ethics and moral responsibilities and creative use of leisure time. (3 Credits)

COOP 211. Seminar and Work Experience. Prerequisite: Approval of Coordinator of Cooperative Education. A comprehensive treatment of internship related activities, individualized objectives, and regularly scheduled seminars. Concentration on long-term employment considerations, including analysis of employee benefits, involvement in labor organizations, social security, insurance needs, retirement and a continuation of career development and evaluation. (3 Credits)

COOP 212. Seminar and Work Experience. Prerequisite: Approval of Coordinator of Cooperative Education. A comprehensive treatment of internship related activities, individualized objectives, and regularly scheduled seminar. Concentration on the concept of career development through an examination of career change and advancement, leadership and management styles and the relationships of professional, civic and social organizations to career advancement. (3 Credits)

CORRECTIONAL SCIENCE

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

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. Legal Terminology and Dictation (3 credits). Building a legal vocabulary; developing skill in recognizing the meaning of legal terminology by studying prefixes, suffixes, roots, and abbreviations; spelling and pronunciation of legal terms; reading legal documents with understanding; and building speed and accuracy in the machine transcription of these terms. Prerequisite: none. Lecture, 4 hours; Laboratory, 1 hour; Total, 5 hours per week.

CTRP 122. Medical Terminology and Dictation (3 credits). Building a medical vocabulary. The course is integrated with machine dictation and transcription. Prerequisite: CTRP 111. Lecture, 4 hours; Laboratory, 1 hour; Total, 5 hours per week.

CTRP 210. Transcription (3 credits). Supervised activity with continued concentration on dictation and transcription of shorthand notes. Prerequisites: CTRP 120. 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. Courtroom Procedures (3 credits). Simulated courtroom situation with attorneys and witnesses. Depositions taken under conditions of actual courtroom atmosphere. Prerequisite: CTRP 120. Lecture, 3 hours; Laboratory, 2 hours; Total, 5 hours per week.

CTRP 230. Tape (3 credits). Concentrated machine shorthand practice under supervision with the utilization of tapes. Prerequisite: CTRP 120. Lecture, 0 hours; Laboratory, 5 hours; Total, 5 hours per week.

CTRP 240. Stenorette (3 credits). A course designed specifically to emphasize the varied techniques of dictation into a stenorette and the process of producing a proper transcript from the stenorette tape. Prerequisite: CTRP 211. Lecture, 3 hours; Laboratory, 2 hours; Total, 5 hours per week.

DRAFTING

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. Two lecture and six laboratory hours per week. Prerequisite: DRFT 110, the equivalent, or consent of Department.

DRFT 120. Descriptive Geometry (3 credits). Problems relating to point, lines, and planes; intersection and sheetmetal developments; and auxiliary views. Two lecture and four laboratory hours per week. Prerequisite: DRFT 110 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.

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 six laboratory hours per week. Prerequisite: Approval of Department.

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 six laboratory hours per week. Prerequisite: DRFT 130 or consent of department.

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 130.

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 110.

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.

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.

DRFT 252. Machine Drafting (4 credits). A continuation at an advanced level of DRFT 251 developing machine design skills. Two lecture and six laboratory 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 110 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. 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 110 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

DRAM 111, 112, 211, 212. Rehearsal and Performance (1 credit for each course). This course is an activities course in which the student participates in theatre productions either as actor or crew member. Two lab hours per week.

DRAM 120. The Creative Experience (3 credits). This course is designed to aid the student to find his/her own individual creativity. Through planned exercises the student will study rhythm and time; space and form; and line and silhouette. Three lecture 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 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. Lecture two hours, laboratory two hours per week.

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. Lecture two hours, laboratory two hours 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, costuming, lighting, and design. Lecture two hours, laboratory two hours per week. Prerequisite, DRAM 130.

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. Lecture two hours, laboratory two hours 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.

ECONOMICS

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. Prerequisite: ECON 111.

ELECTRONICS

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 ALGEBRA 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 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** (2 credits). A survey of current electronic devices found in industrial applications. Seminar and lecture, two 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.
- 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 295. Computers and Computer Controlled Systems Laboratory** (1 credit). Three laboratory hours per week. Corequisite: ELEC 290.

ENGLISH

- ENGL 110. Developmental Writing.** (3 credits). A program of study with a laboratory setting which involves diagnosis of specific English deficiencies and strengths. The student is guided through a sequence of learning experiences individually tailored to upgrade his/her writing skills. This course is required for the student who scores below 14 in English on the ACT and/or who reveals by the placement examination a deficiency in English. English 110 must be satisfactorily completed prior to registration in English 111 or English 121.
- ENGL 111. Communication Skills I** (3 credits). Designed for the occupational/technical student and career-related materials, this course concentrates on correct forms of written communication. Intensive practice in composing informative paragraphs and multi-paragraph papers leads to the writing of the research paper, a detailed investigation of a career related topic. Three lecture hours per week. Prerequisite: Satisfactory score on English proficiency examination.
- ENGL 112. Communication Skills II** (3 credits). Designed for the occupational/technical student, this course presents aspects of oral

communication. Assignments include practice in techniques for proficient listening, speaking, and group problem-solving. Three lecture hours per week. Prerequisite: English 111.

ENGL 121. Composition and Rhetoric I (3 credits). This standard course aims to promote clarity and correctness of expression through a review of grammar and through practice in writing. It includes the study of techniques of prose writing through a consideration of the essay and short fiction. Three lecture hours per week. Prerequisite: Satisfactory score on English proficiency examination.

ENGL 122. Composition and Rhetoric II (3 credits). This course enlarges on the skills and concepts relating to composition and literature covered in ENGL 121. It provides more intensive practice in theme writing, including a research paper, and emphasizes the techniques of longer prose fiction, drama, and poetry. Three lecture hours per week. Prerequisite: ENGL 121.

ENGL 211. Survey of Literature I (3 credits). This course is a study of masterpieces of literature of the classical style. An effort will be made to share through literature some of the ideas which have shaped our cultural heritage and to show how these ideas in literature are related to those expressed in other arts. Collateral reading reports, and papers will be required. Three lecture hours per week. Prerequisite: ENGL 122.

ENGL 212. Survey of Literature II (3 credits). This course is a continuation of ENGL 211. The study includes romantic, realistic, impressionistic and expressionistic styles of literature. Collateral reading, reports, and papers will be required. Three lecture hours per week. Prerequisite: ENGL 211.

ENGL 221. Survey of English Literature I (3 credits). This course is a study of selections in English literature from its beginnings to the Romantic Period. Collateral reading, reports, and papers will be required. Three lecture hours per week. Prerequisite: ENGL 122.

ENGL 222. Survey of English Literature II (3 credits). This course is a study of English literature including works from the Romantic Period to the present. Collateral reading, reports, and papers will be required. Three lecture hours per week. Prerequisite: ENGL 221.

ENGL 230. American Literature (3 credits). From colonial times to the present, this course surveys the significant writings that make-up our national literary heritage. Collateral reading, reports, and papers will be required. Three lecture hours per week. Prerequisite: ENGL 122.

FASHION MERCHANDISING

Course Descriptions

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 performance 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 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

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

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.

GOVERNMENT

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 TECHNOLOGY

(Medical Laboratory Technician)
(Certified Laboratory Assistant)

HMLT 111. Clinical Chemistry I (3 credits). Introduction to Clinical Chemistry. Lecture and laboratory to provide background and practical experience 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 for various chemical tests; use the important components of: spectrophotometers, centrifuges, water baths, pH meters and one-test-modular-semiautomated equipment. Student will be able to perform blood urea nitrogen, glucose (blood and spinal fluid and urine), potassium, chloride, sodium, CO₂ content. Student will be able to use gravimetric and volumetric instruments. Two lecture and four laboratory hours per week.

HMLT 112. Clinical Chemistry II (3 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, cardiac enzymes, creatinine, creatinine clearance and other renal function tests, lipid metabolites, blood and fluid proteins and their fractionation and identification and enzyme analyses. Two lecture and four laboratory hours per week.

HMLT 113. Hematology I (5 credits). Lecture and laboratory will provide factual background and practical experience enabling student to discuss and perform the following: Blood collection and preservation, preparation 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.), use of balance and preparation of solutions, 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. Two lecture and twelve laboratory hours per week.

HMLT 114. Hematology II (3 credits). Lecture and laboratory providing fundamentals and practical experience enabling student to discuss and perform the following: Use and maintenance of the microscope; enumeration and differentiation of cellular elements in cerebrospinal fluid; morphologic study, enumeration and differentiation of leukocytes, erythrocytes, platelets on blood smears; platelet counts, reticulocyte counts, antinuclear factor studies; special stains such as peroxidase; 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. LE factor study and detection. Two lecture and four laboratory hours per week.

HMLT 115. Phlebotomy-Serology-Immunology (2 credits). This course will deal with phlebotomy and the procedures for withdrawing blood. Also, lecture and laboratory experience enabling student to understand the basic theory of and to perform the following: agglutination, complement fixation, precipitation, quality control. Student should be able to accurately read and record these test results. He/she should clearly understand antigens and antibodies and their relationship to the above procedures. Care and use of commonly-used instruments in a clinical serology laboratory will be taught. One lecture and four lab hours per week.

HMLT 116. Urinology and Clinical Microscopy (2 credits). Lecture and laboratory experience to enable student to perform the routine urinalysis including the chemical and microscopic tests, pregnancy tests, renal function tests, and to discuss the relationship of these tests to disease or malfunction, the fundamental chemistry and biology underlying these tests, and handling of histological and cytological specimens. One lecture and four laboratory hours per week.

HMLT 117. Clinical Microbiology I (3 credits). Introduction to clinical microbiology including introductory mycology, parasitology, and virology. Lecture and laboratory experience will prepare the student to perform the following procedures: specimen collection, processing and shipment; routine staining procedures (Gram's stain, concentration and staining for parasitology, acid fast stain, etc.); preparation of basic reagents; microscopic examination, media preparation and selection or application and quality control procedures as applied to tests performed. Knowledge of operation and maintenance of equipment commonly used in a clinical microbiology laboratory such as microscopes, water baths, centrifuge, pH water, ultrafilter apparatus, etc. Proficiency in microbiological terminology and nomenclature. Two lecture and four laboratory hours per week.

HMLT 118. Clinical Microbiology II (4 credits). Lecture and laboratory experience enabling a student to understand the theory basic to the procedures commonly used in clinical bacteriology, parasitology, mycology, and virology; and to use this knowledge in identifying organisms most frequently encountered clinically. A student should be able to perform antibiotic susceptibility, biochemical, and serological procedures and to read and interpret results of these procedures with the ultimate result in the identification of a specific organism. A general understanding of the relationship of this course to physiology, biochemistry, and immunology as they are associated with the knowledge of disease processes is necessary. Rapid identification procedures for identification of pathogenic bacteria and use of multiphasic test systems. Two lecture and ten laboratory hours per week.

HMLT 119. Clinical Seminar (3 credits). The fundamental concepts of clinical medicine, along with automation, E.K.G., and special laboratory procedures, as well as laboratory problems as they are experienced in a clinical laboratory, will be stressed. The role of the clinical laboratory as a diagnostic tool and the integration of all areas of the laboratory will be studied. The application of concepts to the solution of clinical problems, including the study of the physiological and technical origin of the problems, will also be included. Three lecture and four laboratory hours per week.

HMLT 120. Concepts of Medical Laboratory Sciences (1 credit). The basic role and fundamental concepts of medical laboratory sciences associated with the theoretical application to a clinical laboratory environment. One lecture hour per week.

HMLT 211. Clinical Instrumentation (4 credits). Lecture and laboratory experience so that the student will be able to operate, trouble shoot, calibrate and maintain instruments in the clinical laboratory with particular emphasis on automated equipment. This would include sequential multiple analyzers, discrete sample analyzer, centrifugal fast analyzers, flame emission spectroscopy, fluorimetry, nephelometry, electrophoresis, electronic cell counting, atomic absorption, osmometry, and methods of chromatography. Two lecture and ten laboratory hours per week.

HMLT 212. Immuno Hematology I (2 credits). Lecture and laboratory experience to provide the student with a background so that he can discuss the nature of antigens and antibodies as they relate to blood cell metabolism, blood storage, blood cells and platelets, blood preservation, and so that the student can perform the determination of blood type and group and those subgroups as generally performed and perform a cross match. The student will also be able to interview blood donors and perform a phlebotomy. One lecture and four laboratory hours per week.

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 lecture 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 IK (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 II (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

HRTT 110. Introduction to Health Sciences (3 credits). Designed as the first course for students interested in the health career field. Includes history and philosophies of patient care, development and interrelationships of health institutions, agencies, health services personnel, ethics and legal aspects related to health activities, lectures and field trips.

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.

HRTT 112. Clinical Practical I (3 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.

HRTT 113. Clinical Practical II (6 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.

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.

HRTT 115. Advanced Respiratory Therapy Procedures II (3 credits). Pressure and volume-cycled ventilators, gas analysis equipment, and auxiliary therapeutic and diagnostic equipment are explored in depth.

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.

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.

HRTT 118. Clinical Application II (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.

HRTT 119. Clinical Practical III (3 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.

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.

HISTORY

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; and 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.

HORTICULTURE

(ORNAMENTAL)

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. Two hours lecture and six 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. Two hours lecture and six 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. Two hours lecture and six 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. Two hours lecture and six 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. Two hours lecture and six 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. Two hours lecture and six 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. Two hours lecture and six 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. Two lecture hours and six 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, 2 hours; Laboratory, 6 hours. Total, 8 hours per week.

***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, 2 hours; Laboratory, 6 hours. Total, 8 hours per week.

*Recommended Related Electives.

HUMANITIES

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.

JOURNALISM

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

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 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.

LEGAL ASSISTANT

LEGA 110. Texas Legal Systems (3 credits). A study of the court system of Texas. Includes an examination of the various types of legal practices as they relate to the courts and general principles of court administration. Elements of the Federal Court System are reviewed. Three lecture hours per week.

LEGA 111. Legal Technology I (3 credits). Review development of legal technician concept; study the legal profession, its ethics, and unauthorized practice; establish the "new profession" concept; study history of American law, its classification for study and analysis; and the various areas of law as classified; begin "in depth" study of legal research and bibliography including research problems; and introduction to legal drafting and writing. Three lecture hours per week.

LEGA 112. Legal Technology II (3 credits). Study of composition, location and jurisdiction of all courts; detailed examination of a civil case; introduction to legal drafting and writing. Three lecture hours per week.

LEGA 210. Principles of Family Law (3 credits). Such topics as divorce, separation, custody, legitimacy, adoption, change of name, guardianship, support, Domestic Relations Court procedures, and separation agreements are covered in this course. Three lecture hours per week.

LEGA 212. Legal Assistant Internship (3 credits). The student works in a qualified firm a minimum of 15 hours per week where he or she receives practical training and experience compatible with his management career objective. Law firms would normally qualify, but government agencies and legal departments of private companies and banks would also suffice. Students may receive credit from an approved full-time job.

LEGA 220. Wills, Trusts, and Probate Administration (3 credits). Study of the more common forms of wills and trusts, and a survey of the fundamental principles of law applicable to each; a study of the organization and jurisdiction of a Texas Probate Court; a detailed analysis of the administration of estates in Texas Probate; review of estate and inheritance taxes applicable to such estates. Three lecture hours per week.

LEGA 222. Legal Assistant Internship (3 credits). The student works in a qualified firm a minimum of 15 hours per week where he or she receives practical training and experience compatible with his management career objective. Law firms would normally qualify, but government agencies and legal departments of private companies and banks would also suffice. Students may receive credit from an approved full-time job.

LEGA 230. Insurance Law and Claims Investigation (3 credits). A study of the fundamental principles of the law of torts and insurance, including special research assignments related to the subject matter; consideration of the techniques of investigation involved in the lawyer's handling of tort and insurance claims; a study of the various forms of pleading involved in commencing such claims in court actions. Three lecture hours per week.

LEGA 240. Law Office Management (3 credits). This course will provide the ethical considerations applicable to the legal technician, office organization, specialized bookkeeping and accounting for attorneys, fees and billing procedures, scheduling and calendaring, legal research, management of personnel, proofreading, management of investigations and file preparation, legal drafting, management and organization procedures for specialized areas of law, special considerations with respect to attorneys trust account, preparation of law office forms, check list and files, and disbursement on behalf of clients. Three lecture hours per week.

MATHEMATICS

GENERAL MATHEMATICS

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 110A. 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 121. College Algebra (3 credits). This course includes only a brief review of elementary topics followed by a more intensive study of advanced topics in quadratic equations, systems of quadratic equations, inequalities, progressions, complex numbers, elementary theory of equations, permutations, combinations, mathematical induction and other selected topics as time permits. Three lecture hours per week. Prerequisite: Two years of high school algebra or consent of instructor.

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.

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 mathematics of finance, probability, testing hypotheses, sample theory, parameter estimation, frequency functions, correlation and regression. Prerequisite: 6 semester hours of math.

MATH 211-212. Differential and Integral Calculus with Applications (5 credits) (5 credits). These courses are designed to meet the needs of mathematics, engineering, and science students. Math 211 and Math 212 are equivalent to Math 213, Math 214, and Math 215 which are three credit hours each. Topics of Math 211 include inequalities, functions, limits, the derivative, differentiation of algebraic functions, the differential, the definite integral, the trigonometric functions, logarithmic functions, exponential functions, parametric equations, and length and polar coordinates. Topics of Math 212 include formulas and methods of integrations, applications of the integral, solid analytic geometry, elements of infinite series, partial derivatives with applications, multiple integration, vectors, power series, Taylor's series, gradient and linear algebra. Each course is five lecture hours per week. Prerequisite: Math 150 or consent of instructor.

MATH 213-214. Differential and Integral Calculus (3 credits) (3 credits). These two courses are designed to meet the needs of mathematics, engineering, and science students. Math 213, Math 214, and Math 215 are equivalent to Math 211 and Math 212 which are five credit hours each. 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 three lecture hours per week. Prerequisite: Math 150 or consent of instructor.

MATH 215. Calculus Applications (3 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. Three 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 214 or 212.

MATHEMATICS FOR LIBERAL ARTS MAJORS

MATH 111-112. Selected Topics I, II (3 Credits) (3 Credits). These courses are designed to satisfy the mathematics requirement for liberal arts majors. Some of the topics included are: number theory, concepts of algebra, geometry, statistics, logic, computer science, matrix algebra, and history of mathematics. 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

MMGT 111. Introduction to Mid-Management (3 credits). The student is introduced to the concept of middle level management, prepared for initial employment as an intern, and is continually involved in seminars and case study problems relating to his work. Experience is gained so that the student may more meaningfully relate to the principles and theories of management in the following course. 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 practi-

car 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.

MUSIC

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 students preparing to become teachers 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 120. Music of Yesterday and Today (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.

MUSC 131-132, 233-234 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. Meets two hours per week. May be repeated for credit. Prerequisite: Approval of the instructor.

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 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. Three rehearsal 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. Three 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. Three 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. Three 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 rehearsal hours per week.

APPLIED MUSIC

MUSC 115, 116, 215, 216. 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 117, 118, 217, 218. 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 125, 126, 225, 226. 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 127, 128, 227, 228. 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 135, 136, 235, 236. 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 145, 146, 245, 246. 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 155, 156, 255, 256. 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.

NURSING

ADN — Associate Degree Nursing

NURS 110. Introduction to Nursing (8 credits). This is the basic course in the nursing curriculum, and it provides the foundation upon which other courses build and expand. It is designed to help the student further develop an understanding of the physical and biological sciences. It introduces the scientific principles of nutrition, pharmacology, communications, mental health concepts and technical skills basic to nursing care. Through the use of problem-solving, the student is guided to an awareness and use of intellectual evaluation. The course is concerned with health care and the related stages of the nursing process. The student is introduced to deviations from wellness so that he has the opportunity to develop an increased knowledge of the different levels of the health-illness continuum. Clinical experiences include adult and pediatric services. Four lecture hours, twelve laboratory hours. Pre- or co-requisites: PSYC 110, 130, BIOL 121.

NURS 120. Maternal and Child Health Nursing (8 credits). 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 child from birth through adolescence. The stages of growth and development offered as a prerequisite course form the theoretical foundation for the nursing care. The conceptual framework is based on meeting the physiological and psychological needs of the family as a whole with emphasis on the normal aspects of childbearing. Deviations from normal are included, and the focus is on the assessment and nursing management involved. Experiences are provided in clinical agencies for caring for children and for the mother and the newborn. Four lecture hours, twelve laboratory hours. Prerequisites: PSYC 110, 130; BIOL 121; NURS 110.

NURS 130. Psychiatric Nursing (5 credits). This course focuses on the conceptual model of wellness, health care and related stages of the nursing process. Opportunity is afforded the student to utilize the thinking and perceiving abilities and knowledge to explain events, facilitate change and solve problems. Clinical experience working with patients, individually, in groups, and with their families is provided. Rehabilitative methods are goal directed toward the patient's return to optimum mental health. The role of the nurse in treatment modalities is stressed. Four lecture hours; eight laboratory hours. Prerequisites: BIOL 121, 122; PSYC 110, 130; NURS 110, 120.

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 credits). This course familiarizes the student with the basic elements of medical-surgical nursing. It emphasizes the interrelatedness of medical, surgical, dietary, pharmacological, psychological, sociological and community aspects of nursing management. Major emphasis is placed on meeting the needs of the patient. Deviations from wellness afford the student an opportunity to practice in the hospital setting. The student is provided responsibilities and experiences on a level higher than that practiced on the introductory levels. Auto-tutorial materials are provided to assist the student in assuming responsibility for part of his learning. Four lecture hours, twelve laboratory hours. Prerequisite: NURS 110, 120, 130, BIOL 122.

NURS 212. Medical-Surgical Nursing II (8 credits). This course is a continuation of Medical-Surgical Nursing I in which medical, surgical, dietary, psychological, sociological and community aspects of nursing management are interrelated. However, Medical-Surgical Nursing II is on a more in-depth level and includes nursing practice in intensive care units. The student is given an opportunity of assuming greater responsibility and experience in the nursing care of adults. The student will learn to synthesize the knowledge and skills of the nursing courses and the social science courses. Guidance is afforded the student in making individual contributions to the total needs of the patient. The course material will be presented by the behavioral outcomes approach to the nursing course of study. Four lecture hours, twelve laboratory hours. Prerequisites: NURS 110, 120, 130, 211; BIOL 225; CHEM 110.

NURSING

VN — Vocational Nursing

NURS 001. Personal and Vocational Relationships (10 contact hours). This course introduces history of vocational nursing, nursing ethics, legal aspects, personal hygiene and grooming, and the role of the vocational nurse as part of the health team.

... introduction to vocational nursing skills, including Pharmacology and Nutrition (225 contact hours). This is a basic course which introduces the new students to pharmacology, nutrition, mental health concepts, communication and manual skills to nursing care. Vocational nursing skills shall include laboratory and hospital setting experiences.

NURS 003. Maternal and Child Health Nursing (50 contact hours). This is a basic course approaching the family at the establishment phase and follows the family through the expectant, child bearing, including complications specific to mother and newborn. Continued study of related pharmacology and nutrition. Clinical experience in hospital setting, 3 weeks obstetrics, 2 weeks newborn.

NURS 004. Pediatric Nursing (50 contact hours). This is a basic course in childhood diseases. The effect of disease on normal growth and development. Nursing care measures necessary to meet the emotional and physical needs. Continued pharmacology and nutrition. Clinical experience in hospital setting or clinic, 3 weeks.

NURS 005. Mental Health and Mental Illness (20 contact hours). This is a course defining the basic concepts of positive mental health; the various aspects of emotional behavior due to illness, environment, and religious beliefs. Continued study of related pharmacology and nutrition. Clinical experience in hospital setting and mental health clinics, 2 weeks, if available.

NURS 006. Medical-Surgical Nursing (125 contact hours). A study of basic nursing care of medical-surgical patients, including the progressive steps in treatment and recovery. The course is designed to aid the student in meeting the needs of the adult and geriatric patient in the hospital, nursing home, and in the home. First aid is introduced. Continued study of related pharmacology and nutrition. Clinical experience in hospital settings, 6 weeks medical, 6 weeks surgical.

NURS 007. Body Structure and Function (50 contact hours). A basic course in anatomy and physiology as a background for nursing care.

NURS 008. Disease Control and Prevention (10 contact hours). A basic course in microbiology with emphasis on disease prevention, disease control programs and community resources.

NURS 009. Child Growth and Development (10 contact hours). This course is intended to provide the basic aspects of growth and development from birth through adolescence.

PHILOSOPHY

PHIL 111. Introduction to Philosophy I (3 credits). An introductory study of some philosophical issues concerning the perception and belief of man in society. Three lecture hours per week.

PHIL 112. Introduction to Ethics (3 credits). Study of basic principles of the moral life, with critical examination of traditional and contemporary theories of the nature of goodness, happiness, duty and freedom.

PHYSICAL EDUCATION

ACTIVITY COURSES FOR MEN AND WOMEN

PHED 115-116. Individual and Dual Sports. (1 credit) (1 credit). This course provides instruction and participation in the fundamentals of beginning tennis, badminton, archery, tumbling, karate, handball & racquetball 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 125-126. Fundamentals of Movement. This course provides instruction and participation in the fundamentals of beginning folk dance 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 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 127-128. Badminton. (1 credit) (1 credit). This course consists of instruction and participation in both beginning and advanced badminton. 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 147-148. Golf. (1 credit) (1 credit). The course is designed to give students beginning instruction in golf and will deal with the history, skills, rules and safety of the game. Three hours of class instruction and participation per week.

PHED 151-152. Team Sports. (1 credit) (1 credit). Activities taught may include 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 227-228. Badminton. (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 247-248. Golf. (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 210. First Aid. (3 credits). The theory and practice in the standard and advanced 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.

PHYSICS

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.

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.

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.

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, and other topics to study the meaning and practice of planning and 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.

PSYCHOLOGY

PSYC 110. Human Relations (3 credits). Communication, perception, motivation, leadership, group dynamics, and social conflict are studied. The application of psychology to problems in industry and private life are also considered. 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 250. Fundamentals of Behavior Pathology. (Credit: 3 semester hours). Introduction to behavioral disorders; the dynamics of human behavior; analysis of the biological, cultural, sociological, and psychological factors in the development, diagnosis, and treatment of disorders. Three lecture hours per week. Prerequisite: PSYC 110 or 120.

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

READING

RDNG 110. Study Skills (3 credits). Is designed to improve the student's reading and studying effectiveness. It is concerned with the improvement of reading comprehension, vocabulary and reading rate. One of the major course objectives is to help students develop an interest in reading for pleasure as well as for information. Learning experiences are developed in the following areas: use of the dictionary, vocabulary building, techniques of note-taking, exam-taking and studying, and reading for enjoyment. Developmental reading is offered in a laboratory setting.

RDNG 110F. Study Skills. Reading of English as a Second Language (3 credits). Is designed to improve the student's reading and studying effectiveness. Emphasis is placed on a phonetic and structural analysis of the English language. An individualized program is designed to meet each student's specific needs. The course is offered in a laboratory setting.

RDNG 115. Speed Reading (3 credits). For students who read at an average or above average rate. This course is designed to improve the student's reading and studying effectiveness. Speed drills, vocabulary building, and comprehension exercises are included to build the student's skills in these areas. Prerequisite: An ACT score of 14 or higher is required for registration in this course.

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 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.

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.

SECRETARIAL SCIENCE

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. 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 150. Office Machines (3 credits). Introduction to operations of ten-key adding machine, electronic calculator, printing calculator, and bookkeeping machine. 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 Procedures (3 credits). A study is made of business procedures including business etiquette, handling of office mail, filing systems, preparation of business reports, and office work flow. Lecture three hours per week.

SOCIOLOGY

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

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 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

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

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.

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.



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