Community College of Denver

Auraria Campus
North Campus
Red Rocks Campus

74/75

COMMUNITY COLLEGE OF DENVER

GENERAL INFORMATION 1974-75

THE DENVER AREA COUNCIL FOR COMMUNITY COLLEGES

Mrs. Harold V. Anderson, Chairman
Boulder County
Serving on Council since 1967

Tracy J. Smith, Vice Chairman
Adams County
Serving on Council since 1969

Mrs. H. C. Engdahl, Secretary
Past President of Council
Jefferson County
Serving on Council since 1967

Gerald L. Vetter, DVM
Arapahoe County
Serving on Council since 1973

Richard W. Wright
Denver County
Serving on Council since 1967

ADMINISTRATION

Dr. Leland B. Luchsinger, President
COMMUNITY COLLEGE OF DENVER

Central Administration
1009 Grant Street
Denver, Colorado 80203
892-3481

Dr. Jose A. Perea, Vice President
AURARIA CAMPUS
1201 Acoma Street
Denver, Colorado 80204
893-8868

Dr. John H. Swenson, Vice President
NORTH CAMPUS
1001 East 62 Avenue
Denver, Colorado 80216
287-3311

Dr. G. Owen Smith, Vice President
RED ROCKS CAMPUS
12600 West Sixth Avenue
Golden, Colorado 80401
988-6160

COVER PHOTO: LONG LAKE — ARAPAHOE PEAKS
Courtesy of the Colorado Department of Public Relations

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1974-75 COMMUNITY COLLEGE OF DENVER STUDENT CALENDAR

1974

JANUARY

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FEBRUARY

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SEPTEMBER

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DECEMBER

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JANUARY

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SEPTEMBER

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OCTOBER

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Symbols: □ — Registration, no classes O — Holiday, no classes [— First day of classes] — Last day of classes

SPRING QUARTER — 1974

March 27-28*	Registration
April 1	Classes Begin
May 27	School Closed — Memorial Day Holiday
June 12	Quarter Ends

SUMMER QUARTER — 1974

June 18*	Registration
June 20	Classes Begin
July 4	School Closed — Independence Day
August 29	Quarter Ends

FALL QUARTER — 1974

September 18-19*	Registration
September 23	Classes Begin
November 27-29	School Closed — Thanksgiving Recess
December 5	Quarter Ends

WINTER QUARTER — 1975

January 3, 6, 7*	Registration
January 9	Classes Begin
March 19	Quarter Ends

SPRING QUARTER — 1975

March 31 - April 1*	Registration
April 3	Classes Begin
May 26	School Closed — Memorial Day
June 12	Quarter Ends

SUMMER QUARTER — 1975

June 17*	Registration
June 19	Classes Begin
July 4	School Closed — Independence Day
August 28	Quarter Ends

*Contact campus of your choice for specific dates. Early registration may take place on some campuses.

GENERAL INFORMATION

History of the College

The 1967 Colorado General Assembly, in the enactment of House Bill 1448, established a state system of community colleges under a State Board for Community Colleges and Occupational Education. The first college to be created under the State Board, by the passage of House Bill 1449, was the Community College of Denver. The new law called for the establishment of three campuses, in successive years beginning in the fall of 1968, to serve primarily the area of Adams, Arapahoe, Boulder, Denver and Jefferson counties.

The five-member governing council of the Community College of Denver, officially named the Denver Area Council for Community Colleges, was appointed by the Governor and held its organizational meeting on September 27, 1967. The initial task of the Council was to engage the services of a president. Dr. Leland B. Luchsinger was appointed by the Council as the first president of the Community College of Denver on November 1, 1967.

The first campus of the Community College of Denver, designated as the North Campus, was established in relocatable buildings on a six and one-fourth acre temporary site at the intersection of East 62nd Avenue and Downing Street in the fall of 1968. Eighteen hundred and sixty one students were registered. The campus was expanded during the summer and fall of 1969 to provide additional facilities for new programs and in anticipation of increased enrollment during the next academic year. In the fall of 1969, 2,800 students were registered. Additional facility expansions were made in 1970 and 1971 to accommodate fall enrollment increases to approximately 3,650 students in the fall of 1972.

A permanent site of 160 acres for the North Campus, located at 112th Avenue between Federal and Sheridan Boulevards, has been procured through an appropriation by the Colorado legislature and the efforts of the Community College of Denver Foundation. Physical planning money for the site is being requested of the legislature.

In the fall of 1969, the West Campus, now named the Red Rocks Campus, was established on a temporary site located at 1209 Quail Street in two relocatable buildings. The initial registration for the fall of 1969 was 780 students. The Red Rocks Campus has expanded its facilities and steadily increased in enrollment to a fall 1972 enrollment of 3,000 students.

Program plans for a permanent campus, which will eventually serve more than 10,000 students, have been developed, and the 1970 session of the Colorado General Assembly has also provided facility planning money for the construction of the first permanent buildings beginning in 1971. The first phase of construction on the new site at West 6th and Indiana was completed in the spring of 1973.

A third campus was opened in downtown Denver in the fall of 1970, now named the Auraria Campus. The campus was initially located in temporary renovated facilities located at 12th and Acoma Street. Seven hundred and ninety three students were enrolled in the fall of 1970. A steady increase in enrollment has occurred since the opening of the campus. Facilities of the campus were expanded during the summer of 1972. In the fall of 1973, 2,389 students were registered.

The downtown campus received its name as the Auraria Campus in conjunction with its planned permanent location as a part of the Auraria Higher Education Center. The Center is to be located on approximately 167 acres in the Auraria Urban Renewal Subdivision, to be shared by Metropolitan State College and the Denver Center of Colorado University. Plans indicate that occupancy of the first phase of permanent buildings on the site will take place in 1975.

Objectives of the College

The Community College of Denver is a comprehensive state community college established within the five-county area of Adams, Arapahoe, Boulder, Denver and Jefferson Counties to help meet the educational-vocational training needs of youth and adults. More interested in what the student is ready to do than in what he has done, the College is open to all who can profit from the instruction for which they enroll. The program of offerings includes:

1. Occupational courses and programs of several weeks to two years duration, the satisfactory completion of which may lead to job entry in an occupation of the student's choice or advancement in a current job.
2. Pre-professional and liberal arts courses which, upon completion of the first and second years, will enable a student to transfer to a four-year college or university and earn a baccalaureate degree.
3. Other education opportunities for youth and adults, both credit and non-credit, including developmental programs, cultural opportunities and community services.
4. An emphasis on meeting the individual needs of the learners including the provision of specialized learning laboratories and a student-oriented learning materials center.
5. A comprehensive counseling program staffed by individuals who are genuinely concerned with the educational, vocational and personal welfare of students.

Accreditation

The Community College of Denver is under the jurisdiction of the Colorado State Board for Community Colleges and Occupational Education. The community Colleges Division of the State Board has received letters from officials of four-year colleges and universities in Colorado stating that transfer credit will be granted to students who have successfully completed appropriate courses at the several colleges operating under the State Board. Students who plan to transfer to baccalaureate programs at four-year institutions can be confident that

college-parallel credits earned at the Community College of Denver will transfer without difficulty if students do acceptable work at the four-year institution.

The campuses now have Correspondent or Recognized Candidacy Status in the North Central Association of Colleges and Secondary Schools, the association which accredits all institutions of higher education in this area. This indicates that the institution has given evidence of sound planning, has the resources to implement these plans, and has indicated an intent to work toward accreditation.

Location of Campuses of the College

The location of the Red Rocks Campus of the Community College of Denver is at 12600 West 6th Ave. in Jefferson County, approximately five miles west of the west central boundary of the City of Denver and just west of the Denver Federal Center.

The temporary location of the North Campus of the Community College of Denver is at 1001 East 62nd Avenue in Adams County, just outside the north central boundary of the City of Denver, approximately five miles from the State Capitol in the downtown Denver area.

The temporary location of the Auraria Campus of the Community College of Denver is at 1201 Acoma Street, 1160 Lincoln, 1200 Broadway and 1250 Bannock in Denver County, which is in the heart of the central downtown business district of Denver.

Limitations of Catalog Information

This catalog should not be considered a contract between the Community College of Denver and any prospective student. The College must retain the customary right to cancel programs or course offerings where enrollments are insufficient to permit them on an educationally sound and economically efficient basis or to alter them for other reasons. Similarly, published charges for tuition and fees are subject to change as circumstances may require.

All of the courses listed but not offered in a given quarter or on a given campus may be offered if there is sufficient student interest.

Tuition

The tuition for state supported institutions is determined by the Colorado General Assembly and is subject to change.

As of the printing of this catalog, the tuition for 1974-75 has not been determined.

Tuition and fees may be altered at any time prior to the first day of registration for any quarter.

Fees

A Student Fee in the amount of 50 cents per credit hour up to a maximum of $6.00 is charged to all enrolled students. This money is used for various student activities including student publications, operation of student government, cultural activities, recreational activities, clubs and organizational activities. Expenditure of student fee monies is generally made with the approval of the student government. Students enrolled in certain courses may be required to purchase individual supplies and materials and to rent uniforms.

Residence Classification for Tuition Purposes

At the time of application for admission, students are classified for tuition purposes as Colorado residents or out-of-state residents according to provisions of Colorado law.

Any student who has been classified as a non-resident and who believes he can qualify as a resident may secure from the Registrar an application form for in-state status. A copy of the regulations governing residence classification is a part of the application.

The final decision regarding tuition status rests with the institution. All questions regarding residency classification should be addressed to the Registrar.

Student Rights and Responsibilities

Admission to the College implies a recognition by the student that he should respect the rights of others, and that he should observe moral and civil laws. Interference with the normal process of education in the classroom or elsewhere on the campus will be regarded as unacceptable conduct which warrants suspension and/or dismissal from the school. The success of the college in attaining its objectives is conditioned by the good will, integrity, and honor of its students.

The Denver Area Council has approved a document which contains a Definition of Education, a Joint Statement on Rights, Freedoms and Responsibilities of Students, and Rules of Procedure in Student Disciplinary Matters. This document provides guidelines necessary to insure the rights of all members of the college community. Each campus has its specific "due process" procedures. These procedures are included in the Student Handbook.

Credit Hours

Generally, one credit hour is earned by attending a non-laboratory class for a fifty-minute period, once a week, for a full quarter. In a laboratory course, one credit hour is granted for from two to four, fifty-minute periods per week in a laboratory.

Course Load

The normal course load for a full-time student is fifteen credit hours. Special permission must be obtained from the Dean of Student Services or an authorized representative to register for more than eighteen credit hours.

Counselors are available to consult with students about their course load.

Classification of Students

For record and reporting purposes, students are classified as follows:

Full-time — a student who carries twelve or more credit hours.

Part-time — a student who carries less than twelve credit hours.

First-year (Freshman) — a student who has completed fewer than forty-five credit hours.

Second-year (Sophomore) — a student who has completed forty-five or more credit hours, but has not received an associate degree or has not qualified for upper division classification in a four-year college or university.

Unclassified — a student who has earned a degree (associate, bachelors, etc.) or who has qualified for upper division classification at a four-year college or university.

Financial Obligations of Students

The financial obligations of students to the College — such as payments for tuition, fees, and books — are due and payable on the published specified date or at the times the obligations are incurred. In unusual circumstances of an emergency nature, where it may be impossible for a student to pay the total charges at the proper time, special arrangements may be considered for approval by the Director of Business Services.

A student is not considered officially registered until his class schedule has been processed by the Business Office.

A student who is in any way financially obligated to the College through a tuition deferment, emergency student loan, National Defense Loan, etc., or who has failed to account for College property in his possession will be denied a transcript of record and registration for subsequent sessions until he has made a satisfactory settlement with the College.

Attendance

College officials believe that regular class attendance is necessary if a student is to receive maximum benefits from his work. Students are expected to attend all sessions of the classes for which they are registered. Students who anticipate absences are requested to discuss these in advance with instructors.

Adding and Dropping Courses

Students wishing to adjust their schedules should be familiar with the College policy which reads: "The deadline for adds will be the 15th full day of instruction. The deadline for drops will be on the date two weeks prior to the end of the quarter." Exceptions to this policy may be made only upon approval by the appropriate division director and instructional dean.

This policy does not preclude "adjustments" (arranging for change of courses in the interest of the students), nor does it preclude initial enrollment of new students during the course of the quarter in conformity with the continuous registration philosophy of the College.

Foreign Students

The Community College of Denver is authorized by the U.S. Immigration Service to admit non-immigrant alien students.

Foreign students who wish to enroll at the Community College of Denver are required to submit the following documents:

1. An official application for admission to the Community College of Denver.
2. Two official copies of the appropriate high school, college or equivalent transcript. (See requirements under transcripts.) One copy must be an English translation. The other transcript should be in the original language.
3. Evidence of proficiency in the English language as documented by verbal discourse, or use of the Test of English as a Foreign Language.

   For information on the test write to:

   Test of English as a Foreign Language
   Educational Testing Service
   Box 899
   Princeton, New Jersey 08540 U.S.A.
4. A statement of the financial resources to provide for the student's stay in the United States.

Form I-20A will not be issued to any foreign student until all the above documents are on file in the Office of Admissions and Records.

Tuition and fee charges for foreign students are the same as for out-of-state registrants. (See tuition and fee schedule.)

Readmission of Former Students

Former students who are returning to the College after an absence of one or more quarters, summer quarter excepted, must make application for readmission. Students who have attended other colleges since last attending the Community College of Denver may be requested to submit a transcript of all college credits.

Withdrawal Procedure

Students are admitted to the Community College of Denver under the assumption that they will remain until the end of the quarter or longer, unless unforeseen circumstances necessitate their withdrawal from the institution. When the student finds it necessary to initiate a complete withdrawal from the College, he should follow the procedures indicated below:

1. Obtain a withdrawal form from the Office of Admissions
2. Fill in the appropriate information
3. Fulfill all financial obligations to the College incurred with the Business Office, Financial Aid Office, Bookstore, or the Learning Materials Center
4. Conduct an exit interview with a counselor
5. Return withdrawal form to the Office of Admissions
6. Return identification card to the Registrar upon request

Tuition Refunds

No refunds are possible after the tenth day of class

nor are refunds made if students drop a partial course load at any time.

The student may claim a seventy-five percent refund of tuition paid if a complete withdrawal is made before the eleventh day of classes of the new quarter. Tuition refund request forms are available in the Office of Admissions and Records. No tuition refunds of less than $1.00 will be made.

Unusual circumstances concerning refunds should be referred to the Dean of Student Services.

Allowance of Credit

Within the strict limitations of an established policy, enrolled students are permitted to apply for an allowance of credit for demonstrated knowledge or competency they have attained through previous study and experience. This procedure includes the challenging of courses which coincide with the student's major program and career objectives, allowance of credit through CLEP Examination performance at the 35th percentile and evidence of proficiency through experience.

The College recognizes the CLEP Examination as well as selected Subject Examinations. Up to 45 hours of college credit may be awarded through the CLEP General Examinations. Additional credit may be earned by attaining successful scores on CLEP subject matter examinations. The Registrar's Office should be consulted for details concerning College Level Examination Program (CLEP) Examinations.

Students may be permitted to demonstrate that their achievement level, based on prior experience(s), is the equivalent of that required for enrollment in the successful completion of a course offered by the College, according to the following conditions and procedures:

1. The student must be currently enrolled in the College.
2. The student must submit a petition to the appropriate Division Director setting forth the nature of the student's previous experience(s) and planned career objective(s) which support his petition to seek allowance of credit in lieu of enrolling in and completing a particular course.
3. Upon approval of the Division Director, an evaluation shall be arranged whereby the student shall have the opportunity to demonstrate that his level of achievement is the equivalent of that required by the College for successful completion of a particular course.
4. Not more than one evaluation for allowance of credit for a particular course will be arranged during any quarter of the regular academic schedule of the College.
5. Upon successful completion of the evaluation for allowance of credit, the student shall be awarded full credit for the particular course(s) as set forth in his approved petition.
6. Students pay tuition only if they pass and would normally owe tuition for the credit.

Evaluation and Grading

The Community College of Denver is philosophically committed to a program that focuses on the student and on activities that foster his learning. Student evaluation, when properly conducted, is regarded as one of these activities. Although the College utilizes continuous and varied means of evaluating a student's progress, it has departed from tradition in adopting a system of grading. The system emphasizes accomplishment rather than penalty for failure and employes only the grade symbols listed below.

Grade Symbol	Quality of Work Denoted by Symbol	Grade Points Per Credit Hour
A	Superior	4
B	Excellent	3
C	Average	2
D	Below Average	1

If a student earns a grade of D, he may elect either to have it recorded on his permanent record or disregarded. Learning accomplishment at a level which is judged to be failing receives no credit and is not recorded on the permanent record. If an incomplete (I) is given it must be made up during the following quarter to earn credit.

Grades are issued at the end of each quarter for all students, and grade slips will be mailed approximately one week after the last day of classes.

Grade - Point Average

Under this system, grade points measure the achievement of the student for the number of credit hours he has completed at an accomplished level of D or above. They are determined by multiplying the grade points per credit hour by the credit hour value of the course completed.

The following example will enable the student to compute his grade-point average:

Course	Completed Credit Hours	Final Grade	Grade Points
English	3	B	3 grade points (3x3) equals 9
Mathematics	3	C	2 grade points (3x2) equals 6
Electronics	2	A	4 grade points (2x4) equals 8
Physics	5	C	2 grade points (5x2) equals 10
Physical Education	1	D	1 grade point (1x1) equals 1
	14		34

Total grade points are divided by total credit hours to compute the grade-point average. For example, 34 divided by 14 equals a 2.43 grade-point average.

The cumulative grade-point average is the total number of grade points recorded divided by the total number of credit hours.

Degrees and Certificates Offered

The Associate Degree is awarded to students successfully completing two-year programs. For shorter programs, Certificates of Achievement and Certificates of Completion are granted.

Graduation Requirements

To receive the ASSOCIATE DEGREE – a student must:

1. Complete a minimum of ninety quarter hours, including the specific subject or course requirements in the selected program. Certain programs may require more than the minimum of ninety quarter hours and these must also be completed.
2. Earn an overall grade point average of 2.0 in all credit counted toward the degree.
3. Complete three quarter hours of English.
4. Complete at least fifteen hours in residence at the Community College of Denver. (In mitigating circumstances, certain portions of this requirement may be waived by the Dean of Student Services.)
5. File the Application for Graduation form at the time when registering for the final quarter. This form is available from the Office of Admissions and Records.

To receive the CERTIFICATE OF ACHIEVEMENT – a student must:

1. Complete the specified subject matter or course requirements of an approved program as set forth in the catalog. For programs longer than one quarter in duration, at least fifteen credit hours must be earned at the Community College of Denver.
2. Earn an overall grade-point average of 2.0 in all credit counted toward the certificate.
3. Complete three credit hours in speech or English in programs of longer than one quarter in duration except in programs where exemption is noted.
4. File the Application for Graduation form when registering for the final quarter. This form is available from the Office of Admissions and Records.

Certificate of Completion

The College offers many short courses, conferences, workshops and seminars. These will vary in length from one to two meetings of short duration to units necessitating many clock hours accumulated over a period of several weeks. Successful completion of short courses of this type will result in the granting of a Certificate of Completion.

A Certificate of Completion may also be granted upon the successful completion of a course or courses in fulfillment of an educational objective leading to job-entry level employment as developed in conjunction with an advisor or counselor and approved by the respective division director leading to job entry employment. In order to receive this Certificate the applicant must file the Application for Graduation form at the time of registering for the final quarter. This form is available from the Office of Admissions and Records.

Transfer of Credit

If a student wishes to have previous college credits applied toward the degree requirements, he must submit official copies of previous college transcripts to the Registrar's Office no later than the time of registration for the quarter he plans to graduate. Official transcripts are those bearing the official seal of the College and mailed to the Registrar's Office by the sending institution.

"D" Policy

The Community College of Denver will accept "D's" from other institutions but in order for a person to graduate from Community College of Denver with a Certificate of Completion, Certificate of Achievement or an Associate Degree, he must have an overall grade point average of 2.0 in all credit counted toward the certificate or degree. Students should be informed that "D" credit may not be acceptable to four year institutions.

Requests for Transcripts by Students

A student requesting that a transcript of his record be sent to an educational institution or to a prospective employer must complete the appropriate form which may be obtained from the Admissions and Records Office. The College assesses no fee for this service; however, no transcript will be provided for a student who has not fulfilled all financial obligations to the College or who has not provided transcripts as requested by the College.

Course Numbers

Course numbers consist of prefix letters, which constitute an abbreviation of the subject area or program, and a series of three digits, the first of which indicates its classification according to the year it should be taken. Usually, course numbers below 100 are designed for developmental education; numbers from 100-199 are usually taken during the first year of college since they are

prerequisite courses. Courses numbered 200-299 are usually taken during the second year of college.

STUDENT SERVICES

In addition to the programs of study available at the College, a number of related or special services are provided for the assistance of students and others who may be interested.

Admissions, Records and Registration

Detailed information and admissions requirements and procedures are given in a previous section of the catalog.

Registration for classes is conducted in a manner which is designed for the convenience of students.

A system of record keeping assures the student of a complete and confidential file of information on previous educational experience, credits earned at the Community College of Denver, test data and other information.

Admissions Policy

The College will admit high school graduates, non-graduates of high school who are eighteen years of age or older, and any other person who can profit from the instruction from which he enrolls. However, admission to the College does not assure acceptance of an individual student in a particular course or program. Some students may be requested to enroll in special courses at the College for correction of scholastic or other deficiencies.

The College does not require a physical examination as a general condition of admission but reserves the right to require evidence of good health in individual instances when such seems appropriate. Physical disabilities and chronic illnesses should be indicated to the Admissions Office.

Entrance examinations are not required as a condition for admission to the College.

Students are served more adequately when applications and transcripts of previously earned credits are submitted in advance of counseling appointments, advising, and registration for classes.

Admissions Procedure:

Submit an official application for admission to the Community College of Denver, available from the Registrar's Office. Transcripts of previous high school or college credits are not required, except as follows:

1. Persons planning to receive a degree or certificate from the College, who wish previous college credits to be considered, must submit official copies of those previous college transcripts to the Registrar's Office no later than the time of registration for the quarter in which they plan to graduate. Only official transcripts will be accepted. Copies should be mailed directly to the Registrar's Office from the sending institution.
2. The College reserves the right to request transcripts of students in cases where it is felt that the student can be better served through use of his transcripts.
3. Foreign students should refer to Foreign Student requirements on page 6.

These documents become the property of the College and will not be released to the student or transferred to other institutions. The student's subsequent registration is contingent upon receipt of all required documents.

Bookstore

The Bookstores of Community College of Denver are owned and operated by the institution. The basic philosophy of each store is to serve the entire college community faculty and staff as well as students. While the bulk of items sold are required textbooks, each store tries to stock other merchandise such as paper, pens, slide rules, drafting and art supplies and general reading books that are used in the educational process.

Policy and procedures for the stores are established so that the stores are self-maintaining, and will operate on a competitive level with other retail outlets in the area.

Any profits realized by the stores after operating expenses are deducted will be used to finance student related activities such as scholarship funds and building funds.

Business Services

The Office of Business Services of the College is responsible for a number of functions which support the instructional and other services provided by the College. Included among these are assistance with budget preparation, collection of tuition and fees, financial accounting and reporting, preparation of payrolls, purchasing of equipment and supplies, and maintenance and operation of buildings and grounds.

Community Services

The style and emphasis of Community Services is determined by those community needs and interests which the college can develop resources to serve. Through Community Services, the resources of the college are extended to meet community needs and to help in the solution of community and individual problems. In turn, the needs and know-how of the community are channeled to

college programs so they may better reflect current community conditions. This double-door action between college and community will enhance the growth of both by decreasing the boundaries between instruction and service, between classroom and community-based learning, and between paper and human problem-solving. The long range goals of the Community Services Program include:

1. *Educational Expansion Function.* Programming a variety of educational, upgrading and new career opportunities which reach beyond the traditional limitations of college credit restrictions; e.g., institutes, seminars, tours, short courses, contractual in-plant training, etc.

2. *Educational Extension Function.* Increasing the accessibility of the regular courses and curricula of the college by extending their availability to the community at large; e.g., evening classes, TV courses, "Weekend college," neighborhood extension centers.

3. *Social Outreach Function.* Organizing programs to increase the earning power, educational level, and political influence of the disadvantaged; e.g., ADC mothers, unemployed males, educationally deprived youth, and welfare recipients.

4. *Civic Action Functions.* Participating in cooperative efforts with local government, business, industry, professions, religious and social groups to increase the resources of the community to deal with major problems confronting the community; e.g., community self-studies, urban beautification, community chest drives, and air pollution.

5. *Leisure-time Activity Function.* Expanding opportunities for community members to participate in a variety of recreational activities, e.g., sports instruction, outdoor education, summer youth programs, and senior citizen activities.

6. *Community Analysis Function.* Collecting and analyzing significant data which reflect existing and emerging needs of the community and which can serve as a basis for developing the community service program of the college; e.g., analyzing census tracts, analyzing manpower data, conducting problem-oriented studies, identifying roles and goals of organizations.

7. *Staff Consultation Function.* Identifying, developing and making available the consulting skills of the faculty in community development activities; e.g., consulting with small business, advising on instructional materials, designing community studies, instruction in group leadership and laboratory testing.

8. *Public Forum Function.* Developing activities designed to stimulate interest in understanding of local, national, and world problems; e.g., public affairs pamphlets, "town" meetings, and TV symposia.

9. *Cultural Development Function.* Expanding opportunities for community members to participate in a variety of cultural activities; e.g., fine arts series, art festivals, artists in residence, and community theater.

10. *Conference Planning Function.* Providing professional assistance to community groups in the planning of conferences, institutes and workshops; e.g., registration procedures, program development, and conference evaluations.

11. *Facility Utilization Function.* Encouraging community use of college facilities by making them readily accessible, by facilitating the scheduling process, and by designing them for multipurpose activities when appropriate; e.g., campus tours, centralized scheduling office, conference rooms, and auditorium design.

12. *Developmental Counseling Function.* Providing community members with opportunities for self-discovery and development through individual and group counseling processes, e.g., aptitude-interest testing, individual interviews, career information, job placement, and family life.

COUNSELING SERVICES

The Counseling Division is dedicated to helping people. A qualified professional staff is available both days and evenings for exploration with students individually or in groups, of such areas as educational planning, measurement of aptitudes, interest and abilities, career plans, academic difficulties, marriage adjustment and interpersonal relationships.

The counseling staff is committed to the confidentiality of information on any student. The counseling staff is able to relate to student's personal concerns and treats personal information in a professional manner.

Any student desiring assistance from the Counseling Staff is encouraged to contact the counseling office.

Advising

The entire faculty of the College is guidance oriented and has a major commitment to help each individual student pursue a course of study planned to fulfill his goals.

Students are assisted by the instructional staff and/or

counselor in developing his program of study and selection of classes each quarter.

It is the student's responsibility to:

1. Meet with an instructor or counselor to discuss the most appropriate classes for his career objective.
2. Discuss his program and classes prior to each registration and work out his class schedule.
3. Contact an instructor or counselor when problems arise in the program. The instructor or counselor should also be informed if he changes his program of study.
4. Make certain he is fulfilling the department's requirements for graduation.

STUDENTS WHO HAVE NOT SELECTED A PROGRAM OF STUDY, OR ARE UNCERTAIN OF THE PROGRAM THEY WANT TO FOLLOW, ARE URGED TO CONTACT THE COUNSELING OFFICE.

Career Center

Within the Student Services complex, a Career Center is maintained. This area has available occupational information, a collection of college catalogs, and materials to assist students in making informed career decisions. A counselor who has major responsibility in assisting students with career plans is in charge of the Center.

Housing

Students who attend the Community College of Denver commute. The College does not operate a residence hall program. Students are expected to arrange their own housing. Those desiring help may contact the Counseling Office.

Orientation

New students are invited to attend an Orientation Session. At the session, the group is given a short general over-view of the college, the staff, the instructional divisions, and the various programs available.

Counselors assist each student in preparing a tentative schedule.

Self-Exploration

Small group seminars are offered that utilize the methods of group counseling. These seminars include self-exploration and understanding, Human Potential workshops and vocational exploration.

Testing

No entrance examinations or tests are required for admission to the College. Individuals contemplating transfer to another college are encouraged to take the ACT or SAT required by such institutions and have a copy of the results sent to the Community College. The college provides a testing program to assist students in determining their interests, aptitudes, and level of competency in certain subject matter areas. With these data, counselors are better able to assist individual students in planning their educational and vocational program and can make appropriate use of the resources available to him.

Evening Classes

The instructional program of the College includes a large number of evening course offerings, scheduled between 5:00 and 11:00 p.m. five evenings a week. These often make it possible for adults to help satisfy cultural and hobby interests which they may have, in addition to pursuing the regular degree and certificate programs through evening study.

Financial Aid

The Offices of Financial Aid on each campus of the College endeavor to help deserving students obtain financial assistance in meeting their college related expenses. The College participates in several federal, state and institutional financial aid programs including loans, grants and work-study jobs. The College uses the American College Testing Program Financial Needs Analysis in determining the financial need of students applying for aid.

Student loans are available through the National Direct Student Loan Program, Federal Nursing Student Loan Program, and the Federally Insured Student Loan Program. Each represents a long-term, low-interest loan repayable after the student completes his education or terminates his student status.

Grants are available through the Supplementary Educational Opportunity Grant (SEOG) Program, Federal Nursing Scholarship Program, Basic Educational Opportunity Grant (BEOG) Program, and the Colorado Student Grant Program (CSG). Some of these grants can pay up to $1500 per academic year.

Federal Nursing Scholarship Funds are available only on North Campus to full-time nursing students and range up to $1500 depending on need and availability of funds. All grant and loan monies are awarded on the basis of financial need.

The school also participates in the Colorado Scholars Program. Students who maintain a 3.0 (B average) may apply for these scholarships, which cover the cost of tuition and fees.

Part-time jobs are available through the College Work-Study and the Colorado Work-Study Programs.

These awards are also made on the basis of financial need with the exception of 30% of the Colorado Work-Study Program, which is used for no-need students.

Food Service

Automated food service is provided on all campuses in the food vending area. The North campus provides cafeteria service as well.

Health Services

College officials recognize the importance of good health for happy and productive study. The Student Health Service is designed to foster and maintain proper attitudes and habits of personal and community health. Various programs and activities related to current health problems are planned each quarter. These programs are designed to educate students, faculty, and staff of today's health problems and the means of preventive health measures.

A registered nurse is available to assist students with minor emergencies, treatment of minor illnesses, referrals, health information and other health related problems. A consulting physician is also available to students at varying times during the week.

No group accident and sickness insurance program is available to students. Students should make arrangements for individual coverage with their own insurors. Students are encouraged to utilize the health services of the college.

Job Development and Placement

The Job Development and Placement Office on the respective campuses, instructors, and division directors in the area of Occupational Studies maintain close contact with business and industry concerning job opportunities and training needs. A record of available employment positions, both full and part-time, is kept in the Job Development and Placement Office. This office coordinates all of the College's efforts to assist students in obtaining suitable full-time employment in occupations for which they have been prepared at the College. The Services include assistance in resume development. Other services are: application aids, job interview aids, summer employment, and volunteer listings. Students interested in full-time and part-time jobs should contact the Job Development and Placement Office on their Campus and complete an application for employment.

Parking

Student parking facilities vary at the three campuses. Auraria students use street parking. There are blocks with and blocks without parking meters in the immediate vicinity. Many students also use the commercial lots in the area which cost approximately 65 cents per day. North campus students may park on nearby streets, in a small lot adjacent to the west building or in a commercial lot on Downing Street at a cost of 25 cents each time they use it. Red Rocks campus has two lots available at a cost of 25 cents each time it is entered or may obtain a pass at a cost of $11 per quarter.

Student Activities

The College cooperates in the development of those student-initiated activities which supplement the more formal instructional program. Such activities are expected to provide constructive experiences which will stimulate personal growth and social development and add to the student's enjoyment of life. Opportunities for the development of leadership, cooperative planning and special interests are fostered through participation in these activities. All student activities are coordinated through the Office of Student Activities.

The student activity programs involve students in self-government, participation in the College decision-making process, student leadership programs and conferences, student-selected clubs and organizations, and an intramural program in physical education and recreation.

Selective Service

It is the responsibility of enrolled students to keep the Selective Service Local Boards informed of their current status. The Office of Admissions and Records has selective service information for the student. No student status information is sent to the Selective Service Boards unless requested by the student.

Veterans Educational Benefits

The Community College of Denver is approved for education and training under various Veterans Administration programs. Students who are eligible for Veteran's benefits should make application for benefits at the Veterans Administration Regional Office. A student approved for educational benefits by the Veterans Administration will be issued a Certificate of Eligibility which he should bring to the Office of Admissions and Records at the time of his initial registration.

Students using Veteran's benefits must report any changes in their program of studies immediately to the Office of Admissions and Records.

If a veteran fails to notify the Registrar's Office of a reduction in his credit hours during a given quarter, he will automatically be reduced at the end of the quarter and re-certified to the Veterans Administration, effective the first day of the quarter in question. For further information, contact the Registrar's Office, Division of Veteran's Affairs.

Students receiving G. I. benefits are required to notify the Registrar's Office, Division of Veteran's Affairs, of any change in their training status.

THE DENVER MDTA SKILL CENTER

The Denver Manpower Skill Center is integrated into

the on-going occupational programs of the Community College of Denver.

The Skill Center was originally designated under the Manpower Development and Training Act of 1962 as amended. The Manpower Skill Center is now authorized under the Comprehensive Employment and Training Act of 1973.

Unemployed and underemployed individuals are referred to the Skill Center for training to job entry level through regular Community College classes.

In addition, individuals may be referred for upgrade training. The individual Skill Center student training program may also include cooperative occupational education experience in addition to classroom instruction.

LEARNING MATERIALS CENTER

As an instructional and supportive division to the total curriculum of the College, the Learning Materials Center (LMC) functions simultaneously as a learning center, instructional/resources laboratory, and a library.

To realistically serve the many different needs and interests of students and faculty, the LMC circulates a wide range of educational print and non-print media.

Inter-library loans are available through the LMC from the Denver Bibliographical Center for Research and other educational institutions. The Book Catalog of the Jefferson County Public Libraries is available for use by students and faculty on the Red Rocks Campus.

Auraria Campus is a member of the Education Information Services of the University of Northern Colorado.

Professional and supportive personnel are available for consultation and media production services.

INSTRUCTIONAL LABORATORIES

To serve the needs of all CCD students and to assure success in career training, the Community College of Denver provides specialized instructional laboratories at all three campuses. These laboratories offer instruction through specialized equipment thereby enabling students to develop basic learning skills. Mastery of these skills will assure students of successful completion of course assignments as well as high school diplomacy equivalency requirements. Moreover, the instructional laboratories will enable students to qualify for and maintain productive employment. Instruction in such basic skills as writing, reading, spelling, or arithmetic in addition to tutorial support supplementing various instructional programs is provided by the College. Instructional laboratories are open to all students at CCD whether enrolled in occupational or general studies programs.

The procedure in the instructional laboratory is to diagnose the student's skill deficiency and prescribe a plan to bolster the lack of basic skills. Thereafter, the student will participate in a highly individualized program in close contact with instructors qualified to help with his specific problem. For example, should a student in carpentry lack a proficiency in math or reading which inhibits his ability to perform simple mathematical computations or to read and translate measurements, the lab will analyze and diagnose this skill problem. Then, through individualized planned instruction, the student will be helped by trained instructors until his lack of knowledge and skill is rectified.

There is no established timetable for completion in the instructional laboratory. The achievement of proficiency in basic learning skills cannot be related to academic quarters, clock hours or traditional forms of scheduling. Enrolled students are permitted to use the instructional laboratories frequently and for as long as they wish during each time of use.

The following program opportunities for all CCD students are available according to individual needs:

COMMUNICATIONS (READING, WRITING, SPEAKING, LISTENING)

MATHEMATICS (FUNDAMENTALS OF ARITHMETIC, ALGEBRA, AND GEOMETRY)

SCIENCE (BASIC LIFE SCIENCES AND PHYSICAL SCIENCE)

SOCIAL SCIENCES (FUNDAMENTALS OF WORLD AND U.S. HISTORY, U.S. GOVERNMENT, GEOGRAPHY, AND CONSUMER ECONOMICS)

SERVICEMEN'S OPPORTUNITY COLLEGE

In recognition of the unique educational problems confronting active duty servicemen in obtaining their educational goals, the Community College of Denver has been officially designated as a Servicemen's Opportunity College. By completing 15 quarter hours in a degree program at the Community College of Denver, the serviceman may transfer the remaining 75 hours from other Servicemen's Opportunity Colleges, other accredited institutions, CLEP examinations and/or institutional challenge examinations completed prior to or after attending the Community College of Denver. Before transferring to another institution, the serviceman may contract for a degree from the Community College of Denver for any work remaining beyond the initial 15 hours. This work may be completed at other Servicemen's Opportunity Colleges, or other accredited institutions.

Each campus of the Community College of Denver has a counselor who serves as a Servicemen's Counselor. This counselor's prime responsibility is to assist servicemen in achieving their educational goals.

COLLEGIATE CENTER FOR THE PHYSICALLY DISADVANTAGED

Proposed Program

The Community College of Denver has developed, through its Center for the Physically Disadvantaged, comprehensive support — services permitting all physically handicapped candidates to pursue existing programs offered in this catalog. Satisfactory completion will lead to one of the following certifications: Associate Degree, Certificate of Achievement, or Certificate of Completion.

The achievement and employment record of handicapped students assisted by the Center has been noteworthy. Because of the heavy demand for the services of the Center for the Physically Disadvantaged, it will be necessary (for the 1974-75 school year) to concentrate this effort primarily at the North Campus until further ex-

pansion is feasible. Therefore, it is recommended that students desiring to avail themselves of the full battery of services of the Center register at the North Campus.

Disability Groups Served

This new program will be directed towards secondary and post-secondary candidates, and will provide educational services for the following physical disabilities:

AMPUTATIONS
BLINDNESS/VISUAL PROBLEMS
PARAPLEGIA AND SPINAL CORD INJURIES
DEAFNESS
CARDIAC AND VASCULAR
CEREBRAL PALSY
MULTIPLE SCLEROSIS
DEFORMITIES
SPEECH DISORDERS
ASTHMA/RESPIRATORY
DISABLING CONDITIONS
SELECTED MULTIPLE HANDICAPS

Support Services Offered

Depending upon the candidate's disability, the following support services are offered:

TUTORIAL ASSISTANCE
READERS AND BRAILLE TRANSCRIBERS
SPECIAL COUNSELORS
NOTETAKERS AND TESTORS
SPECIALIZED MEDIA
EQUIPPED RESOURCE CENTERS
PERIPHERAL THERAPY AND NURSING SERVICE
PSYCHOLOGICAL TESTING SERVICE
INTERPRETING (FOR THE DEAF)
PARAPROFESSIONAL AID
CURRICULUM ADAPTATION
MODIFICATION OF ARCHITECTURAL BARRIERS
PLACEMENT SERVICE FOR THE HANDICAPPED
LIAISON WITH REHABILITATION CENTERS
ON-CAMPUS ATTENDANT ASSISTANCE
TEXTBOOK OUTLINING
EARLY REGISTRATION

Educational Objectives

The thrust of this project is to direct handicapped candidates toward the greatest degree of employable competency that the physical limitations of their particular disability will allow.

An in-depth analysis of all occupational programs available at the three-campus complex has been undertaken to identify programs suitable to each kind of handicapping condition. Curriculum modification will be implemented to meet each candidate's specific potential. Equipment adaptation or the provision of supplementary equipment will be arranged.

Conceptual Basis for the Program

It is the philosophy of the Community College of Denver that handicapped adults should be given the same opportunities for occupational training as their able-bodied counterparts. In addition, CCD maintains the belief that many more handicapped individuals should and could be employed than are in the present labor market. CCD maintains also that the physically handicapped can be trained more effectively, at less expenditure, in the same classrooms with their non-handicapped peers, rather than in isolated special schools. To facilitate this philosophy, CCD is making certain that ancillary classroom services are available for all physically handicapped students.

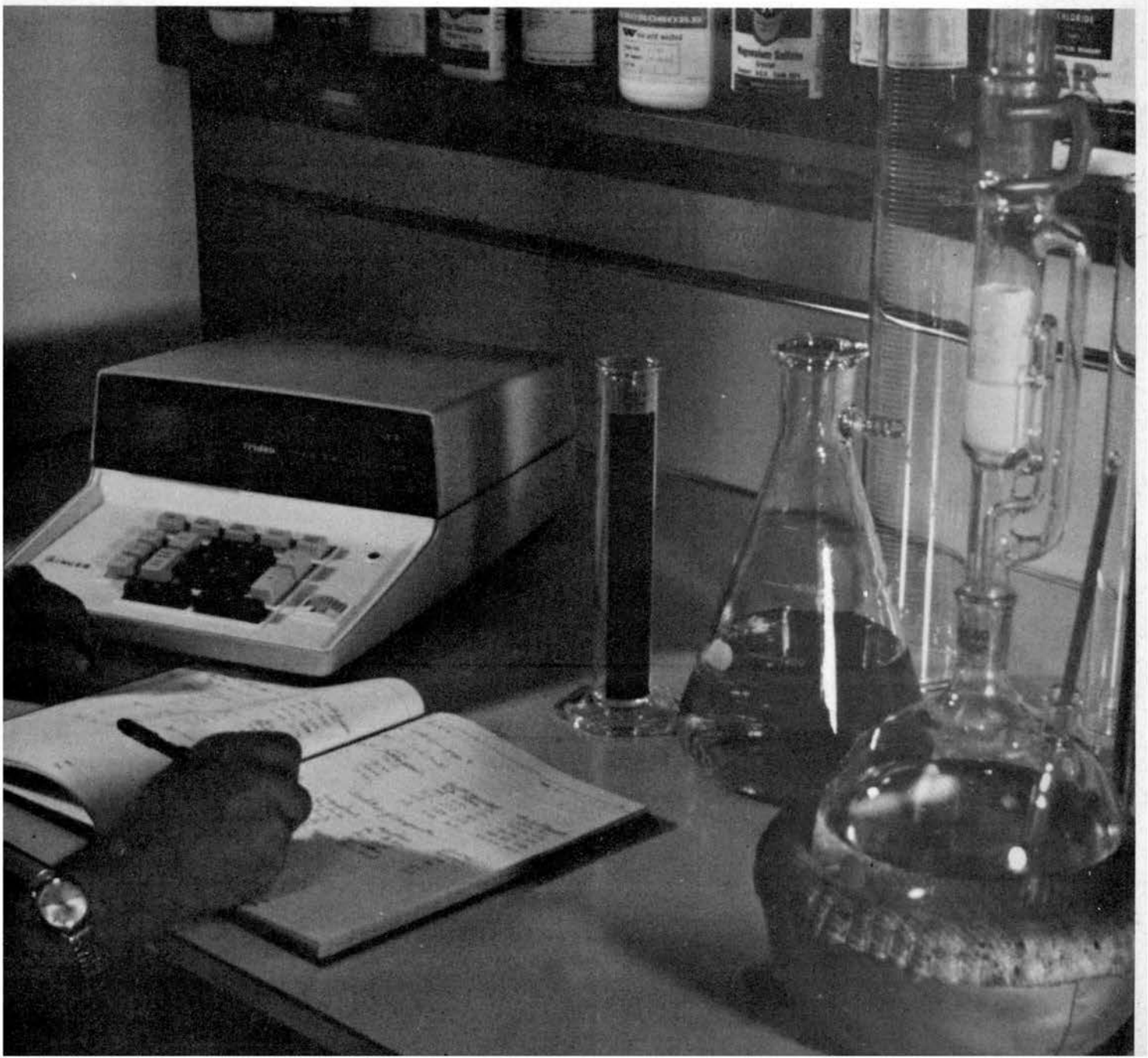
KEY TO COURSE PREFIX LETTERS

AB — Auto Body Service
AC — Accounting
AE — Appliance and Refrigeration Mechanics
AES — Airframe Power Plant
AM — Automotive Mechanics
AN — Anthropology
AR — Art
AT — Architectural Technology
AV — Audio-Visual Technology
B — Biology
BE — Biomedical Equipment Technology
BI — Building Inspection
BL — Bricklaying
C — Chemistry
CA — Carpentry
CC — Early Childhood Education and Management
CH — Chinese
CJ — Criminal Justice
CM — Commercial Art
CO — Cosmetology
CT — Civil Technology
D — Drafting
DA — Dental Assisting
DM — Diesel Mechanics
DP — Data Processing
EC — Economics
EG — English
EG — (Manual Communication)
EM — Appliance and Refrigeration Mechanics
EO — Heavy Equipment Operation
ET — Electronics Technology
EV — Environmental Control Technology
F — Food Service
FP — Fluid Power
FR — French
FS — Fire Science Technology
G — Earth Science
GA — Graphic Arts
GE — Geography
GR — German
HE — Health Education
HI — Hearing Impaired
HM — Hotel-Motel Management
HS — History
H'' — Humanities
I — Information Media Technology
IC — Inventory Control
IE — Commercial Industrial Electricity
IM — Industrial Management
IN — Insurance
IT — Respiratory (Inhalation) Therapy Technology
JL — Journalism
LA — Para-Legal
LI — Literature
LT — Library Technology
M — Mathematics
MG — Management
MH — Manufactured Housing Technology
MI — Mineral Industry Technology
MO — Medical Insurance Clerk
MS — Machine Shop
MU — Music
N — Nursing
NA — Nurse Assisting
NT — Nuclear Medicine Technology
OA — Optometric Assisting
OM — Business Machine Technology
P — Physics
PE — Physical Education
PH — Philosophy
PL — Plumbing
PR — Public Relations
PS — Political Science
PT — Commercial Photography
PY — Psychology
QA — Quality Assurance
R — Radiation Therapy Technology
RA — Radio and Television Service
RD — Reading
RE — Real Estate
RL — Recreational Leadership
RT — Radiologic Technology
S — Speech
SC — Secretarial Science
SE — Sports Crafts and Speciaity Area Mechanics
SI — Science
SK — Skill Center
SO — Sociology
SP — Spanish
SR — Activity Directing for Senior Citizens
SS — Social Science
ST — Surgical Technology
SU — Surveying
SW — Community and Social Service Assisting
TE — Traffic Engineering Technology
TI — Technical Illustration
TT — Traffic and Transportation
TV — Television Technology
UH — Urban Horticulture
UP — Urban Planning Technology
VM — Vending Machine Technology
VN — Practical Nursing
WC — Ward Clerk
WE — Welding and Fabrication
WW — Water-Wastewater Technology
XT — General Diagnostic (X-Ray)

Community College of Denver

Auraria Campus
North Campus
Red Rocks Campus

General Studies Programs



GENERAL STUDIES PROGRAM

Note: Auraria Campus—A
North Campus—N
Red Rocks Campus—R

GENERAL STUDIES PROGRAMS

The General Studies Programs are intended to provide educational opportunities in support of a student's selected career emphasis in Occupational Studies, in preparation for transfer to a four-year college or university and in general and developmental education interests.

Students enrolled in Occupational Studies Programs may enroll in General Studies courses to meet the specific requirements of a particular occupational curriculum and to select desired elective courses.

Students who intend to transfer to a four-year college or university should review the catalog of the particular institution to which they plan to transfer in order to determine specific course requirements. Copies of catalogs for other Colorado colleges, universities, and out-of-state schools may be obtained through the Office of Student Services. Students are urged to seek the advice of the division directors and faculty members in the selection of transfer courses in their areas of interest.

The Associate Degree is awarded by the Community College of Denver upon the successful completion of the requirements for the degree. The general requirements for the Associate Degree are listed on Page A8. Also, a General Studies student must meet the specific requirements in one of the four areas of emphasis listed below:

1. Arts — This is designed for the student whose major emphasis of study is in Communication and Arts and/or Social Sciences and is intended for transfer to a four-year college or university in his area of interest.

   Degree Requirements

   Successful completion of a minimum of ninety (90) quarter hours of credit in transfer course work including the following:

   a. EG 111, 112, and 113 ..... 9 hours
   b. Nine (9) quarter hours of course work in the Division of Communications and Arts* (in addition to EG 111, 112, and 113) ..... 9 hours
   c. Twelve (12) quarter hours of course work in the Division of Science and Mathematics ..... 12 hours
   d. Twelve (12) quarter hours of course work in the Division of Social Sciences ..... 12 hours
   e. Electives that fit in with the student's transfer program ..... 48 hours

   TOTAL ..... 90 hours

   *Excluding course work in physical education.

2. Science — This is designed for the student whose major emphasis of study is in Science or Mathematics and is intended for transfer to a four-year college or university in his area of interest.

   Degree Requirements

   Successful completion of a minimum of ninety (90) quarter hours of credit in transfer course work including the following:

   a. EG 111, 112, and 113 ..... 9 hours
   b. Nine (9) quarter hours of course work in the Division of Communication and Arts* (in addition to EG 111, 112, and 113) ..... 9 hours
   c. Thirty (30) quarter hours of course work in the Division of Science and Mathematics ..... 30 hours
   d. Twelve (12) quarter hours of course work in the Division of Social Sciences ..... 12 hours
   e. Electives that fit in with the student's transfer program ..... 30 hours

   TOTAL ..... 90 hours

   *Excluding course work in physical education.

3. Business — This is designed for the student whose major emphasis of study is in Business and may be used for transfer to a four-year college or university school of business.

   Degree Requirements

   Succesful completion of a curriculum designed for transfer to a four-year college or university by the Division of Business and Management Occupations.

4. General Education — This is designed for the student who completes a broad program of courses without the constraints of specialization characteristic of the other programs in General Studies and is not designed for transfer.

   Degree Requirements

   Successful completion of a minimum of ninety (90) quarter hours of course work including the following:

   a. Six (6) quarter hours of course work in the Division of Communication and Arts* ..... 6 hours
   b. Six (6) quarter hours of course work in the Division of Science and Mathematics ..... 6 hours
   c. Six (6) quarter hours of course work in the Division of Social Sciences ..... 6 hours
   d. Electives in General Studies ..... 30 hours
   e. Electives of the student's choosing ..... 42 hours

   TOTAL ..... 90 hours

   *Excluding course work in physical education.

NOTE: Students who can submit evidence that their successful completion of ninety (90) quarter hours of course work constitutes a completely transferable curriculum for transfer into a specific program at a four-year college or university need not complete the specific requirements listed above in order to be considered for the Associate Degree.

DIVISION OF COMMUNICATION AND ARTS

Art	**A, N, R**
English	**A, N, R**
Beginning Manual Communications	**N, R**
French	**A, R**
German	**R**
Humanities	**A, R**
Instructional Labs	**A, N, R**
Journalism	**A, R**
Literature	**A, N, R**
Music	**A, N, R**
Physical Education	**A, N, R**
Reading	**A, N, R**
Speech	**A, N, R**
Skill Center Instructional Program	**A, N, R**
Spanish	**A, N, R**
Independent Study	**A, N, R**

Note: Auraria Campus—A
North Campus—N
Red Rocks Campus—R

DIVISION OF COMMUNICATION AND ARTS

COURSE DESCRIPTIONS

Where a course description does not indicate the campus by the key A, N or R, we would suggest you call the campus of your choice for information.

AR 100 Art Appreciation (A, N) ..... 3 credit hours
A study of the world's art masterpieces, various aspects and types of art works as a basis for broadening knowledge and appreciation of the subject.

AR 101 Basic Drawing (A, N, R) .... 3 credit hours
Freehand drawing covering a selection of subject, proportion, perspective, line, texture, value and composition. Media includes pencil, conte crayon, charcoal and ink. (6 hours per week)

AR 102 Basic Drawing (A, N, R) .... 3 credit hours
Prerequisite: AR 101 or permission of instructor
Drawing fundamentals with a stronger emphasis on the idea or concept of drawing, introduction of color into drawing and a wider selection of drawing media. (6 hours per week)

AR 103 Basic Drawing (A,N,R) ..... 3 credit hours
Prerequisite: AR 102 or 103 or permission of instructor
Drawing in varied and mixed media, emphasizing experimentation. Broad range of size and material stressing composition and concept. Introduction to drawing human figure. (6 hours per week)

AR 105 Basic Design (A, N) ..... 3 credit hours
Fundamentals of form, color, visual perception, principles of composition, organization and structure introduced with experimentation in two-dimensional design. (6 hours per week)

AR 106 Basic Design (A, N) ..... 3 credit hours
Prerequisite: AR 105 or permission of instructor
Continuation of AR 105 with problems in form, color, visual perception, principles of composition, organization and structure in both two and three dimensional design. (6 hours per week)

AR 107 Basic Design (A, N) ..... 3 credit hours
Prerequisite: AR 105 or 106 or permission of instructor
Advanced problems in two and three dimensional design. (6 hours per week)

AR 110 Art of the Southwest (A) ..... 3 credit hours
The architecture, painting and sculpture of the American Southwest from pre-Colombian civilization to present times. Emphasis is on regional adaptation and assimilation of art forms brought about by the different cycles of conquest.

AR 111 Introduction to Art, A Survey of Masterpieces of the World (A,R) ..... 3 credit hours
The course is designed for students interested in general awareness of art and art appreciation. A study of the world's masterpieces from Prehistoric to Gothic period with brief exposure to some studio experiences if appropriate.

AR 112 Introduction to Art, A Survey of Masterpieces of the World (A, R) ..... 3 credit hours
A continuation of AR 111, from Early Renaissance through Rococo periods.

AR 113 Introduction to Art, A Survey of Masterpieces of the World (A, R) ..... 3 credit hours
A continuation of AR 112, from New Classic through Contemporary periods.

AR 181 Ethnic Studies in Art, The American Southwest (A) ..... 3 credit hours
Special studies of the Art of the American Southwest from pre-Colombian civilizations to present times as it relates to the Chicano.

AR 182 Ethnic Studies in Art, The Art of Africa and Black Americans (A) ..... 3 credit hours
Special studies of the Art of Africa from ancient to present times as it relates to contemporary Black American artists.

AR 183 Ethnic Studies in Art, The Art of the Orient and the American Oriental (A) ..... 3 credit hours
Special studies of Oriental Art from ancient to present times as it relates to contemporary American Oriental artists.

AR 184 Ethnic Studies in Art, The American Indians (A) ..... 3 credit hours
Special Studies of the Art of the American Indian from ancient to present times as it relates to contemporary American Indian artists.

AR 201 Second Year Drawing (A, N, R) ..... 3 credit hours
Prerequisite: AR 103 or permission of instructor
Advanced problems in freehand drawing. Emphasis on experimentation using a variety of media and greater emphasis on drawing the human figure. (6 hours per week)

AR 202 Second Year Drawing (A, N, R) ..... 3 credit hours
Prerequisite: AR 201 or permission of instructor
Continuation of AR 201. (6 hours per week)

AR 203 Second Year Drawing (A, N, R) ..... 3 credit hours
Prerequisite: AR 201 or permission of instructor
Continuation of AR 202. (6 hours per week)

AR 211 Basic Water Colors and Watermedia (A,N,R) ... 3 credit hours

Introduction to transparent and opaque water color media through problems in creative design involving landscape and still life. (6 hours per week)

AR 212 Basic Water Colors and Watermedia (A, N, R) ..... 3 credit hours

Prerequisite: AR 211 or permission of instructor

Continuation of AR 211. (6 hours per week)

AR 213 Basic Water Colors and Watermedia (A, N, R) ..... 3 credit hours

Prerequisite: AR 212 or permission of instructor

Continuation of AR 211 and 212. (6 hours per week)

AR 215 Figure Drawing I (A, N, R) ..... 3 credit hours

Beginning drawing of the human figure with a variety of drawing media and an introduction to human anatomy. (6 hours per week)

AR 216 Figure Drawing II (A, N, R) ..... 3 credit hours

Prerequisite: AR 215 or permission of instructor

Continuation of AR 215. (6 hours per week)

AR 217 Figure Drawing III (A, N, R) ..... 3 credit hours

Prerequisite: AR 216 or permission of instructor

Continuation of AR 216. (6 hours per week)

AR 221 Oil and Acrylic Painting (A, N, R) ..... 3 credit hours

Introduction to oil or acrylic painting with basic investigation of the materials of the painter and their employment in control of form and space through the use of color and other elements of design. (6 hours per week)

AR 222 Oil and Acrylic Painting (A, N, R) ..... 3 credit hours

Prerequisite: AR 221 or permission of instructor

Continuation of AR 221. (6 hours per week)

AR 223 Oil and Acrylic Painting (A, N, R) ..... 3 credit hours

Prerequisite: AR 222 or permission of instructor

Continuation of AR 221 or 222. (6 hours per week)

AR 231 Ceramics I (A, R) ..... 3 credit hours

Opportunity for students to discover their potential in design as applied to pottery. Various methods of building and glazing ceramic forms are made possible through laboratory experiences. (6 hours per week)

AR 232 Ceramics II (A, R) ..... 3 credit hours

Prerequisite: AR 231 or permission of instructor

(6 hours per week)

AR 233 Ceramics III (A, R) ..... 3 credit hours

Prerequisite: AR 232 or permission of instructor

(6 hours per week)

AR 235 Textile Design and Weaving I (A) ..... 2 credit hours

Historical development of looms, weaving and textile design techniques, studio experience in weaving, batik and other textile design. (4 hours per week)

AR 236 Textile Design and Weaving II (A) ..... 2 credit hours

Prerequisite: AR 235 or permission of instructor

Continuation of AR 235. (4 hours per week)

AR 237 Textile Design and Weaving III (A) ..... 2 credit hours

Prerequisite: AR 236 or permission of instructor

Continuation of AR 236. (4 hours per week)

AR 241 History of Art (R) ..... 3 credit hours

Earliest Stone Age to the Roman Era: Painting, sculpture, architecture, minor arts.

AR 242 History of Art (R) ..... 3 credit hours

Beginning of the Roman Era to the 18th Century; Architecture, painting, sculpture, minor arts.

AR 243 History of Art (R) ..... 3 credit hours

Eighteenth Century to Contemporary. European and American, Primitive African and Oceanic: Architecture, painting, minor arts.

AR 245 Printmaking I (A, N, R) ..... 3 credit hours

Prerequisite: AR 105, 106, 107 Basic Design or permission of instructor

A study of basic hand printing techniques: Lithography, etching, wood engraving, block printing and silkscreen printing. (6 hours per week)

AR 246 Printmaking II (A, N, R) .... 3 credit hours

Prerequisite: AR 245 or permission of instructor

Continuation of AR 245. (6 hours per week)

AR 247 Printmaking III (A, N, R) .... 3 credit hours

Prerequisite: AR 246 or permission of instructor

Continuation of AR 246. (6 hours per week)

AR 251 Metalsmithing and Jewelry I (A, R) ..... 3 credit hours

Jewelry design, basic construction and surface treatment techniques in sterling silver. (6 hours per week)

AR 252 Metalsmithing and Jewelry II (A, R) ..... 3 credit hours

Prerequisite: AR 251 or permission of instructor

Continuation of AR 251. (6 hours per week)

AR 253 Metalsmithing and Jewelry III (A, R) ..... 3 credit hours

Prerequisite: AR 252 or permission of instructor

(6 hours per week)

AR 255 Basic Sculpture I (A, R) .... 3 credit hours

Prerequisite: One year of basic design or permission of instructor

A creative approach to three dimensional design in sculpture; modeling, assembling, and construction in a variety of materials. (6 hours per week)

AR 256 Basic Sculpture II (A, R) ... 3 credit hours

Prerequisite: AR 255 or permission of instructor

Continuation of AR 255. (6 hours per week)

AR 257 Basic Sculpture III (A, R) .. 3 credit hours

Continuation of AR 256. (6 hours per week)

AR 261 Second Year Painting (A, N, R) ..... 3 credit hours

Prerequisite: AR 213 and 223 or permission of instructor

A continuation of AR 213 and 223. This course provides an opportunity for the advanced student to work with water color, oil and acrylic, or mixed media through problems involving landscape, still life, abstraction and non-objective painting. (6 hours per week)

AR 262 Second Year Painting (A, N, R) ..... 3 credit hours
Prerequisite: AR 261 or permission of instructor
Continuation of AR 261. (6 hours per week)

AR 263 Second Year Painting (A, N, R) ..... 3 credit hours
Prerequisite: AR 262 or permission of instructor
Continuation of AR 262. (6 hours per week)

AR 271 Second Year Ceramics I (A, R) ..... 3 credit hours
A continuation of AR 233. This course provides an opportunity for advanced ceramics in second year, creative design in wheel thrown pottery forming processes and glaze compositions. (6 hours per week)

AR 272 Second Year Ceramics II (A, R) ..... 3 credit hours
Prerequisite: AR 271 or permission of instructor
(6 hours per week)

AR 273 Second Year Ceramics III (A, R) ..... 3 credit hours
Prerequisite: AR 272 or permission of instructor
(6 hours per week)

AR 281 Art History (R) ..... 3 credit hours
Survey of American art from the Puritan beginnings to contemporary times.

AR 282 Art History (R) ..... 3 credit hours
Continuation of AR 281 with emphasis on an in-depth study of an area of art of student's choice.

AR 283 Art History (R) ..... 3 credit hours
Continuation of AR 282 with further independent study.

ENGLISH

IL 090 Communications Laboratory (A, N, R) .....
This program is designed to guide and assist students who have difficulty in any of the communication skills — especially in reading, spelling, written composition and oral communication (including listening). Through counseling and tests these laboratory experiences help the student recognize his problem, define it, and then, through highly individualized teaching, work toward some meaningful solution of that problem in order to prepare him to go on with his college work.

EG 095 Comprehensive Business Communications (R) ..... 3 credit hours
A special course designed for the short-term business students who must improve their skill in the mechanics of transcribing business letters. Intensive practice in proofreading and correcting business correspondence will be provided. (5 class hours per week, plus lab assignments as directed by the instructor).

EG 096 English as a Second Language (A, N, R) ..... 5 credit hours
This course is designed to lead the student to mastery of the sound system of English along with the mastery of the devices which English uses structurally and the fundamental matters of word order and the patterns of form. (5 hours per week)

EG 097 English as a Second Language (A) ..... 5 credit hours
Designed to develop the student's ability to use correct parts of speech in verbal and written sentences. Pronunciation, rythm, and intonation are stressed as important patterns in communication. Individualized instruction is correlated to each student's other classes.

EG 098 English as a Second Language (A) ..... 5 credit hours
Designed to develop college level reading, note-taking, and vocabulary skills. Composition and speech skills are taught simultaneously as products of English thought patterns. Individualized instruction is correlated to each student's other classes.

EG 100 Study Skills (N, R) ..... 1 credit hour
Objectives are to introduce basic study skills.

EG 102 Workshop in Language Fundamentals (A, N, R) .... 3 credit hours
The course is designed to give the student basic writing skills. The course will cover basic grammar, punctuation and syntax. Ample exercise and individualized instruction will ensure student progress in the development of fundamental writing skills needed in college or work world.

EG 106 Occupational Communication (A, N, R) ... 3 credit hours
Designed to develop the occupational student's skills and understanding in reading and writing. Special emphasis is placed on business and industrial needs. EG 106 develops these skills in written communication and focuses on the student's abilities to read and write within his chosen field.

EG 107 Occupational Communication (A, N, R) ... 3 credit hours
Designed to develop the student's abilities in oral communication (speaking and listening) in his chosen field.

EG 108 Occupational Communication (A, N, R) ... 3 credit hours
The focus is on introductory technical writing and will cover letters, progress reports and informal technical reports.

EG 111 English Composition (A, N, R) ..... 3 credit hours
Designed to introduce the student to the broad field of communication and to develop ability in the writing of short papers and reports through the application of the techniques of clear thinking: definition, classification, structure and process analysis, and comparison/contrast.

EG 112 English Composition (A, N, R) ..... 3 credit hours
Prerequisite: EG 111 or equivalent
Designed to teach the student to write reports and research papers. The emphasis is on the library paper: (1) defining the problem, (2) collecting data, (3) organizing logical sequence, (4) recording (footnoting, editing, typing, etc.).

EG 113 English Composition (A, N, R) ..... 3 credit hours
Designed to develop the student's understanding of crea-

tive forms in all areas of communication. This includes (1) introduction to the characteristics of creativity, (2) meaningful forms of creative expression and application and (3) experiences in the search for personal expression, with particular emphasis on contemporary involvement. EG 111 and 112 are not prerequisites for EG 113.

EG 114 Creative Writing (A, N, R) ..... 3 credit hours

The writing of creative papers and the creative process generally. Students are exposed to a variety of techniques primarily applicable to creative forms; poetry, essays, short stories, and others.

EG 121 Communications for Health Occupations (N) ..... 3 credit hours

Designed to give the student insights into the basic communication skills needed for effective performance in the Health Occupations areas of work. The course will cover the communication process, minimum standards for written assignments, documentation techniques, prerequisites for writing, organizational techniques, structure of written reports, techniques for efficient communication, punctuation problems, sentence patterns and variations, and job seeking communications. Students will be given both lecture, and individual instruction in all these areas of communications, and they will be given an opportunity to deal with subjects related to their own world of work when they write.

EG 131 Business Communications I (A, N, R) ..... 3 credit hours

Presents essential principles involved in preparing business letters and other types of business communications—purpose, style, structure and use of correct, forceful English. Intensive practice in the mechanics of language and vocabulary used by management and office personnel is provided.

EG 132 Business Communications II (A, N, R) ..... 3 credit hours

Prerequisite: EG 131 or equivalent

Applies the business technique to communications that require problem solving and an understanding of human relations in a business situation. Students will compose and evaluate the various kinds of business letters that are commonly used by businessmen. Business reports, interoffice bulletins, news releases and other forms of business composition will receive attention. The legal and ethical responsibilities involved in written communication will be discussed.

EG 133 Business Communications III (A, N, R) ..... 3 credit hours

Prerequisite: EG 132 or equivalent

Applications of the writing, speaking and listening skills learned in EG 131 and 132 (Business Communications) are covered in this course. Oral business reporting for staff meetings, public speaking, correct telephone usage, techniques in business dictation, listening for notetaking and other business facets of written and oral communications are practiced.

EG 200 Advanced Composition (A, R) ..... 3 credit hours

The techniques of clear thinking and organization as implemented by the basic concepts of EG 111 and EG 112 applied to expository writing with special attention to syntactic and rhetorical development.

EG 201 Survey of Communication (A, R) ..... 3 credit hours

Focuses on the development of basic communication habits as aids to better communication. The communication model, levels of communicative interdependence, empathy, origin of meanings, general semantics, dimensions of observations and judgments — are studied as a new approach to human understanding and improvement of human relations.

EG 214 Advanced Creative Writing (A, R) ..... 3 credit hours

An advanced course in creative writing. The course will channel individual student potential into advanced creative expression, self-enrichment with resultant publishable materials.

EG 220 The Rhetoric of Social Protest (A) ..... 3 credit hours

An analytical and critical study of the rhetoric of social protest in America with special emphasis on activism.

EG 250 Technical Writing (A, N, R) ..... 3 credit hours

Prerequisite: Successful completion of a sequence of 3 quarters of Occupational Communication, or Business Communications or English Composition or equivalent

Designed as a professional introductory course in technical writing. This course will teach the student to prepare a formal technical report for the printer through (1) the development of definition and analyses, (2) the definition of problems, (3) collection and organization of data, (4) mastery of structure, style and mechanics of the written report, and (5) the use of graphics.

EG MANUAL

EG 151 Beginning Manual Communications (N, R) .... 3 credit hours

A beginning course in the language of signs. Emphasis is on the development of receptive and expressive skills in the use of the manual alphabet, together with practice in the use of basic signs.

EG 152 Intermediate Manual Communications (N, R) .... 3 credit hours

Refinement of skills developed in the beginning Manual Communications course. Extensive practice in the use of the sign language, with development of colloquial expressions. Increased practice in the reading of signs and fingerspelling.

EG 153 Advanced Manual Communications (N, R) .... 3 credit hours

Introduction to the role of sign languages as a medium for interpreting. Simulated interpreting situations will provide the vehicle for the development of fluid manual communication skills.

EG 251 Specialized Manual Communications (N, R) .... 3 credit hours

This course, designed for students already familiar with the language of signs, will provide a number of different interpreting situations for observation and practice in order to develop a broad scope of interpreting skills.

EG 252 Supervised Practicum in Interpreting-I (N, R) ..... 3 credit hours

Using actual classroom situations, students will have the

opportunity to apply their interpreting skills by translating lectures for deaf students enrolled in a variety of courses; observation and evaluation will be conducted by professional interpreters. (5 hours per week)

EG 253 Supervised Practicum in Interpreting-II (N, R) ..... 6 credit hours

A concluding course to bring together all of the many facets of interpreting; continuation of professionally guided classroom and laboratory interpreting for the deaf. (12 or more hours per week as determined by the Coordinator)

FRENCH

FR 100 Basic Applied French (A, R) ..... 2 credit hours

Designed for those who wish to learn basic conversational patterns for enjoyment and for travel or for simple business needs. Language background helpful but not essential. (2 hours per week, plus laboratory)

FR 101 Basic Applied French (A, R) ..... 2 credit hours

Continuation of FR 100.

FR 102 Basic Applied French (A, R) ..... 2 credit hours

Continuation of FR 101.

FR 111 First Year French (A, R) .... 5 credit hours

Designed to develop basic principles of grammar and syntax; reading and writing of simple French, correct pronunciation and rudimentary conversation.

FR 112 First Year French (A, R) .... 5 credit hours

Prerequisite: FR 111

Continuation and Expansion of FR 111.

FR 113 First Year French (A, R) .... 5 credit hours

Prerequisite: FR 112

Continuation and Expansion of FR 112 and additional reading materials.

FR 211 Intermediate French (A, R) ..... 3 credit hours

Prerequisite: FR 113 or equivalent

This course will (1) review and reinforce skills and knowledge gained in first year French, (2) develop further skills in listerning, speaking, reading, and writing, (3) develop sense of linguistic structure and increase vocabulary and (4) provide readings in plays, short stories and poems.

FR 212 Intermediate French (A, R) ..... 3 credit hours

Prerequisite: FR 211

Continuation and Expansion of FR 211.

FR 213 Intermediate French (A,R) ..... 3 credit hours

Prerequisite: FR 212

Continuation and expansion of FR 212.

GERMAN

GR 100 Basic Applied German (R) ..... 2 credit hours

This course is for those who wish to learn basic conversational patterns for enjoyment, for travel, or for simple business needs.

GR 101 Basic Applied German (R) ..... 2 credit hours

Continuation of GR 100.

GR 102 Basic Applied German (R) ..... 2 credit hours

Continuation of GR 101.

GR 111 First Year German (R) ..... 5 credit hours

Designed to develop basic principles of grammar and syntax; reading and writing of simple German, correct pronunciation and rudimentary conversation.

GR 112 German II (R) ..... 5 credit hours

Continuation and Expansion of GR 111.

GR 113 German III (R) ..... 5 credit hours

Continuation and Expansion of GR 112 and additional reading materials.

GR 211 Intermediate German (R) ..... 3 credit hours

This course will (1) review and reinforce skills and knowledge gained in first year German, (2) develop further skills in listening, speaking, reading, and writing, (3) develop sense of linguistic structure and increase vocabulary and (4) provide readings in plays, short stories and poems.

GR 212 Intermediate German (R) ..... 3 credit hours

Continuation and Expansion of GR 211.

GR 213 Intermediate German (R) ..... 3 credit hours

Continuation and Expansion of GR 212.

HUMANITIES

HU 145 Chicano Culture (A) ..... 3 credit hours

Story of the Chicano from pre-Colombian to contemporary times. Includes the study of the social, cultural, political and economic heritage of the Chicano and his contribution to American society.

HU 146 Black Culture (A) ..... 3 credit hours

Role of the Black man in American culture and traditions which give rise to current dilemma confronting the American community.

HU 147 Folklore of Mexico and the Southwest (R) ..... 3 credit hours

Study of the Indian Folklore of Mexico and the Southwest and its fusion with Hispanic Folklore. (3 hours per week)

HU 201 Pop Culture (A,R) ..... 3 credit hours

A close look at the assumptions made by mass-produced artifacts: movies, TV, magazines, comics, books and an effort to judge them. Students find out what's really going on by means of field trips, individual projects, and discussions.

HU 202 The Movies (Cinema) (A,R) ..... 3 credit hours

This course provides intensive study of the movies — considered the newest art, as a unique 20th century form of communication, and as a reflection of the values and problems of our time. Students will see short movies weekly, will attend several features, and will conduct a research project.

HU 211 Humanities (A,R) ..... 5 credit hours
Based on a comparative study of world mythology, religion, and symbolism and the arts that they have produced.

HU 212 Humanities (A,R) ..... 5 credit hours
A comparative study of the arts and crafts of the world and the ways in which they influenced human development and the ways in which human development has influenced them.

HU 213 Humanities (A,R) ..... 5 credit hours
A comparative study of the general themes and methodology of Western and Eastern philosophies and the cultural patterns that form their matrix.

HU 215 Ideas in a Changing Society (A,R) ..... 3 credit hours
An inter-disciplinary course dealing with current issues placed in historical and ideological perspective. The instructor will be aided by qualified guest speakers and specialists who will discuss various intellectual disciplines, including religion, philosophy, psychology, sociology, education, politics and civil rights.

JOURNALISM

JL 221 Introduction to Journalism (R) ..... 3 credit hours
An introduction to the basic principles of journalism. This is an applied course and will involve work on a college publication or a minimum of 3 hours of class, plus 3 hours of laboratory per week.

JL 222 Introduction to Journalism (R) ..... 3 credit hours
Prerequisite: JL 221
A continuation of JL 221.

JL 223 Introduction to Journalism (R) ..... 3 credit hours
Prerequisite: JL 222
A continuation of JL 222.

LITERATURE

LI 125 The Black Writer in America (A) ..... 4 credit hours
A beginning course in the study of Black literature, which includes the methods of evaluation and analysis essential for understanding and appreciating the literary contribution of the Black writer in America.

LI 141 Introduction to Literature (A,N,R) ..... 3 credit hours
Short Story — an overview and selected readings.

LI 142 Introduction to Literature (A,N,R) ..... 3 credit hours
Novel — an overview and selected readings.

LI 143 Introduction to Literature (A,N,R) ..... 3 credit hours
Poetry — an overview and selected readings.

LI 144 Afro-American Literature (A,R) ..... 3 credit hours
Study of the contribution of Afro-American writers to American literature and civilization.

LI 145 Literature for Children (A,N,R) ..... 3 credit hours
A general survey of prose and poetry suitable for young people.

LI 147 Contemporary Chicano Literature in Translation (A) ..... 3 credit hours
A contemporary look at the Southwest through the works of its authors. Attention to the writings of the present and how they underline the Chicano's search for an identity.

LI 200 Adam's Rib Speaks (N) .... 3 credit hours
This course considers the role of the woman in society through literature from the past to the present. It deals with literature both by, and about, the woman in society. Special emphasis is placed on the qualities of the woman in literature that make her unique and important in new and vital ways.

LI 210 Science Fiction (A) ..... 3 credit hours
An examination of current trends in science fiction: robots, computers, time travel, space operas, cloning, the occult. This course is designed to give students the literary interpretation of the technological, progress-oriented world in which they live with an emphasis on how technical advances and futuristic planning affect human values and lives.

LI 211 Fantasy (A) ..... 3 credit hours
The course uses plays, poems, stories, and fables from all over the world in an attempt to understand why men need to write and read fantasy and why it is the foundation of a preponderance of great fiction.

LI 231 Ethnic Literature in America (A,N,R) ..... 3 credit hours
Concentration on the literature of Black writers in America. The approach will be through general themes, chronological considerations, comparison and genre.

LI 232 Ethnic Literature in America (N,R) ..... 3 credit hours
Concentration on the literature of Chicano writers in America. The approach will be through general themes, chronological considerations, comparison and genre.

LI 233 Ethnic Literature in America (R) ..... 3 credit hours
Concentration on the literature of Oriental writers in America. The approach will be through general themes, chronological considerations, comparison and genre.

LI 234 Ethnic Literature in America (R) ..... 3 credit hours
Concentration on the literature of the American Indian. The approach will be through general themes, chronological considerations, and genre.

LI 241 Survey of American Literature (A,N,R) ..... 3 credit hours
By study of major authors, this quarter will emphasize representative themes and works that reflect the literature of the American Experience from the beginning through the Civil War.

LI 242 Survey of American Literature (A,N,R) ..... 3 credit hours
By in-depth study of major authors, this quarter will emphasize representative themes and works that reflect the literature of the American Experience from the Civil War to World War I.

LI 243 Survey of American Literature (A,N,R) ..... 3 credit hours

By in-depth study of major authors, this quarter will emphasize representative themes and works that reflect the literature of the American Experience from World War I to the present.

LI 247 English Literature (A,R) .... 3 credit hours

Critical insignts into the major works from the Anglo-Saxon up to the Elizabethan Period.

LI 248 English Literature (A,R) .... 3 credit hours

This quarter concentrates on major works of the Elizabethan Period to the Romantic Period.

LI 249 English Literature (A,R) .... 3 credit hours

This quarter concentrates on the Romantic Period to the present.

LI 261 World Literature — Asia (A,N,R) ..... 3 credit hours

A study of development of Asiatic literature.

LI 262 World Literature — Western Europe (A,N,R) ..... 3 credit hours

A study of development of Western European literature.

LI 263 World Literature — Eastern Europe (A,N,R) ..... 3 credit hours

A study of development of Eastern European literature.

LI 264 World Literature — Africa (N,R) ..... 3 credit hours

A study of development of African literature.

LI 265 World Literature — Latin America (N,R) ..... 3 credit hours

A study of development of Latin American literature.

MUSIC

MU 100 Music Appreciation (A,N,R) ..... 3 credit hours

General overview of music from its inception to the present day. Some general and detailed knowledge of composers, compositions, periods, styles, etc.

MU 111 Theory and Harmony (A,N) ..... 5 credit hours

Study of theory and harmony of music dealing with scales, meter, rhythm, intervals, chord structure, voice leading, chord succession and part writing. Course completion will require keyboard work and laboratory work in sight-singing and ear-training, outside of class time. (4 hours lecture, 3 hours laboratory). *A basic music test will be administered. Those students with a deficiency will be REQUIRED TO COMPLETE AN INTENSIVE 4-WEEK WORKSHOP (no credit) concurrently.*

MU 112 Theory and Harmony (A,N) ..... 5 credit hours

Prerequisite: MU 111 Continued study of harmony and theory with emphasis on diatonic and secondary seventh chords. Sight-singing aptitude and ability to take musical dictation. Course completion will require keyboard work and laboratory work in sight-singing and ear-training, outside of class time. (4 hours lecture, 3 hours laboratory).

MU 113 Theory and Harmony (A,N) ..... 5 credit hours

Prerequisite: MU 112

Continued work with the materials of the first two quarters with emphasis on harmonizing sopranos, beginning modulation and some creative writing. Course completion will require keyboard work and laboratory work in sight-singing and ear-training, outside of class time. (4 hours lecture, 3 hours laboratory)

MU 120 Music of Mexico and the Southwest (A) ..... 3 credit hours

An examination of selected works in Mexican music from pre-Colombian time to present, concentrating on regional works and on Twentieth Century composers and their relationship to Chicano society.

MU 140 Chorus (A,N) ..... 1 credit hour

Study of choral literature from the classics to the modern day and from religious through secular music. Special emphasis on rhythm and tone. Can be repeated up to 6 hours credit.

MU 145 Music for Children (A,N,R) ..... 3 credit hours

Introductory study of the fundamentals of music. Emphasis is placed on selection of activities and methods for musical participation by the children rather than on perfection of performance skills. (A general survey of materials, activities and instruments pertinent to the area)

MU 151 152,153 — Piano Class for the Keyboard Beginner (A,N) ..... 1 credit hour

For students with no formal keyboard training. Will lead to an understanding of the instrument, its limits, its possibilities. Appropriate literature will be used. Will require at least three hours outside practice per week.

MU 161, 162, 163 — Voice Class (A,N) ..... 1 credit hour

For students with no formal vocal training. Will lead to an understanding of the vocal instrument, its limits, its possibilities. Appropriate literature will be used. Will require at least three hours outside practice per week.

MU 165, 166, 167 — Guitar Class (A,N) ..... 1 credit hour

For students with no formal guitar training. Will lead to an understanding of the instrument, its limits, its possibilities. Appropriate literature will be used. Will require at least three hours outside practice per week.

MU 205 Elementary Conducting (N) ..... 2 credit hours

Introduction to conducting patterns and techniques.

MU 206 Instrumental Conducting (N) ..... 2 credit hours

Prerequisite: MU 205

Further work on conducting emphasizing individual work on instrumental music.

MU 207 Choral Conducting (N) ..... 2 credit hours

Prerequisite: MU 205

Further work on conducting, emphasizing individual work on choral music.

NOTE: MU 205, 206, 207 (needed for those transfer students preparing for music major or minor) may also be used for teacher aides.

MU 211 Advanced Theory and Harmony (A,N) ..... 5 credit hours

Prerequisite: MU 113 or equivalent

A continuation of Theory and Harmony MU 113 emphasizing traditional harmonies, chromatic harmony and embellishments. Course completion will require keyboard work and laboratory work in sight-singing and ear-training, outside of class time.

MU 212 Advanced Theory and Harmony (A,N) ..... 5 credit hours
Prerequisite: MU 211 or equivalent

Continuation of MU 211 emphasizing modern harmonies. Course completion will require keyboard work and laboratory work in sight-singing and ear-training, outside of class time.

MU 213 Advanced Theory and Harmony (A,N) ..... 5 credit hours
Prerequisite: MU 212 or equivalent

Continuation of MU 212 emphasizing original composition and analysis. Course completion will require keyboard work and laboratory work in sight-singing and ear-training, outside of class time.

MU 241 Introduction to Music (R) .. 3 credit hours

A study of musical styles, forms, developments, literature and composers by historical periods. Outside listening to records required. For music majors and qualified non-music majors, by consent of instructor. Antiquity through Baroque.

MU 242 Introduction to Music (R) .. 3 credit hours
Prerequisite: MU 241

Continuation of MU 241, emphasizing Classical and Romantic.

MU 243 Introduction to Music (R) .. 3 credit hours
Prerequisite: MU 242

Continuation of MU 242, emphasizing Impressionistic and Contemporary.

MU 251 Piano Class for Advanced Keyboard Beginner (A,N) ... 1 credit hour
Prerequisite MU 252, 253, and 153 or equivalent

Completion will lead to more technical expertise and development of confidence and style. Ensemble playing will be stressed with work in transposition and improvisation. Will require at least 3 hours outside practice per week.

MU 252 Piano Class for Advanced Keyboard Beginner (A,N) ... 1 credit hour
Prerequisite: MU 251 or equivalent

Completion will lead to more technical expertise and development of confidence and style. Ensemble playing will be stressed with work in transposition and improvisation. Will require at least 3 hours outside practice per week.

MU 253 Piano Class for Advanced Keyboard Beginner (A,N) ... 1 credit hour
Prerequisite: MU 252 or equivalent

Completion will lead to more technical expertise and development of confidence and style. Ensemble playing will be stressed with work in transposition and improvisation. Will require at least 3 hours outside practice per week.

PHYSICAL EDUCATION

PE 101 First Aid (A,N,R) ..... 1 credit hour

The Standard American Red Cross First Aid Course; a basic course stressing the prevention of accidents and proper care of accident victims. The student will qualify for the Standard American Red Cross Certificate (card) upon satisfactory completion of the course.

PE 110 Group Activities Men (A,N,R) ..... 1 credit hour

This course is designed to offer participation and instruction in such activities as soccer, touch football and basketball.

PE 112 Group Activities Women (A,N,R) ..... 1 credit hour

Participation in activities designed to develop poise, improve physical fitness and teach skills of various team sports.

PE 120 Beginning Conditioning Activities (A,N,R) ..... 1 credit hour

A slimnastics program with emphasis on fundamental movements, body mechanics and conditioning exercises on mats.

PE 121 Intermediate Conditioning Activities (A,N,R) ..... 1 credit hour

Continuation of PE 120.

PE 122 Beginning Archery (A,N,R) ..... 1 credit hour

Class designed to teach basic skills and techniques including target competition, field shooting, equipment used and terminology.

PE 123 Intermediate Archery (A,N,R) ..... 1 credit hour

Continuation — prerequisite PE 122.

PE 124 Beginning Bowling (A,N,R) ..... 1 credit hour

Designed to instruct students in basic skills of bowling. This course will provide instruction in the recreational activity.

PE 125 Intermediate Bowling (A,N,R) ..... 1 credit hour

Continuation — Prerequisite PE 124.

PE 126 Beginning Golf (A,N,R) ..... 1 credit hour

Introduction to golf, its origin and development, with emphasis on basic skills and techniques.

PE 127 Intermediate Golf (A,N,R) ... 1 credit hour

Continuation — Prerequisite PE 126.

PE 128 Swimming (A,N,R) ..... 1 credit hour

Emphasis is on skill and proficiency in beginning, intermediate and advanced swimming.

A. Lifesaving and Water Safety .... 1 credit hour
Red Cross lifesaving and water safety instructor's certification. Prerequisites: PE 128 and 128 B.

B. Water Related Activities ..... 1 credit hour
Emphasis is on skill and proficiency in a variety of aquatic activities; including water polo, water basketball and other water contests. Prerequisite: PE 128.

PE 129 Tennis (A,N,R) ..... 1 credit hour

A course offering instruction in beginning tennis techniques.

PE 130 Modern Dance (A,N,R) ..... 1 credit hour

Emphasis on modern dance techniques. Vocabulary of movement and skills to develop elasticity, balance and coordination of the body.

PE 131 Social and Folk Dance (A,N,R) ..... 1 credit hour

Emphasis on fundamental rhythms and basic structure of social and folk dances.

PE 132 Skiing (A,N,R) ..... 1 credit hour

Course will offer basic instruction in skiing, including beginning, intermediate and advanced lessons. Classes will be held at major ski areas, and rental charge will be required for this course.

PE 133 Intermediate Skiing (A,N,R) ..... 1 credit hour

Prerequisite: PE 132

Continuation of PE 132.

PE 134 Scuba Diving (A,N,R) ..... 1 credit hour

Course designed to offer basic instruction in scuba diving. Aqua charges will be required for participants in this class and individuals must furnish own scuba diving equipment or rent.

PE 135 Ice Skating (A, N, R) ..... 1 credit hour

A course providing instruction in the recreational activity of ice skating.

PE 136 Self-Defense (A, N, R) ..... 1 credit hour

Class offered to teach basic skill and technique on the art of self-defense.

PE 137 Horsemanship (A, R) ..... 1 credit hour

Beginning instruction in Western style riding and horsemanship.

PE 138 Canoeing (A, R) ..... 1 credit hour

Course will offer basic strokes of canoeing, principles of water safety and self-rescue.

PE 139 Yoga (A, N, R) ..... 1 credit hour

Basic concepts of ancient Eastern training of body, mind and spirit through physical culture, proper breathing and meditation techniques.

PE 140 Tumbling-Gymnastics (A, R) ..... 1 credit hour

Practical experience and sequential development of stunts, tumbling and apparatus activities.

PE 141 Hiking (N) ..... 1 credit hour

Will emphasize proper conditioning, hiking and walking techniques, climbing techniques, emergency procedures, choice and use of equipment and nature study.

PE 142 Basic Mountaineering (A, R) ..... 1 credit hour

Basic instruction in mountain climbing safety and survival.

NOTE: PE courses may be repeated to gain and develop proficiency.

READING

RD 101 Skills for College Reading I (A, N, R) ..... 3 credit hours

Promote reading efficiency through development of skills and improved comprehension.

RD 102 Skills for College Reading II (A, N, R) ..... 3 credit hours

Emphasis on practicing various skills of efficient reading. Individual and group needs will be recognized in comprehension skills, study reading techniques, vocabulary development, skimming/skanning skills and flexibility.

RD 120 Speed Reading (A, N, R) ... 2 credit hours

Speed reading is designed to increase speed, develop a more flexible reading pace and promote better comprehension.

RD 200 College Reading (A, R) .... 3 credit hours

This course is designed for students who have normal reading ability or better than normal but would like to improve their speed and comprehension as well as develop analytical techniques.

SPEECH

S 102 Motivational Speech (R) ... 3 credit hours

To teach basic principles of sales and persuasive speech as applied to specific occupations and problems.

S 110 Introduction to Speech (A,N,R) ..... 3 credit hours

A beginning course in communication and public speaking. Completion of course requirements in language, speaking poise, speech composition, mastery of listening techniques and ability to express ideas in order to enable students to become more effective speakers.

S 111 Introduction to Theatre Arts (A,N) ..... 3 credit hours

Drama program introduces the student to the basic principles of acting, scenery and costume construction, elementary problems of production and sales and promotion.

S 112 Introduction to Theatre Arts (A,N) ..... 3 credit hours

Continuation of S 111.

S 113 Introduction to Theatre Arts (A,N) ..... 3 credit hours

Continuation of S 112.

S 131 Forensic Activity (N) ..... 3 credit hours

Prerequisite: S 110 or equivalent

Course will acquaint students with techniques of debate and extemporaneous speaking. Debate activities are encouraged.

S 132 Forensic Activity (N) ..... 3 credit hours

Prerequisite: S 110 or equivalent

Course will acquaint students with techniques used in oratory and in oral interpretation.

S 133 Oral Interpretation of Literature (A,N) ..... 3 credit hours

Emphasis on learning to select, analyze and perform poetry, drama, fiction and non-fiction for the beginner.

S 134 Reader's Theatre (A,N,R) ..... 3 credit hours

Prerequisite: S 133

For the advanced student of oral interpretation. Emphasis on learning to select, cut, cast, produce and direct small scale production.

S 210 Advanced Public Speaking (A,N,R) ..... 3 credit hours

Prerequisite: S 110

The study of advanced persuasion techniques including those skills necessary for argumentation. Improving the ability to analyze problems logically with emphasis on persuasion. Investigation of two-way and group discus-

sion skills to determine the best methods of problem solving.

S 221 Survey of Theatre (A,N,R) .. 3 credit hours
Survey of great plays, playwrights, performers and critics. Includes weekly workshops on fundamentals of playreading, acting, and dramatic production. Features historical backgrounds of dramatic creativity both lecture and film.

S 222 Survey of Theatre (A,N,R) .. 3 credit hours
Continuation of S 221.

S 223 Survey of Theatre (A,N,R) .. 3 credit hours
Continuation of S 222.

S 231 Theatre Improvisation (A,R) ..... 3 credit hours
Students who have already had experience in theatre and theatre courses will review the history of improvisation in theatre and have in the various techniques and approaches through actual production.

SKILL CENTER INSTRUCTIONAL PROGRAM

Though designed primarily to assist Skill Center students in pre-vocational preparation, any student who can benefit from individualized work in the following courses is welcome to enroll.

SK 100 Reading Improvement (A,N,R) ..... 3 credit hours
In order to determine special needs, each student's reading ability will first be diagnosed and evaluated. Adequate word attack and comprehension skills will be developed. Where appropriate, training to increase speed will be given. Special attention will be paid to developing good study techniques with all students. (Minimum 3 hours per week)

SK 101 Pre-Vocational Mathematics (A,N,R) ..... 3 credit hours
An individualized program designed to prepare the student for the entering level of math required for his occupation. For students whose curricula call for math courses, specific preparation will be given for Developmental Math, Math for Business and Industry, Introductory Algebra and Accounting III. (Minimum 3 hours per week)

SK 102 Pre-Vocational Communication (A,N,R) .... 3 credit hours
An individualized program designed to prepare the student for the entering level of math required for his occupation. For students whose curricula call for math courses, specific preparation will be given for Developmental Math, Math for Business and Industry, Introductory Algebra and Accounting III. (Minimum 3 hours per week)

SK 103 Spelling (A,N,R) ..... 3 credit hours
This course will develop awareness of occupational information. Stress will be on thinking, oral communication and listening to other's ideas to develop better social awareness as it applies to the job and everyday life. (Minimum 3 hours per week)

SK 104 Occupational Information (A,N,R) ..... 3 credit hours
This course will develop awareness of occupational information. Stress will be on thinking, oral communication and listening to other's ideas to develop better social awareness as it applies to the job and everyday life. (Minimum 3 hours per week)

SK 105 GED preparation (A,N,R) ... 3 credit hours

SK 106 Study Skills (A,R) ..... 2 credit hours

SPANISH

SP 100 Basic Applied Spanish (A,N,R) ..... 2 credit hours
For those who wish to learn basic conversational Spanish for enjoyment or for travel or for simple business needs.

SP 101 Basic Applied Spanish (A,N,R) ..... 2 credit hours
Continuation of SP 100.

SP 102 Basic Applied Spanish (A,N,R) ..... 2 credit hours
Continuation of SP 101.

SP 111 First Year Spanish (A,N,R) ..... 5 credit hours
Designed to develop basic principles of grammar and syntax; reading and writing of simple Spanish, correct pronunciation and rudimentary conversation.

SP 112 First Year Spanish (A,N,R) ..... 5 credit hours
Prerequisite SP 111 Continuation and Expansion of SP 111.

SP 113 First Year Spanish (A,N,R) ..... 5 credit hours
Prerequisite: SP 112
Continuation and Expansion of SP 112 and additional reading materials.

SP 211 Intermediate Spanish (A,N,R) ..... 3 credit hours
This course will (1) review and reinforce skills and knowledge gained in first year Spanish, (2) develop further skills in listening, speaking, reading, and writing, (3) develop sense of linguistic structure and increase vocabulary, and (4) provide reading in plays, short stories and poems.

SP 212 Intermediate Spanish (A,N,R) ..... 3 credit hours
Prerequisite: SP 112 or SP 113 Continuation of Expansion of SP 211.

SP 213 Intermediate Spanish (A,N,R) ..... 3 credit hours
Continuation and Expansion of SP 212.

INDEPENDENT STUDY

299 Independent Study (A,N,R) ..... 1 to 3 credit hours
Independent study (Course No. 299) is available in each of the major areas within the Division of Communication and Arts (i.e., English, foreign language, speech, etc.) except physical education and communications laboratory. The course provides opportunity for the serious-minded student to engage in intensive study and research on a specific topic under the direction of a qualified faculty member. Prerequisite for enrollment is permission of the Director of the Division of Communication and Arts and the assigned instructor. The number of quarter hours of credit (1-3) will be determined by the Division Director.

DIVISION OF SCIENCE AND MATHEMATICS

Biology	**A, N, R**
Chemistry	**A, N, R**
Earth Science	**R**
Mathematics	**A, N, R**
Physics	**A, N, R**
Science	**N, R**
Independent Study	**A, N, R**

Note: Auraria Campus—A
North Campus—N
Red Rocks Campus—R

DIVISION OF SCIENCE AND MATHEMATICS

COURSE DESCRIPTIONS

Where a course description does not indicate the campus by the key A, N or R, we would suggest you call the campus of your choice for information.

BIOLOGY

B 100 Basic Human Biology (A, N, R) ..... 4 credit hours

A survey course for Health Occupations students and others needing an understanding of basic biological and chemical concepts as applied to the human body. The basic cellular and chemical aspects of life are related to a brief survey of body organ systems. Primarily for students planning to enroll in B 123 Human Anatomy and Physiology. (3 hours of lecture and 3 hours of laboratory per week)

B 105 Microbiology for Dental Assistants (N) ..... 1 credit hour

Corequisite: To be taken concurrently with DA 115

A mini course emphasizing micro-organisms of importance to dentistry and methods of controlling bacteria. (1 hour of lecture and 1 hour of laboratory per week)

B 110 Introduction to the Environment (A, R) ..... 3 credit hours

A study of ecosystems, population dynamics, man's impact upon ecosystems, and possible solutions to the problems posed to man in his environment. (3 hours of lecture per week, no laboratory)

B 111 General Biology (A, N, R) .. 5 credit hours

Biology 111, 112, 113 constitutes a three-quarter course in general college biology. A study of living organisms emphasizing their environmental and evolutionary relationships and origins. (4 hours of lecture and 3 hours of laboratory per week)

B 112 General Biology (A, N, R) .. 5 credit hours

A functional view of the organismic, cellular, and molecular aspects of life. (4 hours of lecture and 3 hours of laboratory per week)

B 113 General Biology (A, N, R) .. 5 credit hours

The life processes of reproduction, genetics, development, and mechanisms of evolution. (4 hours of lecture and 3 hours of laboratory per week)

B 115 Human Sexuality and Reproduction (A, N, R) ..... 3 credit hours

An introductory course dealing with the various aspects of human reproduction. Topics include overpopulation, human sexual response, pregnancy, birth, contraception, and venereal diseases. (3 hours per week, no laboratory)

B 123 Human Anatomy and Physiology (A, N) ..... 4 credit hours

Prerequisite: B 100 or C 101 or SI 136 or consent of instructor

A detailed study of the gross and microscopic anatomical structure of the human body and of the relationship of these structures to their function. (3 hours of lecture and 3 hours of laboratory per week)

B 124 Human Anatomy and Physiology (A, N) ..... 4 credit hours

Prerequisite: B 123 or consent of instructor

A continuation of B 123. (3 hours of lecture and 3 hours of laboratory per week)

B 130 Basic Health (A, N) ..... 4 credit hours

A survey of the basic issues of human interrelationships and diseases which affect personal, family, and community health. (4 hours of lecture per week, no laboratory)

B 140 Introduction to Microbiology (A, N) ..... 4 credit hours

Prerequisite: B 124

An introduction to microbiology with an emphasis on epidemiology and its relationship to the health science occupations. (3 hours of lecture and 3 hours of laboratory per week)

B 150 Biology of the Human Races (A) ..... 3 credit hours

The biological aspects of race formation will be considered, including the genetic foundations, the range of human variability and race mixtures, and the usefulness of biological factors in understanding racial problems. (3 hours of lecture per week, no laboratory)

B 231 Environmental Biology (A, N, R) ..... 5 credit hours

Prerequisite: B 111 and B 113 or consent of instructor

An introduction to the principles of ecology, population dynamics and genetics, and evolutionary mechanisms. (4 hours of lecture and 3 hours of laboratory per week; Saturday field trips may replace laboratories)

B 232 Cell Biology (A, N, R) ..... 5 credit hours

Prerequisite: B 112 or consent of instructor

An introduction to the cell as the fundamental unit of function and structure in all living systems. Morphological and physiological characteristics common to all cells will be emphasized. (4 hours of lecture and 3 hours of laboratory per week)

B 233 Developmental Biology (A, N, R) ..... 5 credit hours

Prerequisite: B 113 and B 232 or consent of instructor

An introduction to the changes occurring during organismic development and differentiation; gene action, biochemical regulation, and environmental factors will be stressed. (4 hours of lecture and 3 hours of laboratory per week)

B 240 General Microbiology (N, R) ..... 5 credit hours

Prerequisite: One year of college biology

A survey of major microbial groups with special emphasis on bacteria. Emphasis is on basic principles and techniques in microbiology as well as identification, structure, function and role in nature and disease. (3 hours of lecture and 6 hours of laboratory per week)

CHEMISTRY

C 101 Fundamentals of Chemistry (A, N, R) ..... 4 credit hours

Prerequisite: M 100 or equivalent, M 105 or equivalent suggested

A first course in the fundamentals of chemistry designed for non-science majors, students in occupational programs, or students with no high school chemistry. (3 hours of lecture and 3 hours of laboratory per week)

C 102 Fundamentals of Chemistry (A, N, R) ..... 4 credit hours

Prerequisite: C 101

A continuation of C 101. (3 hours of lecture and 3 hours of laboratory per week)

C 103 Fundamental Organic Chemistry (A, N, R) ..... 4 credit hours

Prerequisite: C 101

A brief introduction to organic and biological chemistry. (3 hours of lecture and 3 hours of laboratory per week)

C 109 Applied Chemistry (R) ..... 4 credit hours

Prerequisite: One year of high school algebra or M 103

A basic applied course designed to provide the background in chemistry needed for course work in particular occupational programs. (3 hours of lecture and 3 hours of laboratory per week)

C 111 General College Chemistry (A, N, R) ..... 5 credit hours

Prerequisite: One year of high school chemistry or C 102, M 106 or equivalent, or consent of instructor

C 111, 112, and 113 constitute a three-quarter sequential course in the principles of college chemistry. Designed for science majors and students in preprofessional programs. (4 hours of lecture and 3 hours of laboratory per week)

C 112 General College Chemistry (A, N, R) ..... 5 credit hours

Prerequisite: C 111 or equivalent

Continuation of C 111. (4 hours of lecture and 3 hours of laboratory per week)

C 113 General College Chemistry (A, N, R) ..... 5 credit hours

Prerequisite: C 112 or equivalent

Continuation of C 112. (4 hours of lecture and 3 hours of laboratory per week)

C 211 Organic Chemistry (N, R) ..... 5 credit hours

Prerequisite: C 113 or equivalent

C 211, 212, and 213 are a three-quarter sequential course in organic chemistry designed primarily for science majors, premedical and predental students and others who desire a knowledge of the chemistry of organic compounds. A structural and mechanistic approach to syntheses properties and behavior of chemically and biologically important compounds is stressed. Laboratory emphasis is on basic techniques, synthetic procedures and modern instrumental analyses. (3 hours of lecture and 6 hours of laboratory per week)

C 212 Organic Chemistry (N, R) ..... 5 credit hours

Prerequisite: C 211

Continuation of C 211. (3 hours of lecture and 6 hours of laboratory per week)

C 213 Organic Chemistry (N, R) ..... 5 credit hours

Prerequisite: C 212

Continuation of C 212. (3 hours of lecture and 6 hours of laboratory per week)

EARTH SCIENCE

G 111 Physical Geology (R) ..... 4 credit hours

An introductory course exploring our physical environment. Emphasis is on understanding the earth's interior, the rocks and minerals of the earth's crust, mountain building, continental drift, volcanoes, and earthquakes. Laboratories include studies of Rocky Mountain geology through field investigations, field trips, and tours of museums. (3 hours of lecture and 3 hours of laboratory per week)

G 112 Geologic Processes (R) ... 4 credit hours

An introductory course emphasizing the role of weathering, landslides, streams, waves, wind, glaciers, and ground water in shaping the land surface. Laboratories include studies of Rocky Mountain geology through field investigations, field trips, and tours of museums. (3 hours of lecture and 3 hours of laboratory per week)

G 113 Historical Geology (R) ..... 4 credit hours

An introductory study of the origin of the earth, geologic time, methods and concepts of rock correlation, and fossils. Emphasis is on the record in the rocks of ancient environments, physical history, and evolution of life forms. Laboratories include studies of Rocky Mountain geology through field investigations, field trips, and tours of museums. (3 hours of lecture and 3 hours of laboratory per week)

G 115 Environmental Geology of Colorado (R) ..... 4 credit hours

A non-technical study of the impact of geologic hazards on the environment. Emphasis is on the role of landslides, slump, unstable soils, solid and mine waste disposal, ground water pollution, floods, strip mining, land use planning, etc., in the development of the Front Range region. Laboratories include map studies and field investigations of environmental problems. (3 hours of lecture and 3 hours of laboratory per week)

G 211 Colorado Crystals (R) ..... 4 credit hours

An exploration into the origin, growth, structure, internal and external form, physical characteristics, occurrence, and classification of natural and man-made crystals and gems. Laboratories include crystal identification, collecting trips, field investigations, and tours of museums. (3 hours of lecture and 3 hours of laboratory per week)

G 212 Colorado Minerals (R) ..... 4 credit hours

An exploration into the origin, occurrence, physical properties, and economic importance of minerals, especially those found in Colorado. Modern equipment, including the direct reading spectroscope and the polarizing microscope, is used to study and identify specimens. Laboratories include mineral identification, collecting trips, field investigations, and museum tours. (3 hours of lecture and 3 hours of laboratory per week)

G 213 Colorado Rocks (R) ..... 4 credit hours

An exploration into the recognition, origin, distribution, use and significance of rocks, especially those found in Colorado. Laboratories include rock identification, collecting trips, field investigations, and museum tours. (3 hours of lecture and 3 hours of laboratory per week)

G 214 Geology of Colorado (R) ..... 3 credit hours

An introduction to the origin, development, and significance of Colorado's prairies, peaks, and plateaus; the role of glaciers, running water, wind surface movements, and volcanoes in shaping the topography; and mineral resources and their conservation. Numerous field trips, tours, and practical laboratory problems are planned. (2 hours of lecture and 3 hours of laboratory or field trip per week)

MATHEMATICS

M 100 Introduction to Mathematics (A, N, R) ..... 3 credit hours

This course is designed for students who need a comprehensive review of arithmetic. Topics include the fundamental operations of whole numbers, fractions, decimals, and percentages, proportion, operations with signed numbers and equations. (3 hours per week)

M 101 Pre-Algebra (R) ..... 3 credit hours

Prerequisite: M 100 or equivalent

This course is for students who need exposure to some mathematical concepts beyond arithmetic before enrolling in algebra. Topics include operations with signed numbers, formulas, literal expressions, and solutions of equations. By arrangement with the Division of Science and Mathematics. (3 hours per week)

M 102 Applied Mathematics I (A, N, R) ..... 3 credit hours

Prerequisite: M 100 or equivalent
FOR INDUSTRIAL OCCUPATIONS

This course is directed toward the application of the fundamental mathematical operations needed to solve problems related to these occupations. Topics include fractions, decimals, percentage, ratio and proportion, powers and roots, weights and measures. (3 hours per week)

M 103 Applied Mathematics II (A, N, R) ..... 3 credit hours

Prerequisite: M 102
FOR INDUSTRIAL OCCUPATIONS

The development and application of mathematical skills relating to geometry and formula manipulation. (3 hours per week)

M 104 Applied Mathematics III (A, N, R) ..... 3 credit hours

Prerequisite: M 103
FOR INDUSTRIAL OCCUPATIONS

The development and application of mathematical skills relating to basic applied trigonometry. Computations with logarithms. (3 hours per week)

M 105 Introductory Algebra (A, N, R) ..... 4 credit hours

Prerequisite: M 100 or equivalent

A first course in algebra designed for the student who has had less than one year of high school algebra or for those who need a review. Manipulation of algebraic expressions, solving first degree equations in one and two variables, factoring, solving fractional equations, graphing and verbal problem solving. (4 hours per week)

M 106 Intermediate Algebra (A, N, R) ..... 4 credit hours

Prerequisite: M 105 or successful completion of 1½ years of high school algebra

Introduction to sets, introduction to an axiomatic approach to the set of real numbers, extension of exponents, radicals, first and second degree equations in one variable, solving equations by completing the square and quadratic formula, functions and graphs, and logarithms. (4 hours per week)

M 107 Introduction to Geometry (A, N) ..... 4 credit hours

Prerequisite: M 106 or 2 years of high school algebra

Designed to extend the mathematical skills developed in M 105 and M 106. The topics to be included are logic, geometry, and basic trigonometry. (4 hours per week)

M 109 Mini-Math Review (N) ..... 1 credit hour

Corequisite: Concurrent enrollment in HE 109 or consent of instructor

A brief review of the basic skills and underlying concepts of fractions, decimals, and percents. Individual student needs are diagnosed through initial testing, and material is structured to meet these needs. (10 hours per quarter)

M 110 Mathematics for Business (A, N, R) ..... 3 credit hours

Prerequisite: M 100 or equivalent
FOR BUSINESS AND MANAGEMENT OCCUPATIONS

Consists of an integrated development of the concepts and computational skills of arithmetic that are commonly used in business. Topics covered are percentages, fractions, ratios and proportions, graphs, interest, banking, insurance and taxes. (3 hours per week)

M 111 College Algebra (A, N) ..... 5 credit hours

Prerequisite: Successful completion of two years of high school algebra or M 106 or equivalent

Sets, operations on sets, an axiomatic approach to the set of real numbers, absolute value, inequalities, algebraic, exponential, and logarithmic functions, solving first and second degree equations and equalities, solutions of systems of equations, sequences, permutations and combinations, and mathematical induction. (5 hours per week)

M 112 Trigonometry and Functions (A, N) ..... 5 credit hours

Prerequisite: M 111 or equivalent

Topics include trigonometric functions, identities, graphs, logarithms, solutions of triangles, and complex numbers. Functions as mappings, associations and ordered pairs. Theory of equations and further solutions to systems of equations. (5 hours per week)

M 113 Elementary Functions I (R) ..... 3 credit hours
Prerequisite: M 106 or equivalent, M 107 or equivalent strongly recommended

A thorough exploration of sets and properties of real numbers and their application to basic algebra. The concept of function and its applications will be emphasized. Exponential and logarithmic functions will be presented. (3 hours per week)

M 114 Elementary Functions II (R) ..... 3 credit hours
Prerequisite: Elementary Functions I or equivalent

Systems of equations will be solved, and various techniques including matrices and determinants will be used to solve linear systems. Sequences and mathematical induction, permutations and combinations, the binomial theorem, and theory of equations will also be covered. (3 hours per week)

M 115 Elementary Functions III (R) ..... 3 credit hours
Prerequisite: Elementary Functions I is a prerequisite, and
Elementary Functions II is a prerequisite or corequisite

Trigonometric functions and relationships among them. Solutions of triangles and trigonometric equations. Complex numbers and the application of trigonometry to them. (3 hours per week)

M 116 Calculus I (A, N, R) ..... 5 credit hours
Prerequisite: M 112 or M 115

Introduction to single variable calculus and analytic geometry. The concepts introduced will be motivated by geometric and physical interpretations. (5 hours per week)

M 117 Mathematics for Electronics I (A, N) ..... 5 credit hours
Prerequisite: M 100 or equivalent

The development and application of mathematical skills needed in electronics. Topics covered include: powers of ten, slide rule, evaluation and solution of equations, fractions, basic trigonometry, vectors and phasors, ratio, proportion, percent and logarithms. (5 hours per week)

M 118 Mathematics for Electronics II (A, N) ..... 3 credit hours
Prerequisite: M 117

Further development of the mathematical skills needed in electronics. This course is a continuation of M 117. Topics covered include: review of percent, graphs, exponents and radicals, solving equations used in electronics, and logarithms. (3 hours per week)

M 120 Statistics for Business and Industry (A, N, R) ..... 3 credit hours
Prerequisite: M 105 or equivalent

Designed to provide an opportunity for the business student to develop critical and functional understandings of statistical data. Attention is given to the basic concepts of statistical methodology and procedures which are used as media in the business world. The principles of statistical investigation, technique in data presentation, measures of central tendency, etc., are studied in their practical business application. (3 hours per week)

M 121 Fundamentals of Modern Mathematics (A, N, R) ..... 3 credit hours
Prerequisite: M 105 or equivalent
NOT FOR SCIENCE OR MATHEMATICS MAJORS

The M 121, 122, and 123 sequence is designed for students who desire a greater knowledge of some of the techniques and concepts of modern mathematics. Sets, Venn diagrams, truth tables, deductive proofs, number bases other than ten. (3 hours per week)

M 122 Fundamentals of Modern Mathematics (A, N, R) ..... 3 credit hours
Prerequisite: M 121
NOT FOR SCIENCE OR MATHEMATICS MAJORS

An introduction to groups and modulo arithmetic. Decimals, structure of arithmetic, properties of the natural numbers, integers, and rational numbers. (3 hours per week)

M 123 Fundamentals of Modern Mathematics (A, N, R) ..... 3 credit hours
Prerequisite: M 122
NOT FOR SCIENCE OR MATHEMATICS MAJORS

Properties of real numbers, inequalities, absolute value, exponents, and roots. Solutions of equations and inequalities of first and second degree in one or two variables. Introduction to finite probability, permutations and combination. (3 hours per week)

M 130 Finite Probability (N) ..... 3 credit hours
Prerequisite: M 111 or the equivalent

Counting, introduction to probability models, conditional probability, mean variance, standard deviation of a variable, histograms, binomial, hypergeometric and normal random variables. (3 hours per week)

M 140 Slide Rule and Calculator (A, N, R) ..... 1 credit hour
Prerequisite: M 100 or equivalent

A course designed to introduce students to the slide rule and to the calculator as calculating devices. (10 hours of instruction)

M 150 Mathematics of Finance (N) ..... 3 credit hours

Introduction to the concepts and processes involved in problems relating to amortization, sinking funds, present worth, investments, depreciation, business equations, graphs, elementary statistics. (3 hours per week)

M 211 Calculus II (A, N, R) ..... 5 credit hours
Prerequisite: M 116

Extension and further development of concepts of single variable calculus and analytic geometry studied in M 113. Applications of differentiation and integration; techniques of integration. (5 hours per week)

M 212 Calculus III (A, N, R) ..... 5 credit hours
Prerequisite: M 211

The completion of the traditional subject matter of single variable calculus not covered in M 113 and M 211. In this course and in M 213 an introduction to vector analysis, multivariable calculus, and solid analytic geometry will be presented. Also covered are three-dimensional vector space and infinite series. (5 hours per week)

M 213 Calculus IV (A, N, R) ..... 5 credit hours
Prerequisite: M 212

Continuation and completion of topics listed under M 212. (5 hours per week)

M 220 Introduction to Linear Algebra (A, N, R) ..... 4 credit hours
Prerequisite: M 113

This course is designed to be an introduction to some basic concepts encountered in linear algebra. Matrices, matrix algebra, finite dimensional vector spaces, systems of linear equations, linear transformations. (4 hours per week)

PHYSICS

P 100 Survey of Physical Science (A) ..... 3 credit hours

A core physical science course for health science students and others who need an understanding of the scientific method and the nature of the physical sciences. Emphasis is on observation, experimentation, and quantitative results drawn from chemistry and physics. (2 hours of lecture and 3 hours of laboratory per week)

P 101 Fundamental Physics (A, N, R) ..... 3 credit hours
Prerequisite: One year of high school algebra or M 100 or equivalent

An introduction to some of the more important basic concepts of physics with applications to practical problems relating to various occupational programs. Primarily for occupational students and non-science majors. Recommended as a preparatory course for students with inadequate background in physics who wish to take P 111, 112, and 113. (3 hours per week)

P 101L Fundamental Physics Laboratory (A, N, R) ..... 1 credit hour
Corequisite: Concurrent enrollment in P 101

A laboratory designed to demonstrate the physical concepts presented in Fundamental Physics (P 101). (2 hours per week)

P 102 Physics for Instrumentation I (A) ..... 3 credit hours

A study of the basic principles of physics, emphasizing mechanics and heat, with particular emphasis on those principles embodied in the design of mechanical indicating and sensing devices.

P 105 Radiation Physics (N, R) ..... 4 credit hours

Provides the student with both specialized information on X-ray equipment and the theoretical background to make it meaningful. Covered are: fundamentals of electrical and radiation physics and the basic principles underlying the operation of X-ray equipment and auxiliary devices. (3 hours of lecture and 3 hours of laboratory per week)

P 111 College Physics (A, N, R) ..... 5 credit hours
Prerequisite: M 111 or consent of instructor

A noncalculus study of kinematics, linear and rotational dynamics, conservation of energy and momentum, and topics in special relativity. (4 hours of lecture and 3 hours of laboratory per week)

P 112 College Physics (A, N, R) ..... 5 credit hours
Prerequisite: P 111 or equivalent and M 112 or concurrent enrollment in M 112

A continuation of P 111. Topics include properties of matter, wave motion, thermal phenomena, optics, and electricity and magnetism. (4 hours of lecture and 3 hours of laboratory per week)

P 113 College Physics (A, N, R) ..... 5 credit hours
Prerequisite: P 112

A continuation of P 112. Topics include atomic and nuclear structure, behavior of gases, liquids, and solids, oscillations, electromagnet waves, and matter waves. (4 hours of lecture and 3 hours of laboratory per week)

P 114 College Physics - Calculus Supplement (N, R) ..... 2 credit hours
Prerequisite: M 113

Application of calculus to the physical concepts discussed in P 111 which must be taken concurrently. (2 hours per week)

P 115 College Physics - Calculus Supplement (N, R) ..... 2 credit hours
Corequisite: M 211

Application of calculus to the physical concepts discussed in P 112 which must be taken concurrently. (2 hours per week)

P 116 College Physics - Calculus Supplement (N, R) ..... 2 credit hours
Prerequisite: P 115
Corequisite: M 212

Application of calculus to the physical concepts discussed in P 111 and P 112. (2 hours per week)

SCIENCE

SI 105 The Metric System: A Mini Course (A, N, R) ..... 1 credit hour

An introduction to the metric system designed to allow a person to become proficient in the metric system of measurement and to convert between the English and the metric system. Metric units of length, volume, and mass will be covered as well as temperature measurements in Centigrade and Kelvin Systems. (1 hour per week)

SI 110 The Black Scientist Contributes (A) ..... 3 credit hours

Auraria Campus only — See Consortium of Ethnic Studies, page B38.

SI 111 Science for the Earth Citizen (An Introduction to Science for Non-Science Majors) (N) .. 4 credit hours

This course is a general introduction to the scientific view of the world designed to help non-science majors live and vote intelligently in a world shaped by science. Basic concepts in astronomy, biology, chemistry, geology, physics and technology are studied in terms of words and pictures with no mathematics other than arithmetic being employed. (3 hours of lecture and 3 hours of laboratory per week.)

SI 112 Science for the Earth Citizen (An Introduction to Science for Non-Science Majors)(N) ... 4 credit hours
Prerequisite: SI 111 or consent of instructor

Continuation of SI 111. (3 hours of lecture and 3 hours of laboratory each week.)

SI 113 Science for the Earth Citizen (An Introduction to Science for Non-Science Majors)(N) ... 4 credit hours

Prerequisite: SI 112 or consent of instructor

Continuation of SI 112. (3 hours of lecture and 3 hours laboratory per week.)

SI 121 Environmental Science (A, N, R) ..... 4 credit hours

Prerequisite: M 105 or consent of instructor

SI 121, 122, 123 is intended to be a survey of various aspects of our environment. The descriptions given for SI 121, 122, and 123 suggest the scope of the investigation. All areas of interest will be studied from a physical rather than a biological point of view. The physics and some chemistry of the problem will be emphasized.

SI 121 deals with the basic physics, chemistry, and geology necessary for an adequate description of our atmosphere and earth. Air and water pollution problems will be investigated with emphasis on sources of pollution and methods of detection. (3 hours of lecture and 3 hours of laboratory per week)

SI 122 Environmental Science (A, N, R) ..... 4 credit hours

Prerequisite: SI 121

The basic physics of heat, energy, and wave motion will be discussed. Thermal and sound pollutions will be studied. (3 hours of lecture and 3 hours of laboratory per week)

SI 123 Environmental Science (A, N, R) ..... 4 credit hours

Prerequisite: SI 121

The physical problems relating to population, mass transportation, and communications will be studied. Radiation and public safety will then be discussed. (3 hours of lecture and 3 hours of laboratory per week)

SI 136 Basic Science I (A, N) ..... 5 credit hours

This course provides an opportunity to acquire knowledge of selected and fundamental principles in the fields of chemistry, physics, and microbiology. The chemistry and physics module will consist of selected principles and their application to health fields. A module in medical microbiology deals with methods of identification and control of those organisms which are responsible for infectious disease. (4 hours of lecture and 3 hours of laboratory per week)

SI 137 Basic Science II (A, N) .... 5 credit hours

A one-quarter study of the structure/function of the human body. The course consists of two modules, one of which deals with the erect and moving body and one with body metabolism. (4 hours of lecture and 3 hours of laboratory per week)

SI 236 Basic Science III (A, N) .... 5 credit hours

Prerequisite: SI 137 or consent of instructor

A continuation of the topics covered in Basic Science II (SI 137). This course is designed to examine more deeply the physiology of human body systems. (4 hours of lecture and 3 hours of laboratory per week)

SI 237 Basic Science IV (A, N) .... 5 credit hours

Prerequisite: SI 136, B 100 or permission of instructor

A continuation of Basic Science I (SI 136) to complete a biological coverage of microbiology, physics, and chemistry as they relate to body functions.

INDEPENDENT STUDY

299 Independent Study (A, N, R) ..... 1 to 3 credit hours

Students majoring in one of the areas of the Division of Science and Mathematics may enroll in Independent Study (Course No. 299)

This enables the serious-minded student to engage in intensive library and/or laboratory research on a specific topic under the direction of a qualified member of the Division faculty. To be eligible the student must have successfully completed one or more second year courses in the subject matter area in which he is majoring and give evidence that he can successfully engage in independent study. Independent Study carries 1-3 hours credit involving a minimum of 3-9 hours per week. Permission to enroll must be obtained from the instructor under whose direction the independent study will be carried out and from the Director of the Division.

DIVISION OF SOCIAL SCIENCES

Anthropology	A, N, R
Economics	A, N, R
Geography	A, N, R
History	A, N, R
Philosophy	A, N, R
Political Science	A, N, R
Psychology	A, N, R
Sociology	A, N, R
Social Science	A, N, R
Independent Study	A, N, R

DIVISION OF SOCIAL SCIENCES

COURSE DESCRIPTIONS

Where a course description does not indicate the campus by the key A, N or R, we would suggest you call the campus of your choice for information.

ANTHROPOLOGY

AN 111 Cultural Anthropology (A, N, R) ..... 3 credit hours

An introductory study of the nature of culture and cultural development in the paleolithic, neolithic and modern ages. (3 hours per week)

AN 112 Cultural Anthropology (A, N, R) ..... 3 credit hours

A continuation of AN 111 with emphasis on the relationships among the cultural sub-systems of language, social organization, technology and ideology. (3 hours per week)

AN 113 Cultural Anthropology (A, N, R) ..... 3 credit hours

A continuation of AN 112 with an anthropological approach to current topics of socio-cultural concern such as race, drugs, nationalism, violence and environment. (3 hours per week)

AN 201 Physical Anthropology (A, N, R) ..... 3 credit hours

An introductory study of the fossil record, living animals and cultural factors as they relate to the evolution of man. (3 hours per week)

AN 202 Physical Anthropology (A, N, R) ..... 3 credit hours

A continuation of AN 201 with emphasis on human variation, human biology and the mechanics of evoluation. (3 hours per week)

AN 220 Introduction to Archeology (A, N, R) ..... 3 credit hours

An introductory study of methods, techniques and theories of archeological investigation. Selected culture areas are used as examples. (3 hours per week)

AN 230 Ethnography of the North American Indian (A, N, R) .. 3 credit hours

A survey of the major Indian cultures of North America. Environmental and historical relationships are included. (3 hours per week)

ECONOMICS

EC 107 Consumer Economics (A, N, R) ..... 3 credit hours

A one-quarter survey of the American economic system from the point of view of the consumer, including such topics as personal and household finance, consumer credit, taxes, insurance, mortgages, social security, medicare and medicaid. (3 hours per week)

EC 108 Labor Relations (A, N, R) ..... 3 credit hours

A study of the development, structure, and philosophy of American trade unionism including collective bargaining, the role of government, productivity and wages, unemployment and automation. (3 hours per week)

EC 109 Applied Economics (A, N, R) ..... 3 credit hours

A one-quarter study of those aspects of basic economics that relate to the role of the small businessman and the wage earner. Problem solving techniques which have proven successful in the market place will be explored and individualized. (3 hours per week)

EC 161 Black Economics (A) ..... 4 credit hours

Auraria Campus only. See Consortium of Ethnic Studies, page B36.

EC 211 Principles of Economics (A, N, R) ..... 3 credit hours

The principles and theory of economics, emphasizing the American economic system but including international economics and economic growth. Principles of money, banking, public finance, distribution of income, pricing and allocation of resources, volume of economic activity, etc. (3 hours per week)

EC 212 Principles of Economics (A, N, R) ..... 3 credit hours

Continuation of EC 211. (3 hours per week)

EC 213 Principles of Economics (A, N, R) ..... 3 credit hours

Continuation of EC 212. (3 hours per week)

EC 252 Economic History of the United States (A, N, R) .... 3 credit hours

A study of the rise of the modern economic system of the United States from colonial times to the present. The study includes the impact of agriculture, industry and capitalism on the nation.

GEOGRAPHY

GE 105 Fundamental Place-Name Geography(R) ..... 1 hour credit

An independent study course for persons wanting to know where places are.

GE 111 Physical Geography (A, N, R) ..... 5 credit hours

An investigation of the relationship between man and his physiographic environment. The course will include a study of minerals, continental origin, earth-forming processes, landform classification, regional landform pat-

terns, and man-physiographic relationships. (3 hours of lecture and 3 hours of laboratory/field study per week)

GE 112 Physical Geography (A, N, R) ..... 5 credit hours

An investigation of the relationship between man and his atmospheric environment. The course will include a study of earth form, basic earth-sun-moon astronomy, weather processes, regional climatic patterns, and man-atmospheric interrelationships. (3 hours of lecture and 3 hours of laboratory/field study per week)

GE 113 Physical Geography (A, N, R) ..... 5 credit hours

An investigation of the relationship between man and his biotic and hydrographic environment. The course will include a study of soils, vegetation, water and man-biotic/hydrographic interrelationships. The implications of physical geography to man's cultural environment will be discussed. (3 hours of lecture and 3 hours of laboratory/field study per week)

GE 121 Man and His Cultural Environment (R) ..... 3 hours credit

An investigation of the human elements of geography. The course will examine processes and patterns of population distribution, cultures, settlement, land use, economic systems, and economic development.

GE 200 World Regional Geography (A, N, R) ..... 3 credit hours

A world perspective of the interrelationship between man and his environment.

GE 201 Continuation of GE 200 (A, N, R) ..... 3 credit hours

GE 210 Economic Geography (A, N, R) ..... 3 credit hours

An examination of world economic activities in relation to physical and cultural environments.

GE 220 Human Ecology (A, N, R) ..... 3 credit hours

Study of problems facing man in the conservation, use, and management of physical environments. Topics analyzed include the impact of urban development, technological advancement, and the conservation of resources.

GE 230 Urban Geography (A, N, R) ..... 3 credit hours

Introductory study of geographic factors related to the development of modern urban areas: population growth, land use, environmental deterioration, and future planning.

HISTORY

HS 107 Hang-Ups and Happenings in American History (A, N, R) ..... 3 credit hours

A one-quarter topical survey of American History from its origin to 1971.

HS 111 History of World Civilization (A, N, R) ..... 4 credit hours

The first of a three quarter sequence covering the historical development of world civilizations from ancient times to the present. The cultures examined during the quarter include South Asia, East Asia, and Southeast Asia. Emphasis will be placed on India, China, Japan, and Southeast Asia.

HS 112 History of World Civilization (A, N, R) ..... 4 credit hours

No prerequisites. The cultures, examined during the quarter are Moslem, Slavic and European. Emphasis will be placed on the Middle East, East Central Europe, Soviet Union, and Western Europe.

HS 113 History of World Civilization (A, N, R) ..... 4 credit hours

No prerequisite. The cultures examined during the quarter will include the Americas, Latin America, and Africa with emphasis on Latin America and sub-Saharan Africa.

HS 121 History of the Indians of the West (A, N, R) ..... 3 credit hours

A study of the Indians west of the Mississippi River from prehistoric times to the present.

HS 130 History of the Southwest United States (Chicano History)(A, N, R) .. 3 credit hours

The culture and historical development of what is now the Southwestern United States, including the rich cultural contributions of the Chicano people.

HS 145 Chicano Civilization — Spain (A, N, R) ..... 3 credit hours

The development of culture and the history of Spain from Roman times to the present including a brief study of efforts in colonization. This course covers the origin and power of the Catholic Church, the government, and the social structure of Spain.

HS 146 Chicano Civilization — Early Colonies (A, N, R) .... 3 credit hours

The expansion of Spanish power into the New World and Asia from the 15th century to 1800. This covers the changes in culture, in society brought about by colonization. It traces the expansion of the power of Spain to its peak.

HS 147 Chicano Civilization — Independence to Present (A, N, R) ..... 3 credit hours

The fall of the Spanish Empire, the rise of the new nations and the problems that they face today. This covers North and South America and Asia in relation to Spanish heritage and Modern Society.

HS 150 Contemporary World History (A, N, R) ..... 3 credit hours

The culture and history of modern man since 1900 with critical emphasis on international problems of war, world government, conflicting economic and political ideologist (fascism, communism, socialism) and the emergency of nationalism.

HS 211 The History of the United States — to 1789 (A, N, R) ..... 3 credit hours

The Colonial and Revolutionary period of American History to 1789.

HS 212 History of the United States — 1789 to 1877 (A, N, R) ..... 3 credit hours

Post Revolutionary period to the Civil War Reconstruction, 1789-1877.

HS 213 History of the United States (A, N, R) ..... 3 credit hours

The New Nation, 1877 to the present.

HS 220 Colorado History (A, N, R) ..... 3 credit hours

The historical development of Colorado with emphasis on the cultural, political and economic; from pre-historic Indians to modern missile factories.

HS 224 History of the Black People (A, N, R) ..... 3 credit hours

The historical development of the Black people of the world. Tracing this development from the early African civilizations through the American slave systems to the modern day Black cultures of the U.S.

HS 225 The Black People and the American Frontier (A, N, R) ..... 3 credit hours

This course examines the role of Black people in the winning of the West. It covers colonial days, black settlers, homesteaders, cowboys, gunfighters, and soldiers in the Indian Wars.

HS 246 A History of Mexico (A,N,R) ..... 3 credit hours

The historical and cultural development of Mexico from pre-history to the present. This includes an examination of present day politics and society of Mexico.

HS 250 The History of Democratic Ideas (A, N, R) ..... 3 credit hours

A study of individual and social freedom culminating in America's Jeffersonian ideals, including utopian and revolutionary ideas and experiments.

HS 251 The History of Cities (A, N, R) ..... 3 credit hours

A study of cities in the United States in their beginning and developmental stages since the Colonial period.

HS 261 China Today: Tradition and Change (A, N, R) ..... 3 credit hours

This course will examine Chinese Civilization and culture from prehistoric times to the present. Special emphasis will be given to Confucianism, Taoism, Buddhism and Communist society today.

HS 262 China Today: Tradition and Change (A, R) ..... 3 credit hours

(1644 to the present) Auraria Campus only. See Consortium of Ethnic Studies.

HS 265 Japan Today: The Asian Giant (A, N, R) ..... 3 credit hours

The course will briefly survey Japanese traditional society and culture. Emphasis will be placed on recent historical developments from the Tokugawa Shogunate and the Mejii Reforms to the present. Japanese national character, religion (particularly Zen) and the arts will be examined.

HS 267 Indian Today: Tradition and Change (A, N, R) ..... 3 credit hours

This course will examine the roots of Indian Civilization as well as the intense impact major invasions had on India, from the growth of Hinduism to the development of Western Democracy. The influence India has had on other cultures will also be studied.

HS 269 Cultural History of Southeast Asia (A) ..... 3 credit hours

Auraria Campus only. See Consortium of Ethnic Studies.

HS 271 History of England — Early Years (A, N, R) ..... 3 credit hours

England from Henry VII to Anne, 1485-1713.

HS 272 History of England — Early Years (A, N, R) ..... 3 credit hours

England from Henry VII to Anne, 1485-1713.

HS 273 History of England — Modern Times (A, N, R) .... 3 credit hours

The expansion and decline of Great Britain from Anne to the present time, 1713-1972.

PHILOSOPHY

PH 111 Introduction to Philosophy (A, N, R) ..... 3 credit hours

A study of philosophy and its usefulness, of methods of inquiry, man and his place in the world, and of the different schools of philosophy. (3 hours per week)

PH 112 Introduction to Philosophy (A, N, R) ..... 3 credit hours

(Continuation of PH 111) A study of the realm of values and the life worth living, ethics, oriental philosophies, religions, and social issues. (3 hours per week)

PH 120 The Faiths by Which Men Live (A, N, R) ..... 3 credit hours

Great religions of the Far East such as Hinduism, Buddism, Confucianism, Taoism, etc. Attention will be given to the beliefs and convictions men use as they seek to interpret experience and find meaning and direction in life, and to the role of religion in the development of culture.

PH 121 The Faiths by Which Men Live (A, N, R) ..... 3 credit hours

A continuation of PH 120 with attention given to the religions identified with the Middle East and Western Civilization such as Judaism, Christianity, and Islam. Some of the modern challenges to religion such as humanism, Marxism, secularism will be explored as we consider recent developments in the field of religion.

PH 220 Ethics: Learning to Cope With Life (A, N, R) ..... 3 credit hours

Utilizing the resources of philosophy and ethics to achieve greater competence in living creatively with the problems and possibilities of the contemporary world. (3 hours per week)

PH 230 Logic (A, N, R) ..... 3 credit hours

A study of the principles and practices of reflective thinking and problem solving, of the proposition and syllogism, of evidence and evaluation, and the various approaches to the scientific method of reasoning processes. The aim is the achievement of more precise and creative thinking. (3 hours per week)

POLITICAL SCIENCE

PS 107 The Power Elite: Who's Who in Colorado (R) ..... 3 hours credit

Focuses on the agents, both individuals and organiza-

tions, and processes responsible for major social, political, economic, and planning decisions in Colorado.

PS 111 Introduction to Political Science (A, N, R) ..... 3 credit hours

Approaches to the study of politics: man as political animal; the nature and use of power; the role of ideology.

PS 112 Introduction to Political Science (A, N, R) ..... 3 credit hours

Approaches to the study of politics: the relationship between political behavior and governmental structures.

PS 113 American National Government (A, N, R) ..... 3 credit hours

Present day American government interpreted in the light of constitutional and other influences; emphasis on the role of institutions, individuals, and groups in forming American political behavior.

PS 114 American State and Local Government (A, N, R) ..... 3 credit hours

Governmental structure and political behavior in states and municipalities; urban problems and the role of government in their solution.

PS 161 Political Leadership (A, N, R) ..... 3 credit hours

A study of group process, parliamentary procedures, recruiting, campaigning, publicity, legislation and administration through classroom and laboratory experience.

PS 162 Practical Politics (A,N,R) ... 3 credit hours

Introduction to political action at the local, state and/or national level.

PS 201 Comparative Politics (A,N,R) ..... 3 credit hours

Introductory survey and analysis of political behavior and institutions in the 20th century; problems of the "over developed" world, including Europe, the Soviet Union, Japan, and the United States.

PS 202 Comparative Politics (A,N,R) ..... 3 credit hours

Introductory survey and analysis of political behavior and institutions in the 20th century; problems of the "underdeveloped world, including Asia, Africa, and Latin America.

PS 203 International Relations (A,N,R) ..... 3 credit hours

The international political system and the effects of geography, history, culture, ideology, domestic politics, foreign policies, diplomacy, international law, and international organizations upon it.

PS 211 Current Political Issues (N) 3 credit hours

Local, state, national, and international political events with newspapers, periodicals, and television as primary sources for student involvement. Emphasis will be on class discussion.

PS 241 Political Woman (A,N,R) .... 3 credit hours

Emphasis on the social, psychological, and economic status of women in the contemporary United States: the role of politics in supporting and attacking that status; the women's movement in the 19th century and today.

PS 251 Chicano Political Experience (A,N,R) ..... 3 credit hours

A critical evaluation of leading issues affecting Chicanos in American society. Includes a survey of social, cultural, and political organizations within the community.

PS 261 Black Political Thought and Experience (A,N,R) .... 4 credit hours

Carries the development of black political thought from Frederick Douglass to the present, making the student aware of the forces which direct the black man in his struggle to achieve personal and community goals.

PSYCHOLOGY

PY 100 Human Relations in Business and Industry (A,N,R) ..... 3 credit hours

Primarily focuses on the personal problems encountered by employees in a business relationship with fellow employees and with the employer. Deals with the effect of these problems on others and various methods of handling them or minimizing their effect.

PY 101 Human Potential Workshop I (A, N, R) ..... 1-3 credit hours

The purpose of Human Potential Workshop is to increase self-affirmation, self-motivation, self-determination and an empathetic regard for others. It will focus primarily on the student's strengths, their personal resources, rather than their weaknesses. The emphasis is on an integration of thinking and feelings about oneself and others.

PY 102 Human Potential Workshop II (A,N,R) ..... 1-3 credit hours

Prerequisite: PY 101

The Human Potential Workship II is a continuation of PY 101 and is designed to assist students in identifying and resolving personal conflicts and clarifying and firming up a meaningful life-style. When a person is in a state of conflict, personal potentialities are often denied or forgotten rather than actualized. Through successful conflict resolution, a person can grow in self-affirmation; therefore, being able to determine the integration of one's life goals, strengths and values, feelings and thoughts leading to an involvement of a congruent life-style.

PY 105 Self-Exploration and Understanding (A,N,R) ..... 1-3 credit hours

This seminar is designed as a type of discussion group to help provide the student with the opportunity to gail self-understanding and acceptance. Good mental health for each student and how it may be achieved is emphasized. The importance of being sensitive to our own individual psychological needs and the needs of others is given considerable attention. Other topics of student concern may be discussed.

PY 107 Psychology of Personal Development (A,N,R) ..... 3 credit hours

The study of the individual and the social factors which contribute to the development of both healthy and unhealthy personalities.

PY 108 Vocational Exploration (A,N,R) ..... 1-3 credit hours

PY 108 is designed to enable the student to select either a career direction or confirm his present career choice.

Each student will have a thorough understanding of this occupation and how it relates to him or herself. They will understand: (1) the nature of their occupation (2) the potential of that occupation (3) information about himself as it relates to his occupation and (4) information as it relates to training for that occupation. Based on this information, the student will decide on the occupational direction to go and will devise and implement a plan to reach that goal. The goal will be tentative and always flexible as occupational choice is to be treated as a life-long process and not a onetime decision. Students will be responsible for a minimum of three papers and/or oral conferences with the instructor. The reports or conferences, and class participation will be considered by the student when determining his grade.

PY 111 General Psychology (A,N,R) ..... 3 credit hours

A broad overview of the general field and fundamental principles of psychology. Will study areas of perception, motivation, emotion, learning maturation, social individual differences, mental illness, psycho-therapy, etc.

PY 112 General Psychology (A,N,R) ..... 3 credit hours

Continuation of PY 111.

PY 113 General Psychology (A,N,R) ..... 3 credit hours

Continuation of PY 112.

PY 123 Child Guidance Techniques (A,N,R) ..... 3 credit hours

A study of acceptable methods and techniques of working with children.

PY 200 Psychology of the Deaf (A,N,R) ..... 3 credit hours

This course is intended to provide an overview of the field, with particular emphasis on communications, testing measurement of the hearing-impaired, research in the field of deafness, and special methods used in the education of deaf children with psychological ramifications.

PY 210 Social Psychology (A,N,R) ..... 3 credit hours

Social factors which influence the behavior of the individual as he interacts with others. Consideration of such problems as leadership fashions, prejudice, public opinion and social attitudes.

PY 220 Educational Psychology (A,N,R) ..... 3 credit hours

This is a study of psychology as applied to the teacher-learner situation with emphasis on the principles of motivation learning, intelligence, heredity, growth, environment and individual differences.

PY 221 Developmental Psychology (Child Growth & Devel.) (A,N,R) ..... 3 credit hours

Study of early childhood including genetic background, prenatal life, motor-sensory development and the preschool period. Covers all aspects of growth and development: physical, emotional, social, and intellectual.

PY 222 Developmental Psychology (Child Growth and Devel.) (A, N, R) ..... 3 credit hours

Continuation of PY 221

PY 223 Developmental Psychology Adolescence, adulthood, and old age) (A, N, R) ..... 3 credit hours

Developmental psychology with emphasis on adolescence, adulthood, and old age.

PY 230 Abnormal Psychology (A,N,R) ..... 3 credit hours

Causes, description and theories of severe personality and behavior disorders.

PY 240 Personality (A,N,R) ..... 3 credit hours

Psychological theories which deal with the development, structure, and functioning of the normal personality.

PY 250 Psychology of Prejudice (A,N,R) ..... 3 credit hours

A course designed to assist students so that they understand in depth the basic causes of prejudice and the etiology of prejudicial behavior. Experiences are provided for greater understanding of people and processes for abating or ameliorating the degree of prejudice by the individual.

PY 255 Black Psychology (A,N,R) .. 3 credit hours

This course is designed to enable the student to identify the psychological factors of racism that influence the development of the Black personality.

PY 260 Chicano Psychology (A,N,R) ..... 3 credit hours

This course is designed to develop an understanding from a psychological viewpoint of the impact of the Chicano experience on the Chicano personality.

PY 270 Industrial Psychology (A,N,R) ..... 3 credit hours

Presents psychological material relevant to the industrial setting including employee selection, training, testing, evaluation, assumptions of management about human motivation, job satisfactions, work efficiency, fatigue and human engineering.

SOCIOLOGY

SO 108 Social Problems (A,N,R) ... 3 credit hours

Issues confronting the individual, groups and society are explored. Ranging from alienation to xenophobia, the issues will be examined for their causes, their possible inter-relationships, and their consequences upon the various sectors of society. Particular emphasis will be given to issues of direct concern to the student. (3 hours per week)

SO 111 Introduction to Sociology (A,N,R) ..... 3 credit hours

Basic principles of sociology are introduced: investigating social behavior, man culture, institutions, social interaction and social change. Theoretical principles are introduced and applied to field projects where students seek to acquire familiarity with the community as a laboratory. (3 hours per week)

SO 112 Introduction to Sociology (A,N,R) ..... 3 credit hours

The issues, concepts and understandings treated in SO 111 are developed by treating major issues and concerns through the writings of major sociologists. Theoretical principles dealing with power, interaction, deviance, etc. are explored in depth. (3 hours per week)

SO 113 Introduction to Sociology (A,N,R) ..... 3 credit hours

Methods and techniques of investigating and for developing understanding of society are given primary focus here. The student spends sizable periods outside of the classroom undertaking methods of research appropriate to different situations depending on the instructor's orientation. (3 hours per week)

SO 135 Sociology of Health Care (A,N,R) ..... 3 credit hours

A systematic attempt to relate sociological concepts to the fields of physical health and illness. An overview of socio-cultural aspects of the institution we know as "medicine." Includes the community and medical care, medical education, the hospital as a social institution, and concepts of medical practice.

SO 151 The Chicano and the Schools (A,N,R) ..... 3 credit hours

Problems of Chicano students adapting to the schools and the teacher's response to them. Includes observation of school facilities and classroom techniques.

SO 152 Urbanization and the Chicano (A, N, R) ..... 3 credit hours

Study of rural folk values of the Chicano and their erosion in the urban setting. Includes an analysis of changing values within the Chicano community.

SO 200 Urban Sociology (A,N,R) ... 3 credit hours

City and metropolitan growth are examined in terms of the human factors and social issues involved. Social structures, forms and processes of interaction, residential and institutional patternings, are looked at as these relate to urban planning, community change, transitional neighborhoods and urban tensions. (3 hours per week)

SO 211 Current Social Issues (A,N,R) ..... 3 credit hours

Introductory consideration of some major current social issues designed to improve the student's ability to understand and systematically investigate concerns vital to everyday life. Issues to be treated will include the major "P's" of poverty, power, pollution, and population; conflict, intergroup relations, social change and alienation. (3 hours per week)

SO 212 Current Social Issues (A, N, R) ..... 3 credit hours

Increased emphasis is given here to the interrelationship of issues. The issues to be dealt with are primarily of a national and international flavor. (3 hours per week)

So 213 Field Practicum: Community Studies (A, N, R) ..... 3 credit hours

Aimed at the service professions (social work, etc.) as well as those adults interested in becoming involved in ongoing social change activities, the course seeks through guided field experiences to aid the student in developing the perspectives, skills and methods vital to activating and carrying through community organization, community development, and field study programs.

SO 220 Minority Groups in American Society (A, N, R) . 3 credit hours

The processes and consequences of labeling whereby certain groups come to be defined as "minorities" and treated in particular ways are studied. (3 hours per week)

SO 223 Youth in Society (A, N, R) ..... 3 credit hours

Presentation of issues and patterns of behavior confronting youth in society: drugs, crime, formation of gangs, relations with adults, education, political involvement, alienation, the creation of counter-cultures, racial tensions and cultural factors affecting individual and group action. The impact of the mass media, advertising, and the arts upon youth groups and the impact of youth groups upon these areas are examined. The role of the above-30 and the elderly in a youth-oriented society are explored. (3 hours per week)

SO 225 Racism and American Institutions (A, N, R) ..... 3 credit hours

This course is designed to analyze American institutions in relationship to racism. The historical development of racism and what it has done to influence the American way of life will be the foundation of this class.

SO 230 Hispano Culture (A, N, R) ..... 3 credit hours

Designed for all students. The purpose of the course is to develop an understanding of the cultural attainments and activities of the Hispanic Culture. The emphasis will be on the arts, music, religious beliefs, traditions, language, and how all these relate to contemporary cultural patterns.

SO 235 Sociology of Religion (A) ..... 3 credit hours

Concepts related to the field of religion as it applies to man's organization of society, his cognitive construction of his world.

SO 240 Sociology of the Black Community (A, N, R) ..... 3 credit hours

Fundamental concepts and theories of sociology with comparative emphasis on the Black man, his culture, and contributions to American culture.

SO 241 Sociology of the Chicano Community (A, N, R) ..... 3 credit hours

Fundamental concepts and theories of sociology with comparative emphasis on the Chicano and his culture in America.

SO 250 Marriage and the Family (A, N, R) ..... 3 credit hours

Designed for all students, the purpose of the course is to develop an understanding of the social role of marriage and family living, and to promote stable marital relations. Special emphasis is placed on courtship and preparation for marriage, conflict situations and adjustments between husband and wife, parent-child relationships, the family in the community and other factors related to successful family life. (3 hours per week)

SO 254 Juvenile Delinquency (A, N, R) ..... 3 credit hours

Sociological and cultural aspects of late childhood and

adolescence. Problems of the individual in his social environment and group forces which lead to maladjustment. Sociological principles for working with youth from the viewpoint of parent, teacher, police, social worker and youth organization leader. (3 hours per week)

SO 255 Criminology (A) ..... 3 credit hours

The course is designed to study the nature of crime, the statistics of criminal behavior, the nature of the criminal, causes and conditions, theories and practices of treatment.

SOCIAL SCIENCE

SS 101 Field Experience in Community Organizations I (A, N, R) ... 3 credit hours

Students enrolled in this course will perform human service work in community organizations, programs, and agencies of their choice subject to the approval of the instructor. By doing so, they will gain job experience, community service opportunity, and have an avenue to test career interests in a reality setting. Field experience sites will be developed through mutual agreement of the student, the community organization, and supervising instructor. (1 hour of lecture and 4-6 hours of field experience per week)

SS 102 Field Experience in Community Organizations II (A, N, R) .. 3 credit hours

Prerequisite: Field Experience in Community Organizations I

Continuation of Field Experience. (1 hour of lecture and 4-6 hours of field experience per week)

SS 103 Field Experience in Human Services (A, N, R) ..... 3 credit hours

Prerequisite: Field Experience I, II, or acceptable field work

An evaluation of community needs and resources based on the students' previous field experienced and through direct readings. The emphasis will be toward change methodology and related skills and techniques. (3 hours per week)

SS 205 The 21st Century: Models of Future Worlds (R) ..... 3 credit hours

An interdisciplinary examination of possible futures for man, his physical environment, and his social institutions.

SS 211 The Social and Political Environment of the 20th Century (A, N, R) ..... 3 credit hours

An interdisciplinary approach to study of the problems confronting the twentieth-century American. Consideration will be given to such issues as urbanization, alienation, war, technological change, violence and protest movements, values, and the quest for personal identity and significance. (3 hours per week)

SS 212 The Social and Political Environment of the 20th Century (A, N, R) ..... 3 credit hours

Continuation of SS 211. (3 hours per week)

SS 213 The Social and Political Environment of the 20th Century (A, N, R) ..... 3 credit hours

Continuation of SS 212. (3 hours per week)

SS 260 Research Methods in the Social Sciences (A, N, R) ..... 3 credit hours

An interdisciplinary course designed to aid the student develop the skills, methods and techniques of research required for systematically exploring the social-psychological world in which he lives. An introduction to statistical methods — including validity, reliability, correlation and other forms of analysis — is also undertaken.

INDEPENDENT STUDY

299 Independent Study (A, N, R) ..... 1 to 3 credit hours

Independent Study (Course No. 299) is available in each of the major areas within the Division of Social Sciences (i.e. history, political science, sociology, etc.). The course provides opportunity for the serious-minded student to engage in intensive study and research on a specific topic under the direction of a qualified faculty member. Prerequisite for enrollment is permission of the Director of the Division of Social Sciences and the assigned instructor. The number of quarter hours of credit (1-3) will be determined by the Division Director.

CONSORTIUM OF ETHNIC STUDIES ..... AURARIA ONLY

Anthropology	A
Chinese	A
Economics	A
History	A
Humanities	A
Literature	A, N, R
Music	A
Political Science	A
Psychology	A
Science	A
Sociology	A
Spanish	A, N, R

(THE COURSES LISTED UNDER THE CONSORTIUM OF ETHNIC STUDIES COUNT FOR CREDIT TOWARD THE ASSOCIATE ARTS DEGREE.)

Note: Auraria Campus—A
North Campus—N
Red Rocks Campus—R

CONSORTIUM OF ETHNIC STUDIES...AURARIA CAMPUS ONLY

ANTHROPOLOGY

AN 230 Ethnography of the North American Indian (A) ..... 3 credit hours

A survey of the major Indian cultures of North America. Environmental and historical relationships are included. (3 hours per week)

ART

AR 181 Ethnic Studies in Art, The American Southwest (A) ... 3 credit hours

Special Studies of the Art of the American Southwest from pre-Colombian civilizations to present times as it relates to the Chicano.

AR 182 Ethnic Studies in Art, The Art of Africa and Black Americans (A) ..... 3 credit hours

Special Study of the Art of Africa from ancient to present times as it relates to contemporary Black American Artists.

AR 183 Ethnic Studies in Art, The Art of the Orient and the American Oriental (A) ..... 3 credit hours

Special Studies of the Art of the American Indian from ancient to present times as it relates to contemporary American Indian Artists.

AR 184 Ethnic Studies in Art, The American Indians (A) ..... 3 credit hours

Special Studies of the Art of the American Indian from ancient to present times as it relates to contemporary American Indian Artists.

CHINESE

CH 100 Basic Applied Chinese (A) ..... 2 credit hours

Course designed for those who wish to learn basic conversational patterns for enjoyment and travel or for simple business needs. Language background helpful but not essential. (2 hours per week, plus laboratory)

CH 111 First Year Chinese ..... 5 credit hours

Designed to develop basic principles of grammar and syntax; reading and writing of simple Chinese, correct pronunciation and rudimentary conversation.

CH 112 First Year Chinese (A) ..... 5 credit hours

Prerequisite: CH 111

CH 113 First Year Chinese (A) ..... 5 credit hours

Prerequisite: CH 112

Continuation and Expansion of CH 112 and additional reading materials.

CH 211 Intermediate Chinese (A) ..... 3 credit hours

This course will (1) review and reinforce skills and knowledge gained in first year Chinese, (2) develop further skills in listening, speaking, reading and writing, (3) develop sense of linguistic structure and increase vocabulary and (4) provide readings in plays, short stories and poems.

CH 212 Intermediate Chinese (A) ..... 3 credit hours

Prerequisite: CH 211

Continuation and Expansion of CH 211.

CH 213 Intermediate Chinese (A) ..... 3 credit hours

Prerequisite: CH 212

Continuation and Expansion of CH 212.

CH 214 Conversation and Composition Chinese (A) ..... 3 credit hours

Prerequisite: CH 213 or demonstration of sufficient language skills

Conversation and Composition Chinese is designed to increase vocabulary and develop oral and written proficiency at the intermediate level through discussions, reports, and situation dialogues.

CH 215 Conversation and Composition Chinese (A) ..... 3 credit hours

Continuation and Expansion of CH 214.

CH 216 Conversation and Composition Chinese (A) ..... 3 credit hours

Continuation and Expansion of CH 215.

CH 241 Contemporary Chinese Short Stories (A) ..... 3 credit hours

Selected examples of most representative authors.

CH 242 Contemporary Chinese Theatre (A) ..... 3 credit hours

Selected plays representative of the Chinese stage today.

CH 243 Contemporary Chinese Novel (A) ..... 3 credit hours

ECONOMICS

EC 161 Black Economics (A) ..... 4 credit hours

Introduction to the concepts of labor, land, capital, ownership and control of economic institutions as they have affected and continue to affect the lives of Black and poor Americans. The course will span the concepts of slavery to the idea of Black Power.

HISTORY

HS 121 History of the Indians of the West (A) ..... 3 credit hours

A study of the Indians west of the Mississippi River from prehistoric times to the present.

HS 125 Black Civilization — Africa (A) ..... 3 credit hours

Culture and development of the area of Africa from ear-

liest times to the present. Includes tribes, slavery, colonialism and the new independent nations.

HS 126 Black Civilization — Americas to 1865 (A) ..... 3 credit hours

The culture and the development of the Black people in the Americas through the American Civil War. This includes Black people in Brazil, Surinam, the Caribbean, and the United States.

HS 127 Black Civilization — Americas Since 1865 (A) .. 3 credit hours

The culture and development of the Black people in the Americas following the American Civil War. This includes the Black nations and people in South and Central America, the Indies and the U.S.

HS 130 History of the Southwest United States (A, N, R) .... 3 credit hours

The cultural and historical development of what is now the Southwestern United States.

HS 145 Chicano Civilization — Spain (A) ..... 3 credit hours

The development of culture and the history of Spain from Roman times to the present including a brief study of efforts and colonization, and the colonies that Spain owns today. This course covers the origin and power of the Catholic Church, the government, and the social structure of Spain.

HS 146 Chicano Civilization — Early Colonies (A) ..... 3 credit hours

The expansion of Spanish power into the New World and Asia from the 15th Century to 1800. This covers the changes in culture, as society brought about, by colonization. It traces the expansion of the power of Spain to its peak.

HS 147 Chicano Civilization — Independence to Present (A) ..... 3 credit hours

The fall of the Spanish Empire, the rise of the new nations and the problems that they face today. This covers North and South America and Asia in relation to Spanish heritage and modern Society.

HS 224 History of the Black People (A, N, R) ..... 3 credit hours

The historical development of the Black people of the world. Tracing this development from the early African civilizations through the American salve system to the modern day Black cultures of the U. S.

HS 225 The Black People and the Black People (A) ..... 3 credit hours

This course examines the role of the Black people and the winning of the West. It covers colonial days, Black settlers, homesteaders, cowboys, gunfighters, and soldiers in the Indian Wars.

HS 261 China Today: Tradition and Change (A, N, R) ..... 3 credit hours

This course will examine Chinese Civilization and culture from pre-historic times to the present. Special emphasis will be given to Confucianism, Taoism, Buddhism and Community society today.

HS 262 China Today: Tradition and Change (1644 to the present) (A, R) ..... 3 credit hours

The course will deal with modern Chinese history, beginning with a brief survey of Chinese society from the 17th to the 19th century when the convergence of Chinese and Western history ended Chinese seclusion. More emphasis will be placed on examining the interplay of foreign and domestic elements which gave rise to revolutionary changes in every aspect of Chinese society up to the present.

HS 265 Japan Today: The Asian Giant (A, N, R) ..... 3 credit hours

The course will briefly survey Japanese traditional society and culture. More emphasis will be placed on more recent historical developments from the Tokugawa Shogunate and the Meiji Reforms to the present. Japanese national character, religion (particularly Zen) and the arts will be examined.

HS 267 India Today: Tradition and Change (A, N, R) ..... 3 credit hours

This course will examine the roots of Indian civilization as well as the intense impact major invasions had on India, from the growth of Hinduism to the development of Western democracy. The influence India has had on other cultures will also be studied.

HUMANITIES

HU 145 Chicano Culture (A) ..... 3 credit hours

Story of the Chicano from pre-Colombian to contemporary times. Includes the study of the social, cultural, political and economic heritage of the Chicano and his contributions to American society.

HU 147 Folklore of Mexico and the Southwest (A) ..... 3 credit hours

HU 241 Comparative Culture Spanish (A, N) ..... 3 credit hours

Prerequisite: SP 213

Study of Spain from the Middle Ages to the 19th Century through the media of slides, records, art books, tapes, films and lectures. (3 hours per week)

HU 242 Comparative Culture Spanish (A, N) ..... 3 credit hours

Prerequisite: SP 213

A continued study of Spain, stressing the 19th and 20th Centuries. Early Latin-American development will be investigated. This course will stress the multi-media approach. (3 hours per week)

HU 243 Comparative Culture- Spanish (A, N) ..... 3 credit hours

Prerequisite: SP 213

A continued study with emphasis on Latin-American independence and the course of development to the present time. Multi-media approach will be used. (3 hours per week)

LITERATURE

LI 125 The Black Writer in America (A) ..... 4 credit hours

A beginning course in the study of Black literature, which includes the methods of evaluation and analysis essential

for understanding and appreciating the literary contributions of the Black Writer in America.

LI 144 Afro-American Literature (A, R) ..... 3 credit hours

Study of the contribution of Afro-American writers to American literature and civilization.

LI 147 Contemporary Chicano Literature in Translation (A) ..... 3 credit hours

A contemporary look at the Southwest through the works of its authors. Attention to the writings of the Chicano's search for an identity.

LI 231 Ethnic Literature in America (A, N, R) ..... 3 credit hours

Concentration on the literature of Black writers in America. The approach will be through general themes, chronological considerations, comparison and genre.

LI 232 Ethnic Literature in America (A, N, R) ..... 3 credit hours

Concentration on the literature of Chicano writers in America. The approach will be through general themes, chronological considerations, comparison and genre.

LI 233 Ethnic Literature in America (A, N, R) ..... 3 credit hours

Concentration on the literature of Oriental writers in America. The approach will be through general themes, chronological considerations, comparison and genre.

LI 234 Ethnic Literature in America (A, N, R) ..... 3 credit hours

Concentration on the literature of the American Indian. The approach will be through general themes, chronological considerations and genre.

MUSIC

MU 120 Music of Mexico and the Southwest (A) ..... 3 credit hours

An examination of selected works in Mexican music from pre-Colombian time to present, concentrating on regional works and on Twentieth Century composers and their relationship to Chicano society.

POLITICAL SCIENCE

PS 251 Chicano Political Experience (A) ..... 3 credit hours

A critical evaluation of leading issues affecting Chicanos in American society. Includes a survey of social, cultural and political organizations within the community.

PS 261 Black Political Thought and Experience (A) ..... 4 credit hours

Carries the development of Black political thought from Frederick Douglass to the present, making the student aware of the forces which direct the Black man in his struggle to achieve personal and community goals.

PSYCHOLOGY

PY 255 Black Psychology (A) ..... 3 credit hours

This course is designed to enable the student to identify the psychological factors of racism that influence the development of the Black personality.

PY 260 Chicano Psychology (A) ... 3 credit hours

This course is designed to develop an understanding from a psychological viewpoint of the impact of the Chicano situation on the Chicano personality.

SCIENCE

SI 110 Black Men in Science (A) ..... 3 credit hours

A survey of the contribution of the Black man to the scientific world, with in-depth studies of some of the major figures. (3 lectures per week, no laboratory)

SOCIOLOGY

SO 140 Field Work in Barrio Studies (A) ..... 3 credit hours

Field study observation of selected barrios, institutions, and agencies to be conducted under supervision and after preparatory instruction to acquaint students with the barrio.

SO 151 The Chicano and the Schools (A) ..... 3 credit hours

Problems of Chicano students adapting to the schools and the teacher's response to them. Includes observation of school facilities and classroom techniques.

SO 225 Racism and American Institutions (A) ..... 3 credit hours

This course is designed to analyze American institutions in relationship to racism. The historical development of racism and what it has done to influence the American way of life will be the foundation of this class.

SO 230 Hispano Culture (A) ..... 3 credit hours

Designed for all students. The purpose of the course is to develop an understanding of the cultural attainments and activities of the Hispanic Culture. The emphasis will be on the arts, music, religious beliefs, traditions, language, and how all these relate to contemporary cultural patterns.

SO 240 Sociology of the Black Community (A) ..... 3 credit hours

Fundamental concepts and theories of sociology with comparative emphasis on the Black man, his culture, and contributions to American culture.

SO 241 Sociology of the Chicano Community (A) ..... 3 credit hours

Fundamental concepts and theories of sociology with comparative emphasis on the Chicano and his culture in America.

SPANISH

SP 100 Basic Applied Spanish (R) . 2 credit hours

For those who wish to learn basic conversational Spanish for enjoyment or travel or for simple business needs.

SP 111 First Year Spanish (A, N, R) ..... 5 credit hours

Designed to develop basic principles of grammar and syntax; reading and writing of simple Spanish, correct pronunciation and rudimentary conversation.

SP 112 First Year Spanish
(A, N, R) ..... 5 credit hours
Prerequisite: SP 111

Continuation and Expansion of SP 111.

SP 113 First Year Spanish
(A, N, R) ..... 5 credit hours
Prerequisite: SP 112

Continuation and Expansion of SP 112 and additional reading materials.

SP 121 Spanish to the Chicano
(A) ..... 5 credit hours

Designed for the bi-vocal Chicano student. Instruction takes into consideration the interference of English in the development of the Spanish language skills for the student.

SP 122 Spanish to the Chicano
(A) ..... 5 credit hours

Continuation of SP 121

SP 123 Spanish to the Chicano
(A) ..... 5 credit hours

Continuation of SP 122.

SP 211 Intermediate Spanish
(A, N, R) ..... 3 credit hours

This course will (1) review and reinforce skills and knowledge gained in first year Spanish, (2) develop further skills in listening, speaking, reading, and writing, (3) develop sense of linguistic structure and increase vocabulary, and (4) provide reading in plays, short stories and poems.

SP 212 Intermediate Spanish
(A, N, R) ..... 3 credit hours
Prerequisite: SP 112 or 113

Continuation and Expansion of SP 211.

SP 213 Intermediate Spanish
(A, N, R) ..... 3 credit hours

Continuation and Expansion of SP 212.

SP 214 Conversation and Composition
Spanish (A) ..... 3 credit hours
Prerequisite: SP 213 or demonstration of sufficient language skills

Conversation and Composition Spanish is designed to increase vocabulary and develop oral and written proficiency at the intermediate level through discussions, reports, and situation dialogues.

SP 215 Conversation and
Composition Spanish (A) .. 3 credit hours

Continuation and Expansion of SP 214.

SP 216 Conversation and
Composition Spanish (A) .. 3 credit hours

Continuation and Expansion of SP 215.

SP 241 Contemporary Spanish
Short Stories (A) ..... 3 credit hours

Selected examples of most representative authors.

SP 242 Contemporary Spanish
Theater (A) ..... 3 credit hours

Selected plays representative of the Spanish stage today.

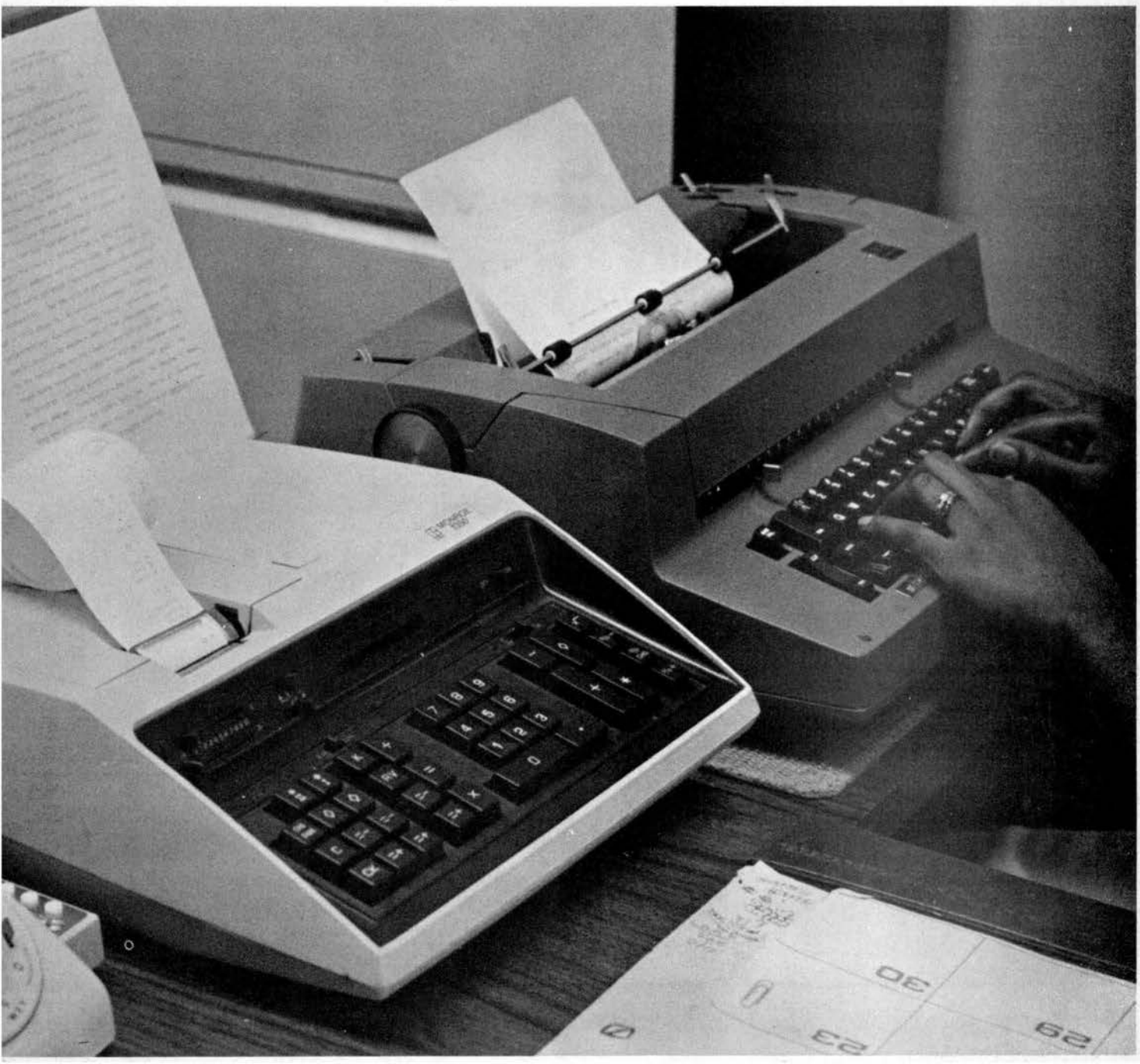
SP 243 Contemporary Spanish
Novel (A) ..... 3 credit hours

Selected contemporary novels particularly appealing to modern youth.

Community College of Denver

Auraria Campus
North Campus
Red Rocks Campus

Division of Business and Management Occupations



DIVISION OF BUSINESS AND MANAGEMENT OCCUPATIONS

Accounting	A, N, R
Business Management	A, N, R
Credit Management	A
Data Processing-Programmer	N
General Clerical	A, N, R
Industrial Management	R
International Secretarial	N
Key Punch	N
Legal Secretarial	A
Marketing Management	A, N, R
Medical Secretarial	A, N
Office Administration	N, R
Public Administration	R
Real Estate	R
Secretarial Science	A, N, R
Stenographic	A, N, R
Word-Processing Typist	N, R
Transportation and Traffic Management	A

Note: Auraria Campus—A
North Campus—N
Red Rocks Campus—R

DIVISION OF BUSINESS AND MANAGEMENT OCCUPATIONS

ACCOUNTING
NINE-MONTH PROGRAM

			Cr. Hrs.
First Quarter			
AC	111	Accounting	5
EG	131	Business Communications	3
MG	105	Introduction to Business	3
M	110	Business Math	3
EC	109	or 211	3
			17
Second Quarter			
AC	112	Accounting	5
EG	132	Business Communications	3
SC	103	Business Machines	3
DP	111	Princ. of Bus. Data Proc.	3
		Typing Elective[1]	4
			18
Third Quarter			
AC	113	Accounting	5
MG	222	Office Management	3
MG	240	Business Finance	5
		Business or Acct. Elect.[1]	3-5
			16-18

1.Selection of electives must be made in conference with faculty advisor.

EMPLOYMENT OPPORTUNITIES: Completion of this course leads to employment opportunities in clerical bookkeeping positions related to the accounting field.

TOTAL CREDIT HOURS: 51-53

ACCOUNTING
TWO-YEAR PROGRAM

			Cr. Hrs.
First Quarter			
AC	111	Accounting	5
EG	131	Business Communications	3
MG	105	Intro. to Business	3
M	110	Math for Business	3
		Social Science Elect.[1]	3
			17
Second Quarter			
AC	112	Accounting	5
EG	132	Business Communications	3
SC	103	Business Machines	3
DP	111	Princ. of Bus. Data Proc.	3
Math Elective:			
M	120	Business Statistics or	
M	150	Math of Finance	3
			17
Third Quarter			
AC	113	Accounting	5
EG	133	Business Communications	3
AC	213	Cost Accounting	5
		Data Proc. Elective[2]	3-5
			16-18
Fourth Quarter			
AC	211	Intermediate Accounting	5
MG	210	Business Law I	3
MG	240	Business Finance	5
		Elective[1]	3-5
			16-18
Fifth Quarter			
AC	212	Intermediate Accounting	5
MG	211	Business Law II	3
EC	211	Princ. of Economics	3
		Elective[1]	3-5
			14-16
Sixth Quarter			
MG	201	Business Org. & Mgt.	3
		Account. Elective[3]	5
BU	297	Coop. Work Exp. or Elect.	3-6
			11-14

1.Selection of Electives must be made in conference with faculty advisor.
2.Business Elective at Auraria Campus.
3.Accounting Elective must be made in conference with faculty advisor. These include: AC 214, AC 215, AC 217 and AC 220.

BUSINESS OPPORTUNITIES: Completion of this program leads to employment opportunities in bookkeeping and initial accounting positions in business and industrial concerns or at various levels in governmental agencies.

TOTAL CREDIT HOURS 91-100

BUSINESS MANAGEMENT
TWO-YEAR PROGRAM

			Cr. Hrs.
First Quarter			
AC	111	Accounting	5
EG	131	Business Communications	3
MG	105	Introduction to Business	3
SC	103	Business Machines	3
		Math Elective[1]	3-5
			17-19
Second Quarter			
AC	112	Accounting	5
EG	132	Business Communications	3
M	120	Statistics for Business	3
DP	111	Prin. of Bus. Data Proc.	3
		Elective[2]	3
			17
Third Quarter			
AC	113	Accounting	5
EG	133	Business Communications	3
DP	112	Advanced Princ. of Bus. DP	5
MG	201	Business Org. & Mgmt.	3
			16
Fourth Quarter			
MG	203	Prin. of Marketing I	5
MG	210	Business Law I	3
EC	211	Prin. of Economics	3
MG	221	Personnel Management	3
			14
Fifth Quarter			
MG	240	Business Finance	5
MG	211	Business Law II	3
EC	212	Princ. of Economics	3
		Management Elect.[3]	3
BU	297	Coop. Work Exp. or Elect.	3
			17

Sixth Quarter

MG	250	Business Policies	3
EC	108	Labor Relations	3
EC	213	Prin. of Economics	3
		Mgmt. Elective[3]	3
BU	297	Coop. Work Exp. or Elect.	3
			15

1.Recommended electives are M 110, M 105, M 150, and M 111.
2.Selection of electives must be made in conference with advisor.
3.Recommended electives are MG 222, MG 217, MG 239, MG 220, MG 212, and AC 213.

TOTAL CREDIT HOURS: 96-98

CREDIT MANAGEMENT (A)

TWO-YEAR PROGRAM

First Quarter			Cr. Hrs.
MG	130	Credit Fundamentals	3
MG	105	Introduction to Business	3
AC	111	Accounting	5
M	110	Math for Business	3
EG	131	Business Communications	3
			17
Second Quarter			
MG	131	Credit Fundamentals	3
M	120	Business Statistics	3
AC	112	Accounting	5
EG	132	Business Communications	3
		Soc. Science Elect.[1]	3
			17
Third Quarter			
EC	107	Consumer Economics	3
MG	201	Business Org. & Mgmt.	3
AC	113	Accounting	5
EG	133	Business Communications	3
		Science Elective[1]	3
			17
Fourth Quarter			
MG	213	Credit and the Law I	3
EC	211	Princ. of Economics	3
MG	210	Business Law I	3
DP	111	Prin. of Business DP	3
		Elective[1]	3
			15
Fifth Quarter			
MG	211	Business Law II	3
MG	221	Personnel Management	3
MG	222	Office Management	3
BU	297	Coop. Work Exp. or Elect.[2]	3
		Elective	3
			15
Sixth Quarter			
MG	240	Business Fianace	5
MG	220	Small Bus. Management	3
BU	297	Coop. Work Experience or Business Elective	6
			14

1.Consult faculty advisor for recommended electives.
2.BU 299 (Independent Study) or Elective may be chosen only in event appropriate work station is not available.

TOTAL CREDIT HOURS: 95

DATA PROCESSING-PROGRAMMER (N)

TWO-YEAR PROGRAM

First Quarter			Cr. Hrs.
DP	111	Prin. of Bus. Data Proc.	3
MG	105	Intro. to Bus.	3
Math Elective:			
DP	122	Applied Computer Math I	
M	112	College Algebra	
Communications Elect.[1]			3
Elective[2]			3
			17
Second Quarter			
DP	112	Adv. Prin. of Bus. Data Proc.	5
Math Elective			5
DP	122	Applied Computer Math II	
M	112	Trig. and Functions	
Communications Elective[1]			3
AC	111	Accounting	5
			18
Third Quarter			
DP Elective — Group I[3]			5
Communications Elect.[1]			3
AC	112	Accounting	5
Business Elective[2]			3
			16
Fourth Quarter			
DP Elective — Group I[3]			5
DP Elective — Group II[4]			5
Business Elective[2]			3
Soc. Science Elective[2]			3
			16
Fifth Quarter			
DP Elective — Group II[4]			5
DP	231	Systems Analysis I	3
Business Electives[2]			6
Soc. Science Elect.[2]			3
			17
Sixth Quarter			
DP	232	Systems Analysis II	3
M	150	Math of Finance	
or			
M	120	Statistics for Bus.	3
		Electives[2]	10
			16

1.Communications Electives:
EG 111 English Composition
EG 112 English Composition
EG 113 English Composition
EG 131 Business Communications
EG 132 Business Communications
EG 133 Business Communications
EG 250 Technical Writing
S 110 Introduction to Speech
S 210 Advanced Public Speaking

2.Consult advisor for recommended electives to fulfill these requirements.

3.Data Processing Electives — Group I:
DP 213 Assembler Language I
DP 216 Cobol I
DP 221 Fortran IV, I
DP 224 PL/I, I

4.Data Processing Electives — Group II:
DP 214 Assembler Language II
DP 217 Cobol II
DP 222 Fortran IV, II
DP 225 PL/I, II

TOTAL CREDIT HOURS: 99

GENERAL CLERICAL

9-MONTH PROGRAM

First Quarter			Cr. Hrs.
EG	131	Business Comm.	3
SC	110	Typing (or by placement)	4
M	100	Developmental Math	
	or		
M	110	Math for Business	3
		Business Elective	3-5
			13-15

Second Quarter			
AC	109	Book. and Accounting	5
EG	132	Business Communications	3
SC	111	Typing II or (by placement)	4
SC	103	Business Machines	3
			15

Third Quarter			
SC	105	Filing & Records Control	3
SC	100	Duplicating Machines	2
SC	112	Intermed. Typing (or placement)	4
PY	100	Human Relations	3
		Business Elective	3
			15

TOTAL CREDIT HOURS: 43-45

INDUSTRIAL MANAGEMENT (R)

TWO-YEAR PROGRAM

FIRST YEAR

First Quarter			Cr. Hrs.
M	110	Math for Business	3
AC	111	Accounting	5
EG	131	Bus. Comm.	3
IM	103	Industrial Safety	3
IM	101	Elements of Supervision	3
			17

Second Quarter			
AC	112	Accounting	5
PY	107	Psych. of Personal Dev.	3
EG	133	Bus. Comm.	3
Math Elective			4-5
M	105	Introductory Algebra	
M	106	Inter. Algebra	
M	111	College Algebra	
			15-16

Third Quarter			
IM	104	Work Simpl. & Cost Control	3
M	120	Stat. for Bus. & Ind.	3
DP	111	Prin. of Bus. Data. Proc.	3
EC	109	Applied Economics	3
MG	216	Personnel Admin.	3
			15

SECOND YEAR

Fourth Quarter			Cr. Hrs.
IM	201	Employee Development	3
S	110	Intro. to Speech	3
EC	108	Labor Relations	3
EG	132	Bus. Comm.	3
IM	202	Theory & Appl. of Behav. Sci.	3
			15

Fifth Quarter			
MG	209	Bus. Org. & Mgmt.	3
MG	205	Bus. Finance	3
MG	207	Business Law I	3
MG	222	Office Management	3
		Elective	3
			15

Sixth Quarter			
IM	203	Mgt. by Objectives	3
Social Sci. Elect.			3
MG	239	Wage and Salary Adm.	3
		Electives	4-6
			13-15

EMPLOYMENT OPPORTUNITIES: This program is designed for persons in the field of supervision; however, other students electing to pursue the program should be able to seek employment in the areas of government service, public utilities and industry.

TOTAL CREDIT HOURS: 90-93

INTERNATIONAL SECRETARIAL (N)

TWO-YEAR PROGRAM

First Quarter			Cr. Hrs.
MG	105	Introduction to Business	3
		Spanish (by placement)[1]	5
Spanish Typing (by placement)			4
SC	110	or	
SC	111		
EG	131	Business Communications	3
PY	100	Human Relat. in Business	3
			18

Second Quarter			
M	110	Math for Business	3
SC	125	Gregg Shorthand	4
		Spanish (by placement)[1]	5
Typing[2]			4
SC 111, SC 112 or SC 113			
EG	132	Business Communications	3
			19

Third Quarter			
AC	111	Accounting	5
SC	126	Gregg Shorthand	4
		Spanish (by placement)[1]	5
SC	132	Mach. Trans., Spanish	3
			17

Fourth Quarter			
SC	260	Office Practice I-Spanish	3
MG	201	Business Org. & Mgmt.	3
SC	127	Shorthand Speed Building	4
SC	105	Filing & Records Control	3
		Elective[3]	3
			16

Fifth Quarter			
SC	261	Office Practice II-Spanish	3
SC	128	Shorthand Transcription	4
SC	123	Spanish Gregg Shorthand	4
		Electives[3]	6
			17

Sixth Quarter			
SC	262	Office Practice III-Spanish	3
SC	259	Internat. Sec. Procedures	3
SC	124	Spanish Shorthand Trans.	4
BU	297	Coop. Work Experience	
	or		
BU	299	Independent Study[4]	3
			13

1.Students will be placed at a foreign language level suited to their competency at entrance.
2.Students who have had previous instruction and/or experience in typing will be given a proficiency examination to determine proper placement.
3.Consult advisor for recommended elective.
4.BU 299 (Independent Study) or elective may be chosen only in event appropriate work station is not available.

TOTAL CREDIT HOURS: 100

KEY PUNCH (N)

THREE-MONTH PROGRAM*

		Cr. Hrs.
DP 102	Key Punch Laboratory	8
MG 105	Introduction to Business	3
DP 111	Principles of Business DP	3
		14

*Can be completed in three months only if typing speed is 45 words per minute. In order to enroll in Key Punch Laboratory, student must pass a typing test with 45 wpm within a 5 error limitation.

LEGAL SECRETARIAL (A)

TWO-YEAR PROGRAM

First Quarter		Cr. Hrs.
MG 105	Introduction to Business	3
SC 110	Typing[1]	4
English Elective[2]		3
EG 131	Bus. Comm.	
EG 111	Eng. Comp.	
M 110	Math for Business & Ind.	3
SC 105	Filing & Rec. Cont.	3
		16
Second Quarter		
SC 125	Gregg Shorthand Prin.	
or		
SC 120	Alpha Shorthand	4
SC 111	Typing II	4
English Elective:[2]		
EG 132	Business Communications	
EG 112	English Composition	3
SC 103	Business Machines	3
	Elective[2]	3
		17
Third Quarter		
DP 111	Prin. of Business, Data. Proc.	3
SC 126	Gregg Shorthand Principles	4
or		
SC 121	Alpha Shorthand	4
SC 112	Intermediate Typing	4
English Elective:[2]		
EG 133	Business Communications	
EG 113	English Composition	3
MG 210	Business Law, I	3
		17
Fourth Quarter		
SC 127	Shorthand Speedbuilding	4
SC 113	Prod. Typing	4
SC 200	Office Procedures	5
MG 211	Business Law, II	3
		16
Fifth Quarter		
S 128	Shorthand Transcription	4
AC 111	Accounting	5
SC 210	Legal Secretarial Procedures & Terminology	3
MG 201	Business Org. & Mgt.	3
	Social Science Elective[2]	3
		18
Sixth Quarter		
SC 206	Legal Dictation & Trans.	3
SC 130	Machine Trans. I	3
Economics Elective:[2]		
EC 109	Applied Econ.	
EC 211	Prin. of Econ.	3
BU 297	Cooperative Work Experience or Business Elective	3
AC 112	Accounting	5
		17

1.Students who have had previous instruction and/or experience in typing and shorthand will be given proficiency examinations to determine proper placement.
2.Consult faculty advisor or counselor for recommended electives.

TOTAL CREDIT HOURS: 101

MARKETING MANAGEMENT[1](A,N,R)

TWO-YEAR PROGRAM

First Quarter		Cr. Hrs.
AC 111	Accounting	5
MG 105	Introduction to Business	3
EG 131	Business Communications	3
M 110	Math for Business	3
		14
Second Quarter		
AC 112	Accounting	5
DP 111	Prin. of Business DP	3
EG 132	Business Communications	3
MG 115	Principles of Advertising	3
MG 110	Salesmanship	3
		17
Third Quarter		
AC 113	Accounting	5
MG 201	Business Org. & Mgmt.	3
MG 217	Sales Management	3
EG 133	Business Communications	3
M 150	Math of Finance	3
		17
Fourth Quarter		
MG 203	Prin. of Marketing I	5
MH 210	Business Law I	3
MG 240	Business Finance	5
EC 211	Princ. of Economics	3
		16
Fifth Quarter		
MG 221	Personnel Management	3
MG 215	Prin. of Retailing	3
MG 211	Business Law II	3
BU 297	Coop. Work Experience[2]	3
M 120	Business Statistics	3
		15
Sixth Quarter		
MG 216	Principles of Buying	3
MG 250	Business Policies	3
BU 297	Coop. Work Experience[2]	3
	Electives[1]	6
		15

1.Consult faculty advisor for recommended electives.
2.BU 299 (independent Study) or Elective may be chosen in event appropriate work station is not available.

EMPLOYMENT OPPORTUNITIES: Sales, supervision and managerial trainee opportunities in a variety of retail, wholesale and marketing businesses.

TOTAL CREDIT HOURS: 94

MEDICAL SECRETARIAL (A)

TWO-YEAR PROGRAM

First Quarter			Cr. Hrs.
MG	105	Introduction to Business	3
SC	110	Typing I[1]	4
HE	100	Medical Term.	2
EG	131	Business Communications	3
B	100	Basic Human Biology	4
			16
Second Quarter			
SC	125	Gregg Shorthand Principles[1]	4
SC	111	Typing II	4
SC	103	Business Machines	3
EG	132	Business Communications	3
MO	130	Medical Filing	3
			17
Third Quarter			
SC	126	Gregg Shorthand Principles	4
SC	112	Intermediate Typing	4
EG	133	Business Communications	3
M	110	Math for Business	3
MO	100	Intro. to Medical Office Procedures	3
			17
Fourth Quarter			
SC	127	Shorthand Speed Building	4
AC	109	Bookkeeping & Accounting	5
SC	130	Machine Transcription I (Med)	3
SC	113	Production Typing	4
			16
Fifth Quarter			
SC	128	Shorthand Transcription	4
DP	111	Princ. of Business DP	3
SC	100	Duplicating Machines	2
SC	131	Machine Transcription II	3
		Psychology Elective	3
			15
Sixth Quarter			
MG	222	Office Management	3
MF	210	Business Law I	3
MO	110	Intro. to Health Insur. or Business Elective	3
BU	297	Coop. Work Exp.	3
		Elective	3
			15-16

1. If a student has shorthand and typewriting background, it is recommended that he challenge the introductory courses and enroll in the courses at his proficiency level.

TOTAL CREDIT HOURS: 98

OFFICE ADMINISTRATION[1] (N, R)

TWO-YEAR PROGRAM

First Quarter			Cr. Hrs.
MG	105	Introduction to Business	3
EG	131	Business Communications	3
Math Elective:[1]			
M	110	Math for Business	
M	105	Introductory Algebra	
M	106	Intermediate Algebra	3-4
Typing (by placement)[2]			
SC	110	Typing	
SC	111	Typing	
SC	112	Typing	4
SC	103	Business Machines	3
			16-17
Second Quarter			
AC	111	Accounting	5
EG	132	Business Communications	3
Math Elective: [1]			
M	150	Math of Finance	
M	105	Introductory Algebra	
M	106	Intermediate Algebra	
M	111	College Algebra (5 cr. hrs.)	3-5
SC	200	Office Procedures or	
SC	112	Typing	4-5
			15-18
Third Quarter			
AC	112	Accounting	5
EG	133	Business Communications	3
DP	111	Princ. of Business DP	3
MG	201	Business Org. & Mgmt.	
	or		
IM	101	Elements of Supervision	3
SC	105	Filing & Records Control	3
			17
Fourth Quarter			
AC	113	Accounting	5
DP	112	Advanced Prin. of Bus. DP	5
Ecomonics Elective:[1]			
EC	109	Applied Economics	
	or		
EC	211	Principles of Economics	3
PY	100	Human Relations in Business	3
			16
Fifth Quarter			
MG	222	Office Management	3
MG	221	Personnel Management	3
		Soc. Science Elect.[1]	3
BU	297	Coop. Work Exp. or Elect.	3
MG	210	Business Law I	3
			15
Sixth Quarter			
MG	240	Business Finance I	5
MG	211	Business Law II	3
BU	297	Coop. Work Experience or Elective[3]	3
MG	250	Business Policies	3
			14

1. Consult faculty advisor for recommended electives.

2. Students who have had previous instruction and/or experience in typing will be given a proficiency examination to determine proper placement.

3. Elective may be chosen only in event appropriate work station is not available.

EMPLOYMENT OPPORTUNITIES: Supervisory and administrative or managerial trainee opportunities in a variety of business and industries.

TOTAL CREDIT HOURS: 93-97

PUBLIC ADMINISTRATION (R)

TWO-YEAR PROGRAM

FIRST YEAR

First Quarter			Cr. Hrs.
AC	111	Accounting	5
EG	131	Bus. Comm.	3
M	110	Math for Bus. & Ind.	3
MG	105	Intro. to Bus.	3
PS	111	Intro. to Pol Sci.	3
			17
Second Quarter			
AC	112	Accounting	5
EG	132	Bus. Comm.	3
Math Elective			4-5
M	105	Intro. Algebra	
M	106	Inter. Algebra	
M	111	College Algebra	
PS	113	American National Govt.	3
			15-16
Third Quarter			
AC	220	Prin. of Govt. Acct. & Budget	5
EG	133	Bus. Comm.	
		or	
S	110	Intro. to Speech	3
M	120	Stat. for Bus. & Ind.	3
MG	240	Business Finance	5
PS	114	Amer. State & Local Govt.	3
			19

SECOND YEAR

Fourth Quarter			Cr. Hrs.
EC	109	Applied Economics	3
MG	210	Bus. Law I	3
MG	221	Personnel Mgt.	3
PR	209	Public Relations	3
		Elective	3
			15
Fifth Quarter			
GE	230	Urban Geography	3
MG	211	Bus. Law II	3
MG	239	Wage and Salary Adm.	3
PY	100	Hum. Rel. in Bus. & Ind.	3
SO	107	Sociology of Pers. Dev.	3
			15
Sixth Quarter			
EC	108	Labor Relations	3
BU	297	Coop. Work Exp.	
		or	
		Electives[1]	6
		Office Management	3
			12

1.Electives will be chosen when an appropriate work station or internship cannot be provided.

General College Requirements: A minimum of credits in related areas. This is a two-year program which will cross several disciplines.

EMPLOYMENT OPPORTUNITIES: This program is designed to equip the graduate with the "tools" which are necessary to function at various levels of government. Included in these tools are those which will prepare the student for administrative positions as well as the technician level.

TOTAL CREDIT HOURS: 93-94

REAL ESTATE (R)

TWO-YEAR PROGRAM

FIRST YEAR

First Quarter			Cr. Hrs.
MG	105	Intro. to Bus.	3
EG	131	Bus. Comm.	3
AC	111	Accounting	5
RE	101	Real Estate Fundamentals	3
PY	100	Hum. Rel. in Bus. & Ind.	3
			17
Second Quarter			
M	110	Math for Bus.	3
EG	132	Bus. Comm.	3
AC	112	Accounting	5
RE	103	Real Estate Financ.	3
RE	104	Real Estate Law I	3
			17
Third Quarter			
SC	110	Typing I	4
SC	103	Bus. Machines	3
EG	133	Bus. Comm.	3
RE	105	Real Estate Law II	3
RE	110	Real Estate License Prep.	3
			16

SECOND YEAR

Fourth Quarter			Cr. Hrs.
RE	201	Prin. of Insurance	3
MG	110	Salesmanship	3
RE	202	Real Estate Appraisal II	3
RE	210	Real Estate Trends and Dev.	3
		Elective	3
			15
Fifth Quarter			
MG	201	Bus. Org. & Mgt.	3
EC	109	Applied Economics	3
M	120	Stat. for Bus. & Ind.	3
		Elective	3
RE	203	Real Estate Appraisal II	3
			15
Sixth Quarter			
RE	204	Real Estate. Inv.	3
PS	114	Am. St. & Local Govt.	3
		Electives	4-6
			10-12

EMPLOYMENT OPPORTUNITIES: This program will prepare a student to work in real estate sales and real estate related fields, and financial institutions relating to real estate.

TOTAL CREDIT HOURS: 90-92

SECRETARIAL SCIENCE

TWO-YEAR PROGRAM

First Quarter			Cr. Hrs.
MG	105	Intro. to Business	3
SC	110	Typing I (or by placement)	4
EG	131	Business Comm.	3
M	110	Business Math	3
			13

Second Quarter

SC	125	Gregg Short. Princ.	4
SC	111	Typing II	4
EG	132	Bus. Comm.	3
SC	103	Business Machines	3
SC	105	Filing & Records Cont.	3
			17

Third Quarter

SC	126	Gregg Short. Princ.	4
SC	112	Intermediate Typing	4
EG	133	Business Communications	3
PY	100	Hum. Rel. in Bus. & Ind.	3
DP	111	Princ. of Business Data Proc.	3
			17

Fourth Quarter

SC	127	Shorthand Speed Building	4
AC	109	Book. & Accounting, or	
AC	111	Accounting	5
SC	130	Machine Transcription I	3
SC	113	Production Typing	4
			16

Fifth Quarter

SC	128	Shorthand Trans.	4
AC	111	Accounting or	
AC	112	Accounting	5
SC	200	Office Procedures	5
SC	131	Machine Trans. II	3
			17

Sixth Quarter

SC	100	Duplicating Machines	2
MG	210	Business Law I	3
		Business Elective	3
BU	297	Cooperative Work Exp.	3-6
		Elective	3
			14-17

TOTAL CREDIT HOURS: 94-97

STENOGRAPHIC

TWELVE MONTH PROGRAM

First Quarter			Cr. Hrs.
MG	105	Intro. to Business	3
EG	131	Business Comm.	3
Shorthand			4
	SC 125	Gregg, or	
	SC 120	Alpha	
SC	110	Typing I	4
M	110	Math for Business	3
			17

Second Quarter

EG	132	Business Comm.	3
Shorthand			4
	SC 126	Gregg, or	
	SC 121	Alpha	
SC	111	Typing II	4
SC	105	Filing & Records Control	3
SC	103	Business Machines	3
			17

Third Quarter

SC	112	Intermediate Typewriting	4
SC	127	Shorthand Speed Building	4
AC	109	Bookkeeping & Account.	5
PY	100	Hum. Rel. in Bus. & Ind.	3
			16

Fourth Quarter

SC	113	Production Typing	4
SC	130	Machine Transcription I	3
SC	200	Office Procedures	5
		Business Elective	3-6
			15-18

TOTAL CREDIT HOURS: 65-68

WORD-PROCESSING TYPIST (N, R)

First Quarter			Cr. Hrs.
SC	111	Typing II	4
EG	131	Bus. Communications	3
SC	105	Filing & Records Control	3
AC	109	Book. & Accounting	5
			15

Second Quarter

SC	112	Intermediate Typing	4
EG	132	Business Comm.	3
SC	130	Machine Transcription I	3
		Business Electives	6
			16

Third Quarter

SC	115	Magnetic Card Typewriting	3
SC	200	Office Procedures	5
SC	131	Machine Transcription II	3
EG	133	Business Communications	3
			14

This program may be completed in 9 months only if student enters with a typing skill of at least 25 wpm.

TOTAL CREDIT HOURS: 45

TRANSPORTATION AND TRAFFIC MANAGEMENT (A)

TWO-YEAR PROGRAM

First Quarter			Cr. Hrs.
TT	101	Commercial Trans. I	4
TT	130	Mgt. Tools & Concepts I	4
		English Elective[1]	3
	EG 131	Business Communications	
	EG 111	English Composition	
	EG 106	Occup. Comm.	
		Math Elective[1]	3-4
	M 110	Math for Business	
	M 105	Introductory Algebra	
	M 106	Intermediate Algebra	
MG	105	Introduction to Business	3
			17-18

Second Quarter

TT	102	Commercial Transportation II	4
TT	131	Mgt. Tools & Concepts II	4
		English Elective[1]	3
	EG 132	Business Communications	
	EG 112	English Composition	
	EG 107	Occupational Communication	
Math Elective[1]			3-5
	M 102	Applied Math I	
	M 105	Introductory Algebra	
	M 106	Intermediate Algebra	
	M 111	College Algebra	
EC	108	Labor Relations	3
			17-19

Third Quarter

TT	103	Commercial Transport. III	4
TT	132	Mgt. Tools & Concepts III	4
English Elective[1]			3
EG	133	Business Communications	
EG	113	English Composition	
		Economics Elective[1]	3
Elective[1]			3

Fourth Quarter

TT	120	International Trade I	4
TT	110	Transport. Reg. I	4
TT	141	Econ. of Trans. I	2
TT	105	Traf. Mgt. & Phy. Dist. I	2
MG	201	Bus. Org. & Mgt.	3
		Elective	2-3
			17-18

Fifth Quarter

TT	121	International Trade II	4
TT	111	Trans. Reg. II	4
TT	142	Econ. of Trans. II	2
TT	105	Traf. Mgt. & Phy Dist. II	2
MG	203	Prin. of Marketing I	3
		Elective	2-3
			17-18

Sixth Quarter

TT	122	International Trade III	4
TT	143	Econ. of Trans. III	2
TT	112	Trans. Reg. III	4
TT	106	Traf. Mgt. & Phy Dist. Ii	2
MG	210	Business Law I	3
		Elective[1]	2-3
			17-18

1. Consult faculty advisor for recommended electives.

TOTAL CREDIT HOURS: 103-109

ACCOUNTING

AC 109 Bookkeeping & Accounting (A, N, R) ..... 5 credit hours

This study of the basic elements of accounting for the secretarial student includes the handling of cash receipts and disbursements, accounts receivable and accounts payable and the five basic journals. Study of the accounting cycle and the preparation of financial statements is provided. Practice set is required. (5 hours per week plus programmed laboratory as needed)

AC 110 Payroll & Machine Accounting (R) ..... 5 credit hours

Prerequisite: AC 109 Bookkeeping & Accounting or AC 111 Accounting or consent of the instructor

An in-depth study of various payroll systems including the study of related law and practices. Includes practice in preparation of payrolls and computation of deduction. Emphasis is placed on actual preparation of payroll projects by hand, pegboard system and the accounting machine. (5 hours per week plus programmed laboratory as needed)

AC 111 Accounting (A, N, R) ..... 5 credit hours

Prerequisite, Corequisite or equivalent: MG 105 Introduction to Business; M 110 Mathematics for Business

An introductory study of accounting principles to acquaint the student with the theory and logic that underlie accounting procedures. Course content includes basic accounting structure, the accounting cycle, processing sales and cash receipts, processing purchases and cash payments, summarizing and reporting, receivables and payables, and merchandise inventory. (5 hours per week plus programmed laboratory as needed)

AC 112 Accounting (A, N, R) ..... 5 credit hours

Prerequisite: AC 111 Accounting

A continuation of accounting principles as they pertain to deferrals and accruals, plant assets and intangible assets, systems and controls, payroll systems, systems design and automated data processing, concepts and principles, partnerships and corporation — organization and operations. (5 hours per week plus programmed laboratory as needed)

AC 113 Accounting (A, N, R) ..... 5 credit hours

Prerequisite: AC 112 Accounting

A study of accounting principles, theory and logic relating to corporations. Special emphasis is given to stockholders' equity, earnings and dividends, long-term obligations and investments, departments and branches, management reports and special analysis, fund, fund statement and cash flow, consolidated statements and other statements, and financial statement analysis. (5 hours per week plus programmed laboratory as needed)

AC 211 Intermediate Accounting (A, N, R) ..... 5 credit hours

Prerequisite: AC 113 Accounting and DP 111 Principles of Business Data Processing

In-depth study of the fundamental accounting process with emphasis on the financial statement (income statement, retained earning statement and balance sheet), working capital (cash and liabilities), receivable forecast, inventories and current liabilities as related to a corporate form of business organization. (5 hours per week plus programmed laboratory as needed)

AC 212 Intermediate Accounting (A, N, R) ..... 5 credit hours

Prerequisite: AC 211 Intermediate Accounting

In-depth study of the fundamental accounting process with emphasis on non-current assets, liabilities and owners equity as related to a corporate form of business organization. Includes in-depth study of financial statement analysis, ratios and measurement, and fund flow. (5 hours per week plus programmed laboratory as needed)

AC 213 Cost Accounting I (A, N, R) ..... 5 credit hours

Prerequisite or Corequisite: AC 113 Accounting or equivalent

A study of the cost accumulation methods emphasizing planning and control. Concepts and procedures applicable to job order and process cost systems are presented. Orientation in the use and interpretation of cost data by management. (5 hours per week plus programmed laboratory as needed)

AC 214 Cost Accounting II (R) ..... 5 credit hours

Prerequisite: AC 213 Accounting or equivalent.

A study of responsibility accounting and reporting of factory overhead, materials and labor. Emphasis on cost control and the planning phase, budgeting. (5 hours per week plus programmed laboratory as needed)

AC 215 Introduction to Accounting Systems ..... 5 credit hours
Prerequisite: AC 113 Accounting and DP 112 Advanced Principles of Business Date Processing

A study of the integration of computers and accounting, the installation and control of accounting systems in various business study. Analysis of case problems and applications are an essential part of the course. (5 hours per week plus programmed laboratory as needed)

AC 217 Individual Income Tax Accounting ..... 5 credit hours
Prerequisite: AC 113 Accounting or equivalent

Practice in the application of the Internal Revenue Code and Colorado Income Tax Law to determine individual income tax. Coverage is restricted to individual income taxation and includes the basic concepts of returns, exemptions, exclusions and inclusions of gross income, itemized and standard deductions, payment of tax liability, recognition of gains and losses. Selected practical problems will be solved through student research of the Code provided by the Commerce Clearing House tax service. (5 hours per week plus programmed laboratory as needed)

AC 218 Individual Income Tax Accounting II (R) ..... 5 credit hours
Prerequisite: AC 217 Individual Income Tax Accounting or equivalent

An introduction to basic concepts of state returns and partnerships, corporation and fiduciary returns will be included. A continuation of the basic concepts of individual income tax preparation. Coverage will include installment and deferred payment sales, dividends, inventories, deductions for expense, depreciation and investment credits, depletion, deduction for bad debts, income averaging. Emphasis will be placed on selected practical problems through student research of the Code provided by the Commerce Clearing House tax service. (5 hours per week plus programmed laboratory as needed)

AC 220 Principles of Governmental Accounting and Budget .... 5 credit hours
Prerequisite: AC 113 Accounting

Orientation in the concept of fund and budgetary controls as a matter of law and public administration at the County, City, State and Federal Leve. Includes forecast of requirements and anticipated revenue, the anticipated expenditures and the actual revenue and expenditures. Accounting principles and procedures to implement budget forecasts, and actual enactment of the budget. (5 hours per week plus programmed laboratory as needed)

BUSINESS

BU 297 Cooperative Work Experience ..... 1 to 6 credit hours

In some program areas, cooperative work experience is a part of the course study. The student is placed at a work station, somewhere in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved, with a College Instructor providing general co-ordination. Prerequisites for enrollment in Cooperative Work Experience are permission of the instructor and approval of the Division Director.

BU 299 Independent Study ... 1 to 3 credit hours

Provides an opportunity for the mid-management or transfer student to engage in intensive study and research on a specific topic under the direction of a qualified faculty member. Conditions for electing this course will be evaluated by the Director of the Division of Business and Management Occupations, who will assist in selecting an advisor and determining the amount of credit to be granted for successful completion of the work.

DATA PROCESSING

DP 102 Key Punch Laboratory (N, R) ..... 8 credit hours
Prerequisite: Typing speed of 45 wpm with 5 error maximum

A practice course in the operation of the card punch machine and verifier. If the student reaches employable levels prior to the completion of the quarter, he may be given other tape equipment instruction as conditions permit. Because of conflicting keyboard arrangements, it is recommended that students avoid scheduling SC 103, Business Machines, concurrently with Key Punch Laboratory. (15 hours per week, plus lab as directed by instructor)

DP 111 Principles of Business Data Processing (A, N, R) ..... 3 credit hours

An introduction to basic method, techniques, and systems of manual, mechanical, unit record, and electronic data processing. Objective of this course is to give the student a general understanding of the field of data processing. (3 hours per week)

DP 112 Advanced Principles of Business Date Processing (A, N, R) .. 5 credit hours
Prerequisite: DP 111

A basic course in computer programming which includes the use of simple flow charts, decision tables, and logic techniques to acquaint the student with the logical necessities of programming. The student is exposed to machine language, assembly language, and the general principles of a computer operating system. (5 hours per week)

DP 114 Report Program Generator (N) ..... 5 credit hours
Prerequisite: DP 112

Coding and execution of simple business programs using RPG. (5 hours per week)

DP 121 Applied Computer Mathematics (N) ..... 5 credit hours

Application of data processing techniques to simple business mathematics problems. (5 hours per week)

DP 122 Applied Computer Mathematics (N) ..... 5 credit hours
Prerequisite: DP 121

Continuation of DP 121 using more advanced applications. (5 hours per week)

DP 213 Assembler Language I (N,R) ..... 5 credit hours
Prerequisite: DP 112

Coding and execution of simple business programs using assembler language. (5 hours per week)

DP 214 Assembler Language II (N) ..... 5 credit hours
Prerequisite: DP 213

Continuation of DP 213 using more advanced applications. (5 hours per week)

DP 216 Cobol I (N) ..... 5 credit hours
Prerequisite: DP 112

Coding and execution of simple business programs using COBOL. (5 hours per week)

DP 217 Cobol II (N) ..... 5 credit hours
Prerequisite: DP 216

Continuation of DP 216 using more advanced applications. (5 hours per week)

DP 221 Fortran IV, I (N) ..... 5 credit hours
Prerequisite: DP 112

Coding and execution of simple business programs using Fortran IV. (5 hours per week)

DP 222 Fortran IV, II (N) ..... 5 credit hours
Prerequisite: DP 221

Continuation of DP 221 using more advanced applications. (5 hours per week)

DP 224 PL/I (N) ..... 5 credit hours
Prerequisite: DP 112

Coding and execution of simple business programs using PL/I. (5 hours per week)

DP 225 PL/II (N) ..... 5 credit hours
Prerequisite: DP 224

Continuation of DP 224 using more advanced applications. (5 hours per week)

DP 231 Systems Analysis I (N) ..... 3 credit hours
Prerequisite: Completion of a two quarter programming language sequence.

Courses DP 231 and DP 232 constitute a two quarter sequence in which the student will be given a problem to analyze, define, and solve by data processing techniques using a programming language. (3 hours per week)

DP 232 Systems Analysis II (N) .... 3 credit hours
Prerequisite: DP 231

Continuation of DP 231 (3 hours per week)

INDUSTRIAL MANAGEMENT
(Red Rocks only)

IM 101 Elements of Supervision (R) ..... 3 credit hours

Emphasis is given to the first-line supervisor's needs for a working understanding of functions of management, organizational arrangements, and practical aspects of motivation. This course also emphasizes developing an ability to critically and constructively self-evaluate with a view toward developing attitudes, habits, and skills which lead to effective as well as personally rewarding and satisfying supervisory practices. (3 hours per week)

IM 103 Industrial Safety (R) ..... 3 credit hours

A survey of Workmen's Compensation regulations and the first-line supervisor's responsibility in this area. The course will stress the importance of on-the-job safety training. (3 hours per week)

IM 104 Work Simplification and Cost Control (R) ..... 3 credit hours

This course seeks to assist each class member to develop a working understanding of the major elements of work simplification and skill in systematic analytical approaches in their application; a working understanding of the principles and procedures useful in devising and employing work measurement methods using various measurement techniques and the purposes to be served by these methods including setting of incentives; the ability to recognize potential areas for application of cost control mechanisms; an appreciation of the significance of recognizing and coping with problems inherent in devising and gaining acceptance of improved methods and/or measurement of work activity. (3 hours per week)

IM 151 Construction Supervision (R) ..... 2 credit hours

The study of construction supervision from a job-related approach. Job situations are used to illustrate types of leadership, methods of exerting leadership influence, types of motivational forces, and effective communication techniques. Students repeatedly participate in simulated situations to improve their supervisory skills. The course is conducted in cooperation with the Associated General Contractors. Depending upon a student's major, this course will apply as an elective within the Industrial Management Program. (2 hours per week)

IM 152 Construction Supervision (R) ..... 2 credit hours
Prerequisite: IM 151 Construction Supervision

This course is a continuation of IM 151 Construction Supervision. Student involvement and simulated situations are used to teach methods of identifying and solving problems, decision making, job analysis, job-site material handling and storage and techniques of job planning, organization and follow through. Depending upon a student's major, this course will apply as an elective within the Industrial Management Program. (2 hours per week)

IM 201 Employee Development (R) ..... 3 credit hours

A course designed to acquaint the student with the various on-the-job methods of training. The course will cover vestibule, coaching, counseling, and the use of evaluation in training. (3 hours per week)

IM 202 Theory and Application of Behavioral Sciences (R) ... 3 credit hours

A study of the supervising aspect of management. The course will consider, in depth, the ideas of persons such as Maslow, Argyris, McGregor, etc. Also, an exposure to "sensitivity" training will be included. (3 hours per week)

IM 203 Management by Objectives (R) ..... 3 credit hours

A course designed to make a student aware of a method of management which will enable him to make decisions based on an immediate goal. It is to include case studies in its approach to this subject. (3 hours per week)

MANAGEMENT

MG 105 Introduction to Business (A, N, R) ..... 3 credit hours

A survey of the structure and functions of the American business system. Provides an overview of business orga-

nization, finance, managerial, control, production, distribution, personnel, and the interdependence of business and government (3 hours per week)

MG 110 Salesmanship (A, N, R) ..... 3 credit hours

Covers the fundamentals of selling from the determination of customer needs to the close of the sale. Treats such factors as customer problems, merchandising knowledge, and personality traits of successful salesmen. (3 hours per week)

MG 115 Principles of Advertising (A, N, R) ..... 3 credit hours

An introductory course handling the theory, practice and techniques in advertising. Considers the role of advertising and sales promotion in our economy, and includes a general survey of the kinds and purposes of different media, the psychological implications of typical appeals, and limited student practice in promotional programming. (3 hours per week)

MG 130 Credit Fundamentals I (A) ..... 3 credit hours

A study of the development and growth of consumer and retail credit and its effect on the American life style. Various credit plans will be analyzed. Home mortgage loans and the role of sales finance companies will also be discussed. (3 hours per week)

MG 131 Credit Fundamentals II (A) ..... 3 credit hours

A study of commercial and governmental uses of credit with an analysis of the actual operations of a retail, wholesale, and commercial credit department. Basis for credit making decisions will be discussed. (3 hours per week)

MG 201 Business Organization and Management (A, N, R) ..... 3 credit hours

Prerequisite: MG 105 and MG 110

The study of the management functions as they relate to the elements of management to the elements of management to include planning, organizing, directing and controlling. (3 hours per week)

MG 203 Principles of Marketing (A, N, R) ..... 3 credit hours

Prerequisite: MG 105, BU 110

Marketing as an institution and as a managerial variable is studied in this course. Covers a survey of the distributive fields, their function, and interrelationship. (3 hours per week)

MG 210 Business Law I (A, N, R) ... 3 credit hours

Prerequisite: MG 105

Introduction of ordinary legal aspects of business transactions involving such topics as legal rights and duties, law of contracts, negotiable instruments. Designed to give a general understanding and development of basic legal logic in business situations through the use of principles and cases and information useful in determining the need for professional counsel. (3 hours per week)

MG 211 Business Law II (A, N, R) ..... 3 credit hours

Prerequisite: MG 210

Continuation of Business Law I. Course includes further study in law of sales, bailments, agency, real estate, insurance, business organization and social welfare legislation. Primarily designed for students planning careers in accounting, credit, management, and other fields related to business law. Extensive use of case material. (3 hours per week)

MG 212 Business Law III ..... 3 credit hours

Prerequisite: MG 211

Continuation of Business Law II. Course includes study of personal property, bailments, security devices, partnerships, and corporations. (3 hours per week)

MG 213 Credit and the Law I (A) ..... 3 credit hours

A presentation of the legal aspects of credit as it relates to interest, collection, conditional sales and installment contracts, wage assignments and the basic rights of debtor and creditor.

MG 215 Principles of Retailing (A, N, R,) ..... 3 credit hours

Prerequisite: MG 105 and M 110

Designed to acquaint the student with the fundamentals of retail store organization and management, including store location, layout, buying, pricing operation, advertising display, and analysis associated with handling of merchandise. (3 hours per week)

MG 216 Principles of Purchasing (A, N, R) ..... 3 credit hours

Prerequisite: MG 105, MG 203, M 110

Objectives and methodology of industrial, institutional, and governmental purchasing agents and buyers; emphasizes value analysis, product quality control, maintenance of operating efficiency, analysis of competitive price quotations, and materials management.

MG 217 Sales Management (A, N, R) ..... 3 credit hours

Prerequisite: MG 110 and Corequisite: MG 201

A study of sales management, the methods, techniques, and problems involved, and the relationship of sales management to the total business operation. (3 hours per week)

MG 220 Small Business Management (A, N, R) ..... 3 credit hours

Prerequisites: MG 201 and MG 203

A study of small business and its importance in the American economy. Problems of small business operation will be analyzed. (3 hours per week)

MG 221 Personnel Management (A, N, R) ..... 3 credit hours

Prerequisite: MG 105 and MG 201

A study of the principles and techniques of personnel management, including an examination of managerial practices in the selection, development, and motivation of employees. Considers factors underlying employee participation in policy formation; the effect of the work environment; administration of wages, salaries, and benefits; and the evaluation of personnel programs. (3 hours per week)

MG 222 Office Management (A, N, R) ..... 3 credit hours

Prerequisite: MG 105

Emphasis is placed on the functions of the office and office organization, work in the office, office layout, equipment, supplies, and forms, personnel problems in the office, and costs and control of office work. Course presents methods of recognizing and solving office com-

munication problems and awareness of successful human relations, changing technologies and philosophy of business and the technical terminology used in business. (3 hours per week)

MG 239 Wage and Salary Administration (R) ..... 3 credit hours
Prerequisite: MG 221 or consent of instructor

Systematic administration of wages and salaries as a means of motivation and control in business and other enterprises. Job analysis, descriptions and specifications, job evaluation methods, wage structure, community wage and salary surveys, principles and administration of wage incentive plans and their effectiveness. (3 hours per week)

MG 240 Business Finance (A,N,R) ..... 5 credit hours
Prerequisite: MG 105, EC 109 or 211, AC 113

Studies the impact of fiscal and monetary policy on the business environment. Examines the sources and uses of short term, intermediate term, and long term funds for a business. Principles and motives of corporate financial management are stressed. (5 hours per week)

MG 250 Business Policies (A, N, R) . 3 credit hours
Prerequisites: MG 105 and MG 201
and 12 Hrs. Mgt. Courses

A study of policy construction and its relationship to effective management, sound personnel administration, and financial stability. Various areas previously studied are related to policy decision-making through the use of case studies. (3 hours per week)

PR 209 Public Relations (R) ..... 3 credit hours

Introduction to procedures and practice in writing institutional news, features and editorials for public information media. (3 hours per week)

REAL ESTATE

RE 101 Real Estate Fundamentals (R) 3 credit hours

A general survey of real estate principles and practices designed to provide basic knowledge of real estate. (3 hours per week)

RE 103 Real Estate Finance (R) .... 3 credit hours

A course of study covering the various methods of financing real property and the financial institutions that provide the funds for financing residential, commercial and income properties. (3 hours per week)

RE 104 Real Estate Law I (R) ..... 3 credit hours

A comprehensive case study of real estate law as it pertains to individuals, real estate brokers, subdividers and developers with special emphasis on the law as applied in the State of Colorado. (3 hours per week)

RE 105 Real Estate Law II (R) ..... 3 credit hours

A continuation of Real Estate Law I including existing and proposed state and federal legislation affecting real estate development. (3 hours per week)

RE 110 Real Estate License Preparation (R) ..... 3 credit hours

A course designed to prepare real estate license applicants for the Multi-State and Colorado License Examinations. (3 hours per week)

RE 201 Principles of Insurance (R) ..... 3 credit hours

A general survey of all types of insurance with special emphasis on property, life and automobile insurance. (3 hours per week)

RE 202 Real Estate Appraisal I (R) ..... 3 credit hours

A basic study of the principles, techniques and accepted methods of evaluating real property as used by professional appraisers, emphasis is placed on the evaluation of residential property. (3 hours per week)

RE 203 Real Estate Appraisal II (R) ..... 3 credit hours

A study of the income approach and rate of return approach in the evaluating of income producing properties such as apartments, motels, hotels, and office buildings. (3 hours per week)

RE 204 Real Estate Investments (R) ..... 3 credit hours

A study of the investment opportunities in the real estate market including tax benefits derived from depreciation, tax free exchanges and preferred types of ownership. (3 hours per week)

RE 210 Real Estate Trends and Developments (R) ..... 3 credit hours

A study based upon new concepts in the development of residential, multi-family, commercial and industrial real estate including trends to disperse population growth. (3 hours per week)

SECRETARIAL

SC 100 Duplicating Machines (A, N, R) ..... 2 credit hours
Prerequisite: SC 112 Typing or equivalent

Provides instruction and practice in the operation of spirit duplicators, mimeograph machines, and thermal and photocopy machines. Also includes the preparation of stencils, master, and various media associated with these machines. (2 hours per week plus lab as needed)

SC 103 Business Machines (A, N, R) ..... 3 credit hours
Prerequisite or Corequisite: M 100
Developmental Math

Fundamental instruction in the basic mathematical process—addition, subtraction, multiplication, division—on full-key, and printing calculators. Following basic familiarization on a variety of makes and models, the student will return to the 10-key machines to develop employable proficiency at high levels of speed and accuracy. (Also, the student will be introduced to specialized machine processes such as employing constants, using machine memory devices, figuring lapsed time, chain discounts, mark-ups and mark-downs, percentages of increase and decrease etc. (5 hours per week plus a minimum of 2 practice hours)

SC 105 Filing and Records Control (A, N, R) ..... 3 credit hours

This course acquaints the student with the rules, procedures, and techniques of filing that are vital to every business worker. The course also covers the principles of records management and control. (3 hours per week)

SC 110 Typing I (A, N, R) ..... 4 credit hours

A beginning course for those who have had no previous instruction in typing. Introduces the keyboard and machine parts, and develops correct techniques for attaining acceptable levels of speed and accuracy. While primary emphasis is placed on straight-copy skills, the course covers a range of basic typing applications: letters, manuscripts, tabulation problems, and common business forms. This course is designed to meet the needs of students with vocational as well as nonbusiness objectives. (5 hours per week, plus lab as needed)

SC 111 Typing II (A, N, R) ..... 4 credit hours

Prerequisite: SC 110 or equivalent
Typing speed of 25 words per minute

This course is a continuation of SC 110. The course is also designed for those who have taken some limited typing instruction but need to have their basic skills restored before they can pursue intermediate typing (SC 112). The student is encouraged to develop speed and accuracy skills to a higher degree before entering the next phase of the typing sequence. (5 hours per week plus lab as needed)

SC 112 Intermediate Typing (A, N, R) ..... 4 credit hours

Typing speed of 35 words per minute

Reinforces skills acquired in typing, identifies and handles individual typing deficiencies and covers a comprehensive program of vocational typing applications. Emphasis is placed upon production typing as it relates to office situations. (5 hours per week plus lab as directed)

SC 113 Production Typing (A, N, R) ..... 4 credit hours

Prerequisite: SC 112 or equivalent
Typing speed of 45 words per minute

Emphasizes attainment of high professional levels in speed and accuracy, especially in the rate of production output in those activities frequently performed by a secretary or full-time typist. The course concentrates on building production skills and preparation for office employment using proper business forms. Emphasis is placed upon problem typing in the following areas: general, technical, accounting, professional, government, and executive. This is the terminal course in the typing sequence. (5 hours per week plus lab as directed)

SC 115 Magnetic Card Typewriting ..... 3 credit hours

Student will be instructed in keyboarding techniques of magnetic media typewriters in order to develop an employable skill in the operation of this equipment.

SC 120 Alphabetical Shorthand Principles I (A, N, R) ..... 4 credit hours

Prerequisite: SC 110 or equivalent

This is an accelerated introductory shorthand course for those students preferring an alphabetic rather than a symbol system. The course covers the theory of ABC Stenoscript Shorthand, a totally alphabetical system. Both reading and writing techniques are stressed, and the student is introduced to short dictation exercises at minimum speeds. (5 hours per week plus lab as directed)

SC 121 Alphabetic Shorthand Principles II ..... 4 credit hours

Prerequisite: SC 120 or proficiency examination

This course develops speed in taking dictation from 70-90 words per minute. Typewritten transcription is further developed. The basic rules of sentence structure, punctuation, capitalization, etc. are reviewed in preparation for job entrance tests and Civil Service Examination. Spelling improvement is integrated with the course content. It is suggested that students plan to follow this course with SC 127 Shorthand Speedbuilding. (5 hours per week plus lab practice as directed)

SC 123 Spanish Gregg Shorthand Principles (N) ..... 4 credit hours

See course description for SC 125. This course will introduce the theory of Gregg Shorthand in Spanish. Designed for International Secretarial Program. (5 hours per week)

SC 124 Spanish Shorthand Transcription (N) ..... 4 credit hours

See course description for SC 128. Continuation of SC 123. Designed for International Secretarial students. (5 hours per week)

SC 125 Gregg Shorthand Principles (A, N) ..... 4 credit hours

Prerequisite: SC 110 or equivalent

Introduces the theory of Gregg Shorthand, Diamond Jubilee Series, and develops reading speeds from book plates and handwritten notes. Shorthand writing of familiar matter demonstrating all Gregg Principles is developed to average speeds of 60 words a minute. This course is intended for students who have had no previous Gregg Shorthand instruction, or for those whose proficiency examination indicate a need for basic review and reinforcement. (5 hours per week, plus practice as directed)

SC 126 Gregg Shorthand Principles (A, N, R) ..... 4 credit hours

Prerequisite: SC 125 or proficiency examination

Reinforces basic theory principles and develops the ability to take dictation of both familiar and unfamiliar matter. Transcription at the typewriter is further developed and special attention is placed on building an extensive shorthand vocabulary. Speed emphasis in this course ranges from 70-90 words a minute. (5 hours per week, plus lab as directed)

SC 127 Shorthand Speed Building (A, N, R) ..... 4 credit hours

Prerequisite: SC 126 or SC 121 or Proficiency Examination

Intensive dictation practice permits the student to reach optimum speeds ranging from 90 to 110 words a minute. A comprehensive review is provided in punctuation, spelling, letter styles, and vocabulary improvement. A great emphasis on the typewritten transcript is also stressed in the course. (5 hours per week plus lab as directed)

SC 128 Shorthand Transcription (A, N, R) ..... 4 credit hours

Prerequisite: SC 127 or SC 121

Optimum speed and accuracy in dictation and transcription are fully realized in this course, with emphasis on the production of mailable letters. Total business proficiency is expected, and attention is directed to the ability to take dictation for longer periods and to transcribe job assignments at employable production rates. Speed ranges extend from 90 to 120 words a minute (5 hours per week, plus lab as directed)

SC 130 Machine Transcription I
(A, N, R) ..... 3 credit hours
Prerequisite: SC 112 (Intermediate Typing) or equivalent and EG 131

This course provides fundamental instruction in the use of transcribing machines in the preparation of business letters and other correspondence. The course includes a review of letter styles, rules of transcription and punctuation, and the mechanics of producing mailable letters at high production rates. (3 hours per week, plus lab as directed)

SC 131 Machine Transcription II
(A, N, R) ..... 3 credit hours
Prerequisite: SC 130 or equivalent

Designed primarily for students seeking certification as word-processing typists, this course provides intensive practice in the transcription of business letters from machine sources. Students may elect to concentrate in specific professional or business forms of correspondence, such as medical, legal, or educational transcription. Open to any student on an elective basis. (3 hours per week, plus lab practice)

SC 132 Machine Transcription—
Spanish (N) ..... 3 credit hours
Prerequisite: SC 112 or equivalent proficiency

Intensive practice in the use of magnetic tape and belt transcribing machines in the preparation of business correspondence dictated in Spanish. Includes a review of letter styles, rules of transcription and punctuation, and the mechanics of producing mailable letters at high production rates. Experience on several models of electric typewriters will be provided. (3 hours per week plus lab practice)

SC 145 Comprehensive Office Experience
(R only) ..... 3, 6, or 9 credit hours

This class is designed to give you actual office experience. Work is done for instructors and administrators. Students will hold positions such as Office Manager, Secretary-Receptionist, Accountant, Bookkeeper, Stenographer, Typists, Duplicating Machine Operator, and File Clerk. The position you acquire will be determined by the prerequisites you have had. New machines to be used are IBM Executive Typewriter, IBM Dual- pitch Selectric Typewriter, Magnetic Card Selectric Typewriter, telephone usage, and mimeo-scopes. Credit hours will depend on hours in class:

1 hour per day, 5 days per week .... 3 credit hours
2 hours per day, 5 days per week ... 6 credit hours
3 hours per day, 5 days per week ... 9 credit hours

SC 200 Office Procedures
(A, N, R) ..... 5 credit hours
Prerequisite: SC 112

This course introduces the student to the business world and acquaints the prospective office employee with the various office duties. Units covered include organization of office work, incoming and outgoing mail, postal and shipping services, telephone techniques, maintenance and control of office supplies, and business and social conduct. A practicum is used in the course which correlates classroom discussion with related office projects. (5 hours per week)

SC 206 Legal Dictation and
Transcription (A) ..... 3 credit hours
Prerequisite: SC 210

Specialized course for legal reporting and transcription. Student will continue to build mastery of legal terminology and forms. Individual tape, programmed dictation is used extensively in this course. (3 hours per week plus lab as needed)

SC 210 Legal Secretarial Procedures and
Terminology (A) ..... 3 credit hours
Prerequisite: SC 200

Provides intensive practice in preparing many types of legal documents. Student is introduced to the routine of a legal office. This course is designed for the legal secretarial student, and attention will be given to mastering meanings, spelling, and shorthand forms established for legal terms in preparation for legal and dictating transcription. (5 hours per week plus lab as needed)

SC 259 International Secretarial
Procedures (N) ..... 3 credit hours
Prerequisite: SC 118

Adapts material described in SC 200 to the international business scene. Covers import-export procedures; telephone procedures (domestic and foreign); transportation and travel (domestic and foreign); money exchange; mailing procedures (domestic and foreign); English-Spanish office communications; and a number of office routines that are characteristic of all business offices. (3 hours per week)

SC 260 Office Practice I —
Spanish (N) ..... 3 credit hours
Prerequisite: SP 113 or equivalent proficiency

A course designed primarily for students enrolled in the International Secretarial Program, and students meeting the above prerequisites. Deals with the commercial Spanish language used in both domestic and foreign offices. Emphasis on Spanish Correspondence. (3 hours per week)

SC 261 Office Practice II —
Spanish (N) ..... 3 credit hours
Prerequisite: SC 260

Continuation of SC 260. Develops a sound business vocabulary and introduces correct translation demanded when acting as an official interpreter for both written and oral business communication. Emphasis on Documentation. (3 hours per week)

SC 262 Office Practice III —
Spanish (N) ..... 3 credit hours
Prerequisite: SC 251

Continuation of SC 261. Emphasizes practical application through project work. Students will be involved with representatives from import-export firms, government offices, foreign consulates, and embassies. (3 hours per week)

TRAFFIC AND TRANSPORTATION
(Auraria only)

TT 101 Fundamentals of Commercial
Transportation I (A) ..... 4 credit hours
(Formerly Introduction to Traffic and Transportation)

A survey of the air, highway, rail and water transportation industry. Covers the importance of transportation, location theory, historical factors, geographical consideration, inherent advantages of each mode, relationship of carrier and user and the current economic status of each mode. (4 hours per week)

TT 102 Fundamental of Commercial Transportation II (A) ..... 4 credit hours
(Formerly Logistics and Traffic Management)
Prerequisite: TT 101 or permission of instructor

A continuation of TT 101. (4 hours per week)

TT 103 Fundamentals of Commercial Transortation III (A) ..... 4 credit hours
(Formerly Logistics and Traffic Management)
Prerequisite: TT 102 or permission of instructor

A continuation of TT 102, completing a three-quarter sequence essential to the further study of all courses in the Transportation Division of the College. Reviews, in-depth, the significance of the various facets of transportation. (4 hours per week)

TT 105 Traffic Management and Physical Distribution I (A) ..... 2 credit hours
Prerequisite: TT 101, TT 102 and TT 103

Advanced studies of management concepts as they relate to traffic management and physical distribution. This first quarter deals with the organization, management, and analytical methods of physical and traffic management. (2 hours per week)

TT 106 Traffic Management and Physical Distribution II (A) ..... 2 credit hours
Prerequisite: TT 105

A continuation of TT 105 covering warehousing, inventory control, material handling and packaging. (2 hours per week)

TT 107 Traffic Management and Physical Distribution III (A) ..... 2 credit hours
Prerequisite: TT 106

Concludes a three-quarter sequence. Deals with the development of rates, classifications relative to transportation, documentation and services offered by or used in connection with various modes of transportation, etc. Also treated in this quarter will be the liabilities of carriers and the managerial procedures involved in claims. (2 hours per week)

TT 110 Transportation Regulations I (A) ..... 4 credit hours
Prerequisite: TT 101

A professional course providing intensive and advanced work in regulation for transportation specialists who are candidates for admission to practice before the Interstate Commerce Commission. A study of the promotion and restriction of transportation enterprises from colonial times to the present; economic and political climate extant as each mode of transport emerged; general effect of transportation legislation. (4 hours per week)

TT 111 Transportation Regulations II (A) ..... 4 credit hours
Prerequisite: TT 110

A comprehensive study of cases applying policies for transportation regulations and employing decisions of special interests in traffic administration. (4 hours per week)

TT 112 Transporation Regulations III (A) ..... 4 credit hours
Prerequisite: TT 110

A study of the Rules of Procedure before the Interstate Commerce Commission, the Practitioner's Code of Ethics, due process, and preparation of cases. (4 hours per week)

TT 120 International Trade I (A) ..... 4 credit hours
Prerequisite: Permission of instructor

A comprehensive course in the field of Import-Export Operations combining basic theory with practical application, such as the facets of including credits, documentation, government controls, promotion sales and transportation legislation. (4 hours per week)

IT 121 International Trade II (A) ..... 4 credit hours
Prerequisite: TT 120 or permission of instructor

Continuation of TT 120. Covers export trade throughout the world and import business within the United States (4 hours per week)

IT 122 International Trade III (A) ..... 4 credit hours
Prerequisite: TT 121 or permission of instructor.

Conclusion of a three-quarter sequence in International Trade. This is an advanced course based on case history method with active student participation. Can serve as a refresher course for export executives and their assistants. (4 hours per week)

IT 130 Management Tools and Concepts I (A) ..... 4 credit hours
Prerequisite: MG 105 or permission of instructor

The first of three related courses will focus on managerial accounting. Accounting reports and their use. Cost Accounting introduction, and accounting methodology. For Transportation students only. (4 hours per week)

TT 131 Management Tools and Concepts II (A) ..... 4 credit hours
Prerequisite: TT 130

Introduces principles of corporate finance, financial analysis and procedures. Introduction to money and banking, fiscal and monetary institutions and tools. For transportation students only. (4 hours per week)

TT 132 Management Tools and Concepts III (A) ..... 4 credit hours
Prerequisite: TT 131

Concluding section of a three-quarter sequence, providing an introduction to marketing and statistics, as they pertain to the field of transportation. (4 hours per week)

TT 141 Economics of Transportation I (A) ..... 2 credit hours
Prerequisites: TT 101, TT 102 and TT 103

An in-depth study of transportation economics. Such specifics as the development of transportation systems, theory of pricing, cost structures and rate making, competition between modes, transportation regulation, finance and national transportation policy will be considered. (2 hours per week)

TT 142 Economics of Transportation II (A) ..... 2 credit hours
Prerequisite: TT 141

A continuation of TT 141. An in-depth study of the theory of pricing and rate-making. Examines the regulations of various modes of transportation. (2 hours per week)

TT 143 Economics of Transportation III (A) ..... 2 credit hours

Prerequisite: TT 142

Concludes the Transportation Economics sequence. Studies national transportation policies, competition, integration of transportation, transporting financing, labor, and regulations governing the field of transportation. (2 hours per week)

TT 151 Workshop in Freight Rates I (A) ..... 2 credit hours

A practical workshop designed specifically to prepare the student for tariff interpretation of rates by rail, motor carrier, air cargo, air express, trailer on flat car, container on flat car, freight forwarded and water. (2 hours per week)

TT 152 Workshop in Freight Rates II (A) ..... 2 credit hours

Prerequisite: TT 151

A continuation of TT 151. An intensive, practical workshop extending tariff interpretations. (2 hours per week)

TT 153 Workshop in Freight Rates III (A) ..... 2 credit hours

Prerequisite: TT 152

Concludes the Workshop in Freight Rates sequence. Particular emphasis placed on tariff interpretation of rates in view of the various vehicles employed in transportation. (2 hours per week)

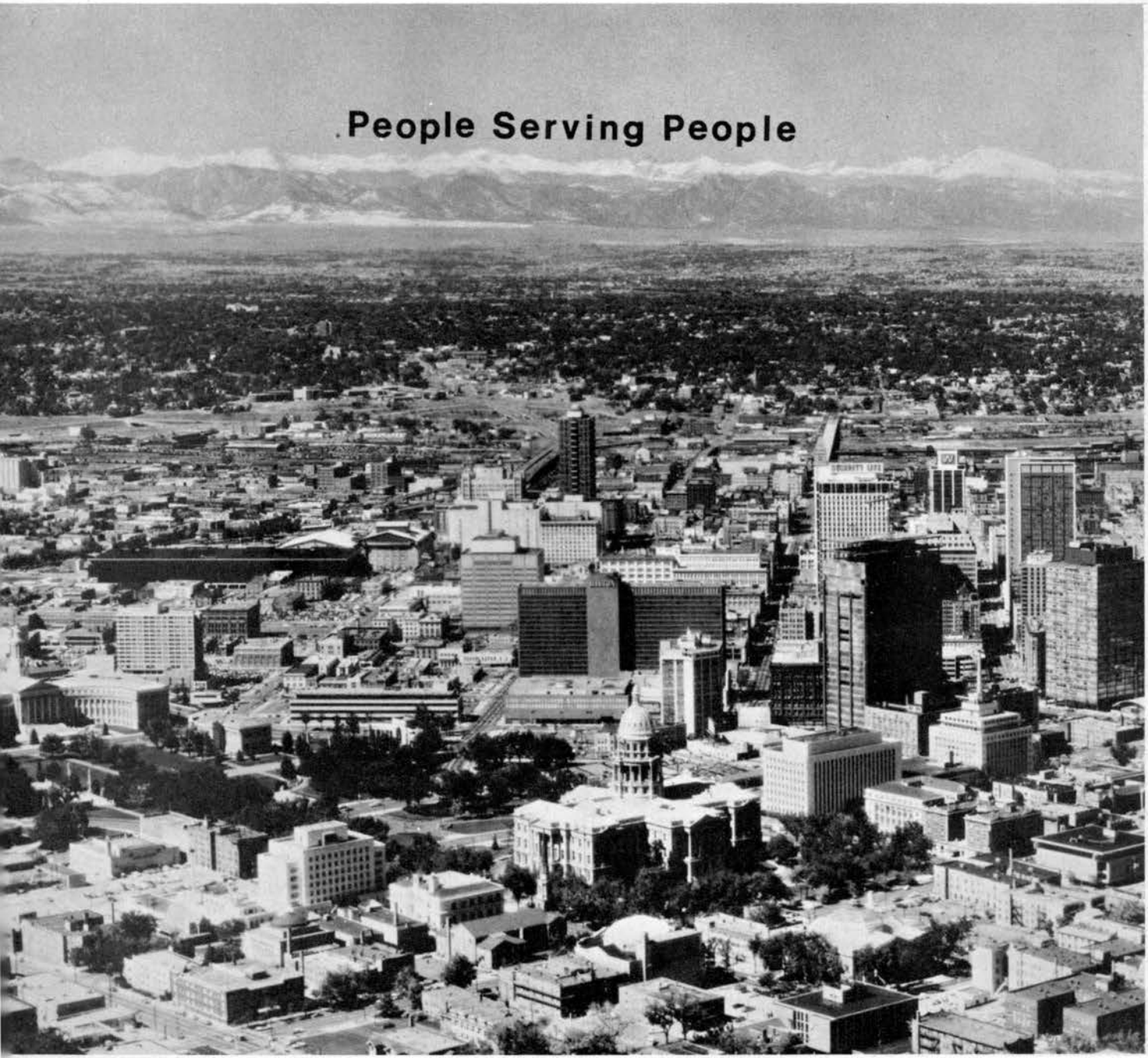
TT 161 Introduction to Public Transit Systems (A) ..... 2 credit hours

A study of the development of transit systems, to include: historical analysis, land use patterns, public relations, technologics and economics of urban transportation and its effects on the American life style.

Community College of Denver

Auraria Campus
North Campus
Red Rocks Campus

Division of Community and Personal Service Occupations



DIVISION OF COMMUNITY AND PERSONAL SERVICE OCCUPATIONS

Audio-Visual Technology	R
Activity Directing for Senior Citizens	A
Building Inspection	R
Classroom Teaching Assisting	A
Community and Social Service Assisting	A
Cosmetology	R
Criminal Justice	R
Dietic Assisting	N
Early Childhood Education Assisting	N, A
Early Childhood Education and Management	N, R
Suggested Core for Early Childhood Education	
Environmental Control Technology	R
Fire Science Technology	R
Food Service	N
Hotel-Motel Operations	A
Information Media Technology	N
Library Media Assisting	N
Library Media Technology	N
Paralegal	A
Recreational Leadership	R
Traffic Engineering Technology	R
Urban Horticulture	N
Urban Planning Technology	R
Water-Wastewater Technology	R

Note: Auraria Campus—A
North Campus—N
Red Rocks Campus—R

DIVISION OF COMMUNITY AND PERSONAL SERVICE OCCUPATIONS

AUDIO-VISUAL TECHNOLOGY (R)

TWO-YEAR PROGRAM

The Audio-Visual Technology program is made up of Occupational Courses designed specifically to meet the needs of individuals participating in this profession and offered exclusively by the Division of Community and Personal Service Occupations.

Related Courses in the areas of Science and Math, Social Sciences, Communications and Arts, and Business and Management are also required to meet the needs of individuals in this profession.

Listed below are the Occupational and Related Courses necessary to meet the requirements to receive an Associate Degree in Audio-Visual Technology from the Community College of Denver.

Occupational Courses

Course Title			Cr. Hrs.
AV	100	Introduction to Media	3
AV	102	Audio-Visual Basic Electricity	3
AV	103	Audio-Visual Library Services	4
AV	200	Production of AV Materials	4
AV	201	Television Production	6
AV	202	Audio-Visual Photography	3
AV	203	Projection Equipment Maint.	4
AV	204	Transcription Equip. Maint.	4
AV	205	Audio-Visual Electronics	4
AV	206	Duplicating Processes	3
AV	297	Cooperative Work Exp.	8
AV	299	Independent Study	6

Related Courses

Course Title			Cr. Hrs.
M	105	Introduction to Algebra	4
MG	105	Intro. to Business	3
PY	100	Human Rel. in Bus. & Ind.	3
PY	107	Psych. of Pers. Dev.	3
		English Elective	9
		Related Electives	18
		TOTAL CREDITS REQUIRED:	92
		TOTAL CONTACT HOURS:	1417

Electives in both Occupational and Related areas are available to meet the requirements of the program. Electives must be approved by the student's Advisor.

NOTE: AV courses should be taken in the sequence which appears above. Special permission should be obtained from the instructor involved to alter sequence.

EMPLOYMENT OPPORTUNITIES: The demand for the services of trained individuals in this area is presently quite strong and the interest in such personnel throughout this state and other states has been high for some time. Trainees will be prepared to enter business, industry and educational systems upon completion of the program. The student will develop basic skills in the audio-visual program from simple familiarization with the repair of hardware to the various production techniques encountered in the educational media field.

ACTIVITY DIRECTING FOR SENIOR CITIZENS (A)

THREE QUARTER PROGRAM

The Activity Directing for Senior Citizens program is designed to train personnel for employment in nursing homes and other resident facilities for senior citizens. The purpose of an activity program is to create as near to a normal environment as possible, thereby encouraging persons in a long-term facility to exercise their abilities. The curriculum prepares students to provide these challenges in a planned, coordinated, and structured manner.

Listed below are the Occupational and Related courses which must be satisfactorily completed in order to meet the requirement for the Certificate of Achievement in the Activity Directing for Senior Citizens program.

Occupational Courses

Course Title			Cr. Hrs.
SR	100	Intro. to Studies of the Aging	3
SR	102	Nutrition for the Elderly	3
SR	105	A.D.L. Laboratory	3
SR	110	Inst. Organiz. & Record Keeping	3
SR	112	Activ. for Sr. Citizens I	3
SR	113	Activ. for Sr. Citizens II	3
SR	121	Physical, Psych. & Soc. Implic. of Aging	3
SR	122	Reality Orient. & Remotivation	3
SR	297	Coop. Work Experience	4
SR	297	Coop. Work Experience	6

Related Courses

Course Title			Cr. Hrs.
SW	100	Intro. to Soc. Welfare Inst.	4
SW	102	Princ. of Interviewing & Rept. Writing	4
PY	107	Psych. of Pers. Development	3
PE	101	First Aid	1
		English or Speech Credits	3
		TOTAL CREDIT HOURS	49
		TOTAL CONTACT HOURS	590

EMPLOYMENT OPPORTUNITIES: The ever increasing number of senior citizens who are in need of long-term care and opportunities for wholesome recreation and socialization has created a demand for trained personnel to work in nursing homes & other residential facilities. Successful completion of this program will prepare the student for an occupation as Activity Director with senior citizens.

BUILDING INSPECTION (R)

ONE YEAR PROGRAM

The Building Inspection program is made up of Occupational Courses designed specifically to meet the needs of individuals participating in this profession and offered exclusively by the Division of Community and Personal Service Occupations.

Related Courses in the areas of Industrial Occupations and Communications and Arts are also required to meet the needs of individuals in this profession.

Listed below are the Occupational and Related Courses necessary to meet the requirements to receive a Certificate of Achievment in Building Inspection from the Community College of Denver.

Occupational Courses

Course Title			Cr. Hrs.
BI	100	Bldg. Codes & Standards	3
BI	102	Construction Materials	4
BI	103	Mechanical Inspection	3
BI	104	Field Inspection Techniques	4
BI	105	Soils and Grading	3
BI	106	Electrical Inspection	3
BI	110	Plumbing Inspection	3
BI	112	Plan Review	3
BI	214	Const. Organ & Manag.	3
BI	215	Utilities Inspection	3
BI	216	Intro. to Design Funda.	3
BI	218	Housing Insp. & Programs	3
*BI	297	Cooperative Work Exp.	4

Related Courses

Course Title			Cr. Hrs.
CA	102	Blueprint Read. for Bldg. Trades	4
EG	108	Occup. Comm.	3

TOTAL CREDITS REQUIRED: 45-49

TOTAL CONTACT HOURS: 542-550

*Students who are not presently employed in the profession will be required to take a minimum of 4 credit hours of BI 297, Cooperative Work Experience before they can receive their associate degree.

EMPLOYMENT OPPORTUNITIES: This program is designed primarily for individuals presently employed in the field of Building Inspection and who wish to improve their abilities and increase their knowledge. Those individuals in the building contracting and construction fields will find the courses valuable in that they will help them understand the requirements which must be met.

Building inspection includes the examination and evaluation of construction work in progress, comparing or contrasting it with recognized norms or standards, and accepting or rejecting it in the light of conformity or non-conformity to the standards. It involves a person capable of understanding and interpreting a body of standards, so that he can make judgments regarding all aspects and phases of building, construction rehabilitation and conservation.

CLASSROOM TEACHING ASSISTING (A)

Training for teacher assistants is offered as a seminar. Time arrangements vary to meet specific needs. Basically the program involves 30 hours of class time which can include observations and practical experience as well as lectures and demonstrations by qualified school personnel. The aim of the program is to prepare teacher aids to fill existing job needs in local schools.

Topics usually included are: personal and child psychology, introduction to school library organization, orientation to school administration, use of audio-visual equipment and other school machines, first aid and creative activities. Since each offering of the course is intended to meet specific needs, concepts emphasized may vary.

This course may be taken for credit or without credit. If the course is selected for credit, it will be given a TA prefix.

EMPLOYMENT OPPORTUNITIES Aides to professional school teachers are employed throughout the public school system in the local area. Aides for vocational or occupational programs at the secondary level must also meet state certification requirements which exceed this course.

COMMUNITY & SOCIAL SERVICE ASSISTING (A)

The Community & Social Service Assisting Program is designed to meet the vocational training needs of persons involved in social work practice and social welfare services in the community.

This is a six quarter program with a comprehensive curriculum providing content courses on social work practice and appropriate educationally directed field instruction. The curriculum is intended to prepare students to understand and appreciate traditions of the varied cultural and ethnic groups in American society and assist them to achieve skill in analyzing, interpreting, and relating this material to social issues.

Listed below are the Occupational and Related courses necessary to meet the requirements for the Associate Degree in Community & Social Service.

COMMUNITY & SOCIAL SERVICE ASSISTING (A)

SIX QUARTER PROGRAM

Occupational Courses

Course Title			Cr. Hrs.
SW	100	Intro. to Soc. Welfare Inst.	4
SW	102	Interviewing & Report Writing for Social Service Workers	4
SW	120	Survey of Soc. Work Methods & Svcs.	4
SW	125	Social Work with Indiv. & Families	4
SW	200	Soc. Service Prac. & Seminar	
		or	
SW	201	Applic. of Soc. Work Methods I	4
SW	202	Applic. of Soc. Work Methods II	4
SW	225	Creative Approaches with Commun. & Groups	4
SW	110	Field Experience	3
SW	111	Field Experience	3
SW	211	Field Experience	3
SW	212	Field Experience	3
SW	213	Field Experience	3

Related Courses

Course Title			Cr. Hrs.
		Engl. Credit	3
		Elective (Foreign Language or AudioVisual Recommended)	2-5
SR	100	Introduction Studies of the Aging	3
LA	101	Domestic Relations	4
B	130	Basic Health Science	3
GC	101	Self-Exploration & Underst.	3
		or	
PY	107	Psychology of Pers. Dev.	3
PY	221	Developmental Psychology	3
PY	223	Developmental Psychology	3

PY	210	Social Psychology	
		or	
PY	240	Personality	3
PY	230	Abnormal Psychology	3
*HS	110	History of Chicano People	3
*HS	120	History of Black People	3
*HS	121	History of the Indians of the West	3
EC	107	Consumer Economics	3
PS	114	American State & Local Government	3
M	100	Introduction to Mathematics	
or			
SS	260	Research Methods in Social Sciences ..	3
SO	111	Introduction to Sociology	3
SO	200	Urban Sociology	3

TOTAL CREDIT HOURS 97-100

TOTAL CONTACT HOURS 1220-1250

*The history courses listed above are strongly recommended. Other related subjects dealing with minority & ethnic groups in search of equality may be substituted with approval.

EMPLOYMENT OPPORTUNITIES: Following successful completion of this program, the graduate will be well prepared for practice in a variety of agencies, public and private, providing social services to individuals, families, groups, organizations and communities.

COSMETOLOGY (R)

TWO YEAR PROGRAM

The Associate Degree program in Cosmetology is made up of Occupational Courses designed specifically to meet the needs of individuals participating in this profession and offered by the Division of Community and Personal Service Occupations of the Red Rocks Campus in cooperation with the Jefferson County Warren Occupational Center.

Related courses in the areas of Business and Management Occupations, Communications and Arts, Science and Math and Social Sciences are also required to meet the needs of individuals in this profession.

Listed below are the Occupational requirements and Related Courses necessary to meet the requirements to receive an Associate Degree in Cosmetology from the Community College of Denver.

Occupational Courses

Occupational course requirements may be met by completing the Certificate of Achievement program in Cosmetology offered by the Community College of Denver, Red Rocks Campus or providing the college with verification that the 1650 hours of Cosmetology training required as preparation for the Colorado State Board of Cosmetology examination has been completed at another institution.

Students *must* also complete the following Occupational Courses:

Occupational Courses

Course Title			Cr. Hrs.
CO	120	Salon Management	3

Related Courses

Course Title			Cr. Hrs.
AC	109	Bookkeeping and Accounting	5
AR	105	Basic Design	3
BU	110	Business Mathematics	3
EC	109	Applied Economics	3
EG	107	Occupational Communications	3
P	100	Survey of Phys. Science	3
PS	114	Amer. State & Local Gov't	3
PY	107	Psych. of Pers. Dev.	3

TOTAL CREDITS REQUIRED: 101

TOTAL CONTACT HOURS: 1686

COSMETOLOGY (R)

12 MONTH PROGRAM

The Certificate of Achievment program in Cosmetology is made up of Occupational Courses designed specifically to meet the 1650 hours of Cosmetology training required as preparation for the Colorado State Board of Cosmetology examination and job entry.

Occupational Courses

Upon completion of the 1650 hour training program, the student will be awarded 72 quarter hours of credit by the Community College of Denver, Red Rocks Campus.

Student *must* contact Director of Community and Personal Service Occupations for an explanation of enrollment procedures, tuition costs and class scheduling.

EMPLOYMENT OPPORTUNITIES: Part and full time employment in the field of Cosmetology is extremely good in the Denver Metro area. Job categories include hairdressing, manicuring, beauty salon operator, salon manager, and cosmetology instructor. The Cosmetologists perform the following activities: manicuring, color application, permanent waving, shampooing, haircutting, hair styling, finger waving, iron curling, facials, wig servicing, scalp and hair treatments and skin analysis. Potential earnings depend on the location of the shop and the hours spent. Operators can expect to make from $4,800 to $10,000 per year for the first five years. Tips make the difference in exact salary and these vary based on the type of salon and its location.

CRIMINAL JUSTICE (R)

TWO YEAR PROGRAM

The Criminal Justice program is made up of Occupational Courses designed specifically to meet the needs of individuals participating in this profession and offered exclusively by the Division of Community and Personal Service Occupations.

Related Courses in the areas of Science and Math, Social Sciences and Communications and Arts are also required to meet the needs of individuals in this profession.

Listed below are the Occupational and Related Courses necessary to meet the requirements to receive an Associate Degree in Criminal Justice from the Community College of Denver.

Occupational Courses

Course Title			Cr. Hrs.
CJ	110	Criminal Justice I	3
CJ	111	Criminal Justice II	3

CJ	112	Constitutional Law	3
CJ	113	Civil Law	3
CJ	114	Criminal Law	3
CJ	116	Rules of Evidence	3
CJ	210	Criminal Investigation I	3
CJ	211	Criminal Investigation II	3
CJ	212	Criminal Investigation III	3
CJ	224	Community Relations	3
*CJ	297	Coop. Work Experience	8
		Criminal Justice Elect.	24

Related Courses

Course Title			Cr. Hrs.
		English Elective	3
		Math &/or Science Elect.	3-5
S	110	Fundamentals of Speech	3
		Social Science Electives	15
		Related Electives	12

NOTE: All Electives *must* be approved by the student's advisor.

*Students who are not presently employed in the profession will be required to take a minimum of 8 credit hours of CJ 297, Cooperative Work Experience before they can receive their associate degrees.

TOTAL CREDITS REQUIRED: 90-100

TOTAL CONTACT HOURS: 900-1020

EMPLOYMENT OPPORTUNITIES: Law enforcement is one of the largest of the career groups in public service. Investigative agents and specialists are employed by the federal government. A vast number of career opportunities exist with a variety of state and local agencies. This program has been designed to serve the needs of new recruits as well as provide for the in-service and upgrading training needs of those presently employed in the field.

DIETETIC ASSISTING (N)

THREE QUARTER PROGRAM

This program is designed to prepare dietary assistants, nutritionist aides, and school food service personnel with a limited background in sound food and nutrition principles. There is not, at this time, any such program open to the general public at a post secondary level. There is a demonstrable need for individuals with this type of training in hospitals, extended care facilities, nursing homes, with migrant nutrition or with the extension service.

Occupational Courses

Course Title				Cr. Hrs.
F	100	Intro. to Food Service Indus.		16
		Module A	4	
		Module B	4	
		Module C	4	
		Module D	4	
F	108	Normal Nutrition		3
F	200	Food & Bev. Svc. & Mgt.		8
		Module A	4	
		Module F	4	
F	210	Diet Therapy		3
F	297	Cooperative Work Exp.		8
AC	109	Bookkeeping & Accounting		5
HE	100	Medical Terminology		2
MG	221	Personnel Mgmt.		3

Related Courses

Course Title			Cr. Hrs.
B	100	Basic Human Biology	4
PY	107	Psych. of Pers. Devel.	3
EG	106	Occup. Communications or	
EG	111	English Comp.	3

TOTAL CREDIT HOURS: 58

TOTAL CONTACT HOURS: 630

Depending on the vocational interest of the student he may take various elective options:

I — School food service supervisors would schedule F 211 The School Nutrition Program — 3 credit hours.

II — Extended care or nursing home dietary assistants. PY 223 Developmental Psychology (Maturity and Aging) — 3 credit hours. (They should also schedule the section of F 210 Diet Therapy emphasizing geriatric nutrition.)

EMPLOYMENT OPPORTUNITIES: The limited number of persons available in the area of dietetic support personnel is inadequate to fill current needs. The Colorado Department of Health is anxious to have at least one such person in every small hospital or extended-care facility in the State. If Title XVIII and XIX, Medicare and Medicaid legislation now pending becomes law, trained dietetic assistants will be required for all such patient care, with the employment of persons with higher levels of competency such as dietetic technicians strongly recommended.

EARLY CHILDHOOD EDUCATION AND MANAGEMENT (N-R)

The Early Childhood Education and Management Program was designed to meet the vocational training needs for all personnel involved in the care of young pre-kindergarten children as determined by the Colorado State Social Services Licensing Department.

The six-quarter program is the most comprehensive curriculum providing courses in child development and administration, as well as appropriate support courses to complement the observation student teaching core. The academic requirements enumerated by the State are optimally satisfied.

The three-quarter introductory program offers a substantial foundation in the early childhood field and meets current teacher requirements.

The experienced but academically unqualified student will select the appropriate recommended courses from the Suggested Core for Social Services Licensing. The acquisition of 36 quarter hour credits from this program will satisfy minimal requirements.

EARLY CHILDHOOD EDUCATION ASSISTING (N-A)

THREE QUARTER PROGRAM

Occupational Courses

Course Title			Cr. Hrs.
CC	102	Creative Activities	3
CC	103	Intro. to Early Childhood Ed.	6

CC	104	**Supervised Laboratory Exp.	6
CC	105	**Supervised Student Partic.	6
CC	108	Theory of Teaching the Young Child	4
CC	109	Meth. of Teaching the Young Child	4
CC	211	Child Care Prog. Super. & Admin. II	4

Related Courses

Course Title			Cr. Hrs.
		*English Credit	3
PE	101	First Aid	1
PY	107	Psych. of Pers. Dev. or	
GC	100	Guidance Counseling	3
PY	123	Child Guidance Techniques	3
PY	221	Developmental Pshcyology	3
PY	222	Developmental Psychology	3
		Science Elective	3-5

TOTAL CREDIT HOURS: 52-54

TOTAL CONTACT HOURS: 749-753

*English Credit selected upon approval/or recommendation of advisor:
RE 101 Basic Reading
EG 106 Occupational Communications
SC 100A Typing — Beginning courses or other (by examination)
**Program Practicum Core — CC 103, CC 104, CC 105 — Must be taken sequentially, each of the three may be offered every quarter.

EMPLOYMENT OPPORTUNITIES: The demand for trained assistants or aides in the child care field is steadily increasing. Jobs are available in nursery schools and day care centers as group leaders.

Additional Course Offerings for refresher or updating:

CC	201	Workshop of Ideas	4 Cr. Hrs.
CC	202	Workshop of Things	4 Cr. Hrs.

Acceptable for State Social Service Licensing Requirements in the proper categories. See Suggested Core for Social Service Licensing Requirement.

EARLY CHILDHOOD EDUCATION AND MANAGEMENT (N-R)

SIX QUARTER PROGRAM

Occupational Courses

Course Title			Cr. Hrs.
CC	102	Creative Activities	3
CC	103	**Intro. to Early Child. Ed.	6
CC	104	**Supervised Lab. Experience	6
CC	105	**Supv. Student Partic.	6
CC	106	**Supv. Student Partic.	6
CC	107	**Supv. Student Partic.	6
CC	108	Theory of Teach. the Yng. Child	4
CC	109	Meth. of Teach. the Yng. Child	4
CC	201	Workshop of Ideas	4
CC	210	Child Care. Prog. Supv. & Admin. I	4
CC	211	Child Care Prog. Supv. & Admin. II	4
CC	212	Child Care Center Bus. Op.	4

Related Courses

Course Title			Cr. Hrs.
		English or For. Lang. Cr.	3-5
F	108	Nutrition	3
GC	100	Guidance Counc. or	
PY	107	Psych. of Pers. Dev.	3
PY	111	General Psychology	3
PY	112	General Psychology	3
PY	123	Child Guidance Techniques	3
PY	221	Developmental Psychology	3
PY	222	Developmental Psychology	3
PE	101	First Aid	1
LI	145	Literature for Children	3
S	110	Introduction to Speech or	
EG	107	Occup. Comm.	3
		Elective	3
		Science Elective	3-5
MU	145	Music for the Child	3
SO	111	Intro. to Soc. or Ethnic Stud.	3

TOTAL CREDIT HOURS: 100-104

TOTAL CONTACT HOURS: 1359-1364

*English credit selected upon recommendation or approval of advisor.
RE 101 Basic Reading
EG 106 Occup. Comm.
SC 110 Or other Typing Course
**Program Practicum Core — Each of which may be offered every quarter — CC 103, CC 104, CC 105, CC 106, CC 107. To be completely within the two year period with CC 103 and 104 taken sequentially as to the initial core.

EMPLOYMENT OPPORTUNITIES: The nationwide trend is for mothers with small children to join the nation's work forces. The pre-school children of these mothers will be taken care of in some type of children's center. Graduates of this program will be ready to work in day care centers, nursery schools and child development centers as directors or teachers upon completion of the specific experience requirements of the State Social Services Licensing Unit.

Additional Course offerings for refresher or updating:

AC	109	Bookkeeping & Accntg.	5 Cr. Hrs.
CC	201	Workshop of Ideas	4 Cr. Hrs.
CC	202	Workshop of Things	4 Cr. Hrs.

Acceptable for State Social Service Licensing requirements in the proper categories. See suggested Core for Social Service Licensing Requirement.

SUGGESTED CORE FOR EARLY CHILDHOOD EDUCATION

SOCIAL SERVICE LICENSING REQUIREMENTS

Child Development and Nursery Education

Total of 36 credit hours from the following:

Child Development		**(Total of 9)**	Cr. Hrs.
CC	103	Intro. to Early Child. Ed.	6
CC	108	Theories of Teach. the Yng. Child	4
CC	109	Methods of Teach. the Yng. Child	4
*PY	107	Psych. of Pers. Dev.	3
*PY	123	Child Guidance Techniques	3
*PY	221	Developmental Psychology	3
*PY	222	Developmental Psychology	3
Related Areas		**(Total of 9)**	
CC	102	Creative Activities	3
CC	104	Supv. Student Lab. Experience	6
CC	109	Methods of Teach. the Yng. Child	4
CC	201	Workshop of Ideas	4
LI	145	Literature for Children	3
MU	145	Music for Children	3
Psychology		**(Total of 4.5)**	
*PY	107	Psych. of Pers. Dev.	3
PY	111	General Psychology	3
PY	112	General Psychology	3
*PY	123	Child Guidance Techniques	3
*PY	221	Developmental Psychology	3
*PY	222	Developmental Psychology	3

Administration		**(Total of 6)**	
CC	210	Child Care Prog. Supv. & Admin. I	4
*CC	221	Child Care Prog. Supv. & Admin. II	4
CC	212	Child Care Center Bus. Operations	4
Sociology		**(Total of 4.5)**	
*CC	211	Child Care Prog. Supv. & Admin II	4
SO	111	Introduction to Sociology	3
Nutrition		**(Total of 3)**	
F	108	Nutrition	3

*Courses are applicable to both disciplines but credit will be given in only one. A total of 18 hours, 9 each from the Child Development & Related areas is required. Completion of 36 credit hours from the above Core Course can be accomplished in a nine month or three quarter period. This Core is appropriate for those who have already completed the State work experience requirement (4,000 work hours with young children) for licensing. Of the 36 required hours, at least 15 must be taken at Community College of Denver. A Certificate of Completion will be awarded upon satisfactory completion of courses selected by the student to meet licensing requirements.

CHILD DEVELOPMENT ASSOCIATE (A, N, R)

The Early Childhood Education Program is designed around a core curriculum. The Core curriculum, comprised of approximately ten (10) courses, can be achieved/earned through two approaches. The regular traditional on-campus approach or the innovative on-site field based CDA (Child Development Associate) like approach.

Acceptance to register for the CDA like approach can be approved by the Early Childhood staff.

ENVIRONMENTAL CONTROL TECHNOLOGY (R)

The Environmental Control Technology Program is composed of courses designed to meet the requirements of local, state and Federal agencies, business and industry groups in order to prepare individuals for environmental generalist technician positions in a variety of environmental fields. The program is offered exclusively by the Division of Community and Personal Service Occupations.

Related courses in the areas of Science and Math, Social Science, and Communications and Arts are also required to meet the needs of individuals in the various environmental fields as well as to meet the general education demands of the environmental fields themselves.

Listed below are the Occupational and Related Courses necessary to meet the requirements to receive an Associate Degree in Environmental Control Technology from the Community College of Denver.

Occupational Courses

Course Title			Cr. Hrs.
EV	101	Environmental Problems	3
EV	105	Noise Pollution	3
EV	107	Solid Waste Pollution	3
EV	110	Environmental Decision Making	3
EV	115	Industry and O.S. H. A.	3
EV	118	Industrial Hygiene	3
EV	201	Atmospheric Pollution	4
EV	205	Pollution Control Systems	4
EV	297	Cooperative Work Exp.	9

Related Courses

Course Title			Cr. Hrs.
B	110	Introduction to Environment	3
B	114	Sanitary Microbiology	4
G	115	Environmental Geology	4
M	105	Introductory Algebra	4
M	106	Intermediate Algebra	4
M	107	Intro. to Geometry	4
M	140	Slide Rule and Calculator	1
PY	100	Human Relations in Bus. & Ind.	3
SI	105	The Metric System	1
SI	121	Environmental Science	4
SI	122	Environmental Science	4
WW	100	Intro. to Water-Wastewater	3
		Chemistry Elective	5
		English Electives	6
		Related Electives	6

TOTAL CREDITS REQUIRED: 91

TOTAL CONTACT HOURS: 1,130

Electives in both Occupational and Related areas are available to meet the requirements of the program. Electives *must* be approved by the student's advisor.

EMPLOYMENT OPPORTUNITIES: This program was planned in response to the intense public concern with the multitude of environmental problems confronting mankind.

The program is designed to prepare students for employment as technicians and related jobs in a variety of environmental fields, including, but not limited to, air, water, and noise pollution, solid waste disposal, environmental health, law enforcement, land use, public relations and industrial occupational health. Potential job opportunities exist in local, state and Federal environmental agencies, industrial pollution control, engineering consulting firms, city engineering offices and business firms which sell pollution sampling and monitoring equipment. Emphasis is placed upon the technician's role in such areas as detection and control of pollution through surveys, sampling and testing procedures, operating and maintaining pollution detection and control equipment and an understanding of environmental impact statements and land use. Emphasis will also be placed upon the art and science of recognizing, evaluating and controlling occupational health and safety hazards in industry.

FIRE SCIENCE TECHNOLOGY (R)

TWO-YEAR PROGRAM

The Fire Science Technology program is made up of Occupational Courses designed specifically to meet the needs of individuals in this profession and offered exclusively by the Division of Community and Personal Service Occupations.

Related Courses in the areas of Science and Math, Social Sciences, and Communications and Arts are also required to meet the needs of individuals in this profession.

Listed below are the Occupational and Related courses necessary to meet the requirements to receive an Associate Degree in Fire Science Technology from the Community College of Denver.

Occupational Courses

Course Title			Cr. Hrs.
FS	100	Intro. to Fire Science	3
FS	104	Fire Co. Organ. & Proc.	3
FS	106	Fire Fighting Tactics & Strat.	3
FS	108	Fire Hydraulics	3
FS	110	Fire Apparatus & Equip.	3
FS	202	Fund. of Fire Prevention	3

FS	204	Related Codes & Ord. I	3
FS	205	Related Codes & Ord. II	3
FS	206	Rescue Practices	3
FS	208	Hazardous Materials I	3
FS	209	Hazardous Materials II	3
FS	212	Fire Prot. Equip. & Systems	3
FS	214	Fire Dept. Admin.	3
FS	216	Private Fire Protection Syst.	3
FS	218	Fire Investigation	3
FS	220	Fire Insurance	3
FS	230	Blprt. Reading for Firefighters	3
		Fire Science Tech. Elect.	6

Related Courses

Course Title			Cr. Hrs.
C	109	Applied Chemistry	4
EG	107	Occupational Comm.	3
EG	108	Occupational Comm.	3
M	103	Applied Math II	3
P	101	Fundamental Physics	4
PY	100	Human Relat. in Bus. & Industry	3
RD	101	Skills for College Reading	3
		Math Elective	3
		Social Science Electives	6
		Related Elective	3
		TOTAL CREDITS REQUIRED:	92
		TOTAL CONTACT HOURS:	930

Electives in both Occupational and Related areas are available to meet the requirements of the program. Electives *must* be approved by the student's advisor.

EMPLOYMENT OPPORTUNITIES: Program is designed to prepare for initial entrance into employment or advancement with municipalities, industrial firms, or other employers requiring fire protection personnel. May be employed by insurance companies and agencies as salesmen, fire loss and safety prevention personnel, adjusters or insurance rating and inspection bureaus.

FOOD SERVICE PREPARATION/MANAGEMENT (N)

The Community & Personal Service Occupations Food Service Program is structured to give each student the maximum time available in his chosen occupational area. The courses will be identified as 100 for the first year and 200 for the second year with the appropriate prefix to identify the particular discipline, e.e., F 100-F 200. Each course is designed to continue through three quarters of approximately 10 weeks in length totaling 600+ hours of instruction per year.

Each course will consist of a series of different specific measurable performance objectives that the student is expected to master before moving on to the next skill. Under this system, it is entirely possible for the student to earn more or less credit hours than he contracted for at the time of registration. Those students capable of moving at an accelerated pace will be encouraged to do so and students having difficulty with a particular unit or skill will be given the individual attention necessary to master those difficult units.

The normal ratio of credits earned for time invested will be as follows:

4 credit hours = 5 contact hours
8 credit hours = 10 contact hours
12 credit hours = 15 contact hours
16 credit hours = 20 contact hours

A student who signs up for 16 credit hours would invest 20 hours of time each week of the 10 week quarter, and would gain 200 hours of instructional time for each of the three quarters.

Note: Class periods will be 50 minutes in length.

F 100 48 Credit Hours/16 per Quarter
600 Contact Hours in three (3) quarters, 200 Contact/Quarter

Introduction to the food service industry

Occupational Courses

Course Title		Cr. Hrs.
Module A	Sanitation and Safety	4
Module B	Tools and Equipment	4
Module C	Basic Food Service	4
Module D	Food Production I	4
Module E	Menu Planning	4
Module F	Pantry Station	4
Module G	Basic Baking	4
Module H	Food Production II	4
Module I	Fry Cooks Station	4
Module J	Restaurant Service	4
Module K	1st Cooks Station	4
Module L	Food Production III	4
		48

Required Support Courses

FIRST YEAR

Course Title			Cr. Hrs.
F	108	Nutrition	3
M	110	Math for Business	3
MG	105	Intro. to Business	3
PY	100	Psych. for Bus. & Ind.	3
EG	106	Occ. Comm.	3
F	297	Coop. Work Experience	6-12
			21-27
		TOTAL CREDIT HOURS:	69-75
		TOTAL CONTACT HOURS:	810-870

Upon completion of 69-75 quarter hours — 810-870 contact hours a Certificate of Achievment will be awarded.

EMPLOYMENT OPPORTUNITIES: There are varied opportunities for trained workers in entry level jobs in the field of food production and management. Training programs offered are designed to give students a salable skill in food production by the end of any quarter. Job skills needed to work in one of the basic work stations of a commercial kitchen can be learned in approximately a 200 hour training block depending on the student's previous experience, available time and effort.

SECOND YEAR

Course Title			Cr. Hrs.
F	200	Food & Beverage Serv. & Mgmt.	
		32 credit hours/16 per quarter	
400 contact hours in 2 quarters. 200 contact hrs./quarter			
Module A		Intro. to Food & Bev. Mgmt. & Serv.	4
Module B		Intro. to Food Serv. & Bev. Contr. Syst.	4
Module C		Personnel Sched. & Motiv.	4
Module D		Merch. & Public Relations	4
Module E		Cash Reg. Syst. & Controls & Customer Serv. & Sales	4
Module F		Purch. & Stock Record Cont. Syst.	4

Module G	Food, Bev., Labor Cont. & Cost. Acct. Syst.		4
Module H	Process. of Meats, Fish & Poultry		4
			32

Required Support Courses

Course		Title	Cr. Hrs.
AC	109	Bookkeep. & Accounting	5
MG	201	Business Management	3
EG	107	Occupat. Comm.	3
EG	131	Bus. Comm.	3
			14

TOTAL CREDIT HOURS: 46

TOTAL CONTACT HOURS: 540

Upon completion of 46 credit hours — 540 contact hours the student will be awarded a Certificate of Completion. Completion of the F 100-F 200 and required support courses will yield the student an Associates Degree in Food Services.

EMPLOYMENT OPPORTUNITIES: Completion of the two year program in the food production option will qualify the students for food service occupations in hotels, motels, restaurants, public schools, hospitals and similar institutional jobs. The management option provides occupational up-grading or entry to management careers related to commercial food service.

HOTEL-MOTEL OPERATIONS (A)

SIX QUARTER PROGRAM

The Hotel-Motel personnel training program has been designed to meet the needs of hotel-motel business and industry. Students completing the two-year program will be awarded an Associate Degree. In less than one year the student can acquire a Certificate of Completion. One year of training . . .Certificate of Achievement. Occupations which require less than an A.D. will allow enrollees to enter the job market after one, two, three or four quarters of training.

Occupational Courses

Course		Title	Cr. Hrs.
HM	103	Intro. to Hotel-Motel Mgmt.	3
HM	105	Front Office Procedures	3
HM	109	Supervisory Housekeeping	3
HM	111	Supervisory Dev. or	
HM	205	Training & Coaching Tech.	3
HM	115	Hotel-Motel Law	3
HM	117	Hotel-Motel Basic Acct.	3
HM	119	Food & Bdv. Mgmt. & Serv. or	
HM	121	Food and Bev. Control	3
HM	123	Food and Bev. Purch.	3
HM	151	Hotel-Motel Org. & Admin.	3
HM	201	Hotel-Motel Sales	3
HM	203	Hotel-Motel Motor Mg. Or El.	3
HM	297	Coop. Work Exp. or Elective	4
HM	297	Coop. Work Exp. or Elective	4
HM	297	Coop. Work Exp. or Elective	6
HM	297	Coop. Work Exp. or Elective	4
HM	297	Coop. Work Exp. or Elective	6

Related Courses

Course		Title	Cr. Hrs.
EG	106	Occup. Comm.	3
M	100	Intro. to Mathematics	3
SO	111	Intro. to Sociology	3
AC	109	Bookkeep. and Account.	5
MG	201	Business Org. & Mgmt.	3
MG	203	Princ. of Marketing	3
MG	221	Pers. Management	3
MG	222	Pers. Management	3
PY	100	Human Relat. in Bus. & Ind.	3
PY	107	Psych. of Pers. Dev.	3
		Elective	3

TOTAL CREDIT HOURS: 92

TOTAL CONTACT HOURS: 920

EMPLOYMENT OPPORTUNITIES: Successful completion of this program affords the student the opportunity for immediate job entry level assignments. Graduates will be offered employment in hotels, motels, clubs, commercial food establishments, hospitals, and other private and public institutions.

INFORMATION MEDIA TECHNOLOGY (N)

A new flexible approach to information and Library Employment through education and occupational skills training.

PROGRAMS
Library Media Assisting
Library Media Technology
SHORT COURSES
Information Assisting
Micromedia Assisting

COMMUNITY SERVICES

CONFERENCES, SEMINARS AND WORKSHOPS

Information use, service and production are of essential concern to administrators, businessmen and librarians. The past decade has produced improvements in equipment and techniques of library/information systems.

An important part of pre-job and up-grading skills training for para-professional support personnel are the use of new equipment technology and associated management, in a host of related information handling occupations throughout industry, business offices and government.

The program is a flexible basic skill approach to information and library employment. It utilizes integrated block period methods to instruct in basic system characteristics of equipment and supplies, management presentations, and actual work experience, allowing the student to fit functionally into many existing and developing jobs.

The two year Associate Degree is granted upon graduation from the Library Media Technology Program. A certificate of Achievement is awarded for the one year Library Media Assisting plan.

Certificates of completion are given for Micromedia and Records Information Management skills.

LIBRARY MEDIA ASSISTING

THREE QUARTER PROGRAM

Occupational Courses

Course		Title	Cr. Hrs.
I	100	Information Media Services I	6
I	101	Information Media Services II	9

I	150	Information Media Skills I	6
I	151	Information Media Skills II	9
I	200	Technical Supervision Skills	9
I	297	Cooperative Work Experience	3

Related Courses

Course Title			Cr. Hrs.
EG	131	Business Communications	3
SC	105	Filing and Records Control	3
SC	110	Typing I	4

TOTAL CREDIT HOURS: 52

TOTAL CONTACT HOURS: 73

LIBRARY MEDIA TECHNOLOGY

SIX QUARTER PROGRAM

Occupational Courses

Course Title			Cr. Hrs.
I	100	Information Media Services I	6
I	101	Information Media Services II	9
I	150	Information Media Skills I	6
I	151	Information Media Skills II	9
I	200	Technical Supervision Skills	9
I	290	Comm. Intro/Library Media Sem.	6
I	297	Coop. Work Experience	3
AC	109	Accounting & Bookkeeping	5
DP	111	Princ. of Business Data Process.	3
SC	103	Business Machines	3
SC	105	Filing and Records Control	3
SC	110	Typing I	4
SC	111	Typing II	4
		Appr. Elect. specialty devel.	15-21

Related Courses

Course Title			Cr. Hrs.
EG	095	Com. Business English	3
EG	106	Occup. Comm. or	
EG	111	English Composition	3
EG	107	Basic Composition or	
EG	112	English Composition	3
EG	108	Occup. Communications or	
EG	113	English Composition	3
M	100	Introduction to Math or	
M	110	Math	3

TOTAL CREDIT HOURS 100-106

TOTAL CONTACT HOURS 1480-1500

Electives: Must be approved by a counselor or advisor by consulting the student's transcript and may be taken at any time during the two year program.

EMPLOYMENT OPPORTUNITIES: Industrial-Economic growth studies conducted in the Denver Metropolitan region indicate an increasing need for Library and Information Services. Growing information demands are an index which points to the rapid rising potential and advancement for employees in area libraries, resource and information centers. A large work force of technical support staff is necessary to operate the more than 500 various academic, government, public, school, and special libraries in which graduates of the program may seek employment. Many hundreds of business and industry offices in the region are employing technical information personnel to cope with the records management, micromedia publishing explosion and national data bank information network developments. Demand for the pre-trained job ready worker is in excess of the supply.

PARALEGAL (A)

THREE QUARTER PROGRAM

The Paralegal training program has been designed to meet the needs of law offices and corporations, both in the public and private sector. Students completing this program will be prepared to enter law offices in the capacity of a legal assistant. This is a three quarter program and Certificate of Completion will be awarded by the college upon successful course completion.

OCCUPATIONAL COURSES

Course Title			
LA	100	Intro. to Paralegal Train.	4
LA	101	Domestic Relations	4
LA	102	Corporations	4
LA	103	Real Estate Procedures or	
LA	104	Law Offices Effic. and Proc.	4
LA	105	Litig. Civil Procedures	4
LA	106	Probate	4
LA	107	The Paraleg. and the Str. of Govt.	4
LA	210	Paralegal Workshop	6

RELATED COURSES

SC	105	Filing and Records	3
SC	110	Typing I	4
SC	111	Typing II	4
SC	112	Typing III	4
AC	109	Bookkeeping & Accnt.	5

TOTAL CREDIT HOURS 54

TOTAL CONTACT HOURS 680

EMPLOYMENT OPPORTUNITIES: Perhaps the most exciting and revolutionary occurrence in the field of law in this century has been the introduction of paralegals. Today paralegals are doing a large percent of the legal work attorneys are called upon to perform. Because of this, there has been an increased demand for trained paralegals in the profession. Job opportunities are increasing everyday both in the public and private sectors of law.

RECREATIONAL LEADERSHIP (R)

TWO YEAR PROGRAM

The Recreational Leadership program is made up of Occupational Courses designed specifically to meet the needs of individuals participating in this profession and offered exclusively by the Division of Community and Personal Service Occupations.

Related Courses in the areas of Science and Math, Social Sciences and Communications and Arts are also required to meet the needs of individuals in this profession.

Listed below are the Occupational and Related Courses necessary to meet the requirements to receive an Associate Degree in Recreational Leadership from the Community College of Denver.

Occupational Courses

Course		Title	Cr. Hrs.
RL	100	Intro. to Recreation Services	3
RL	102	Tech. of Prog. Plan. & Organ.	3
RL	111	Field Work	4
RL	112	Field Work	4
RL	113	Field Work	4
RL	120	Creative Dramatics	2
RL	140	Social Recreation	3
RL	141	Arts & Crafts	2
RL	200	Team Sports	2
RL	202	Ind. Lifetime Sports	2
RL	203	Outdoor Recreation & Camping	3
RL	204	Games and Rhythms	2
RL	206	Dance Activities	2
RL	207	Equipment & Facilities	3
		Recreat. Lead. Electives	14

Related Courses

Course		Title	Cr. Hrs.
B	100	Basic Human Biology	4
EG	106	Occupational Communication or	
EG	111	English Composition	3
PS	114	Amer. State & Local Gov't	3
PY	107	Psych. of Pers. Dev.	3
PY	111	General Psychology	3
PY	210	Social Psychology	3
PY	221	Developmental Psychology	3
S	110	Intro. to Speech	3
SO	111	Intro. to Sociology	3
SO	120	Marriage and Family	3
		Music Elective	3
		Related Elective	6

TOTAL CREDITS REQUIRED: 93

TOTAL CONTACT HOURS: 1800

Electives in both Occupational and Related areas are available to meet the requirements of the program. Electives must be approved by the student's advisor.

EMPLOYMENT OPPORTUNITIES: Employment opportunities for talented and well-trained persons are presently very good and expected to improve in the future. May be employed in private clubs, schools and institutions, voluntary agencies, industrial plants, community and municipal programs, health studios, hospitals, resorts, urban programs, and other organizations.

TRAFFIC ENGINEERING TECHNOLOGY (R)

TWO-YEAR PROGRAM

The Traffic Engineering Technology program is made up of occupational Courses designed specifically to meet the needs of individuals participating in this profession and offered exclusively by the Division of Community and Personal Service Occupations.

Related Courses in the areas of Science and Math, Social Sciences, Industrial Occupations and Communications and Arts are also required to meet the needs of individuals in this profession.

Listed below are the Occupational and Related Courses necessary to meet the requirements to receive an Associate Degree in Traffic Engineering Technology from the Community College of Denver.

Occupational Courses

Course		Title	Cr. Hrs.
TE	100	Intro. to Traffic Eng.	3
TE	102	Traffic Eng. Studies I	3
TE	103	Traffic Eng. Studies II	3
TE	106	Traffic Admin. & Safety	3
TE	108	Control Devices	3
TE	200	Traffic Eng. Psychology	3
TE	202	Traffic Laws & Regulations	4
TE	203	Geometric Design I	3
TE	204	Geometric Design II	4
TE	210	Traffic Accid. Rept. & Analy.	3
TE	211	Urban Trans. Planning I	3
TE	212	Urban Transport. Planning II	3
TE	215	Traffic Eng. Prob.	3

Related Courses

Course		Title	Cr. Hrs.
EG	107	Occup. Comm.	3
EG	108	Occup. Comm.	3
D	100	Mech. Drafting Theory & Tech.	4
DP	111	Prin. of Bus. Data Proc.	3
M	105	Intro. to Algebra	4
M	106	Interm. Algebra	4
M	107	Intro. to Geometry	4
M	120	Stat. for Bus. & Industry	3
P	111	College Physics	5
P	112	College Physics	5
P	113	College Physics	5
SU	103	Basic Surveying	8
UP	100	Intro. to Planning	3
		Social Science Elective	3
		Related Elective	3

TOTAL CREDITS REQUIRED: 101

TOTAL CONTACT HOURS: 1175

Electives in both Occupational and Related areas are available to meet the requirements of the program. Electives *must* be approved by the student's advisor.

URBAN HORTICULTURE (N)

SEVEN-QUARTER PROGRAM

Horticulture in Colorado presents many diverse opportunities for persons interested in landscape and floral work. Because of this, the program is made up of seven quarters for persons interested in learning about the total field of horticulture while the three quarter programs are geared to specific job entry categories.

Occupational Courses

Course		Title	Cr. Hrs.
*UH	100	Intro. to Urban Horticulture	2
†UH	102	Landscape Plant Materials	4
UH	104	Plant Science I	4
UH	106	Plant Science II	4
†UH	108	Landscape Planning	4
UH	110	Soils and Fertilizers	4
UH	112	Plant Propagation	4
UH	201	Nursery Management	4
UH	203	Hort. Equip. and Facil.	3
†UH	205	Landscape Management	4
†UH	207	Greenhouse Management	4
UH	209	Horticulture Bus. Oper.	3
†UH	211	Diseases and Pests	4
†UH	213	Turf Prod. and Mgmt.	4

UH	297	Coop. Work Experience	8-12
UH	299	Independent Study	4
		***Occup. Electives	4
AC	109	Bookkeep. and Account. or	
AC	111	Accounting	5

Related Courses

Course Title			Cr. Hrs.
EG	106	Occupational Communication or	
EG	111	English Comp.	3
EG	107	Occupational Communication or	
EG	112	English Comp.	3
EC	211	Principles of Economics	3
		Math Elective	3
PY	100	Human Relat. in Bus. & Ind.	3
PY	107	Psych. of Pers. Devel.	3

TOTAL CREDIT HOURS: 103-107

TOTAL CONTACT HOURS: 1423-1430

*Option — Student may substitute elective with instructor's approval.
†Evening Courses will require Saturday Field Trips.
***Suggested Electives: Horticulture-Floral Design Workshop-UH 114; Horticulture Seminar-UH 221; Perspective Drawing-UH 219; Merchandising Horticulture Products-UH 116. Business & Management; Business & Organization Management-MG 201 (Prerequisite: Intro. to Business- MG 105); Principles of Marketing-MG 203; Principles of Retailing & Merchandising-MG 215.

EMPLOYMENT OPPORTUNITIES: As our society has become more affluent, it has also created more leisure time for recreational activities which utilize park, golf course and other outdoor areas, all of which must be managed and maintained. Flowers increasingly appear in and around our homes, and we have become more concerned about the beautification of our nation's landscapes. Consequently, career opportunities have been increasing in the field of urban horticulture, and the industry is looking for ambitious and well-trained people. Successful completion of this program will result in the granting of an Associate Degree in Horticulture.

URBAN HORTICULTURE (N)

THREE-QUARTER PROGRAM

NURSERY MANAGEMENT AND LANDSCAPE MAINTENANCE OPTION

Occupational Courses

Course Title			Cr. Hrs.
*UH	102	Landscape Plant Materials	4
UH	104	Plant Science I	4
*UH	108	Landscape Planning	4
UH	110	Soils and Fertilizers	4
UH	111	Small Eng. & Carb. Repair for Urban Hort.	5
*UH	201	Nursery Management	4
*UH	205	Landscape Management	4
*UH	211	Diseases and Pests	4
		Business and Mgmt. Elective	3
		**Elective	3

Related Courses

Course Title			Cr. Hrs.
EG	106	Occup. Communications	3
PY	107	Psych. of Pers. Devel.	3

TOTAL CREDIT HOURS: 45

TOTAL CONTACT HOURS: 620

*Evening courses will require Saturday Field Trips.
**Suggested Electives: Horticulture Seminar, Perspective Drawing, and Coop. Work Exp.

EMPLOYMENT OPPORTUNITIES: The Nursery Management and Landscape Maintenance Option provides entry level job skills as assistant Nurseryman, Garden Center Employee and Landscape Maintenance man. Successful completion of this program will result in the granting of a Certificate of Achievment.

URBAN HORTICULTURE (N)

THREE-QUARTER PROGRAM

GREENHOUSE MANAGEMENT OPTION

Occupational Courses

Course Title			Cr. Hrs.
UH	104	Plant Science I	4
UH	106	Plant Science II	4
UH	110	Soils and Fertilizers	4
UH	111	Small Engine & Carb. Repair for Urban Hort.	5
UH	112	Plant Propagation	4
UH	203	Horticult. Equip. & Facil.	3
*UH	207	Greenhouse Management	4
*UH	211	Diseases and Pests	4
**UH		Elective	3
		Indus. Occupations Elect.	5

Related Courses

Course Title			Cr. Hrs.
		Math Elective	3
EG	106	Occupational Comm.	3

TOTAL CREDIT HOURS: 46

TOTAL CONTACT HOURS: 620

*Evening courses will require Saturday field trips.
**Suggested Electives: Horticulture Seminar, Floral Design Seminar, Merchandising Horticultural products, and Coop. Work Exp.

EMPLOYMENT OPPORTUNITIES: The Greenhous Management Program is designed to equip an individual with the basic knowledge and skills to work as an assistant grower in a greenhouse. Foreman and supervisory level jobs are available upon completion of the two year program and further greenhouse training. Successful completion of this program will result in the granting of a Certificate of Achievement.

URBAN HORTICULTURE (N)

THREE-QUARTER PROGRAM

TURF MANAGEMENT OPTION

Occupational Courses

Course Title			Cr. Hrs.
UH	104	Plant Science I	4
UH	106	Plant Science II	4
UH	110	Soils and Fertilizers	4
UH	111	Small Engine & Carb. Repair for Urban Hort.	5

UH	203	Horticulture Equip. & Facil.	3
*UH	205	Landscape Management	4
UH	211	Diseases and Pests	4
*UH	213	Turf Prod. & Management	4
UH	299	Independent Studies	4
*UH		Elective	3

Related Courses

Course Title			Cr. Hrs.
EG	106	Occup. Communications	3
		Math Elective	3
PY	107	Psych. of Personal Dev.	3

TOTAL CREDIT HOURS: 48

TOTAL CONTACT HOURS: 522

*Evening courses will require Saturday field trips.
**Suggested Electives: Horticulture Seminar, Merchandising Horticultural Products, and Coop. Work Exp.

EMPLOYMENT OPPORTUNITIES: The Turf Management option provides the basis for entry level job skills in Golf Course maintenance.

URBAN HORTICULTURE (N)

THREE-QUARTER PROGRAM

LANDSCAPE CONSTRUCTION (AND DESIGN) OPTION

Occupational Courses

Course Title			Cr. Hrs.
UH	101	Intro. to Landscape Constr. Draft.	4
UH	102	Landscape Plant Materials	4
UH	104	Plant Science I	4
UH	108	Landscape Planning	4
UH	110	Soils and Fertilizers	4
*UH	201	Nursery Management	4
*UH	205	Landscape Management	4
UH	208	Landscape Surveying	4
UH	212	Basic Landscape Construction	8
UH	217	Advanced Landscape Planning	4
UH	219	Landscape Perspective	4
**UH		Elective	5
		Business Mgmt. Elective	3

Related Courses

Course Title			Cr. Hrs.
EG	106	Occup. Communications	3
		Math Elective	3

TOTAL CREDIT HOURS: 62

TOTAL CONTACT HOURS: 700

*Evening courses will require Saturday Field Trips.
**Suggested Electives: Horticulture Seminar, Floral Design Seminar, Merchandising Horticultural products and Cooperative Work Experience.

EMPLOYMENT OPPORTUNITIES: This program is designed to prepare the student for positions with landscape contractors as supervisory personnel; and with landscape architects as landscape technicians and assistants. Upon completion a Certificate of Achievement will be granted.

URBAN PLANNING TECHNOLOGY (R)

TWO-YEAR PROGRAM

The Urban Planning Technology program is made up of Occupational Courses designed specifically to meet the needs of individuals participating in this profession and offered exclusively by the Division of Community and Personal Service Occupations.

Related Courses in the areas of Science and Math, Social Science, Industrial Occupations, and Communications and Arts are also required to meet the needs of individuals in this profession.

Listed below are the Occupational and Related Courses necessary to meet the requirements to receive an Associate Degree in Urban Planning Technology from the Community College of Denver.

Occupational Courses

Course Title			Cr. Hrs.
UP	100	Introduction to Planning	3
UP	102	Data Collecting Tech. & Eval.	3
UP	110	Problems in Urban Planning	3
UP	200	Statistics for Planners	3
UP	202	Data Processing for Planners	3
UP	205	Map Reading & Photo Interp.	3
UP	207	Pictorial Drafting	4
UP	210	Planning Law	3
UP	297	Coop. Work Experience	7
UP	299	Independent Study	3

Related Courses

Course Title			Cr. Hrs.
AR	105	Basic Design	3
AV	200	Production of AV materials	4
B	110	Intro. to Environment	3
D	100	Mech. Drafting Theory & Tech.	4
EC	109	Applied Economics	3
EG	106	Occup. Communications	3
EG	107	Occup. Communications	
or			
S	110	Intro. to Speech	3
EG	108	Occup. Communications	3
G	111	Intro. to Geology	4
GE	230	Urban Geography	3
HS	251	History of Cities	3
M	102	Applied Math I	3
M	103	Applied Math II	3
M	104	Applied Math III	3
PS	114	American State & Local Gov't	3
SU	103	Basic Surveying	8
		Related Electives	6

TOTAL CREDITS REQUIRED: 97

TOTAL CONTACT HOURS: 1225

Electives in both Occupational and Related Areas are available to meet the requirements of this program. Electives *must* be approved by the student's advisor.

EMPLOYMENT OPPORTUNITIES: The program is designed primarily to qualify students, upon completion of the curriculum and requirements, for employment as assistants to professional planners and urban renewal specialists in both public and private city, county, regional and state planning offices, urban renewal agencies and other organizations concerned with various aspects of urban development.

WATER-WASTEWATER TECHNOLOGY (R)

TWO-YEAR PROGRAM

The Water-Wastewater Technology program is made up of Occupational Courses designed specifically to meet the needs of individuals participating in this profession and offered exclusively by the Division of Community and Personal Service Occupations.

Related Courses in the areas of Science and Math, Social Sciences, Industrial Occupations and Communications and Arts are also required to meet the needs of individuals in this profession.

Listed below are the Occupational and Related Courses necessary to meet the requirements to receive an Associate Degree in Water-Wastewater Technology from the Community College of Denver.

Occupational Courses

Course Title		Cr. Hrs.
WW 100	Intro. to Water-Wastewater	3
WW 103	Blueprt. Read. for Water-Wastewater	3
WW 107	Advanced Treatment	3
WW 109	Basic Elect. for Water-Waste.	3
WW 200	Hydraulics for Water-Waste.	3
WW 205	Water-Waste. Equip. Maint.	3
WW 206	Water-Waste. Admin. & Finance	3
WW 208	Sanitary Chemistry I	4
WW 209	Sanitary Chemistry II	4
WW 220	Public. Relat. for Water-Waste.	3
WW 225	Instrument. and Control	4
*WW297	Cooperative Work Exp.	7
	Water-Waste. Electives	12

*Students who are not presently employed in the profession will be required to take a minimum of 7 credit hours of WW 297, Cooperative Work Experience, before they can receive their Associate Degree.

Related Courses

Course Title		Cr. Hrs.
B 112	General Biology	5
B 114	Sanitary Biology.	4
PY 100	Human Relat. in Bus. & Ind.	3
M 102	Applied Math	3
M 103	Applied Math	3
FP 103	Pumps and Motors	4
IM 101	Elements of Supervision	3
IM 103	Industrial Safety	3
EV 118	Industrial Hygiene	3
	English Electives	6
	Related Electives	6
	TOTAL CREDIT HOURS:	93-100
	TOTAL CONTACT HOURS:	976-990

EMPLOYMENT OPPORTUNITIES: Persons who master the Water-Wastewater Technology program can serve as assistants to engineers, scientists, and public health personnel concerned with water supply developments and distribution, and with wastewater collection and treatment to abate and prevent pollution. The water and wastewater technician can function as a member of the team engaged in research, plant development, or operation; as an operator or assistant operator of water purification or wastewater-treatment facilities supervising and coordinating the efforts of workmen; as a member of the public health team.

COURSE DESCRIPTIONS

AUDIO-VISUAL TECHNOLOGY

AV 100 Introduction to Media (R) .. 3 credit hours

Course is designed to impart the philosophy, aims, and goals of the educational media field. Stress will be placed on understanding of the role of audio-visual aids. (3 hours per week)

AV 102 Audio-Visual Basic Electricity (R) ..... 3 Credit hours

This course will help the student develop competencies in recognizing and applying basic principles of electricity, magnetism, electric motors, circuitry (series and parallel) as they apply to audio-visual equipment. It will also prepare the student to do basic electrical repair on projectory and transcription machines. (3 hours per week)

AV 103 Audio-Visual Library Services (R) ..... 4 credit hours

Provides the student with a brief overview of a modern library or materials center, emphasizes the role of A-V materials and equipment. Also prepares the student in the technical processes of acquisition, preparation and circulation of audio-visual materials. (4 hours per week)

AV 200 Production of Audio-Visual Materials (R) ..... 4 credit hours

Prerequisite: AV 100 Introduction to Media

This course will help the student to develop proficiencies in creating and producing sound-slide presentations, overhead transparencies, single concept films and posters. It also will prepare the student to operate slide and tape duplicators, laminating equipment and basic lettering devices. (4 hours per week)

AV 201 Television Production (R) ..... 6 credit hours

This course is designed to develop competencies in the production of Video and Audio tapes for instructional purposes. It will also provide opportunities to develop basic skills in motion picture photography. (6 hours per week)

AV 202 Audio-Visual Photography (R) ..... 3 credit hours

A basic course in theory of photography, construction and operation of cameras. This course will help the student develop skills in photography as related to audio-visual presentation techniques. (3 hours per week)

AV 203 Projection Equipment Maintenance (R) ..... 4 credit hours

This course enables the individual student to attain basic knowledge and skills in maintenance and care of slide, filmstrip, overhead, opaque projectors aswellas 8mm and 16mm motion picture pictures. (4 hours per week)

AV 204 Transcription Equipment Maintenance (R) ..... 4 credit hours

This course enables the student to attain general knowledge of the maintenance and repair of audio tape recorders, video tape recorders, as well as disc and cassette players. (4 hours per week)

AV 205 Audio-Visual Electronics (R) ..... 4 credit hours

A basic course in vacuum and solid state devices as they

pertain to audio-visual equipment. The student will have the opportunity to develop skills in trouble shooting and repair of electronic components in projectors, video tape equipment, phonographs and audio recorders. (4 hours per week)

AV 206 Duplicating Processes (R) ..... 3 credit hours

Training in the technology related to reproductions of various graphic designs; provides opportunity to develop skills in offset printing, mimeographing and spirit duplicating. (3 hours per week)

AV 297 Cooperative Work Experience (R) ..... 1-6 credit hours

In the Audio-Visual Technology program, cooperative work experience is a part of the course of study. The student is placed at a work station, somewhere in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved, with a College instructor providing coordination. Prerequisites for enrollment in Cooperative Work Experience are permission of the instructor and approval of the Division Director.

The amount of time spent in cooperative work experience will vary to meet student's individual needs. (Credit and Contact Hours Arranged)

AV 299 Independent Study (R) ... 1-6 credit hours

This course provides opportunity for a student to study intensively a specific topic of interest under the direction of a qualified faculty member. Permission to enroll for independent study must be obtained from the Division Director and the assigned instructor. The number of credit hours to be allowed for successful completion of the course will be determined cooperatively by the instructor and the Division Director. (Credit and Contact Hours Arranged)

ACTIVITY DIRECTING FOR SENIOR CITIZENS (A)

SR 100 Introduction to Studies of the Aging (A) ..... 3 credit hours

Physical, mental and psychologyical changes which occur in aging are considered. Problems which may occur in later years with possible solutions and prevention are discussed. Nutritional implications in geriatrics will be included. (3 hours per week)

SR 102 Nutrition for the Elderly (A) ..... 3 credit hours

A study of the essential nutrients and their values in various food groups; their function in the body; and how to determine the food need of the elderly individual. (3 hours per week)

SR 105 A. D. L. Laboratory (A) ..... 3 credit hours

Procedures that relate to the Activities of Daily Living, awareness of range of motion mechanics that are utilized in rehabilitation to the maximum potential of the individual. (3 hours per week)

SR 110 Institutional Organization and Record Keeping (A) ..... 3 credit hours

General procedure followed in the home for senior citizens; psychology of relations with senior citizens. Responsibilities of personnel to self, employer and residents. Communication skill necessary to record information relevant to activities. Orientation to senior citizen home record department. Obtaining, preserving and using records; coding; statistics; legal aspects of record keeping; ethics. (3 hours per week)

SR 112 Activities for Senior Citizens I ..... 3 credit hours

Planning and conducting meaningful recreational opportunities that meet the interests of senior citizens, are adapted to their physical limitations, and contribute to their adjustment to the home. (3 hours per week)

SR 113 Activities for Senior Citizens II ..... 3 credit hours

Continuation of SR 112. (3 hours per week)

SR 121 Physical, Psychological & Social Implications of Aging ..... 3 credit hours

This course will provide the student with a better understanding of the social, psychological, and physical implications in the aging process and how they relate to the needs of the individual. (3 hours per week)

SR 122 Reality Orientation and Remotivation ..... 3 credit hours

Reality Orientation is an effective means of assisting the individual in everyday living. Both the Team concept and the Classroom concept will be covered.

Remotivation assists the individual in coping with today's world through a technique of simple group interaction.

Thirty classroom hours will provide the student with the title of Remotivation Technician through the American Psychiatric Association. (3 hours per week)

EMPLOYMENT OPPORTUNITIES: The purpose of an activity program is to create as near to a normal environment as possible, thereby encouraging persons in a long-term facility to exercise their abilities. The program provides these challenges in a planned, coordinated, structured manner. The activities provided are carefully selected so that they are not only enjoyable, but are especially beneficial in overcoming specific problems. An activity program creates the environment of challenge and achievement, helping a person along the road to recovery. The ever-increasing number of senior citizens who are in need of long-term care has created a demand for trained individuals who can make a nursing home more of a home for its residents.

BUILDING INSPECTION

BI 100 Building Codes and Standards (R) ..... 3 credit hours

An analysis of the building laws and their sources regulating construction. (3 hours per week)

BI 102 Construction Materials (R) ..... 4 credit hours

A qualitative study of wood, masonry, concrete, and steel construction, and survey of roofing, glazing wall and floor finishes. (4 hours per week)

BI 103 Mechanical Inspection (R) ..... 3 credit hours

An introduction to the art of inspecting the heating and ventilating, and refrigeration work on the contruction job. (3 hours per week)

BI 104 Field Inspection Techniques (R) ..... 4 credit hours

An introduction to the art of inspecting construction job-in-progress with special emphasis on problems encountered in the field. (2 hours lecture, 4 hours lab per week)

BI 105 Soils and Grading (R) ..... 3 credit hours

A study of the problems and solutions encountered in the soils of a construction job. (3 hours per week)

BI 106 Electrical Inspection (R) ... 3 credit hours

An introduction to the art of inspecting the electrical work on the construction job. (3 hours per week)

BI 110 Plumbing Inspection (R) ... 3 credit hours

An introduction to the art of inspecting the plumbing work on the construction job. (3 hours per week)

BI 112 Plan Review (R) ..... 3 credit hours

Evaluation of building design for life safety, environmental health features, and structural stability. (3 hours per week)

BI 214 Construction Organization and Management (R) ..... 3 credit hours

An introduction to modern management theory and techniques with application to modern construction problems. The student is given an understanding of supervisory principles as they apply to managerial positions. (3 hours per week)

BI 215 Utilities Inspection (R) ..... 3 credit hours

An examination of the installation of larger, more complex plumbing systems and trench backfill. (3 hours per week)

BI 216 Introduction to Design Fundamentals (R) ..... 3 credit hours

Evaluation of building design for features of structural stability. (3 hours per week)

BI 218 Housing Inspection and Programs (R) ..... 3 credit hours

An examination of the inspection problems unique to existing residential buildings. (3 hours per week)

BI 297 Cooperative Work Experience (R) ..... 1-6 credit hours

In the Building Inspection program, cooperative work experience is a part of the course of study. The student is placed at a work station, somewhere in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved, with a College instructor providing coordination. Prerequisites for enrollment in Cooperative Work Experience are permission of the instructor and approval of the Division Director.

The amount of time spent in cooperative work experience will vary to meet student's individual needs. (Credit and Contact Hours Arranged)

BI 299 Independent Study (R) ... 1-6 credit hours

This course provides opportunity for a student to study intensively a specific topic of interest under the direction of a qualified faculty member. Permission to enroll for independent study must be obtained from the Division Director and the assigned instructor. The number of credit hours to be allowed for successful completion of the course will be determined cooperatively by the instructor and the Division Director. (Credit and Contact Hours Arranged)

COMMUNITY & SOCIAL SERVICE ASSISTING

SW 100 Introduction to Social Welfare Institutions (A) .... 4 credit hours

This course will expose the beginning student to the history and philosophy of social welfare institutions and their relationships to other social institutions in the United States. Current patterns of social welfare provision are placed within an historical perspective. (4 hours per week)

SW 102 Interviewing & Report Writing for Social Service Workers (A) ..... 4 credit hours

This course is designed to enhance the student's skills in such social work practice areas as communication, observation, report writing and interviewing. Emphasis is placed on conducting interviews and writing reports in such a way that the client will be served. (4 hrs. per week)

SW 110 Field Experience (A) ..... 3 credit hours
Prerequisite: SW 100

The field experience is an educationally directed program which offers students opportunities to learn by participating in the delivery of social services to individuals, small groups, families, organizations and/or communities. Students are assigned to a specific social agency, social work program or service. (8 hrs. per week)

SW 111 Field Experience (A) ..... 3 credit hours
Prerequisite: SW 110 — Field Experience

Contination of SW 110 with progressive expectations. (8 hrs. per week)

SW 120 Survey of Social Work Methods and Services (A) ..... 4 credit hours

An analysis of the three basic social work methods: social casework, social group work, and community organization is provided. The basic concepts and principles of the three methods are viewed within the general values of the social work profession. Characteristics of particular fields of service, such as child welfare or corrections, and the application of the above to specific fields is included. (4 hrs. per week)

SW 125 Social Work with Individuals and Families (A) ..... 4 credit hours

Skills in the provision of direct social services to individuals and families are taught on a theoretical level or through simulated practice situations in the classroom. Beginning familiarity with role theory, group theory, and learning theory, as they apply to social work practice, is developed. (4 hrs. per week)

SW 200 Social Services Practicum & Seminar (A) ... 4 credit hours

This course is designed to meet the needs of community & social service workers already in the field. Work performed in the field will be related to the academic program. The seminar method is utilized and discussion includes such job oriented functions as: relationship of worker and supervisor, role fo the professional social worker, role of the para-professional. Students also evaluate and discuss typical case studies. (4 hrs. per week)

SW 201 Application of Social Work Methods I (A) ..... 4 credit hours

Application of social work knowledge & skills with different ethnic and socio-economic groups is discussed. Various aspects of practice including working relationships, are explored. Belief in human worth and human potential, self-awareness, sensitivity to others, and a sense of responsibility are all stressed. (4 hrs. per week)

SW 202 Application of Social Work II (A) ..... 4 credit hours

Application of social work knowledge and skills with different age groups is looked into. Principles and techniques are illustrated through the use of case material. (4 hrs. per week)

SW 211 Field Experience (A) ..... 3 credit hours
Prerequisite: SW 111 — Field Experience

Contination of SW 111 with progressive expectations. (8 hrs. per week)

SW 212 Field Experience (A) ..... 3 credit hours
Prerequisite: SW 211 — Field Experience

Contination of SW 211 with progressive expectations. (8 hrs. per week)

SW 213 Field Experience (A) ..... 3 credit hours
Prerequisite: SW 212 — Field Experience

Continuation of SW 212 with progressive expectations. (8 hrs. per week)

SW 225 Creative Approaches with Communities and Groups (A) ..... 4 credit hours

This course will serve as a resource for students and agency personnel planning services to communities and groups. Ways of mobilizing people and devising means to satisfy changing human needs are examined. An approach based on individual circumstances, personality factors and the particular setting is advocated. (4 hrs. per week)

COSMETOLOGY

CO 100 Cosmetology ..... 73 credit hours

The Cosmetology program consists of 1650 hours of training over approximately 12 months. The course includes training in the following areas: Sterilization, sanitation, basic personal grooming, bacteriology, basic hair styling, finger-waving, manicuring, scalp treatment, facials, facial makeup, hair cutting, hair coloring, permanent waving, skin and scalp disorders and diseases, wig care, iron curling, shear hair cutting, oil manicuring, anatomy, physiology, electricity, chemistry, air blow styling, scalp treatment, hair removal techniques, lash and brow tinting, and shampoo methods. (35 hours per week)

CO 120 Salon Business Operations and Management ..... 3 credit hours
Prerequisite—Possession of Cosmetology License

The course consists of indepth study of salon procedures and operations. The planning of the physical facility, salon personnel, salon inventory procedures, salon accounting procedures, merchandising, advertising, public relations are all slanted toward the beauty salon in day to day activities. (3 hours per week)

CRIMINAL JUSTICE (R)

CJ 110 Criminal Justice I (R) ..... 3 credit hours

The law enforcement field and the criminal justice system is introduced to the student. The various police professions including federal, state, county and municipal agencies will be studied. The vocational opportunities and functions at all levels of law enforcement will be considered. Includes the history, administrative problems, and philosophical view of the criminal justice system. A survey of the relationship within the American system of justice — between law enforcement activities and the courts, and between the courts and correctional activities. (3 hours per week)

CJ 111 Criminal Justice II (R) ..... 3 credit hours
Prerequisite: CJ 110

Principles of organization, administration, and public service. Administration as applied to field operations. Discussions of fundamentals of patrol and crime prevention; community problems associated with enforcement, vice, traffic, and other duties; special units; duties of supervisory officers. (3 hours per week)

CJ 112 Constitutional Law (R) ..... 3 credit hours

The development of U.S. Constitutional Law. Covers vital issues, definitions of constitutional terms and case law as it relates to constitutional issues. (3 hours per week)

CJ 113 Civil Law (R) ..... 3 credit hours

The course concerns the legal protection afforded in civil procedures against interference by others with the security of one's person, property of intangible interests. Three fundamental theories of liability emerge: intentional interference, negligence and strict liability. The influences of theories and underlying social and economic factors is studied in the content of recognized categories of tact liability, interference with peace of mind, negligence, trespass to property nuisance, fraud, and other misrepresentation, defamation, and invasion of privacy. Through these illustrations the course seeks to develop an understanding of the law's search for basic principles to govern the resolutions of conflicts arising out of human relationships. (3 hours per week)

CJ 114 Criminal Law (R) ..... 3 credit hours

The purpose of this course is to explore criminal law viewed as a device for controlling socially undesireable behavior. It is intended to give the students a working knowledge of the criminal code, the basic questions of public policy in the administration of criminal justice and of the legal principles of determining criminal liability. (3 hours per week)

CJ 115 Patrol Procedures ..... 3 credit hours

This course includes the operation of the patrol division of a law enforement agency. The complex day to day duties of the patrol officer will be introduced to the student. The course covers the different areas of patrol procedures including purpose of police patrol, types of patrol, field note-taking, techniques and tactics by type of call, and courtroom testimony and demeanor.

CJ 116 Rules of Evidence (R) ..... 3 credit hours

The student becomes familiar with the kinds and degrees of evidence, and with the rules governing the admissibility of evidence in court. (3 hours per week)

CJ 120 The Court System (R) ..... 3 credit hours

The court system of the United States is explained at all levels, emphasizing adversary procedures in the criminal and civil or equity procedures in the juvenile court, together with recent Supreme Court decisions regarding both. (3 hours per week)

CJ 122 Probation, Pardon, and Paroles (R) ..... 3 credit hours

Probation as a judicial process and parole as an executive function are examined as community-based correctional programs and the use of pardons is reviewed. (3 hours per week)

CJ 210 Criminal Investigation I (R) 3 credit hours

Preliminary investigation techniques to include securing the scene; identifying witnesses; interviewing; search and recording of the scene; arrest procedures; and other related topics. (3 hours per week)

CJ 211 Criminal Investigation II (R) ..... 3 credit hours

Prerequisite: CJ 210

Followup investigation techniques. A contination of CJ 210, Criminal Investigation I. Attention is given to interviewing and statements; the importance of knowing the criminals *modus operandi*; and sources of information. Emphasis is placed on the practical aspects of criminal investigation such as the techniques used in special kinds of investigation; case preparation; and methods of dealing with news media. (3 hours per week)

CJ 212 Criminal Investigation III (R) ..... 3 credit hours

Prerequisite: CJ 211

The collection, identification and preservation of evidence. Attention is given to comparative evidence and current laboratory capabilities and limitations. Students are made aware of available technical methods used in criminal investigation. (3 hours per week)

CJ 222 Traffic Enforcement (R) .... 3 credit hours

Course includes the traffic problem; patrolling procedures; pursuit driving; stopping the violator; officer-violator relationships; drinking driver investigations; traffic direction; and roadblocks. (3 hours per week)

CJ 224 Community Relations (R) .. 3 credit hours

The role of the individual officer in achieving and maintaining public support; human relations, public information; relationships with violators and complainants. (3 hours per week)

CJ 230 Police Supervision (R) ..... 3 credit hours

Principles of personnel management as applied to the police enterprise evaluation and promotion, discipline, training, employee welfare, problem solving, leadership. (3 hours per week)

CJ 234 Narcotics and Drugs (R) ... 3 credit hours

This course will include the discovery and investigation of narcotics peddlers and users; behavior and treatment of the addict; prevention techniques; cooperation with federal agencies; description, chemical properties and results of the use of narcotics and other dangerous drugs. (3 hours per week)

CJ 236 Advance Emergency Techniques (R) ..... 2 credit hours

Skills to be used in the treatment of injuries in an emergency situation; including emergency childbirth and other situations frequently encountered by police. (2 hours per week)

CJ 238 Correctional Services in the Community (R) ..... 3 credit hours

Community resources that can be brought to bear on the correctional task are examined, such as vocational rehabilitation, alcohol detoxification and other units, welfare services, child guidance, and mental health clinics, employment services, private volunteer professional assistance, legal aid and other pertinent services. (3 hours per week)

CJ 297 Cooperative Work Experience (R) ..... 1-6 credit hours

In the Criminal Justice program, cooperative work experience is a part of the course of study. The student is placed at a work station, somewhere in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved with a College instructor providing coordination. Prerequisites for enrollment in Cooperative Work Experience are permission of the instructor and approval of the Division Director.

The amount of time spent in cooperative work experience will vary to meet student's individual needs. (Credit Hours Arranged)

CJ 299 Independent Study (R) ... 1-6 credit hours

This course provides opportunity for a student to study intensively a specific topic of interest under the direction of a qualified faculty member. Permission to enroll for independent study must be obtained from the Division Director and the assigned instructor. The number of credit hours to be allowed for successful completion of the course will be determined cooperatively by the instructor and the Division Director. (Credit Hours Arranged)

EARLY CHILDHOOD EDUCATION AND MANAGEMENT

CC 101 Day Care Teaching Techniques & Program Design (A) ..... 4 credit hours

An overview of duties and responsibilities of the assistant within day care centers servicing the children 2 to 6 years of age. A study of day care schedules and State requirements for day care centers. Survey of the assistant in relation to the child, parent, and total center staff. This course will include a strong emphasis on the "team" approach, and the value of constant communication from the assistant to the teach of who he/she is assisting. (2 hrs. lecture, 2 hrs. lab)

CC 102 Creative Activities (A,N,R) ..... 3 credit hours

The intent of this course is to provide learning experiences encouraging creativity and self-expression in children 2 to 6 years of age through the use of suitable activities and materials. Experiences in basic drawing, painting, pasting, cutting, clay and play dough are included. (2 hrs. lecture, 2 hrs. lab)

CC 103 Introduction to Early Childhood Education (A,N,R) ..... 6 credit hours

Analysis and interpretation of children's activities and experiences based on observations in the Children's Center

at Community College or other approved licensed facility serving the children 2 to 6 years of age, in relation to early childhood education and development. Appropriate licensing regulations are introduced and qualified. (2 hrs. lecture, 8 hrs. lab)

CC 104 Supervised Laboratory Experience (A,N,R) ..... 6 credit hours
Prerequisite: CC 103

Practicum in the Community College Children's Center or other approved licensed facility. Participation as well as discussion and application of methods for guiding children's learning experiences are involved in serving the children 2 to 6 years of age. (2 hrs. lecture, 8 hrs. lab)

CC 105 Supervised Student Participation (A,N,R) ..... 6 credit hours
Prerequisite: CC 104

Practicum in approved day care center; continuation of CC 104 servicing the children 2 to 6 years of age. (1 hr. lecture, 10 hrs. lab)

CC 106 Supervised Student Participation (A,N,R) ..... 6 credit hours
Prerequisite: CC 105

Practicum in approved day care center; continuation of CC 105 servicing the children 2 to 6 years of age. (1 hr. lecture, 10 hrs. lab)

CC 107 Supervised Student Participation (A,N,R) ..... 6 credit hours
Prerequisite: CC 106

Practicum in approved day care center; continuation of CC 106 servicing the children 2 to 6 years of age. (1 hr. lecture, 10 hrs. lab)

CC 108 Theories of Teaching the Young Child (A,N,R) .... 4 credit hours

Theory and methods of teaching the young child, two to six years of age, in relation to his developmental patterns. Survey of relevant learning theories and current learning models. (3 hrs. lecture, 2 hrs. lab)

CC 109 Methods of Teaching the Young Child (A,N,R) ..... 4 credit hours
Prerequisite: CC 108 or permission of instructor

Application of basic philosophy and theory of teaching the child two to six years of age. Student design various materials and aides for use in teaching. (3 hours lecture and 2 hours lab)

CC 201 Workshop of Ideas (A,N,R) ..... 4 credit hours
Prerequisite: Permission of Instructor

This course is designed to meet needs of teachers currently in the field. It includes a brief review of basic early childhood practices and an introduction to recent learning models and theories. (4 hours per week)

CC 202 Workshop of Things (A,N,R) ..... 4 credit hours
Prerequisite: CC 201 or permission of instructor

Examination of commercial and teacher made materials related to current learning models. Teacher design and create teaching materials for their own classroom. (4 hours per week)

CC 210 Child Care Program Supervision & Administration I (A,N,R) .... 4 credit hours

Analysis and interpretation of supervision and administration procedures relevant to early childhood education programs. State licensing regulations appropriate to staff and staff responsibilities are presented. (4 hours per week)

CC 211 Child Care Program Supervision & Administration II (A,N,R) ... 4 credit hours

Analysis and interpretation of supervision and administration procedures relevant to early childhood education programs specifically related to the involvement of parents. Community resources are studied in application to home and school needs. (5 hours per week)

CC 212 Child Care Centers Business Operations (A,N,R) ..... 4 credit hours

A study of the methods and problems involved in operating a small business. Inquiry into the areas of zoning restrictions, licensing requirements, tax information, funding procedures, basic bookkeeping techniques. (4 hours per week)

ENVIRONMENTAL CONTROL TECHNOLOGY (R)

EV 101 Environmental Problems (R) ..... 3 credit hours

An introduction to the major environmental problems confronting mankind and their physical and psychological effects upon people. Problems involving air, water, noise and scenic pollution, solid waste disposal, land use and population growth will be identified and discussed. Present and potential technological controls and the development of alternative solutions to environmental problems will also be studied. Field trips to complement and illustrate classroom studies will be taken. (3 hours per week)

EV 105 Noise Pollution (R) ..... 3 credit hours

An introduction to noise pollution, including the psychological and physical effects of noise upon people. A familiarization with the operations of instruments used to measure noise intensity through demonstrations, field experiences and operation of the equipment by students themselves. Noise control methods used in industry and in the local community will be discussed, along with current and proposed noise control legislation. (3 Hours per week)

EV 107 Solid Waste Pollution (R) ..... 3 credit hours

An in-depth study of sources of solid waste and the problems such pollution causes relative to land use, water and people. Traditional, new and experimental methods of control and abatement will be identified. Methods of sewage treatment will also be studied. Field trips will be taken to sanitary landfill and garbage dump facilities and wastewater treatment plants to observe both poor and good practices, relative to solid waste disposal. (3 hours per week)

EV 110 Environmental Decision Making (R) ..... 3 credit hours

A course designed to help the student become acquainted with techniques involved in environmental decision making, including ecological, social, economic and cultural considerations. The concept of the Environmental Impact Statement required by Federal law will be explored, along with case studies of actual environmental impact statements developed by various entities. Integra-

tion of project management techniques and the evaluation of actual development proposals from neighboring communities will be included in the course. (3 hours per week)

EV 115 Industry and O.S.H.A. (R) ..... 3 credit hours

A course designed to help the student become familiar with the relatively new Federal and state occupational safety and health laws which will directly relate to one's responsibilities as an industrial hygiene or environmental technician. (3 hours per week)

EV 118 Industrial Hygiene (R) ..... 3 credit hours

The science of recognizing, evaluating and controlling health hazards, including safety, in industry will be studied. Included in the course will be a description of techniques involved in collecting and analyzing airborne contaminants, radiation, and physical hazards, such as noise and heat stress. Students will also become familiar with the various types of industrial hygiene sampling equipment. Field trips will be taken to observe and become familiar with industrial processes which present potential health hazards. (3 hours per week)

EV 201 Atmospheric Pollution (R) ..... 4 credits

Source and classification of air pollutants, effects upon public as well as upon plant life and man-made materials, present technological methods of control and future alternative solutions. Pollution and weather and descriptions of sampling and measurement techniques will also be covered. Field trips will be taken to observe technological controls now employed and equipment used to detect and analyze air pollutants. (4 hours per week)

EV 205 Pollution Control Systems ..... 4 credit hours

Prerequisite: M 105 Introduction to Algebra

Hydraulic, pneumatic, mechanical, electrical and electronic control systems and components. Basic description, analysis and explanation of operation. Typical performance characteristics, limitations on performance, accuracy, application and their utilization in industrial processes. (4 hours per week)

FIRE SCIENCE TECHNOLOGY

FS 100 Introduction to Fire Science and Suppression (R) ..... 3 credit hours

Philosophy and history of fire protection; history of loss of life and property by fire; review of municipal fire defenses; study of the organization and function of federal, state, county, and private fire protection agencies; survey of professional fire protection career opportunities. Fire suppression organization; fire suppression equipment; characteristics and behavior of fire; fire hazard properties of ordinary materials; building design and construction; extinguishing agents; basic fire fighting tactics; public relations. (3 hours per week)

FS 104 Fire Company Organization and Procedure (R) ..... 3 credit hours

Review of fire department organization; fire company organization; the company officer; personnel administration; communications; fire equipment; maintenance; training; fire prevention; fire fighting, company fire fighting capability; records and reports. (3 hours per week)

FS 106 Fire Fighting Tactics and Strategy (R) ..... 3 credit hours

Prerequisite: FS 110 Fire Apparatus and Equipment

Review of fire chemistry, equipment and manpower; basic fire fighting tactics and strategy; methods of attack; preplanning fire problems. (3 hours per week)

FS 108 Fire Hydraulics (R) ..... 3 credit hours

Prerequisite: M 102 Applied Math I

Review of basic mathematics; hydraulic laws and formulas as applied to the fire service; application of formulas and mental calculation to hydraulic problems; water supply problems; underwriters' requirements for pumps. (3 hours per week)

FS 110 Fire Apparatus and Equipment (R) ..... 3 credit hours

Driving laws, driving techniques, construction and operation of pumping engines, ladder trucks, aerial platforms, specialized equipment; apparatus maintenance. (3 hours per week)

FS 112 Defensive Driving for Firemen (R) ..... 3 credit hours

Familiarization with national, state and local driving laws; emergency vehicle driving techniques with emphasis on safety. (3 hours per week)

FS 199 Fire Command Officer Training School (R) ..... 3 credit hours

A comprehensive 3 day Command Officer Training Seminar and Workshop. Conducted during the summer quarter utilizing nationally known speakers in Fire Service Management, Command Strategy and Company Operations.

FS 202 Fundamentals of Fire Prevention (R) ..... 3 credit hours

Prerequisite: FS 100 Introduction to Fire Science & Suppression

Organization and function of the fire prevention organization; inspections; surveying and mapping procedures; recognition of fire hazards; engineering a solution of the hazard; enforcement of the solution; public relations as affected by fire prevention. (3 hours per week)

FS 204 Related Codes and Ordinances I (R) ..... 3 credit hours

Familiarization with national, state and local laws and ordinances which influence the field of fire prevention, with emphasis on building codes. (3 hrs. per week)

FS 205 Related Codes and Ordinances II (R) ..... 3 credit hours

Prerequisite: F 204 Related Codes and Ordinances I

Continuation of Related Codes and Ordinances I with an emphasis on life safety and fire prevention codes. (3 hrs. per week)

FS 206 Rescue Practice (R) ..... 3 credit hours

Rescue practices, rescue skills and techniques, rescue tools and equipment with emphasis on auto accident extraction, building collapse, cave-in and landslide and other rescue problem procedures. (3 hrs. per week)

FS 208 Hazardous Materials I (R) ..... 3 credit hours

Prerequisite: C 109 Applied Chemistry

A review of basic chemistry, storage, handling, laws,

standards, and fire fighting practices pertaining to hazardous materials. (3 hours per week)

FS 209 Hazardous Materials II (R) ..... 3 credit hours

Prerequisite: FS 208 Hazardous Materials I

Continuation of the study of hazardous materials covering storage, handling laws, standards, and fire fighting practices with emphasis on fire fighting and control at the company officer level. (3 hours per week)

FS 212 Fire Protection Equipment and Systems (R) ..... 3 credit hours

Portable fire extinguishing equipment requirements. Sprinkler systems, types, installation and maintenance and special protection systems for various hazards. (3 hrs. per week)

FS 214 Fire Department Administration (R) ..... 3 credit hours

Prerequisite: FS 104 Fire Company Organization and Procedure

Consideration of basic concepts and principles of administration applicable to the organization and administration of an efficient fire department. (3 hours per week)

FS 216 Private Fire Protection Systems (R) ..... 3 credit hours

Prerequisite: FS 212 Fire Protection Equipment and Systems

An analysis of private protection and alarm systems. Course covers organization and operation of private Fire Brigades, complete water system layouts. A study and evaluation of Fire Detection, Alarm and Supervisory systems. (3 hours per week)

FS 218 Fire Investigation (R) ..... 3 credit hours

Introduction to arson and incendiarism, arson laws, and types of incendiary fires. Methods of determining fire cause, recognizing and preserving evidence, interviewing and detaining witnesses. Procedures in handling juveniles, court procedures and giving cour testimony. (3 hours per week)

FS 220 Fire Insurance (R) ..... 3 credit hours

An analysis of the fire insurance rating structure. Elements involved in establishing insurance rates. The grading system for cities and towns, the classification of cities and towns, and hazard factors in occupancy, construction and exposures. (3 hours per week)

FS 222 Fire Service Training Techniques (R) ..... 3 credit hours

Familiarization with the modern concepts of instruction; Methods of Organizing, Planning and Conducting Fire Service Training. Study and evaluation of objective writing and student motivation. Introduction to Audio-Visual Teaching Techniques. (3 hours per week)

FS 230 Blueprint Reading for Firemen (R) ..... 3 credit hours

This course will give the student a working knowledge of blueprint reading and sketching as applied to the construction industry. Building terms and abbreviations are taught along with symbols and conventions for other major trades. Construction features, beginning with details of component parts and advancing to a complete set of working drawings. (3 hours per week)

FS 297 Cooperative Work Experience (R) ..... 1-6 credit hours

In the Fire Science Technology program, cooperative work experience is a part of the course of study. The student is placed at a work station, somewhere in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved, with a College instructor providing coordination. Prerequisites for enrollment in Cooperative Work Experience are permission of the instructor and approval of the Division Director,

The amount of time spent in cooperative work experience will vary to meet student's individual needs. (Credit hours arranged)

FS 299 Independent Study (R) ... 1-6 credit hours

This course provides opportunity for a student to study intensively a specific topic of interest under the direction of a qualified faculty member. Permission to enroll for independent study must be obtained from the Division Director and the assigned instructor. The number of credit hours to be allowed for successful completion of the course will be determined cooperatively by the instructor and the Division Director. (Credit hours arranged)

FOOD SERVICE

F 100 Introduction to the Food Service Industry ..... 16 credit hours per quarter for 3 quarters

An introduction to commercial and institutional food services. Courses will cover sanitation/safety practices and utilization of commercial food service equipment. Demonstration and participation in preparing various soups, sauces, meat dishes and fruits and vegetables.

		Cr. Hrs.
Module A	Sanitation and Safety	4
Module B	Tools and Equipment	4
Module C	Basic Food Science	4
Module D	Food Production I	4
Module E	Menu Planning	4
Module F	Pantry Station	4
Module G	Basic Baking	4
Module H	Food Production II	4
Module I	Fry Cooks Station	4
Module J	Restaurant Service	4
Module K	1st Cooks Station	4
Module L	Food Production III	4

F 108 Nutrition ..... 3 credit hours

Orientation in nutritional values, their effect on the health human body as well as their therapeutic use in regaining health; their effect on the social, physical and psychological development of children; their application to commercial food service, and the procedures necessary to assure the preservation of these values through proper preparation and service. (3 hours per week)

F 200 Food & Beverage Service & Management ..... 16 credit hours per quarter for two quarters

This program is designed to qualify the student for a position in food services mid-management. The areas of Purchasing, Accounting and Control Systems as well as Personnel and Scheduling will be stressed. Other areas in-

clude: Merchandising, Service and Sales. Opportunities for employment upon completion are numerous. Some would include: Hotel; (catering, food and beverage management) Restaurant; (coffee shop management, fast food management)

		Cr. Hrs.
Module A	Intro. to Food & Beverage Management & Service	4
Module B	Intro. to Food Service & Beverage Control Systems	4
Module C	Personnel Scheduling & Motivation	4
Module D	Mechandising and Public Relations	4
Module E	Cash Register Systems & Controls & Customer Service and Sales	4
Module F	Purchasing & Stock Record Control Systems	4
Module G	Food, Beverage, Labor Control & Cost Accounting Systems	4
Module H	Processing of Meats, Fish and Poultry	4

F 210 Diet Therapy (N) ..... 3 credit hours
Prerequisite: F 108 and HE 100

An intensive study of more detailed diet therapy emphasizing the team case study approach. In addition to an understanding of diet as a therapeutic means in general illnesses, special emphasis will be given to work with geriatrics and deficiency diseases. (3 hours per week)

F 211 School Nutrition Program (N) ..... 3 credit hours
Prerequisite: F 108

An in depth study of the school nutrition program as currently implemented and supported by school food service. (3 hours per week)

HOTEL-MOTEL MANAGEMENT

HM 103 Introduction to Hotel-Motel Management (A) ..... 3 credit hours

This course is designed to give the background of hotel-motel management from early innkeeping to the modern skyscraper hote. Organization of hotel operations, opportunities and trends will be stressed. (3 hours per week)

HM 105 Front Office Procedures (A) ..... 3 credit hours

Develops the area of human and public relationships responsibilities of the front office salesmanship, cashier's charges, posting machines and some legal aspects of innkeeping. (3 hours per week)

HM 107 Maintenance and Engineer (A) ..... 3 credit hours

Examines the organization of the engineering department. Discusses plumbing, heating ventilation, refrigeration and air conditioning, and electrical systems. Vertical transportation, structural maintenance, painting, landscaping, contracts, communication, acoustics, fire protection and maintenance of kitchen equipment represent the content of this course. (3 hours per week)

HM 109 Supervisory Housekeeping (A) ..... 3 credit hours

Provides a functional knowledge of the supervisor's duties such as record keeping, staffing, and employee training. (3 hours per week)

HM 111 Supervisory Development (A) ..... 3 credit hours

Critical study of selected areas such as interpersonal relations in the industry, understanding and motivating people, handling grievances, training and evaluation, and cost control. (3 hours per week)

HM 115 Hotel-Motel Law (A) ..... 3 credit hours

An exploration of problems related to theories of liability, casual relationships and intentional torts, negligence, labor laws, liens, evictions and crimes. (3 hours per week)

HM 117 Hotel-Motel Basic Accounting (A) ..... 3 credit hours

Develops the basic principles of accounting as applied to the hospitality industry. Student progresses from an initial transaction to an analysis of the financial statement. (3 hours per week)

HM 119 Food & Beverage Management and Service (A) ..... 3 credit hours

An overview for complete food and beverage operations which extends from purchasing, receiving and storage to preparation and service. (3 hours per week)

HM 121 Food and Beverage Control (A) ..... 3 credit hours

Outlines the essentials of effective food and beverage control. Establishes a system for determining sale values for food and beverages. (3 hours per week)

HM 123 Food and Beverage Purchasing (A) ..... 3 credit hours

A detailed study of the major groups of food purchased by quantity buyers. Establishes quality procurement procedures for food, beverage, and related items. (3 hours per week)

HM 151 Hotel-Motel Organization & Administration (A) ..... 3 credit hours

Analysis of management functions and responsibilities in the lodging industry. (3 hours per week)

HM 201 Hotel-Motel Sales (A) ..... 3 credit hours

A critical study of effective techniques for promoting the industry through application of principles of sales, service, marketing, advertising media, and public relations. (3 hours per week)

HM 203 Hotel-Motel Motor Management (A) ..... 3 credit hours

A study for operators of small properties. Emphasizes administrative techniques for today's motel operators such as history, space utilization and business practices. (3 hours per week)

HM 205 Training and Coaching Techniques for Hotel-Motel Supervisor (A) ..... 3 credit hours

Course is designed to assist the student in learning supervisory skills and organizational methods for maximizing the employer's day-to-day work performance. (3 hours per week)

INFORMATION MEDIA TECHNOLOGY

I 100 Information Media Services I (N) ..... 6 credit hours

Introduces the student to a brief history of information Media, including books, non-book media-microforms and audio-visual materials. Library and information center organization and management are studied, with vocabulary, equipment and personnel. Tasks and operations involved in the Technical Assistant staff role, in all service areas. Major instruction is given in technical circulation duties of materials control systems and associated records. (8 hours per week)

I 101 Information Media Services II (N) ..... 9 credit hours

Continues staff role study and service areas-reference study; stresses research materials methods and user service duties. Laboratory skills in the function of preparing materials in the technical operations, also acquisition and maintenance of materials in all types of information library facilities. Technical cataloging operations in operating bibliographic information storage and retrieval methods are emphasized. (12 hours per week)

I 105 Library Use (N) ..... 1 credit hour

A 1 hour course designed to introduce students to the library, its resources and how to use them. The course includes explanations of the card catalog, indexes and various reference materials. (A total of 9 contact hours)

I 110 Records & Information Management (N) ..... 4 credit hours

The course will include a practical simplified approach to organization of office collections of 100 to 1000 items. There will be instruction in use of standard and non-conventional organizational methods. The program will instruct in the use and preparation of special materials and files. Additional exercises provide information for application of library and office filing practices. Executive oriented training in dictionaries, hand books, looseleaf services and other references in business and science will be covered. Special arrangement offers individual experience methods application practice in management of the office Information Center to make it function when assembled. (6 hours per week)

I 115 Micromedia Skills (N) ..... 6 credit hours

Three phases of training are integrated into this course. Basic and important characteristics of equipment — its use and manual-automated machine practices are primary methods studied. Management elements are examined in simulation to train students in designing, operating and managing microform systems. Occupationally related uses in libraries, business and industry and also specialized fields in both present and potential applications. Field trips, manufacturer and use presentations with general and special application purposes will be part of the learning laboratory experience. Guided investigation of students will relate executive, middle management and operative staff in microform use. (9 hours per week)

I 150 Information Media Skills I (N) ..... 6 credit hours

Instruction in the basic audio-visual skills for anyone employed in Information/Library, Education, Child Care, Business-Marketing & Sales or Government. Learn to make transparencies, with added color and motion, bulletin boards, dioramas, flannel boards, also laminate and mount pictures. Instruction includes the operation of motion picture, overhead, opaque, filmstrip, slide projectors, tape recorders and other special audio-visual equipment. (8 hours per week)

I 151 Information Media Skills II (N) ..... 9 credit hours

PrerequisiteL I 100; I 101

Introduces the student to advanced cataloging techniques and several existing subject classifications for all types of information and library collections. Materials selection instructs the student to incorporate pamphlets, audio-visual materials, etc., into the collection. Standard catalogs are utilized, and lists plus basic skills in procurement systems of materials are practiced. Information sources from business, science and educational research are related to technical-service duties and responsibilities. (12 hours per week)

I 200 Technical Supervision Skills (N) ..... 9 credit hours

Prerequisite: I 100, 101, 150, 151

Develop skills related to the supervisory principles of the Technical Supervision role, gives basic instruction in the supervising of other clerical personnel. Explores the management of information/library and related equipment use for effective arrangement by field experience, laboratory exercises and case study methods. Faculty supervision in applied skills of computer automation, micrographics and advanced storage and retrieval methods operating in libraries and information facilities in which the student plans to seek employment. (12 hours per week)

I 290 Information Media Community Service Seminar (N) ..... 1-6 credit hours

Seminars and workshops can be offered as needed to meet community demand. Technical simulation will familiarize the student with modern information/library technology. Community service seminars require the student to work one half day a week on a specific project in the community, such as working with mentally retarded, physically handicapped, persons in penal institutions, hospitals, and nursing homes — the opportunities are unlimited. The seminar format allows the students to share their experiences and ideas with others.

PARALEGAL (A)

LA 100 Introduction to Paralegal Training (A) ..... 4 credit hours

The intent of this course is to give the student interested in becoming a paralegal, exposure to his career options, a working knowledge of legal concepts and terminology, familiarity with legal research techniques, techniques of getting a job, and exposure to five substantive areas of the law and the attorneys and paralegals who practice in these areas. (4 hours per week)

LA 101 Domestic Relations (A) .... 4 credit hours

This course will deal not only with standard legal problems of marriage that lawyers deal with, encompassed by the dissolution of Code such as dependent and neglected children, children in need of supervision, adoptions, etc.

LA 102 Corporations (A) ..... 4 credit hours

Emphasis will be placed on drafting the forms necessary to incorporate a corporation, do the upkeep on it, etc. The

course should prepare the student to step directly into a law office and be an integral part of the firm corporate department. The paralegal will learn to do such things as draft stock option agreements, promissory notes and other such form relevant to corporate or commercial law. (4 hours per week)

LA 103 Real Estate Procedures (A) ..... 4 credit hours

Emphasis will be placed on drafting such things as partnership agreements, filling out forms necessary to complete a real estate transaction, how to comply with subdivision requirements, relevant legislation and other procedures relevant to a successful real estate law practice. (4 hours per week)

LA 104 Law Office Efficiency and Procedures (A) ..... 4 credit hours

Most law firms exist in chaos, attorneys spend time managing rather than practicing law. This course will be geared to teach the paralegal how to create order out of chaos, i.e., it will teach such skills as time-keeping, management control, client files, checklists, etc. (4 hours per week)

LA 105 Litigation & Civil Procedures ..... 4 credit hours

An intensive study of the Colorado Rules of Civil Procedures in all courts of records and their importance in litigation.

LA 106 Probate (A) ..... 4 credit hours

Stress will be primarily on drafting wills, settling estates, trusts, and the tax considerations involved in each of these. (4 hours per week)

LA 107 The Paralegal and the Structure of Government (A) ..... 4 credit hours

This course will be an overview of the structure and work of the State and Federal Government, furthermore this course will instruct students as to which legal documents should be filed in which agency or office of the Federal and State Government, that is articles of incorporation with Secretary of State, sub division plats with county planning commissions in environmental impact statement with E. P. A., etc., etc. (4 hours per week)

LA 108 Legal Assistance to Indigent Client ..... 4 credit hours

A comprehensive study of the emerging area of poverty law, particularly in the civil area, but also concerning itself with defense of the indigent criminal defendant. Can be taken in place of LA 107.

LA 109 Legal Research ..... 4 credit hours

The intent of this course is to provide the student with a working knowledge of the law library and to develop his skills in the area of legal research which is of prime importance and necessity for any student interested in pursuing a career as a paralegal.

LA 210 Paralegal Workshop (A) .... 6 credit hours

This course will be taught by a consortium of instructors from the disciplines mentioned above. It will allow the student to become a specialist in one of the substantive areas mentioned above. This course will stress legal tools, systems, techniques, problems and checklists. It will also give the student the opportunity of working directly with attorneys practicing in the student's chosen specialty area. (6 hours per week)

RECREATIONAL LEADERSHIP

RL 100 Introduction to Recreation Services (R) ..... 3 credit hours

Introduces the basic fundamentals of the nature, scope, and significance of organized recreation services. It includes study of factors involved in the operation of basic recreation units, major program areas, organizational patterns, and the interrelationships of special agencies and institutions which serve the recreation needs of society. (3 hours per week)

RL 102 Techniques in Program Planning and Organization (R) ..... 3 credit hours

A study of the essential elements and basic principles involved in the organization, supervision, promotion, and evaluation of various types of recreation programs. Emphasis is on organized programs and services. (6 hours per week)

RL 111 Field Work (R) ..... 4 credit hours
Prerequisite: RL 100 and Recreational Leadership major

A course designed to give the recreation student practical experience under supervision. The first experience should have the student working with an agency leader. Exposure to leadership responsibilities of planning, conducting, and evaluating an activity or program should result. (6 hours per week)

RL 112 Field Work ..... 4 credit hours
Prerequisite: RL 111

The second supervised course designed to give the recreation student practical experience in developing recreation leadership skills. This experience should have the student working as direct leader with the responsibility for planning, conducting, and evaluating an activity or program. (6 hours per week)

RL 113 Field Work (R) ..... 4 credit hours
Prerequisite: RL 112

The third course designed to give the recreation student practical experience under supervision. This experience should involve the student working as an indirect leader by assisting a group or individual in the planning, conducting, and evaluating the group's or individual's desired experience. (6 hours per week)

RL 120 Creative Dramatics (R) ..... 2 credit hours

A survey of the scope, values, and fundamental skills of drama and its role in recreation. Emphasis is on knowledge, understanding, and promotion of drama rather than mastery of performance skills. (4 hours per week)

RL 121 Tumbling and Gymnastics (R) ..... 2 credit hours

Designed to acquaint the student with skills, teaching techniques and progression of tumbling, stunts and gymnastics for elementary and secondary school students. (4 hours per week)

RL 122 Sports Officiating (R) ..... 2 credit hours

Instruction and experience in organizing, officiating and conducting competetive and recreational sports. (4 hours per week)

RL 140 Social Recreation (R) ..... 3 credit hours

Introduces methods and materials for planning, organiz-

ing, and conducting social activities for groups of various sizes and ages in a variety of social situations. Emphasis is on the mechanics of planning and presenting a repertoire of activities for social recreation events. Major activities will be discussed, played, and/or demonstrated. (6 hours per week)

RL 141 Arts and Crafts (R) ..... 2 credit hours

Demonstrates the methods and materials used in arts and crafts projects for a variety of recreational settings; school, camp, playground, recreation center, and clubs. Emphasis is on constructing, administering, promoting and teaching crafts. (4 hours per week)

RL 200 Team Sports (R) ..... 2 credit hours

A survey of the basic terminology, skills, and rules of selected team sports and their use in recreation. Emphasis is upon knowledge and understanding of the organization, administration, and promotion of sport rather than mastery of performance skills. (4 hours per week)

RL 201 Group Leadership (R) ..... 2 credit hours

Provides insight into the theory, principles and practice of planning, organizing, and conducting effective recreation programs for various groups. Emphasis is on group involvement. (4 hours per week)

RL 202 Individual Lifetime Sports (R) ..... 2 credit hours

A survey of the basic terminology, skills, and rules for selected individual lifetime sports and their use in recreation. Emphasis is on knowledge and understanding of the organization, administration and promotion of sports which have carry-over value rather than on mastery of performance skills. (4 hours per week)

RL 203 Outdoor Recreation and Camping (R) ..... 3 credit hours

Includes study of the history, development, and trends of outdoor recreation, conservation, and organized camping. Emphasis is on laboratory work, field trips, and the development of outdoor skills. (6 hours per week)

RL 204 Games and Rhythms (R) ..... 2 credit hours

Introduces methods and procedures in the instruction of recreational games and rhythmical activities. Course includes basic skills of games and rhythms at the elementary and secondary level. (4 hours per week)

RL 205 Aquatic Programming (R) ..... 2 credit hours

Includes the basic terminology, skills, and techniques of selected water related activities and their use in recreation programs. (4 hours per week)

RL 206 Dance Activities (R) ..... 2 credit hours

Introduces methods and materials for folk, square and social dance. Attention is given to terminology, skills, selection, and presentation of dances. Emphasis is on knowledge and understanding of administration and promotion, rather than on mastery of performance skills. (4 hours per week)

RL 207 Equipment & Facilities (R) ..... 2 credit hours

Designed to acquaint and familiarize student with recreational equipment and program facilities. (4 hours per week)

RL 208 Recreation in Special Settings (R) ..... 3 credit hours

Insight into special recreation programming: therapeutic recreation; recreation for aged; recreation for the handicapped as related to community and volunteer services; recreation rehabilitation for the alcoholic, juvenile delinquent and criminal. (3 hours per week)

RL 299 Independent Study (R) ... 1-6 credit hours

This course provides opportunity for a student to study intensively a specific topic of interest under the direction of a qualified faculty member. Permission to enroll for independent study must be obtained from the Division Director and the assigned instructor. The number of credit hours to be allowed for succesful completion of the course will be determined cooperatively by the instructor and the Division Director. (Credit and Contact Hours Arranged)

TRAFFIC ENGINEERING TECHNOLOGY PROGRAM

TE 100 Introduction to Traffic Engineering (R) ..... 3 credit hours

Course objectives include a general overview of Traffic Engineering. career opportunities, specific areas of interest to the student, and an introduction to the remaining occupational courses required in the program. (3 hours per week)

TE 102 Traffic Engineering Studies I ..... 3 credit hours

Course includes problems applicable to surveys, survey types, execution, analysis, and field techniques. Stressed are statistical significance, innovations of applications and hands-on procedures. (3 hours per week)

TE 103 Traffic Engineering Studies II ..... 3 credit hours

Prerequisite: TE 102

A continuation of TE 102 with emphasis placed upon such topics as origin-destination surveys, transit studies, parking studies, lighting studies and observance studies. (3 hours per week)

TE 200 Traffic Engineering Psychology ..... 3 credit hours

Course objectives include behavioral theory, behavioral measurements and driver expectancy. Course will stress practical application and research techniques. (3 hours per week)

TE 202 Traffic Laws, Ordinances and Regulations ..... 4 credit hours

Course covers the court system, legislative procedure. legislative language, judicial interpretation and their application to traffic control. (4 hours per week)

TE 203 Geometric Design I ..... 3 credit hours

Geometrics will be defined and geometric design will be related to accident and traffic operations. Capacity will also be covered. (3 hours per week)

TE 204 Geometric Design II ..... 4 credit hours

Prerequisite: TE 203

A continuation of TE 203 with added instruction in topics such as control of access, grade separations and interchanges, safety, research, capacity, freeways and expressways, etc. (3 hours lecture, 2 hours lab per week)

TE 210 Traffic Accident Reporting and Analysis ..... 3 credit hours

Course objectives include reporting an accident, determining violations and causes, analyzing mass accident data, determining causative elements, and proposing solutions to accident problems. (3 hours per week)

TE 211 Urban Transportation Planning I ..... 3 credit hours

Course includes an introduction to the purpose, technique and limitations of urban transportation planning. The use of output from the planning process as an operational tool and the limitations on accuracy will be covered. (3 hours per week)

TE 212 Urban Transportation Planning II ..... 3 credit hours

Prerequisite: TE 211

A continuation of TE 211 with additional instruction in model split techniques, parking, traffic assignments, environmental considerations, development of alternatives and economic analysis. (3 hours per week)

TE 215 Traffic Engineering Problems ..... 3 credit hours

Social, economic and psychologyical factors which influence traffic engineering. Traffic engineering issues and problems of contemporary importance will be discussed. (3 hours per week)

URBAN HORTICULTURE

UH 100 Introduction to Urban Horticulture (N) ..... 2 credit hours

Rocky Mountain Horticulture is different, but not impossible. Cultural methods and plant materials are suggested which will aid the horticulturist in adjusting to our existing climatic conditions. Basic design principles and maintenance are also covered. (2 hours per week)

UH 101 Introduction to Landscape Construction Drafting (N) .. 4 credit hours

This course introduces the student to the proper use of drafting equipment, printing techniques, freehand drawing, scale drawings, and isometric drawings designing landscape structure. (2 hours lecture, 4 hours lab)

UH 102 Landscape Plant Materials (N) ..... 4 credit hours

The identification, culture and use of deciduous and evergreen plant materials. (6 hours per week, lecture and lab)

UH 104 Plant Science I (N) ..... 4 credit hours

A study of fundamentals of plant growth with major emphasis upon the seed plants. Plant processes and growth related to commercial horticultural practices. (6 hours per week, lecture and lab)

UH 106 Plant Science II (N) ..... 4 credit hours

Suggested Prerequisite: UH 104

A continuation of Plant Science UH 104, including factors affecting flowering, seeds, fruits, plant genetics and the lower plants, related to plant diseases likely to be encountered in the field. (6 hours per week, lecture and lab)

UH 108 Landscape Planning (N) ... 4 credit hours

Suggested Prerequisite: UH 101 and UH 102

Practical experience in drafting and design principles used in planning the home grounds and other areas. (6 hours per week, lecture and lab)

UH 110 Soils & Fertilizers (N) ..... 4 credit hours

Suggested Prerequisite: UH 104

The properties and management of soils in relation to plant growth with emphasis on the principles of solid fertility and practice of fertilizer use. (6 hours per week, lecture and lab)

UH 111 Small Engine & Carburetion Repair for U.H. (N) ..... 5 credit hours

The principles, design, construction, servicing, operation, troubleshooting and major overhaul of small engines (both two- and four-cycle) are studied, both in theory and practical application on live chain-saws, mowers, tillers, spraying equipment and small garden tractors. (6 hours lecture and lab per week)

UH 112 Plant Propagation (N) ..... 4 credit hours

Suggested Prerequisite: UH 104

The theory and practical application of propagation by seed, cuttings, budding, grafting and layering with proper usage of chemical room stimulators. (3 hours lecture and 3 hours lab per week)

UH 114 Floral Design (N) ..... 4 credit hours

Practical experience in handling and arrangement of flowers. Students will design their own certerpieces, corsages, floral arrangements for special occasions and holidays. (6 hours per week, lecture and lab)

UH 116 Merchandising Horticultural Products (N) ..... 1 credit hour

Display and selling of plants produced in horticultural greenhouse. (2 hours per week, lab)

UH 201 Nursery Management (N) .. 4 credit hours

Suggested Prerequisites: UH 102 and UH 104 and UH 110.

Propagation, planting, crop rotation, business and cultural practices involved in operating a nursery. (3 hours lecture, 3 hours lab per week)

UH 203 Horticultural Equipment & Facilities (N) ..... 3 credit hours

Practical experience is gained in the operation of landscaping and turf equipment: tractors, front end loaders, etc. along with their proper servicing and maintenance. Various horticulture supplies will also be introduced. (2 hours lecture, 2 hours lab per week)

UH 205 Landscape Management (N) ..... 4 credit hours

Suggested Prerequisites: UH 102, UH 104 and UH 110

Care and maintenance practices concerning commercial, industrial, and public grounds areas. Field trips will aid the student in identifying and solving grounds management problems. (3 hours lecture, 3 hours lab)

UH 207 Greenhouse Management (N) ..... 4 credit hours

Suggested Prerequisites: UH 104 and UH 110

Environmental control, culture and production methods employed in producing some of the leading florist crops (2 hours lecture, 4 hours lab per week)

UH 208 Landscape Surveying (N) .. 4 credit hours

The student will learn how to use surveying equipment; topographical plotting as pertains to landscape development and construction, establishing grades, contouring,

estimating top soil quantities and placing grade stakes in the field. (6 hours per week lecture and lab)

UH 209 Horticultural Business Operations (N) ..... 3 credit hours

A study of the methods and problems involved in operating a small business. (3 hours per week lecture)

UH 211 Diseases and Pests (N) .... 4 credit hours

Identification, prevention and control of diseases and insect problems. Special consideration will be given to the use of insecticides and other chemicals (6 hours per week, lecture and lab)

UH 212 Basic Landscape Construction Estimating & Bidding (N) ..... 8 credit hours

Suggested Prerequisites: Math, UH 102, UH 108, UH 110, UH 201, UH 203

Students will learn basic landscape construction methods and equipment operation, i.e., grading and sod laying, seeding, retaining wal and step construction, edging gravel and mulching techniques and estimating costs. (10 hours lecture and lab per week)

UH 213 Turf Production & Management (N) ..... 4 credit hours

Suggested Prerequisites: UH 104 and UH 110

The principles and practices involved in the establishment and maintenance of lawns and turfs for parks, playgrounds, golf courses and home grounds. (6 hours per week, lecture and lab)

UH 217 Advanced Landscape Planning (N) ..... 4 credit hours

Suggested Prerequisites: UH 101, UH 102, UH 108, UH 110, UH 208

Most of the class activity will be advanced field work which includes use of surveying procedures. Classroom lecture time will be held to a minimum. Enrollment will be limited. (6 hours per week, lecture and lab)

UH 219 Landscape Perspective Drawing (N) ..... 4 credit hours

Suggested Prerequisite: UH 108

Students will learn how to illustrate landscaping plans in three dimension drawings. 6 hours per week, lecture and lab)

UH 221 Seminar in Horticulture (N) ..... 1 credit hour

Student must have completed 45 credit hours, at least 15 of which, must be in horticulture or a related science. (Hours arranged)

URBAN PLANNING TECHNOLOGY

UP 100 Introduction to Planning (R) ..... 3 credit hours

An introduction to the planning process as it is currently operating in the urban setting with an emphasis on basic planning philosophy, techniques, and the function of the planning technician in development of solutions to urban problems including mass transportation, housing, and pollution. (3 hours per week)

UP 102 Date Collecting Techniques and Evaluation (R) ..... 3 credit hours

Prerequisite: UP 100 Introduction to Planning

Basic principles of sampling; survey design; systems of sampling; methods of estimation; problem definition; evaluation of information collected; organization and preparation of reports, including techniques of collecting, interpreting and presenting information useful in urban planning. (2 hours of lecture, 3 hours lab per week)

UP 110 Problems in Urban Planning (R) ..... 3 credit hours

Social, economic and psychological factors which influence social stratification and their effect on urban planning. Urban planning issues and problems of contemporary importance such as social attitudes, public opinion, etc. (3 hours per week)

UP 200 Statistics for Planners (R) ..... 3 credit hours

Prerequisite: M 104 Applied Math III

Data handling; methods of analysis of interpretation; application of techniques to data rather than development of formulas; with examples drawn from urban planning studies. (3 hours per week)

UP 202 Data Processing for Planners (R) ..... 3 credit hours

Prerequisite: M 104 Applied Math III and UP 102 Data Collecting Techniques and Evaluation

Effective use of automatic equipment necessary to meet the information needs of urban planners. Study of the basic data processing concepts and procedures including management information systems, the hardware and software necessary for system implementation and intrafirm and agency coordination. (3 hours per week)

UP 205 Map Reading and Photo Interpretation (R) ..... 3 credit hours

Prerequisite: SU 102 Basic Surveying, and UP 100 Introduction to Planning

Interpretation and information gathering from maps and aerial photos. Use and application of black and white and color photos to urban planning. Final projects will be an evaluation of an area for specific proposal. (6 hours lab per week)

UP 207 Pictorial Drafting (R) ..... 4 credit hours

Prerequisite: D 111 Introduction to Drafting

Problems involving the construction, layout, and rendering of pictorial illustrations of a technical nature, including exploded assemblies and assembled sections, using axonometric, and perspective projection. (6 hours each week, lecture and laboratory)

UP 210 Planning Law (R) ..... 3 credit hours

An introduction to the legal basis for planning including such topics as the basic court cases and Federal laws which delineate the planning function in the urban setting, the State enabling legislation, and a review of local jurisdiction ordinance forms. This is followed by a review of the process which is required for the passage of new state and local laws. (3 hours per week)

UP 297 Cooperative Work Experience (R) ..... 1-6 credit hours

In the Urban Planning Technology program, cooperative work experience is a part of the course of study. The student is placed at a work station, somewhere in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved, with a College in-

structor providing coordination. Prerequisites for enrollment in Cooperative Work Experience are permission of the instructor and apprd approval of the Division Director.

The amount of time spent in cooperative work experience will vary to meet student's individual needs. (Credit and Contact Hours Arranged)

UP 299 Independent Study (R) ... 1-6 credit hours

This course provides opportunity for a student to study intensively a specific topic of interest under the direction of a qualified faculty member. Permission to enroll for independent study must be obtained from the Division Director and the assigned instructor. The number of credit hours to be allowed for successful completion of the course will be determined cooperatively by the Instructor and the Division Director. (Credit and Contact Hours Arranged)

WATER-WASTEWATER TECHNOLOGY (R)

WW 100 Introduction to Water-Wastewater (R) .... 3 credit hours

This course is designed to introduce the student to the characteristic effects of wastewater upon water quality. Treatment operations used to remove objectionable pollutants. Characteristics of water, water treatment and protection of ground water.(3 hours per week)

WW 101 Water Sources and Supply (R) ..... 3 credit hours

A study of the aspects of Water Sources and Supply. Included topics will be Surface Water, Ground Water, Water Storage, Affects of Storage, Water Shed Protection and Raw Water Transmission. (3 hours per week)

WW 102 Mechanical Physical Treatment (R) ... 3 credit hours

The course will include the principles of pre-treatment of wastewater, study of Sceens and Racks, Communution, Grit Removal and Grit Chambers and Preaeration. Also, studied will be the technical processes of sedimentation and flotation. (3 hours per week)

WW 103 Blueprint Reading for Water-Wastewater (R) .... 3 credit hours

Instruction in reading and interpreting drawings of treatment works, equipment, distribution and collection systems and introduction to different types of graphical presentations and interpretations and use of various graphs and monographs. (3 hours per week)

WW 105 Water Distribution (R) .... 3 credit hours

Develops a knowledge of water distribution systems and components and the operation and maintenance of equipment. Some specifics are: distribution and service fittings, tapping, valves, hydrants, main cleaning and line installation. (3 hours per week)

WW 106 Sludge Treatment (R) .... 3 credit hours

A corrse designed to give the student a basic understanding of the principles of Sludge Digestion, Sludge drying on sand beds, the use of chemical for conditioning. Also covered will be Vacuum filtration, Flotation and Centrifuging. (3 hours per week)

WW 107 Advanced Treatment (R) . 3 credit hours

Introduction to some of the more sophisticated treatment methods used in water and wastewater. Tertiary treatment methods are discussed such as, ion exchange, activated carbon and reverse osmosis. Disinfection will also be discussed. (3 hours per week)

WW 108 Waste Water Collection Systems (R) ..... 3 credit hours

The course will develop an understanding of information and procedures used in design, construction and maintenance of sanitary sewers, lift stations and sewage pumps, measurement of wastewater flow and sewage disposal for residences and institutions through discussion. (3 hours per week)

WW 109 Basic Electricity for Water-Wastewater (R) .... 3 credit hours

An elementary study of electricity, electrical terms and how to trouble shoot basic electrical problems that may be incurred in day-to-day plant operations. (3 hours per week)

WW 200 Hydraulics for Water-Wastewater (R) .... 5 credit hours

Introduction to principles of density, specific gravity, Pascal's law, pressures, force, heads, friction loss, flow measurement and other topics related specifically to liquids and their properties in water and wastewater operations. (3 hours lecture, 4 hours lab per week)

WW 202 Water Treatment I (R) .... 3 credit hours

Familiarization with theory equipment and operational practices of a conventional Water Treatment Plant. Including basic design and operation (3 hours per week)

WW 203 Water Treatment II ..... 3 credit hours

Study of the Chemical-Physical aspects of Water Treatment. (Coagulation-Flacculation.) To afford the student a more complete understanding of Coagulation-Flacculation, Sedimentation, and Filtration. Includes disinfection. (3 hours per week)

WW 204 Biological Treatment (R) ..... 3 credit hours

Prerequisite: WW 100 Introduction to Water-Wastewater

A study of how Biological Treatment is used in the field of waste water treatment. Included topics that will be covered will be: activated sludge, trickling filters, and oxidation ponds. (3 hours per week)

WW 205 Water-Wastewater Equipment-Maintenance (R) ..... 3 credit hours

A course designed to make the student aware of sound practices in general equipment repair and maintenance. Specific tools, protective coatings and record keeping are to be stressed. (3 hours per week)

WW 206 Water-Wastewater Administration & Finance (R) ..... 3 credit hours

Sound practices in project service costs, rate structure, municipal finance, safety programs and personnel practices are to be taught. (3 hours per week)

WW 208 Sanitary Chemistry I (R) ..... 4 credit hours

Introductory course teaches fundamentals essential to good laboratory operation. Subjects such as laboratory safety, basic concepts concerning atoms and molecules, calculations regarding solubility, reactivities of compounds, pH calculations etc., to provide a basis for more detailed work in the water and wastewater laboratory courses. (3 hours lecture, 4 hours lab per week)

WW 209 Sanitary Chemistry II (R) ..... 4 credit hours

Prerequisite: WW 208 Sanitary Chemistry I

Theory and laboratory techniques for all control tests of water purification and wastewater treatment. It includes basic in-plant studies. (2 hours lecture, 3 hours lab per week)

WW 220 Public Relations for Water-Wastewater ..... 3 credit hours

Course will be developed during 1973-74 school years. For course content and description student should contact program instructors. (3 hours per week)

WW 225 Instrumentation and Controls (R) ..... 4 credit hours

An elementary study of hydraulic, pneumatic, mechanical, electrical and electronic control systems and components. It includes a basic description, analysis, and explanation of operation of instrumental controls for water and wastewater plants. Typical performance characteristics, accuracy and application of instruments are studied. (3 hours lecture, 2 hours lab per week)

WW 297 Cooperative Work Experience (R) ..... 7 credit hours

In the Water-Wastewater Technology program, cooperative work experience is a part of the course of study. The student is placed at a work station, somewhere in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved, with a College instructor providing coordination. Prerequisites for enrollment in Cooperative Work Experience are permission of the instructor and approval of the division director.

The amount of time spent in cooperative work experience will vary to meet student's individual needs. (Credit and Contact Hours Arranged)

SEMINARS AND WORKSHOPS

Most of the courses offered by the Division of Community and Personal Service Occupations can be adapted for seminars and workshops to meet specific occupational needs. For further information, contact the Director of Community and Personal Service Occupations on your campus.

COOPERATIVE WORK EXPERIENCE

— 297 Cooperative Work Experience (A, N, R) ... 3-12 credit hours

In some program areas, cooperative work experience is a part of the course of study. The student is placed at a work station, somewhere in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved, with a College instructor providing coordination. Prerequisites for enrollment in Cooperative Work Experience are permission of the instructor and approval of the Division Director.

The amount of time spent in cooperative work experience will vary somewhat from program to program and to meet student's individual needs. (credit hours arranged)

OCCUPATIONAL PRACTICUM

— 298 Occupational Practicum (R) ..... 1-6 credit hours

This course is designed for students having previous work experience in their major field of study. Emphasis will be placed upon job analysis, development of long-range career goal planning, upgrading of present job, supervisory training and the like. Planned and supervised learning experiences will be provided in the business- industry sector of the community, depending on individual student needs and interests. Learning experiences will be supervised by the Coordinator of Cooperative Education. Prerequisites are completion of — 297 Cooperative Work Experience or the equivalent job-related work experience and the approval of the Coordinator of Cooperative Education. (credit hours arranged)

INDEPENDENT STUDY

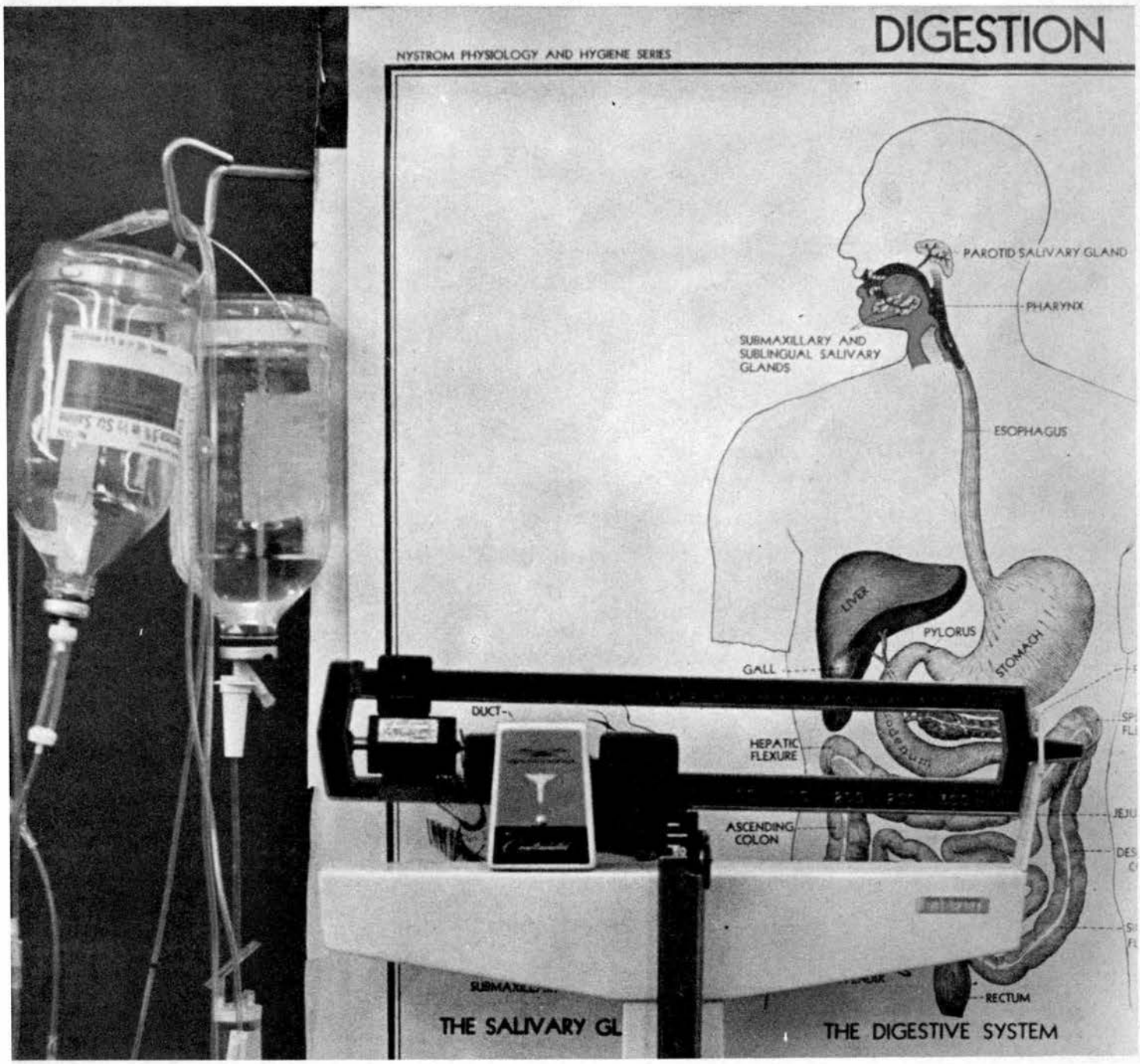
— 299 Independent Study (A, N, R) ..... 1-12 credit hours

Independent study is available in each of the major areas of the Division of Community & Personal Service Occupations. The course provides opportunity for a student to study intensively a specific topic of unterest under the direction of a qualified faculty member. Permission to enroll for independent study must be obtained from the Division Director and the assigned instructor. The number of credit hours to be allowed for successful completion of the course will be determined cooperatively by the instructor and the Division Director. (credit hours arranged)

Community College of Denver

uraria Campus
orth Campus
ed Rocks Campus

ivision of Health Occupations



DIVISION OF HEALTH OCCUPATIONS

Dental Assisting	**N**
Respiratory (Inhalation) Therapy Technology	**N**
Respiratory (Inhalation) Therapy Asst.	**N**
Medical Insurance Clerk	**A**
Nurse Assisting	**A, N, R**
Nursing	**A, N**
Practical Nursing	**A**
R. N. Refresher Course	**R**
Optometric Assisting	**N**
Radiologic Technology	**N**
Operating Room Technology	**A**
Ward Clerk	**A**

Note: Auraria Campus—A
North Campus—N
Red Rocks Campus—R

DIVISION OF HEALTH OCCUPATIONS

GENERAL INFORMATION

Each health occupation program includes class room instruction and experience in patient care. The patient care experience will be in the actual hospital, clinic or similar unit typical of where the student will work upon completion of the program. **Enrollment in each program is based on the availability of these clinical resources for patient care; therefore, the number of students in each program is limited to the number that can be accommodated at the clinical units. It is recommended that students with an interest in entering these occupational areas apply at least one year prior to the time planned for program entrance.** Early application to the health program will also provide an opportunity for the student to take courses that will refresh or supplement previous high school work.

The Community College of Denver does not require the G. E. D. or high school graduation for entrance, but this is required by regulatory agencies in the health field. A student must have the G. E. D. or high school diploma prior to entering the Practical Nursing and Dental Assisting Programs. This requirement must be met before the student completes the Program or they will not be eligible to take the Nursing Licensing examination or the Radiologic Technology and Respiratory Therapy Registry examination.

Associate Degree programs are structured within the basic framework of two years; however, each program may be individualized according to the student's needs. The individual with family or work responsibilities should plan to allot more than two years for completion of the Associate Degree requirements.

CONTINUING EDUCATION

Two basic types of continuing education programs are available to the practitioners in the health occupations. Refresher courses will be offered, as indicated by community needs, to renew the knowledge and skills of the practitioners who have been inactive. For example, a nurse refresher course is offered for nurses currently licensed in Colorado who feel the need for additional theory and clinical practice before returning to the active practice of nursing.

The second group of programs is designed to augment the knowledge and skills of the practitioner in the health occupations. These courses will enable the practitioner to acquire an increased depth of knowledge in basic practice areas; an awareness of progress; developments and new therapy measures; and to meet requirements for recertification in such areas as Dental Assisting.

DENTAL ASSISTING (N)

TWO-YEAR PROGRAM

FIRST YEAR

			Cr. Hrs.
First Quarter			
		Communications	3
SC	110	or 112 Typing	4
B	100	Basic Human Bio.	4
DA	110	Ornt. Dnt. Ass't	3
F	108	Nutrition	3
			17
Second Quarter			
		Communications	3
AC	108	Bookkeeping & Accounting	5
B	123	Human Ant. Phys.	4
DA	112	Int. Dental Ass't	3
DA	114	Dental Office Procedures	3
			18
Third Quarter			
		Communications	3
		Psychology	3
DA	120	Dental Science	3
DA	118	Dental Materials	3
DA	130	Odontology	3
			15
Fourth Quarter			
B	105	Microbiology for Dent. Asst.	1
DA	115	Emerg. Msr., Pharm. for D.A.	2
DA	200	Dent. Opr. Pro	5
DA	205	Dent. Roentgenology	3
			11
Fifth Quarter			
DA	212	Intro. Clin. Exp.	2
DA	220	Adv. Dent. Oper. Proc. I	8
DA	240	Adv. Clinical Experience I	8
			18
Sixth Quarter			
DA	222	Adv. Dent. Oper. Proc. II	8
DA	242	Adv. Clinical Experience II	8
			16

EMPLOYMENT OPPORTUNITIES: The program is designed to prepare students to become direct assistants to dentists in general and specialized practice. In addition to the responsibilities of chairside assisting, the dental assistant is prepared to assume office responsibilities and laboratory duties.

TOTAL CREDIT HOURS: 95

RESPIRATORY THERAPY ASSISTING (N)

NINE-MONTH PROGRAM

			Cr. Hrs.
First Quarter			
SI	136	Basic Science I	5
HE	100	Medical Term.	2
HE	105	Nsg. Pro., Prob. Rel.	3
M	105	Intro. Algebra	4
IT	100	Orient. to Resp. Tech.	3
			17
Second Quarter			
SI	137	Basic Science II	5
EG	121	Communications for H. O.	3
IT	106	Fund. Resp. Therapy	4
IT	131	Cardio-Pulmonary Phys.	3
P	101H	Fund. Physics	3
			18
Third Quarter			
HE	110	Pharmacology	3
IT	112	Resp. Tech.	4
IT	107	Clinical Ap.	3
IT	125	Resp. Patho. Physiology	4
IT	132	Intro. Pul. Funct.	3
			17

Fourth Quarter

IT	140	Therapy Conference	2
IT	297A	Coop Work Experience A	2
		or	
IT	297B	Coop Work Experience B	10
			4 or 10

EMPLOYMENT OPPORTUNITIES: Under the supervision of a physician or respiratory therapist, the therapy assistant is qualified to administer basic respiratory therapy measures. Positions may be obtained in hospitals, clinics and extended care resources.

TOTAL CREDIT HOURS 56 or 62

RESPIRATORY THERAPY TECHNOLOGY (N)

21-MONTH PROGRAM

FIRST YEAR

First Quarter			Cr. Hrs.
SI	136	Basic Science I	5
HE	100	Medical Term.	2
HE	105	Nsg. Pro., Prob. Rel.	3
M	105	Intro. Algebra	4
IT	100	Orient. to Resp. Tech.	3
			17
Second Quarter			
SC	137	Basic Science II	5
EG	121	Communications for H. O.	3
IT	106	Fund. Resp. Therapy	4
IT	131	Cardio-Pulmonary Phys.	3
P	101H	Fund. Physics	3
			18
Third Quarter			
HE	110	Pharmacology	3
IT	112	Resp. Tech.	4
IT	107	Clinical Ap.	3
IT	125	Resp. Patho. Physiology	4
IT	132	Intro. Pul. Funct	3
			17

SECOND YEAR

Fourth Quarter (Summer)			Cr. Hrs.
IT	140	Therapy Conference	2
IT	297A	Coop Work Experience A	2
		or	
IT	297B	Coop Work Experience B	10
			4 or 10
Fifth Quarter			
B	130	Microbiology	4
IT	206	Prolonged Art. Vent	4
IT	230	Applied Technology I	6
			14
Sixth Quarter			
IT	208	Adv. Pul. Function	4
IT	231	Applied Technology II	8
IT	202	Fed. Resp. Tech.	3
			15
Seventh Quarter			
MG	221	Personnel Mgmt.	3
IT	210	Dept. Mgmt.	3
IT	220	Therapy Seminar	4
IT	232	Appl. Pr. of Suprv. & Mgmt.	4
			14

EMPLOYMENT OPPORTUNITIES: The Program in Inhalation Therapy Technology is designed to prepare therapists to work under the supervision of a physician. The therapist is employed in hospitals, clinics and research laboratories. Upon completion of the Program the student is eligible to take the Registry Examination offered by the American Association of Respiratory Therapy.

TOTAL CREDIT HOURS 99 or 105

MEDICAL INSURANCE CLERK (A)

NINE-MONTH PROGRAM

First Quarter			Cr. Hrs.
MO	100	Intro. Med. Ofc. Proc.	3
MO	104	Basic Ins. Concepts	3
*SC	110	Typing I or II	4
MO	181	Life Science for Health Clerical Tech I	3
HE	100	Med. Terminology	2
			15
Second Quarter			
MO	100	Advanced Med. Ofc. Proc.	3
MO	120	Medical Ethics	1
EG	106	Occupational Comm. or	3
*EG	131	Business Comm.	
MO	181	Life Science for Health Clerical Tech II	2
MO	130	Medical Filing	3
SC	103	Business Machines	3
			16
Third Quarter			
MO	150	Ins. Inf. Methods	6
MO	170	Health Ins. Claim Report	6
SC	132	Med. Machine Transc.	3
MO	297	Co-op Work	2
			17

*EG 131 is required for completion of the program; if basic English skills are needed EG 106 must also be taken.

*SC 111 typing skills to 45 wpm must be achieved to take Med. Mach. Transcription.

AC 111- Accounting and Business machines may in some instances be substituted for Typing and Machine Transcription. This will be a division decision depending upon the aptitude test of the individual.

EMPLOYMENT OPPORTUNITIES: Employment is available in many health care facilities such as hospitals, clinics, and doctors' offices. This worker is also utilized by insurance companies and other businesses concerned with health insurance claims.

TOTAL CREDIT HOURS 48

NURSE ASSISTING (A, N, R)

THREE-MONTH PROGRAM

This one quarter (10-12 week) course is to prepare the student for employment as a nurse assistant. The nurse assistant will work as a part of the health team, under the direction and supervision of a registered nurse, caring for patients in hospitals, extended care facilities and nursing homes.

The student will spend 20 hours each week in classes at the College or in supervised patient care experiences in a hospital or nursing home.

First Quarter			Cr. Hrs.
NA	110	Basic Personal Care	8
NA	120	Patient Care Measures	8
			16

EMPLOYMENT OPPORTUNITIES: Graduates will qualify for service in hospitals, extended care facilities, nursing homes, and home-care agencies. Persons who qualify for a more advanced program will be counseled to enter practical, technical or professional nursing programs.

NURSING (A, N)

ASSOCIATE DEGREE NURSING PROGRAM

FIRST YEAR

			Cr. Hrs.
First Quarter			
N	111	Fund of Nsg.	6
F	108	Nutrition	3
SI	137	Basic Science II	5
HE	100	Med. Terminology	2
		Communications (Elective)	3
			19
Second Quarter			
N	112	Mat. & Child Care	7
SI	136	Basic Science I	5
HE	110	Pharmacology	3
		Psychology (Elective)	3
			18
Third Quarter			
N	113	Med. Surg. Nursing	10
VN	122	Voc.-Soc. Rel.	1
S	135	Soc. of Health Care	3
		Communications (Elective)	3
			17

SECOND YEAR

			Cr. Hrs.
Fourth Quarter			
N	211	Cr. of Child-Yng. Adult	5
N	201	Emot. Cr. of Child-Yng. Adult	3
N	205	Soc. Proc. I	1
SI	236	Basic Science III	5
PY	223	Growth & Dev.	3
			17
Fifth Quarter			
N	212	Cr. of Mature Adult	6
N	202	Tm. Leading-Group Processes	3
N	206	Soc. Proc. II	1
SI	237	Basic Science IV	5
			15
Sixth Quarter			
N	213	Cr. of Older Adult	6
N	203	Emot. Cr. of Older Adult	2
N	207	Soc. Process III	1
		Communications (Elective)	3
			12

PRACTICAL NURSING (A)

			Cr. Hrs.
First Quarter			
HE	100	Medical Term	2
HE	107	Basic Science	5
VN	100	Personal Care of Patients	6
VN	102	Nutrition	2
		English Elective	3
			18
Second Quarter			
HE	106	Basic Science	5
HE	108	Pharmacology	3
VN	110	Maternal & Child Care	7
		Psychology Elective	3
			18
Third Quarter			
		English Elective	3
VN	120	Medical-Surgical Nursing	10
VN	122	Personal & Vocational Rel.	2
		Sociology Elective	2
			18

EMPLOYMENT OPPORTUNITIES: Following successful completion of this program and the licensure by the State Board of Nursing, the graduate will be prepared to work in beginning nurse positions. He or she will be qualified to administer total care to people of all ages and to lead health team members with less educational preparation. Positions may be obtained in hospitals, doctors' offices, clinics, nursing homes, mental health centers, and industrial health offices. Many opportunities for employment are available, especially for those who are able to work a flexible schedule.

TOTAL CREDIT HOURS: 98

CONTINUING EDUCATION FOR REGISTERED NURSES (R)

Continuing education will be offered, as indicated by community needs, to augment the knowledge and skills of practitioners in nursing. These courses will enable the practitioner to acquire an increased depth of knowledge in basic practice areas: an awareness of progress; developments and new therapy measures; and to meet requirements for certification and recertification. Reassessment of needs for course offerings will be ongoing. Leaflets with course information will be made available to Colorado Nurses' Association, district newsletters, health department newsletter, health agencies and to individual RNs.

			Cr. Hrs.
N	230	Reg. Nurse Refresher Course	8
N	250	Pharmacodynamics	3
N	251	Applied Physiology (For Nurses)	3

Other course offerings in continuing education will be added as needed.

EMPLOYMENT OPPORTUNITIES: Registered nurses who have been inactive for five years or more are advised to complete refresher course before seeking employment in hospitals, nursing homes, extended care facilities and other health care agencies and institutions.

OPTOMETRIC ASSISTING (N)

NINE-MONTH PROGRAM

			Cr. Hrs.
First Quarter			
OA	100	Intro. to Optom. Assisting	4
OA	101	Optom. Term., Anatomy	3
OA	103	Optom. Lab. Procedures	4
M	100	Dev. Math	3
		or	
SC	110	Typing	4
			14 or 15
Second Quarter			
OA	102	Optom. Office Procedures	4
OA	104	Frame Selection Adjustment	2
OA	105	Optom. Clin. Pro.	3
EG	131	Bus. Communications	3
SC	110	Typing	4
		or	
B	100	Basic Human Biology	4
			16

Third Quarter

OA	106	Optom. Clinical Experience	6
OA	110	Occupational Seminar	3
B	100	Basic Hum. Bio. (If needed)	4
			9 or 13

EMPLOYMENT OPPORTUNITIES: The prepared optometric assistant will work under the supervision of the optometrist in offices or clinics. Increased emphasis on visual health will increase the need for this worker.

TOTAL CREDIT HOURS: 39 or 44

RADIOLOGIC TECHNOLOGY (N)

GENERAL DIAGNOSTIC (X-RAY)

FIRST YEAR

First Quarter			Cr. Hrs.
HE	100	Med. Term.	2
SI	136	Basic Science I	4
M	105	Introductory Algebra	4
RT	100	Intro. to Rad. Tech.	3
XT	101	Clinical Orientation	2
RT	110	Intro. to Rad. Pos.	3
			18
Second Quarter			
SI	137	Basic Science II	4
HE	105	Nurs. Proc.-Prob. Rel.	3
RT	102	Radiographic Technique I	3
RT	111	Radiographic Positioningl	3
XT	111	Clinical Experience I	2
			15
Third Quarter			
P	105	Radiation Physics	4
		Communications (Elective)	3
RT	104	Radiographic Technique II	3
RT	112	Radiographic Positioning II	3
XT	112	Clinical Experience I	4
			17

SECOND YEAR

Fourth Quarter			Cr. Hrs.
		Psychology (Elective)	3
HE	205	Survey of Med. & Surg. Diseases	3
		Communications (Elective)	3
XT	113	Clinical Experience III	3
			12
Fifth Quarter			
RT	210	Special Pos. Techniques	3
XT	210	Clinical Experience IV	5-9
			8-12
Sixth Quarter			
RT	211	Special Proc. and Techniques	3
XT	211	Clinical Experience V	5-9
			8-12
Seventh Quarter			
XT	212	Clinical Experience VI	5-12
			5-12
Eighth Quarter			
RT	213	Registry Review	3
XT	213	Clinical Experience VII	5-9
			8-12

EMPLOYMENT OPPORTUNITIES: Upon successful completion of this program and the Registry Examination, the graduate is prepared to work in hospitals, clinics, physicians' offices, government health facilities and research laboratories.

TOTAL CREDIT HOURS: 91 or 110

NUCLEAR MEDICINE (N)

FIRST YEAR

First Quarter			Cr. Hrs.
		Communications	3
HE	100	Med. Term.	2
B	100	Basic Human Biology	
		or	
C	101	Fund. of Chemistry	4
RT	100	Intro. to Rad. Tech.	4
		Elective (Math)	4
			17
Second Quarter			
		Communications	3
B	123	Hum. Anat. & Phys.	4
C	101	Fund. of Chem.	
		or	
RT	100	Intro. to Rad. Tech.	4
HE	105	Nurs. Proc.	3
		Elective (Math)	4
RT	101	Clinical Orientation	2
			20
Third Quarter			
B	124	Hum. Anat. & Phys.	4
RT	108	Intro. to Rad. Positioning	2
P	105	Rad. Physics	4
		Psychology (Elective)	3
*M	111	College Algebra	5
			18

*A student may select the mathematics courses as needed but must complete M 207 and M 111 prior to Fall Quarter of the second year.

SECOND YEAR

Fourth Quarter (Fall)			Cr. Hrs.
NT	200	Intro. Nuc. Phys. and Stat.	3
NT	202	Int. Nucl. Med. Method Tech.	4
NT	203	Intro. to App. Nucl. Tech.	8
HE	205	Survey of Med.-Surg. Diseases	3
			18
Fifth Quarter			
R	210	Rad. Bio. & Path. I	3
NT	204	Interm. Nucl. Med. Tech.	4
NT	205	Interm. App. Nucl. Med. Tech.	8
C	102	Fund. of Chemistry	4
			19
Sixth Quarter			
NT	206	Adv. Nucl. Tech.	4
NT	207	Adv. Nucl. App. Med. Tech.	8
NT	215	Chem. of Nucl. Med.	3
			15
Seventh Quarter (Summer)			
NT	220	Reg. Review	6
NT	297	Coop. Work Exp.	6
			12

EMPLOYMENT OPPORTUNITIES: Upon successful completion of this program and the examination of the American Registry of Radiologic Technologists, the graduate is prepared to work in any Nuclear Medicine

department in the United States and Canada. There is an increasing need for Registered Nuclear Medicine technologists and employment opportunities are unlimited.

TOTAL CREDIT HOURS: 119

RADIATION THERAPY (N)

FIRST YEAR

First Quarter			Cr. Hrs.
		Communications	3
HE	100	Med. Term.	2
B	100	Basic Hum. Bio.	
		or	
C	101	Fund. of Chem.	4
RT	100	Intro. to Rad. Tech.	4
		Elective (Math)	4
			17
Second Quarter			
		Communications	3
B	123	Human Anat. & Phys.	4
C	101	Fund. of Chem.	
		or	
RT	100	Intro. to Rad. Tech.	4
HE	105	Nurs. Proc.	3
		Elective (Math)	4
RT	101	Clinical Orientation	2
			20
Third Quarter			
B	124	Hum. Anat. & Phys.	4
RT	108	Intro. to Rad. Positioning	2
P	105	Rad. Physics	4
		Psychology (Elective)	3
M	111	College Algebra	5
			18

*A student may select the mathematics courses as needed but must complete M 107 and M 111 prior to Fall Quarter of the second year.

SECOND YEAR

Fourth Quarter			Cr. Hrs.
R	202	Intro. to Rad. Therapy	4
R	203	Intro. to App. Rad. Ther.	8
HE	205	Survey of Med.-Surg. Disease	3
			15
Fifth Quarter			
R	204	Interm. Rad. Therapy	4
R	205	Interm. Applied Rad. Ther.	8
R	210	Rad. Bio. & Path. I	3
			15
Sixth Quarter			
R	206	Adv. Rad. Therapy	4
R	207	Adv. Applied Rad. Therapy	8
R	212	Rad. Bio. & Path. II	3
			15
Seventh Quarter			
R	220	Reg. Review	6
R	297	Coop Work Exp.	6
			12

EMPLOYMENT OPPORTUNITIES: Upon successful completion of this program and the examination of the American Registry of Radiologic Technologists, the graduate is prepared to work in any radiation therapy department in the United States and Canada. There is an increasing need for Registered Radiation Therapy Technologists and employment opportunities are unlimited.

TOTAL CREDIT HOURS: 111

NUCLEAR MEDICINE (N)

*Certificate Program

First Quarter			Cr. Hrs.
NT	200	Intro. Nuc. Physics and Statistics	3
NE	202	Intro. Nucl. Tech.	4
C	101	Fund. of Chem.	4
NT	203	Intro. to Applied Nucl. Tech.	8
			19
Second Quarter			
R	210	Rad. Bio. & Path. I	3
NT	204	Interm. Nucl. Med. Tech.	4
NT	205	Interm. App. Nucl. Med. Tech.	8
C	102	Fund. of Chem.	4
			19
Third Quarter			
NT	206	Adv. Nucl. Tech.	4
NT	207	Adv. Applied Nucl. Med. Tech.	8
NT	215	Chem. of Nucl. Med.	3
			15
Fourth Quarter (Summer)			
NT	220	Reg. Review	6
NT	297	Coop. Work Exp.	6
			12

*CERTIFICATE PROGRAM: For those persons who do not wish to obtain an Associate Degree, a 12-month Certificate Program in Nuclear Medicine Technology is available. To be eligible for this program, the person must be registered (or eligible for registry) as an MT (ASCP), RT (ARRT), or RN, and have completed M 107 and Mill or the equivalent. Upon successful completion of the 12-month training program, these persons will be eligible for certification and registration as Nuclear Medicine Technicians by the American Registry of Radiologic Technologists. Acceptance into the Certificate Program is dependent on the availability of clinical positions in the participating hospitals.

TOTAL CREDIT HOURS: 65

RADIATION THERAPY

*Certificate Program

First Quarter			Cr. Hrs.
R	202	Intro. to Rad. Therapy	4
R	203	Intro. to Applied Rad. Therapy	8
			12
Second Quarter			
R	204	Interm. Rad. Therapy	4
R	210	Rad. Bio. & Path. I	3
R	205	Interm. Applied Rad. Therapy	8
			15
Third Quarter			
R	206	Adv. Rad. Ther.	4
R	212	Rad. Bio. & Path. II	3
R	207	Adv. Applied Rad. Therapy	8
			15

Fourth Quarter

		Communications	3
R	220	Reg. Review	6
R	297	Coop. Work Exp.	6
			15

*For those persons who do not wish to obtain an Associate Degree, a 12-month Certificate Program in Radiation Therapy Technology is available. To be eligible for this program the person must must be eligible for registry as an RT (ARRT), or RN. Upon successful completion of the 12-month training program, these persons will be eligible for certification and registration as Radiation Therapy Technologists. Acceptance into the certificate program is dependent on the availability of clinical positions in the participating hospitals.

TOTAL CREDIT HOURS: 57

OPERATING ROOM TECHNOLOGY (A)

NINE-MONTH PROGRAM

			Cr. Hrs.
First Quarter			
		English Elective	3
HE	105	Nsg. Proc. & Prof. Rel.	3
HE	106	Basic Science	5
HE	100	Medical Terminology	2
ST	100	Intro. to Surg. Tech.	4
			17
Second Quarter			
HE	107	Basic Science	5
		Psychology Elective	3
ST	105	Operating Room Tech.	9
			17
Third Quarter			
HE	108	Basic Science	3
ST	110	Applied Surgery Tech.	12
			15

EMPLOYMENT OPPORTUNITIES: The program is designed to prepare students to become direct assistants in hospital operating rooms.

TOTAL CREDIT HOURS: 49

WARD CLERK (A)

THREE-MONTH PROGRAM

A short term course to prepare the individual to assume routine clerical duties related to the provision of Health Care Services.

			Cr. Hrs.
First Quarter			
WC	100	Intro. to Unit Management	3
WC	105	The Ward Clerk and Her Job	5
HE	100	Medical Terminology	2
HE	105	Nursing Procedures and Professional Relationships	3
		English Elective	3
			16

EMPLOYMENT OPPORTUNITIES: Graduates will qualify for services in hospitals, with limited opportunities in extended-care facilities, nursing homes, and home-care agencies.

TOTAL CREDIT HOURS: 16

COURSE DESCRIPTIONS

Where course description does not indicate the campus by the key A, N, or R, we would suggest you call the campus of your choice for information.

DENTAL ASSISTING

DA 110 Orientation to Dental Assisting (N) ..... 3 credit hours
Prerequsite: Addmission to Dental Assisting Program
An orientation to dental assisting and the role of the Certified Dental Assistant in relation to other members of the dental health team. A brief history of the field, the code of ethics and legal controls are also included. (3 hours per week)

DA 112 Introduction to Dental Assisting (N) ..... 3 credit hours
Prerequisite: DA 110 (may be taken concurrently)
An introduction to basic responsibilities of the dental assistant. The prevention control program, fundamental equipment and terminology are also introduced in this course. (2 hours lecture and 2 hours laboratory per week)

DA 114 Dental Office Procedure (N) ..... 3 credit hours
Prerequisite: AC 109 Recordkeeping or Equivalent
Office practices necessary in the dental office; case history planning and records, treatment planning as related to appointment scheduling, bookkeeping and business letters. Field trips with limited experience to private offices included in curriculum. (2 hours lecture and 3 hours laboratory per week)

DA 115 Emergency Measures and Pharmacology for Dental Assistants (N) ..... 2 credit hours
Prerequisites: DA 118, DA 120
The cause and primary therapy measures of common Dental emergencies. An overview of drugs common to the practice of Dental Assisting is included. (2 hours lecture per week)

DA 118 Dental Materials (N) ..... 3 credit hours
Prerequisite: DA 112
Chemical properties and uses of dental materials and solutions. Manipulative techniques, dental pharmacology and anesthesia are included in this course. (2 hours lecture and 3 hours laboratory per week)

DA 120 Dental Sciences (N) ..... 4 credit hours
Prerequisites: B 100, DA 112 or B 123 (may be taken concurrently)
This course covers oral anatomy and physiology, microscopic anatomy, pathology and bacteriology, physiology of eating and breathing, oral structures and terminology. (3 hours lecture per week)

DA 130 Odontology (N) ..... 3 credit hours
Prerequisite: DA 112 or experience in a dental office (For basic students-concurrent enrollment in DA 120)
A course in descriptive of anatomy of teeth, i.e., the external form and relationships of teeth. Laboratory experience in the preparation of a three dimensional record of each tooth is included. This course prepares the student for the expanded duty course area of packing and carving

of amalgam and composite restorations. (2 hours lecture - 3 hours laboratory per week)

DA 200 Dental Operatory Procedures (N) ..... 5 credit hours
Prerequisite: DA 112

This course is a study of the names and uses of dental instruments, proper chairside assistance and operation of equipment, bacteriology and sterilization. (3 hours lecture and 6 hours laboratory per week)

DA 205 Dental Roentgenology (N) . 3 credit hours
Prerequisite: DA 120

Principles, practices, and precautions in the operation of dental X-ray units are studied. (2 hours lecture and 3 hours laboratory per week)

DA 212 Introductory Clinical Experience (N) ..... 2 credit hours
Prerequisite: DA 200
(may be taken concurrently)

Field trips combined with supervised clinical experience in clinics, hospitals, and selected private offices. (1 hour lecture and 3 hours laboratory per week)

DA 220 Advanced Dental Operatory Procedures I (N) ..... 8 credit hours

DA 222 Advanced Dental Operatory Procedures II (N) ..... 8 credit hours

DA 240 Advanced Clinical Experience I (N) ..... 8 credit hours

DA 242 Advanced Clinical Experience II (N) ..... 8 credit hours
Prerequisite: First 4 quarters of Dental Assisting Program

Students are placed in dental offices and clinics to acquire the applied knowledge and skills essential for employment as a dental assistant. Instruction in the expanded functions of the dental assistant and clinical conferences are also included in these courses. (3 hours lecture, 36 hours clinical experience per week)

HEALTH EDUCATION

HE 090 Overview of Health Occupations ..... 1 credit hour

This course is designed for the student who is interested in a health occupations program. It includes information about scheduling, program planning, the structure of the curriculum, study methods, and test taking procedures, and the health field. It offers the student an opportunity to "belong" to the Division, to communicate with health occupations faculty and to identify his needs for remedial study before beginning the chosen program. (2-3 hours per week)

HE 100 Medical Terminology (A, N, R) ..... 2 credit hours

A study designed to acquaint the student with the origin and structure of medical terms. The intent of this course is to help the student interpret and understand medical terms, reports and therapy requests to his field. (2 hours per week)

HE 105 Nursing Procedures & Professional Relationships (A, N) ..... 3 credit hours

Nursing measures common to the health occupations. Roles of members of health professions, principles of ethics and professional relationships and simple nursing techniques needed for care, evaluation of the patient and treatment recording are included. Measures for common hospital emergencies are included. (3 hours per week)

HE 106 Basic Science (A, N) ..... 5 credit hours

This course provides an opportunity to acquire knowledge of selected and fundamental principles in the fields of Chemistry, Physics, and Microbiology. The Chemistry and Physics module will consist of selected principles and their application to health fields. A module in Medical Microbiology deals with methods of identification and control of those organisms which are responsible for infectious disease. Emphasis is placed on individual and community role in prevention and control. (4 hours lecture, 2 hours laboratory per week)

HE 107 Basic Science (A, N) ..... 5 credit hours

A study of the structure and function of the human body. The course consists of 2 modules which deal with the erect and moving body and body metabolism. The main focus is on principles of anatomy and physiology which are used as a base for practice in health occupations. (4 hours lecture, 2 hours laboratory per week)

HE 108 Basic Science (A, N) ..... 3 credit hours

A study of the major classes of drugs used as therapeutic agents and their effect on the human body. Emphasis is placed on anticipated effects of a drug, and appropriate response if anticipated effects do not appear. (3 hours per week)

HE 109 Drugs and Solutions (N) ... 3 credit hours
Prerequisite: Math Pre-Test — Mini-Math Review Course

This course provides an opportunity for study of various systems of weights and measures as applied to the administration of drugs and solutions within the health care system. Included are conversions from one system to another, practice solving typical problems of drug administration, basic principles of preparation and administration. (3 hours per week)

HE 110 Drugs & Drug Administration (A, N) ..... 3 credit hours
Prerequisite: HE 100, B 123, or instructor's permission (may be taken concurrently)

A beginning course in drugs and drug administration designed to provide opportunities to become familiar with drugs, drug administration, therapeutics, and toxic effects of drugs. (5 hours lecture and laboratory per week)

HE 205 A Survey of Medical and Surgical Diseases (N) ..... 3 credit hours
Prerequisites: HE 100 and B 123 and B 124

The basic cause of diseases, changes that occur in disease and trauma and related diagnostic and therapeutic measures. Discussion, case examples will be related in the student's particular occupational interest. (3 hours per week)

HE 210 Emergency Measures (N) .. 2 credit hours
Prerequisite: HE 105 or permission of instructor

The cause and primary therapy measures of common medical emergencies. Ethics, legal implications and roles of members of the health professions in emergencies are included. (2 hours per week)

RESPIRATORY THERAPY TECHNOLOGY

IT 100 Orientation to Respiratory Technology (N) ..... 3 credit hours

An overview of the field of respiratory therapy and an introduction to basic therapy measures and equipment. (3 hours per week)

IT 106 Fundamentals of Respiratory Therapy (N) ..... 4 credit hours

Prerequisite: IT 100 and SI 136

An introduction to the principles of and procedures for aerosol, intermittent positive pressure, and oxygen therapies. The care, including sterilization and maintenance, of basic therapy equipment is emphasized. Safety principles are included. (3 hours lecture, 3 hours laboratory per week)

IT 107 Clinical Application (N) .... 3 credit hours

Prerequisite: IT 106

Clinical experience in medical, surgical, coronary care, and intensive care units of hospitals to enable the acquiring of skill in primary respiratory therapy measures. (12 hours experience per week)

IT 112 Respiratory Technology (N) ..... 4 credit hours

Prerequisites: IT 106 and SI 137

The role and responsibilities of the technician in the complete care of the patient receiving respiratory therapy. (4 hours lecture - discussion per week)

IT 125 Respiratory Pathophysiology (N) ..... 4 credit hours

Prerequisite: IT 131 and IT 106

An in-depth study of cardio pulmonary anatomy-physiology and disorders. Etiology and course of the disease are discussed. Treatment by the Respiratory Therapist is emphasized. (4 hours per week)

IT 131 Cardio-Pulmonary Physiology (N) ..... 3 credit hours

Prerequisite: IT 100 and SI 136

An in-depth study of the structure and function of the cardiac and respiratory systems as this knowledge relates to respiratory technology. (3 hours per week)

IT 132 Introduction to Pulmonary Function (N) ..... 3 credit hours

Prerequisite: SI 136, 137 and IT 106

An orientation to the basic pulmonary function studies utilized in respiratory technology. The use of these studies by the technician is emphasized. (3 hours per week)

IT 140 Therapy Conference (N) ... 2 credit hours

Prerequisite: Concurrent enrollment in IT 297

Small group conference discussions of clinical learning experiences. These discussions will involve various members of the health care team. (2 hours per week)

IT 202 Pediatric Respiratory Therapy (N) ..... 3 credit hours

Prerequisites: IT 106, IT 206

This course emphasizes Inhalation Therapy as applied to children (e.g., IPPB, U. S. and aerosol therapy). Applied anatomy and physiology with emphasis on the pediatric cardio-pulmonary system. (3 hours lecture per week)

IT 206 Prolonged Artificial Ventilation (N) ..... 4 credit hours

Prerequisite: IT 297

This course is a detailed study of setting up and maintaining a patient on a continuous ventilator. Emphasis is placed on all types of ventilators (e.g., MA-1, Bird, Ohio 560). The student will be able to maintain and troubleshoot this equipment. (4 hours lecture)

IT 208 Advanced Pulmonary Function (N) ..... 4 credit hours

Prerequisite: IT 125, IT 132, IT 206

An in-depth study of pulmonary function evaluation measures. The course will include the opportunity to develop the primary skills related to performance of function studies.

IT 210 Department Management (N) ..... 3 credit hours

This course includes an introduction to departmental administration. Attention is directed to the organization and operation of an Inhalation Therapy department. The administrative problems, factors influencing a solution, and methods of solution are emphasized. (2 hours per week)

IT 220 Therapy Seminar (N) ..... 3 credit hours

Seminar discussion on new advances in Inhalation Therapy. The students will present papers for discussion in this class. This class will be used to integrate all previous course work in Inhalation Therapy. (3 hours per week)

IT 230 Applied Technology I (N) ..... 6 credit hours

Prerequisite: IT 206, 297 or concurrent enrollment in IT 206

Clinical experience to develop the more complex skills of respiratory therapy. Experience in a variety of hospital units will be included.

IT 231 Applied Technology II (N) ..... 6 credit hours

Prerequisite: IT 297, IT 230

A continuation of IT 230 (applied Technology I). The more advanced and specialized techniques such as those relating to pulmonary function studies, care of the unconscious or anesthetized patient are included.

IT 232 Applied Principles of Supervision and Management (N) ..... 4 credit hours

Prerequisite: Applied Technology I, II, Department Management

A short-term clinical experience including essentials of tasks related to supervisory employment categories in a Respiratory Therapy department (4 weeks — 40 hours per week)

MEDICAL INSURANCE CLERK

MO 100 Introduction to Medical Office Procedures (A) ..... 3 credit hours

Introductory course in the duties of the Medical Insurance Clerk. Includes fundamental instruction toward the training and development of proper medical office routine and the technical aspects of daily medical office procedure. (2 hours lecture and 2 hours laboratory per week.

MO 104 Basic Medical Insurance Concepts (A) ..... 3 credit hours

Basic concepts of medical insurance claims and forms. Includes basic information on types of health and hospitalization insurance and methods of filing claims. (3 hours per week)

MO 110 Introduction to Health Insurance (A) ..... 3 credit hours

The nature and function of health insurance in today's society with particular emphasis on types of policies and their provisions will be taught. This course will include the basic principles of State Compensation, Third Party Liability, Medicare, Medicaid and the private insurance carrier. (3 hours per week)

MO 120 Medical Ethics (A) ..... 1 credit hour

This course will prepare the student with knowledge of the fundamentals of medical licensure, registration, statutory reports, the patient-doctor contract and privileges, patient consent and other medical records as well as all other aspects of professional ethics including the concept of confidentiality. (1 hour per week)

MO 130 Medical Filing Procedures (A) ..... 3 credit hours

The primary objective of this course is to acquaint the student with basic filing techniques. Proper procedures in filing medical insurance and statistical data and the method of maintaining follow-up records will be taught. This course will also include various methods of obtaining, preserving and using this data. (3 hours per week)

MO 150 Insurance Information Methods (A) ..... 6 credit hours

This course will cover in detail an analysis of all health insurance functions especially applicable to the Medical Insurance Clerk. The Practical application of the initiation of insurance claims to the proper agencies utilizing actual claim forms will be emphasized. (4 hours lecture, 4 hours laboratory per week)

MO 170 Health Insurance Claim Reporting (A) ..... 6 credit hours

All phases of claim reporting will be discussed in this class. The methods by which information is obtained from hospitals, insurance companies and the patient will be studied. The financial responsibility of both the patient and the physician will be examined. (4 hours lecture, 4 hours lab per week)

MO 181 Life Science for Health Clerical Workers. ..... 3 quarter credits

The first of 2 Basic Science courses designed to provide knowledge in the area of health and personal and community resources for its promotion, maintenance and restoration. Emphasis is placed on descriptive, normal body structure and functions.

MO 182 Life Science for Health Clerical Workers 2 quarter credits

This record course of Basic Science for Health Clerical Workers is concerned in providing knowledge needed by Clerical Workers in respect to disease and Microbiology.

NURSING

N 090 Nursing Directed Laboratory (N) ..... 3 credit hours
For 6 weeks, six hours per week, arranged according to student's needs

Selected laboratory experiences designed to meet individual student needs and to supplement required nursing courses.

N 111 Fundamentals of Nursing (N) ..... 6 credit hours

An introductory course in the fundamentals of patient care including the knowledges and skills necessary for the safe and accurate delivery of nursing care. Basic mental health concepts are introduced. Learning experiences are provided in the college classroom and laboratory, and in clinical facilities in the community. (3 lecture and 12 laboratory-clinical experience per week)

N 112 Maternal and Child Care (N) ..... 7 credit hours
Prerequisite: Science II or equivalent, Fundamentals of Nursing, Nutrition

This course focuses on the role of the nurse in meeting the individual needs of the mother and the newborn infant and the child from infancy through adolescence in health and illness. Relevant mental health concepts are integrated. Practical application will occur in hospitals, clinics and doctor's offices. (3 hours lecture and 16 hours laboratory-clinical experience per week)

N 113 Medical Surgical Nursing (N) ..... 10 credit hours
Prerequisite: Science II, Pharmacology, Maternal and Child Care

A basic course designed to prepare the nurse to assume an appropriate role in meeting the needs of patients with medical and/or surgical conditions. The application of knowledge from Pharmacology and Nutrition, as well as continued integration of mental health concepts, is emphasized. Experience in the care of patients with Medical and Surgical conditions is included. (5 hours lecture and 20 hours laboratory-clinical experience per week)

N 120 Title: Concentrated Nursing Skills ..... 3-9 credit hours
Prerequisite: Instructor's permission

This is a laboratory course of concentrated nursing skill development designed to follow the first year of nursing. Students may request this course for reinforcement of clinical practice and to gain confidence in the clinical area. The number of hours will be scheduled each quarter with two, three-hour laboratory times and one post clinical conference per day. The variable credit will allow the student to take as many sessions per week as needed. (1-3 hours lecture, 6-18 hours laboratory per week)

N 201 Emotional Care of the Child and Young Adult (N) ..... 3 credit hours
Prerequisite: Concurrent enrollment in Care of the Child and Young Adult

Nursing responsibilities based on the needs of the child and young adult. Principles of growth and development (developmental tasks) are included. (2 hours lecture and 3 hours clinical experience per week)

N 202 Team Leading and Group Process (N) ..... 3 credit hours
Prerequisite: Concurrent enrollment in Care of the Mature Adult

A study of developmental tasks of the mature adult relevant to nursing. The course is primarily concerned with group relationships and principles of team leadership in nursing. (2 hours lecture and 3 hours clinical experience per week)

N 203 Emotional Care of the Older Adult (N) ..... 2 credit hours
Prerequisite: Concurrent enrollment in Care of the Older Adult

Nursing measure related to the tasks of the older adult. Social factors as they affect nursing responsibilities are included (1 hour lecture and 3 hours clinical experience per week)

N 205 Socialization Process and the Nurse I ..... 1 credit hour

N 206 Socialization Process and the Nurse II ..... 1 credit hour

N 207 Socialization Process and the Nurse III ..... 1 credit hour

A seminar discussion course to assist the student to assume the responsibilities of a registered nurse. The course is taught in conjunction with the clinical nursing presented that quarter and is designed to meet the socialization needs of the student at that level. (1 hour discussion each week.

N 211 Care of the Child and Young Adult (N) ..... 5 credit hours
Prerequisite: Maternal and Child Care, Pharmacology

A comprehensive study of the needs in health and illness, of the child and young adult and the nursing actions related to these needs. Increased skill in maternal and infant care is included. (2 hours lecture and 9 hours laboratory-clinical experience per week)

N 212 Care of the Mature Adult (N) ..... 6 credit hours
Prerequisite: Maternal and Child Care, Pharmacology

A more advanced nursing course primarily concerned with nursing intervention related to medical-surgical conditions common to the mature adult. (3 hours lecture and 9 hours laboratory-clinical experience per week)

N 213 Care of the Older Adult (N) ..... 6 credit hours
Prerequisite: Medical-Surgical Nursing, Pharmacology

A course dealing with the social and health maintenance needs of the older adult. (3 hours lecture and 9 hours laboratory-clinical experience per week)

N 220 Review of Nursing Principles (N) ..... 3 credit hours
Prerequisite: Instructor's permission

Review and synthesis of nursing theory preparing the student for job readiness.

N 230 Registered Nurse Refresher Course (R) ..... 8 credit hours

Classroom instruction includes nursing knowledge and skills basic to most all areas of nursing practice: current trends in health care, common health problems and rehabilitation, new equipment, medication therapy, fluid and electrolytes, intravenous therapy, cardiopulmonary resuscitation, legal aspects and team nursing. Individualized learning material applicable to selected areas of clinical practice will be available. (40-50 hours classroom instruction and 70-80 hours clinical experience for 6 weeks)

N 250 Pharmacodynamics (R) .... 3 credit hours

Study of biochemical and physiologic effects of drugs and their mechanism of action with emphasis on nursing implications.

N 251 Applied Physiology (R) (for Nurses) ..... 3 credit hours

Study of normal physiology related to pathologic physiology — an integrated approach to human disease with emphasis on nursing implications.

NURSE ASSISTING

NA 110 Basic Personal Care (A,N,R) ..... 8 credit hours

Nursing measures common to all patients with emphasis on the total nursing needs of the individual according to the type of needs: physical, cultural, social, emotional, and spiritual. Instruction in the nursing skills and opportunities for supervised practice in Laboratory sessions, hospitals, extended care facilities and nursing homes, are included. (2 hours lecture, 8 hours laboratory-clinical experience per week)

NA 120 Patient Care Measures (A,N,R) ..... 8 credit hours

Includes the discussion of common conditions and diseases, with introduction of specific procedures relating to the condition or disease. Measures for common medical emergencies are included. (2 hours lecture, 6 hours laboratory- clinical experience per week)

NUCLEAR MEDICINE TECHNOLOGY

NT 200 Introduction to Nuclear Physics Statistics ..... 3 credit hours
Prerequisite: Hospital placement for Nuclear Technology Experience

A course dealing with the specific application of selected principles of physics and statistics to the field of Nuclear Medicine Technology. (2 hours lecture, 3 hours laboratory per week)

NT 202 Introductory Nuclear Technology (N) ..... 4 credit hours
Prerequisite: Admission to the Nuclear Medicine Technology Program

Radiation Units, properties of nuclides, identification and calibration of nuclides, detectors and instrumentation, counting procedures, scintillation spectrometry. (2 hours lecture and 3 hours laboratory per week)

NT 203 Introduction to Applied Nuclear Technology (N) .... 8 credit hours
Prerequisite: NT 202 (may be taken concurrently)

A laboratory course to introduce the student to the nuclear medicine clerical setting. The opportunity to perform simple routine examinations, under the direct supervision of a Registered Technologist, is included. (24 hours a week in an affiliated hospital)

NT 204 Intermediate Nuclear Medicine Technology (N) .. 4 credit hours
Prerequisite: NT 202

Oran scanning (manual and computerized), physiology of the thyroid gland, clinical studies utilizing radioisotope techniques, hematology studies. (2 hours lecture and 3 hours laboratory per week)

NT 205 Intermediate Applied Nuclear Medicine Techniques (N) .. 8 credit hours
Prerequisite: NT 203; NT 204 must be taken concurrently

A continuation of the development of skills from NT 203. The student will begin performing the more complex examinations under the supervision of a Registered Technologist (24 hours per week in an affiliated hospital)

NT 206 Advanced Nuclear Technology (N) ..... 4 credit hours
Prerequisite: NT 204

Ionizing radiations, Geiger-Mueller counters, scalers and count-rate meters, standardization and calibration of instruments, autoradiography, liquid scintillation studies and special topics. (2 hours lecture and 3 hours laboratory per week)

NT 207 Advanced Nuclear Medicine Techniques Applied (N) .... 8 credit hours
Prerequisite: NT 205; NT 206 must be taken concurrently

A clinical laboratory course in which students gain a depth of skill in basic techniques and more advanced clinical techniques. (24 hours per week in affiliated hospitals)

NT 215 Chemistry of Nuclear Medicine (N) ..... 3 credit hours
Prerequisites: Chem 101 or equivalent, Math 105 or equivalent

Radionuclide generators, dilution analysis, sterility and pyrogenicity tests, radiochemical and radioisotopic purity, labeling procedures, regulations, equipment and nuclide suppliers. (2 hours lecture and 4 hours laboratory per week)

NT 220 Registry Review (N) ..... 6 credit hours
Prerequisites: NT 206, NT 215

A review of essential methodology and clinical work in preparation for the registry examination. (3 hours lecture and 9 hours lab or independent study)

OPTOMETRIC ASSISTING

OA 100 Introduction to Optometric Assisting (N) ..... 4 credit hours

An introduction to visual health and therapy measures and the role and responsibilities of the optometric assistant. (3 hours lecture, 3 hours laboratory per week)

OA 101 Optometric Terminology and Anatomy (N) ..... 3 credit hours

A study of the eye and surrounding structure as they relate to visual function and health. A fundamental orientation to optometric terminology is included. (3 hours per week)

OA 102 Optometric Office Procedures (N) ..... 4 credit hours
Prerequisite: OA 100

A general orientation to the technical tasks performed in the optometric office. Laboratory practice includes experience in keeping basic records, care of equipment, examination assistance, and contact lens dispensing. (3 hours lecture, 3 hours laboratory per week) (clinical procedure)

OA 103 Optometic Laboratory Procedures (N) ..... 4 credit hours

A fundamental orientation to metrology, optical measurements, measuring equipment and fundamentals basic to vision corrective measures. (3 hours lecture, 3 hours laboratory per week)

OA 104 Frame Selection — Adjustment (N) ..... 2 credit hours

A detailed study of the fundamental principles of frame selection, styling and adjustment and the technical skills required by the assistant. (2 hours per week)

OA 105 Optometric Clinical Procedures (N) ..... 3 credit hours
Prerequisites: OA 101, 103

A continuation of OA 103 with emphasis on the more complex tasks of the assistant (visual training — visual skills). (2 hours lecture, 3 hours laboratory per week)

OA 106 Optometric Clinical Experience (N) ..... 6 credit hours
Prerequisites: OA 102, 105

Through placement in an office or clinic, this course provides the opportunity for each student to perform tasks common to this field under the supervision of an optometrist or experienced assistant. (24 hours per week)

OA 110 Occupational Seminar (N) ..... 3 credit hours

An orientation to specialty areas of Optometric Assisting; reinforcement and clarification of clinical learning experiences. (3 hours per week)

RADIATION THERAPY TECHNOLOGY

R 202 Introduction to Radiation Therapy (N) ..... 4 credit hours
Prerequisite: Admission to Radiation Therapy Technology Program

Properties of nuclides, radiation measurements, characteristics of superfiscal and medium voltage X-ray and cobalt therapy machines. (2 hours lecture and 3 hours laboratory per week)

R 203 Introduction to Applied Radiation Therapy (N) ..... 8 credit hours
Prerequisite: R 202 (may be taken concurrently)

A clinical laboratory course designed to introduce the student to the clinical therapy setting, basic equipment and therapeutic routines. The student will perform therapeutic treatments under the direct supervision of a physician or Registered Technologist. (24 hours per week in an affiliated hospital)

R 204 Intermediate Radiation Therapy (N) ..... 4 credit hours
Prerequisite: R 202

Continuation of R 202 with emphasis on calibration of x, gamma and electron beams, dose calculations in phantoms and patients, and measuring percent doses. (2 hours lecture and 3 hours laboratory per week)

R 205 Intermediate Applied Radiation Therapy (N) ..... 8 credit hours
Prerequisite: R 203; R 204 must be taken concurrently

A continuation of R 203 with increased opportunity for skill development. Treatment planning and external therapy measures are emphasized. (24 hours per week in an affiliated hospital)

R 206 Advanced Radiation Therapy (N) ..... 4 credit hours
Prerequisite: R 204

Continuation of R 204 with emphasis on treatment planning, positioning patients, radium therapy, and computer programming in radiation therapy. (2 hours lecture and 3 hours laboratory)

R 207 Advanced Applied Radiation Therapy (N) ..... 8 credit hours

An advanced clinical course offering the opportunity for adaptation of basic skills in a variety of clinical settings. Radium Therapy; interstitial and intercauitary treatment measures are emphasized. (24 hours per week in affiliated hospital)

R 210 Radiation Biology and Pathology I (N) ..... 3 credit hours

Discussion of biological and pathological effects of radiation at the chemical, cellular, organ, and whole body levels. Emphasis is placed upon the practical aspects of radiation biology with respect to radiation therapy. (3 hours per week)

R 212 Radiation Biology and Pathology II (N) ..... 3 credit hours
Prerequisite: R 210

Continuation of R 210 Radiologic considerations for therapy of specific regions of the body. (3 hours per week)

R 220 Registry Review (N) ..... 6 credit hours
Prerequisites: R 206, R 212

A review of essential methodology and clinical work in preparation for the registry examination. (3 hours lecture and 9 hours lab or independent study)

RADIOLOGIC TECHNOLOGY

RT 100 Introduction to Radiologic Technology (N) ..... 3 credit hours
Prerequisite: Acceptance into program or permission from instructor

A basic general orientation course covering the three specialties of Radiologic Technology, X-ray Technology, Nuclear Medicine and Radiation Therapy Technology. The course includes the following: Ethics and departmental relationships, history of/and future trends in Radiologic protection, introduction to prime factors or variables used in the production of radiographs and the theory of latent image formation. The laboratory hours include tours of hospitals, assignments in Radiology Departments and working experiments with the X-ray equipment and phantom in the College lab. (4 hours lecture-laboratory per week).

RT 101 Clinical Orientation (N) .... 2 credit hours
Prerequisite: Admission to Nuclear Medicine or Radiation Therapy Technology Programs

An orientation to the broad field of Radiology and the physical facilities common to the practice of Radiologic Technology. Departmental regulations and an opportunity for career exploration in the radiologic specialities are included. (40 hours per week for 2 weeks)

RT 104 Radiographic Technique (N) ..... 3 credit hours
Concurrently with RT 112 and XT 112

More advanced principles of radiographic exposure including specialized techniques and equipment. (4 hours lecture/lab per week)

RT 108 Introduction to Radiographic Positioning (N) ..... 2 credit hours
Prerequisite: RT 100

This course is specifically for Nuclear Medicine and Radiation Therapy students and includes the following: Basic Radiographic Techniques necessary for positioning, introduction to terminology and general principles of positioning, routine positioning and anatomy of the chest, abdomen, and skull. (3 hours lecture/lab per week)

RT 110 Introduction to Radiographic Positioning (N) ..... 3 credit hours
Prerequisite: concurrently with RT 100, XT 101, and SI 136

This course is specifically for diagnostic (X-ray) students and includes the following: Basic radiographic techniques necessary for positioning, introduction to terminology and general principles of positioning, routine positioning and anatomy of the chest, abdomen, upper and lower extremities. (5 hours lecture/lab per week)

RT 111 Radiographic Positioning (N) ..... 3 credit hours
Prerequisite: RT 110, SI 137, XT 111

Continuation of RT 110. Included is radiography of: the complete spine, sternum and bony thorax, gastrointestinal tract, biliary system, excretory system. Also included is a review of anatomy of these structures. (4 hours lecture/lab per week)

RT 112 Radiographic Positioning (N) ..... 3 credit hours
Prerequisite: RT 111 (Concurrently with SI 137, RT 101, XT 111)

This is a continuation of RT 111 in radiographic positioning and related anatomy. Included are routine skull positioning, anatomy, and techniques. Special positioning techniques including anatomy of the sella turcica, facial bones, nasal, zygoma, sinuses, orbits, optic foramina, eye localizations, mandible TMJ, mastids, sialograms, etc. (4 hours lecture/lab per week)

RT 200 Orientation to Technical Methodology (N) ..... 3 credit hours
Prerequisite: Admission to a Radiologic Technology Program

This course provides an orientation to the foundation knowledge essential to the development of practical skills needed in the more complex methodology courses. (3 hours per week)

RT 210 Special Positioning Tech (N) ..... 3 credit hours
Prerequisite: RT 112, XT 113

Continuation of RT 112 which includes portable and operating room procedures, special procedures, nuclear medicine techniques and radiation therapy. (4 hours lecture/lab per week)

RT 211 Special Procedures and Techniques (N) ..... 3 credit hours
Prerequisite: RT 210 (Concurrently with XT 211)

A continuation of RT 210 with a study of pediatric radiography, special radiographic procedures, such as tomography, stereoscopy, pelvimetry, mammography, dental and oral radiography, equipment maintenance, nonroutine positioning, departmental administration. (4 hours per week lecture/lab)

RT 213 Registry Review (N) ..... 3 credit hours
Prerequisite: XT 212 Concurrently with XT 213

Total review of all courses and clinical work in X-ray technology in preparation for registry examination given by the American Registry of Radiologic Technologists in cooperation with the Council on Medical Education of the American Medical Association. (3 hours lecture per week for 6 weeks)

PRACTICAL NURSING

VN 100 Personal Care of Patients (A) ..... 6 credit hours

This course is designed to introduce the student to basic principles and practices that relate to the health care of individuals. Practical application of principles will take place in an environment essential for meeting the health needs of these individuals. (3 hours lecture and 12 hours laboratory-clinical experience per week)

VN 102 Nutrition (A) ..... 2 credit hours

This course is designed to orient the student to normal nutritional needs of individuals throughout the developmental phases of life. Therapeutic modifications of the normal diet will be included. (2 hours per week)

VN 110 Maternal and Child Care (A) ..... 7 credit hours
Prerequisites: VN 100, VN 102, HE 107 or equivalent

This course focuses on the assisting role of the practical nurse in meeting the individual needs of the mother and the newborn, and the child from infancy through adolescence in both wellness and illness. Practical application will occur in institutions, clinics, and doctor's offices. (3 hours lecture and 16 clinical experiences per week)

VN 120 Medical-Surgical Nursing (assisting role of the LPN) (A) ..... 10 credit hours
Prerequisites: VN 110, HE 106 & 107 or equivalent

This course is designed to prepare the practical nurse to identify, discuss, assume an appropriate role in meeting the needs of patients with medical and/or surgical conditions. Pharmacology, applied nutrition, and mental health concepts are integrated. Practical application of these principles will take place in an institution designated for the care of patients with medical and surgical problems. (5 hours lecture and 20 hours clinical experience per week)

VN 122 Personal and Vocational Relationships (A) ..... 1 credit hour

This course is designed to explore the changing general trends in nursing with emphasis on the specific legal and ethical implications for the practical nurse. It is intended to assist the practical nurse in identifying her role with other members of the health team.

WARD CLERK

WC 100 Introduction to Unit Management (A) ..... 3 credit hours

A comprehensive course in individual, group and departmental relations, stressing communication. Ordering, inventory of basic supplies, environmental regulation, interdepartmental relationships are included. (3 hours per week)

WC 105 The Ward Clerk and Her Job (A) ..... 5 credit hours

Discussion and supervised experience in the specific ward clerk function. (2 hours lecture and 12 hours laboratory-clinical experience per week)

GENERAL DIAGNOSTIC (X-RAY)

XT 101 Clinical Orientation (N) ..... 2 credit hours
Prerequisite: Admission to Radiologic Technology program. (Concurrently with RT 100, RT 110, SI 136)

Introduction to clinical laboratory experience which will enable student to begin practicing radiographic principles and positioning on patients under the direct supervision of registered technologists in an affiliated hospital supervised by Board Certified Radiologists. (8 hours per week in affiliated hospital)

XT 111 Clinical Experience I (N) ..... 2 credit hours
Prerequsite: XT 101 (Concurrently with SI 137, HE 105 or P 105, RT 101, RT 111)

A continuation of XT 101 in which student will gain experience and develop skills in perfomring radiographic examinations under the direct supervision of registered technologists. (8 hours per week in affiliated hospital)

XT 112 Clinical Experience II (N) ..... 4 credit hours
Prerequisite: XT 111 (Concurrently with RT 102, RT 112)

A continuation of XT 111 wherein skills are developed in radiographic and fluoroscopic procedures with supervision by radiologic technologists. (16 hours per week in affiliated hospital)

XT 113 Clinical Experience III (N) ..... 3 credit hours
Prerequisite: XT 112 (Concurrently with HE 205)

Continuation of laboratory course in which student gains experience in advanced techniques and positioning. Included are 2 hours a week of film critique given at the affiliated hospital. (24 hours per week in affiliated hospital)

XT 210 Clinical Experience IV (N) ..... 5-9 credit hours
Prerequisite: XT 113 (Concurrently with RT 210)

A continuation of Clinical laboratory course in which student gains experience in special procedures and specialized equipment. Included are 2 hours per week of film critique given at the affiliated hospital (36 hours per week in affiliated hospital)

XT 211 Clinical Experience V (N) ..... 5-9 credit hours
Prerequisite: XT 210 (Concurrently with RT 211)

A clinical laboratory course in which students gain additional, more advanced experience in clinical techniques.

Included are 2 hours a week of film critique given at the affiliated hospital. (36 hours per week in affiliated hospital)

XT 212 Clinical Experience VI (N) ..... 5-12 credit hours

Prerequisite: XT 211, RT 211

A continuation of more advanced procedures in clinical radiography. (40 hours per week in affiliated hospital)

XT 213 Clinical Experience VII (N) ..... 5-9 credit hours

Prerequisite: XT 211 (Concurrently with RT 212)

The final quarter of clinical experience. Under the supervision of registered technologist, the student will have the opportunity to perform duties typical of a staff radiologic technologist. (36-40 hours per week in affiliated hospital)

Students will gain practical experience by working in the Radiology Deaprtment of the affiliated hospitals under the direct supervision of a Registered Technologist. The second year of this work experience will consist of 12 months of continuous experience in the hospital. (52 weeks with 2 weeks vacation.) Film critique and conferences will be conducted approximately two hours a week in the hospital during this experience.

COOPERATIVE WORK EXPERIENCE

297 Cooperative Work Experience (A,N,R) ..... 0-6 credit hours

In some program areas, cooperative work experience is a part of the course of study. The student is placed at a work station, in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved, with a College instructor providing general coordination. Prerequisites for enrollment to Cooperative Work Experience are permission of the instructor and approval of the Division Director.

INDEPENDENT STUDY

299 Independent Study (A,N,R) ..... 3 credit hours

Prerequisite: Enrollment in a health program leading to an Associate Degree and permission from the Division Director This course provides opportunities for the student to investigate an area of special interest or to further develop knowledge gained through prior experiences in the field, under the super vision of a qualified faculty member.

Community College of Denver

CD

uraria Campus
lorth Campus
ed Rocks Campus

Division of Industrial Occupations

DIVISION OF INDUSTRIAL OCCUPATIONS

Airframe Power Plant	A
Appliance and Refrigeration Mechanics	A
Architectural Drafting	N
Architectural Technology	N
Automotive Mechanics	A,N,R
Auto Body Service	N
Biomedical Equipment Technology	A
Bricklaying	R
Business Machine Technology	A
Carpentry	R
Civil Engineering Technology	R
Commercial Art	A
Commercial Industrial Electricity	R
Diesel Mechanics	R
Electronic Technology	A,N
Electronic Communications Option	N
Electronic Digital Technology	R
Industrial Electronics	R
Instrumentation Technology	A
Television Technology	N
Graphic Arts Technology	A
Heavy Equipment Operation Service	R
Hydraulic Mechanics	R
Fluid Power	R
Industrial-Commercial Drafting Technology	A,N,R
Machine Drafting Technology	N
Manufactured Housing Technology	R
Mechanical Drafting	A,N,R
Industrial Pipe Drafting	N
Inventory Control	A
Machine Shop	N
Mineral Industry Technology	R
Photography	A
Plumbing	R
Quality Assurance	A
Sports Crafts and Specialty Area Mechanics	N
Surveying	R
Technical Illustration	A
Vending Machine Repair	A
Welding and Fabrication	N,R

Note: Auraria Campus—A
North Campus—N
Red Rocks Campus—R

DIVISION OF INDUSTRIAL OCCUPATIONS

AIRFRAME POWER PLANT (A)

Students interested in Airframe Power Plant Program may register for these courses at Opportunity School. Upon completion of these courses at Opportunity School, an FAA certificate, and 15 credit hours (consisting of at least 3 quarter hours of English and the remainder electives), the student may receive an Associate Degree from Community College of Denver in the Airframe Power Plant field.

TWO-YEAR PROGRAM

FIRST YEAR

		Cr. Hrs.
AES 111	Airframe Mechanics I	15
AES 112	Airframe Mechanics II	15
AES 113	Airframe Mechanics III	15

SECOND YEAR

AES 211	Aircraft Powerplant Mechanics I	15
AES 212	Aircraft Powerplant Mechanics II	15
AES 213	Aircraft Powerplant Mechanics III	15

APPLIANCE AND REFRIGERATION MECHANICS (A)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
AE	100	App. & Ref. Mech.	16	200
		Math Elect.	3	30
		Elective	3	30
			22	260
Second Quarter				
AE	100	App. & Ref. Mech.	16	200
		Eng. Elect	3	30
PY	100	Hum. Rel. in Bus. & Ind.	3	30
			22	260
Third Quarter				
AE	100	App. & Ref. Mech.	16	200
		Elective	3	30
IO	297	Co-op Work Experience &	3-12	100-400
IO	299	or Tech. Proj.	1-12	10-120
			23-43	340-750

OPTIONAL COURSES:

EM	200	Refrigeration & Air Conditioning (A&B)
EM	200	Advanced Refrigeration & Air Conditioning (A&B)
EM	200	Adv. Ref. Air Conditioning & Heating

TOTAL CREDIT HOURS: 67-87

EMPLOYMENT OPPORTUNITIES: Installing and repairing appliances, refrigeration and air conditioning equipment. Students are qualified (when successfully completing the course) to enter service departments of appliance sales and service firms or to be self-employed.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math & Science, Communications & Arts, and Social Sciences. Other courses may be substituted in these areas as recommended by the advisor or instructor.

ARCHITECTURAL DRAFTING (N)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
AT	100	Arch. Drafting	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math I	3	30
M	140	Slide Rule & Calculator	1	10
			23	270
Second Quarter				
AT	100	Arch. Drafting	16	200
EG	107	Occ. Comm.	3	30
M	103	App. Math II	3	30
			22	260
Third Quarter				
AT	100	Arch. Drafting	16	200
EG	108	Occ. Comm.	3	30
M	104	App. Math III	3	30
	or			
IO	297	Co-op Wk. Exp.	3-12	100-400
			22-31	260-600

EMPLOYMENT OPPORTUNITIES: The architectural draftsman will be prepared to accept employment in a number of professional areas: Architectural offices; structural design or detailing offices; fixture layout companies or in other drafting offices requiring the services of a draftsman familiar with architectural practices.

TOTAL CREDIT HOURS: 67-73

TOTAL CONTACT HOURS: 790-1130

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

ARCHITECTURAL DRAFTING (N)

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
AT	100	Arch. Draft.	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math I	3	30
M	140	Slide Rule & Calculator	1	10
			23	270
Second Quarter				
AT	100	Arch. Draft.	16	200
EG	107	Occ. Comm.	3	30
M	103	App. Math II	3	30
			22	260

Third Quarter				
AT	100	Arch. Draft.	16	200
EG	108	Occ. Comm.	3	30
M	104	App. Math III	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			22-31	260-600

SECOND YEAR

Fourth Quarter			Cr. Hrs.	Ct. Hrs.
AT	200	Arch. Design	16	200
IO	297	Co-op Wk. Exp.	6	200
		(See Note)	22	400
Fifth Quarter				
AT	200	Arch. Design	16	200
IO	297	Co-op Wk. Exp.	6	200
			22	400
Sixth Quarter				
AT	200	Arch. Design	16	200

NOTE: IO 297 Co-operative Work Experience requires a total of 12 credit hours which may be taken at any time and in any sequence during the two-year program.

Structures I and II (CT 224-5 and CT 225-5) for a total of 10 credit hours may be taken in lieu of IO 297.

EMPLOYMENT OPPORTUNITIES: The graduate of the Architectural Technology Program is prepared to enter the employment field as an architectural draftsman working with architects or structural engineers or as draftsman or junior engineers, preparing working drawings for the building construction industry.

TOTAL CREDIT HOURS: 127

TOTAL CONTACT HOURS: 1790

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

AUTOMOTIVE MECHANICS (A*,N,R)

NINE-MONTH PROGRAM

First Quarter			Cr. Hrs.	Ct. Hrs.
AM	100	Basic Automotive Mechanics	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math	3	30
			22	260
Second Quarter				
AM	100	Basic Automotive Mechanics	16	200
EG	107	Occ. Comm	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
AM	100	Basic Automotive Mechanics	16	200
EC	107	Cons. Econ.	3	30
PY	107	Psy. of Per. Development	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			22-28	260-600

EMPLOYMENT OPPORTUNITIES: Entry level mechanic in a service station or garage.

TOTAL CREDIT HOURS: 66-72

TOTAL CONTACT HOURS: 780-1120

*Note: The Auraria Campus Automotive Program specializes in foreign cars.

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

AUTOMOTIVE MECHANICS (A*,N,R)

FIRST YEAR

First Quarter			Cr. Hrs.	Ct. Hrs.
AM	100	Basic Automotive Mechanics	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math	3	30
			22	260
Second Quarter				
AM	100	Basic Automotive Mechanics	16	200
EG	107	Occ. Comm.	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
AM	100	Basic Automotive Mechanics	16	200
EC	107	Cons. Econ.	3	30
PY	107	Psy. of Per. Development	3	30
			22	260

SECOND YEAR

Fourth Quarter				
AM	200	Advanced Automotive Repair	16	200
		Elective	3	30
			19	230
Fifth Quarter				
AM	200	Advanced Automotive Repair	16	200
		Elective	3	30
			19	230
Sixth Quarter				
AM	200	Advanced Automotive Repair	16	200
		Elective	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			19-28	230-600

EMPLOYMENT OPPORTUNITIES: Entry into automotive service field as a line mechanic in a garage or service station. Employment in specialty shops rebuilding engines, transmissions, or charging systems. Opportunities in automotive parts, sales or as manufacturer's representative. A foundation for the potential service manager or garage foreman.

TOTAL CREDIT HOURS: 123-132

TOTAL CONTACT HOURS: 1470-1840

*Note: The Auraria Campus Automotive Program specializes in foreign cars.

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

AUTO BODY SERVICE (N)

(AUTO BODY REPAIR & REFINISHING OPTION)
NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
AB	100	Basic Auto Body Repair & Refinishing	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math	3	30
			22	260
Second Quarter				
AB	100	Basic Auto Body Repair & Refinishing	16	200
EG	107	Occ. Comm.	3	30
EC	108	Labor Relations	3	30
			22	260
Third Quarter				
AB	100	Basic Auto Body Repair & Refinishing	16	200
EC	107	Cons. Ec.	3	30
PY	100	Hum. Rel. in Bus. & Ind.	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			22-28	260-600

EMPLOYMENT OPPORTUNITIES: Body repairman or helper, painter or painter's helper in automobile dealership, independent body shop, or automotive maintenance dept. of business or industry.

TOTAL CREDIT HOURS: 66-72

TOTAL CONTACT HOURS: 780-1120

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

AUTO BODY SERVICE (N)

(AUTO BODY REPAIR OPTION)
NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
AB	100	Basic Auto Body Repair	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math.	3	30
			22	260
Second Quarter				
AB	100	Basic Auto Body Repair	16	200
EG	107	Occ. Comm.	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
AB	100	Basic Auto Body Repair	16	200
EC	107	Cons. Ec.	3	30
PY	100	Hum. Rel. in Bus. & Ind.	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			22-28	260-600

EMPLOYMENT OPPORTUNITIES: Body repairman or helper in automobile dealership, independent body shop or automotive maintenance department of business or industry.

TOTAL CREDIT HOURS: 66-72

TOTAL CONTACT HOURS: 780-1120

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

AUTO BODY SERVICE (N)

(AUTO BODY REFINISHING OPTION)
NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
AB	100	Basic Auto Body Refinishing	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math.	3	30
			22	260
Second Quarter				
AB	100	Basic Auto Body Refinishing	16	200
EG	107	Occ. Comm.	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
AB	100	Basic Auto Body Refinishing	16	200
EC	107	Cons. Ec.	3	30
PY	100	Hum. Rel. in Bus. & Ind.	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			22-28	260-600

EMPLOYMENT OPPORTUNITIES: Entry into automotive field as a painter or painter's helper in dealership or independent body shop. Also in industry, aircraft, and appliance refinishing.

TOTAL CREDIT HOURS: 66-72

TOTAL CONTACT HOURS: 780-1120

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

AUTO BODY SERVICE (N)

(AUTO BODY REPAIR OPTION)

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
AB	100	Basic Auto Body Repair	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math	3	30
			22	260
Second Quarter				
AB	100	Basic Auto Body Repair	16	200
EG	107	Occ. Comm.	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
AB	100	Basic Auto Body Repair	16	200
EC	107	Cons. Ec.	3	30
PY	100	Hum. Rel. in Bus. & Ind.	3	30
			22	260

SECOND YEAR

Fourth Quarter				
AB	200	Major Auto Body Repair	16	200
		Elective	3	30
			19	230

Fifth Quarter				
AB	200	Major Auto Body Repair	16	200
		Elective	3	30
			19	230
Sixth Quarter				
AB	200	Major Auto Body Repair	16	200
		Elective	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			19-28	230-600

TOTAL CREDIT HOURS: 123-132

TOTAL CONTACT HOURS: 1470-1840

EMPLOYMENT OPPORTUNITIES: Auto Body Repairman in an automotive dealership, independent body shop or maintenance department of business or industry; or may be employed as insurance adjuster trainee, order writer in a dealership, salesman in automotive supply house.

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

AUTO BODY SERVICE (N)

(AUTO BODY REPAIR & REFINISHING OPTION)

FIRST YEAR

First Quarter			Cr. Hrs.	Ct. Hrs.
AB	100	Basic Auto Body Repair & Refinishing	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math	3	30
			22	260
Second Quarter				
AB	100	Basic Auto Body Repair & Refinishing	16	200
EG	107	Occ. Comm.	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
AB	100	Basic Auto Body Repair & Refinishing	16	200
EC	107	Cons. Ec.	3	30
PY	100	Hum. Rel. in Bus. & Ind.	3	30
			22	260

SECOND YEAR

Fourth Quarter				
AB	100	Major Auto Body Repair & Refinishing	16	200
		Elective	3	30
			19	230
Fifth Quarter				
AB	200	Major Auto Body Repair & Refinishing	16	200
		Elective	3	30
			19	230
Sixth Quarter				
AB	200	Major Auto Body Repair & Refinishing	16	200
		Elective	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			19-28	230-600

TOTAL CREDIT HOURS: 123-132

TOTAL CONTACT HOURS: 1470-1840

EMPLOYMENT OPPORTUNITIES: Auto Body repairman and/or painter in an automotive dealership, independent body shop or maintenance department of business and industry; or may be employed as insurance adjuster trainee, order writer in a dealership, salesman in automotive supply house.

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

BIOMEDICAL EQUIPMENT TECHNOLOGY (A)

TWO-YEAR PROGRAM

FIRST YEAR

First Quarter			Cr. Hrs.	Ct. Hrs.
		Rec. Math Elective	3-5	30-50
PY	106	107 Psychology	3	30
ET	101	DC & AC Theory	12	150
HE	107	Basic Science	5	50
			23-25	260-280
Second Quarter				
		Rec. Math Elective	3-5	30-50
HE	100	Medical Terminology	4	20
ET	102	Solid State	12	150
BE	100	Biomed. Physio.	4	40
			23-25	240-260
Third Quarter				
EG	250	Tech. Writing	3	30
ET	103	Appl. Elect.	12	150
P	101	Basic Physics	3	50
BE	110	Non-Elec. Biomed. Eq.	4	72
			22	302

SECOND YEAR

Fourth Quarter				
		Rec. Math Elective	3-5	30-50
BE	120	Elect. Biomed. Equip.	16	216
		Psych. Elective	3	30
			22-24	276-296
Fifth Quarter				
ET	240	Intro. Instr.	4	50
BE	200	Elect. Equip. Tech.	16	200
		Com. Elective (speech)	3	30
			23	280
Sixth Quarter				
ET	250	Intro. Digital	4	50
IO	299	Independent Study	4-12	40-120
BE	230	Advanced Electronic Biomed, Equipment	16	200
			24-32	290-370
OPTIONAL COURSES:				
IO	297	Co-op Wk. Exp.	3-12	200-400
IO	299	Indep. Study	1-12	10-200

TOTAL CREDIT HOURS: 137-151

TOTAL CONTACT HOURS: 1648-1988

EMPLOYMENT OPPORTUNITIES: The introduction of complex equipment in medical therapy and research requires skilled operational support and maintenance. A recent survey indicates that 10,000 biomedical technicians will be needed in 1973.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts, and Social Sciences. Other courses may be substituted in these areas as recommended by the advisor or instructor.

BRICKLAYING (R)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
BL	100	Bricklaying	16	200
M	100	Dev. Math.	3	30
		Elective	4	50
			23	280
Second Quarter				
BL	100	Bricklaying	16	200
EG	106	Occ. Comm.	3	30
		Elective	4	50
			23	280
Third Quarter				
BL	100	Bricklaying	16	200
PY	100	Hum. Rel. in Bus. & Industry	3	30
		Elective	4	50
			23	280

OPTIONAL COURSES:
The student may elect the following: Carpentry, Plumbing, Commercial Industrial Electricity, Welding, Cooperative Work Experience.

EMPLOYMENT OPPORTUNITIES: At the end of the nine-month program, the student will be ready to enter the bricklaying trade at the home-building level. He will not be considered a journeyman.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math & Science, Communications & Arts, and Social Science. Other courses may be substituted in these areas as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 69

TOTAL CONTACT HOURS: 840

BUSINESS MACHINE TECHNOLOGY (A)

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
OM	100	Intro. to Typewriters and Business Machine Term.	16	200
MG	105	Intro. to Business	3	30
			19	230
Second Quarter				
OM	100	Intro. to Typewriters and Salesmanship	16	200
SC	110	Typing I	3	30
			19	230
Third Quarter				
OM	100	Intro. to Typewriters and Typewriter trouble shooting	16	200
			16	200

SECOND YEAR

Fourth Quarter				
OM	200	Intro. to Office Machines	16	200
EG	106	Occ. Comm.	3	30
			19	230
Fifth Quarter				
OM	200	Intro. to Office Machines	16	200
			16	200
Sixth Quarter				
OM	200	Intro. to Office Machines	16	200
			16	200

OPTIONAL COURSES:

IO	297	Coop. Work Exp. 3-12
IO	299	Independent Study 1-12

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math & Science, Communications & Arts, and Social Sciences. Other courses may be substituted in these areas as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 115

TOTAL CONTACT HOURS: 1390

CARPENTRY (R)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
CA	100	Carpentry	16	200
CA	102	Blueprint Reading for the Bldg Trades	4	50
			20	250
Second Quarter				
CA	100	Carpentry	16	200
M	100	Dev. Math	3	30
			19	230
Third Quarter				
CA	100	Carpentry	16	200
EG	106	Occ. Comm.	3	30
			19	230

OPTIONAL COURSES:
Labor Relations, Cooperative Work Experience, Contracts and Specifications, Estimating and Construction Costs, Electrical Installation.

EMPLOYMENT OPPORTUNITIES: Entry jobs in the carpentry trade as assistants to the carpenter in building such structures as residences and commercial and industrial buildings.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications & Arts, and Social Sciences. Other courses may be substituted in these areas as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 58

TOTAL CONTACT HOURS: 710

CARPENTRY (R)

TWO-YEAR PROGRAM

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
CA	100	Carpentry	16	200
CA	102	Blueprint Reading for the Bldg. Trades	4	50
			20	250
Second Quarter				
CA	100	Carpentry	16	200
M	100	Dev. Math.	3	30
			19	230
Third Quarter				
CA	100	Carpentry	16	200
EG	106	Occ. Comm.	3	30
			19	230

SECOND YEAR

Fourth Quarter				
CA	200	Carpentry	12	200
PY	100	Hum. Rel. in Bus. & Ind.	3	30
		Elective	4	50
			19	230
Fifth Quarter				
CA	200	Carpentry	12	150
CT	122	Contracts & Spec.	5	50
		Elective	4	50
			21	250
Sixth Quarter				
CA	200	Carpentry	12	150
CT	123	Est. Const. Costs	5	50
		Elective	4	50
			21	250

OPTIONAL COURSES: Plumbing, Bricklaying, Cooperative Work Experience, Labor Relations, Electrical Installation.

EMPLOYMENT OPPORTUNITIES: Occupational opportunities will be found with private builders, residential builders, general contractors and other industries that maintain their own buildings.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math & Science, Communications & Arts, and Social Science. Other courses may be substituted as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 119

TOTAL CONTACT HOURS: 1440

CIVIL ENGINEERING TECHNOLOGY (R)

NINE-MONTH PROGRAM

The first year is devoted to a core curriculum that is a prerequisite to second year courses.

			Cr. Hrs.	Ct. Hrs.
First Quarter				
D	100	Draft. I	12	150
CT	111	Build. Const. & Methods	5	50
EG	106	Occ. Comm.	3	30
M	102	Appl. Math I	3	30
			23	260
Second Quarter				
CT	112	Phy. & Struc. Prop. of Soils & Rocks	5	50
M	103	App. Math II	3	30
CT	112	Contracts & Specifications	5	50
CT	132	Civil Tech. Lab	8	10
			21	140
Third Quarter				
CT	113	Surveying I	12	150
CT	123	Estimating Const. Costs	5	50
M	104	Appl. Math III	3	30
EG	108	Occ. Comm.	3	30
		or		
IO	297	Coop. Wk. Exp.	3-12	100-400
			26-35	260-660

EMPLOYMENT OPPORTUNITIES: If employment is desired at the end of the core curriculum, the student is prepared for many jobs in private and governmental civil engineering, construction and drafting.

TOTAL CREDIT HOURS: 70-79

TOTAL CONTACT HOURS: 660-1060

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

CIVIL ENGINEERING TECHNOLOGY (R)

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
D	100	Draft. I	12	150
CT	111	Build. Const. & Methods	5	50
EG	106	Occ. Comm.	3	30
M	102	Appl. Math I	3	30
			23	260
Second Quarter				
CT	112	Phy. & Struc. Prop. of Soils & Rocks	5	50
M	103	Appl. Math II	3	30
CT	122	Contracts & Specifications	5	50
CT	132	Civil Tech. Lab.	8	100
			21	230
Third Quarter				
CT	113	Surveying I	12	150
CT	123	Estimating Const. Costs	5	50
M	104	Appl. Math III	3	30
EG	108	Occ. Comm.	3	30
			23	260

SECOND YEAR

Fourth Quarter				
CT	214	Surveying II	12	150
CT	224	Structures I	5	50
CT	234	Fluid Dynamics	5	50
			22	250
Fifth Quarter				
CT	215	Photogrammetry	8	100
CT	225	Structures II	5	50
P	101	Fund. of Phy.	3	50
			16	200
Sixth Quarter				
CT	216	Route Location Surveys & Design	8	100

C	101	Fund. of Chem.	4	50
CT	226	Proff. Pract.	3	30
		or		
IO	297	Coop. Wk. Exp.	3-12	100-400
			15-24	190-590

EMPLOYMENT OPPORTUNITIES: The Civil Engineering Technician is prepared with a broad background in civil engineering principles, related technical training, mathematics, science and communications. The graduate is qualified to fill positions as civil draftsmen, assistants to engineers, purchasing agents, building material salesmen, and laboratory technicians.

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 120-129

TOTAL CONTACT HOURS: 1390-1790

COMMERCIAL ART (A)

FIRST YEAR

First Quarter			Cr. Hrs.	Ct. Hrs.
		English Elective	3	30
AR	101	Basic Drawing	3	60
AR	105	Basic Design	3	60
CM	100	Lettering & Typography	4	60
CM	150	Descriptive Drawing	3	40
			16	250
Second Quarter				
		English Elective	3	30
AR	102	Basic Drawing	3	60
AR	106	Basic Design	3	60
CM	101	Typography & Layout	4	60
PY	100	Hum. Rel. in Bus. & Ind.	3	30
		Elective	3	30
			19	270
Third Quarter				
S	110	Intr. to Speech	3	30
AR	103	Basic Drawing	3	60
AR	107	Basic Design	3	60
CM	103	Typography & Layout	4	60
		Elective	3	30
			16	240

SECOND YEAR

Fourth Quarter				
PT	101	Basic Photo.	4	60
CM	201	Adv. Design & Rendering	4	60
AR	201	Second Year Drawing	3	60
CM	207	Adv. Theory & Production	3	60
AR	245	Printmaking	3	60
			17	300
Fifth Quarter				
PT	102	Intermediate Photography	4	50
CM	202	Adv. Design & Rendering	4	60
IO	297	Co-op Work Experience	2	40
GA	100	Introduction to Graphic Arts	12	150
			22	300
Sixth Quarter				
CM	209	Adv. Illus.	4	60
CM	203	Adv. Design & Rendering	4	60
PY	107	Psych. of Pers. Dev.	3	30
IO	297	Co-op Work Experience or Elective	3-12	100-400
CM	204	Visual Merch.	4	50
		Elective	3	30
			21-30	330-630

OPTIONAL COURSES;

IO	297	Co-op Work Experience	3-12
IO	299	Independent Study	1-12

TOTAL CREDIT HOURS: 111-120

TOTAL CONTACT HOURS: 1690-1990

EMPLOYMENT OPPORTUNITIES: The program is organized to develop skills in design, layout, lettering, typography, illustration, production, art services and studio procedure. Job opportunities as illustrators, layout men, letterers, paste-up and mechanical men in advertising agencies, art studios, art services, department stores, publishing house packaging service, product manufacturers, and silkscreen printing shops.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

COMMERCIAL ART (A)

TECHNICAL ILLUSTRATION OPTION

SECOND YEAR

Fourth Quarter			Cr. Hrs.	Ct. Hrs.
CM	201	Adv. Design & Rendering	4	50
TI	214	Air Brush Techniques I	4	50
PT	101	Basic Photography	4	50
		Art Elective	3	30
			15	180
Fifth Quarter				
CM	202	Adv. Design & Rendering	4	80
MG	209	Bus. Organ. & Management	3	30
		Elective	3	30
TI	216	Air Brush Techniques II	4	50
			16	220
Sixth Quarter				
GA	100	Intro. to Graphic Arts	12	150
TI	218	Special Problems	6	75
OPTIONAL COURSE:				
IO	297	Co-op Work Experience	3-12	10-20
			18-26	185-205

TOTAL CREDIT HOURS: 49-58 (116-126)

TOTAL CONTACT HOURS: 635-655 (1425-1445)

COMMERCIAL INDUSTRIAL ELECTRICITY (R)

NINE-MONTH PROGRAM

First Quarter			Cr. Hrs.	Ct. Hrs.
ET	101	Basic Elec. & AC Theory	16	200
M	102	Applied Math I	3	30
EG	106	Occ. Comm.	3	30
			22	260

Second Quarter				
ET	104	Solid State Devices	12	150
M	103	Applied Math II	3	30
IE	207	Electrical Tools Equip. & Circuits	4	50
			19	230
Third Quarter				
IE	201	Electrical Instr. & Meas.	12	150
		Elective	4	50
			16	200

EMPLOYMENT OPPORTUNITIES: Job entry as an electrician's helper. Assist electrician to install and repair electrical wiring, fixtures and equipment.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted as recommended by the advisor or instructor.

COMMERCIAL INDUSTRIAL ELECTRICITY (R)

TWO-YEAR PROGRAM

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
ET	101	Basic Elec. & AC Theory	16	200
M	102	Applied Math I	3	30
EG	106	Occ. Comm.	3	30
			22	260
Second Quarter				
ET	104	Solid State Devices	12	150
M	103	Applied Math II	3	30
IE	207	Electrical Tools Equip. & Circuits	4	50
			19	230
Third Quarter				
IE	201	Electrical Instr. & Meas.	12	150
		Elective	4	50
			16	200

SECOND YEAR

Fourth Quarter				
IE	203	Ind. Controls	12	150
PY	100	Human Rel. in Bus. & Industry	3	30
		Elective	4	50
			19	230
Fifth Quarter				
IE	205	Elec. Inst., Planning	12	150
		Elective	4	50
			16	200
Sixth Quarter				
IE	202	Alternating Current Mach.	12	150
IE	206	Elec. Trades Blueprint Reading	4	50
		Elective	4	50
			20	250

NOTE: Elective courses may be selected with the advice of the student's advisor or instructor.

EMPLOYMENT OPPORTUNITIES: A graduate of the two-year Commercial Industrial Electricity Program will be capable of performing a variety of jobs in the field of electrical power distribution and in the design and manufacture of electrical equipment.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 112

TOTAL CONTACT HOURS: 1370

DIESEL MECHANICS (R)

TWO-YEAR PROGRAM

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
DM	100	Basic Diesel Mechanics	16	200
WE	100	Basic Welding & Theory	4	50
M	100	Dev. Math	3	30
			23	280
Second Quarter				
DM	100	Basic Diesel Mechanics	16	200
FP	100	Hydraulic Mechanics	4	50
EG	106	Occ. Comm.	3	30
			23	280
Third Quarter				
DM	100	Basic Diesel Mechanics	16	200
EC	108	Labor Rel.	3	30
		Elective	4	50
			23	280

SECOND YEAR

Fourth Quarter				
DM	200	Adv. Diesel Mechanics	16	200
PY	100	Human Rel. in Bus. & Industry	3	30
		Elective	4	50
			23	280
Fifth Quarter				
DM	200	Adv. Diesel Mechanics	16	200
		Elective	4	50
			20	250
Sixth Quarter				
DM	200	Adv. Diesel Mechanics	16	200
		Elective	4	50
			20	250

NOTE: Elective courses may be selected with the advice of the student's advisor or instructor.

EMPLOYMENT OPPORTUNITIES: This course gives a thorough preparation for entering the Diesel Service Field, such as heavy equipment mechanics, construction equipment mechanics. The course prepares the student in learning service of Diesel Engines and Diesel powered equipment of many types. Training covers all phases of engine service and care and repair of the vehicles involved, both on-and-off highway types.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted in these areas as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 132

TOTAL CONTACT HOURS: 1620

ELECTRONICS TECHNOLOGY (A,N)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
ET	101	Basic Elect. & AC Theory	16	200
M	117	Math for Electronics	5	50
M	140	Slide Rule & Calculator	1	10
			22	260
Second Quarter				
ET	102	Solid State Devices & Vacuum Tubes	16	200
M	118	Math for Electronics	3	30
EG	106	Occ. Comm.	3	30
			22	260
Third Quarter				
ET	103	App. Elect. Layout & Fab.	16	200
EC	107	Cons. Ec.	3	30
EG	107	Occ. Comm.	3	30
		or		
IO	297	Co-op Wk. Ex.	3-12	100-400
			22-28	260-600

TOTAL CREDIT HOURS: 66-72

TOTAL CONTACT HOURS: 780-1120

EMPLOYMENT OPPORTUNITIES: Opportunities including beginning work as Service Technicians, Assembly and Testing. The program provides general basic knowledge to advance into more detailed and specific areas of electronics with further training.

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

ELECTRONICS TECHNOLOGY (A,N)

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
ET	101	Basic Elect. & AC Theory	16	200
M	117	Math for Electronics	5	50
M	140	Slide Rule	1	10
			22	260
Second Quarter				
ET	102	Solid State Devices & Vacuum Tubes	16	200
M	118	Math for Electronics	3	30
EG	106	Occ. Comm.	3	30
			22	260
Third Quarter				
ET	103	App. Elect. Layout & Fab.	16	200
EC	107	Cons. Ec.	3	30
EG	107	Occ. Comm.	3	30
			22	260

GENERAL OPTION

SECOND YEAR

			Cr. Hrs.	Ct. Hrs.
Fourth Quarter				
ET	240	Intro. to Instruments & Measurements	8	100
ET	250	Intro. to Digital Elect. I (Sec. 1)	4	50
		Math Elective	3	30
			15	180
Fifth Quarter				
ET	250	Digital Elect. Electronics (Sec. 2)	4	50
ET	221	Comm. Sys. I	4	50
ET	242	Electronic Trouble Shooting	4	50
P	101	Fund. Physics	3	50
			15	200
Sixth Quarter				
ET	231	Intro. to Electro-Mech. Devices	8	100
ET	222	Comm. Sys. II	4	50
		Elective	3	30
		or		
IO	299	Independent Study	1-12	
IO	297	Co-op Wk. Exp.	3-12	100-400
			15-24	180-550

EMPLOYMENT OPPORTUNITIES: Opportunities include work as research and development technician, operations technicians, assembly technicians. The program will provide the general knowledge required for the technician to advance into positions of increasing responsibility.

TOTAL CREDIT HOURS: 111-120

TOTAL CONTACT HOURS: 1340-1690

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

ELECTRONICS TECHNOLOGY (N)

COMMUNICATIONS OPTION

SECOND YEAR

			Cr. Hrs.	Ct. Hrs.
Fourth Quarter				
ET	240	Intro. to Instruments & Measurements I	8	100
ET	250	Intro. to Digital I	4	50
			12	150
Fifth Quarter				
ET	223	Radio Lic. Prep. I	4	50
ET	225	Mobile Radio-telephone Systems I	12	150
			16	200
Sixth Quarter				
ET	224	Radio License Prep II	4	50
ET	226	Mobile Radio-telephone Sys. II	12	150
		Elective	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			19-28	210-600

EMPLOYMENT OPPORTUNITIES: The graduate of this program is equipped to enter employment as a telephone technician, radio transmitter maintenance man, mobile radio- telephone installer-repairman or in communications oriented sales and service.

TOTAL CREDIT HOURS: 113-122

TOTAL CONTACT HOURS: 1340-1730

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

ELECTRONIC DIGITAL TECHNOLOGY (R)

TWO-YEAR PROGRAM

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
ET	101	Basic Elec. & AC Theory	16	200
M	102	Applied Math I	3	30
EG	106	Occ. Comm.	3	30
			22	260
Second Quarter				
ET	104	Solid State Devices	12	160
M	103	Applied Math II	3	30
EG	107	Occ. Comm.	3	30
			18	220
Third Quarter				
ET	105	Adv. Switch & Logic	12	150
ET	107	Focal Programming	4	40
P	101	Fundamental Physics	3	30
			19	220

SECOND YEAR

Fourth Quarter				
ET	208	Machine Language	4	40
ET	249	Intro. to Computers	12	150
ET	299	Independent Study in Electronics	3	30
			19	220
Fifth Quarter				
ET	209	Transistor Analysis	4	40
ET	251	Adv. Computer Technology	12	150
ET	299	Ind. Study in Elec.	3	30
			19	220
Sixth Quarter				
ET	210	Linear Circuits	4	40
ET	211	Interface Circuits	4	40
ET	252	Computer Peripheral	12	150
			20	230

EMPLOYMENT OPPORTUNITIES: The objective of the total curriculum in Electronic Digital Technology is to produce a competent electronic technician who is familiar with electronic digital concepts. A great need exists in small businesses that use small computers for service technicians. Industry is also in need of personnel who can use small computers to program and maintain automated assembly lines.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Sciences. Other courses may be substituted in these areas as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 117

TOTAL CONTACT HOURS: 1370

INDUSTRIAL ELECTRONICS (R)

TWO-YEAR PROGRAM

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
ET	101	Basic Elec. & AC Theory	16	200
M	102	Applied Math I	3	30
EG	106	Occ. Comm.	3	30
			22	260
Second Quarter				
ET	104	Solid State Devices	12	160
M	103	Applied Math II	3	30
EG	107	Occ. Comm.	3	30
			18	220
Third Quarter				
ET	105	Adv. Switch & Logic	12	150
ET	210	Linear Circuits	4	40
P	101	Fundamental Physics	3	30
			19	220

SECOND YEAR

Fourth Quarter				
ET	260	Ind. Logic Systems	12	150
ET	209	Transistor Analysis	4	40
ET	299	Independent Study in Electronics	3	30
			19	220
Fifth Quarter				
ET	261	Control Circuits for Industrial Applications	12	150
ET	299	Independent Study in Elec.	3	30
		Elective	4	50
			19	230
Sixth Quarter				
ET	262	Assembly Line Techniques	12	150
ET	299	Independent Study in Electronics	3	30
		Elective or IO 297 Co-op Work Exp.	4	50
			19	230

Note: Elective courses may be selected with the advice of the student's advisor or instructor.

EMPLOYMENT OPPORTUNITIES: The student upon completion will be qualified to service and maintain an automated assembly line. Modify such systems whenever a change is required. Repair AC and DC motors which would control industrial circuits.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted in this area as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 116

TOTAL CONTACT HOURS: 1380

INSTUMENTATION TECHNOLOGY (Option)

(Auraria Only)

SECOND YEAR

			Cr. Hrs.	Ct. Hrs.
Fourth Quarter				
ET	240	Intro. to Instru. & Measure I Meas. Princ. (Elec.)	16	200

M	106	Inter. Algebra	4	40
P	102	Physics for Instru. I	3	50
			23	290
Fifth Quarter				
ET	241	Meas. Princ. II	12	150
ET	250	Intro. to Digital Elect.	4	50
ET	221	Comm. Systems I	4	50
PY	100	Hum. Rel. in Bus. & Ind.	3	30
			23	203
Sixth Quarter				
ET	231	Intro. to Electro-Mec. Devices	4	50
ET	242	Elec. Trouble-shooting	12	150
		Elective	3	30
			19	203
To Be Taken Any of Above Quarters				
IO	297	Co-op Work Exp.	3-12	100-400
IO	299	Independent Study	1-12	10-120

EMPLOYMENT OPPORTUNITIES: Opportunities include work as research and development technicians, sales and service technicians, operations technicians, assembly technicians. The program will provide the general knowledge required for the technician to advance into positions of increasing responsibility in the field of repair and calibration of test and measurement equipment.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math & Science, Communications & Arts, and Social Sciences. Other courses may be substituted in these areas as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 69-89

TOTAL CONTACT HOURS: 806-1216

TV TECHNOLOGY (N)

NINE-MONTH PROGRAM

First Quarter			Cr. Hrs.	Ct. Hrs.
TV	100	Basic TV Service (N)	16	200
PY	100	Human Relations in Business and Industry	3	30
		Mathematics elective	3	30
			22	260
Second Quarter				
TV	100	Basic TV Service	16	200
EG	106	Occup. Comm.	3	30
		Mathematics elective	3	30
			22	260
Third Quarter				
TV	100	Basic TV Service (N)	16	200
		English Elective	3	30
		Elective or		
IO	297	Co-op Work Exp.	3-12	100-400
			22-28	260-600

EMPLOYMENT OPPORTUNITIES: Trained for jobs in installing, servicing, trouble-shooting, and repairing AM, FM and car radios, and home and industrial audio systems. Entry at apprentice level in installing, servicing, trouble-shooting, and repairing consumer and industrial electronics systems such as BW and Color TV and FM stereo multiplex receivers, sound and video tape recorders, automatic record changers, and closed circuit TV.

ELECTIVES: Electives or substitute courses may be chosen from such fields as Physics, Chemistry, English, Economics, and Business. Independent study also available.

GRAPHIC ARTS (A)

FIRST YEAR

First Quarter			Cr. Hrs.	Ct. Hrs.
GA	100	Intro. to Graphic Arts Proc. & Production	12	150
SC	110	Typing	4	50
PT	101	Basic Photo	4	50
			20	250
Second Quarter				
GA	110	Offset Litho. Funds	12	150
CM	101	Typo. & Layout	4	50
		English Elective	3	30
			19	230
Third Quarter				
GA	120	Basic Offset Litho. Press Ops. & Production	12	150
PT	222	Photo & Art	4	50
CM	103	Typo. & Layout	4	50
			20	250

SECOND YEAR

Fourth Quarter				
GA	200	Intermediate Litho. Oprs. & Process Color	12	150
SC	111	Typing	4	50
IO	299	Independent Study	3	40
			19	240
Fifth Quarter				
GA	210	Advanced Litho Oprs. & Computerized typesetting	12	150
AR	245	Printmaking	3	30
		Math Elective	3	30
			18	210
Sixth Quarter				
IO	297	Coop Work Experience	12	200
PT	211	Color Photo. I	4	50
PY	100	Human Relations	3	30
			19	280

GA 100, 110, 120, 200, 210 — 15 contact hours weekly.

Special night classes:

GA	150	Process Camera & Halftones	4	6
GA	160	Offset Press Operations	4	6
*GA	170	Color Separations	2	3
IO	299	Independent Study		

*(prerequisite GA 110 or GA 150 and/or instructors consent)

Required Courses

IO	297	Co-op Work Experience	3	12
IO	299	Independent Study	1	12

TOTAL CREDIT HOURS: 115

TOTAL CONTACT HOURS: 1484

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math & Science, Communications & Arts, and Social Sciences. Other courses may be substituted in these areas as recommended by the advisor or instructor.

HEAVY EQUIPMENT OPERATION AND SERVICE (R)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
EO	100	Heavy Equipment Operation	16	200
DM	100	Basic Diesel Mechanics	4	50
			20	250
Second Quarter				
EO	100	Heavy Equipment Oper.	16	200
EG	106	Occ. Comm	3	30
		Elective	4	40
			23	280
Third Quarter				
EO	100	Heavy Equipment Oper.	16	200
WE	100	Basic Welding & Theory	4	50
		Elective	4	50
			24	300

NOTE: Elective courses may be selected from the following areas: Hydraulics, Welding, Cooperative Work Experience, Diesel Mechanics.

EMPLOYMENT OPPORTUNITIES: Men who successfully complete the Heavy Equipment Program will be qualified to enter the construction field as heavy equipment operators, maintenance men and servicemen.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted in these areas as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 67

TOTAL CONTACT HOURS: 830

HYDRAULIC MECHANICS (R)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
FP	100	Hydraulic Mechanics	16	200
M	102	Applied Math I	3	30
		Elective	4	50
			23	280
Second Quarter				
FP	100	Hydraulic Mechanics	16	200
EG	106	Occ. Comm.	3	30
		Elective	4	50
			23	280
Third Quarter				
FP	100	Hydraulic Mechanics	16	200
FP	102	Industrial Hydaulic Controls & Circuits	4	50
		Elective	4	50
			24	300

NOTE: Elective courses may be selected with the advice of the student's advisor or instructor.

EMPLOYMENT OPPORTUNITIES: Hydraulic Mechanic in any shop or overhaul and repair facility for hydraulic pumps, cylinders and control valves.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted in these areas as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 70

TOTAL CONTACT HOURS: 860

FLUID POWER (R)

TWO-YEAR PROGRAM

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
FP	100	Hydraulic Mechanics	16	200
M	102	Applied Math I	3	30
		Elective	4	50
			23	280
Second Quarter				
FP	100	Hydraulic Mechanics	16	200
EG	106	Occ. Comm.	3	30
		Elective	4	50
			23	280
Third Quarter				
FP	100	Hydraulic Mechanics	16	200
FP	102	Industrial Hydraulic Controls & Circuits	4	50
		Elective	4	50
			24	300

SECOND YEAR

Fourth Quarter				
FP	200	Pneumatics	16	200
M	103	Applied Math II	3	30
		Elective	4	50
			23	280
Fifth Quarter				
FP	200	Pneumatics	16	200
P	101	Fundamental Physics	3	30
		Elective	4	50
			23	280
Sixth Quarter				
FP	200	Pneumatics	16	200
		Elective	4	50
			20	250

NOTE: Electives may be selected with the advice of the student's advisor or instructor.

EMPLOYMENT OPPORTUNITIES: Graduates are prepared to enter the mobile machinery, manufacturing and automotive-type vehicle fields. Work performed may be on farm tractors and implements, industrial trucks, earthmoving equipment, self-propelled vehicles of all kinds, instrumentations, hydraulic equipment design and other commercial-industrial applications.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted in these areas as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 136

TOTAL CONTACT HOURS: 1670

INDUSTRIAL-COMMERCIAL DRAFTING TECHNOLOGY (A,N,R)

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
D	100	Mechanical Drafting Theory & Techniques	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math	3	30
M	140	Slide Rule & Calculator	1	10
			23	270
Second Quarter				
D	100	Mechanical Drafting Theory & Techniques	16	200
M	103	App. Math	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
D	100	Mechanical Drafting Theory & Techniques	16	200
M	104	App. Math	3	30
EG	108	Occ. Comm.	3	30
			22	260

SECOND YEAR

Fourth Quarter				
D	200	Ind. Draft. Principles	16	200
P	101	Fund. of Physics	3	50
			19	250
Fifth Quarter				
D	200	Ind. Draft. Principles	16	200
		Elective	3	30
			19	230
Sixth Quarter				
D	200	Ind. Draft. Principles	16	200
		Elective	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			19-28	230-600

EMPLOYMENT OPPORTUNITIES: At the end of the two-year drafting program, students are prepared to enter industry in a beginning position in industrial plants, engineering firms, manufacturing and business concerns. As a member of a drafting and design team, he may become a detailer, draftsman, designer, or junior engineer working with various projects and their related drawings, materials and processes.

TOTAL CREDIT HOURS: 124-134

TOTAL CONTACT HOURS: 1500-1870

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

MACHINE DRAFTING TECHNOLOGY (N)

TWO-YEAR PROGRAM
Option

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
D	100	Mech. Draft. & Techniques	16	200
M	102	App. Math I	3	30
EG	106	Occ. Comm.	3	30
M	140	Slide Rule & Calculator	1	10
			23	270
Second Quarter				
D	100	Mech. Draft. & Techniques	16	200
M	103	App. Math II	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
MS	100	Basic Machine Tool Opr. & Theory	16	200
EC	107	Cons. Econ.	3	30
EC	108	Occ. Comm.	3	30
			22	260

SECOND YEAR

Fourth Quarter				
MS	100	Basic Machine Tool Opr. & Theory	16	200
P	101	Fund. of Physics	3	30
D	261	Proj. in Machine Drafting	4	40
			23	290
Fifth Quarter				
D	100	Mech. Draft. & Techniques	16	200
		Elective	3	30
			19	230
Sixth Quarter				
D	200	Ind. Draft. Prin.	16	200
		Elective	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			19-28	230-600

TOTAL CREDIT HOURS: 128-137

TOTAL CONTACT HOURS: 1540-1910

EMPLOYMENT OPPORTUNITIES: This two-year option provides the student with training for beginning drafting positions in industries where a knowledge of machine shop practices would be essential. As a member of a drafting or design team he may become a detailer, draftsman or designer in industries associated with production and manufacturing requirements, metal forming processes and applications, tooling, mechanical and operating components.

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

MANUFACTURED HOUSING TECHNOLOGY (R)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
MH	100	Mobile Home Service	16	200
EG	106	Occ. Comm.	3	30
M	100	Development Math	3	30
			22	260

			Cr. Hrs.	Ct. Hrs.
Second Quarter				
MH	100	Mobile Home Service	16	200
PY	100	Human Relations in Business and Industry	3	30
CA	203	Est. Const. Costs	4	50
			23	280
Third Quarter				
MH	100	Mobile Home Service	16	200
		*Elective	4	50
			20	250

*Elective Courses: Welding, Carpentry, Electricity and Plumbing

EMPLOYMENT OPPORTUNITIES: This course is designed to prepare the student to be the serviceman the mobile home industry needs. The industry is growing rapidly and the need for skilled servicemen is great. Advancement opportunities are also available within the mobile home industry.

TOTAL CREDIT HOURS: 65

TOTAL CONTACT HOURS: 790

MECHANICAL DRAFTING (A,N,R)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
D	100	Mechanical Drafting Theory & Techniques	16	200
EG	106	Occ. Comm.	3	30
M	102	App. Math	3	30
M	140	Slide Rule & Calculator	1	10
			23	270
Second Quarter				
D	100	Mechanical Drafting Theory & Techniques	16	200
M	103	App. Math	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
D	100	Mechanical Drafting Theory & Techniques	16	200
M	104	App. Math	3	30
EG	108	Occ. Comm.	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			22-28	260-600

EMPLOYMENT OPPORTUNITIES: Graduates of the nine-month Industrial-Mechanical Drafting Program will be prepared to enter employment as a beginning or junior draftsman.

TOTAL CREDIT HOURS: 67-72

TOTAL CONTACT HOURS: 790-1120

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

INDUSTRIAL PIPE DRAFTING (N)

			Cr. Hrs.	Ct. Hrs.
First Quarter				
D	251	Ind. Pipe Draft.	8	100
Second Quarter				
D	252	Ind. Pipe Draft.	8	100
Third Quarter				
D	253	Ind. Pipe Draft.	8	100

TOTAL CREDIT HOURS: 24

TOTAL CONTACT HOURS: 300

EMPLOYMENT OPPORTUNITIES: Upon completion of three quarters, the draftsman should be qualified as a junior piping detailer, isometric spooler, material take-off and beginning flow sheet detailer.

INVENTORY CONTROL (A)

			Cr. Hrs.	Ct. Hrs.
First Quarter				
SC	110	Typing I	4	50
		English Elective	3	30
IC	100	Inventory Control	12	150
			19	230
Second Quarter				
SC	111	Typing II	4	70
M	110	Bus. Math	3	30
IC	100	Inventory Control	12	150
			19	250
Third Quarter				
		Math Elective	3	30
AC	109	Accounting & Bookkeeping	5	50
IC	100	Inventory Control	12	150
			20	230
OPTIONAL COURSES:				
IO	297	Co-op Work Exp.	3-12	100-400
IO	299	Independent Study	1-12	10-400

TOAL CREDIT HOURS: 58

TOTAL CONTACT HOURS: 710

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math & Science, Communications & Arts, and Social Services. Other courses may be substituted in these areas as recommended by the advisor or instructor.

MACHINE SHOP (N)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
MS	100	Basic Machine Tool Oper. & Theory	16	200
M	102	App. Math I	3	30
EG	106	Occ. Comm.	3	30
			22	260
Second Quarter				
MS	100	Basic Mach. Tool Oper. & Theory	16	200
M	103	App. Math (Machinist)	3	30
EG	107	Occ. Comm.	3	30
			22	260
Third Quarter				
MS	100	Basic Machine Tool Oper. & Theory	16	200
EC	107	Cons. Ec.	3	30
EC	108	Labor Rel.	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			22-28	260-600

EMPLOYMENT OPPORTUNITIES: The first year is designed to give beginning students the opportunity to acquire basic skills and the related information necessary to gain employment and build a profitable career in the machine shop industry. The trainee is qualified to enter an occupation as a machinist's helper, tool room attendant, machine tool inspector, as well as other areas including apprenticeable occupations.

TOTAL CREDIT HOURS: 66-72

TOTAL CONTACT HOURS: 780-1120

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

MACHINE SHOP (N)

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
MS	100	Basic Machine Tool Oper. & Theory	16	200
M	102	App. Math I	3	30
EG	106	Occ. Comm.	3	30
			22	260
Second Quarter				
MS	100	Basic Machine Tool Oper. & Theory	16	200
M	103	App. Math (Machinist)	3	30
EC	107	Occ. Comm.	3	30
			22	260
Third Quarter				
MS	100	Basic Machine Tool Oper. & Theory	3	30
EC	107	Cons. Ec.	3	30
EC	108	Labor Rel.	3	30
			22	260

SECOND YEAR

Fourth Quarter				
MS	200	Special Mach. Tools, Setups & Processes	16	200
		Elective	3	30
			19	230
Fifth Quarter				
MS	200	Special Mach. Tools, Setups & Processes	16	200
		Elective	3	30
			19	230
Sixth Quarter				
MS	200	Special Mach. Tools, Setups & Processes	16	200
		Elective	3-12	100-400
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			19-28	230-600

EMPLOYMENT OPPORTUNITIES: The graduate will have the necessary skills to work directly with machine shop equipment. He will be capable of working from blueprints or written specifications, applying the knowledge of mechanics, shop mathematics, metal properties, and layout machining procedures.

TOTAL CREDIT HOURS: 123-132

TOTAL CONTACT HOURS: 1470-1840

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

MINERAL INDUSTRY TECHNOLOGY (R)

TWO-YEAR PROGRAM

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
MI	101	Mining	3	30
G	111	Intro. to Geology	4	60
M	102	App. Math I	3	30
EG	106	Occ. Comm.	3	30
		Elective	4	50
			17	200
Second Quarter				
M	101	Mining	3	30
MI	103	Mining Drafting	8	100
G	112	Physical Geology	4	60
M	103	App. Math II	3	30
			18	220
Third Quarter				
MI	104	Ore Deo.	4	50
MI	105	Mineral Explorations	4	50
SU	103	Basic Surveying	8	100
M	104	App. Math III	3	30
			19	230

SECOND YEAR

Fourth Quarter				
MI	201	Mining	3	30
MI	202	Rock & Mineral Sampling	4	50
SU	104	Adv. Survey.	4	50
C	101	Fund. of Chemistry	4	60
		Elective	4	50
			19	240
Fifth Quarter				
MI	203	Mine Design	4	50
MI	204	Mining Equ.	4	50
MI	205	Plant Product Sampling	4	50
SU	105	Mine Survey.	4	50
		Elective	4	50
			20	250
Sixth Quarter				
MI	206	Metal and Alloy Sampling	4	50
MI	207	Mil Equip. Operating Techniques	4	50
MI	208	Mining & Mineral Law	3	30
MI	209	Mine Safety & Vent.	3	30
MI	297	Co-op. Work Experience	6	200
			20	360

EMPLOYMENT OPPORTUNITIES: The objective of this total curriculum is to prepare students to become competent Mineral Industry Technicians. The mineral industry is a multi-billion dollar operation where many technicians are needed.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 113

TOTAL CONTACT HOURS: 1500

PHOTOGRAPHY (A)

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
PT	101	Photography I	4	50
AR	105	Basic Design	3	60
AR	101	Basic Drawing	3	60
		English Elect.	3	30
		Elective	3	30
			16	200
Second Quarter				
PT	102	Photography II	4	50
PT	108	History of Photography	4	50
CM	100	Lettering-Typography	4	50
GA	150	Process Camera & Half Tones	4	60
		Psych.-Soc. Elective	3	30
		Elective	3	30
			22	250
Third Quarter				
PT	103	Photography III	4	50
PT	116	Portrait Photo. I	4	50
GA	100	Intro. to Graphic Arts	12	150
			20	250

SECOND YEAR

Fourth Quarter				
PT	201	Commercial Photo. I	4	50
PT	211	Color Photo. I	4	50
PT	221	Editorial Photo.	4	50
PT	216	Portrait Photo. II	4	50
		Math Elective	3	30
			19	230
Fifth Quarter				
PT	202	Commercial Photo. II	4	50
PT	212	Color Photo II	4	50
PT	222	Photo.-Art & Design	4	50
PT	223	Nature Photography	4	50
		Free Elective	3	30
			19	230
Sixth Quarter				
PT	203	Comm. Photo. III	4	50
PT	213	Color Photo. III	4-12	50-100
PT	231	Special Project	4-8	50-100
PT	233	Comm. Prod. Methods	4-12	50-100
			12-36	150-400

TOTAL CREDIT HOURS: 108-132

TOTAL CONTACT HOURS: 1360-1610

PLUMBING (R)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
PL	100	Plumbing	16	200
M	100	Dev. Math	3	30
		Elective	4	50
			23	280
Second Quarter				
PL	100	Plumbing	16	200
EG	106	Occ. Comm.	3	30
		Elective	4	50
			23	280
Third Quarter				
PL	100	Plumbing	16	200
		Elective	4	50
			20	250

OPTIONAL COURSES: Welding, Cooperative Work Experience, Carpentry, Bricklaying, Electrical Installation.

EMPLOYMENT OPPORTUNITIES: This course is designed for job entry for the student who wants to work in the plumbing trades.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 66

TOTAL CONTACT HOURS: 810

PLUMBING (R)

TWO-YEAR ASSOCIATE DEGREE PROGRAM

SECOND YEAR

			Cr. Hrs.	Ct. Hrs.
Fourth Quarter				
PL	200	Plumbing	16	200
PY	100	Human Relations in Bus. & Ind.	3	30
PL	201	Blueprint Reading & Sketching	4	50
			23	280
Fifth Quarter				
PL	200	Plumbing	16	200
FP	100	Hydraulic Mechanics	4	50
		Elective	4	50
			24	300
Sixth Quarter				
PL	200	Plumbing	16	200
FP	102	Indust. Hydraul. Controls and Circuits	4	50
		Elective	4	50
			24	300

ELECTIVE COURSES: Carpentry, Cooperative Work Experience, Bricklaying, Electrical Installation, Estimating Contracts and Specifications, Inspection.

EMPLOYMENT OPPORTUNITIES: In addition to new jobs created by employment growth, thousands of job opportunities will arise to replace experienced plumbers who transfer to other fields of work, retire or die.

QUALITY ASSURANCE

TWO-YEAR ASSOCIATE DEGREE PROGRAM

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
		English Elective	3	30
		Math Elective	5	50
D	111	Drafting I	4	60
QA	100	Intro. to Q.A.	4	30
ET	101A	Basic Elect. & DC Theory	4	50
			20	220

Second Quarter				
		English Elective	3	30
		Math Elective	4	50
QA	101	Princ. of QA.	4	30
D	110	Mech. Draft. II	4	60
			15	170
Third Quarter				
P	101	Fund. Phys.	3	30
QA	102	Princ. of QA II	7	70
E T 101B		Basic Elect. & AC Theory	4	50
			14	150

SECOND YEAR

Fourth Quarter				
P	111	College Physics	5	70
QA	201	Theory & Appl. of QA I	7	40
			12	110
Fifth Quarter				
QA	206	Metrology	2	40
QA	205	Nondestructive Testing	2	40
		Humanities Elective	3	30
		Tech. Relat. Elect.	8	100
QA	202	Theory & Appl. of QA II	4	40
			19	250
Sixth Quarter				
QA	207	Elec. QA	2	40
QA	208	Procurement QA & Princ. of N. C.	3	40
		English Elective	3	30
QA	203	Advanced QA	4	40
			12	150

TOTAL CREDIT HOURS: 92

TOTAL CONTACT HOURS: 1050

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted as recommended by the advisor or instructor.

SPORTS CRAFTS AND SPECIALTY AREA MECHANICS (N)

NINE-MONTH PROGRAM

First Quarter			Cr. Hrs.	Ct. Hrs.
SE	100	Specialty Area Mechanics	16	200
M	102	App. Math	3	30
EG	106	Occ. Comm.	3	30
			22	260
Second Quarter				
SE	100	Specialty Area Mechanics	16	200
EG	107	Occ. Comm.	3	30
EC	107	Cons. Econ.	3	30
			22	260
Third Quarter				
SE	100	Specialty Area Mechanics	16	200
EC	108	Labor Rel.	3	30
		or		
IO	297	Co-op Wk.	3-12	100-400
			22-28	230-600

EMPLOYMENT OPPORTUNITIES: Entry into small engine mechanic service field, as a small mechanic dealership, automotive warehouse, or parts store, sales or as a manufacturer's service representative. A foundation for the potential service manager or garage foreman.

TOTAL CREDIT HOURS: 66-72

TOTAL CONTACT HOURS: 750-1120

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

SURVEYING (R)

TWO-YEAR PROGRAM

FIRST YEAR

First Quarter			Cr. Hrs.	Ct. Hrs.
SU	112	Drafting & Physical Measurement	8	100
M	102	App. Math I	3	30
EG	106	Occ. Comm.	3	30
G	111	Intro. to Geology	4	60
			18	220
Second Quarter				
SU	113	Surveying Drafting	8	100
GE	230	Urban Geog.	3	30
M	103	App. Math II	3	30
EG	107	Occ. Comm.	3	30
			17	190
Third Quarter				
SU	102	Basic Survey. I	12	150
M	104	Applied Math III	3	30
EG	108	Occ. Comm.	3	30
			18	210

SECOND YEAR

Fourth Quarter				
SU	203	Intermediate Surveying	12	150
SU	214	Surveying Calculations	5	50
			17	200
Fifth Quarter				
SU	206	Photogrammetry	8	100
SU	223	Error Analysis	4	40
SU	215	Special surveying Problems	4	40
			16	180
Sixth Quarter				
SU	204	Advanced Surveying	8	100
CT	123	Contracts & Specifications	5	50
SU	216	Legal Aspects of Surveying	4	40
SU	217	Technical Project	4	40
			21	230

NOTE: This surveying curriculum is a practical course, supported by theory. Since practice can only be obtained in the field, the student and his surveying team members should be prepared to spend several days per week during the Fall and Spring

Quarters in the field irrespective of weather conditions.

In addition, since Surveying is a team effort, the student must enroll at the beginning of the quarter to receive the full benefit of the field work and the instructions.

EMPLOYMENT OPPORTUNITIES: Entry as a working member of a surveying party and proficiency in office work and calculations. A two-year credit towards registration as a professional surveyor is given upon completion of the program.

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted as recommended by the advisor or instructor.

TOTAL CREDIT HOURS: 107

TOTAL CONTACT HOURS: 1230

TECHNICAL ILLUSTRATION (A)

TWO-YEAR PROGRAM

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
EG	106	Occ. Comm.	3	30
D	100	Drafting	16	200
AR	101	Basic Drawing	3	60
			22	290
Second Quarter				
M	102	App. Math	3	30
D	100	Drafting	16	200
AR	102	Basic Drawing	3	60
			22	290
Third Quarter				
M	103	App. Math	3	30
D	100	Drafting	16	200
PY	100	Human Rel. in Bus. & Ind.	3	30
			22	260

SECOND YEAR

Fourth Quarter				
AR	105	Basic Design	3	60
CM	201	Adv. Design & Rendering	4	50
TI	214	Air Brush Techniques I	4	60
PY	107	Psy. of Pers. Development	3	30
PT	101	Basic Photo.	4	50
			18	350
Fifth Quarter				
CM	202	Adv. Design & Rendering	4	80
MG	209	Bus. Organ. & Manag.	3	30
MG	226	Salesmanship	3	30
TI	216	Air Brush Techniques II	4	90
M	104	App. Math.	3	30
			17	260
Sixth Quarter				
GA	100	Intro. to Graphic Arts	12	50
TI	218	Special Problems	6	75
TI	215	TI Seminar	3	30
OPTIONAL COURSE:				
IO	297	Co-op. Work Exp.	3-12	10-20
			21-33	165-215

TOTAL CREDIT HOURS: 125-134

TOTAL CONTACT HOURS: 1615-1625

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted as recommended by the advisor or instructor.

VENDING MACHINE REPAIR (A)

TWO-YEAR PROGRAM

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
ET	101	Basic Elec. & AC Theory	16	200
M	102	Applied Math I	3	30
			19	230
Second Quarter				
ET	102	Solid State Devices & Vacuum Tubes	16	200
M	103	Applied Math II	3	30
			19	230
Third Quarter				
VM	100	Vending Machine I	16	200
M	104	Applied Math III	3	30
			19	230

SECOND YEAR

Fourth Quarter				
VM	200	Vending Machine II	16	200
			16	200
Fifth Quarter				
VM	200	Vending Machine III	16	200
			16	200
Sixth Quarter				
VM	200	Vending Machine IV	16	200
			16	200
OPTIONAL COURSES:				
VM	297	Co-op. Work Exp.		3-12
VM	299	Independent Study		1-12

TOTAL CREDIT HOURS: 109-129

TOTAL CONTACT HOURS: 1209

NOTE: The courses in the block form are recommended as minimum electives in the areas of Math and Science, Communications and Arts and Social Science. Other courses may be substituted as recommended by the advisor or instructor.

WELDING AND FABRICATION (N,R)

NINE-MONTH PROGRAM

			Cr. Hrs.	Ct. Hrs.
First Quarter				
WE	100	Basic Weld. & Theory	16	200
M	102	App. Math.	3	30
EG	106	Occ. Comm.	3	30
			22	260
Second Quarter				
WE	100	Basic Weld. & Theory	16	200
EG	107	Occ. Comm.	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
WE	100	Basic Weld. & Theory	16	200
EC	107	Cons. Ec.	3	30
PY	107	Psy. of Per. Develop.	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			22-28	260-600

EMPLOYMENT OPPORTUNITIES: Student is ready to enter the welding trade at job entry level.

TOTAL CREDIT HOURS: 66-72

TOTAL CONTACT HOURS: 780-1120

NOTE: The courses in Math & Science, Communications & Arts, and Social Sciences are recommended as minimum electives. Other courses may be substituted as recommended by the advisor or instructor.

WELDING AND FABRICATION (N,R)

FIRST YEAR

			Cr. Hrs.	Ct. Hrs.
First Quarter				
WE	100	Basic Weld. & Theory	16	200
M	102	App. Math.	3	30
EG	106	Occ. Comm.	3	30
			22	260
Second Quarter				
WE	100	Basic Weld. & Theory	16	200
EG	107	Occ. Comm.	3	30
EC	108	Labor Rel.	3	30
			22	260
Third Quarter				
WE	100	Basic Weld. & Theory	16	200
EC	107	Cons. Ec.	3	30
PY	107	Psy. of Per. Development	3	30
			22	260

SECOND YEAR

Fourth Quarter				
WE	200	Weld., Fab. & Theory	16	200
		or		
WE	201	Ornamental Iron Work (North Campus Only)	16	200
		Elective	3	30
			19	230
Fifth Quarter				
WE	200	Weld., Fab. & Theory	16	200
		Elective	3	30
			19	230
Sixth Quarter				
WE	200	Weld., Fab. & Theory	16	200
		Elective	3	30
		or		
IO	297	Co-op Wk. Exp.	3-12	100-400
			19-28	230-600

EMPLOYMENT OPPORTUNITIES: Welding mechanic in any facility requiring diversified welding skills and techniques of fabrication.

TOTAL CREDIT HOURS: 123-132

TOTAL CONTACT HOURS: 1470-1840

GENERAL INFORMATION FOR INDUSTRIAL OCCUPATIONS DIVISIONS

SCHOLARSHIPS

Scholarships covering Tuition, Books and Fees are available to students majoring in Auto Mechanics. The awards are based on outstanding scholarship, extraordinary talents and leadership abilities.

Contributed by: The Rocky Mountain Automotive Wholesalers Association and The Pacific Automotive Show

20 HOUR INSTRUCTIONAL BLOCK

Any student may enroll in an Industrial Occupations' course, if it can be determined that such courses will meet the occupational goal of the student. A student may enroll in the full 20 contact hour — 16 credit block or a portion of it in accordance with the following ratio:

4 credit hours — 5 contact hours
8 credit hours — 10 contact hours
12 credit hours — 15 contact hours

COOPERATIVE WORK EXPERIENCE

IO 297 Cooperative Work Experience ..... 3-12 credit hours*

In some program areas, cooperative work experience is a part of the course of study. The student is placed at a work station, somewhere in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved, with a College Coordinator providing general coordination. Prerequisites for enrollment to Cooperative Work Experience are permission of the instructor and approval of the Cooperative Work Experience Coordinator.

*Credit will be granted proportional to hours on the job.

40 hours a week on a related job ..... 12 credits
30 hours a week on a related job ..... 9 credits
20 hours a week on a related job ..... 6 credits
10 hours a week on a related job ..... 3 credits

INDEPENDENT STUDY

IO 299 Independent Study ... 1-12 credit hours

Provides an opportunity for the serious-minded student to engage in intensive study and research on a special topic under the direction of a qualified faculty member. Conditions for electing this course will be evaluated by the Director of the Division of Industrial Occupations, who will assist in selecting an advisor and determine the amount of credit to be granted.

Ten hours work for each hour of credit is considered as minimum. Maximum of 12 credits will be allowed in any program.

COURSE DESCRIPTIONS
FOR
INDUSTRIAL OCCUPATIONS DIVISIONS

INDUSTRIAL OCCUPATIONS

The Industrial Occupations programs are structured to give each student the maximum time available in his chosen occupational area. The courses will be identified as 100 for the first year and 200 for the second year with the appropriate prefix to identify the particular discipline, i.e., WE 100-WE 200, MS 100-MS 200, etc. Each course is designed to continue through three quarters of approx. 10 weeks in length totaling 600 + hours of instruction per year.

Each course will consist of a series of different specific measurable performance objectives that the student is expected to master before moving on to the next skill. Under this system, it is entirely possible for the student to earn more or less credit hours than he contracted for at the time of registration. Those students capable of moving at an accelerated pace will be encouraged to do so and students having difficulty with a particular unit or skill, will be given the individual attention necessary to master those difficult units.

The normal ratio of credits earned for time invested will be as follows:

4 credit hours = 5 contact hours
8 credit hours = 10 contact hours
12 credit hours = 15 contact hours
16 credit hours = 20 contact hours

A student who signs up for 16 credit hours would invest 20 hours of time each week of the 10 week quarter, and would gain 200 hours of instructional time for each of the three quarters.

NOTE: Class periods will be 50 minutes in length.

AIRFRAME POWER PLANT (A)

AES 111 112, 113 — Airframe Mechanics I, II, III ..... 15 cr. hours each

Consists of training in the overhaul and maintenance of various airframes. Includes rigging and assembly, wood, fabric, doping, sheet metal, welding, Federal Aviation Regulations and hydraulic systems. This course, taken in conjunction with the course in aircraft powerplants, prepares a student practically and theoretically to qualify for the Federal Aviation Administration A and P license. It is based on standards required by the FAA and is an FAA approved mechanics school.

AES 211 212, 213 — Aircraft Powerplant ..... 15 cr. hours each

Consists of training in various aircraft powerplants and components, such as carburetors, ignition systems, propellers, electrical systems and generators, lubrication and fuel systems. This course, along with the airframe mechanics course, is an approved FAA combined Airframe and Powerplant Mechanics curriculum and the two prepare a student practically and theoretically to qualify for the FAA A and P license.

APPLIANCE AND REFRIGERATION MECHANICS (A)

AE 100 1st Qtr. — Appliance & Refrigeration Mechanics ..... 16 credit hours
Per Quarter

Lecture and study assignments to acquaint the student with the basic fundamentals of electricity, electrical and mechanical components, their functions and trouble diagnosis, how to dismantle, repair and reassemble appliances. Laboratory experiences in studying electrical circuits, drawing circuit diagrams, locating electrical and mechanical components from schematics and pictorials; working with the appliance, testing, replacing, repairing, adjusting and final testing in regard to safety and performance dependability. Learning to properly use and care for tools and test equipment. Theory and performance evaluation. (20 hours per week)

This program is designed to be taught twenty hours per week per quarter (16 credit hours). To facilitate night classes, the above classes are taught three nights a week for a total of ten contact hours (8 credit hours). When the courses are split in this fashion the course number will take on the connotation of A & B, indicating that the student will have to take two quarters to complete any one of the courses.

AE 100 2nd Qtr. — Appliance and Refrigeration Mechanics ..... 16 credit hours
Per Quarter

Lecture and study assignments on electrical and electronic components, their functions and relative locations in the major appliances. Vacuum tubes and semi-conductors, control devices, drives, science of heats and gases. Laboratory experiences in the safe diagnosis, dismantling, repairing, reassembly, adjusting and testing of performance and dependability of major appliances. Theory and performance evaluation. (20 hours per week).

This program is designed to be taught twenty hours per week per quarter (16 credit hours). To facilitate night classes, the above classes are taught three nights a week for a total of ten contact hours (8 credit hours). When the courses are split in this fashion the course number will take on the connotation of A & B, indicating that the student will have to take two quarters to complete any one of the courses.

AE 100 3rd Qtr. — Appliance and Refrigeration Mechanics ..... 16 credit hours
Per Quarter

Lecture and study assignments on diagnosis of trouble and recommended procedures for repair of refrigeration,

and air-conditioning equipment used in domestic and light industrial applications. Laboratory experience in diagnosis and repair of heat-transfer equipment. This includes air conditioning used in domestic and light industry. (20 hours per week)

ARCHITECTURAL TECHNOLOGY

AT 100 Architectural Drafting (N) ..... 16 credit hours
Per Quarter

Wood, masonry and concrete structures. An introduction to professional architectural working drawing communication skills:

Lettering and line quality
Drafting expression and communication
Building materials symbols in elevation and section
Architectural projection systems
Plan development and dimensioning
Preliminary structural analysis and design
Construction methods & sequences
Building sections & wall sections
Miscellaneous details and schedules
Working drawing organization
Building Code introduction

AT 200 Architectural Design (N) ..... 16 credit hours
Per Quarter

Prerequisite: AT 100 or consent of Advisor

An extension of skills and concepts introduced in the first year, further development will be required in the preparation of working drawings for a steel and concrete commercial structure:

Site planning and development
Application of building codes
Preliminary structural analysis and design
Mechanical and electrical systems
Vertical transportation systems
Shop drawings
Specification writing
Contract documents
History and theory of architecture
Employment resume preparation

AUTOMOTIVE MECHANICS

AM 100 Basic Automotive Mechanics (A, N, R) ..... 16 credit hours
Per Quarter

Principles of design, construction, and operation of modern automotive engines. Introduction to the fundamentals of electricity, ignition systems, fuel systems, and tune-up. The theory and operation of brake systems, chassis, and power trains. Includes:

Shop Safety
Hand Tools and Equipment
Basic Electricity
Charging Systems
Tune-up
Carburetion
Brake Systems
Chassis
Wheel Alignment and Balancing
Clutches
Standard Transmission
Drive Lines
Rear Axle Assemblies
Automatic Transmission
(20 hours per week)

AM 200 Advanced Automotive Repair (A, N, R) ..... 16 credit hours
Per Quarter

Prerequisite: AM 100 or consent of Advisor

Service and repair procedures on engine rebuilding and overhaul. Diagnosis and troubleshooting on all phases of automobile repair and dynomometer operation with the latest test equipment. Also principles of operation and service of air conditioning. Course includes:

Micrometers
Special Measuring Tools
Special Tools
Valve Service
Piston and Rings
Crankshafts and Bearings
Engine Overhaul
Engine Analyzer Operation
Scope Interpretation
Dynamometer Operation
Principles of Air Conditioning
Air Conditioning Service
New and Used Car Service
(20 hours per week)

AUTO BODY SERVICE (AUTO BODY REPAIR & REFINISHING OPTION)

AB 100 Basic Auto Body Repair & Refinishing ..... 16 credit hours
Per Quarter

The development of knowledge and skills in performing basic operations of auto body repair, painting, acetylene welding, body filling materials, e.g., lead and plastic. Use and knowledge of all tools. Remove, repair, and replacing parts, e.g.

Doors
Fenders
Hood
Bumpers
Headliners
Glass
Front Sheet Metal

Surface preparation and spot painting with lacquer and acrylic lacquer.
(20 hours per week)

AB 200 Major Auto Body Repair & Refinishing (N) ..... 16 credit hours
Per Quarter

Prerequisite: AB 100 Basic Auto Body Repair & Refinishing

The development of knowledge and skills in the areas of identifying, diagnosing, set-ups, straightening and replacement of the following:

Make and Model
Type and Construction
Total Damage
Portable Frame Machine
Welding Torch
Quarter Panel

Door Panel
Built On Parts
Glass
Painting (Spot and Completes)
(20 hours per week)

AUTO BODY SERVICE (AUTO BODY REPAIR OPTION)

AB 100 Basic Auto Body Repair (N) ..... 16 credit hours
Per Quarter

The development of knowledge and skills in performing basic operations of auto body repair, acetylene welding, body filling materials, e.g. lead and plastic. Use and knowledge of all tools. Remove, repair, and replacing parts, e.g.

Doors
Fenders
Hood
Bumpers
Headliners
Glass
Front Sheet Metal
(20 hours per week)

AB 200 Major Auto Body Repair (N) ..... 16 credit hours
Per Quarter

Prerequisite: AB 100 Basic Auto Body Repair

The development of knowledge and skills in the areas of identifying, diagnosing, set-ups, straightening and replacement of the following:

Make and Model
Type and Construction
Total Damage
Portable Frame Machine
Welding Torch
Quarter Panel
Door Panel
Built On Parts
Glass
(20 hours per week)

AUTO BODY SERVICE (AUTO BODY REFINISHING OPTION)

AB 100 Basic Auto Body Refinishing ..... 16 credit hours
Per Quarter

This course will provide instruction in the following areas:

Basic principles, care and maintenance of spray gun and other equipment
Masking
Machine and hand rubbing
Surface Preparation
Use of Primer, Lacquer and Enamel
Spot Painting
Pin Stripes
Wide Stripes
Vinyl Tops

BIOMEDICAL EQUIPMENT TECHNOLOGY

BE 100 Biomedical Physiology (A) ..... 4 credit hours

Introduction to basic physiology as applied to Biomedical Equipment.

BE 110 Non-Electrical Biomedical Equipment ..... 4 credit hours

Provides a study of the operation, use, care, PM procedures, installation and repair of inhalation therapy apparatus, gas anesthesia units, resuscitation equipment.

BE 120 Electrical Biomedical Equipment ..... 16 credit hours

Provides circuit theory and analysis to include the operation of basic electromechanical Biomedical equipment. The course consists of combination lecture and laboratory sessions.

BE 200 Electronic Biomedical Equipment ..... 16 credit hours

This course presents an in-depth check and analysis of both the particular monitoring equipment and x-ray generating equipment. Other instrumentation will include ultrasonics and laboratory type items.

BE 230 Advanced Electronic Biomedical Equipment ... 16 credit hours

Advanced theories on x-ray and Biomedical Equipment.

BRICKLAYING (R)

BL 100 Bricklaying (R) ..... 16 credit hours
Per Quarter

This nine-month program will take the student into the phase of bricklaying that is basically used in home construction: (20 contact hours per week)

Spreading mortar
Laying bricks to a line
Building brick corners
Laying sills
Brick veneering
Blocklaying
Tile setting
Stone laying
Commercial construction brickwork
Blueprint reading
Safety procedures
Fireplace construction
Glass block setting
Use of tools and equipment

BUSINESS MACHINE TECHNOLOGY

OM 100 1st Quarter — Introduction to Typewriters ..... 16 credit hours
Per Quarter

Complete disassembly and reassembly of Royal Typewriters, using factory adjustments; following proper sequence. Accustoms the student to proper disassembly and reassembly procedures. Familiarizes students with individual parts and their operation and function with other parts. Theory of typewriter principles.

Business Machine Terminology gives the student an understanding of the language used in industry to special tools, adjustments, and parts. (20 hours per week)

OM 100 2nd Quarter — Introduction to Typewriters ..... 16 credit hours
Per Quarter

Complete disassembly and reassembly of Smith-Corona 250 typewriters, using factory adjustments; following proper sequence. Accustoms the students with proper

disassembly and reassembly procedures. Familiarizes student with individual parts and their operation and function with other mechanism. Theory of typewriter principles.

This course is designed to express the importance of being able to sell one's self to potential customers; his service abilities, workmanship, appearance and the proper approach to meeting the general public. (20 hours per week)

OM 100 3rd Quarter — Introduction to Typewriters ..... 16 credit hours
Per Quarter

Complete disassembly and reassembly of Adler electric typewriters, using factory adjustments; following proper sequence. Accustoms the student with proper disassembly and reassembly procedures. Familiarizes students with individual parts and their operation and function with other mechanisms. Theory of typewriter principles.

Typewriter Troubleshooting gives the student the language used by manufacturers and service technicians. (20 hours per week)

OM 200 1st Quarter — Introduction to Office Machines ..... 16 credit hours
Per Quarter

Complete disassembly and reassembly of adding machines, using factory adjustments; following proper sequence. Accustoms the student to proper disassembly and reassembly procedures. Familiarizes students with individual parts and their operation and function with other mechanisms. This course is designed to give the student a better overall understanding of the business machine industry. Field trips are included. (20 hours per week)

OM 200 2nd Quarter — Introduction to Office Machines ..... 16 credit hours
Per Quarter

Complete disassembly and reassembly of calculating sections, using factory adjustments; following proper sequence. Accustoms the students to proper disassembly and reassembly procedures. Familiarizes students with individual parts and their operation and function with other mechanisms. Theory of calculator principles. Complete disassembly and reassembly of spirit duplicators, using factory adjustments; following proper sequence. Familiarizes students with individual parts and their operation and function with other mechanisms. Theory of duplicators principles. (20 hours per week)

OM 200 3rd Quarter — Introduction to Office Machines ..... 16 credit hours
Per Quarter

Techniques used in maintaining business equipment in top mechanical condition. Also designed to help the student with maintaining a high quality of work performed and check of his work. Gives students a knowledge of how to locate problems faster and to correct them efficiently. Shows students how to distinguish between different problems. (20 hours per week)

CARPENTRY (R)

CA 100 Carpentry (R) ..... 16 credit hours
Per Quarter

Practical training is given the student applying proper construction techniques as used in the construction industry. (20 hours per week)

Carpentry tools and equipment
Building codes and ordinances
Blueprint reading
Visits to construction sites
Safety practices
Lumber measuring and selection
Framing square
Building layout
Framing
Doors and windows
Rafters and roof construction
Rough carpentry work

CA 102 Blueprint Reading for the Building Trades (R) ..... 4 credit hours

This course will give the student a working knowledge of blueprint reading and sketching as applied to the construction industry. Building terms and abbreviations are taught along with symbols and conventions for other major trades. Construction features, beginning with details of component parts and advancing to a complete set of working drawings. (5 hours per week)

CA 200 Advanced Carpentry (R) ..... 12 credit hours
Per Quarter

The student will have the opportunity to advance to more difficult construction jobs. (15 hours per week)

Job safety
Blueprint reading
Prefabrication of buildings
Building erections
Builders transit
Estimating
Commercial construction techniques
Building codes

CIVIL ENGINEERING TECHNOLOGY

CT 111 Building Construction ..... 5 credit hours

Materials and types of construction used for the various parts of buildings. Building code requirements, steel, timber and masonry construction. Structures of the common form, lift-slab and tilt-up construction and developments in the building construction field. (5 hours per week)

CT 112 Physical and Structural Properties of Soils and Rocks ..... 5 credit hours

Introduction to geology. The earth's crust: its rocks, soils, topography, and problems. Laboratory studies of rocks, mineral identification, geologic maps and engineering analysis. Elementary soil and rock mechanics. (5 hours per week)

CT 113 Surveying I ..... 12 credit hours
Prerequisite: M 103 (2nd Quarter Math and concurrent enrollment in M104) (3rd Quarter Math)

Theory, practice and computations of surveying. Theory, use and adjustments of surveying instruments. Observation, analysis and presentation of basic linear, angular, area and volume field measurements common to civil engineering technology endeavor. (15 hours per week)

CT 122 Contracts and Specifications ..... 5 credit hours

The Law of Contracts and its application to engineering projects. Specification writing, adequacy and applica-

tion. Additional problems in the general field of engineering law: responsibility to clients, the engineer as an expert witness, professional ethics. (5 hours per week)

CT 123 Estimating Construction Costs ..... 5 credit hours

Interpretation of construction drawings and specifications. Material take-off estimating quantities, costs of materials and labor in residential and commercial building projects. Quantity survey, development of unit prices and preparation of bid proposals. (5 hours per week)

CT 132 Civil Technology Laboratory ..... 8 credit hours

Prerequisite: CT 112 Physical & Structural Properties of Soils and Rocks

Investigation of Portland cement, its properties and uses in concrete, additives, aggregate and testing of concrete; the physical properties and uses of bituminous materials; soil as an engineering material: testing, analysis and classification. (10 hours per week)

CT 214 Surveying II ..... 12 credit hours

Prerequisite: CT 113 Surveying I

Horizontal and vertical curves. Electronic surveying methods, astronomical observations, field problems in location surveys. Electronic data processing of survey information. Problems in land surveying, topographic mapping and construction surveys. (15 hours per week)

CT 215 Photogrammetry ..... 8 credit hours

Prerequisite: CT 113 Survey I, and CT 214 Surveying II

Characteristics of aerial photographs; measuring and interpreting from aerial photos for planimetric, topographic, hydrological, soil and land use surveys; analysis and presentation of field measurements over extensive reached. (10 hours per week)

CT 216 Route Location Surveys and Design ..... 8 credit hours

Prerequisite: CT 214

Preparation of topographic maps: negative scribing, inking and planimetric maps. Surveys for route location, preparation of plans, profiles and cross sections, use of aerial photographs. Advanced technical surveys and mapping. (10 hours per week)

CT 224 Structures I ..... 4 credit hours

Mechanical properties of materials; stresses and strains in members subjected to tension, compression and shear. Graphical and trigometrical analysis of space frames, including trusses. Force systems: coplanar, parallel, concurrent, nonconcurrent and noncoplanar. (4 hours per week)

CT 225 Structures II ..... 5 credit hours

Prerequisite: CT 224 Structures I

Elementary structural analysis, including timber and steel structures, columns, riveted, and bolted connections. Shear and moment diagrams, deflections, beam analysis and elementary design problems. (5 hours per week)

CT 226 Professional Practice ..... 3 credit hours

Prerequisite: At least 50 hours credit in the Civil Engineering Technology Curricula

Lectures by individuals prominent in the civil engineering profession. Independent study and research of a subject of the student's own choice in a field associated with Civil Engineering Technology. (3 hours per week)

CT 234 Fluid Dynamics ..... 5 credit hours

Fluid properties, hydrostatics and fluid flow properties. Flow in pipes and open channels, flow measurements, basic theoretical and applied fluid mechanics. (5 hours per week)

COMMERCIAL ART

CM 100 Lettering & Typography (A) ..... 4 credit hours

Designed to develop lettering skills, techniques of drawing letter forms and letter spacing. In addition to developing lettering skills, the course familiarizes students with the historical development of type faces and their terminology. (5 hours per week)

CM 101 Typography & Layout (A) ..... 4 credit hours

Appreciation of relationship of lettering and typography to layout design, applied problems in layout, letter forms, symbols, illustrations and systems of measurement. (5 hours per week)

CM 103 Typography & Layout (A) ..... 4 credit hours

Prerequisite: CM 101 or permission of instructor

Continuation of CM 101 with addition of mechanicals and larger range of media. (5 hours per week)

CM 150 Descriptive Drawing (A) ..... 3 credit hours

Fundamentals of mechanical drawing, orthographic and isometric projection, one-and-two point perspective, as applied to specific design and drawing problems. (4 hours per week)

CM 201 Advertising Design and Rendering (A) ..... 4 credit hours

Prerequisite: AR 105, 106, 107 basic design or permission of instructor

Problems in advertising illustration and graphic design. Various media explored with stress in individuality, critical judgment and creativity. Emphasis on preparing problems for reproduction. (5 hours per week)

CM 202 Advertising Design and Rendering (A) ..... 4 credit hours

Problems in designing packages, brochures and three dimensional advertising projects. Continuation of CM 201, with a wider range of media. (5 hours per week)

CM 203 Advertising Design and Rendering (A) ..... 4 credit hours

Continuation of CM 202 with a wider range of media including the use of the airbrush. (5 hours per week)

CM 207 Advertising Theory and Production (A) ..... 3 credit hours

Study of the advertising field, business procedures, methods of reproduction, quantity and quality control in the graphic arts. Study of typesetting estimating and copy fitting techniques and marking production proofs. Emphasis in doing paste-ups. (4 hours per week)

CM 204 Visual Merchandising (A) ..... 4 credit hours

Application of the principles of three-dimensional design and construction as they apply to phases of merchandising display. Emphasis on building an image and consumer appeal. (5 hours per week)

CM 209 Advertising Illustration (A) ..... 4 credit hours

Problems and techniques relating to technical and pictorial illustration, magazines, and newspapers with emphasis on the human figure in advertising. Variety of media involved. (5 hours per week)

COMMERCIAL INDUSTRIAL ELECTRICITY (R)

IE 201 Electrical Instruments and Measurements (R) ..... 12 credit hours

The work in this course is confined to the study of advance electricity measuring techniques, Wheatstone bridge, VOM, Oscilloscopes, Galvanometers and other complex instruments will be discussed. (15 hours per week)

IE 202 Alternating Current Machines (R) ..... 12 credit hours

The work in this course is confined to a study of mechanical-electrical power devices. Alternators, single-phase motors and three-phase motors, transformers, voltage regulators, generators, as well as the auxillary studied. Installation and maintenance requirements for alternating current power equipment are given. (15 hours per week)

IE 203 Industrial Controls (R) ..... 12 credit hours

The principles and applications of electrical controllers are covered in this course. Hardware and circuitry for AC and DC industrial control devices including contactors, starters, speed controllers, time delays, limit switches, and pilot devices. Application in the control of industrial equipment, motors, servounits, and motor-driven actuators. Field trips are provided. (15 hours per week)

IE 204 National Electric Code (R) ..... 4 credit hours

A course especially designed for students desiring an elective or upgrading on codes and regulations. (5 hours per week)

IE 205 Electrical Installation Planning (R) ..... 12 credit hours

Methods and materials used in electrical installations and problems encountered in electrical construction work. Laboratory work consists of industrial and residential wiring practices, paying particular attention to the National Electric Code and local codes. Where possible, selected examples of industrial installations and residential construction are inspected. Electrical measurement is given along with repair and calibration of measuring instruments. Blueprint reading is included (15 hours per week).

IE 206 Electrical Trades Blueprint Reading (R) ..... 4 credit hours

The course will cover the blueprint reading of electrical workers common to an industrial situation, and at the same time, provide a working knowledge of the methods used to install a complete wiring system for an industrial building. (5 hours per week)

IE 207 Electrical Tools, Equipment and Circuits (R) ..... 4 credit hours

Designed to familiarize the beginning electrical student with kinds, sizes, use and care of hand and power tools, fastening devices and equipment employed by the electrician. Topics covered include: wire sizes and connections, wire insulation, conduit and fittings, wiring methods, switches, motors and starters, lighting equipment, safe working practices, atomic structure of matter and electron theory, sources of voltage, Ohm's Law, electrical units, series and parallel circuits, magnetism. (5 hours per week)

DIESEL MECHANICS (R)

DM 100 Basic Diesel Mechanics ..... 16 credit hours
Per Quarter

The student becomes familiar with the various diesel engine models. (20 hours per week)

Disassembly
Reassembly and operation
Inspection of parts
Repairs and tests
Overhaul lab experience
Tools and shop equipment
Safety practices
Shop manuals
Shop operation and planning

DM 200 Advanced Diesel Mechanics ..... 16 credit hours
Per Quarter

Shop practice is offered in the maintenance and repair and operating characteristics of diesel engines. (20 hours per week)

Mechanical and thermal efficiencies
Dynamometer operation
Instrument and control panels
Troubleshooting procedures
Fuel injectors
Brake, horsepower, torque and fuel consumption
Shop planning
Testing equipment
Shop safety

ELECTRONICS TECHNOLOGY

ET 101 Basic Electricity and AC Theory (A, N, R) ..... 16 credit hours

Current, voltage, resistance and power in AC and DC Circuits. Series, parallel and series-parallel circuit computations and measurements, troubleshooting procedures, properties and conductors and insulators. Use of the slide rule and scientific notation. Complex devices and circuits, basic test equipment, circuitry analysis and troubleshooting with practical applications. (20 hours per week)

ET 102 Solid State Devices and Vacuum Tubes (A,N) ..... 16 credit hours

Prerequisite: ET 101 Basic Electricity and AC Theory or Consent of Advisor

Solid state devices, the theory of electron flow and application in various circuits. Analysis and interpretation of various solid state devices in different configurations. Circuits discussed are constructed for examination and proof. The vacuum tube diode, triode and selected multigrid tubes, the semi-conductor diode in power supply and biasing arrangements including functional circuits using these components. (20 hours per week)

ET 103 Applied Electronics, Layouts & Fabrication (A, N) ..... 16 credit hours
Prerequisite: ET 102 Solid State Devices and Vacuum Tubes or Consent of Advisor

Operational characteristics and performance of electronic circuits. Diode and transistor logic, pulse generation, multivibrators, silicon controlled rectifiers, photoconductive, field effect transistors and control circuits. Basic soldering techniques. Makeup of wiring routing and cabling plans. Connectors, cables and coaxial conductors. Layout and planning of vector board and printed circuits. Integrated circuit packaging and circuit tracing. (20 hours per week)

ET 221 Communications Systems I (A, N) ..... 4 credit hours
Prerequisite: ET 103 Applied Electronics, Layout and Fabrication

Basic electronic circuits and applications. Analysis of circuitry and equipment associated with amplifiers, oscillators, power supplies, radio transmitters, receivers, antennas and transmission lines. (5 hours per week)

ET 222 Communications Systems II (A, N) ..... 4 credit hours
Prerequisite: ET 221 Communications Systems I

A continuation of ET 221. Receiver principles, types of circuitry and applications. Military electronics, radar, directional equipment, special navigation aids and antenna systems. (5 hours per week)

ET 223 Radio License Preparation I (N) ..... 5 credit hours
Prerequisite: ET 103 Applied Electronics, Layout and Fabrication

Preparation of students to successfully pass the FCC license examination for Third and Second Class Radio-Telephone Operators License. The material covered in Elements 1, 2, and 3 of the FCC license examination will be covered. (5 hours per week)

ET 224 Radio License Preparation II (N) ..... 5 credit hours
Prerequisite: ET 223 Radio License Preparation I

A continuation of ET 223, FCC Rules and Regulations, basic radio laws and radio operating practices are covered for Elements 1 and 2 of the FCC examination. A number of final examinations are taken so that the student may gain familiarity with FCC type examinations. (5 hours per week)

ET 225 Mobile Radiotelephone Systems I (N) ..... 12 credit hours

Basic principles and processes used in mobile radio communications systems. The installation, maintenance and operation of vehicular mobile communications equipment of the types used by police, fire and business services. (15 hours per week)

ET 226 Mobile Radiotelephone Systems II (N) ..... 12 credit hours
Prerequisite: ET 225 Mobile Radiotelephone Systems I

A continuation of ET 225. Base station equipment and operational techniques, equipment selection, site selection parameters, antenna systems and system operation. (15 hours per week)

ET 231 Introduction to Electro-mechanical Devices (A, N) ..... 4 credit hours
Prerequisite: ET 103 Applied Electronics, Layout and Fabrication

Alternating and direct current machines, single phase and three phase machines, motors, generators, and associated control and measurement methods. (5 hours per week)

ET 240 Introduction to Instruments & Measurements (A) ..... 16 credit hours
(N) ..... 8 credit hours
Prerequisite: ET 103 Applied Electronics, Layout and Fabrication.

Calibration and use of general test instruments. Accuracy of measurements, theory of operation, proper use and calibration techniques, electronic and digital metering equipment, frequency counters, wave analyzers, frequency generators, waveform generators, general purpose and special purpose oscilliscopes. Actual test instruments are used for lab experience. (20 hours per week)

ET 241 Measuring Principles II Mech. (A) ..... 12 credit hours

Basic types of transducers, employing electrical or electronic energy. Photo electric, potentiometric and position responsive devices. Data logging and recording devices. (15 hours per week)

ET 242 Electronic Trouble-shooting (A) ..... 12 credit hours
(N) ..... 4 credit hours
Prerequisite: ET 103 Applied Electronics, Layout and Fabrication

An introduction to digital solid state circuits applicable to computer, digital, and instrument technology. Codes, memory systems, counters, computer circuits, and Boolean Algebra. (20 hours per week)

ET 250 Introduction to Digital Electronics (A) ..... 16 credit hours
(N) ..... 4 credit hours
Prerequisite: ET 103, Applied Electronics, Layout and Fabrication

An introduction to digital solid state circuits applicable to computer, digital, and instrument technology. Codes, memory systems, counters, computer circuits, and Boolean Algebra. (20 hours per week)

DIGITAL AND INDUSTRIAL ELECTRONICS TECHNOLOGY

ET 101 Basic Electricity and AC Theory (A, N, R) . 16 credit hours

Current, voltage, resistance and power in AC and DC Circuits. Series, parallel and series-parallel circuit computations and measurements, troubleshooting procedures, properties and conductors and insulators. Use of the slide rule and scientific notation. Complex devices and circuits, basic test equipment, circuitry analysis and troubleshooting with practical applications. (20 hours per week)

ET 104 Solid State Devices (R) ..... 12 credit hours
Prerequisite: ET 101 Basic Electricity and AC Theory or Consent of Advisor

Solid state devices, the theory of electron flow and application in various circuits. Analysis and interpretation of various solid state devices in different configurations. Circuits discussed are constructed for examination of biasing arrangements including functional circuits using these components. (15 hours per week)

ET 105 Advance Switching and Logic Circuits (R) ..... 12 credit hours

Prerequisite: ET 104 Solid State Devices and Vacuum Tubes or Consent of Instructor

Operational characteristics and performance of electronic circuits. Diode and transistor logic, pulse, generation, multivibrators, silicon controlled rectifiers, photoconductive field effect transistors and control circuits. Basic soldering techniques. Makeup of wiring, routing and cabling plans.

An introduction to digital solid state circuits applicable to computer, digital, and instrument technology. Codes, memory systems, counters, computer circuits and Boolean Algebra. (15 hours per week)

ET 107 Focal Program (R) ..... 4 credit hours

This course introduces the digital electronic student to computer-programming. The programs developed by the student will be related to solving electronic problems such as Ohms Law and other related calculations. The student will also develop a program for mass testing of other students. Focal is a computer conversation language. (5 hours per week)

ET 208 Machine Language Program (R) ..... 4 credit hours

This course introduces the digital student to machine language. This type of program is necessary to understand the operation of a computer, and to be able to control the operation of the processor from the front panel in case the terminal is inoperative. (5 hours per week)

ET 209 Transistor Analysis (R) ..... 4 credit hours

This course introduces the electronic student to advance transistor analysis. The basics in parameters are introduced and the simplified use of these parameters is the basics of transistor analysis. This course will also give the student a better understanding of transistors. The course objective is to analyze a transistor by approximation methods. (5 hours per week)

ET 210 Linear Circuits (R) ..... 4 credit hours

This course introduces the student to operational, differential and other types of linear amplifiers used in sophisticated electronic systems. Emphasis is placed on linear circuits because of an increasing use of these circuits in industrial and computer applications. (5 hours per week)

ET 211 Computer Interface (R) .... 4 credit hours

This course was designed to give the digital student a better understanding of the processor and its peripheral devices. The student will perform experiments in this area and will develop an interface which will control some type of peripheral device. (5 hours per week)

ET 249 Introduction to Computer (R) ..... 12 credit hours

Prerequisite: ET 101, ET 104, ET 105

The internal circuitry of the computer is explored. A small computer (PDP-8) is used to accomplish this investigation. The actual schematic, test specifications, and operating procedures are used. The student is exposed to the machine language for maintenance and analysis. The student will write his/her own test procedure. (15 hours per week)

ET 251 Advance Computer Technology (R) ..... 12 credit hours

Prerequisite: ET 249

Practical experience in troubleshooting a small commercial computer. Malfunctions are inserted where a student may be exposed to as many as 100 different problems. Associated test equipment is utilized in isolating malfunctions to a card level. The P.C. Card is removed and the malfunction is isolated to a small component. (15 hours per week)

ET 252 Computer Peripheral (R) ..... 12 credit hours

Prerequisite: Consent of Instructor

Circuitry and equipment associated with the input/output devices. Schematic drawings and the use of the top drawings down to the individual component drawings. Card printers and punch, magnetic tape, paper tape, teletype, in-line printer, disc storage and real time clocks. (15 hours per week)

ET 260 Industrial Logic Systems (R) ..... 12 credit hours

Pulse and logic control associated with industrial applications, timing circuits, F/F, And Gates, Nand Gates, Inverters, And/Or Cathode Followers. The basic application of motor controls by use of shift registers and counter circuits. Wire wrapping and other methods of connecting logic elements on an assembly line. (15 hours per week)

ET 261 Control Circuits for Industrial Application (R) ..... 12 credit hours

Prerequisite: Consent of the Instructor

Principles and applications of electrical controllers as an introduction to automation. Devices for differentiation, integration and proportioning. Hardware and circuitry for AC and DC industrial control devices, including contractors, starters, speed controllers, time delays, limit switches and pilot devices. Application in the control of industrial equipment motors, servounits and motor driven actuators. Application and use of magnetic control elements, magnetic amplifiers, industrial electronic systems, advance servo-mechanisms, logic circuit application as associated in industrial use. (15 hours per week)

ET 262 Assembly Line Techniques (R) N(A,B) ..... 12 credit hours

Prerequisite: Consent of the Instructor

The applications of electronics on an assembly-line operation. Multiplier, D-A and A-D conversions, thyratron controls, motor translators, delay lines, real time clocks, variable clocks, solenoid drivers and controls. Photoelectric controls and special counters associated with industrial applications. The use of AC and DC motor controls on the assembly application. (15 hours per week)

TELEVISION SERVICE TECHNOLOGY

TV 100 Television Servicing (N) ..... 16 credit hours

Per Quarter

Practical application of troubleshooting techniques including methodical analysis of problems in radio, stereo,

B/W and color televisions. Bugged systems will help serve as test vehicles to develop speed and experience in troubleshooting — utilizing test equipment found in servicing departments. (20 hours per week)

For further information contact the Division Director of Industrial Occupations, North Campus.

GRAPHIC ARTS

GA 100 Introduction to Graphic Arts (A) ..... 12 credit hours

The objective of this course is to have the student acquire a knowledge as to the rise of graphic communications. History and technological development of the industry is given, terms and measurements, copy preparation, layout procedures, type faces and styles, methods of composition, theory of good paste-up, basic camera and line photography, legal restrictions on copying, estimating, management and production. Some of the specific areas covered are: preparation of design and copy, preparation of composition for printing, copyfitting, preparing estimating sheets and production forms, line photography and reproduction. (15 hours per week)

GA 110 Offset Lithography Fundamentals (A) ..... 12 credit hours

Study of offset lithography with emphasis on the development of skill in camera work, stripping and plate making. Objective of this course is to provide the necessary knowledge and skills in the production of halftones, preparation of the printing plate and basic press practices, laying out and stripping the flat, plate making; basic press operations and bindery operations. (15 hours per week)

GA 120 Basic Offset Lithographic Press and Operations and Production (A) ..... 12 credit hours

Objective of this course is to develop an understanding of the operation adjustments and maintenance procedures of offset press work. Some specific areas studied in this course are: press operations, preparation of the presses (feeder, inking systems, dampening systems, printing units, etc.) preparing plates and impressions, press maintenance. (15 hours per week)

GA 150 Process Camera and Halftones (A) ..... 4 credit hours

Objective of this course is to develop an understanding of the operation of the process camera and stripping up the flat for offset press operations. Specific areas covered: Theory and general nomenclature of the process camera, line and half-tone photography. The specific areas covered: operation of the process camera making both line and half-tone negatives. (6 hours per week)

GA 160 Offset Press Operations (A) ..... 4 credit hours

Object of this course is to develop an understanding of the operation, adjustments, and maintenance procedures of off-set presses. The specific areas studied in this course are: offset press operation and preparation, press maintenance, and process color. (6 hours per week)

GA 170 Color Separations (A) ..... 2 credit hours

Objective of course is to make process color separations for satisfactory offset press process color printing. The specific areas covered will be the use of color filters, masks, pan film, continuous tone film and the actual making of four-color separations for process printing. (3 hours per week)

GA 200 Intermediate Lithographic Operations & Process Color (A) ..... 12 credit hours

Continued upgrading of basic skills, introducing process color, stripping for color, multiple of exposures, mixing P.M.S. Inks and printing and registering process color. (15 hours per week)

GA 210 Advanced Lithographic Operations & Computerized Typesetting (A) ..... 12 credit hours

Advanced training of skills, including color separation and computerized typesetting. (15 hours per week)

HEAVY EQUIPMENT

EO 100 Heavy Equipment Operation (R) ..... 16 credit hours
Per Quarter

This nine-month program will include the following: (20 hours per week)

Operation of heavy equipment
Safe operating practices
Grade stake observations
Cuts and fills
Profiles and stationing
Preventive maintenance
Shop planning
Visits to construction sites
Guest lecturers

HYDRAULIC MECHANICS (R)

FP 100 Hydraulic Mechanics (R) ..... 16 credit hours
Per Quarter

Combination lecture-laboratory course designed to prepare hydraulic mechanics capable of performing duties in the industrial field of hydraulics. (20 hours per week)

Basic components of hydraulic systems
USASI symbols
Schematics and formulas of hydraulic systems
Hydraulic pumps and motors
Horsepower requirements
Pump sizes
Overload
Testing and alignment of pumps and hydraulic motors
Torque and horsepower relationships
Flow control and pressures
Design of hydraulic systems
Troubleshooting hydraulic systems
Hydraulic controls and circuits

FP 102 Industrial Hydraulic Controls and Circuits (R) ..... 4 credit hours

Pressure, volume and directional valves both manual and electrically operated controls are studied. Attention is also given to circuit design. (5 hours per week)

FP 103 Pumps and Motors (R) ..... 4 credit hours

Topics covered include pumping fundamentals related to industrial applications. Gear pumps, single and double

pumps, vane pumps, radial piston and axial piston pumps and pumping units and variable delivery pumps. (5 hours per week)

FP 200 Pneumatics (R) ..... 16 credit hours
Per Quarter

Basic pneumatic systems related to industrial shop applications are studied. (20 hours per week) Areas studied are:

Compressors, regulators and receivers
Air tools
Pneumatic circuits
Valves and piping
Overhaul, repair and testing
Test stand and related test equipment
Pneumatic instrumentation
Fluidic systems and troubleshooting
Wall attachments
Repair of fluidic devices

INDUSTRIAL-COMMERCIAL DRAFTING TECHNOLOGY

D 100 Mechanical Drafting Theory and Techniques (A, N, R) 16 credit hours
Per Quarter

The development of basic drafting techniques and principles necessary to understand and perform the various applications of mechanical drafting concepts.

Industrial Tours
Lettering and Linework
Geometric Constructions
Sketching
Orthographic Principles
Isometric & Pictorial Drafting
Sections & Conventions
Dimensioning
Fastening Devices
Mechanical Concepts
Welding Concepts
Materials & Processes
Charts & Diagrams
Inking Procedures
Assembly & Detail Drawings
Tolerance Development
Intersections & Developments
Descriptive Geometry
(20 contact hours per week)

D 200 Industrial Drafting Principles (A, N, R) ..... 16 credit hours
Per Quarter

Prerequisite: D 100 Mechanical Drafting Theory & Techniques

An advanced course introducing the student to the broader aspects of the drafting field, or its applications and systems.

Drive Systems & Components
Drafting Mathematics Applications-Smoley's Tables
Small Mechanical Components
Large Mechanical Assemblies, Tanks, and Equipment
Material Handling Principles & Applications, Flow Sheets, Design Modifications to and Installation of Plant Equipment
The Integration of
Architecture
Civil
Electrical
Structural
Pipe
Hydraulic & Pneumatic Systems to the Drafting Field
(20 contact hours per week)

D 250, D 251, D 252 Industrial Pipe Drafting (N) ..... 8 credit hours
Per Quarter

Prerequisite: Students must be competent in the basic skills of drafting, as determined by the instructor

The primary function of process piping drafting is to acquaint the student with the terminology of piping as used in heavy industry such as refineries and chemical plants.

Emphasis is placed on preparation of piping systems using correct piping symbols, dimensions and notes. (10 contact hours per week)

TOTAL CREDIT HOURS: 24

TOTAL CONTACT HOURS: 300

Upon the successful completion of 300 hours in Pipe Drafting, a certificate may be awarded.

D 261 Project in Machine Drafting (N) ..... 4 credit hours
Prerequisite: Mechanical Technology Drafting Major or Consent of Advisor

Coordination of drafting and machine shop experiences by developing complete assembly and detail requirements for a project produced by the student in the machine shop. May be used as an elective by other drafting students.

INVENTORY CONTROL (A)

IC 100 Inventory Control (A) .... 12 credit hours

A beginning course for those who have had no previous instruction in inventory control and its related applications. An introduction to basic systems and operational tools and machines, designed to acquaint the student with the purpose of inventory and the basic fundamentals, structure, functions and organization of controls. (15 hours per week)

IC 100 Inventory Control (A) .... 12 credit hours
Prerequisite: IC 110

An accelerated introductory course covering applied techniques in organization, inventories, production controls, horizons and levels of detail, incorporating the role of judgment and skill. (15 hours per week)

IC 100 Inventory Control (A) .... 12 credit hours
Prerequisite: IC 120

A study of project planning, decisions on production, methods for forecasting and scheduling related to systems of controls. An in-depth study of case histories from small two-shelf operations to operations to large corporate complexities. (15 hours per week)

MACHINE SHOP

MS 100 Basic Machine Tool Operation and Theory (N) ..... 16 credit hours
Per Quarter

The development of knowledge and skill in performing

basic operations and set ups on the following machine tools and accessories:

Lathe
Shaper
Mills
Rotary table vice
Boring Heads
Grinding Mchns.
Hand Tools
Indexing
Taper attachments
Drill Presses
Machine Shop Theory as necessary
Shop Drawing
Machine Measuring Instruments
(20 hours per week)

MS 200 Special Machine Tools, Setups and Processes (N) ..... 16 credit hours
Per Quarter

Prerequisite: MS 100 or consent of advisor

The development of knowledge and skill in the areas of special machine tools, setup, and processes listed below:

Tracer Lathes
Turret Lathes
Peg Board Automatics
Numerical Controlled Machines
Machine Repair
Tooling
Estimating Costs
Planning Production
Inspection Methods
Special Setups and Job Types
Fixtures and Production Runs
Theory in all areas as necessary
Study of Metal Properties
(20 hours per week)

MANUFACTURED HOUSING TECHNOLOGY

MH 100 Mobile Home Service (R) ..... 16 credit hours
Per Quarter

This nine-month mobile service program will acquaint the student with all service work that is required to keep a mobile home liveable: setting and blocking; skirting and tiedown; utility hookup; customer relations; structure repair and adjustment; electrical trouble shooting; blueprint reading; plumbing; appliance installation and adjustment; and damage estimating.

MH 102 Mobile Home Service (R) ..... 4 credit hours

Objective of this course is the development of knowledge and skill in performing service work on mobile homes. (5 hours per week)

MINERAL INDUSTRY TECHNOLOGY (R)

MI 101 Mining (History, Romance, Magnitude, Future) (R) ..... 3 credit hours

This course is designed to familiarize the student with mineral generalities in a practical language that will explain its magnitude, economic importance, history and excellent employment opportunities. It will prepare the student with a basic industry terminology that will be useful later when more specialized courses are given and also in the field after graduation. (3 hours per week)

MI 102 Mining (R) ..... 3 credit hours

Continuation of MI 101. (3 lecture hours per week)

MI 103 Mining Drafting (R) ..... 8 credit hours

Prerequisite: 4 cr. hrs. of drafting fundamentals

Graphical methods for the representation of bearing, slope, strike and dip. Intersection of mine workings and veins. Fault and fold problems. Determination of strike and dip from rotated cores and drill holes. Stereonet solutions. (10 hours per week)

MI 104 Ore Deposits (R) ..... 4 credit hours

Prerequisite: G 111 and G 112

This course will cover methods for determining the size, shape and value of a mineral deposit. Plans will be discussed for further exploration development, determination of a mining method and final determination of the ore. (5 hours per week)

MI 105 Mineral Explorations (R) ..... 4 credit hours

Prerequisite: MI 101 and MI 102

This course will cover the practical operation of geophysical exploration equipment in class and in the field. Also, application of geochemical principles in the field will be studied from the standpoint of the technician's duties. (5 hours per week)

MI 201 Mining (History, Romance, Magnitude, Future) (R) ..... 3 credit hours

This course is a continuation of MI 102. Flowsheets from various mineral industry plants will be discussed throughout in an effort to correlate the data given in greater detail in other classes.

The history of the development and improvement of various mining and metallurgical equipment, from single to jack to jumbo and from a hand jig to flotation and solvent extraction, will be discussed. Visits to selected mining industries will be a requirement of this course. (3 hours per week)

MI 202 Rock and Mineral Sampling (R) ..... 4 credit hours

This course will explain the operations of exploration, development and extraction and give the reasons for taking samples at various points. Rock and mineral sampling by knowledgeable, intelligent and careful technicians followed by reliable, analytical determinations are the foundation of the mineral industry since it gives management true basis on which to plan. (5 hours per week)

MI 203 Mine Design (R) ..... 4 credit hours

Surface mining operations, ore grade control and cost estimation. Underground mining methods and design for optimum operation. (5 hours per week)

MI 204 Mining Equipment (R) ..... 4 credit hours

The operation of mining machines will be studied from single jack drilling to multiple mounted hard-rock drilling machines on jumbos; underground ore transportation machine development from hand-pushed cars on steel rail to rubber-tired shoveling machines which combine shoveling and transportation in the same unit. Coal mining equipment from the pick and shovel days to the latest in continuous miners will be described. Machinery manufacturers'

sales representatives will attend classes and describe their equipment. The students will operate available equipment under real or simulated conditions. (5 hours per week)

MI 205 Plant Product Sampling (R) ..... 4 credit hours

This course will explain the operations of concentration of minerals, the extraction and refining of metals and/or metal products by mechanical hydrometallurgical or pyrometallurgical processes. It will explain how samples at various points in the operation are crucial to its success and how, quite often, sampling and analysis must go on continually so as to adjust the process flow automatically. (5 hours per week)

MI 206 Metal and Alloy Sampling (R) ..... 4 credit hours

Pure metal and alloy production sampling by many standard methods will be studied; and the importance of the correlation of molten samples of alloys with drill hole samples of cast billets which tend to segregate upon cooling. The preparation of metal and alloy samples for microscopic work will also be studied. The importance of taking accurate samples will be stressed. (5 hours per week)

MI 207 Mill Equipment Operating Techniques (R) ..... 4 credit hours

This course will use the same methods of presentation as those used in MI 204 except it will cover equipment used in concentrating plants; leaching plants using acid, cyanide or other solvents; pyrometallurgical plants, refineries, industrial mineral plants and coal washeries. Field trips for on-site inspection. (5 hours per week)

MI 208 Mining and Mineral Law (R) ..... 3 credit hours

Mineral and mining laws of the United States and various State Laws. Conveyance of mineral interest, deeds and assignments. Guest speakers will supplement lectures. (3 hours lecture per week)

MI 209 Mine Safety and Ventilation (R) ..... 3 credit hours

Causes and prevention of accidents in metal and coal mines. Safety regulations. Mine rescue and first-aid training. Fundamentals of mine ventilation to control gas and dust. (3 hours per week)

PHOTOGRAPHY

PT 101 Photography I — Fundamentals of Photography ..... 8 credit hours

An introductory course teaching the student the mechanics of the camera, characteristics of different black and white films, development of film, and printing control fundamentals. Emphasis will be placed upon developing sound darkroom techniques producing good negatives and print quality.

PT 102 Photography II — Intermediate Photographic Methods ..... 8 credit hours

The visual concept of the photograph is developed in relation to the fundamentals of lighting composition and the students own visual awareness. The student will gain additional practical experience with roll film cameras, accessories and more sophisticated darkroom equipment and techniques.

PT 103 Photography III — Applied Photographic Technique ... 8 credit hours

Solutions to practical assignments in photography are explored. Techniques of producing functional photographs and the use of both small and large format cameras as tools for the examining and transmission of facts and ideas are taught.

PT 115 History of Photography ..... 4 credit hours

The course covers in depth the men who helped shape photographic history and contemporary photographers who are presently shaping photographic history for tomorrow. Significant photographic advances in techniques and equipment will also be covered.

PT 116 Portrait Photography I — Beginning Portrait Fundamentals ..... 4 credit hours

Basic studio portrait lighting, camera angles, and posing will be covered. Also an introduction to outdoor environmental portraiture will be taught.

PT 201 Commercial Photography I — Advertising Fundamentals of Photography ..... 4 credit hours

Covers mechanics and techniques of commercial photography intend for use in advertising. Introduction to photographic layout. Shooting will be done in both black and white and color film covering a variety of advertising products and services.

PT 202 Commercial Photography II — Intermediate Advertising Photo Methods ..... 4 credit hours

A continuation of PT 201 with the emphasis on refining photographic composition, color coordination, selection of models and props, scouting locations. More advanced lighting and camera techniques are also covered.

PT 203 Commercial Photography III — Advanced Advertising Photo Techniques ..... 4 credit hours

Business procedures for commercial photography. Assignments include work in fashion, automotive, industrial, architectural, cosmetic, food, and scenic photo illustration. Joint projects with commercial art majors are given to prepare students for professional photographer-art director relationship. Work for portfolio includes both assigned problems and specialties selected by students themselves.

PT 211 Color Photography I — Introduction to Color Photography ..... 4 credit hours

Covers basic color theory. Assignments utilizing fundamentals, applications of color, light, color films, color filters, color lighting, and the preparation of color transparencies.

PT 212 Color Photography II — Color Printing and Processing ..... 4 credit hours

Emphasis on color darkroom work including production of color negatives and prints. Filtration in producing good quality prints, the operation of specialized color equipment, and the use of different color film will be covered.

PT 213 Color Photography III — Advanced Color Techniques ..... 4 credit hours

Advanced procedures in camera and color darkroom technique and color composition. Internegative production and experimental assignments in color photography are given.

PT 216 Portrait Photography II — Advanced Portrait Techniques ..... 4 credit hours

A continuation of PT 116 implementing advanced studio and environmental portrait techniques. Emphasis placed on the professionally finished portrait including retouching, spotting and packaging.

PT 221 Editorial Photography ..... 4 credit hours

Practical problems in photography for publication. Includes evaluation of editorial use of photography and the picture story. Course includes an exploration of photojournalism and its impact on American culture.

PT 222 Photographic Art and Design ..... 4 credit hours

The course is intended to develop an awareness and sensitivity to shared concepts among other disciplines in the arts. Emphasis on visual awareness and personal creative expression. Utilization of the photo silkscreen, still life, and experimental camera and darkroom techniques.

PT 223 Nature Photography ..... 4 credit hours

A course designed to help the student become more concerned and visually aware of the natural environment through studying and photographing a variety of different landscapes and natural forms. The student also acquires a valuable basic understanding of the natural world, special photographic techniques and a broader concept of man's attitude toward his environment.

PT 231 Special Project Photography ..... 4-12 credit hours

To be taken the last quarter before the student graduates. Course designed to give the student a chance to demonstrate his proficiency in a specialized area of professional photography. Problems to be solved at the highest professional level possible.

PT 232 Advanced Photography Workshop ..... 4-12 credit hours

A course designed to give the student a chance to work on a specific class will complete an in-depth photographic essay on something of great interest outside his local environment to be hung in exhibition upon completion.

PT 233 Commercial Production ..... 4-12 credit hours

Gives the student the opportunity to get practical work experience by working with businesses that employ professional photographers. Course designed to give the student true to life work situation in photography.

Optional Courses

IO 297 Cooperative Work Experience ..... 3-12 credit hours

In some program areas, cooperative work experience is a part of the course study. The student is placed at a work station, somewhere in the Metropolitan Denver area, which is related to his educational program and occupational objective. He works under the immediate supervision of experienced personnel at the business, industry or agency involved, with a College Coordinator providing general coordination. Prerequisites for enrollment to Cooperative Work Experience are permission of the instructor and approval of the Cooperative Work Experience Coordinator.

IO 299 Independent Study .... 1-12 credit hours

Provides an opportunity for the serious-minded student to engage in intensive study and research on a special topic under the direction of a qualified faculty member. Conditions for electing this course will be evaluated by the Director of the Division of Industrial Occupations, who will assist in selecting an advisor and determine the amount of credit to be granted.

PT 224 Introduction to Motion Photography ..... 4 credit hours

Introduction to motion photography will cover the different types of motion cameras, and film involved in producing motion pictures.

PT 225 Motion Photography and the Media ..... 4 credit hours

How motion photography and the mass media work together as a communicative device.

PT 226 Editing Motion Pictures ..... 4 credit hours

The course will prepare the student in the area of telling stories on motion pictures.

PT 227 Film Making ..... 4 credit hours

The course will enable the student to have a true knowledge of how educational movies are made for reproduction and presentation.

PLUMBING

PL 100 Plumbing (R) ..... 16 credit hours
Per Quarter

This plumbing program will acquaint the student with shop procedures of the plumbing trade. (20 hours per week)

Safety requirements
Use and care of hand tools
Materials and fitting identification
Plumbing mathematics
Intro. to State Plumbing Codes
Pipe theory and calculations
Basic hydraulic principles

PL 200 Plumbing (R) ..... 16 credit hours
Per Quarter

(20 hours per week)

Blueprint reading & sketching
Plumbing theory and calculations
Pipe shop and sizing
Advanced plumbing mathematics
Study of plumbing code
Drainage, waste, and vents
Standards and specifications

PL 201 Blueprint Reading and Sketching (R) ..... 4 credit hours
Per Quarter

The student will express his knowledge of the proper identification of symbols used on plumbing blueprints and

will understand the sketching of various plumbing diagrams and schematics.

TOTAL CREDIT HOURS: 137

TOTAL CONTACT HOURS: 1690

QUALITY ASSURANCE

QA 100 Introduction to Quality Assurance (A) ..... 4 credit hours

A survey course that traces the development of the concept of quality assurance. Emphasis will be on process control, product acceptance, the rejection and corrective cycle, and quality costs. (3 hours per week)

QA 101 Principles of Quality Assurance I (A) ..... 4 credit hours

Prerequisite: QA 100, or equivalent

A basic course on scope and function of quality assurance, including regulations, records, vendor selection, procurement quality and inspection, and measurement techniques. (3 hours per week)

QA 102 Principles of Quality Assurance II (A) ..... 7 credit hours

Prerequisite: QA 101

A continuation of QA 101, including the interpretation and use of quality assurance data. Material control, rejection analysis, measuring instruments, electronic requirements are covered. (7 hours per week)

QA 201 Theory and Application of Quality Assurance I (A) .... 7 credit hours

Presents the latest techniques of quality assurance at the component, the assembly, and the systems level. Quality assurance is analyzed from design concept through consumer use and disposal, including sampling, testing, data analysis, and interpretation. (4 hours per week)

QA 202 Theory and Application of Quality Assurance II (A) ... 4 credit hours

Prerequisite: QA 201 and Physics 112

A continuation of QA 201 with emphasis on statistical analysis, cost analysis, case problem solving applications, and configuration identification and control. (4 hours per week)

QA 203 Advanced Quality Assurance (A) ..... 4 credit hours

Prerequisite: QA 201

An analysis of the total concept of quality assurance, including special quality experiments and quality cost optimization. Sampling by attributes and variables and troubleshooting quality problems, and the application of statistical techniques to the manufacturing process are included. (4 hours per week)

QA 205 Nondestructive Testing (A) ..... 2 credit hours

Prerequisite: QA 100 and Physics 101

Provides a background in industrial nondestructive testing. Emphasis is given to the methods used to preduct equipment performance and to the proper use of each nondestructive test. Advantages and limitations of nondestructive testing methods are reviewed. (4 hours per week)

QA 206 Metrology (A) ..... 2 credit hours

A study of the common measuring instruments that are used in quality assurance. Included are electrical, pressure, vacuum, vibration, acceleration, human error and data evaluation. (4 hours per week)

QA 207 Electronic Quality Assurance (A) ..... 2 credit hours

Prerequisite: ET 101

A study of procurement quality assurance techniques and policy, including regulations, records, vendor selection, and monitoring, inspection measurement instruments, test equipment and control charts applicable to receipt and shipment of goods. (4 hours per week)

QA 208 Procurement Quality Assurance (A) ..... 3 credit hours

Prerequisite: QA 100, or equivalent

A study of procurement quality assurance techniques and policy, including regulations, records, vendor selection, and monitoring, inspection measurement instruments, test equipment and control charts applicable to receipt and shipment of goods. (4 hours per week)

SPORTS, CRAFT & SPECIALTY AREA MECHANICS

SE 100 Specialty Area Mechanics (N) ..... 16 credit hours
Per Quarter

Development of knowledge and skills needed to perform both diagnosis and repair operations on the following equipment:

Two-stroke Engines and Components
Four-stroke Engines and Components
Wankel Rotary and Components
Outboards
Cycles
Snowmobiles
Lawn Equipment
Chainsaws
Miscellaneous Small Engine Powered Equipment
(20 hours per week)

SURVEYING

NOTE: This surveying curriculum is a practical course, supported by theory. Since practice can only be obtained in the field, the student and his surveying team members should be prepared to spend at least one full day per week in the field irrespective of weather conditions.

SU 102 Basic Surveying (R) ..... 12 credit hours

Prerequisite: Consent of Instructor

An introductory course in the use and care of the chain and level. Field practice in horizontal and slopechaining; elevation determinations with the hand and engineer level. Office practice stresses theory and the importance of note taking. (3 hours lecture, 12 hours field work per week)

SU 103 Basic Surveying (For Non-Surveying Majors Only) (R) ..... 8 credit hours

An introductory course in the use, care, and theory of the level and transit. Office practice in the theory and problems of surveying. Field practice in leveling, traversing, triangulation and note taking. (10 hours per week)

SU 104 Advance Surveying (R) ..... 4 credit hours

Observation, analysis and presentation of basic linear, angular area, and volume field measurement to building and mining endeavors. Introduction to electronic surveying methods. Extensive field and office work. (5 hours per week)

SU 105 Mining Surveying (R) ..... 4 credit hours

This course will instruct the student to make surveys on the surface and underground at coal or ore mines to control directions and extent of mining. Calculations of volume of material in dumps, spoil piles or veins and amount of overburden to be removed is given. Maps of mine workings are studied. (5 hours per week)

SU 112 Drafting and Physical Measurements (R) ..... 8 credit hours

Basic drafting techniques and principles of three-dimensional projection concepts. The following areas are covered: Use and care of drafting instruments, lettering, sketching, geometric construction, orthographic projection and isometric drawings. The physical measurement concepts will be extended to length, angles and time measurements and their units as used in surveying. (4 hours lecture, 6 hours lab per week)

SU 113 Surveying Drafting (R) ..... 8 credit hours

Prerequisite: SU 112

Drafting techniques and concepts for the surveying draftsman, such as land plats, route survey drawings and maps. (2 hours lecture, 8 hours lab per week)

SU 203 Intermediate Surveying (R) ..... 12 credit hours

Prerequisite: SU 102

Use, care and theory of the transit. Field practice with horizontal and vertical angles applied to line and area problems. The magnetic compass and plane table are introduced. (3 hours lecture, 12 hours lab per week)

SU 204 Advanced Surveying (R) ... 8 credit hours

Prerequisite: SU 203

The use, care and theory of theodolites and electronic measurement devices. Field problems include triangulation, coordinate problems, route surveying and astronomical observations. (3 hours lecture, 7 hours lab per week)

SU 206 Photogrammetry (R) ..... 8 credit hours

Prerequisite: SU 102

The interpretation and elevation of aerial photographs. Use and theory of photogrammetric instruments from pocket stereoscope through projection plotters. (10 hours lab per week)

SU 214 Surveying Calculations (R) ..... 5 credit hours

Prerequisite: SU 102

Mathematical theory necessary for the understanding of the field problems and the use and theory of desk calculators and electronic computers. The student will be required to solve repetitious survey problems on a programmable electronic desk calculator and become familiar with FORTRAN for use with a computer. (5 hours lecture per week)

SU 215 Special Surveying Problems (R) ..... 4 credit hours

Prerequisite: SU 203

Theory and office practice in route surveying, urban and rural boundary surveys, and bridge, tunnel and mining surveys. The field work is deferred until the Spring Quarter Advanced Surveying, SU 204. (4 hours lecture per week)

SU 216 Legal Aspects of Surveying (R) ..... 4 credit hours

Practical and theoretical considerations of errors. Elementary statistics. (4 hours lecture per week)

SU 217 Technical Project (R) ..... 4 credit hours

An independent study in surveying of the student's own choice with the help and direction of a faculty member. The selection of a practical topic with "outside" contacts is stressed. A written report is required. (1 hour consultation per week)

SU 223 Error Analysis (R) ..... 4 credit hours

Practical and theoretical considerations of errors. Elementary statistics. (4 hours lecture per week)

TECHNICAL ILLUSTRATION

TI 214 Airbrush Technique I (A) ..... 4 credit hours

This course provides training in preparing art for technical manuals and diversified art. Various technical manuals, trade magazines, and advertising publications are studied. Airbrush techniques are used in shading techniques and photo retouching. (6 hours per week)

TI 215 Technical Illustration Seminar (A) ..... 3 credit hours

This course is devoted to giving the student an opportunity to explore various combinations of art and technical illustrations. Field trips are planned. (3 hours per week)

TI 216 Airbrush Techniques II (A) ..... 4 credit hours

A continuation of Airbrush Techniques I. Advanced shading techniques and photo retouching. (9 hours per week)

TI 218 Special Problem (A) ..... 6 credit hours

The student prepares a presentation folio preparatory to employment. This includes work in black and white, as well as color showing assemblies, cutaways, exploded views, spot drawings, visual aids, lettering aids and art aids. (7.5 hours per week)

TV TECHNOLOGY

TV 100 Basic TV Service (N) .... 16 credit hours

Per Quarter

This course is a series of learning experiences designed to provide a learner with the essential basic electronics knowledge and technical skills necessary to diagnose, troubleshoot, and repair radio receivers as well as home audio systems. Testing, troubleshooting, and repairing electronics equipment require two balanced elements: The first is knowledge of the basic components, circuits, and equipment, and the second is the application of this knowledge to specific problems. TV 100 provides both the essential knowledge and the practical application of these principles. Subject matter includes principles and

application of Ohm's Law, series and parallel DC and AC circuits, power, resistors, capacitors, inductors, transformers, magnets, batteries, thermistors, voltage dependent resistors, reactances, sensistors, measurements, test equipment, time constants, power supplies, vacuum tube amplifiers and oscillator, BJT and FET amplifiers and oscillators, solid state switches, microphone, speakers, soldering techniques modulations, superhetrodyne receivers, FM receivers, home audio systems, alignment, and troubleshooting techniques. The use of mathematical and electrical equations will be limited to that which is essential for the job and to clarify points. (20 hours per week)

VENDING MACHINE TECHNOLOGY

VM 100 1st Qtr. — Vending Machine I (A) ..... 16 credit hours
Per Quarter

Prerequisite: ET 102

This course is designed to teach trainees the plumbing, refrigeration, and coin and currency principles involved in the maintenance and repair of automatic vending machines. (20 hours per week)

VM 200 2nd Qtr. — Vending Machine II (A) ..... 16 credit hours
Per Quarter

Prerequisite: Vending Machine I

The object of this course is to instruct the students as to the principles of carbon dioxide systems as they apply to automatic vending machines and their maintenance and repair. They are further trained as to the operation of cup dispensers and methods of heating food and beverages and the maintenance and repair of the equipment for each. The students are taught the business procedures and techniques involved in the repair and maintenance of automatic vending machines. (20 hours per week)

VM 200 3rd Qtr. — Vending Machine III (A) ..... 16 credit hours
Per Quarter

Prerequisite: Vending Machine II

A continuation of Vending Machine II with emphasis on the various types of automatic vending machines and their respective operating principles, maintenance, and repair. (20 hours per week)

VM 200 4th Qtr. — Vending Machine IV (A)..... 16 credit hours
Per Quarter

Prerequisite: Vending Machine III

A further continuation of Vending Machine III with an in-depth study of the many types of automatic vending machines and the operating principles, maintenance, and repair of each. (20 hours per week)

WELDING AND FABRICATION

WE 100 Basic Welding and Theory (N,R) ..... 16 credit hours
Per Quarter

To develop sufficient skills in setting up and operation of welding equipment to permit entrance into the trade at the apprenticeship level.

Oxy-acetylene welding, brazing, soldering, and cutting
Arc welding — basic
Arc welding — advanced
Blue print reading
Theory and safety
(20 hours per week)

WE 200 Welding, Fabrication and Theory (N,R) ..... 16 credit hours
Per Quarter

To develop sufficient skills in setting up and operation of welding equipment to permit entrance into the trade at the advanced apprenticeship level.

MIG & TIG Welding
Welding and Fabrication — Project — Layout
Pipe Welding & Joint Layout
Blueprint Reading
Shop Theory
Safety
(20 hours per week)

WE 201 Ornamental Iron Work (N) ..... 16 credit hours

Prerequisite: All WE 100 Courses or Consent of Advisor

This course utilizes the basic skills of the WE 100 series and will provide for the development of skill in designing, laying-out and fabricating ornamental structures.

1. Oxy-acetylene Cutting, Brazing and Welding
2. Advanced Arc Welding
3. Blueprint Reading
4. Design from Predetermined Specifications
5. Bending & Scrolling
6. Finishing & Installations

(20 hours per week)

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