

Linda Hayton 1969-1970

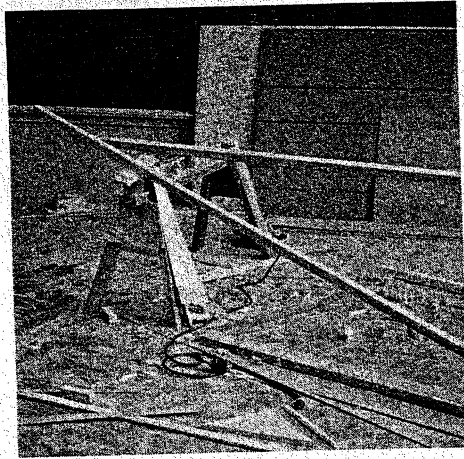
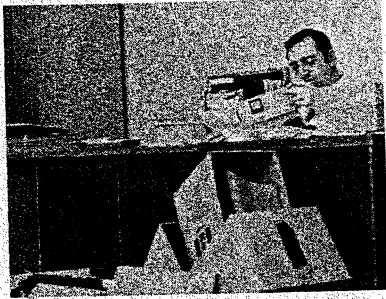
~~Out of state~~
~~tuition \$347.50~~

~~23.50 per hour~~



PROGRAMS AND COURSE DESCRIPTIONS

1969-1970
SUMMER
FALL



7/25/80

Catalog copies: 10-22-99
 1 Deans office
 1- off campus (archives)
 1- Records office w/ film
 (fireproof cabinet)

ARTS AND SCIENCE

Objective: To provide a program for students seeking one of the following:

- An Associate of Arts degree in General College Studies.
- A Baccalaureate degree for those who have not yet chosen their field of specialization, but who wish to satisfy the general education requirements of a four-year institution.
- A Baccalaureate degree in Liberal Arts or Natural Science.

| 1st Semester | 2nd Semester |
|---|---|
| Communications 1013 | Communications 1023 |
| Humanities 101 or Social Science 101 3-4 | Humanities 102 or Social Science 102 3-4 |
| Electives <u>9</u> | Electives <u>9</u> |
| Credit Hours 15-16 | Credit Hours 15-16 |
| 3rd Semester | 4th Semester |
| Humanities 101 or Social Science 101 3-4 | Humanities 102 or Social Science 102 3-4 |
| Electives <u>13</u> | Electives <u>13</u> |
| Credit Hours 16-17 | Credit Hours 16-17 |

C1

Natural Sc. 101, 102 - recommended

LIBERAL ARTS OPTION

Liberal Arts and General College Studies students should take Natural Science 101, 102 for the 1st and 2nd semester electives.

SCIENCE OPTIONS

It is suggested that students select electives from their field of interest:

BIOLOGY OPTIONS

Biology students should take: Biology of Animals 110; Biology of Plants 111; General Chemistry 120, 121; Basic Organic Chemistry 220, 221; and College Algebra 115.

CHEMISTRY OPTION

Chemistry students should take: General Chemistry 120, 121; Basic Organic Chemistry 220, 221; and Analytical Geometry-Calculus 221, 222, 223.

DENTAL OPTION

Pre-dental students should take: Biology of Animals 110; General Chemistry 120, 121; Principles of Organic Chemistry 225; General Physics 150, 151; Human Anatomy-Physiology 116; and Introduction to Health Professions 105.

MATHEMATICS OPTION

Mathematics students should take: Analytical Geometry-Calculus 221, 222, 223; and Differential Equations 224.

PHYSICS OPTION

Physics students should take: Analytical Geometry-Calculus 221, 222, 223; Differential Equations 224; and Engineering Physics 250, 251.

MEDICAL OPTION

Pre-medical students should take: Biology of Animals 110; General Chemistry 120, 121; Basic Organic Chemistry 220, 221; Trigonometry 117; General Physics 150, 151; Human Anatomy-Physiology 116; and Introduction to Health Professions 105.

PHARMACY OPTION

Pre-pharmacy students should take: Biology of Animals 110; Biology of Plants 111; General Chemistry 120, 121; Trigonometry 117; General Physics 150, 151; and Introduction to Health Professions 105.

VETERINARY OPTION

Pre-veterinary students should take: Biology of Animals 110; General Chemistry 120, 121; Basic Organic Chemistry 220, 221; Algebra-Trigonometry 115, 117; General Physics 150, 151; Human Anatomy-Physiology 116; and Introduction to Health Professions 105.

ELECTIVES

Students seeking a Baccalaureate degree should refer to the catalogue of the institution to which they will transfer.



AVIATION INSTITUTE

Objective: To provide career programs for students seeking jobs as:

- General Aviation pilots
- Airline hostesses
- Managers in Aviation
- Air traffic controllers
- Aircraft maintenance technicians

FLIGHT PROGRAM

| 1st Semester | 2nd Semester |
|--------------------------------------|--|
| <i>#525</i> Private Pilot 1014 | <i>#375</i> Commercial Pilot 102 4 |
| Introduction to Aviation 1103 | Introduction to Power Plants 112 3 |
| Communications 1013 | Communications 102 3 |
| *Algebra 105 or 115 or | Speech 114 2 |
| Technical Math 1013 | Electives 3 |
| Humanities 1013 | Credit Hours15 |
| Credit Hours16 | |
| 3rd Semester | 4th Semester |
| Commercial Pilot 2014 | <i>#475</i> Instrument Pilot 202 3 |
| Introduction to Airframes 1133 | Multi-Engine Pilot 2032 |
| Electronics & Avionics 1153 | Airport Management 2153 |
| *Electives6 | Aviation Seminar 2163 |
| Credit Hours16 | Air Transportation 2173 |
| | Electives3 |
| | Credit Hours17 |

SUMMER

| | |
|--------------------------------------|----------|
| Instructor Pilot 206 | 3 |
| Aviation Seminar 216 | 3 |
| Ground Instructor's Rating 219 | 3 |
| Credit Hours | <u>9</u> |

*Mathematics: Math 105 or 115 and Math 117 is required for all students wishing to transfer to a four-year institution.

*Electives: Electives will be taken in the area of non-flying speciality the student has selected as his non-aviation major. These areas are in Social Studies, Humanities, Business or Engineering.

Students are required to pass an FAA third or second class physical examination before flight training begins. All students in Professional Pilot Career Programs are required to pass the second class FAA physical examination.



PRE-HOSTESS OPTION

| 1st Semester | 2nd Semester |
|--------------------------------------|--------------------------------------|
| Introduction to Aviation 110 3 | Hostess 120 2 |
| Communications 101 3 | Communications 102 3 |
| Social Science 101 4 | Social Science 102 4 |
| Data Processing or Typing 2-3 | Introduction to Business 111 3 |
| *Foreign Language 4 | *Foreign Language 4 |
| Credit Hours <u>16-17</u> | Credit Hours <u>16</u> |

SUMMER

Flight 101 4

| 3rd Semester | 4th Semester |
|--|------------------------------|
| Hostess – Places 220 3 | Hostess – People 221 3 |
| Speech 114 2 | *First Aid 201 2 |
| Personal Health and Community Hygiene 120 3 | Person Finance 114 3 |
| Humanities 101 3 | Humanities 102 3 |
| *Foreign Language 4 | *Foreign Language 3 |
| Credit Hours <u>15</u> | Credit Hours <u>15</u> |

*Students who demonstrate adequate preparation in areas of typing, foreign language, or first aid may wish to select electives approved by the Director of the Institute of Aviation.

For information concerning business management of aviation facilities, aircraft maintenance, and air traffic controller programs please contact the College Counselling Office.

BUSINESS ADMINISTRATION

Objective: To provide a university transfer program for students seeking a Baccalaureate degree in Business Administration.

1st Semester

| | |
|-------------------------------------|-----------|
| Introduction to Data Processing 132 | 3 |
| Communications 101 | 3 |
| Introduction to Business 111 | 3 |
| Social Science 101 | 4 |
| Algebra 105 | 5 |
| Credit Hours | 18 |

2nd Semester

| | |
|---------------------|-----------|
| Communications 102 | 3 |
| Statistics 110 | 3 |
| Social Science 102 | 4 |
| Trigonometry 117 | 3 |
| Electives | 2 |
| Credit Hours | 15 |

3rd Semester

| | |
|----------------------------------|-----------|
| Economics 201 | 3 |
| Accounting 101 | 3 |
| Analytical Geometry-Calculus 121 | 5 |
| Natural Science 101 | 4 |
| Credit Hours | 15 |

4th Semester

| | |
|---------------------|-----------|
| Economics 202 | 3 |
| Accounting 102 | 3 |
| Humanities 101 | 3 |
| Natural Science 102 | 4 |
| Electives | 3 |
| Credit Hours | 16 |

MARKETING OPTION

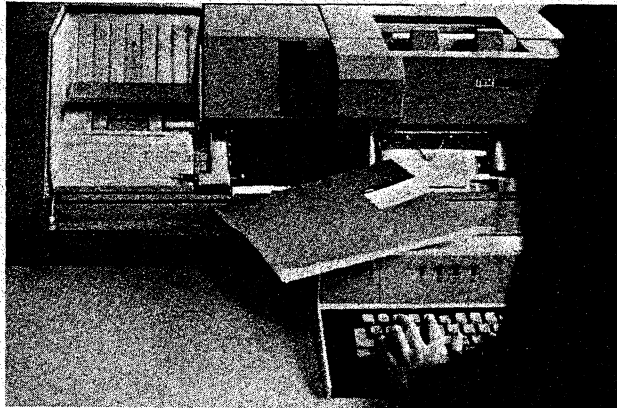
Students wishing a Marketing emphasis should take Salesmanship 177, Retail Advertising and Display 180, or Marketing 214 as electives.

DATA PROCESSING

Objective: To provide a career program to assist students seeking job entry into the field of data processing.

| 1st Semester | 2nd Semester |
|--|---|
| <ul style="list-style-type: none"> • Data Processing Concepts 142 5 • Communications 101 3 • Introduction to Business 111 3 • Social Science 101 4 <li style="border-top: 1px solid black;">Credit Hours 15 | <ul style="list-style-type: none"> Programming 143 5 Speech 114 2 • Communications 102 3 • Statistics 110, or Coll. Algebra 115 3 • Social Science 102 4 <li style="border-top: 1px solid black;">Credit Hours 17 |
| 3rd Semester | 4th Semester |
| <ul style="list-style-type: none"> • Data Processing Concepts 244 5 • Accounting 101 3 • Personnel Management 200 3 • Natural Science 101 4 <li style="border-top: 1px solid black;">Credit Hours 15 | <ul style="list-style-type: none"> • Accounting 102 3 • *Data Processing Management 235 3 • *Application Programming 245 3-6 • Humanities 101 3 • Electives** 3-6 <li style="border-top: 1px solid black;">Credit Hours 15-18 |

*On-the-job training program for all interested students having instructor approval.
 **Courses selected by the student and his advisor.



ENGINEERING

Objective: To provide a university transfer program for students seeking a Baccalaureate degree in Engineering.

1st Semester

| | |
|----------------------------------|----|
| Communications 101 | 3 |
| Analytical Geometry-Calculus 121 | 5 |
| Engineering Drawing 105 | 3 |
| General Chemistry 120 | 5 |
| Credit Hours | 16 |

2nd Semester

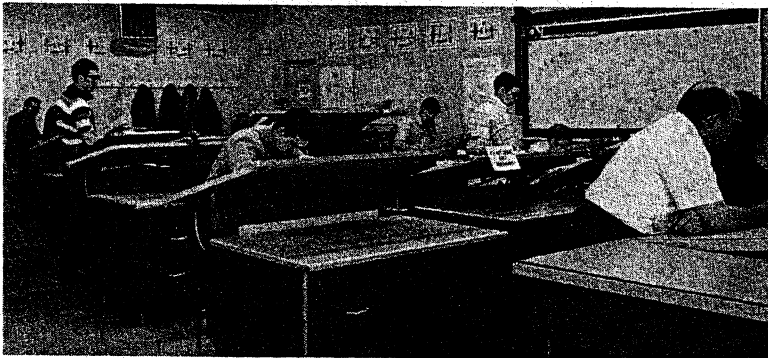
| | |
|----------------------------------|----|
| Communications 102 | 3 |
| Analytical Geometry-Calculus 122 | 5 |
| Engineering Drawing 106 | 3 |
| General Chemistry 121 | 5 |
| Credit Hours | 16 |

3rd Semester

| | |
|----------------------------------|----|
| Analytical Geometry-Calculus 223 | 5 |
| Engineering Physics 250 | 5 |
| Social Science 101 | 4 |
| Statistics 210 | 3 |
| Credit Hours | 17 |

4th Semester

| | |
|----------------------------|----|
| Dynamics 211 | 3 |
| Engineering Physics 251 | 5 |
| Differential Equations 224 | 3 |
| Humanities 101 or 102 | 3 |
| Fortran 122 | 2 |
| Credit Hours | 16 |



DRAFTING TECHNOLOGY

Objective: To provide a career program for students seeking job entry in the drafting field.

| 1st Semester | | 2nd Semester | |
|---------------------------|----|------------------------|----|
| Communications 101 | 3 | Communications 102 | 3 |
| Drafting 101 | 7 | Drafting 102 | 7 |
| Technical Mathematics 101 | 3 | Humanities 101 or 102 | 3 |
| Electives | 3 | Electives | 3 |
| Credit Hours | 16 | Credit Hours | 16 |
| 3rd Semester | | 4th Semester | |
| Drafting 201 | 7 | Drafting 202 | 7 |
| Industrial Science 128 | 5 | Industrial Science 129 | 5 |
| Social Science 101 | 4 | Electives | 4 |
| Credit Hours | 16 | Credit Hours | 16 |

DRAFTING OPTIONS

It is suggested that students select electives from their field of interest.

MECHANICAL OPTION

Processes and Materials of Manufacturing 121, Mechanisms 225, Tool Design 230, and FORTRAN 122.

CIVIL OPTION

Building Materials and Construction 123, FORTRAN 122.

ARCHITECTURAL OPTION

Building Materials and Construction 123, Mechanics of Materials 220.

ELECTRICAL OPTION

Basic Circuits 120, FORTRAN 122.

HEALTH PROFESSIONS

Objective: To provide the student with the basic liberal arts instruction and the necessary clinical experience required of a student to sit for licensing or certifying examinations in those allied health programs indicated.

| 1st Semester | 2nd Semester |
|---|-------------------------------------|
| Communications 1013 | Communications 1023 |
| Social Science 1014 | Social Science 1024 |
| Principles of Chemistry 1255 | General Physics 150 or |
| Intro. to Health Professions 1052 | Microbiology 1154-5 |
| Electives3 | Human Anatomy-Physiology 1165 |
| Credit Hours17 | Credit Hours 16-17 |

3rd and 4th Semesters

By arrangement up to 30 hours of College credit for clinical experience may be taken at institutions affiliated with Johnson County Community College.

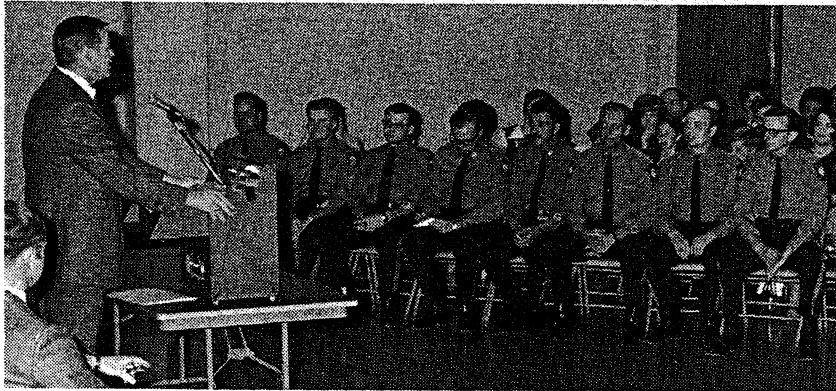
PROBABLE OPTIONS

- | | |
|--|---|
| <p><i>met. jr. col.</i> Cytotechnology</p> <p>Dental Assisting <i>(grad with us)</i></p> <p>Emergency Medical Technician</p> <p>Inhalation Therapy</p> | <p>Medical Records Technician</p> <p>Medical Secretary</p> <p>Radiologic Technology</p> |
|--|---|

Supplemental information about the above programs may be obtained from the Director of Admissions.

LAW ENFORCEMENT

Objectives: To provide career training for job entry and the awarding of an Associate of Arts degree at the successful completion of the two-year program. To allow students, with guidance, to transfer to a four-year institution offering a Baccalaureate degree in Law Enforcement or related disciplines.



1st Semester

| | |
|--|----|
| Communications 101 | 3 |
| Social Science 101 | 4 |
| Introduction to Law Enforcement 151 | 3 |
| Police Administration 152 | 3 |
| Criminal Law 155 | 3 |
| Credit Hours | 16 |

3rd Semester

| | |
|--|--------------|
| Natural Science 101 or 102 | 4 |
| Introduction to Criminalistics 151 | 3 |
| Society and Law Enforcement 252 | 3 |
| Electives | 5 |
| Credit Hours | 15 |

2nd Semester

| | |
|---|----|
| Communications 102 | 3 |
| Social Science 102 | 4 |
| Speech 114 | 2 |
| Fundamentals of Criminal Investigation 156 | 3 |
| Police and the Public 159 | 3 |
| Credit Hours | 15 |

4th Semester

| | |
|-----------------------------------|----|
| Philosophy 151 or Logic 152 | 3 |
| Police Seminar 259 | 3 |
| Electives | 10 |
| Credit Hours | 16 |

RETAIL MARKETING MANAGEMENT

Objectives: To provide a career program for students seeking immediate job entry in retail merchandising, store management and related areas. To provide a program which will enable students to transfer to a four-year institution.

| 1st Semester | 2nd Semester |
|-------------------------------------|--|
| Communications 1013 | Communications 102 3 |
| Introduction to Business 1113 | Speech 1142 |
| Salesmanship 1773 | Retailing 176 3 |
| Social Science 1014 | Introduction to Data Processing 132 ..2 |
| *Retail Field Study 1713 | Retail Advertising and Display 180 ... 3 |
| Credit Hours16 | *Retail Field Study 1723 |
| | Credit Hours16 |

SUMMER

*Retail Field Study 272 3

(Note: Requires full-time employment)

| 3rd Semester | 4th Semester |
|--------------------------------|---|
| Accounting 1013 | Business Elective3 |
| Economics 2013 | *Seminar in Retail Distribution 299 ... 3 |
| Business Law 2123 | Personnel Management 2003 |
| Marketing 2143 | *Retail Field Study 2724 |
| *Retail Field Study 2723 | Electives2 |
| Credit Hours15 | Credit Hours15 |

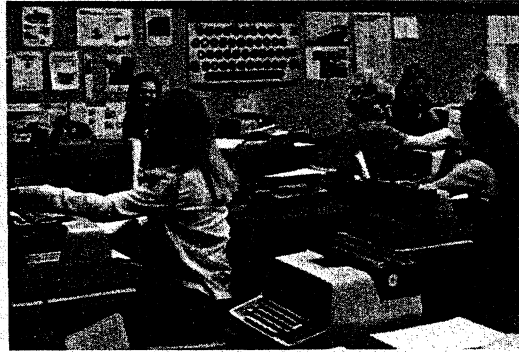
*Approval of Instructor required for enrollment.

SECRETARIAL CAREERS

Objectives: To provide a career program for students seeking immediate job entry in general office and secretarial positions. To provide a program which will enable students to transfer to a four-year institution.

| 1st Semester | 2nd Semester |
|-------------------------------------|--|
| Communications 1013 | Communications 1023 |
| Intermediate Typing 1563 | Production Typing 1573 |
| Shorthand 1513 | Dictation and Transcription 1523 |
| Introduction to Business 1113 | Speech 1142 |
| Humanities 101 or 1023 | Office Machines 1602 |
| Records Management 1612 | Intro. to Data Processing 1322 |
| Credit Hours17 | Credit Hours15 |
| 3rd Semester | 4th Semester |
| Accounting 1013 | Economics 2013 |
| Social Science 1024 | Personal Finance 1143 |
| Business Law 2123 | Secretarial Procedures 2633 |
| Secretarial Procedures 2623 | Secretarial Field Study 265 or |
| Secretarial Field Study 264 or | Elective3 |
| *Elective3 | *Electives3 |
| Credit Hours16 | Credit Hours15 |

*Medical Secretary students take Introduction to Health Professions 105 and Human Anatomy-Physiology 116; Legal Secretary students take Business Law.



COURSE DESCRIPTIONS

AVIATION PRIVATE PILOT (AV 101) 4 Credits

Prerequisite: Third class medical certificate.

This course combines both ground and flight instruction necessary to prepare the student to qualify to take the FAA examination for a private pilot rating. Hours by arrangement.

COMMERCIAL PILOT (AV 102) 4 Credits

Prerequisite: AV 101 and second class medical certificate

This course is the first half of a two phase ground and flight instruction in preparation for the FAA examination for commercial pilot rating. Hours by arrangement.

PRIVATE PILOT GROUND SCHOOL (AV 105) Night 3 Credits

This course is similar to Private Pilot 101; however, it does not include the necessary flight instructions to qualify for the FAA private pilot rating. Class meets three hours per week.

AV 106

INTRODUCTION TO AVIATION (AV 110) 3 Credits

General introductory course covering the development of aviation and its importance in the American economy. Special emphasis on the history of aviation, the airlines, general aviation and the aviation industry. Class meets three hours per week.

INTRODUCTION TO POWERPLANTS (AV 112) 3 Credits

Fall only

Introduction to the fundamental principles of aircraft engines, operation, basic construction, induction, ignition and lubrication systems. Designed to give pilots a better understanding of the powerplant. Class meets three hours per week.

INTRODUCTION TO AIRFRAMES (AV 113) 3 Credits

Fall only

An examination of methods and materials used in the construction of airframes. Emphasis is placed on safety and inspection techniques. Class meets three hours per week.

ELECTRONICS & AVIONICS (AV 115) 3 Credits

Introduction to electronics and its application to radio and navigational equipment used in aircraft. An understanding of the principles and function of airborne avionics equipment. Class meets three hours per week.

- SP '71 **HOSTESS (AV 120)** 2 Credits
 Introduction to career of an airline hostess. Course is a survey of the nature of the work, requirements for employment, and basic understanding of the airline industry as it applies to the hostess. Class meets two hours per week.
- COMMERCIAL PILOT (AV 201)** 4 Credits
Prerequisite: AV 102
 SP '71 Continuation of Commercial Pilot 102. The second half of the two phase flight and ground training necessary to complete the requirements for the FAA commercial pilot's rating. Hours by arrangement.
- INSTRUMENT PILOT (AV 202)** 3 Credits
 SP '71 *Prerequisite: AV 101 or AV 202*
 This course of flight training leads to the FAA instrument rating. Hours by arrangement.
- MULTI-ENGINE PILOT (AV 203)** 2 Credits
Prerequisite: AV 101 or AV 201
 This course leads to the FAA multi-engine pilot rating. All flight training is given in a modern twin-engine aircraft and is designed to provide the advanced pilot a greater depth of aircraft experiences. Hours by arrangement.
- INSTRUCTOR PILOT (AV 206)** 3 Credits
 SP '71 *Prerequisite: AV 201*
 This course prepares the student with teaching and practical experiences that are necessary to qualify for the FAA certified instructor rating. Hours by arrangement.
- AIRPORT MANAGEMENT (AV 215)** 3 Credits
 SP '71 A survey and study of the major functions of airport management. Special attention is given to the areas of organization, zoning, financing, planning, safety, and the social-economic effect on the community or region. Class meets three hours per week.

AVIATION SEMINAR (AV 216)

3 Credits

Prerequisite: AV 201 or by permission of the Director of Aviation.

Sp. '71

A survey of the "state of the arts" in aviation. Group discussion and reports on equipment, airport development, air traffic control, and other current topics in the field of aviation. Tours and field trips include FAA facilities, manufacturing plants, and airports. Lectures by aviation experts and papers on pilot techniques are also used as bases for class instruction. Class meets three hours per week.

AIR TRANSPORTATION (AV 217)

3 Credits

Sp. '71

The development and present status of air transportation. The organization and function of the Federal Aviation Agency and the Civil Aeronautics Board are studied. Class meets three hours per week.

GROUND INSTRUCTION TECHNIQUES (AV 219)

3 Credits

Sp. '71

Investigation of teaching techniques and supervised practice in the teaching of ground school aviation subjects. Class meets three hours per week.

HOSTESS - PLACES (AV 220)

~~Flight Services (Spring)~~

3 Credits

Fall '70

Prerequisite: AV 120

An in-depth study of selected domestic and international city-areas served by scheduled air carriers. Class meets three hours per week.

HOSTESS - PEOPLE (AV 221)

3 Credits

Sp. '71

Prerequisite: AV 220

Basic principles of individual and group psychology as they apply to the job of the hostess. A major portion of class time is devoted to the group process -- the "here and now" of human relationships. Members of the class participate as volunteers in service-oriented cooperating community agencies. Class meets three hours per week.

Flight Services (AV 220)

Spring only

3 cr.

Req. AV 101 & 105

Terminal Air Traffic Control AV 221

Fall only

3 cr.

Req: AV 220

Enroute Air Traffic Control AV 221

Fall only

3 cr.

Req AV 220 & 221

Air Traffic Control Internship AV 223

Spring only

3 cr.

Req: AV 220, 221, & 222

- ACCOUNTING^I (BUS 101)** 3 Credits **BUSINESS**
 Introduction to accounting fundamentals. Emphasis on the recording of business transactions, special journals, accounts and the ledger, financial statements, and summarizing at the close of the fiscal period. Class meets three hours per week.
- ACCOUNTING^{II} (BUS 102)** 3 Credits
Prerequisite: BUS 101
 Continuation of Accounting 101 with increased emphasis on interpretation and use of accounting data. Content includes accounts and records peculiar to partnerships and corporations, along with preparation and use of financial statements. Class meets three hours per week.
- INTRODUCTION TO BUSINESS (BUS 111)** 3 Credits
 Course acquaints beginning students with modern business enterprise. Functional areas such as marketing, personnel, accounting, production, etc., are emphasized as well as an examination of the relationship of business to its environment. Classroom activities include discussion groups, lectures and case discussion. Class meets three hours per week.
- PERSONAL FINANCE (BUS 114)** (Day) 3 Credits
 Sp. '71 Course designed for non-business majors as well as for business majors. Emphasis on values, establishing and maintaining credit controlling expenditures through use of a budget, and the safeguarding and investment of savings. Class meets three hours per week.
- INTRODUCTION TO DATA PROCESSING (BUS 132)** 2 Credits
 Introduction to the principles and concepts in the field of data processing and its application in business and industry. This course is designed for non-professional study of data processing. Class meets two hours per week.
- PROGRAMMING^I (BUS 133)** 3 Credits
Prerequisite: BUS 132 or instructor approval
 A basic overview of computer programming techniques. After a general examination of the various programming languages, the student codes several programs in RPG and COBOL. Class meets three hours per week.

Fall '70

DATA PROCESSING CONCEPTS (BUS 142) 5 Credits

Introduction to the principles and concepts of data processing and programming techniques. This course is designed for the student planning a professional career in the field of data management. Class meets five hours per week.

PROGRAMMING (BUS 143) 5 Credits

Prerequisite: BUS 142 or BUS 133 or instructor approval

Course is designed to provide a comprehensive study of FORTRAN, BAL, RPG, COBOL, and PL/I. Upon completion of this course, the student will be able to program extensively in COBOL AND RPG while having a good understanding of the other three languages. Class meets five hours per week.

SHORTHAND (BUS 151) 3 Credits

Theory of Gregg shorthand, word building and phrasing, with emphasis on dictation and reading. (No credit given to students with one unit of high school shorthand with a grade of C or better.) Class meets five hours per week.

DICTATION AND TRANSCRIPTION (BUS 152) 3 Credits

Prerequisite: BUS 151 or one year of high school shorthand and beginning typewriting or equivalent

Includes a rapid review of shorthand theory. Extensive drills on speed building and production of mailable transcripts with emphasis on dictation and transcription. Class meets five hours per week.

BEGINNING TYPING (BUS 155) 3 Credits

Mastery of the keyboard and machine techniques. Instruction in personal and business letters, outlines, manuscripts, tabulation, centering, and composing at the typewriter. (No credit given to students with one or more units of high school typewriting.) Class meets five hours per week.

INTERMEDIATE TYPING (BUS 156) 3 Credits

Prerequisite: BUS 155 or one unit of high school typewriting or equivalent

Emphasis on speed and accuracy in typing business forms, letters, manuscripts, tabulated reports, and typing from dictated material. Class meets five hours per week.

PRODUCTION TYPING (BUS 157)

3 Credits

Prerequisite: BUS 156 or equivalent

Development of high degree of proficiency in production typing. Emphasis is placed on efficient methods and proper organization of work and materials. One unit of instruction will be in the College's Word Production Center using magnetic tape typewriters. Class meets five hours per week.

OFFICE MACHINES (BUS 160)

2 Credits

Laboratory course in the operation of ten-key and full bank adding machines, comptometers, key driver and rotary calculators. Emphasis on basic fundamentals. Class meets three hours per week.

RECORDS MANAGEMENT (BUS 161)

2 Credits

A study of alphabetic, numeric, subject and geographic filing systems. Provides a foundation of general office routines and efficient methods and systems of storing and retrieving information. Includes survey of various types of office filing equipment. Class meets two hours per week.

RETAIL FIELD STUDY (BUS 171)

3 Credits

Prerequisite: Consent of instructor

Fall '70

Course designed to give the student actual work experience at an approved training center under faculty supervision. Emphasis on successful selling experience. Class meets one hour per week and a minimum of 15 hours of on-the-job training per week by arrangement.

RETAIL FIELD STUDY (BUS 172)

3 Credits

Prerequisite: BUS 171 or consent of instructor

Sp. '71

Course designed to give the student actual work experience at an approved training center under faculty supervision. Emphasis on retailing principles and practices. Class meets one hour per week and a minimum of 15 hours of on-the-job training per week by arrangement.

RETAILING (BUS 176)

3 Credits

Sp. '71

Course gives the student an understanding of retail store organization and operation. Location and layout, retail buying techniques, human relations, employee supervision, pricing and merchandising are explored. Class meets three hours per week.

Fall '70

~~Off~~
~~Fall~~ Sp. '71

SALESMANSHIP (BUS 177) (Day) 3 Credits
Course covers the three main areas of selling - speciality, wholesale, and retail. Selling principles and tactics are developed into a wide variety of selling situations. Personality development is stressed in addition to the practical steps in making sales. Actual sales talks and demonstrations are an integral part of the work. Class meets three hours per week.

* **RETAIL ADVERTISING AND DISPLAY (BUS 180)** 3 Credits
Course deals with modern techniques of advertising and display. Topics covered include media use, show-card writing, script writing, display techniques and sales promotion scheduling. Class meets three hours per week.

* **PERSONNEL MANAGEMENT (BUS 200)** 3 Credits
Course examines decision-making, communications, policy formulation, selection, staffing, training and employee relations. Methods of organization and recent trends in employment practices of business enterprise are studied. Class meets three hours per week.

* **BUSINESS LAW (BUS 212)** 3 Credits
Basic principles of business law as applied to contracts, negotiable instruments, employer-employee relationships, principal and agent. Case studies are utilized throughout the course. Class meets three hours per week.

BUSINESS LAW (BUS 213) 3 Credits
Prerequisite: BUS 212
Continuation of Business Law 212 with an emphasis on partnerships, corporations, buyer and seller relationships, torts, and bankruptcy. Case studies are utilized through the course. Class meets three hours per week.

MARKETING (BUS 214) 3 Credits
Study of problems and policies of manufacturers, wholesalers, and retailers in the marketing of goods and services. Channels of distribution, customer relations, functions of sales departments, price policies, and communications are included. Class meets three hours per week.

* Fashion Fundamentals (Bus 178) Fall only 3 cr.
Textiles (Bus. 181) ~~Evening only~~ Spring 2 cr.
~~Applied Economics Bus 201 Fall only 3 cr.~~

INTRODUCTION TO SYSTEMS DESIGN AND ANALYSIS (BUS 234) 3 Credits

Prerequisite: BUS 132 or instructor approval

Course is designed to provide the student with a general understanding of systems design and analysis concepts. Upon completion of this course the student should be able to assist in the design and implementation of a data processing system. Class meets three hours per week.

Not offered in 1970-71

DATA PROCESSING MANAGEMENT CONCEPTS (BUS 235) 3 Credits

Prerequisite: BUS 132 or instructor approval

This course examines the characteristics and related problems of data processing administration through the use of case studies and guest speakers. Class meets two hours per week.

Spring

DATA PROCESSING CONCEPTS (BUS 244) 5 Credits

Prerequisite: BUS 143 or instructor approval

This course examines in detail the principles of system design and analysis. A brief overview of communication-based systems and complex system usage is presented. Class meets five hours per week.

Always Spring Only

APPLICATION PROGRAMMING (BUS 245) 3 Credits

Prerequisite: BUS 244 or instructor approval

This lab course is designed to provide the advanced student the opportunity to design and program several general application programs such as general ledger, payroll, accounts payable, accounts receivable, inventory control, etc. Class meets three to five hours per week.

not in fall Spring

See Below

SECRETARIAL PROCEDURES (BUS 262) 3 Credits

Prerequisites: BUS 152 and BUS 156 or equivalent

Emphasis on improving secretarial competency and increasing business knowledge of human relations, business law, business administration, and secretarial skills. Class meets three hours per week.

Fall

SECRETARIAL PROCEDURES (BUS 263) 3 Credits

Prerequisite: BUS 262

Emphasis on improving secretarial competency and increasing business knowledge of economics, business mathematics, accounting, and secretarial procedures. Class meets three hours per week.

Sp-71

C21

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|----------|----------|--------|-----------------------|----------------|--------------------|
| Bus 246 | Cobol | 3 hrs. | (fall 1970) | Preq. Bus. 143 | } all took approx. |
| Bus. 247 | Assembly | 3 hrs. | (fall 1970) | Preq. Bus. 143 | |
| Bus. 248 | P2/I | 3 hrs. | (fall 1970) (Spring?) | Preq. Bus. 143 | |

Fall
1970

SECRETARIAL FIELD STUDY (BUS 264) 3 Credits

Prerequisites: Sophomore standing (30 semester credit hours of approved program) and consent of instructor.

Course is designed to give the student actual work experience at an approved training center under faculty supervision. Students spend one hour a week in class discussion. Emphasis is placed on integration and synthesis of clerical knowledge and on-the-job experience. Class meets for one hour lecture and a minimum of 15 hours of on-the-job training per week by arrangement.

SECRETARIAL FIELD STUDY (BUS 265) 3 Credits

Prerequisites: Sophomore standing (30 semester credit hours of approved program) and consent of instructor

Course is designed to give the student actual work experience in an approved training center under faculty supervision. Students spend one hour a week in class discussion. Emphasis is placed on integration and synthesis of secretarial knowledge and on-the-job experience. Class meets for a one-hour lecture and a minimum of 15 hours of on-the-job training per week by arrangement.

SP '71

RETAIL FIELD STUDY (BUS 272) 3 Credits

Prerequisite: BUS 172

Course designed to give the student actual work experience on a full-time basis during the summer following the freshman year. Experience is at an approved training center under faculty supervision. Emphasis on retail advertising and sales promotion. Students spend one hour a week in class or on an individual conference basis with the instructor of the course and a minimum of 240 hours of on-the-job training during the summer by arrangement.

RETAIL FIELD STUDY (BUS 273) 3 Credits

Prerequisite: BUS 272

Course designed to give the student actual work experience at an approved training center under faculty supervision. Emphasis on an individual creative marketing project to be arranged with the instructor. Students spend one hour a week in class dealing with their individual creative marketing project. Class meets for a one-hour lecture and a minimum of 15 hours of on-the-job training per week by arrangement.

Fall

RETAIL FIELD STUDY (BUS 274)

3 Credits

Prerequisite: BUS 273

Sp. 71

Course designed to give the student actual work experience at an approved training center under faculty supervision. Emphasis on retail store organization and management problems. Class meets for a one-hour lecture and a minimum of 15 hours of on-the-job training per week by arrangement.

SEMINAR IN RETAIL DISTRIBUTION (BUS 299)

3 Credits

Prerequisite: BUS 175

Sp. 71

Students select and research areas relating to the retail field. Problems arising from off-campus field experiences are discussed using the conference method of problem solving. Resource personnel present management concepts relating to this field. Class meets three hours per week.



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| COMMUNICATIONS | <p>COMMUNICATIONS (COM 101) 3 Credits Expository and argumentative writing. Emphasis on learning to write concisely, moving from the oral to the written word, and coordinating the needs of the student with the craft of writing. Class meets three hours per week.</p> <p>COMMUNICATIONS (COM 102) 3 Credits <i>Prerequisite: COM 101</i> Descriptive, expository, argumentative, and critical analysis. Exploration into selected readings provide the creative stimulus for most of the writing in Communications 102. Some review of principles of organizations and other rhetorical principles. Class meets three hours per week.</p> <p>BASIC SPEECH (COM 114) 2 Credits This course deals with the communication process through the study of the practical principles of effective oral communication, and the opportunity to apply these principles in a variety of communicative situations. Class meets two hours per week.</p> <p>PUBLIC SPEAKING (COM 115) 2 Credits <i>Prerequisite: COM 114</i> Night An advanced course to Basic Speech 114 for students interested in continued work in public speaking. Increased proficiency in a variety of speaking situations are stressed. Class meets two hours per week.</p> <p>ARGUMENTATION AND DEBATE (COM 116) 2 Credits <i>Prerequisite: High school debate or COM 114</i> A study of the theories and principles of argumentation and debate, with an emphasis on tournament debating. Class meets three hours per week.</p> <p>ORAL INTERPRETATION (COM 117) 3 Credits A study of literature through oral communication. Emphasis is to analyze and perform prose, fiction, poetry and drama. Class meets three hours per week.</p> <p>PRACTICE IN PUBLIC SPEAKING 1 Credit Students approved by the faculty director will work in play productions, debate, television and/or radio. Credit will be given for a minimum of 45 clock hours by arrangement.</p> |
|----------------|---|

Spring '71

Spring

Offered only
in summer →

German 140
German (C 141)

(4 cr)
(4 cr)

Fall
Spring
Fall
Spring

FRENCH (COM 121) 4 Credits

Basic course including grammar study, conversation and composition. Two hours grammar and culture study, one hour audio study, two hours workshop conversation per week.

FRENCH (COM 122) 4 Credits

Prerequisite: COM-121 or two years of high school credit

Continuation of French 121 with cultural aspects emphasized. Graded readings are introduced and conversation is stressed. Class meets four hours per week.

SPANISH (COM 130) 4 Credits

Basic course in language includes grammar study, conversation, composition and an introduction to the culture and history of Spanish-speaking countries. Two general information periods, two conversation-workshop periods, one period of audio-visual study. Class meets four hours per week.

SPANISH (COM 131) 4 Credits

Prerequisite: COM 130 or two years of high school credit

Continuation of Spanish 130 with graded reading selections added to be used as basis for conversation and composition in the workshop. Course structure same as Spanish 130 with an audio study period replacing the audio-visual. Class meets four hours per week.

JOURNALISM (COM 201) Day 3 Credits

Basic introduction to the current practices and responsibilities of communicating public information through the various mass media. Advertising, industrial journalism, motion pictures, newspapers, photojournalism, public relations, radio and television are surveyed. Course supplemented with practical experience: suburban publications, local radio and television stations, film studios, advertising and public relations organizations, student publications. Class meets three hours per week.

SHORT STORY AND THE NOVEL (COM 210) 3 Credits

Introduction to the short story and novel form. Readings from contemporary fiction. Includes a writing workshop for students to compose an original short story. Class meets three hours per week.

POETRY AND DRAMA (COM 211) 3 Credits

Study of poetry and drama as literary genres. Extensive readings in the genres. Student will develop a broad base of critical approaches to poetry and drama. Class meets three hours per week.

Creative Writing (Com 212) ~~3 Cr.~~ 3 Cr.
Fund. of Adv. (Com 203) 3 Cr.
Basic Reporting (Com 202) 3 Cr.

FRENCH (COM 223) 4 Credits

Prerequisite: COM 122

Fall

Intermediate reading course to build vocabulary and comprehension ability. "Etude de Siecle," short stories, and excerpts from the French classics. Grammar review. Conversation and composition in French. Class meets four hours per week.

FRENCH (COM 224) 4 Credits

Prerequisite: COM 223 or four years of high school credit

Spring

Continuation of French 223. Advanced reading. Study of contemporary short stories, novels and plays. "Etude de Siecle" and grammar study continued. Conversation and composition in French. Class meets four hours per week.

SPANISH (COM 232) 4 Credits

Prerequisite: COM 131 or three years of high school credit

Fall

Intermediate reading course to build vocabulary, further understand Hispanic culture, and increase speaking fluency. Composition and conversation in Spanish. Grammar review. Class meets four hours a week.

SPANISH (COM 233) 4 Credits

Prerequisite: COM 232 or four years of high school credit

Spring

Continuation of Spanish 232 with extensive study of Hispanic literature. Advanced reading. Composition and conversation in Spanish. Grammar review continues. Class meets four hours per week.



DRAFTING (ENGR 101) Day 7 Credits **ENGINEERING**
Provides theory of drafting and applied geometry and orthographic projection, use of instruments and lettering. Emphasis on visualization. Fifteen hours of drawing and two hours of lecture per week.

DRAFTING (ENGR 102) Day 7 Credits
Prerequisite: ENGR 101
Covers detail and assembly drawings, auxiliary views, sections, developments, and reproduction with emphasis on dimensioning and specifications. Fifteen hours of drawing and two hours of lecture per week.

ENGINEERING DRAWING (ENGR 105) 3 Credits
Provides theory and practice in engineering drawing, interrelation of points, lines, and planes, orthographic projection, instruments, and lettering. Emphasis on visualization. Class meets six hours per week.

ENGINEERING DRAWING (ENGR 106) 3 Credits
Prerequisite: ENGR 105
Detail and assembly drawings, dimensioning, auxiliary views, developments, sketching, isometric, and perspective. Class meets six hours per week.

Sp. '71 **BASIC CIRCUITS (ENGR 120)** 3 Credits
Study of circuits using resistance, capacitance, and inductance with various types of driving sources. Class meets three hours per week.

PROCESSES AND MATERIALS OF MANUFACTURING (ENGR 121) 3 Credits
Basic principles and theory of production processes for metal and plastics. Class meets three hours per week.

Sp. '71 **FORTRAN (ENGR 122)** 2 Credits
Introduction to FORTRAN programming including structure and vocabulary. Practical experience through writing and debugging fundamental FORTRAN operation and programs provided. Class meets two hours per week.

Sp. '71 **BUILDING MATERIALS AND CONSTRUCTION (ENGR 123)** 3 Credits
Study of the principle materials in building. Emphasis on properties and applications in building construction. Class meets three hours per week.

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| Fall | <p>INDUSTRIAL SCIENCE (ENGR 128) 5 Credits <i>Prerequisite: MATH 101</i> Introduction to principles of metallurgy, material science, physics, chemistry, and mensuration most applicable to drafting. Class meets five hours per week.</p> |
| Spring | <p>INDUSTRIAL SCIENCE (ENGR 129) 5 Credits <i>Prerequisite: ENGR 128</i> Continuation of Industrial Science 128 with emphasis on engineering applications. Class meets five hours per week.</p> |
| | <p>DRAFTING (ENGR 201) 7 Credits <i>Prerequisite: ENGR 102</i> Covers sketching, isometric, oblique, perspective, conventions, and symbols. Selected problems from industry. Fifteen hours of drawing and two hours of lecture per week.</p> |
| | <p>DRAFTING (ENGR 202) 7 Credits <i>Prerequisite: ENGR 201</i> Emphasis on industrially oriented topics and problems. Fifteen hours of drawing and two hours of lecture per week.</p> |
| Fall | <p>STATICS (ENGR 210) 3 Credits <i>Prerequisite: MATH 121 or concurrent enrollment</i> Study of vectors, force systems, friction, centroids, and moments of inertia. Class meets three hours per week.</p> |
| Spring | <p>DYNAMICS (ENGR 211) 2 Credits <i>Prerequisite: ENGR 210</i> Study of unbalanced force systems and the resulting motion, work and energy, impulse and momentum, and impact. Class meets three hours per week.</p> |
| | <p>MECHANICS OF MATERIALS (ENGR 226) 3 Credits <i>Prerequisite: ENGR 210</i> Theory of simple stresses and strains in elastic materials, torsion, beams and columns. Class meets three hours per week.</p> |

INDUSTRIAL SCIENCE (ENGR 128) 5 Credits

Prerequisite: MATH 101

Introduction to principles of metallurgy, material science, physics, chemistry, and mensuration most applicable to drafting. Class meets five hours per week.

Fall

INDUSTRIAL SCIENCE (ENGR 129) 5 Credits

Prerequisite: ENGR 128

Continuation of Industrial Science 128 with emphasis on engineering applications. Class meets five hours per week.

Spring

DRAFTING (ENGR 201) 7 Credits

Prerequisite: ENGR 102

Covers sketching, isometric, oblique, perspective, conventions, and symbols. Selected problems from industry. Fifteen hours of drawing and two hours of lecture per week.

DRAFTING (ENGR 202) 7 Credits

Prerequisite: ENGR 201

Emphasis on industrially oriented topics and problems. Fifteen hours of drawing and two hours of lecture per week.

STATICS (ENGR 210) 3 Credits

Prerequisite: MATH 121 or concurrent enrollment

Study of vectors, force systems, friction, centroids, and moments of inertia. Class meets three hours per week.

Fall

DYNAMICS (ENGR 211) 2 Credits

Prerequisite: ENGR 210

Study of unbalanced force systems and the resulting motion, work and energy, impulse and momentum, and impact. Class meets three hours per week.

Spring

MECHANICS OF MATERIALS (ENGR 220) 3 Credits

Prerequisite: ENGR 210

Theory of simple stresses and strains in elastic materials, torsion, beams and columns. Class meets three hours per week.

HUMANITIES ^I **HUMANITIES (HUM 101) = HUM 102** 3 Credits
Fall Interdisciplinary study of art, music, philosophy, and literature through examination of the nature of creativity: why man creates and how man creates. Class meets three hours per week.

HUMANITIES ^{II} **(HUM 102)** 3 Credits
Spring Interdisciplinary study of man's search for meaning through creativity during three historical periods - Greek, Renaissance, and Romanic. Class meets three hours per week.

~~Spring~~ **BAND (HUM 113)** Day 1 Credit (each semester)
Performance of jazz and popular music at public concerts and college functions. Enrollment by audition. Class meets three hours per week.

CHAMBER CHOIR (HUM 117) 1 Credit (each semester)
Small choir. Enrollment by audition of the instructor. Performances are various community activities. Class meets three hours per week.

CHORUS (HUM 121) Day 1 Credit (each semester)
Open to all students without audition. The chorus performs at least one major choral work each semester. Class meets three hours per week.

ORCHESTRA (HUM 122) 1 Credit (each semester)
Rehearsal and performance with the Kansas City, Kansas Symphony Orchestra. Enrollment by audition. Class meets on Mondays 7-9 p.m.

Fall **MUSIC THEORY (HUM 123)** 2 Credits
Review of major and minor scales, introduction to three and four-part music writing, sight singing and ear training, and piano keyboard introduction. Class meets two hours per week.

Spring **MUSIC THEORY (HUM 124)** 2 Credits
Prerequisite: HUM 123
Continuation of Music Theory 123. Course also includes four-part music writing, introduction of the seventh and ninth chords, continued practice in sight singing, ear training, and keyboard harmony. Class meets two hours per week.

- can take up to 3 times.

APPLIED MUSIC PRIVATE LESSONS (HUM 128) **1 Credit**
Private lessons in vocal and instrumental music are provided depending on the number of interested students. Lesson time is by arrangement, one hour per week.

DESIGN (HUM 131) **3 Credits**
Introductory study of the basic art elements and principles common to all the visual arts. Emphasis on their creative application in two-dimensional design. A variety of media is used in the development of a visual vocabulary. Class meets six hours per week.

DESIGN (HUM 132) **3 Credits**
Prerequisite: HUM 131 or approval of portfolio

Spring

Continuation of Design 131. Focus on three-dimensional problems and employing a variety of man-made and natural materials. Class meets six hours per week.

SCULPTURE (HUM 133) **3 Credits**
Course designed to study and explore natural and man-made sculptural forms and to help the student create a unique, personal body of work through the use of a variety of either traditional or contemporary media and technique. Class meets six hours per week.

SCULPTURE (HUM 134) **3 Credits**
Prerequisite: HUM 133 or approval of portfolio

Continuation of Sculpture 133. Focus on more advanced methods and techniques. Emphasis on sculptural materials and forms. Class meets six hours per week.

PAINTING (HUM 135) **3 Credits**
Through illustrated lectures and studio experiences the student examines the techniques, both traditional and contemporary, involved in the use of a variety of transparent and opaque painting media. Still life, landscape, the human figure and imaginative themes are involved in his attempt to develop a personal imagery. Class meets six hours per week.

PAINTING (HUM 136) **3 Credits**
Prerequisite: HUM 135 or approval of portfolio

Designed to acquaint the student with the basic processes and tools used in oil painting as well as to introduce him to a wide variety of styles and techniques, both traditional and contemporary. Class meets six hours per week.

DRAWING^I (HUM 137) 3 Credits

Introductory course explores a wide variety of drawing media. Emphasis on the development of fundamental drawing skills, increased powers of observation, and an awareness of the personally expressive and compositional aspects of drawing. Three class meetings, two hours each, per week.

DRAWING^{II} (HUM 138) 3 Credits

Prerequisite: HUM 137 or approval of portfolio

Fundamentals of figure drawing. Working from models, students study the structure of the human form as seen in action, stationary, and as a part of its environment. A variety of media is used in rapid gesture drawing, long poses, memory work and portraiture. Class meets six hours per week.

CERAMICS^I (HUM 139) Night 3 Credits

Basic course in hand-building and wheel-throwing techniques. The student becomes familiar with glazing and other methods of surface enrichment, stacking and firing procedures, and the process of casting from a mold of his own design. Class meets for two three-hour sessions per week.

CERAMICS^{II} (HUM 140) Night 3 Credits

Prerequisite: HUM 139 or approval of portfolio

Continuation of Ceramics 139. More advanced methods and techniques. Specific problems explored in greater depth. Class meets for two three-hour sessions per week.

Spring

*** PHILOSOPHY (HUM 151)** 3 Credits

Study of the basic questions of philosophical inquiry, such as God, being, knowledge, love, and society. Attention is given to understanding philosophical method and to developing a critical approach to reading philosophy. Class meets three hours per week.

LOGIC (HUM 152) 3 Credits

Study of typical forms of reasoning and the critical discrimination of valid from invalid reasoning. Emphasis on historical background, modern methods of deductive proof, and the basic concepts of induction. Class meets three hours per week.

Fall

- * Printmaking (Hum 141) Fall 3 cr.
- Printmaking (Hum 142) 3 cr.
- Silversmithing (Hum 143) ~~Fall~~ 3 cr.
- Art Fundamentals (Hum 144) ~~Fall~~ 3 cr.

Independent Studies in Humanities (Hum 200) Fall 3 cr.

ETHICS (HUM 253)

3 Credits

Course covers the history of ethical thought in the Western world, with emphasis upon the classical Greek philosophers, the Hebraic-Christian teachers, German rationalism, and English empiricism. Also includes a consideration of the great problems of ethics, such as free will and determinism, the relationship between the individual conscience and social custom, and the problem of responsibility. Class meets three hours per week.

Spring

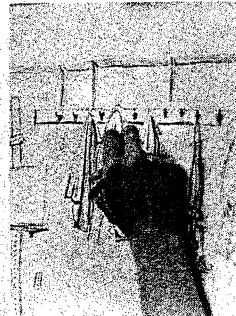
PHILOSOPHY OF RELIGION (HUM 210)

3 Credits

Study of the phenomena of religion as dealt with by the various world religions and by philosophers. Emphasis on such modern schools of religious inquiry as existentialism, humanism, and God is dead theory. Class meets three hours per week.

Spring
1971

~~Not offered
in 1970-71~~



MATH INTRODUCTION TO ALGEBRA (MATH 100) 3 Credits

Intended for the student who has had less than one year of high school algebra or whose training is not current. Includes fundamental algebraic operations, fractions, first and second degree equations, graphs, exponents, and radicals. Class meets three hours per week.

TECHNICAL MATHEMATICS (MATH 101) 3 Credits

An introduction to applied mathematics for the engineering-related professions. Contains selected topics from algebra, geometry, and trigonometry with emphasis on engineering applications. Students with two years of high school algebra should consider Trigonometry 117 instead. Class meets three hours per week. (Offered as a five hour course in 1969-70).

TECHNICAL MATHEMATICS (MATH 102) 3 Credits

Prerequisite: MATH 101

Continuation of Mathematics 101. Plane and solid analytical geometry. Class meets three hours per week. (Offered only in 1969-70)

FINITE MATHEMATICS (MATH 103) 3 Credits

Mathematics for the liberal arts student. Includes operations with numbers and algorithms considered with respect to the field axioms, algebraic concepts, graphs, and inequalities. Class meets three hours per week.

***ALGEBRA (MATH 106) 5 Credits**

Prerequisite: Two years of high school math including one year of algebra

A study of the fundamental laws, exponents, radicals, linear and quadratic equations, inequalities, systems of relations, graphing, polynomials and polynomial functions, logarithms, and series. Class meets five hours per week.

STATISTICS (MATH 110) 3 Credits

Prerequisite: MATH 106 or equivalent

Introduces descriptive statistics, probability, probability models, sampling distributions, hypothesis testing, chi-square test, regression, and correlation. Class meets three hours per week.

ALGEBRA-TRIGONOMETRY (MATH 115) 5 Credits

Prerequisite: MATH 105 or two years of high school math.

Designed for science and engineering majors not requiring more advanced mathematics or for those who feel the need for more background before attempting analytical geometry and calculus. Class meets five hours per week. (Offered only in 1969-70)

COLLEGE ALGEBRA (MATH 116) 3 Credits

Prerequisite: Two and one half years of college preparatory math

An intensive course designed for the science or engineering major who needs additional background before attempting trigonometry and calculus. Class meets three hours per week.

TRIGONOMETRY (MATH 117) 3 Credits

Prerequisite: MATH 106 or equivalent. Not recommended for the student with high school credit in trigonometry.

A study of trigonometric functions, identities, graphs, equations, inverse trigonometric functions, polar coordinates, complex numbers and applications. Class meets three hours per week.

ANALYTIC GEOMETRY-CALCULUS (MATH 121) 5 Credits

Prerequisite: MATH 117 or equivalent

The first course of a three semester sequence in analytic geometry and calculus. Consists of calculus of algebraic functions of one variable, limits, implicit differentiation, definite and indefinite integrals, and applications. Class meets 5 hours per week.

ANALYTIC GEOMETRY-CALCULUS (MATH 122) 5 Credits

Prerequisite: MATH 121 or equivalent

The second course of a three semester sequence in analytic geometry and calculus. Includes the conics, trigonometric and exponential functions, polar coordinates, vectors in a plane, techniques of integration, and applications. Class meets five hours per week.

ANALYTIC GEOMETRY-CALCULUS (MATH 223) 5 Credits

Prerequisite: MATH 122 or equivalent

The third course in a three semester sequence in analytic geometry and calculus. Consists of solid analytic geometry, vectors in space, infinite series, partial differentiation, and multiple integration. Class meets five hours per week.

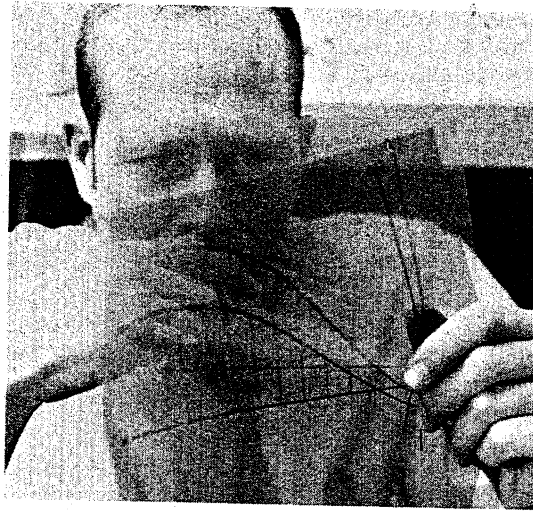
Spring

DIFFERENTIAL EQUATIONS (MATH 224)

3 Credits

Prerequisite: MATH 223 or equivalent

Standard types of ordinary equations of first and second order, linear equations, solutions by series, and application to geometry and physical science. Class meets three hours per week.



- NATURAL SCIENCE (NS 101)** *(full)* **4 Credits** **NATURAL SCIENCE**
Designed to explain the fundamental laws, theories and principles of biology, and to meet laboratory science requirements for the non-science major. Provides a basic understanding of living organisms and their interrelation with the non-living world. The Audio-Visual-Tutorial presentation employs a variety of media as an aid to understanding. Two class meetings and a minimum of two hours of AVT lab per week.
- NATURAL SCIENCE (NS 102)** **4 Credits**
Introduces the fundamental laws, theories and principles of chemistry and physics, and to meet laboratory science requirements for the non-science major. Such topics as atomic and molecular theory, the periodic system, the laws of chemical combinations, and gas laws are covered. Applications of mechanics, electronics, sound, heat, and light are studied. The Audio-Visual-Tutorial presentation employs a variety of media as an aid to understanding. Two class meetings and a minimum of two hours of AVT lab per week.
- INTRODUCTION TO HEALTH PROFESSIONS (NS 105)** **2 Credits**
Survey of allied health and medical professions with some emphasis on medical terminology. Two class meetings per week.
- BIOLOGY OF ANIMALS (NS 110)** **4 Credits**
A survey of animal taxa: systematics and ecology of animal populations. Identification of representative members of the animal phyla using their structural characteristics. Interpretation of anatomical and physiological features in terms of adaptation. Three class meetings and one three-hour lab per week.
- BIOLOGY OF PLANTS (NS 111)** **4 Credits**
Evolutionary relationships from the simplest to the most complex of plants. Plant structure, function, and life cycles will be discussed with an emphasis on their value to man. Three class meetings and one three-hour lab per week.
- MICROBIOLOGY (NS 115)** **5 Credits**
Morphology, physiology, classification, culture, and distribution of microorganisms. Emphasis on their relationship to health and disease and basic techniques of working with microorganisms. Transfer and culture and identification of common microorganisms. Three class meetings and two two-hour labs per week.

HUMAN ANATOMY-PHYSIOLOGY (NS 116) **5 Credits**

Analysis of the relation of structure to function in the organ system of man. Emphasis on location of anatomical features and interpretation of their functional morphology. Three class meetings and two two-hour labs per week.

GENERAL CHEMISTRY (NS 120) **5 Credits**

Prerequisite: MATH 106 or equivalent

Basic introduction to inorganic chemistry with emphasis placed upon atomic structure, chemical calculation, and the periodic table. Three class meetings and two two-hour labs per week.

GENERAL CHEMISTRY (NS 121) **5 Credits**

Prerequisite: NS 120

Presentation of oxidation-reduction, chemical thermodynamics and kinetics, with particular emphasis upon solution and equilibrium. Laboratory consists of supportative experiments, with the later portion devoted to an introduction to qualitative analysis. Three class meetings and two two-hour labs per week. *quantitative*

Spring

PRINCIPLES OF CHEMISTRY (NS 125) **5 Credits**

Introduces the student to the fundamental concepts of inorganic, organic, and biochemistry. Four class meetings and one two-hour lab per week.

GENERAL PHYSICS (NS 150) **4 Credits**

Co-requisite: MATH 117

Introduction to physics. The student will be introduced to properties of matter, heat, sound, and classical physics through lectures and supportive laboratory exercises. Three class meetings and one three-hour lab per week.

GENERAL PHYSICS (NS 151) **4 Credits**

Prerequisite: NS 150

Continuation of General physics 150 with an emphasis on light, optics, electricity and magnetism, and nuclear physics. Three class meetings and one three-hour lab per week.

Spring

ORGANIC CHEMISTRY (NS 220) ^I Day 5 Credits

Prerequisite: NS 121

The lectures develop the nomenclature, principles and theories of organic chemistry with emphasis on electronic theories and reaction mechanisms. The laboratory is supportive in nature with emphasis on developing laboratory techniques and preparation of representative compounds. Three class meetings and two three-hour labs per week.

ORGANIC CHEMISTRY (NS 221) ^{II} Day 5 Credits

Prerequisite: NS 220

Laboratory emphasis includes an introduction to organic qualitative analysis. Three class meetings and two three-hour labs per week.

PRINCIPLES OF ORGANIC CHEMISTRY (NS 225) 5 Credits

Prerequisite: NS 120

Introduction to aliphatic and simple aromatic compounds with an emphasis on nomenclature, principles, and basic theories of organic chemistry. Four class meetings and a three-hour lab per week.

ENGINEERING PHYSICS (NS 250) ^I Day 5 Credits

Co-requisite: MATH 122

Introduction to physics which stresses mathematical approaches. Three class meetings and two three-hour labs per week.

ENGINEERING PHYSICS (NS 251) ^{II} Day 5 Credits

Prerequisite: NS 250

Continuation of Engineering Physics 250. Three class meetings and two three-hour labs per week.



PHYSICAL DEVELOPMENT

CO-ED PHYSICAL DEVELOPMENT (PD 101)

1 Credit

Activities consist of softball, volleyball, badminton, tennis, soccer, marching, calisthenics, bowling, films, lectures, and general discussion of physical development. Standard dress uniform is not required. Dress suited to the activity is stressed. Class meets two hours per week.

CO-ED PHYSICAL DEVELOPMENT (PD 102)

1 Credit

Activities consist of golf, tennis, archery, soccer, calisthenics, bowling, films, lectures, and general discussion of physical development. Standard dress uniform is not required. Dress suited to the activity is stressed. Class meets two hours per week.

RULES AND OFFICIATING (PD 110)

2 Credits

Knowledge and interpretation of the rules of football, basketball, track, field, and softball are essential in preparing for coaching and/or officiating. Such knowledge and interpretive ability is also helpful to spectators of these sports. Class meets three times per week.

PERSONAL HEALTH AND COMMUNITY HYGIENE (PD 120)

3 Credits

Designed to provide insights into some of the problems of maintaining good health. Topics include exercise, personal appearance, narcotics, tobacco, alcohol, recreation, sleep, and minor health disturbances. Also involves social, emotional, economic, physical aspects, and community life. Class meets three hours per week.

INTRODUCTION TO PHYSICAL EDUCATION (PD 130)

3 Credits

Study of the principles of health and physical education; its history, philosophy, theory, and practice. Class meets three hours per week.

FUNDAMENTALS OF ATHLETICS (PD 140)

2 Credits

Theory of coaching and a study of coaching methods. Emphasis placed on the sports currently in season and popular within the local high schools and college athletic programs. Class meets three hours per week.

CO-ED SWIMMING (PD 150)

1 Credit

Instruction and practice in water skills and safety. Covers basic techniques in learning to be a better swimmer. Class meets two hours per week.

Competitive Swimming (PD 151)

1 cr.

Modern Dance (PD 155) Co Ed

1 cr

Cheerleaders (PD 156) Co Ed

2 Cr.

Horsemanship (PD 157)

F-11

1 cr.

C40

Fencing (PD 160)

1 Cr.

SWIMMING POOL MANAGEMENT (PD 152)

1 Credit

Course involves the role of a swimming pool manager as a pool technician, employer and recreation director. Also covers maintenance of the swimming pool, aspects of pool supervision and public relations, and recreation functions of the swimming pool. Class meets two hours per week.

GIRL'S DRILL TEAM (PD 154)

1 Credit (each semester)

To teach precision drill team techniques and to represent the College in community activities. Enrollment by audition. Class meets two times per week.

* Life Saving & Water Safety (PD 158) Spring 1 Cr.
FIRST AID (PD 201) 2 Credits

Prerequisite: Sophomore standing

Standard and/or advanced first aid with certification by the American Red Cross. Cause, prevention, and first aid care of common emergencies. Class meets three hours per week.

Senior Life Saving
is a prerequisite for
Life Saving & Water Safety

P. 158

C41

SOCIAL SCIENCE

SOCIAL SCIENCE (SS 101) ^{Fall '70} ^{SSC 102} 4 Credits
An interdisciplinary course to show the relationship of anthropology, sociology, and psychology. Using the concepts of these disciplines, problems of race and ethnic relationships, demography, urban development, and social stratification are examined in the cultural setting. Class meets four hours per week.

^{Spring} SOCIAL SCIENCE (SS 102) ^{Spr. '71} ^{POL 102} 4 Credits
The study of society begun in ~~Social Science 101~~ showing the relationship of political science, economics, and geography using the concepts of these disciplines in the cultural setting. Class meets four hours per week.

BASIC POLICE TRAINING COURSE (SS 150) 4-7 Credits
Prerequisite: Must be currently employed full-time by a participating law enforcement agency

Basic patrol procedures: Traffic investigation and control, arrests, search and seizures. Fulfills and exceeds requirements of the Kansas Minimum Standards Training Act. May be applied as elective credit to satisfy requirements of the Associate Degree Program in Law Enforcement. A minimum of 240 clock hours. Class meets five days a week, eight hours a day for nine weeks.

INTRODUCTION TO LAW ENFORCEMENT (SS 151) 3 Credits
Philosophical and historical background organization, purpose and functions of police agencies on the local, state, and federal levels and their respective roles in the administration of criminal justice in the United States. Class meets three hours per week.

POLICE ADMINISTRATION (SS 152) 3 Credits
Prerequisite: SS 151
Study of the contemporary law enforcement agency, its functions, structures, and operational techniques. Class meets three hours per week.

CRIMINAL LAW (SS 155) 3 Credits
Classification and analysis of crimes and criminal acts. Discussion of Kansas criminal statutes. Class meets three hours per week.

Criminology (S254) 3 cr.
Traffic Safety & Accident Invest. (S255) 3 cr.

C42

FUNDAMENTALS OF CRIMINAL INVESTIGATION (SS 156) 3 Credits

Prerequisite: Criminal Law SS 155 or permission of instructor

Study of the criminal act and its investigation, including specific crimes against the person and against property. Processes of fact gathering, testing of hypotheses, and problems of proof. Class meets three hours per week.

POLICE AND THE PUBLIC (SS 159) 3 Credits

Study of police community relations. Intensive examination of the many programs used throughout the United States with emphasis placed on the role of the individual police officer. Class meets three hours per week.

Spring

ECONOMICS (SS 201) 3 Credits

A study of the basic economic problems of resource allocation, national income determination, money and banking, and fiscal policy. Class meets three hours per week.

ECONOMICS (SS 202) 3 Credits

Prerequisite: SS 201

A continuation of Social Science 201 with emphasis on supply and demand, theory of the firm, and international trade and finance. Class meets three hours per week.

Spring '71

Night

CHILD DEVELOPMENT (SS 210) 3 Credits

Prerequisite: SS 101 and SS-102 or Sophomore standing

Growth and development of the child from conception to puberty. Emphasis on factors important to an understanding of development: internal growth, self and external adjustment processes. Class meets three hours per week.

Fall

EDUCATIONAL PSYCHOLOGY (SS 211) 3 Credits

Prerequisite: Sophomore standing and Social Science 101

Concepts in human development related to problems in the school learning - teaching situations. A study of behavior, attitudes, values, skills, retention, and transfer. Measurements of abilities and achievements of students. Class meets three hours per week.

AMERICAN HISTORY (SS 220)

3 Credits

Prerequisite: Sophomore standing

Fall

Colonial Period to Civil War. Survey course of American history in light of American ideas, wars and revolutions, minority history, the Presidency, and the inception and growth of the Constitution.

AMERICAN HISTORY (SS 221)

3 Credits

Prerequisite: Sophomore standing

Spring

Civil War to Present. Survey course of American History in light of American ideas, wars and revolutions, minority history, the Presidency, and the growth of the Constitution.

AMERICAN NATIONAL GOVERNMENT (SS 222)

3 Credits

Prerequisite: Sophomore standing

Nature and forms of the American political institutions. Relationship of government to the economic, social, and political institutions of America. Dynamics of political change. Class meets three hours per week.

SOCIAL PROBLEMS (SS 230)

3 Credits

Prerequisite: Sophomore standing

A consideration of the application of varying methods to the study of social problems. Class meets three hours per week.

INTRODUCTION TO CRIMINALISTICS (SS 251)

3 Credits

Prerequisite: SS 155

Physical evidence, collection, identification preservation, and transportation; crime laboratory capability and limitation; examination of physical evidence within resources of the investigator and demonstration of laboratory criminalistics to the extent supported by existing or available facilities. Class meets three hours per week.

SOCIETY AND LAW ENFORCEMENT (SS 253)

3 Credits

Spring '71

Integration of the disciplines of criminology, corrections, juvenile problems, and the ecology of crime in the United States. Class meets three hours per week.

POLICE SEMINAR (SS 259)

3 Credits

Prerequisite: SS 151, SS 152, SS 155 & SS 159

Spring

Students required to display skill and knowledge in general Police Administration. Problem solving in areas of budget, beat layout, records keeping, etc. Class meets three hours per week.

| COURSE NO. & TITLE | COURSE CODE | SEC. | CR. HRS. | ROOM | TIME | DAY | INSTRUCTOR |
|--|-------------|------|----------|--------|--------------|-----|---------------|
| SOCIAL SCIENCE (con't.) | | | | | | | |
| SS102 Social Science | 102S | 9 | 4 | 110 | 10:00-10:50 | TTh | Alvers (Mrs.) |
| Discussion | | | | 112 | 1:00-1:50 | MW | Alvers (Mrs.) |
| SS102 Social Science | 102S | 10 | 4 | 110 | 8:00-8:50 | WF | McKinzie |
| Discussion | | | | 112 | 9:00-9:50 | TTh | McKinzie |
| SS102 Social Science | 102S | 11 | 4 | 110 | 8:00-8:50 | WF | McKinzie |
| Discussion | | | | 112 | 10:00-10:50 | TTh | McKinzie |
| SS102 Social Science | 102S | 12 | 4 | 110 | 8:00-8:50 | WF | McKinzie |
| Discussion | | | | 17 | 8:00-8:50 | TTh | McKinzie |
| SS102 Social Science | 102S | 13 | 4 | 110 | 12:00-12:50 | TTh | Crotchett |
| Discussion | | | | 111 | 9:00-9:50 | MF | Crotchett |
| SS102 Social Science | 102S | 14 | 4 | 110 | 12:00-12:50 | TTh | Crotchett |
| Discussion | | | | 17 | 9:00-9:50 | TTh | Crotchett |
| SS102 Social Science | 102S | 15 | 4 | 110 | 12:00-12:50 | TTh | Crotchett |
| Discussion | | | | 17 | 12:00-12:50 | MW | Crotchett |
| SS102 Social Science | 102S | 16 | 4 | 12 | 6:00-7:50 pm | TTh | Staff |
| SS102 Social Science | 102S | 17 | 4 | 12 | 8:00-9:50 pm | TTh | Staff |
| SS102 Social Science | 102S | 18 | 4 | 18 | 5:30-7:20 pm | MW | Staff |
| SS102 Social Science | 102S | 19 | 4 | 19 | 6:30-8:20 pm | MW | Staff |
| SS102 Social Science | 102S | 20 | 4 | 416 | 6:00-7:50 pm | TTh | Staff |
| SS151 Intro. to Law Enforc. | 151S | 1 | 3 | 122 | 8:00-8:50 | MWF | Staff |
| SS151 Intro. to Law Enforc. | 151S | 2 | 3 | 425 | 7:00-9:50 pm | M | Staff |
| *SS152 Police Administration | 152S | 1 | 3 | 122 | 9:00-10:20 | TTh | Staff |
| SS155 Criminal Law | 155S | 1 | 3 | 18 | 7:30-8:50 | TTh | Staff |
| SS155 Criminal Law | 155S | 2 | 3 | 16 | 5:30-6:50 pm | TTh | Staff |
| *SS156 Fund. of Crim. Invest. | 156S | 1 | 3 | 122 | 10:00-10:50 | MWF | Staff |
| SS159 Police and Public | 159S | 1 | 3 | 122 | 7:30-8:50 | TTh | Staff |
| SS201 Economics | 201S | 1 | 3 | 120 | 10:30-11:50 | TTh | R. Johnson |
| *SS202 Economics | 202S | 1 | 3 | 426 | 10:00-10:50 | MWF | R. Johnson |
| *SS202 Economics | 202S | 2 | 3 | 424 | 1:00-1:50 | MWF | R. Johnson |
| *SS202 Economics | 202S | 3 | 3 | 423 | 5:30-6:50 pm | MW | R. Johnson |
| *SS210 Child Development | 210S | 1 | 3 | 424 | 11:00-11:50 | MWF | Alvers (Mrs.) |
| *SS210 Child Development | 210S | 2 | 3 | 425 | 6:00-7:20 pm | TTh | Cox |
| *SS211 Educ. Psychology | 211S | 1 | 3 | 425 | 12:00-12:50 | MWF | Alvers (Mrs.) |
| *SS211 Educ. Psychology | 211S | 2 | 3 | 19 | 12:00-1:20 | TTh | Staff |
| *SS221 American History | 221S | 1 | 3 | 423 | 7:30-8:50 | TTh | Jackson |
| *SS221 American History | 221S | 2 | 3 | 122 | 12:00-12:50 | MWF | McKinzie |
| *SS221 American History | 221S | 3 | 3 | 100 | 1:00-1:50 | MWF | F. Krebs |
| *SS221 American History | 221S | 4 | 3 | Olathe | 6:00-8:50 pm | M | Staff |
| *SS222 Amer. Nat'l Gov't. | 222S | 1 | 3 | 111 | 1:00-1:50 | MWF | Crotchett |
| *SS230 Social Problems | 230S | 1 | 3 | 19 | 12:00-12:50 | MWF | Behbehani |
| *SS251 Intro. to Crim'listics | 251S | 1 | 3 | 12 | 8:00-10:50 | SAT | Lyon |
| *SS254 Criminology | 254S | 1 | 3 | 421 | 7:00-8:20 pm | TTh | Cottle |
| *SS255 Traffic Safety & Accident Investigation | 255S | 1 | 3 | 424 | 8:00-9:50 pm | MW | Staff |

COURSE FEES (Excluding Tuition) (Per Semester)

AVIATION

| | |
|--------------------------|-----------|
| AV 101 Flight Private | \$ 525.00 |
| AV 101 Flight Commercial | 875.00 |
| AV 201 Flight Commercial | 875.00 |
| AV 202 Flight Instrument | 475.00 |

BUSINESS

| | |
|----------------------------------|------|
| BUS 133 Programming | 5.00 |
| BUS 142 Data Processing Concepts | 5.00 |
| BUS 143 Programming | 5.00 |
| BUS 246 Cobol Programming | 5.00 |

ENGINEERING

| | |
|-------------------|-------|
| ENGR 101 Drafting | 10.00 |
| ENGR 102 Drafting | 10.00 |
| ENGR 201 Drafting | 10.00 |
| ENGR 202 Drafting | 10.00 |

HUMANITIES & SOCIAL SCIENCES

| | |
|------------------------|------|
| COM 101 Communications | 1.00 |
| COM 102 Communications | 1.00 |
| HUM 101 Humanities | 1.00 |

NATURAL SCIENCES

| | |
|--------------------------------|-------|
| HUM 102 Humanities | 1.00 |
| HUM 128 Applied Music | 45.00 |
| HUM 129 Applied Music | 45.00 |
| SS 101 Social Science | 1.00 |
| SS 102 Social Science | 1.00 |
| NS 110 Biology of Animals | 2.00 |
| NS 111 Biology of Plants | 2.00 |
| NS 115 Microbiology | 2.00 |
| NS 116 Anatomy/Physiology | 2.00 |
| NS 120 General Chemistry | 2.00 |
| NS 125 Principles of Chemistry | 2.00 |
| NS 150 General Physics | 2.00 |
| NS 220 Organic Chemistry | 2.00 |
| NS 250 Engineering Physics | 2.00 |

PHYSICAL DEVELOPMENT

| | |
|---------------------|---------------------|
| PD 157 Horsemanship | 75.00 |
| PD 101 Men & Womens | 1.50 |
| PD 159 Golf | Green Fees Required |

In addition to courses offered in the College Catalog, the following will be offered for the Spring Semester, 1971:

College Learning Center (LC 101-104)

1-4 Credits

Individualized instruction in areas of special needs and interests prescribed on basis of diagnostic tests. Reading rate and comprehension, study skills, communications, mathematics, spelling, listening and note-taking, vocabulary and phonics. Students meet for contracted number of hours: one to four credit hours. May also be taken on a non-credit basis.

AVIATION

Flight Services (AV 230)

3 Credits

Prerequisite: AV 101 & 105

A basic study in the control procedures and phraseology utilized in providing flight assistance and communications service to pilots and air traffic. The study includes: monitoring, pilot briefing, emergency procedures, flight handling, search and rescue, airport advisory service, and introduction to teletype procedures and services. Class meets three hours per week.

BUSINESS

Textiles (BUS 181)

2 Credits

A study of natural and man-made textile fibers, weaves, finishes and to evaluate their comparative characteristics. Knowledges and skills in selling techniques along with care and use of textiles are studied. Class meets two hours per week.

COMMUNICATIONS

German (COM 141)

4 Credits

Prerequisite: COM 140 or 2 years of high school German

A study of the German language and culture. Listening and speaking will again be stressed, and added emphasis will be placed on reading and writing idiomatic German. Class meets four hours per week.

Basic Reporting (COM 202)

3 Credits

Prerequisite: COM 201 (or concurrent enrollment)

Practical training in reporting for newspapers. Radio and television news writing. Class meets five hours per week.

Fundamentals of Advertising (COM 203) 3 Credits
Basic understanding of techniques involved in preparing and producing copy for use in advertising, both print and radio, with emphasis on copy, lay-out, copy writing, methodology in determining sales appeal and timing of radio spots. Class meets five hours per week.

Creative Writing (COM 212) 3 Credits
Principles and practice in writing the short story, the essay, the sketch, the play. Emphasis on planning, plotting, choice of material and styles. Examination of recommended models. Frequent writing assignments in chosen areas. Class meets three hours per week.

HUMANITIES

Printmaking (HUM 141) 3 Credits
Printmaking I will introduce the techniques of traditional relief printmaking, including the wood and linoleum cut, as well as the newer media of collography, serigraphy and various mixed media. Class meets six hours per week.

Silversmithing (HUM 143) 3 Credits
A structural course for the beginning student. Tools and techniques in metal smithing will be covered. Emphasis on developing an understanding in metal smithing design. Class meets six hours per week.

Art Fundamentals (HUM 144) 3 Credits
A survey of sculpture, painting, printmaking and drawing. Focusing on 20th Century art forms. Emphasis on studio work. Class meets six hours per week.

PHYSICAL DEVELOPMENT

Competitive Swimming (PD 151) Co-Ed 1 Credit
Co-Ed course for competitive swimmers. Material will emphasize competitive swimming skills, techniques, coaching methods, and officiating water workouts. Class meets two hours per week.

Modern Dance (PD 155) Co-Ed 1 Credit
Emphasis on motor control and skill in executing the fundamentals of dance. Basic techniques. Class meets two hours per week.

Cheerleading (PD 156) Co-Ed **1 Credit**
Basic instruction in the fundamentals of cheerleading. Hours by arrangement.
Two hours per week.

Horsemanship (PD 157) **1 Credit**
General care of horse and equipment. Mounted session to include riding on
the flat and over fences. Course meets two hours per week.

Golf (PD 159) **1 Credit**
Techniques and fundamentals of golf. Choice and use of club, posture, rules
and courtesies of the game. Class meets two hours per week.

Fencing (PD 160) **1 Credit**
History, etiquette, and rules of fencing. Basic offensive and defensive tactics
and combat strategy. Class meets two hours per week.

SOCIAL SCIENCE

Criminology (SS 254) **3 Credits**
Prerequisite: SS 151 and SS 155
Manifestations of crime and theories of criminal behavior. Process and
purpose of treatment, correction, crime prevention and control.
Contemporary trends. Class meets three hours per week.

Traffic Safety and Accident Investigation (SS 255) **3 Credits**
Prerequisite: SS 151 or permission of instructor
Students will study the enforcement problems created by modern society
with emphasis on control, engineering and accident investigation principles.
Class meets three hours per week.

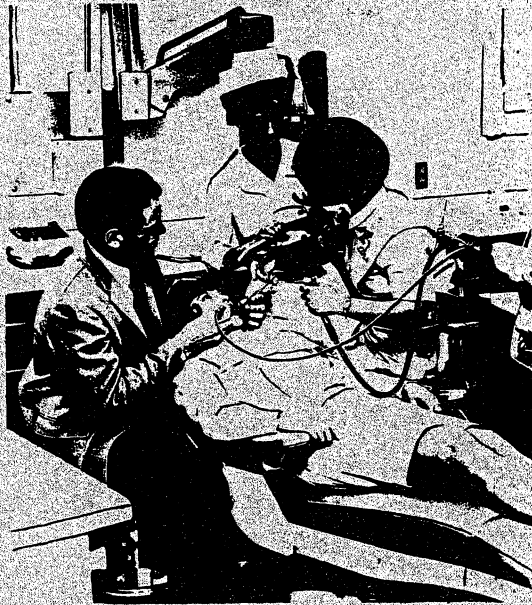
The following room number designations will be used in the Spring Schedule:

| | |
|------------------------|--|
| Rooms 0 - 99 | Merriam Grade School |
| Rooms 100 - 199 | Merriam Christian Church |
| Rooms 200 - 299 | 5441 Merriam Drive (Science Building) |
| Rooms 300 - 399 | 9301 Johnson Crive |
| Rooms 400 - 499 | Shawnee Building |

**The airport will be so indicated, as will rooms being used in the Shawnee
Mission School District No. 512.**

DENTAL ASSISTANT

THE PROGRAM



There is a nationwide shortage of trained dental assistants. To help meet this shortage, Metropolitan Junior College offers the only two-year program in the state of Missouri, leading to an associate degree in applied science, accredited by the American Dental Association, Council on Dental Education.

This two-year program will enable the student to take the examination administered by the Certifying Board of the American Dental Assistants Association. Certified dental assistants status is granted upon passing the examination and completing one year of employment as a dental assistant.

A college education is becoming one of the dental assistant's most important occupational tools. She needs a strong academic program in physical, biological and social sciences, English and business-related courses, combined with practical experience of dental assisting in offices, clinics and hospitals. General aptitude requirements of a dental assistant are: above average intelligence, ability to meet people, clerical perception and finger dexterity.

CAREER OPPORTUNITIES

The career opportunities for a **Certified Dental Assistant** in Greater Kansas City are extremely good. Today the dental profession recognizes the importance of adequately trained and competent dental assistants as a means of providing more complete dental services. Because of this recognition there has been a growing demand for qualified dental assistants.

COURSE OF STUDY

Technical Units of Instruction

Dental Anatomy
First Aid
Oral Hygiene
Oral Pathology
Anesthesia
Chairside Assisting
Dental Terminology
Laboratory Procedures
Dental Radiography
Pharmacology
Sterilization

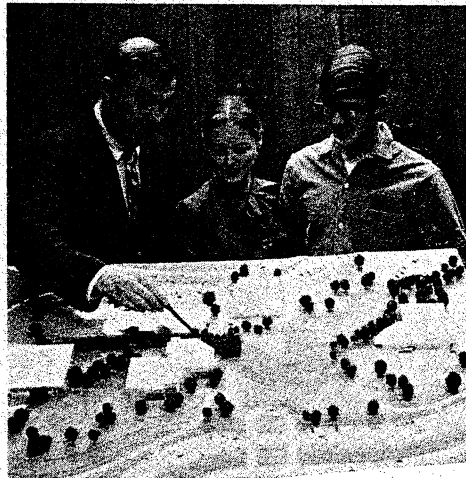
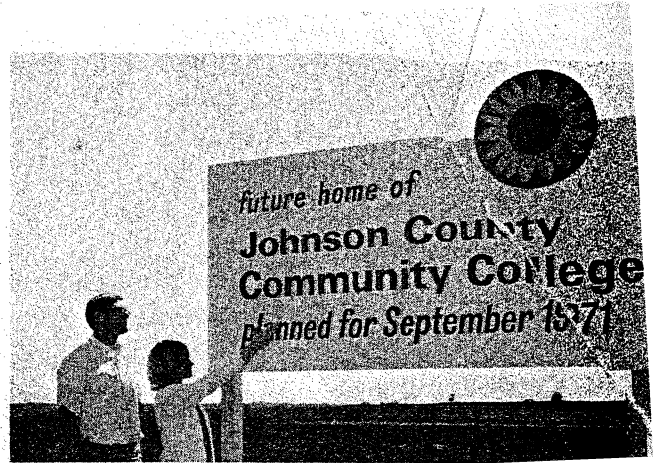
Related Units

English
Speech
Office Accounting
Nutrition
Anatomy and Physiology
American History
Business Communications
Sociology
Chemistry
Psychology
Microbiology

Length of Program

This program consists of four semesters of study. The student should take 16 credit hours a semester which will consist of approximately 18 hours a week in classes on the campus. The third and fourth semester will include a minimum of 10 hours a week of Clinical Practice at UMKC School of Dentistry.

M/J/C METROPOLITAN JUNIOR
COLLEGE DISTRICT
DISTRICT KANSAS CITY, MISSOURI



FALL 1969 COURSE OFFERINGS

AV 101
AV 110

BUS 111
BUS 131
BUS 132
BUS 151
BUS 155
BUS 156
BUS 161
BUS 171
BUS 177

COM 101
COM 121
COM 122
COM 123
COM 130
COM 131
COM 132

ENGR 101
ENGR 105
ENGR 122

HUM 101
HUM 113, 114, 115, 116
HUM 117, 118, 119, 120
HUM 121

HUM 122
HUM 125
HUM 131
HUM 133
HUM 135
HUM 137

MATH 101
MATH 105
MATH 115
MATH 121

NS 101
NS 105
NS 106
NS 120
NS 125
NS 150

PD 101
PD 110
PD 120
PD 130
PD 140
PD 150

SS 101
SS 151
SS 152
SS 156

NOTE:

1. Algebra and Introduction to Algebra used synonymously.
2. Statistics and Business Statistics used synonymously.

ARTS AND SCIENCE

Objective. To provide a program for students seeking one of the following:

1. An Associate of Arts degree in general college studies.
2. A Baccalaureate degree for those who have not yet chosen their field of specialization, but who wish to satisfy the general education requirements of a four year institution.
3. A Baccalaureate degree in Liberal Arts or Natural Science.

1st Semester

| | |
|-------------------------------------|----------|
| Communications I | 3 |
| Social Science I or Humanities I | 4 |
| Electives | <u>9</u> |
| Credit Hours | 16 |

2nd Semester

| | |
|---------------------------------------|----------|
| Communications II | 3 |
| Social Science II or Humanities II | 4 |
| Electives | <u>9</u> |
| Credit Hours | 16 |

3rd Semester

| | |
|-------------------------------------|-----------|
| Humanities I or Social Science I | 3 |
| Electives | <u>13</u> |
| Credit Hours | 16 |

4th Semester

| | |
|---------------------------------------|-----------|
| Humanities II or Social Science II | 3 |
| Electives | <u>13</u> |
| Credit Hours | 16 |

LIBERAL ARTS OPTION

Liberal Arts and General College Studies should take Natural Science I, II for the 1st and 2nd semester electives.

SCIENCE OPTIONS

It is suggested that students select electives from his field of interest

Biology

Biology students should take Natural Science I, Biology of Plants, Biology of Animals, General Chemistry I, II; Basic Organic Chemistry I, II and Algebra-Trigonometry.

Chemistry

Chemistry students should take General Chemistry II, Principles of Chemistry, Basic Organic Chemistry I, II and Analytical Geometry-Calculus I, II, III

Dental

Pre-dental students should take Biology of Animals, General Chemistry I, II; Principles of Organic Chemistry; General Physics I, II and Introduction to Health Professions.

Mathematics

Math students should take Analytical Geometry-Calculus I, II, III and Differential Equations.

SCIENCE OPTIONS:

Medical

Pre-medical students should take Biology of Animals, General Chemistry I, II; Basic Organic Chemistry I, II; Algebra-Trigonometry, General Physics I, II and Introduction to Health Professions

Pharmacy

Pharmacy students should take Biology of Animals, General Chemistry I, II; Basic Organic Chemistry I, II; Algebra-Trigonometry, General Physics I, II; and Introduction to Health Professions.

Physics

Physics students should take Analytical Geometry-Calculus I, II, III; Differential Equations and Applied Physics I, II.

Veterinary

Pre-veterinary students should take Biology of Animals, General Chemistry I, II; Basic Organic Chemistry I, II; Algebra-Trigonometry, General Physics I, II and Introduction to Health Professions.

ELECTIVES: Students seeking a Baccalaureate degree should refer to the catalogue of the institution to which they will transfer.

AVIATION PROFESSIONS

Objectives. To provide career programs for students seeking jobs as:

(1) general aviation pilots, (2) managers in aviation, (3) airline hostesses, (4) air traffic controllers, (5) aircraft maintenance technicians.

NOTE: The total aviation program is currently being developed. Some of the offerings will not be available initially, and some details of those to be offered this Fall are not yet finalized. Prospective students are urged to contact the Director of Admissions for the latest information.

FLIGHT OPTION:

1st Semester*

| | |
|--------------------------|----------|
| Communications I | 3 |
| Flight I** | 4 |
| Algebra-Trigonometry | 5 |
| Introduction to Aviation | <u>3</u> |
| Credit Hours | 15 |

AVIATION ADMINISTRATION OPTION:

1st Semester*

| | |
|--|----------|
| Introduction to Data Processing or Flight I** | 2-4 |
| Communications I | 3 |
| Social Science I | 4 |
| Introduction to Business | 3 |
| Introduction to Aviation | <u>3</u> |
| Credit Hours | 15-17 |

PRE-HOSTESS OPTION: (This program is preparatory to the specialized training provided by the airlines)

1st Semester*

| | |
|--------------------------|----------|
| Flight I** or elective | 2-4 |
| Communications I | 3 |
| Social Science I | 4 |
| Introduction to Aviation | 3 |
| Beginning Typing | <u>3</u> |
| Credit Hours | 15-17 |

AIR TRAFFIC CONTROLLER OPTION: Not available Fall 1969

AVIATION MAINTENANCE OPTION: Not available Fall 1969

*Curricula for 2nd, 3rd and 4th semester are under development.

**Tuition does not include aircraft rental. Exact flight costs have not been established as of this printing, but typically would be \$500 - \$600 for the 35 - 40 hours generally required to obtain the Private License.

BUSINESS ADMINISTRATION

Objective. To provide a transfer program for students seeking a Baccalaureate Degree in Business Administration.

| 1st Semester | |
|---------------------------------|------------|
| Introduction to Data Processing | 2 |
| Communications I | 3 |
| Introduction to Business | 3 |
| Social Science I | 4 |
| Business Elective | <u>3</u> |
| Credit Hours | 15 |
| 2nd Semester | |
| Communications II | 3 |
| Statistics | 3 |
| Social Science II | 4 |
| Business Elective | 3 |
| Marketing | <u>3</u> |
| Credit Hours | 16 |
| 3rd Semester | |
| Economics I | 3 |
| Accounting I | 3 |
| Humanities I or II | 3 |
| Natural Science I | 4 |
| Business Law | <u>3</u> |
| Credit Hours | 16 |
| 4th Semester | |
| Economics II | 3 |
| Accounting II | 3 |
| Personnel Management | 3 |
| Natural Science II | 4 |
| Electives | <u>3.4</u> |
| Credit Hours | 16-17 |

OPTIONS:

Marketing

Students wishing a Marketing emphasis should take Salesmanship and Retailing or Retail Advertising Display as electives.

BUSINESS DATA PROCESSING

Objective. To provide a career program to assist students seeking job entry into the field of data processing.

| 1st Semester | |
|---------------------------------|-----------|
| Communications I | 3 |
| Algebra-Trigonometry | 5 |
| Introduction to Data Processing | <u>2*</u> |
| Unit Record Equipment | 2 |
| Introduction to Business | <u>3</u> |
| Credit Hours | 15 |

2nd, 3rd, 4th Semesters

See Director of Admissions for supplementary information.

DESIGN DRAFTING

Objective. To provide a career program for students seeking job entry into the drafting field.

1st Semester

| | |
|------------------|----------|
| Communications I | 3 |
| Drafting I | 7 |
| Technical Math* | <u>5</u> |
| Credit Hours | 15 |

2nd Semester

| | |
|--------------------|----------|
| Communications II | 3 |
| Drafting II | 7 |
| Humanities I or II | 3 |
| Elective | <u>3</u> |
| Credit Hours | 16 |

3rd Semester

| | |
|----------------------|----------|
| Drafting III | 7 |
| Industrial Science I | 5 |
| Social Science I | <u>4</u> |
| Credit Hours | 16 |

4th Semester

| | |
|-----------------------|----------|
| Drafting IV | 7 |
| Industrial Science II | 5 |
| Elective | <u>4</u> |
| Credit Hours | 16 |

OPTIONS: It is suggested that students select electives from his field of interest.

Mechanical

Processes and Materials of Manufacturing, Mechanisms, Tool Design, Fortran.

Civil

Building Materials and Construction, Fortran..

Electrical

Basic Circuits, Fortran.

Architectural

Building Materials and Construction, Mechanics of Materials

*Algebra-Trigonometry may be substituted with the consent of the Engineering and Technology Division Chairman.

ENGINEERING

Objective. To provide a transfer program for students seeking a Bachelor of Science degree in Engineering from a four-year institution.

1st Semester

| | |
|--------------------------------|----------|
| Communication I | 3 |
| Analytical Geometry-Calculus I | 5 |
| Engineering Drawing I | 3 |
| General Chemistry I | <u>5</u> |
| Credit Hours | 16 |

2nd Semester

| | |
|---------------------------------|----------|
| Communication II | 3 |
| Analytical Geometry-Calculus II | 5 |
| Engineering Drawing II | 3 |
| General Chemistry II | <u>5</u> |
| Credit Hours | 16 |

3rd Semester

| | |
|----------------------------------|----------|
| Analytical Geometry-Calculus III | 5 |
| Engineering Physics I | 5 |
| Social Science I | 4 |
| Statistics | <u>2</u> |
| Credit Hours | 16 |

| 4th Semester | |
|------------------------|-----------|
| Dynamics | 3 |
| Engineering Physics II | 5 |
| Differential Equations | 3 |
| Humanities I or II | 3 |
| Fortran | 2 |
| Credit Hours | <u>16</u> |

| 2nd Semester | |
|--------------------------|-----------|
| Communications II | 3 |
| Social Science II | 4 |
| Speech | 2 |
| Police Administration II | 2 |
| Police and the Public | 3 |
| Electives | 2 |
| Credit Hours | <u>16</u> |

HEALTH PROFESSIONS

Objective. To provide the student with basic liberal arts instruction and the necessary clinical experience required of a student to sit for licensing or certifying examinations in those Allied Health programs indicated.

| 1st Semester | |
|------------------------------------|-----------|
| Communications I | 3 |
| Social Science I | 4 |
| Principles of Chemistry | 5 |
| Introduction to Algebra | 3 |
| Introduction to Health Professions | 2 |
| Credit Hours | <u>17</u> |

| 2nd Semester | |
|-----------------------------------|--------------|
| Communications II | 3 |
| Social Science II | 4 |
| General Physics I or Microbiology | 4-5 |
| Human Anatomy-Physiology | 5 |
| Credit Hours | <u>16-17</u> |

3rd and 4th Semester

By arrangement up to 30 hours of College credit for clinical experience may be taken at institutions affiliated with Johnson County Community College.

PROBABLE OPTIONS (FALL 1969)*

Certified Occupational Therapy Assisting
Cytotechnology
Dental Assisting
Inhalation Therapy
Medical Records Technician
Medical Secretary
Physical Therapy Assisting
Radiologic Technology
Registered Nursing

*Supplemental information about the above programs may be obtained from the Director of Admissions.

LAW ENFORCEMENT

Objective. To provide a career program to assist the following:

1. Students seeking job entry into the Law Enforcement field.
2. Law Enforcement personnel seeking additional professional training.

| 1st Semester | |
|--|-----------|
| Communications I | 3 |
| Social Science I | 4 |
| Introduction to Law Enforcement | 4 |
| Police Administration I | 3 |
| Fundamentals of Criminal Investigation | 3 |
| Credit Hours | <u>17</u> |

| 3rd Semester | |
|-----------------------------|-----------|
| Criminalistics I | 3 |
| Police Lab I | 3 |
| Seminar on Local Problems I | 3 |
| Human Relations | 3 |
| Electives | 3 |
| Credit Hours | <u>15</u> |

| 4th Semester | |
|------------------------------|-----------|
| Criminalistics II | 3 |
| Police Lab II | 3 |
| Seminar on Local Problems II | 3 |
| Law and Society | 3 |
| Electives | 3 |
| Credit Hours | <u>15</u> |

RETAIL MARKETING MANAGEMENT

Objective. To provide a career program for students seeking immediate job entry in retail merchandising, store management and related areas.

| 1st Semester | |
|--------------------------|-----------|
| Communications I | 3 |
| Introduction to Business | 3 |
| Salesmanship | 3 |
| Social Sciences I | 4 |
| Retail Field Study I | 3 |
| Credit Hours | <u>16</u> |

| 2nd Semester | |
|---------------------------------|-----------|
| Communications II | 3 |
| Speech | 2 |
| Retailing | 3 |
| Introduction to Data Processing | 2 |
| Retail Advertising and Display | 3 |
| Retail Field Study II | 3 |
| Credit Hours | <u>16</u> |

SUMMER

Retail Field Study and conference III
— 3 credit Hours (Full-Time Employment)

| 3rd Semester | |
|-----------------------|-----------|
| Accounting I | 3 |
| Economics | 3 |
| Business Law | 3 |
| Marketing | 3 |
| Retail Field Study IV | 3 |
| Credit Hours | <u>15</u> |

| 4th Semester | |
|--------------------------------|-----------|
| Business Elective | 3 |
| Seminar in Retail Distribution | 3 |
| Personnel Management | 3 |
| Elective | 4 |
| Retail Field Study V | 2 |
| Credit Hours | <u>15</u> |

SECRETARIAL SCIENCE

Objective. To provide a career program for students seeking immediate job entry in general office and secretarial positions.

1st Semester

| | |
|-----------------------------|----------|
| Communications I | 3 |
| Intermediate Typing | 3 |
| Shorthand | 3 |
| Introduction to Business | 3 |
| Humanities I or II | 3 |
| Records Management | <u>2</u> |
| Credit Hours | 17 |

2nd Semester

| | |
|------------------------------------|----------|
| Communications II | 3 |
| Production Typing | 3 |
| Dictation and Transcription | 3 |
| Speech | 2 |
| Office Machines | 2 |
| Introduction to Data Processing | <u>2</u> |
| Credit Hours | 15 |

3rd Semester

| | |
|---------------------------|----------|
| Accounting I | 3 |
| Social Science I | 4 |
| Elective | 3 |
| Secretarial Procedures I | 3 |
| Secretarial Field Study I | <u>3</u> |
| Credit Hours | 16 |

4th Semester

| | |
|----------------------------|----------|
| Business Communications | 3 |
| Personal Finance | 3 |
| Elective | 3 |
| Secretarial Procedures II | 3 |
| Secretarial Field Study II | <u>3</u> |
| Credit Hours | 15 |

OPTIONS

Legal

Students planning to become a secretary in a legal office should take Business Law as an elective.

Medical

Students planning to become a secretary in a medical office should consult the Business Division Director as to electives.

COURSE DESCRIPTIONS

AVIATION

FLIGHT I (AV 101) 4 Credits
Ground School and dual and solo flight instruction to prepare the student to meet the Federal Aviation Administration requirements for a private pilot license.

INTRODUCTION TO AVIATION (AV 110) 3 Credits
A general introductory course covering the development of aviation and its importance in the American economy with special emphasis on the history of aviation, the airlines, general aviation and the aviation industry.

BUSINESS

ACCOUNTING I (BUS 101) 3 Credits
An introduction to accounting fundamentals. Emphasis is placed on the recording of business transactions, special journals, accounts and the ledger, financial statements, and summarizing at the close of the fiscal period.

ACCOUNTING II (BUS 102) 3 Credits
Prerequisite: BUS 101
A continuation of the first course in accounting with increased emphasis upon interpretation and use of accounting data. Content includes accounts and records peculiar to partnerships and corporations along with preparation and use of financial statements.

INTRODUCTION TO BUSINESS (BUS III) 3 Credits
Course acquaints beginning students with the functions and practice of modern business. Emphasis is placed on fundamentals of business practice as well as providing a general survey foundation for students preparing for specialized and advanced courses.

BUSINESS LAW I (BUS 112) 3 Credits
Basic principles of business law as applied to contracts, negotiable instruments, employer-employee relationships, principal and agent. Case studies will be utilized throughout the course.

BUSINESS LAW II (BUS 113) 3 Credits
Prerequisite: BUS 112
A continuation of Business Law I with an emphasis on partnerships, corporations, buyer and seller relationships, torts, and bankruptcy. Case studies will be utilized throughout the course.

PERSONAL FINANCE (BUS 114) 3 Credits
This course is designed for non-business majors as well as for business majors. Values, establishing and maintaining credit, controlling expenditures through use of a budget, and the safeguarding and investment of savings are examples of topics studied.

UNIT RECORD EQUIPMENT (BUS 131) 2 Credits
Writing, operation and application of basic electro-mechanical unit record equipment employed in data processing centers. Emphasis is on "hands on" training.

INTRODUCTION TO DATA PROCESSING (BUS 132) 2 Credits
Introduction to the principles and concepts in the field of data processing and its applications in business and industry. The concept of block diagramming will be developed in preparation for computer programming.

SHORTHAND (BUS 151) 3 Credits
Theory of Gregg Shorthand, word building, phrasing and dictation with emphasis on reading and transcribing. (No credit given to students with one unit of high school shorthand with a grade of C or better.)

DICTATION AND TRANSCRIPTION (BUS 152) 3 Credits
Prerequisite: BUS 151 or one year of high school shorthand and beginning typewriting or equivalent.

Includes a rapid review of shorthand theory. Extensive drills on speed building and production of readable transcripts with an emphasis on dictation and transcription.

BEGINNING TYPING (BUS 155) 3 Credits
Mastery of the keyboard, machine techniques, simple centering, placement and common letter forms. (No credit given to students with one or more units of high school typewriting.)

INTERMEDIATE TYPING (BUS 156) 3 Credits
Prerequisite: BUS 155, one unit of high school typewriting, or equivalent.
Emphasis is placed on speed and accuracy in typing from straight copy in the production of business letters and envelopes, manuscripts, tabulated reports and office forms.

PRODUCTION TYPING (BUS 157) 3 Credits
Prerequisite: BUS 156 or equivalent.
Development of high degree of proficiency in production typewriting. One unit of instruction will be in the College's Word Production Center using magnetic tape typewriters.

OFFICE MACHINES (BUS 160) 2 Credits
A laboratory course in the operation of ten-key and full-bank adding machines, comptometers, key driven and rotary calculators. Emphasis is on basic fundamentals.

RECORDS MANAGEMENT (BUS 161) 2 Credits
A study of alphabetic, numeric, subject and geographic filing systems. Types of filing equipment, charge-out, follow-up, and transfer methods along with general office routines in the modern business office are studied.

SECRETARIAL PROCEDURES I (BUS 162) 3 Credits
Prerequisites: BUS 152 and BUS 156.
Covers the many duties required of general office secretaries. Practical office projects emphasizing business etiquette, handling of mail, keeping office records, along with a review of letterwriting and transcription and business English.

SECRETARIAL PROCEDURES II (BUS 163) 3 Credits
Prerequisite: BUS 162
Designed to maintain stenographic skill and to further acquaint the student with the duties of an executive secretary.

SECRETARIAL FIELD STUDY I (BUS 164) 3 Credits
Course is designed to give the student actual work experience at an approved training center under faculty supervision. Emphasis is placed on orientation to basic office procedures. Students will spend one hour a week in class dealing with their basic office problems.

SECRETARIAL FIELD STUDY II (BUS 165) 3 Credits
Course is designed to give the student actual work experience at an approved training center under faculty supervision. Emphasis is placed on office principles and practices. Students will spend one hour a week in class dealing with their office and supervision problems.

RETAIL FIELD STUDY I (BUS 171) 3 Credits
Course is designed to give the student actual work experience at an approved training center under faculty supervision. Emphasis is placed on successful selling experience. Students will spend one hour a week in class dealing with their selling problems.

RETAIL FIELD STUDY II (BUS 172) 3 Credits
Course is designed to give the student actual work experience at an approved training center under faculty supervision. Emphasis is placed on retailing principles and practices. Students will spend one hour a week in class dealing with their merchandising and supervision problems.

RETAIL FIELD STUDY III (BUS 173) 3 Credits
Course is designed to give the student actual work experience on a full-time basis during the summer following the freshman year. This experience must be at an approved training center under faculty supervision. Emphasis will be placed on retail advertising

and sales promotion. Students will spend one hour a week in class or on an individual conference basis with the instructor of the course.

RETAIL FIELD STUDY IV (BUS 174) 3 Credits
Course is designed to give the student actual work experience at an approved training center under faculty supervision. Emphasis is placed on an individual creative marketing project to be arranged with the instructor. Students will spend one hour a week in class dealing with their individual creative marketing project.

RETAIL FIELD STUDY V (BUS 175) 3 Credits
Course is designed to give the student actual work experience at an approved training center under faculty supervision. Emphasis is placed on retail store organization and management problems. Students will spend one hour a week in class dealing with their management and personnel problems.

RETAILING (BUS 176) 3 Credits
Course gives the student an understanding of retail store organization and operation. Location and layout, retail buying techniques, human relations, employee supervision, pricing and merchandising are explored.

SALESMANSHIP (BUS 177) 3 Credits
Course covers the three main areas of selling - specialty, wholesale and retail. Selling principles and tactics are developed into a wide variety of selling situations. Personality development is stressed in addition to the practical steps in making sales. Actual sales talks and demonstrations are an integral part of the work.

PERSONNEL MANAGEMENT (BUS 179) 3 Credits
Course examines decision making, communication, policy formulation, selection, in employment practices of business enterprise are studied.

RETAIL ADVERTISING AND DISPLAY (BUS 180) 3 Credits
Course deals with modern techniques of advertising and display. Topics covered include media use, show-card writing, script writing, display techniques, and sales promotion scheduling.

MARKETING (BUS 181) 3 Credits
Study of problems and policies of manufacturers, wholesalers, and retailers in the marketing of goods and services. Channels of marketing, customer relations, functions of sales departments, price policies and communications are included.

SEMINAR IN RETAIL DISTRIBUTION (BUS 182) 3 Credits
Students select and research areas relating to the retail field. Problems arising from off-campus field experience are discussed using the conference method of problem solving. Resource personnel will also present management concepts relating to this field. Open only to students enrolled in the Retail Marketing Management program.

COMMUNICATIONS

COMMUNICATIONS I (COM 101) 3 Credits
Expository and argumentative writing based upon selected readings and upon personal experiences. Learning to write concisely, coordinating the needs of the student with the craft of writing and learning to move from the verbal to the written are stressed.

COMMUNICATIONS II (COM 102) 3 Credits
Prerequisite: COM 101
Descriptive, narrative and analytical and critical writing. Exploration into selected readings provide the creative impetus for most of the writing in Communication II. Some review of principles of organization and other rhetorical principles.

SPEECH (COM 114) 2 Credits
The course deals with practical problems of public speaking.

FRENCH I (COM 121) 4 Credits
A basic course including grammar study, conversation and composition. Two hours grammar, and culture study, one hour audio study, two hours workshop conversation.

FRENCH II (COM 122) 4 Credits
Prerequisite: COM 121 or two years of high school credit.
Continuation of French I - Cultural aspects are emphasized. Graded readings are introduced and conversation is stressed.

FRENCH III (COM 123) 4 Credits
Prerequisite: COM 122 or three years of high school credit.
Intermediate reading - A reading course to build vocabulary and comprehension ability. Use of "explication de texte - etude de siecle" and grammar review.

FRENCH IV (COM 124) 4 Credits
Prerequisite: COM 123 or four years of high school credit.
Advanced Reading - A continuation of French III. Study of contemporary novels, plays, "etude de siecle - explication de texte" continued. French history and culture are emphasized more fully. Conversation and composition are done in French.

SPANISH I (COM 130) 4 Credits
A basic course in language which includes grammar study, conversation, composition and an introduction to the culture and history of Spanish speaking countries. Two general information periods, two conversation-workshop periods, one period of audio-visual-tutorial study.

SPANISH II (COM 131) 4 Credits
Prerequisite: COM 130 or two years of high school credit.
Continuation of Course I with graded reading selections added which will be used as basis for conversation and composition in the workshop. Course structure same as Course I with an audio study period to replace the audio-visual-tutorial.

SPANISH III (COM 132) 4 Credits
Prerequisite: COM 131 or three years of high school credit.
Intermediate reading - reading course to build vocabulary, further understand Hispanic culture and increase speaking fluency. Grammar Review.

SPANISH IV (COM 133) 4 Credits
Prerequisite: COM 132 or four years of high school credit.
Advanced Reading - A continuation of Spanish III with extensive reading of Hispanic literature. Composition and conversation in Spanish. Grammar review continued.

ENGINEERING

DRAFTING I (ENGR 101) 7 Credits
Provides theory of drafting and applied geometry and orthographic projection, use of instruments and lettering. Emphasis is on visualization. Fifteen hours of drawing and two hours of lecture per week.

DRAFTING II (ENGR 102) 7 Credits
Prerequisite: ENGR 101
Covers detail and assembly drawings, auxiliary views, sections developments and reproduction with emphasis on dimensioning and specifications. Fifteen hours of drawing and two hours of lecture per week.

DRAFTING III (ENGR 201) 7 Credits
Prerequisite: ENGR 102
Covers sketching, isometric, oblique, perspective, conventions and symbols. Selected problems from industry. Fifteen hours of drawing and two hours of lecture per week.

DRAFTING IV (ENGR 202) 7 Credits
Prerequisite: ENGR 201
Emphasis is on industrially oriented topics and problems. Fifteen hours of drawing and two hours of lecture per week.

ENGINEERING DRAWING I (ENGR 105) 3 Credits
Provides theory and practice in engineering drawing, interrelation of points, lines and planes, orthographic projection, instruments, and lettering. Emphasis on visualization.

ENGINEERING DRAWING II (ENGR 106) 3 Credits
Prerequisite: ENGR 105
Detail and assembly drawings, dimensioning, auxiliary views, developments, sketching, isometric and perspective.

BASIC CIRCUITS (ENGR 120) 3 Credits
A study of circuits using resistance, capacitance and inductance with various types of driving sources.

PROCESSES AND MATERIALS OF MANUFACTURING (ENGR 121) 3 Credits
Basic principles and theory of production processes for metal and plastics.

FORTRAN (ENGR 122) 2 Credits
Prerequisite: MATH 105
An introduction to Fortran programming including structure and vocabulary. Practical experience through writing and debugging fundamental Fortran operation and programs will be provided.

BUILDING MATERIALS AND CONSTRUCTION (ENGR 123) 3 Credits
Study of the principal materials in buildings. Emphasis on properties and applications in building construction.

INDUSTRIAL SCIENCE I (ENGR 128) 5 Credits
Prerequisite: MATH 101
Introduction to those principles of metallurgy, material science, physics, chemistry and mensuration most applicable to drafting.

INDUSTRIAL SCIENCE II (ENGR 129) 5 Credits
Prerequisite: ENGR 128
Continuation of ENGR 128 with emphasis on engineering applications.

STATICS (ENGR 210) 2 Credits
Prerequisite: MATH 121
A study of vectors, force systems, friction, centroids and moments of inertia.

DYNAMICS (ENGR 211) 3 Credits
Prerequisite: ENGR 210
A study of unbalanced force systems and the resulting motion, work and energy impulse and momentum, and impact.

MECHANICS OF MATERIALS (ENGR 220) 3 Credits
Prerequisite: ENGR 210
Theory of simple stresses and strains in elastic materials, torsion, beams and columns.

MECHANISMS (ENGR 225) 3 Credits
Prerequisite: ENGR 105 and MATH 121
A study of the motion of machine parts and of methods of transmission of motion by links, cams, gears and belts.

TOOL DESIGN (ENGR 230) 3 Credits
Prerequisite: ENGR 105, ENGR 106, ENGR 220, ENGR 225
Lectures and laboratory. Problems in the design, construction and operation of dies, jigs and fixtures.

HUMANITIES

HUMANITIES I (HUM 101) 3 Credits
An interdisciplinary study of art, music and philosophy through examination of the destination of man's creativity as reflected in his culture: (1) man, (2) society, and (3) the universe. Two class meetings and one two hour lab.

HUMANITIES II (HUM 102) 3 Credits
Critical analysis of the creative process through readings, discussion and audio-visual media to provide criteria with which to make value judgments on art. Two class meetings and one two hour lab.

BAND I, II, III, IV (HUM 113, 114, 115, 116) 1 Credit
The college band will be organized by arrangement of the instructor to fulfill a utilitarian role in the performance of music.

CHAMBER CHOIR I, II, III, IV (HUM 117, 118, 119, 120) 1 Credit
A small choir enrollment by audition of the instructor. Performances will be for various community activities.

CHORUS (HUM 121) 1 Credit
Open to all students without audition. The chorus will perform at least one major choral work each semester.

ORCHESTRA (HUM 122) 1 Credit
Objective is to promote stringed instrument playing and to serve as a performance organization for music students.

GIRLS DRILL TEAM (HUM 125) 1 Credit
To teach precision drill team techniques and to represent the College in community activities. Enrollment by audition of the instructor.

DESIGN I (HUM 131) 3 Credits
An introductory study of the basic art elements and principles common to all the visual arts emphasizing their creative application in two-dimensional design. A variety of media will be used in the development of a visual vocabulary. Three class meetings, two hours each.

DESIGN II (HUM 132) 3 Credits
Prerequisite: HUM 131
A continuation of Design I focusing on three-dimensional problems and employing a variety of man-made and natural materials. Three class meetings, two hours each.

SCULPTURE I (HUM 133) 3 Credits
A course designed to study and explore natural and man-made sculptural forms and to help the student create a unique, personal body of work through the use of a variety of media and techniques either traditional or contemporary. A creative, experimental approach will be emphasized. Three class meetings, two hours each.

SCULPTURE II (HUM 134) 3 Credits
Prerequisite: HUM 133
A continuation of Sculpture I focusing on more advanced methods and techniques and exploring in greater depth specific sculptural materials and forms. Three class meetings, two hours each.

PAINTING I (HUM 135) 3 Credits
Through illustrated lectures and studio experiences the student will examine the techniques, both traditional and contemporary, involved in the use of a variety of transparent and opaque painting media. Still life, landscape, the human figure and imaginative themes will be involved in his attempt to develop a personal imagery. Three class meetings, two hours each.

PAINTING II (HUM 136) 3 Credits
Prerequisite: HUM 135
This course is designed to acquaint the student with the basic processes and tools used in oil painting as well as to introduce him to a wide variety of styles and techniques, both traditional and contemporary. Three class meetings, two hours each.

DRAWING I (HUM 137) 3 Credits
In this introduction course, a wide variety of drawing media will be explored. Emphasis will be placed on the development of fundamental drawing skills, increased powers of observation and an awareness of the personally expressive and compositional aspects of drawing. Three class meetings, two hours each.

DRAWING II (HUM 138) 3 Credits
Prerequisite: HUM 137
This course will focus on the fundamentals of figure drawing. Working from models, students will study the structure of the human form as seen in action and stationary and as a part of its environment. A variety of media will be used in rapid gesture drawing, long poses, memory work and portraiture. Three class meetings, two hours each.

CERAMICS I (HUM 139) 3 Credits
A basic course in hand-building and wheel-throwing techniques. The student will become familiar with glazing and other methods of surface enrichment, stacking and firing procedures and the process of casting from a mold of his own design. Three class meetings, two hours each.

CERAMICS II (HUM 140) 3 Credits
Prerequisite: HUM 139
A continuation of Introduction to Ceramics focusing on more advanced methods and techniques and exploring in greater depth specific problems in ceramics. Three class meetings, two hours each.

PHILOSOPHY (HUM 151) 3 Credits
A study of the basic questions of philosophical enquiry, such as being, God, knowledge, love and society. Attention will be given to understanding philosophical method and to developing a critical approach to reading philosophy.

LOGIC (HUM 152) 3 Credits
A study of typical forms of reasoning and the critical discrimination of valid from invalid reasoning. The emphasis will be on historical background, modern methods of deductive proof and communications theory.

PHILOSOPHY OF RELIGION (HUM 210) 3 Credits
A study of the phenomena of religion as dealt with by the various world religions and by philosophers. Emphasis will be given to such modern schools of religious inquiry as existentialism, humanism, and the death of God.

MATH

TECHNICAL MATHEMATICS (MATH 101) 5 Credits
An introduction into applied mathematics for the engineering related profession. Special topics from introduction to algebra, trigonometry, plane and solid analytical geometry and differential calculus with emphasis on engineering application.

INTRODUCTION TO ALGEBRA (MATH 105) 3 Credits
Designed for the student who has not had high school algebra. An introduction to the basic concepts of algebra such as sets, real numbers, algebraic expression, equations and inequalities and properties of the right triangle.

BUSINESS STATISTICS (MATH 110) 3 Credits
An introduction to statistics as applied to business. Topics include number and symbol vocabulary, with the algebraic essentials in operations for sets and systems of counting, tables, probabilities and evaluations, random variables, and distributions and measures of central tendency.

~~INTRODUCTION TO ALGEBRA-TRIGONOMETRY~~
(MATH 115) 5 Credits
A course consisting of five lectures weekly and carrying five hours credit. The course is designed for those science and engineering majors not requiring more advanced mathematics or for those who feel the need for more background before attempting analytical geometry and calculus.

ANALYTICAL GEOMETRY-CALCULUS I (MATH 121) 5 Credits
5 Credits
A course consisting of five lectures weekly and carrying five hours credit. This is a three semester series for the science and engineering major. Included in the topics are parametric equations, hyperbolic functions, indeterminate forms, Newton's method, techniques of integration, definite integrals, areas and improper integrals.

ANALYTICAL GEOMETRY-CALCULUS II (MATH 122) 5 Credits
Prerequisite: MATH 121
A continuation of MATH 121 covering surfaces, partial differentiation, centroids, moments and series.

ANALYTICAL GEOMETRY-CALCULUS III (MATH 123) 5 Credits
Prerequisite: MATH 122
A continuation of MATH 122 covering polar coordinates, vectors, moments of inertia and multiple integrals.

DIFFERENTIAL EQUATIONS (MATH 124) 3 Credits
Prerequisite: MATH 123
Standard types of ordinary equations of the first and second order, linear equations, solution by series and applications to geometry and physical science.

NATURAL SCIENCE

INTRODUCTION TO HEALTH PROFESSIONS (NS 105) 2 Credits
Survey of allied health and medical professions with some emphasis on medical terminology. Two class meetings weekly.

NATURAL SCIENCE I (NS 101) 4 Credits
Designed to explain the fundamental laws theories and principles of Biology and Geology. The course will give students a basic understanding of living organisms and their interrelation with the non-living world. The audio-visual-tutorial presentation employs a variety of media as an aid to understanding. Two class meetings and two hours of AVT lab.

NATURAL SCIENCE II (NS 102) 4 Credits
Introduces the fundamental laws, theories and principles of chemistry and physics. Such topics as atomic and molecular theory, the periodic systems, the laws of chemical combinations and gas laws will be covered. Applications of mechanics, electronics, sound and light will also be studied. The audio-visual-tutorial presentation employs a variety of media as an aid to understanding. Two class meetings and two hours of AVT lab.

BIOLOGY OF ANIMALS (NS 110) 4 Credits
~~Prerequisite: NS 102~~
A survey of animal taxa: systematics and ecology of animals populations. Identification of representative members of the animal phyla using their structural characteristics. Interpretation of anatomical and physiological features in terms of adaptation. Three class meetings one three hour lab.

BIOLOGY OF PLANTS (NS 111) 4 Credits
Prerequisite: NS 105
Lecture and laboratory sessions stressing evolutionary relationships from the simplest to the most complex of plants. Plant structure, function, and life cycles will be discussed with an emphasis on their value to man. Three class meetings and one three hour lab.

MICROBIOLOGY (NS 115) 5 Credits
Morphology, physiology, classification, culture, and distribution of microorganisms. Emphasis on their relationships to health and disease and basic techniques of working with microorganisms. Transfer and culture and identification of common microorganisms. Three class meetings and two labs. Three hours each.

HUMAN ANATOMY-PHYSIOLOGY (NS 116) 5 Credits
Analysis of the relation of structure to function in the organ systems of man. Emphasis on location of anatomical features and interpretation of their functional morphology. Three class meetings and two labs three hours each.

GENERAL CHEMISTRY I (NS 120) 5 Credits
The course, consisting of lecture and laboratory classes, is a basic introduction to inorganic chemistry with special emphasis placed upon atomic structure, chemical calculation, and the periodic table. Three class meetings and two labs three hours each.

GENERAL CHEMISTRY II (NS 121) 5 Credits
Prerequisite: NS 120
A presentation of oxidation-reduction, chemical thermodynamics and kinetics, with particular emphasis upon solution and equilibrium. The laboratory will consist of supportive experiments, with the latter portion being devoted to an introduction to qualitative analysis. Three class meetings and two labs three hours each.

PRINCIPLES OF CHEMISTRY (NS 125) 5 Credits
Introduces the student to the fundamental concepts of inorganic, organic and biochemistry. Four class meetings, and a two hour lab.

ORGANIC CHEMISTRY I (NS 220) 5 Credits

Prerequisite: NS 121

The lectures develop the nomenclature, principles and theories or organic chemistry with a special emphasis upon electronic theories and reaction mechanisms. The laboratory will be supportive in nature with emphasis on developing laboratory techniques and preparation of representative compounds. Three class meetings and two labs three hours each.

ORGANIC CHEMISTRY II (NS 221) 5 Credits

Prerequisite: NS 220

The laboratory emphasis will include an introduction to organic qualitative analysis during this semester. Three class meetings and two labs three hours each.

PRINCIPLES OF ORGANIC CHEMISTRY (NS 225) 5 Credits

Prerequisite: NS 121

Introduction to aliphatic and simple aromatic compounds with a special emphasis on nomenclature, principles and basic theories of organic chemistry. Three class meetings and a three hour lab.

GENERAL PHYSICS I (NS 150) 4 Credits

Introduction to physics. The student will be introduced to properties of matter, heat, sound and classical physics through lectures and supportive laboratory exercises. Three class meetings and a three hour lab.

GENERAL PHYSICS II (NS 151) 4 Credits

Prerequisite: NS 150

A four credit hour continuation of General Physics I with an emphasis on light, optics, electricity and magnetism and nuclear physics. Three class meetings and a three hour lab.

ENGINEERING PHYSICS I (NS 250) 5 Credits

Prerequisite: MATH 122

An introduction to physics which stresses mathematical approaches. Three class meetings and two labs three hours each.

ENGINEERING PHYSICS II (NS 251) 5 Credits

A continuation of NS 250. Three class meetings and two labs three hours each.

PHYSICAL DEVELOPMENT**CO-ED PHYSICAL DEVELOPMENT (PD 101) 1 Credit**

Activities will consist of softball, volleyball, badminton, tennis, soccer, marching, calisthenics, bowling, films, lectures and general discussion of physical development. No standard dress uniform will be required. Dress suited to the activity will be stressed. Two class meetings a week.

CO-ED PHYSICAL DEVELOPMENT (PD 102) 1 Credit

Activities will consist of golf tennis, archery, soccer, calisthenics, bowling, films, lectures, and general discussion of physical development. No standard dress uniform will be required. Dress suited to the activity will be stressed. Two class meetings a week.

RULES AND OFFICIATING (PD 110) 2 Credits

Knowledge and interpretation of the rules of football, basketball, track and field and softball, are essential in preparing for coaching and/or officiating. Such knowledge and interpretive ability are also helpful to spectators of these sports. Three class meetings a week.

PERSONAL HEALTH AND COMMUNITY HYGIENE (PD 120) 3 Credits

This course is designed to give the students special insights into some of the problems of maintaining good health. Topics such as exercise, personal appearance, narcotics, tobacco, alcohol, recreation, sleep and minor health disturbances dealt with. It also involves social, emotional, economic, physical aspects and community life.

INTRODUCTION TO PHYSICAL EDUCATION (PD 130) 3 Credits

Study of the principles of health and physical education - its history, philosophy, theory and practice. For physical education majors.

FUNDAMENTALS OF ATHLETICS (PD 140) 2 Credits

Theory of coaching and a study of coaching methods form the basis for this course. Emphasis will be placed on the sports currently in season and popular within the local high schools and college athletic programs. For physical education majors. Three class meetings a week.

CO-ED SWIMMING (PD 150) 1 Credit

Instruction and practice in water skills and safety. Covers basic techniques in learning to be a better swimmer. Two class meetings a week.

FIRST AID (PD 201) 2 Credits

Standard and/or advanced first aid with certification by the American Red Cross. Cause, prevention and first aid care of common emergencies. Three class meetings a week.

SOCIAL SCIENCE**SOCIAL SCIENCE I (SS 101) 4Credits**

An interdisciplinary course to show the relationship of anthropology, sociology and psychology. Using the concepts of these disciplines, problems of race and ethnic relationships, demography, urban development and social stratification are examined in the cultural setting.

SOCIAL SCIENCE II (SS 102) 4 Credits

The study of society begun in SS 101 showing the relationship of political science, economics and geography using the concepts of these disciplines in the cultural setting.

ECONOMICS I (SS 111) 3 Credits

A study of the basic economic problems of resource allocation, national income determination, money and banking and fiscal policy.

ECONOMICS II (SS 112) 3 Credits

Prerequisite: SS 111

A continuation of SS 111 with emphasis on supply and demand, theory of the firm, and international trade and finance.

INTRODUCTION TO LAW ENFORCEMENT (SS 151) 4 Credits

An introduction to law enforcement including philosophical and historical backgrounds. Organization, purpose and functions of police agencies on the local, state and federal levels and their respective roles in the administration of criminal justice in the United States.

POLICE ADMINISTRATION I (SS 152) 3 Credits

Prerequisite: SS 151

Study of the contemporary law enforcement agency, its functions, structures and operational techniques.

POLICE ADMINISTRATION II (SS 153) 3 Credits

Study of the contemporary law enforcement agency as evidenced in implications of generalized and specialized units, deployment of resources by time, area and function.

FUNDAMENTALS OF CRIMINAL INVESTIGATION (SS 156) 3 Credits

Study of the criminal act and its investigation, including specific crimes against the person and against property, the process of fact-gathering, testing of hypotheses, and the problem of proof.

POLICE AND THE PUBLIC (SS 159) 3 Credits

Study of police community relations. An intensive examination of the many programs used throughout the United States with emphasis placed on the role of the individual police officer.