

Auraria Campus
1201 Acoma Street

North Campus
1001 E. 62nd Avenue

Red Rocks Campus
1209 Quail Street

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*Brockhaus
Beiswenger*



Vo-Tech

COMMUNITY
COLLEGE OF
DENVER



Catalog
1972-73



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***“Not what you
have done...
but what you
are ready to do.”***

**Dr. Leland B. Luchsinger
President Community College Denver**

**THE DENVER AREA COUNCIL
FOR
COMMUNITY COLLEGES**

*July 4 - Tues - 1 da
Sept 4 - Mon 1 da
Nov 22-24 - 3 da
Dec 25, 26, 27, 3 da
J1 1 da*

Mrs. H. C. Engdahl, Chairman Jefferson County
 Tracy J. Smith, Vice-Chairman Adams County
 Mrs. Harold V. Anderson, Secretary Boulder County
 Mr. H. J. Bleakley, Member Arapahoe County
 Mr. Richard W. Wright, Member Denver County



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Denver Area Council: Front Row, left to right; Mrs. Lila Engdahl and Mrs. Harold V. Anderson. Back Row, left to right; Tracy J. Smith, Richard W. Wright and H. J. Bleakley



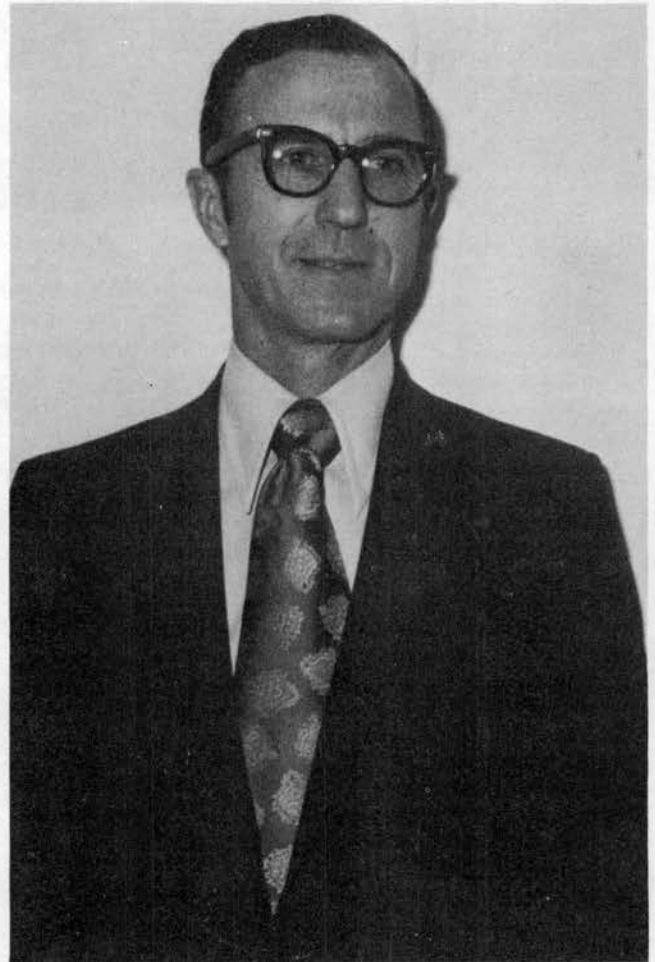
**Dr. Leland B. Luchsinger, President, Community College of Denver
—Multi-Campus**



Dr. Donald H. Godbold, Campus Director—Auraria Campus



Dr. John Swenson, Campus Director—North Campus



Dr. Joseph K. Bailey, Campus Director—Red Rocks Campus

KEY TO COURSE PREFIX LETTERS

Note: This is a listing of course prefix letters and the general course areas they denote.

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

1972-73 COLLEGE CALENDAR

SUMMER QUARTER - 1972

May 31*	Registration for Continuing Students Begins
June 6	Registration and Orientation for New Students Begins
June 21	Classes Begin
July 4	School Closed - Independence Day Holiday
July 26	Mid-term
August 21	Registration Begins for Students Returning Fall Quarter
August 30	Quarter Ends
August 31	Evaluation Day

FALL QUARTER - 1972

Sept. 11*	Registration and Orientation for New Students Begins
Sept. 25	Classes Begin
October 30	Mid-term
Nov. 21	Classes End for Thanksgiving Recess
Nov. 27	Classes Resume
Nov. 27	Registration Begins for Students Returning Winter Quarter
Dec. 7	Quarter Ends
Dec. 8	Evaluation Day

WINTER QUARTER - 1973

Dec. 12*	Registration and Orientation for New Students Begins
Jan. 4	Classes Begin
Feb. 8	Mid-term
March 5	Registration Begins for Students Returning Spring Quarter
March 15	Quarter Ends
March 16	Evaluation Day

SPRING QUARTER - 1973

March 19*	Registration and Orientation for New Students Begins
March 29	Classes Begin
May 3	Mid-term
May 28	School Closed - Memorial Day Holiday
May 29	Registration Begins for Students Returning for Summer Quarter
June 7	Quarter Ends
June 8	Evaluation Day

SUMMER QUARTER - 1973

June 12*	Registration and Orientation for New Students Begins
June 20	Classes Begin
July 2	School Closed - Independence Day Holiday
July 26	Mid-term
August 20	Registration Begins for Students Returning Fall Quarter
August 30	Quarter Ends
August 31	Evaluation Day

Commencement dates will be announced.

*Contact campus of your choice for specific dates, since early registration may not take place on each campus.

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Coding for location of courses on the respective campuses is as follows:

- A Auraria Campus
- N North Campus
- R Red Rocks Campus

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 Streets 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 3,500 students in the fall of 1971.

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 1971 enrollment of 2,400 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. Architectural plans are now completed for the first permanent site of the Red Rocks Campus.

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 1971. In the fall of 1971, 1527 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 1976.

All campuses of the College offer comprehensive programs of occupational and general studies. Occupational programs range from certificated programs of short duration of approximately three months, to programs leading to the Associate degree. Curricula of general studies are designed to transfer to four-year institutions and include other offerings designed to meet a variety of individual and community interests and needs.

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 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 guidance program staffed by counselors who are genuinely concerned with the educational, vocational and personal welfare of students.

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.

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 ac-

credits 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 temporary location of the Red Rocks Campus of the Community College of Denver is at 1209 Quail Street in Jefferson County, approximately four miles west of the west central boundary of the City of Denver and just north 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 and 1200 Broadway, 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.

Tuition

Tuition is \$78.00 per quarter for Colorado residents enrolled for 12 or more credit hours. The rate for fewer than 12 credit hours is \$6.50 per credit hour.

Tuition for out-of-state residents is \$390.00 per quarter for 12 or more credit hours and \$32.50 per credit hour for 11 or fewer credit hours.

The college reserves the right to alter tuition and fees at any time prior to the first day of registration for any quarter.

Fees

A Student Services 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 are generally made with the approval of the student government. Students enrolled in certain courses may be required to purchase individual supplies and materials and 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 only 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 which support the concept of fair play. These procedures are included in the Students 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 faculty advisors and the Dean of Student Services to register for more than eighteen credit hours.

It is recommended that employed students consult with a counselor 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.

Students who owe money to the college from a previous quarter will not be allowed to register in subsequent quarters until their financial indebtedness is paid.

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. 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

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.

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, 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 is limited to the challenging of courses which coincide with the student's major program and career objective and involves a recommendation from the division concerned, the payment of a fee, and a comprehensive examination.

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 employs 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 each quarter.

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
	<hr/> 14		<hr/> 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.

Graduation Requirements

Commencement ceremonies for all Community College of Denver graduates are held at the end of each quarter.

The conferring of Associate Degrees, the granting of Certificates of Achievement and Certificates of Completion, and the awarding of honors highlight the graduation exercises.

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 a minimum cumulative grade-point average at the Community College of Denver of 2.0.
3. Complete three quarter hours of English.
4. Complete the last fifteen hours in residence at the Community College of Denver. (In mitigating circumstances, this requirement may be waived by the Dean of Student Services).
5. 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.

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, the last fifteen credit hours must be earned at the Community College of Denver.
2. Earn a minimum grade-point average at the Community College of Denver of 2.0.
3. Complete three credit hours in speech or English in programs of longer than one quarter in duration.
4. 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.

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.

Requests for Transcripts

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 recordkeeping 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 for 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:

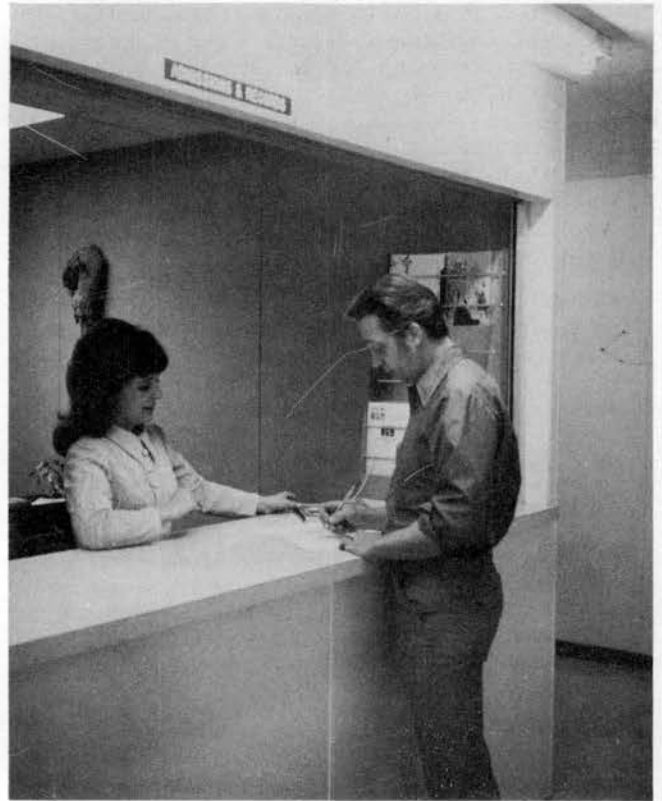
Submit an application form, available from Colorado high schools or the Office of Admissions and Records. Submit an appropriate document validating one of the following:

1. *High School Graduation*—submit an official transcript showing graduation.
2. *G.E.D.* (General Education Development) Test scores accepted in lieu of high school graduation.
3. *Transfer from another college*—submit official transcripts of previous college work. (High school transcripts not required.)
4. *Individual Approval*
Non-graduates of high school under age 18 require special approval from the Dean of Student Services.
5. *Other*—(Transcripts are optional; however, they may be requested at the discretion of the Registrar.)
 - a. Non-graduates of high school, 18 and over.
 - b. College graduates.
 - c. Persons completing high school more than 8 years prior to entering Community College of Denver.
 - d. Persons who have attended another college more than 8 years prior to attending Community College of Denver.

At the option of the individual campuses, all required documents must be on file in the Office of Admissions and Records by the end of a student's first quarter at the Community College of Denver. 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.

Counseling Services

The Counseling Division is dedicated to helping people. A qualified professional staff is available both days and evenings for exploration of such areas as educational planning, measurement of aptitudes, interests and abilities,



Admissions



Counseling

career plans, academic difficulties, marriage adjustment and interpersonal relationships.

The entire counseling staff is committed to the confidentiality of all information on any student as set forth by the American Psychological Association. **NO CONFIDENTIAL INFORMATION IS EVER GIVEN TO ANY INDIVIDUAL OR ORGANIZATION** without the written consent of the student.

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

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 selecting 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.

Testing:

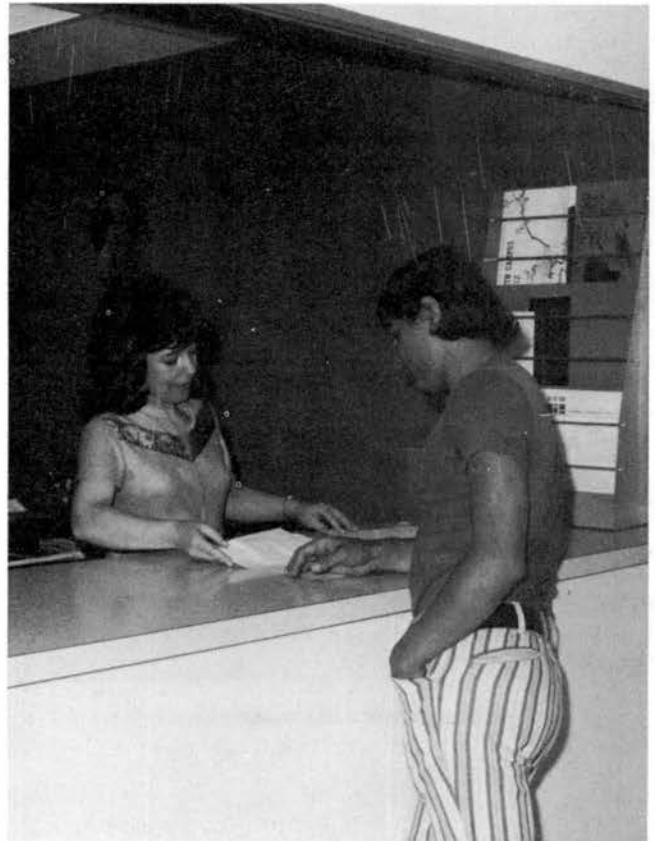
No entrance examinations or tests are required for admission to the College. Individuals contemplating transfer to another college are encouraged to take the ACT or SAT required by such institutions and have a copy of the results sent to the Community College. The college provides a testing program to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

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:

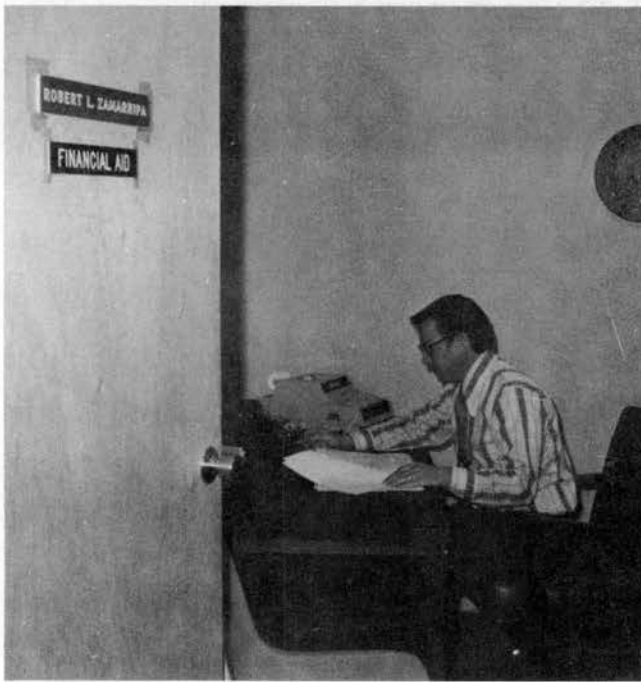
Most students who attend the Community College of Denver commute. Although the college does not operate a residence hall program, assistance is available



Admissions and Records—Red Rocks Campus



Career Center—Red Rocks Campus



Financial Aid—Red Rocks Campus

in obtaining suitable living quarters. Those desiring help may contact the Counseling Office.

Self-Exploration:

A three-credit seminar is offered to assist students in self-exploration and understanding and interpersonal relationships. The content will depend in part on the needs and desires of the students.

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.

Student loans are available through the National Defense Student Loan Program, Federal Nursing Student Loan Program and the Guaranteed 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 Educational Opportunity Grant (EOG) Program, Federal Nursing Scholarship Program and the Colorado Student Grant (CSG) Program. EOG grants are awarded to students from low-income families demonstrating financial need. Grants range from \$200 to \$1,000 per academic year. Federal Nursing Scholarship Funds are available only on North Campus to full-time nursing students and range up to \$1,500 depending upon need and availability of funds. CSG grants are awarded to students from low to medium income families to pay for tuition and books.

Part-time jobs are available through the College Work-Study and the Colorado Work-Study Programs. These programs are for students from low-income families and per-

mit the student to earn a portion of his educational expense through part-time employment on the campus.

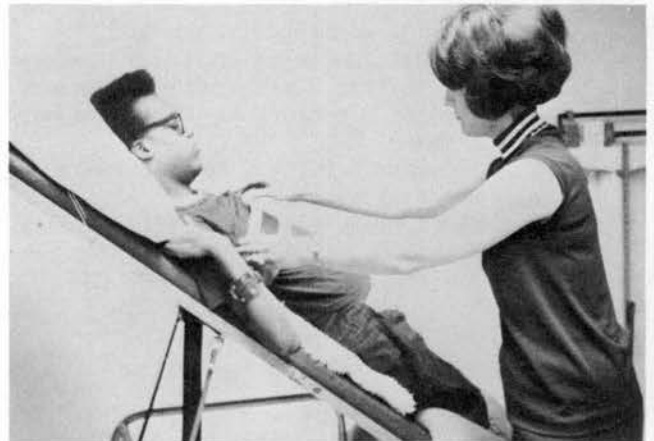
Health Services

College officials recognize the basic importance of good health to happy and productive study and citizenship and wish to encourage students in the development and maintenance of good health practices. Although the college does not provide an infirmary, a registered nurse is available in the Student Health Center to assist students with health emergencies and other health problems.

No group accident and sickness insurance program is available to students. The student should make arrangements for individual coverage with his own insurer. Students are encouraged to utilize the health services of the College.

Job Placement

The Placement Offices 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, and a record of available positions, both full and part-time, is kept in the Placement Offices. 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 Placement Services include assisting in resume development. Other services



Health Services—Red Rocks Campus



Job Placement—North Campus

are: application aids, job interview aids, summer employment, and volunteer listings. Students interested in full-time and part-time jobs should contact the Placement Office on their Campus and complete an application for employment.

Student Activities

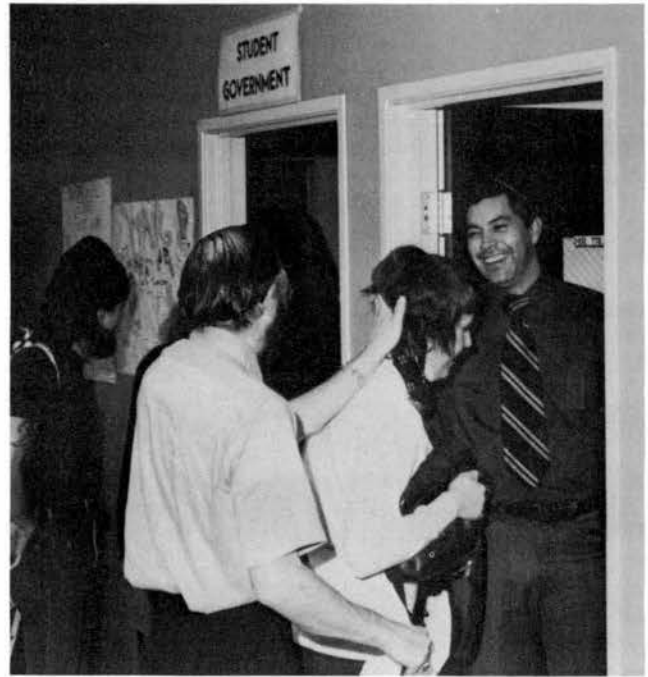
The College cooperates in the development of those student-initiated activities which supplement the more formal instructional program. Such activities are expected to provide constructive experiences which will stimulate personal growth and social development and add to the student's enjoyment of life. 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.

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 immediately to the Office of Admissions and Records any changes



Student Activities—North Campus



Bookstore—North Campus

in their program of studies. For further information contact the Veterans' advisor on each campus.

Students who are receiving G.I. benefits are obligated to notify the Veterans' office on campus when there is a change in their training status.

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.

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.

Bookstore

The College Bookstores market books, stationery, supplies, accessory items, and a minimal variety of nonprescription medicines (aspirins, etc.). At the completion of each quarter, books are repurchased if they are to be used the following quarter. All prices on texts offered for sale are determined by the publisher.

Food Services

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

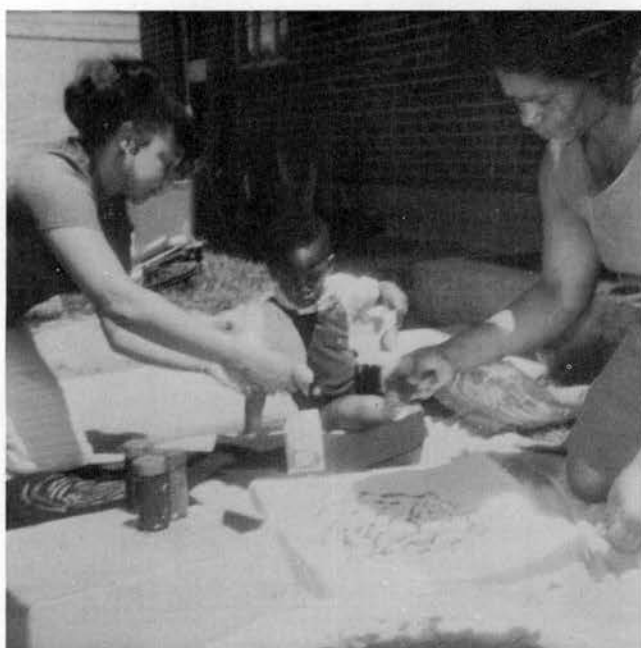
Community Services

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. Among the major functions of the Community Services Program are:

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 man-power data, conducting problem-oriented studies, identifying roles and goals of organizations.



Community Services



Community Services

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 multi-purpose 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.



Community Services—Counseling

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.

The Denver MDTA Skill Center

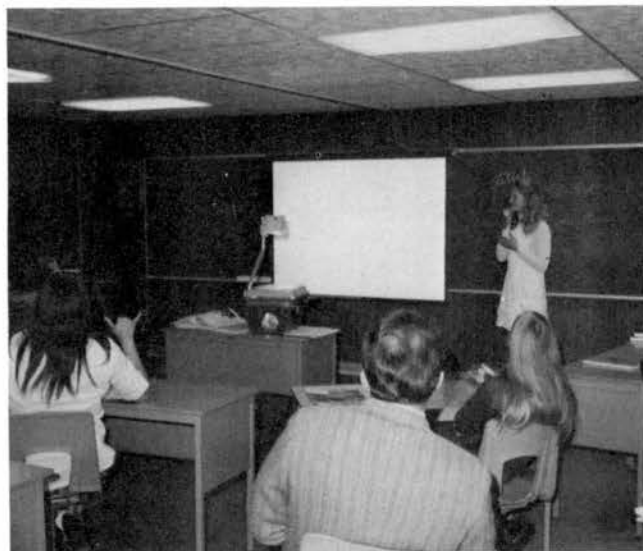
The Denver MDTA Skill Center is integrated into the Community College of Denver.

The Skill Center is authorized under the Manpower Development and Training Act of 1962 as amended. It is funded by H.E.W. through the State Board for Community Colleges and Occupational Education.

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

Center for the Hearing Impaired

To accommodate students with hearing losses, the Community College of Denver has established a Center for the Hearing Impaired which provides a broad organization of support services. A complete description of the occupational programs open to the deaf and the special services available to them will be found on pages 187 to 192 of this catalog.



Hearing Impaired—North Campus

**GENERAL STUDIES
PROGRAMS**

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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 curricula 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. In General Studies, the College provides the following four areas of emphasis for the Associate Degree:

1. General Education - This is awarded to the student who completes a broad program of courses without specialization. The student who seeks this degree with a view of transferring to a four-year college or university should carefully develop his program of study so that he can transfer with a minimum of difficulty.
2. Arts - This is designed for the student whose major emphasis of study is in Communication and Arts and/or Social Science. May be for transfer to a four-year college or university in his area of interest.
3. Science - This is designed for the student whose major emphasis of study is in Science or Mathematics. May be for transfer to a four-year college or university in his area of interest.
4. Business - This is designed for the student whose major emphasis of study in business. May be for transfer to a four-year college or university in his area of interest.

Degree Requirements

In addition to the general requirements listed on Page 9, the following specific requirements must be met for the Associate Degree.

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 below in order to be considered for the Associate Degree.

General Education

1. Successful completion of the following:
 - a. Nine (9) quarter hours of course work in English Language (may include any nine hours of course work in English Language selected by the student, but may not include literature courses). 9 hours
 - b. Nine (9) quarter hours of course work in the Division of Communications and Arts* (in addition to the nine hours in English Language). 9 hours

- c. Twelve (12) quarter hours of course work in the Division of Science and Mathematics 12 hours
 - d. Eighteen (18) quarter hours of course work in the Division of Social Sciences 18 hours
 2. Successful completion of electives of the student's choosing 42 hours
- Total 90 hours

*excluding course work in physical education

Arts

1. 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. 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

Science

1. 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. 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

Business

1. Successful completion of curriculum designed for transfer to a four-year college or university (see Page 59, in the Division of Business and Management Occupations section of the catalog).



Awards

Developmental Education

The program of studies in Developmental Education is intended to be highly individualized in order to provide opportunity for students to strengthen and develop their learning skills, to complete high school diploma equivalency requirements or to prepare for entry into Occupational or General Studies programs. Student needs are diagnosed and individual programs are planned, including study in learning laboratories and participation in fundamental and preparatory classes. The following program opportunities will be available according to individual needs.

Learning Laboratories:

Vestibule

Communications (reading, writing, speech listening)

Mathematics

Science

Social Science

Developmental

Communications (outlining, report writing, research techniques, scholarly writing)

Mathematics fundamentals of arithmetic, Algebra, Geometry)

Science (basic life sciences and physical science)

Social Science (fundamentals of world and U.S. history, U.S. government, and consumer economics)

Fundamental and Preparatory Courses:

English Language (basic written communication)

Mathematics

Science

Social Science



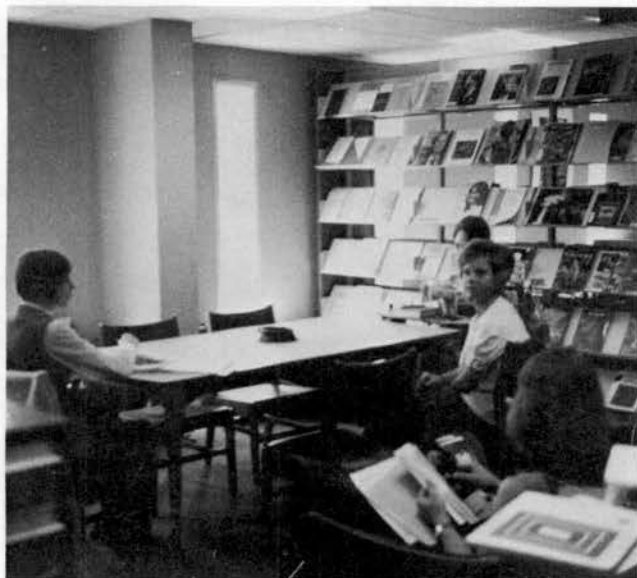
Developmental Education

LEARNING MATERIALS CENTER

At the Community College of Denver, the library plays a more vital role in the instructional program than libraries in traditional settings. Since it serves simultaneously as a library, study center, learning laboratory and instructional materials center, it is called the LEARNING MATERIALS CENTER or LMC. The goal of the LMC is not to be simply a repository for books and materials that are required in courses but also to assemble useful and interesting collateral materials. In order to meet realistically the many different needs of students, the LMC circulates to faculty and students a variety of educational media including books, periodicals, records, tapes, slides, transparencies, films, filmstrips, programmed materials, microfiche and microfilm for reading, viewing and listening. Audio-tutorial equipment is available for individual student use.

Inter-library loans are available through the Denver Bibliographical Center for Research, Colorado universities and colleges, the Colorado State Library, and other special libraries. The Jefferson County Public Libraries have placed a copy of their Book Catalog in the LMC on the Red Rocks Campus and have included that campus on their regular delivery schedule.

The professional and technical staff are available for consultation and production services of various educational media to the faculty and to the students.



LMC - Learning Materials Center

**DIVISION OF
COMMUNICATION AND ARTS**

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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, R) 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. (3 hours per week)

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 101 or 102 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, R) 3 credit hours

Fundamentals of form, color, visual perception, principles of composition, organization and structure introduced with experimentation in two-dimensional problems in design. (6 hours per week)

AR 106 Basic Design (A, N, R) 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, R) 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) 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) 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) 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 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 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 202 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) 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) 3 credit hours**
Prerequisite: AR 215 or permission of instructor
Continuation of AR 215. (6 hours per week)
- AR 217 Figure Drawing III (A) 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 and 222. (6 hours per week)
- AR 231 Ceramics I (A) 3 credit hours**
This is an 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) 3 credit hours**
Prerequisite: AR 231 or permission of instructor
(6 hours per week)
- AR 233 Ceramics III (A) 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 (A, N) 3 credit hours**
Earliest stone age to the Roman Era: Painting, sculpture, architecture, minor arts. (3 hours per week)
- AR 242 History of Art (A, N) 3 credit hours**
Beginning of the Roman Era to the 18th Century: Architecture, painting, sculpture, minor arts. (3 hours per week)



Art—Red Rocks

- AR 243 History of Art (A, N) 3 credit hours**
Eighteenth Century of contemporary. European and American; Primitive African and Oceanic: Architecture, painting, sculpture, and minor arts. (3 hours per week)
- AR 245 Printmaking (A, 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, R) 3 credit hours**
Prerequisite: AR 245 or permission of instructor
Continuation of AR 245. (6 hours per week)
- AR 247 Printmaking III (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 3 credit hours**
Jewelry design, basic construction and surface treatment techniques in sterling silver. (6 hours per week)
- AR 252 Metalsmithing and Jewelry II 3 credit hours**
Prerequisite: AR 251 or permission of instructor
Continuation of AR 251. (6 hours per week)
- AR 253 Metalsmithing and Jewelry III 3 credit hours**
Prerequisite AR 252 or permission of instructor
(6 hours per week)
- AR 255 Basic Sculpture I 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) 3 credit hours**
Prerequisite: AR 255 or permission of instructor
Continuation of AR 255. (6 hours per week)

AR 257 Basic Sculpture III (A) 3 credit hours
Continuation of AR 256. (6 hours per week)

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

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

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

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

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

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 (A) 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: 112
Continuation and Expansion of CH 112 & 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 212
Continuation and Expansion of CH 211.

CH 213 Intermediate Chinese (A) 3 credit hours
Prerequisite: CH 212
Continuation and Expansion of 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 (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 3 credit hours
Selected contemporary novels particularly appealing to modern youth.

ENGLISH

EG 090 Communications Laboratory (A, N, R) 1-9 credit hours

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. Students may also be referred to the laboratory for special work with no credit.

EG 095 Comprehensive Business Communications (A, N, 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 proof-reading 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. (five hours per week)

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

EG 106 Occupational Communication (A, N, R)3 credit hours

EG 106 is 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

EG 107 is designed to develop the student's abilities in oral communication (speaking and listening) in his chosen occupational field. (3 hours per week)

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. (3 hours per week)

EG 111 English Composition (A, N, R)3 credit hours

EG 111 is 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

EG 112 is 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

EG 113 is designed to develop the student's understanding of creative 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. (3 hours per week)

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. (3 hours per week)

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 are presented. Students will compose and evaluate the various kinds of business letters that are commonly used by businessmen. Business reports, inter-office bulletins, news releases, and other forms of business composition will receive attention. The legal and ethical responsibilities involved in written communication will be discussed. (3 hours per week)

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. (3 hours per week)

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 judgements — are studied as a new approach to human understanding and improvement of human relations.

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 racial agitation.

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

EG 250 is 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)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. (3 hours per week)

EG 152 Intermediate Manual Communications (N) 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 finger-spelling. (3 hours per week)

EG 153 Advanced Manual Communications (N) 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. (3 hours per week)

EG 251 Specialized Manual Communications (N) 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. (3 hours per week)

EG 252 Supervised Practicum in Interpreting-I (N) 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) 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 2 credit hours
 Course 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 111 First Year French (A, N, 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, N, R) 5 credit hours
 Prerequisite: FR 111
 Continuation and Expansion of FR 111

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

FR 211 Intermediate French (A, N) 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 listening, 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, N) 3 credit hours
 Prerequisite: FR 211
 Continuation and Expansion of FR 211.

FR 213 Intermediate French (A, N) 3 credit hours
 Prerequisite: FR 212
 Continuation and Expansion of FR 212.

FR 214 Conversation and Composition French (A) 3 credit hours
 Conversation and Composition French is designed to increase vocabulary and develop oral and written proficiency at the intermediate level through discussions, reports, and situation dialogues. Prerequisites FR 213 or demonstration of sufficient language skills.

FR 215 Conversation and Composition (A) 3 credit hours
 Continuation and Expansion of FR 214.

FR 216 Conversation and Composition (A) 3 credit hours
 Continuation and Expansion of FR 215.

FR 241 Contemporary French Short Stories (A) 3 credit hours
 Selected examples of most representative authors.

FR 242 Contemporary French Theatre (A) 3 credit hours
 Selected plays representative of the French Stage.

FR 243 Contemporary French Novel (A) 3 credit hours
 Selected contemporary novels particularly appealing to modern youth.



Language Lab—Auraria Campus

COUNSELING

GC 100 Self-Exploration and Understanding (A, N) 3 credit hours

This seminar is designed as a type of discussion group to help provide the student with the opportunity to gain in 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.

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 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 & 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 212.

GR 214 Conversation and Composition (German) 3 credit hours

Conversation and Composition German is designed to increase vocabulary and develop oral and written proficiency at the intermediate level through discussions, reports, and situation dialogues. Prerequisite 213 or demonstration of sufficient language skills.

GR 215 Conversation and Composition German 3 credit hours

Continuation and Expansion of GR 214.

GR 216 Conversation and Composition German 3 credit hours

Continuation and Expansion of GR 215.

GR 241 Contemporary German Short Stories 3 credit hours

Selected examples of most representative authors.

GR 242 Contemporary German Theatre ... 3 credit hours

Selected plays representative of the German stage today.

GR 243 Contemporary German Novel 3 credit hours

Selected contemporary novels particularly appealing to modern youth.



Classroom—German

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 (A) 3 credit hours

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

HU 211 Humanities (A, R) 5 credit hours

HU 211 is 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

Prerequisite: HU 211

HU 212 is a comparative study of the arts and crafts of the world and the ways in which they have influenced human development and the ways in which human development has influenced them.

HU 213 Humanities (A, R) 5 credit hours

Prerequisite: HU 212

HU 213 is 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.

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)

JOURNALISM

JL 221 Introduction to Journalism (A, N, 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 (A, N, R) 3 credit hours

Prerequisite: JL 221

A continuation of 221.

JL 223 Introduction to Journalism (A, N, R) 3 credit hours

Prerequisite: JL 222

A continuation of JL 222.

LITERATURE

LI 125 The Black Writer in America (A) 4 credit hours

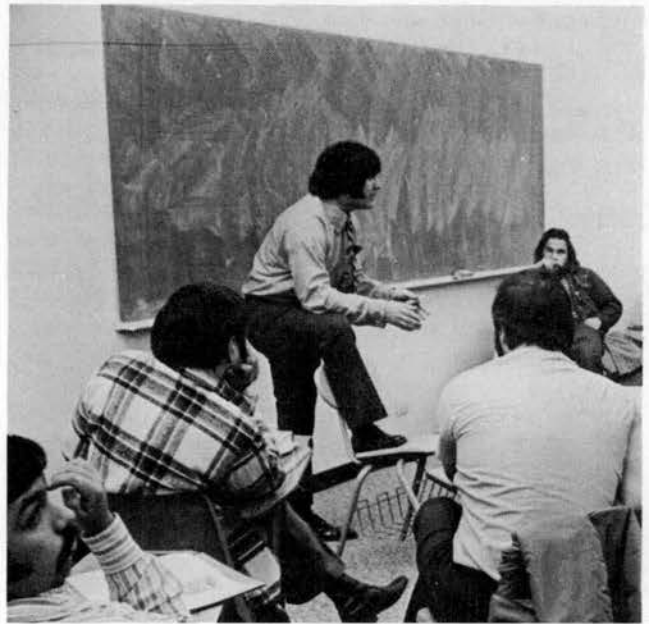
A beginning course in the study of Black literature, which includes the methods of evaluation and analysis essential for understanding and appreciating the literary contribution of the Black writer in America.

LI 141 Introduction to Literature (A, N, R) 3 credit hours

Short story and non-fiction - an overview and selected readings.

LI 142 Introduction to Literature (A, N, R) 3 credit hours

Novel and critical essay - an overview and selected readings.



Chicano Literature—Auraria Campus

LI 143 Introduction to Literature (A, N, R) 3 credit hours

Poetry and Drama - 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 and Adolescents (A, N, R) 3 credit hours

A general survey of prose and poetry suitable for children and adolescents.

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 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.

- 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 244 Contemporary Novel (A) 3 credit hours**
In-depth analysis of the novel with selected readings.
- LI 245 Contemporary Poetry (A, N, R) 3 credit hours**
Prerequisite: Permission of instructor
An in-depth analysis of poetical works by contemporary world poets 1900 to present. Will also include lesser known but highly regarded poets of the 1950's, 1960's, and 1970's.
- LI 246 Contemporary Short Story (A) 3 credit hours**
An in-depth analysis of contemporary short story writers.
- LI 247 English Literature 3 credit hours**
Critical insights into the major works from the Anglo-Saxon up to the Elizabethan Period.
- LI 248 English Literature 3 credit hours**
This quarter concentrates on major works of the Elizabethan Period to the Romantic Period.
- LI 249 English Literature 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 (A, N, R) 3 credit hours**
A study of development of African literature.
- LI 265 World Literature - Latin America (A, 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)
- 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 130 Band 1 credit hour**
Study of instrumental styles and literature from marches to large contemporary works. Can be repeated up to six hours credit.
- 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 (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 155 Woodwind Methods 1 credit hour

A course designed to introduce the methods of playing standard woodwind instruments. Fingering, tone production, care of instrument and representative literature will be stressed. At least two hours of outside practice per week is required.

MU 156 Brass Methods 1 credit hour

A course designed to introduce the methods of playing standard brass instruments. Fingering, tone production, care of instrument and representative literature will be stressed. At least two hours of outside practice per week is required.

MU 157 String Methods 1 credit hour

A course designed to introduce the methods of playing standard string instruments. Fingering, tone production, care of instrument and representative literature will be stressed. At least two hours of outside practice per week is required.

MU 158 Percussion Methods 1 credit hour

A course designed to introduce the methods of playing standard percussion instruments. Fingering, tone production, care of instrument and representative literature will be stressed. At least two hours of outside practice per week is required.

MU 161, 162, 163 Voice Class (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 and Harmony (N) 5 credit hours

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 171, 172, 173 Applied Music (A, N) 2 credit hours

Emphasis on an instrument, to increase or maintain individual's ability to perform. Literature pertinent to the chosen instrument will be studied and performed. One-half hour lessons will necessitate at least 6 hours individual practice per week. Weekly class session may be required of all applied music students.

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 (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 (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 (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 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 3 credit hours

Prerequisite: MU 241

Continuation of MU 241, emphasizing Classical and Romantic.

MU 243 Introduction to Music 3 credit hours

Prerequisite: MU 242

Continuation of MU 242, emphasizing Impressionistic and Contemporary.

MU 271, 272, 273 - 2nd Year Applied Music (N) 2 credit hours

Emphasis on an instrument, to increase or maintain individual's ability to perform. Literature pertinent to the chosen instrument will be studied and performed. One-half hour lessons will necessitate at least 6 hours individual practice per week. Weekly class session may be required of all applied music students.



Music

PHYSICAL EDUCATION

PE 101 First Aid (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—no prerequisite required.

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 Safety1 credit hour
Red Cross lifesaving and water safety instructor's certification. Prerequisites: PE 128 and 128 B.

B. Water Related Activities1 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

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 (R)1 credit hour

Beginning instruction in Western style riding and horsemanship.

PE 138 Canoeing (R)1 credit hour

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

PE 139 Yoga (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, N)1 credit hour

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

PE 142 Basic Mountaineering (R)1 credit hour

Basic instruction in mountain climbing safety and survival. NOTE: PE courses may be repeated to gain and develop proficiency.



Physical Education—Multi-Campus

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, N, 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.



Reading

RUSSIAN

RU 100 Basic Applied Russian 2 credit hours

To learn basic phrases and terms enabling the student to function minimally in specific situations.

RU 111 First Year Russian 5 credit hours

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

RU 112 First Year Russian 5 credit hours

Continuation and Expansion of RU 111.

RU 113 First Year Russian 5 credit hours

Continuation and Expansion of RU 112 & additional reading materials.

RU 211 Intermediate Russian 3 credit hours

This course will (1) review and reinforce skills and knowledge gained in first year Russian, (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.

RU 212 Intermediate Russian 3 credit hours

Continuation and Expansion of RU 211 (RU 211: prerequisite).

RU 213 Intermediate Russian 3 credit hours

Continuation and Expansion of RU 212 (RU 212: prerequisite).

RU 214 Conversation and Composition Russian 3 credit hours

Conversation and Composition Russian is designed to increase vocabulary and develop oral and written proficiency at the intermediate level through discussions, reports, and situation dialogues. Prerequisite: RU 213 or demonstration of sufficient language skills.

RU 215 Conversation and Composition Russian 3 credit hours

Continuation and Expansion of RU 214.

RU 216 Conversation and Composition Russian 3 credit hours

Continuation and Expansion of RU 215.

RU 241 Contemporary Russian Short Stories 3 credit hours

Selected examples of most representative authors.

RU 242 Contemporary Russian Theatre ... 3 credit hours

Selected plays representative of the Russian stage today.

RU 243 Contemporary Novel 3 credit hours

Selected contemporary novels particularly appealing to modern youth.



Classroom—Russian

SPEECH

S 102 Motivational Speech (A) 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 oralize ideas in order to enable students to become more effective speakers.

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

Continuation of S 111. S111 not required as prerequisite.

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

Continuation of S 112. S 111 and 112 not required as prerequisite.

S 131 Forensic Activity (A, N) 3 credit hours

Prerequisite: S 110

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

S 132 Forensic Activity (A, N) 3 credit hours

Prerequisite: S 110

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

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

Prerequisite: None

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

S 134 Reader's Theatre (A) 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 two-way and group discussion skills to determine the best methods of problem solving.

S 221 History of Theatre (A, N, R) 3 credit hours

Survey of great plays, playwrights, performers and critics. Includes weekly workshops on fundamentals of play-reading, acting, and dramatic production. Features historical backgrounds of dramatic creativity both lecture and film.

S 222 History of Theatre (A, N, R) 3 credit hours

Continuation of S 221.

S 223 History 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 experience in the various techniques and approaches through actual production.



Drama—Multi-Campus

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 090 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 091 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 092 Pre-Vocational Communication (A, N, R) 3 credit hours

This course will focus on advancing the student's standard English expression in written and oral skills. After his present level is evaluated, the fundamentals of standard writing will be taught, concentrating on his least strong areas. This may include: capitalization, punctuation, parts of speech, and agreement of predicate and subject. Vocational goals and habits will be stressed in oral English. (Minimum 3 hours per week)

SK 093 Spelling (A, N, R) 3 credit hours
 Students usually succeed through the use of new and different spelling techniques, although work on root words, endings, and occupational terms are included. (Minimum 3 hours per week)

SK 094 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 others' 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, N, R) 2 credit hours



Classroom—Spanish

SPANISH

SP 100 Basic Applied Spanish (R) 2 credit hours
 For those who wish to learn basic conversational Spanish for enjoyment or for 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
 Continuation and Expansion of SP 111. (Spanish 111 prerequisite)

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

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.

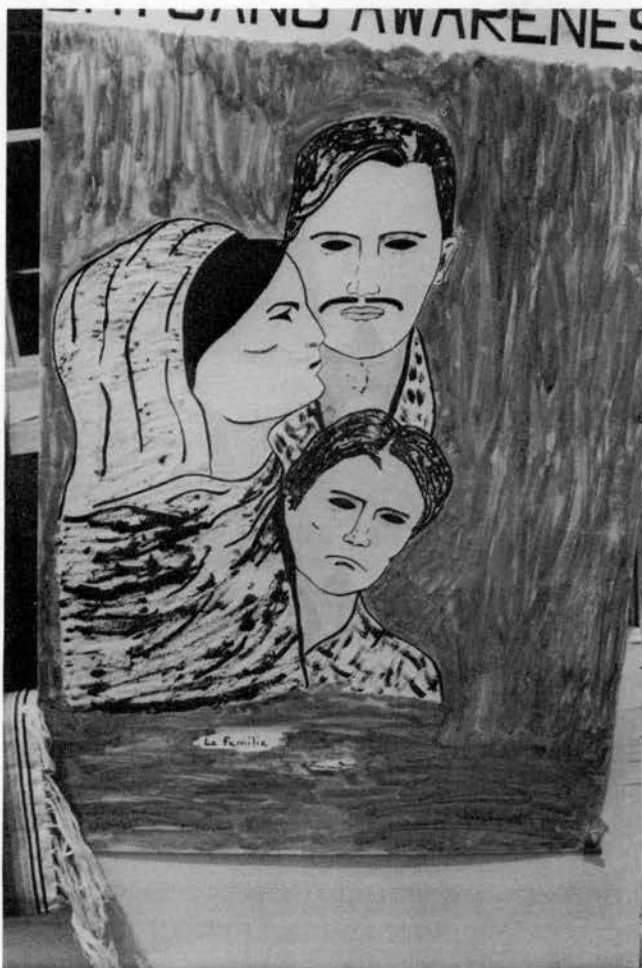
SP 123 Spanish to the Chicano (A) 5 credit hours
 Continuation of SP 122.

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
 Continuation and Expansion of SP 211. (Spanish 112 or 113 prerequisite)

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
 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. Prerequisite SP 213 or demonstration of sufficient language skills.



Chicano Awareness

SP 215 Conversation and Composition (A) 3 credit hours

Continuation and Expansion of SP 214.

SP 216 Conversation and Composition (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 Theatre ... 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.

SP 260 Spanish for Office Personnel (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 prerequisite. Deals with the commercial Spanish language used in both domestic and foreign offices. (3 hours per week)

SP 261 Spanish for Office Personnel (N) 3 credit hours

Prerequisite: SP 260

Continuation of Spanish 260. Develops a sound business vocabulary and introduces correct translation demanded when acting as an official interpreter for both written and oral business communication. (3 hours per week)

SP 262 Spanish for Office Personnel (N) ... 3 credit hours

Prerequisite: SP 261

Continuation of Spanish 261. Emphasizes practical applications through project work. Students will be involved with representatives from import-export firms, government offices, foreign consulates, and embassies. (3 hours per week)

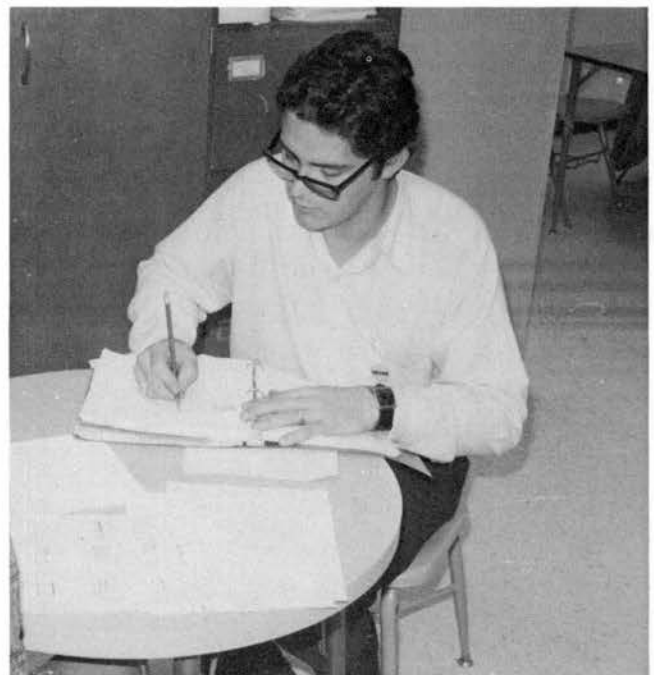
INDEPENDENT STUDY

....299 Independent Study 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.



Classroom—Spanish



Independent Study

**DIVISION OF
SCIENCE AND MATHEMATICS**

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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 099 Biological Learning Center (A, N, R) Non-credit

This center is designed for the student desiring assistance with any difficulty or project relating to biology. The center is supervised by members of the biology faculty; students may avail themselves of this facility voluntarily or may be referred by an instructor. A schedule of the times the center is staffed will be posted each quarter.

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

A survey course for health occupation students and others needing an understanding of basic biological and chemical concepts, as applied to the human body. Chemistry relevant to living systems will be discussed in conjunction with a survey of human organ systems. Primarily for students with insufficient background to enroll in B 123 Human Anatomy and Physiology. (3 hours of lecture and 3 hours of laboratory per week)

B 101 Biological Concepts (N) 4 credit hours

A course for liberal arts majors concerned with man's relationship with his environment. The ecology of Colorado will be emphasized to demonstrate basic environment principles. (3 hours of lecture and 3 hours of laboratory per week)

B 102 Biological Concepts (N) 4 credit hours

Prerequisite: B 101

The biological factors relating to behavior will be studied. The course will emphasize the anatomical, physiological and genetic bases for behavior. Adaptation, territory and home range will also be considered. (3 hours of lecture and 3 hours of laboratory per week)

B 103 Biological Concepts (N) 4 credit hours

Prerequisite: B 102

Biological problems such as nutrient procurement, gaseous exchange and transportation of materials will be studied in view of their solutions by the various plant and animal phyla. (3 hours of lecture and 3 hours 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, R) 5 credit hours

An integrated introduction to biology emphasizing molecular, cellular, developmental and genetic biology. (4 hours of lecture and 3 hours of laboratory per week)

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

Prerequisite: B 111

A study of living forms stressing the functional basis of life, chemical and neural control of life, and the coordination of the organism. (4 hours of lecture and 3 hours of laboratory per week)

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

Prerequisite: B 112

A survey of both the plant and animal kingdoms with additional emphasis placed upon population and community biology. (4 hours of lecture and 3 hours of laboratory per week)

B 120 Environment and Change (R) 3 credit hours

A study of wildlife, forests, grassland and soil in relationship to man. The nature of man, his belief and value systems, and his technology, will be evaluated in relationship to change in the environment. (3 hours per week, no laboratory)

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

Prerequisite: B 100 or C 101 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

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

B 130 Basic Health Science (R) 4 credit hours

A core biological science course for health science students. A survey of the basic principles and practices of health science as they relate to the student, his community and the health occupations. (4 hours of lecture per week, no laboratory)

B 131 General Biology (N) 5 credit hours

Prerequisite: C111 taken concurrently

A study of life and its basis of organization with an emphasis on biological concepts. The course will include a survey of the plant and animal kingdom. (4 hours of lecture and 3 hours of laboratory per week)

B 132 General Biology (N) 5 credit hours

Prerequisite: B 131, or consent of instructor, C 112 taken concurrently

A functional study of life emphasizing cellular and molecular aspects. (4 hours of lecture and 3 hours of laboratory per week)

B 133 General Biology (N) 5 credit hours

Prerequisite: B 132, or consent of instructor, C 113 taken concurrently

A study of life and its relationship to the environment. An ecological approach is utilized in the study of biological communities and populations. (4 hours of lecture and 3 hours of laboratory per week; Saturday field trips may replace laboratories)

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 occupa-

tions. (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 211 General Zoology (R)5 credit hours

Prerequisite: B 113

A survey of the invertebrate animals, their biology, structure and relationship to other animal groups. (4 hours of lecture and 3 hours of laboratory per week)

B 212 General Zoology (R)5 credit hours

Prerequisite: B 211

A study of the structure, body functions, interrelations, and natural history of the vertebrate animals. (4 hours of lecture and 3 hours of laboratory per week)

B 221 General Botany (R)5 credit hours

Prerequisite: B 113

A survey of the plant kingdom including life cycles, habitats, relationships and evolutionary aspects of the major plant divisions. (4 hours of lecture and 3 hours of laboratory per week)

B 222 General Botany (R)5 credit hours

Prerequisite: B 221

A study of seed plants, the conifers and flowering plants, their structure and functions. (4 hours of lecture and 3 hours of laboratory per week)

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

Prerequisite: B 113 or B 133 or equivalent 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 231 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 232 or consent of the 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)5 credit hours

Prerequisite: B 113 or B 133 or consent of instructor

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, func-

tion and role in nature and disease. (3 hours of lecture and 6 hours of laboratory per week)

CHEMISTRY

C 099 Chemistry Learning Center (A, N, R)non-credit

This center is designed for the student desiring assistance with any difficulty or project relating to chemistry. The center is supervised by members of the chemistry faculty; students may avail themselves of this facility voluntarily or may be referred by an instructor. A schedule of the times the center is staffed will be posted each quarter.

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

Prerequisite: One year of high school algebra or M 100 or equivalent

An introduction to the basic principles of chemistry. Emphasis is on atomic structure, chemical bonding, physical states of matter, solutions, and modern acid-base theory. Students who lack a basic understanding of the scientific method and the nature of physical science or who have not acquired basic mathematical skills should enroll in P 100 and/or M 100 before pursuing C 101. (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 the study of the principles of chemistry. Topics will include chemical equilibrium, kinetics, radioactivity, electrochemistry, and a survey of the chemistry of selected non-metals and metals. (3 hours of lecture and 3 hours of laboratory per week)

C 103 Fundamentals of 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 111 General College Chemistry (A, N, R)5 credit hours

Prerequisite: One year high school Algebra or M 105 and one year high school chemistry or C 101

C 111, 112, 113 constitute a three-quarter sequential course in the principles of college chemistry. Designed to take into consideration the superior background of today's high school graduates, the first quarter concentrates on the fundamental concepts of atomic structure, chemical bonding, the kinetic theory, chemical equations and stoichiometry. Students who lack the necessary prerequisites should first enroll in the appropriate mathematics course and/or C 101. (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 General College Chemistry with an emphasis on electro-chemistry, modern acid-base theory, thermodynamics, chemical equilibrium, and kinetics. (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 111 and C 112 with major emphasis on ionic equilibrium, complex compounds, chemistry of selected metals and an introduction to quantitative analysis. (4 hours of lecture and 3 hours of laboratory per week)

C 211 Organic Chemistry (A, 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 pre dental 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 (A, 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 (A, 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 099 Geology Learning Center (R) non-credit
AN 099 center for geology.

G 111 Introduction to Geology (R) 4 credit hours

An introductory course that explores the physical environment, which includes the interpretation and construction of geologic maps and experience with natural crystals, minerals, rocks, and fossils. (3 hours of lecture and 3 hours of laboratory per week)

G 112 Physical Geology (R) 4 credit hours

Geologic concepts relating to stream behavior, wave action, underground water, earthquakes, volcanoes, and glaciers will be explored. (3 hours of lecture and 3 hours of laboratory per week)

G 113 Historical Geology (R) 4 credit hours

The earth is studied from its origin to the present. Topics include the formation of mountains and plains, evolution of life on land and water, and the study of prehistoric plant and animal fossils. (3 hours of lecture and 3 hours of laboratory per week)

G 211 Mineralogy (R) 3 credit hours

Prerequisite: 113

The origin, occurrence, physical and chemical properties of common minerals. Uses of economic minerals and mining techniques. Colorado minerals will be emphasized, including tours of Colorado mines. (2 hours of lecture and 3 hours of laboratory per week)

MATHEMATICS

M 090 Mathematics Laboratory (A, R) 1-3 credit hours

An individualized course available to the student who has a mathematical goal for which credit hours are appropriate. His course of study will be planned and supervised by the mathematics staff.

M 099 Mathematics Learning Center (A, N, R) non-credit

This center is designed for the student desiring assistance with any difficulty or activity related to mathematics. The center is supervised by members of the mathematics faculty; students may avail themselves of this facility voluntarily or may be referred by an instructor. A schedule of the times the center is staffed will be posted each quarter.

M 100 Developmental 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 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. The slide rule will be introduced. (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, and also the slide rule covered in M 102 is reviewed and extended to include application to trigonometry. (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 Introductory Geometry and Trigonometry (A, N, R) 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 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, R) 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, R)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 Calculus I (A, N, R)5 credit hours

Prerequisite: M 112

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



Biology Lab—Auraria Campus

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 combinations. (3 hours per week)

M 130 Finite Probability (N)3 credit hours

Prerequisite: M 411 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 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 113

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

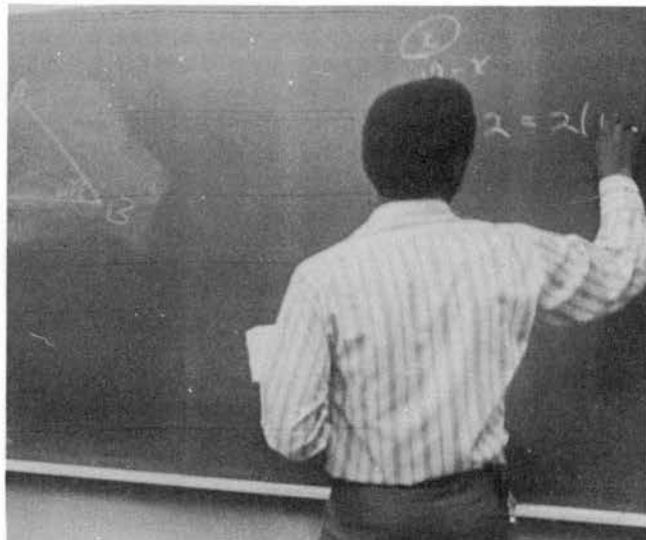
Prerequisite: M 113

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)

M 230 Introduction to Statistics (N)3 credit hours

Prerequisite: M 130 and M 113

Continuous random variables and distributions, random sampling, central limit theorem, point estimation, interval estimation, and hypothesis testing. (3 hours per week)



Classroom—Math

PHYSICS

P 099 Physics Learning Center (A, N, R) non-credit

This center is designed for the student desiring assistance with any difficulty or project relating to physics. The center is supervised by members of the physics faculty; students may avail themselves of this facility voluntarily or may be referred by an instructor. A schedule of the times the center is staffed will be posted each quarter.

P 100 Survey of Physical Science (R)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 of lecture and 2 hours of laboratory 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, electromagnetic waves, and matter waves. (4 hours of lecture and 3 hours of laboratory per week)

P 114 College Physics - Calculus Supplement (N)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)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)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)

P 131 General Physics I (R) 5 credit hours

Prerequisite: M 113 or consent of instructor

P 131, 132, and 133 constitute a three-quarter sequential investigation of classical physics at the calculus level. This course is designed for students majoring in the sciences, engineering, or in mathematics. Topics of interest the first quarter will be vectors, motion, forces and torques, linear and angular momentum, and energy. (4 hours of lecture and 3 hours of laboratory per week)

P 132 General Physics II (R) 5 credit hours

Prerequisite: P 132

Corequisite: M 211 or consent of instructor

Classical thermodynamics through the concept of entropy, wave motion with application to the study of sound. Simple harmonic motion. (4 hours of lecture and 3 hours of laboratory per week)

P 133 General Physics III (R) 5 credit hours

Prerequisite: P 132

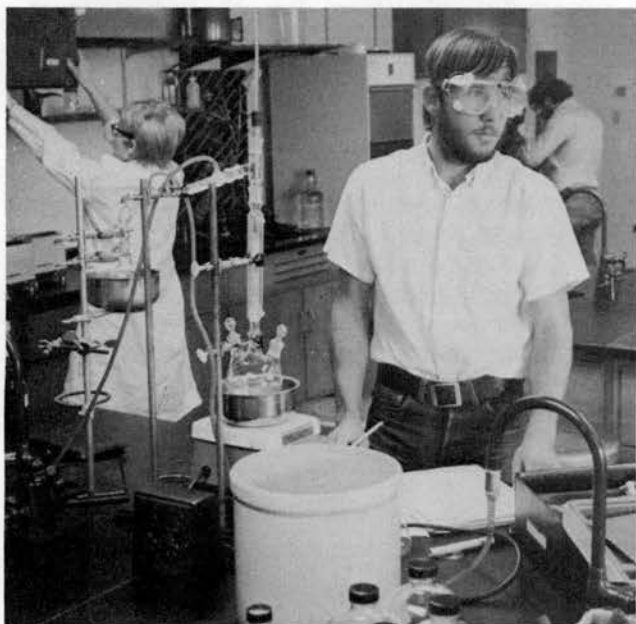
Corequisite: M 212 or consent of instructor

Electric and magnetic fields and their properties, Maxwell's equations, electromagnetic waves, and physical optics. (4 hours of lecture and 3 hours of laboratory per week)

P 204 Concepts of Modern Physics (R) 5 credit hours

Prerequisite: P 133 or consent of instructor,

Relativity, with emphasis on the special theory, Uncertainty Principle and the theory of measurement, quantum mechanics with applications in the areas of atomic, nuclear, and solid-state physics. (4 hours of lecture and 3 hours of laboratory per week)



Classroom—Physics

SCIENCE

SI 110 The Black Scientist Contributes 3 credit hours

Auraria Campus only—See Consortium of Ethnic Studies, page

SI 111 Science for the Earth Citizen (N) 4 credit hours

The course will be centered on the ideas and consequences of physics with forays into geology, chemistry, astronomy,

biology, and technology. Understanding in the following areas will be sought; the general nature of the universe and our location in it, the thin skin of the earth and life which evolved on it, nature of the senses through which man experiences the world; the technology science has fathered (computers, transportation, communication devices), problems that have developed (air pollution, nuclear power), what scientists do, and the incredible beauty of the EARTH. (3 hours of lecture and 3 hours of laboratory per week)

SI 112 Science for the Earth Citizen (N) ... 4 credit hours

Prerequisite: SI 111 or consent of instructor

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

SI 113 Science for the Earth Citizen (N) ... 4 credit hours

Prerequisite: SI 112 or consent of instructor

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

SI 121 Environmental Science (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 (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 (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)

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 student will be carried out and from the Director of the Division.

**DIVISION OF
SOCIAL SCIENCES**

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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 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 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 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 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 3 credit hours

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

AN 220 Introduction to Archeology 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 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 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 3 credit hours

A one-quarter inter-disciplinary course involving historical, economic, sociological, and psychological aspects of the relations between labor and management. The development, structure, and philosophy of American trade unionism, collective bargaining, the role of government, productivity and wages, unemployment and automation, case studies in labor-management relations, and comparison of labor movements in the U.S. with those of other nations. (3 hours per week)

EC 109 Applied Economics 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 4 credit hours

Auraria Campus only. See Consortium of Ethnic Studies, page

EC 162 Black Community Economics and Federal Taxes 3 credit hours

Auraria Campus only. See Consortium of Ethnic Studies, page

EC 170 Economic History of the Southwest 3 credit hours

Auraria Campus only. See Consortium of Ethnic Studies, page

EC 211 Principles of Economics 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. A three-quarter sequence intended for students planning to specialize in business administration and for college transfer students. (3 hours per week)

EC 212 Principles of Economics 3 credit hours

Continuation of EC 211. (3 hours per week)

EC 213 Principles of Economics 3 credit hours

Continuation of EC 212. (3 hours per week)



Classroom—Economics

GEOGRAPHY

GE 111 Fundamentals of Geography 5 credit hours

A three-quarter sequence which systematically investigates the relationship between man and his physical environment. The course will include a study of earth form, earth-sun relationships, meteorology, climatology, mineralogy, landforms, soils, and vegetation. (4 hours of lecture and 3 hours of laboratory per week)

GE 112 Fundamentals of Geography 5 credit hours

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

GE 113 Fundamentals of Geography 5 credit hours

Continuation of GE 112. The third quarter will be an investigation of the human elements of geography. The basic principles of urban geography, economic geography, conservation, settlement patterns, and population problems will be examined. (4 hours of lecture and 3 hours of laboratory per week)

GE 200 World Regional Geography 5 credit hours

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

GE 210 Economic Geography 3 credit hours

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

GE 220 Human Ecology 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 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.



Classroom—Geography

HISTORY

HS 107 Hang-Ups and Happenings in American History 3 credit hours

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

HS 110 History of Chicano People 3 credit hours

Discussion of contemporary social, cultural, political and economic problems of the Chicano people and the study of these problems in relation to their historical roots.

HS 111 History of World Civilization (N) 4 credit hours

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 (N) 4 credit hours

No prerequisites. The cultures, exam, Moslem, Slavic and Europe. Emphasis will be placed on the Middle East, East Central Europe, Russia, and Western Europe.

HS 113 History of World Civilization (N) 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 114 The Making of the Modern World, (A, R) 3 credit hours

No prerequisite. A series of studies on the nations of today. A study of modern Europe with emphasis on Russia, Germany, France and England.

HS 115 The Making of the Modern World (A, R) 3 credit hours

No prerequisite. A study of the rise of modern Africa and Latin America from recent colonial times.

HS 116 The Making of the Modern World (A, R) 3 credit hours

No prerequisite. A study of the modernization of Asia and its impact on the modern world.

HS 120 History of the Black People 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 121 History of the Indians of the West 3 credit hours

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

HS 125 Black Civilization - Africa 3 credit hours

Culture and development of the area of Africa from earliest times to the present. Includes tribes, slavery, colonialism and the new independent nations.

HS 126 Black Civilization - Americas to 1865 3 credit hours

The culture and the development of the Black people in 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 3 credit hours

The culture and the 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 3 credit hours

The cultural and historical development of what is now the Southwestern United States.

HS 145 Chicano Civilization - Spain 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 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 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 3 credit hours

The culture and history of modern man since 1900. A study of the important events in the world including the wars, peace, the depression, and the cold war. Major historical developments in world history during the 20th Century, with critical emphasis on international problems of war, world government, conflicting economic and political ideologies (fascism, communism, socialism) and the emergence of nationalism.

HS 211 The History of the United States - to 1789 3 credit hours

The Colonial and Revolutionary period of American History to 1789.

HS 212 History of the United States - 1789 to 1877 3 credit hours

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

HS 213 History of the United States 3 credit hours

The New Nation, 1877 to the present.

HS 220 Colorado History 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 225 The Black People and the American Frontier 3 credit hours

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

HS 226 The Urban History of the Black People 3 credit hours

This course examines the Black city dweller in relation to other people including the Irish, Spanish, Italian, etc. This provides the basis for an examination of the blacks in the city through demographic and social comparisons with other minority groups at different times.

HS 246 A History of Mexico 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 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 3 credit hours

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

HS 261 Cultural History of China 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 Cultural History of China II 3 credit hours (1644 to the present)

Auraria Campus only. See Consortium of Ethnic Studies, page

HS 265 Cultural History of Japan 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 Cultural History of India 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.



Classroom—History

HS 269 Cultural History of Southwest Asia 3 credit hours
 Auraria Campus only. See Consortium of Ethnic Studies, page

HS 271 History of England - Early Years 3 credit hours
 The culture and development of England to Henry VII.

HS 272 History of England - Early Years 3 credit hours
 England from Henry VII to Anne, 1485-1713.

HS 273 History of England - Modern Times 3 credit hours
 The expansion and decline of Great Britain from Anne to the present time, 1713-1972.

PHILOSOPHY

PH 100 Constructing a Life Philosophy ... 3 credit hours
 Constructing a clearer personal life philosophy by considering alternatives and achieving a better understanding of what it means to live the examined life.

PH 111 Introduction to Philosophy 3 credit hours
 A study of philosophy and its usefulness, of methods of inquiry, man and his place in the world, and of the types of schools of philosophy. (3 hours per week)

PH 112 Introduction to Philosophy 3 credit hours
 (Continuation of PH 111) A study of the realm of values and the life worth living, ethics, oriental philosophies, religion, and social issues. (3 hours per week)

PH 120 The Faiths by Which Men Live ... 3 credit hours
 Great religions of the Far East such as Hinduism, Buddhism, 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 ... 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 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 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 and reasoning process. The aim is the achievement of more precise and creative thinking. (3 hours per week)

POLITICAL SCIENCE

PS 111 Introduction to Political Science ... 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 ... 3 credit hours
 Approaches to the study of politics: the relationship between political behavior and governmental structures.

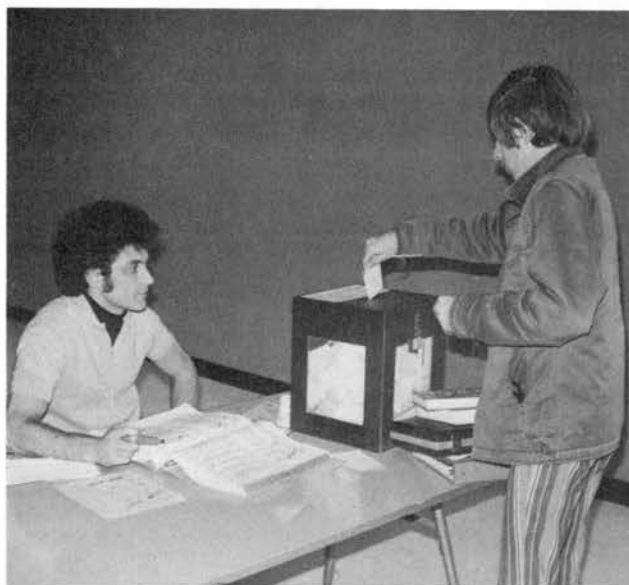
PS 113 American National Government ... 3 credit hours
 Present day American government interpreted in the light of constitutional and other influences; emphasis on the role of institutions, individuals, and groups in forming American political behavior.

PS 114 American State and Local Government 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 3 credit hours
 Group process, parliamentary procedure, recruiting, campaigning, publicity, legislation, administration. Classroom and laboratory experience.

PS 162 Practical Politics 3 credit hours
 Introduction to political action at the local, state and/or national level.

PS 201 Comparative Politics 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.



Classroom—Political Science

PS 202 Comparative Politics3 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 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 241 Political Woman3 credit hours

Emphasis on the social 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 Political Experience3 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 Thought4 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.

PS 262 Black Political Experience 4 credit hours

A survey of the role played (or not played) by the Black man in the development of American political institutions. An analysis of the impact of these institutions upon Black life in America. Specific attention given to the Presidency, Congress, and the Supreme Court in an attempt to surface the Black perspective on these bodies.

PSYCHOLOGY

PY 100 Human Relations in Business and Industry3 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 107 Psychology of Personal Development3 credit hours

The study of the individual and the social factors which contribute to the development of both healthy and unhealthy personalities. Can be used to meet occupational studies requirements.

PY 111 General Psychology3 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, etc. Intended primarily to meet college transfer requirements but also meets occupational studies requirements.

PY 112 General Psychology3 credit hours
Continuation of PY 111.

PY 113 General Psychology3 credit hours
Continuation of PY 112.

PY 123 Child Guidance Techniques 3 credit hours

Guides to speech and action on the parts of adults responsible for children. Considers voice, comparisons and competition, independence, reinforcement and suggestions, limits and the prevention of difficulties.

PY 200 Psychology of the Deaf 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 Psychology3 credit hours

Social factors which influence the behavior of the individual as he interacts with others, individuals, and groups. Consideration of such problems as leadership fashions, prejudice, public opinion and social attitudes.

PY 221 Developmental Psychology (Child Growth & Devel.)3 credit hours

Study of early childhood including genetic background, prenatal life, motor-sensory development and the pre-school period. Covers all aspects of growth and development: physical, emotional, social, and intellectual.

PY 222 Developmental Psychology (Child Growth and Devel.)3 credit hours

Study of physical, emotional, social, moral, and cognitive aspects of middle childhood. Continuation of PY 121.

PY 223 Developmental Psychology (Adolescence, adulthood, and old age) 3 credit hours

Developmental psychology with an emphasis on adolescence, adulthood, and old age.



Classroom—Psychology

PY 220 Educational Psychology 3 credit hours

This is a study of psychology as applied to the teacher-learning situation with emphasis on the principles of motivation learning, intelligence, heredity, growth, environment and individual differences.

PY 230 Abnormal Psychology 3 credit hours

Causes description and theories of more severe personality and behavior disorders.

PY 240 Personality 3 credit hours

Psychological theory which deals with the development, structure, and functioning of the normal personality.

PY 250 Psychology of Prejudice 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 3 credit hours

This course is designed to develop an understanding from a psychological viewpoint of the impact of the Black situation on the Black personality.

PY 260 Chicano Psychology 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.

PY 270 Industrial Psychology 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 107 Sociology of Personal Development 3 credit hours

Basic principles of sociology investigating behavior, culture institutions, interaction and social change. Tailored to meet the needs and concerns of those students seeking to acquire familiarity with the social world in which they live. (3 hours per week)

SO 108 Social Problems 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 interrelationships, and their consequences upon 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 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 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 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. (3 hours per week)

SO 120 Marriage and the Family 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 are 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 130 Juvenile Delinquency 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 135 Sociology of Medical Care 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." The community and medical care, which will include medical education, the hospital as a social institution, concepts of medical practice.

SO 140 Field Work in Barrio Studies 3 credit hours

Field study observation of selected barrios, institutions, and agencies to be conducted under supervision and after preparatory instruction to acquaint student with the barrio.

SO 151 The Chicano and the Schools 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 3 credit hours

Study of rural folk values of the Chicano and their erosion in the urban setting. Includes an analysis of the changing values within the Chicano community.

SO 200 Urban Sociology 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 205 Utopia 3 credit hours

The society of the future: seen alternatively as an ideal state; a boring, decadent community; or a totalitarian nightmare. Selected works of Plato, Thomas More, Edward Bellamy, H. G. Wells, Aldous Huxley, George Orwell, Arthur Koestler, and B. F. Skinner are examined. (3 hours per week)

SO 207 Technological Society 3 credit hours

An interdisciplinary course focusing on the various factors in technological society acting upon the individual. Treated are those social structures, forces, processes, and life-styles which come into play causing man to become estranged from himself and others. Philosophical, social-psychological, and economic issues are considered. (3 hours per week)

SO 210 Social Planning in the Urban Setting 3 credit hours

Urban planning centering on human factors and social issues. The emphasis will be on projected city life including transitional neighborhood and urban tension. (3 hours per week)

SO 211 Current Social Issues 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 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 3 credit hours

Aimed at the service professions (social work, etc.) as well as those adults interested in becoming involved in on-going social change activities, the course seeks through guided field experiences to aid the student to develop the perspectives, skills, methods vital to activating and carrying through community organization, community development, and field study programs.

SO 220 Minority Groups in American Society 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. Various groups including homosexuals, prostitutes, dance musicians, race and ethnic minorities are treated. (3 hours per week)

SO 223 Youth in Society 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 3 credit hours

This course is designed to analyze American institutions in relationships 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 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 3 credit hours

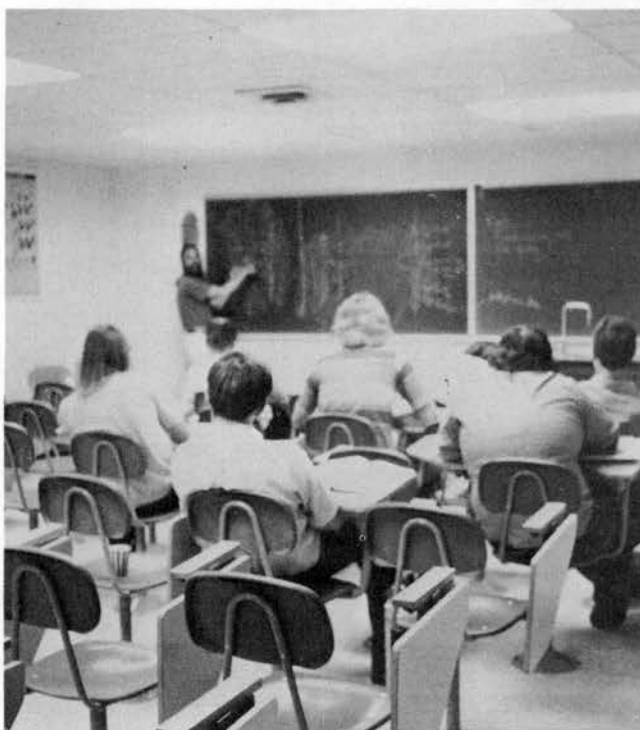
Fundamental concepts and theories of sociology with comparative emphasis on the black man and his culture in white America.

SO 241 Sociology of the Chicano Community 3 credit hours

Fundamental concepts and theories of sociology with comparative emphasis on the Black man and his culture in America.

SO 245 Urban Renewal and the Black Community 3 credit hours

This course is designed to provide the student with an overall view of the economic, political, and social dynamics of urban renewal and the urban change process and how it affects Black individuals, organizations, and institutions. In the course students will explore and evaluate the significance of urban renewal, and investigate the variety of activities that community organizations can adopt as alternatives.



Classroom—Sociology

SOCIAL SCIENCE

SS 211 The Social and Political Environment of the 20th Century3 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 Century3 credit hours

Continuation of SS 211. (3 hours per week)

SS 213 The Social and Political Environment of the 20th Century3 credit hours

Continuation of SS 212. (3 hours per week)

SS 260 Research Methods in the Social Sciences3 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.



Social Science

INDEPENDENT STUDY

299 Independent Study1 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.



Independent Study



Social Science

**CONSORTIUM
OF
ETHNIC STUDIES**

Auraria Campus Only

CONSORTIUM OF ETHNIC STUDIES

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CONSORTIUM OF ETHNIC STUDIES

The Consortium of Ethnic Studies is offered on Auraria Campus. However, some of the courses are offered also on North Campus and Red Rocks.

CONSORTIUM OF ETHNIC STUDIES

Advisory Committees

Asian Studies

Mr. John Yee Aurora Public Schools
Instructor Aurora, Colorado

Mr. Santos Blan Community College of Denver
Student Auraria Campus
1201 Acoma Street
Denver, Colorado 80204

Black Studies

Dr. Welton Flemon Metropolitan State College
Asst. Prof. of Chemistry 250 West 14th Avenue
Director, Black Studies Denver, Colorado 80202

Mr. John Jaramillo Community College of Denver
Instructor 1201 Acoma Street
Communications & Denver, Colorado 80204
Arts Division

Mr. Ottawa Harris Community College of Denver
Counselor 1201 Acoma Street
Denver, Colorado 80204

Mr. Tom Maes Lucy Auld Elementary School
Principal 1200 E. 78th
Denver, Colorado

Mr. Stephen Juniel Community College of Denver
Student 1201 Acoma Street
Denver, Colorado 80204

Mr. Art Marquez Community College of Denver
Student Auraria Campus
1201 Acoma Street
Denver, Colorado 80204

Mr. Ron Morrow Community College of Denver
Student 1201 Acoma Street
Denver, Colorado 80204

Mrs. Fernie Baca Moore Community College of Denver
Financial Aids Officer Auraria Campus
1201 Acoma Street
Denver, Colorado 80204

Mrs. Rachael Noel Denver Public Schools
Member Metro State College
250 West 14th Ave.
Denver, Colorado 80202

Judge Don Pacheco District Court, Division 9
City and County Building
Denver, Colorado 80202

Mr. James Reynolds Civil Rights Commission
Director 312 State Services Building
1525 Sherman Street
Denver, Colorado 80203

Prof. Salvador Ramirez University of Colorado
Director of Mexican Ketchum F8
American Affairs Boulder, Colorado 80302

Dr. Frank Robinson Community College of Denver
Social Science Division 1201 Acoma Street
Denver, Colorado 80204

Native American (Indian)

Dr. Roger Buffalohead University of Minnesota
Chairman, Dept. of Minneapolis, Minnesota 55401
American Indian Studies

Mr. Alfred Williams 3360 Bellaire Street
Community Representative, D.U. Law Student Denver, Colorado 80206

Mr. John Gill Community College of Denver
Student 1201 Acoma Street
Denver, Colorado 80204

Chicano Studies

Mr. Rueben Aguirre Metropolitan State College
Professor of Spanish 250 West 14th Avenue
Denver, Colorado 80202

Miss Tillie Walker United Scholarship Service, Inc.
941 East 17th Avenue
Denver, Colorado 80218

ANTHROPOLOGY

AN 201 Physical Anthropology (A) 3 credit hour

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) 3 credit hours

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

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 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.

BIOLOGY

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)

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 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



Classroom - Chinese—Auraria Campus

ECONOMICS

EC 107 Consumer Economics (A)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 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.

EC 162 Black Community Economics and Federal Taxes (A)3 credit hours

Individual economic stability and development are essential for the little man in the community before he can make any meaningful attempt to utilize his educational skills. This course is designed to give some basic understanding of four areas of taxes and credit. Relevant information on taxes and credit and guidelines for its use will be made to enable the student to make better use of his funds.

EC 170 Economic History of the Southwest (A)3 credit hours

Introduction of the concepts of Labor, Land, Capital, Ownership and control of Economic Institutions as they have affected and continue to affect the lives of the Chicano and poor Americans.

HISTORY

HS 107 Hang-ups and Happenings In American History (A)3 credit hours

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

HS 110 History of Chicano People (A)3 credit hours

Discussion of contemporary social, cultural, political and economic problems of the Chicano people and the study of these problems in relation to their historical roots.

HS 120 History of the Black People (A)3 credit hours

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

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 earliest times to the present. Includes tribes, slavery, colonialism and the new independent nations.

HS 126 Black Civilization - Americas to 1865 (A)3 credit hours

cludes blackIcmfw cmfw cmfw cmfw cmfw cmfwypooao
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)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 150 Contemporary World History (A)3 credit hours

The culture and history of modern man since 1900. A study of the important events in the world including the wars, peace, the depression, and the cold war. Major historical developments in world history during the 20th Century, with critical emphasis on international problems of war, world government, conflicting economic and political ideologies (fascism, communism, socialism) and the emergence of nationalism.

HS 225 The Black People and the American Frontier (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 226 The Urban History of the Black People (A)3 credit hours

This course examines the black city dweller in relation to other people including the Irish, Spanish, Italian, etc. This provides the basis for an examination of the Blacks in the city through demographic and social comparisons with other minority groups at different times.

HS 261 Cultural History of China (A)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 Communist society today.

HS 262 Cultural History of China II (1644 to the present) (A) 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 Cultural History of Japan (A) 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 Cultural History of India (A) 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

Special emphasis on anthropologic-political structure. This course will use an interdisciplinary approach to explore the complex and diverse cultures of southeast Asia and its variety of racial and linguistic groups. The cross cultural influence of India and China as well as the Western World will be carefully examined.

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 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 (A) 3 credit hours

HU 241 Comparative Culture-Spanish 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 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 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 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 3 credit hours

Study of the contribution of Afro-American writers to American literature and civilization.

LI 147 Contemporary Chinese Literature in Translation 3 credit hours

A contemporary look at the Southwest through the works of its authors. Attention to the writings of the present and how it underlines the Chicano's search for an identity.

LI 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 racial agitation.

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 (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.

PS 262 Black Political Experience (A) ... 4 credit hours
A survey of the role played (or not played) by the Black man in the development of American political institutions. An analysis of the impact of these institutions upon Black life in America. Specific attention given to the Presidency, Congress, and the Supreme Court in an attempt to surface the Black perspective on these bodies.

PSYCHOLOGY

PY 250 Psychology of Prejudice (A) 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) 3 credit hours
This course is designed to develop an understanding from a psychological viewpoint of the impact of the Black situation on 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 The Black Scientist Contributes 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 152 Urbanization and the Chicano (A) 3 credit hours
Study of rural folk values of the Chicano and their erosion in the urban setting. Includes an analysis of the changing values within the Chicano community.

SO 220 Minority Groups in American Society (A) 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. Various groups including homosexuals, prostitutes, dance musicians, race and ethnic minorities are treated. (3 hours per week)

SO 225 Racism and American Institutions (A) 3 credit hours

This course is designed to analyze American institutions in relationships 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 and his culture in America.

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.

SO 245 Urban Renewal and the Black Community (A) 3 credit hours

This course is designed to provide the student with an overall view of the economic, political, and social dynamics of urban renewal and the urban change process and how it effects Black individuals, organizations, and institutions. In the course students will explore and evaluate the significance of urban renewal, and investigate the variety of actions that community organizations can adopt as alternatives.



Classroom—Sociology

SPANISH

SP 100 Basic Applied Spanish **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 & 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**
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. Prerequisite 213 or demonstration of sufficient language skills.

SP 215 Conversation and Composition (A) **3 credit hours**
Continuation and Expansion of SP 214.

SP 216 Conversation and Composition (A) **3 credit hours**
Continuation and Expansion of SP 215.

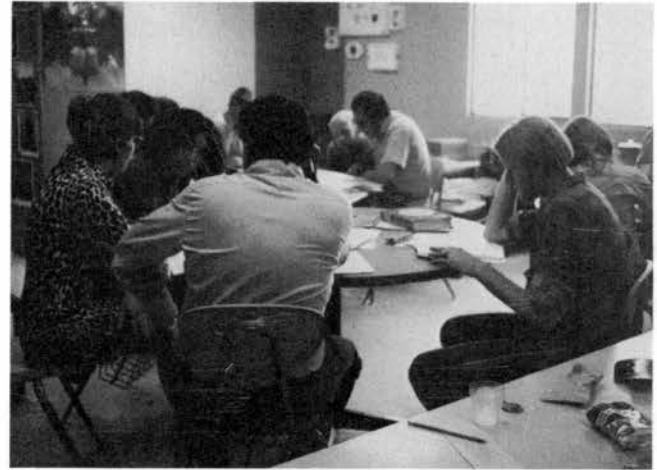
SP 241 Contemporary Spanish Short Stories (A) **3 credit hours**
Selected examples of most representative authors.

SP 242 Contemporary Spanish Theatre (A) **3 credit hours**
Selected plays representative of the Spanish stage today.

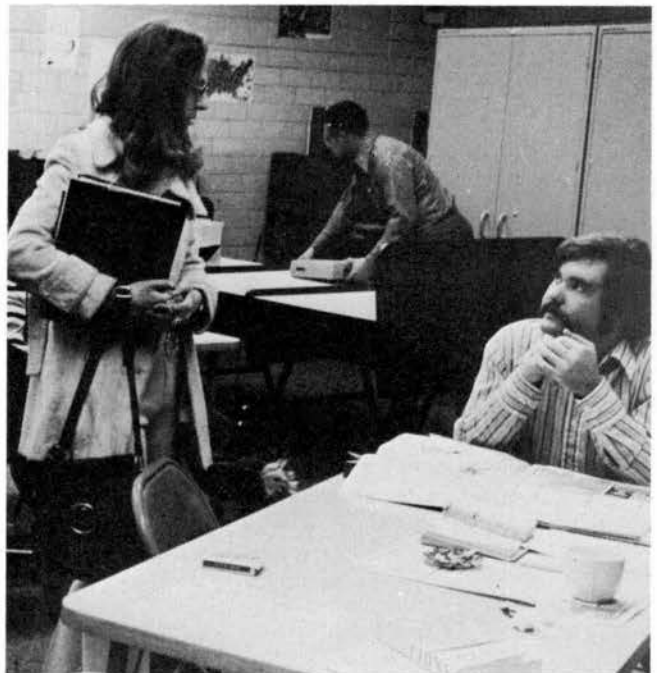
SP 243 Contemporary Spanish Novel (A) **3 credit hours**
Selected contemporary novels particularly appealing to modern youth.

INDEPENDENT STUDY

... **299 Independent Study** **1 to 3 credit hours**
Independent study (Course No. 299) is available in each of the major areas within the Division of Ethnic Studies. 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 Ethnic Studies and the assigned instructor. The number of quarter hours of credit (1-3) will be determined by the Division Director.



Classroom—Spanish



Conversation and Composition Spanish

**DIVISION OF
BUSINESS AND MANAGEMENT
OCCUPATIONS**

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DIVISION OF BUSINESS AND MANAGEMENT PROGRAMS FOR THE TRANSFER STUDENT

A student whose primary purpose in attending Community College of Denver is preparation for transfer to another institution should familiarize himself with that institution's lower-division requirements. Although many institutions award two full years of credit to any transfer student who has earned an Associate degree, others grant transfer credit only for courses which meet their specific program requirements.

Several institutions do set up rigid requirements for completion of a specified number of credit hours in areas such as the sciences, humanities, language, and/or mathematics. Some encourage business majors to select only the basic business courses (typically introduction to business, mathematics, accounting, marketing, and principles of economics) during the first two years.

The Associate degree for the transfer student in Business is awarded by the Community College of Denver upon

successful completion of the general requirements set forth on page 9 and a program of studies designed in conference with the business faculty advisor.

A student who is interested primarily in earning an Associate degree while preparing for a business career should follow the program suggested in this catalog for his area of specialization. If this student decides later to continue at a four-year institution, he should be able to transfer those credits which are applicable to the program he selects. In many instances, unless he changes his major, he will receive full transfer credit for all courses satisfactorily completed at the Community College of Denver. In those instances in which a Community College of Denver course is classified at the senior institution as an upper-division course, the student may receive only elective credit for the completed course.

ACCOUNTING (A-N-R)

NINE-MONTH PROGRAM

First Quarter	Cr. Hrs.	Second Quarter	Cr. Hrs.
AC 111 Accounting	5	AC 112 Accounting	5
EG 131 Bus. Comm.	3	EG 132 Bus. Comm.	3
MG 105 Intro. to Bus.	3	SC 103 Bus. Mach.	3
M 110 Math for Bus.	3	Data Processing Elective: ¹	3
Social Science Elective: ¹		Typing Elective: ¹	4
PY 100 Human Relations in Bus. and Industry			18
PY 111 Gen. Psychology	3		
	17		

Third Quarter	Cr. Hrs.
AC 113 Accounting	5
EG 133 Bus. Comm.	3
MG 201 Office Man.	3
MG 205 Bus. Fin.	3
Bus. or Accounting Elective: ¹	3-5
	17-19

¹Selection 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: 52-54

ACCOUNTING (A-N-R)

TWO-YEAR PROGRAM

	Cr.		Cr.
First Quarter	Hrs.	Fourth Quarter	Hrs.
AC 111 Accounting	5	AC 211 Inter. Acct.	5
EG 131 Bus. Comm.	3	Math Elective: ¹	4-5
MG 105 Intro. to Bus.	3	M 105 Introductory Alg.	
M 110 Math for Bus.	3	M 106 Inter. Alg.	
Social Science Elective: ¹		M 111 College Alg.	
PY 100 Human Relations in Bus. and Industry		MG 207 Bus. Law 1	3
PY 111 Gen. Psychology	3	MG 205 Bus. Fin.	3
	—	Elective: ¹	3-5
	17		—
			18-21
	Cr.		Cr.
	Hrs.		Hrs.
Second Quarter		Fifth Quarter	
AC 112 Accounting	5	AC 212 Inter. Acct.	5
EG 132 Bus. Comm.	3	Elective: ¹	3-5
SC 103 Bus. Mach.	3	MG 208 Bus. Law 11	3
Data Processing Elective: ¹	3	EC 211 Prin. of Econ.	3
Math Elective	3		—
M 120 Statistics for Business and Ind.			14-16
or			
M 150 Math of Fin.			
	—		
	17		
	Cr.		Cr.
	Hrs.		Hrs.
Third Quarter		Sixth Quarter	
AC 113 Accounting	5	MG 209 Bus. Organ. and Management	3
EG 133 Bus. Comm.	3	EC 212 Prin. of Economics	3
AC 213 Cost. Acct.	5	Accounting Elective: ³	5
Data Processing Elective: ¹⁻²	3-5	BU 297 Coop. Wk. Exp.	
	—	or	
	16-18	BU 299 Ind. Stdy.	3-6
			—
			14-17

¹Selection of Electives must be made in conference with faculty advisor.

²Business Elective at Auraria Campus.

³Accounting Elective must be made in conference with faculty advisor. These include: AC 214, Cost Accounting 11; AC 215, Introduction to Accounting Systems; AC 217, Income Tax Preparation; AC 218, Income Tax Preparation; AC 220, Principles of Government Accounting and Budgeting.

BUSINESS OPPORTUNITIES: Completion of this program leads to employment opportunities in bookkeeping and initial accounting position in business and industrial concerns or at various levels in governmental agencies.

TOTAL CREDIT HOURS: 95-106

BUSINESS MANAGEMENT (A-N-R)

TWO-YEAR PROGRAM

	Cr. Hrs.		Cr. Hrs.
First Quarter		Fourth Quarter	
AC 111 Accounting	5	MG 209 Bus. Org. and Mgt.	3
EG 131 Bus. Comm.	3	MG 207 Business Law I	3
MG 105 Intro. to Bus.	3	EC 108 Labor Relations	3
SC 103 Bus. Mach	3	EC 211 Prin. of Econ.	3
Math Elective ²	3-5	MG 216 Personnel Adm.	3
	17-19		15
Second Quarter		Fifth Quarter	
AC 112 Accounting	5	MG 205 Bus. Finance	3
EG 132 Bus. Comm.	3	MG 208 Business Law II	3
M 120 Statistics for Bus. and Ind.	3	EC 212 Prin. of Econ.	3
DP 111 Prin. of Bus. Data Proc.	3	Management Elective ³	3
MG 213 Prin. of Mkt.	3	BU 297 Coop. Work Exp. or Elective	3
	17		15
Third Quarter		Sixth Quarter	
AC 113 Accounting	5	MG 206 Bus. Finance	3
EG 133 Bus. Comm.	3	Mg 210 Bus. Policies	3
DP 112 Advanced Prin. of Bus. Data Proc.	5	EC 213 Prin. of Econ.	3
MG 214 Prin. of Mkt.	3	Management Elective ³	3
	16	BU 297 Coop. Work Exp. or Elective	3
			15

¹Students intending to transfer to a 4-year institution read page 59, "Division of Business and Management Programs for the Transfer Student".

²Recommended electives are M 110 **Math for Business**, M 105 **Introductory Algebra**, M-106 **Intermediate Algebra**, M 150 **Math of Finance**, M 111 **College Algebra**.

³Recommended electives are MG 201 **Office Management**, MG 227 **Sales Management**, MG 239 **Wage and Salary Administration**, MG 240 **Small Business Administration**, MG 120 **Credit Management** and AC 213 **Cost Accounting**.

TOTAL CREDIT HOURS: 95-97

CREDIT MANAGEMENT (A)

TWO-YEAR PROGRAM

	Cr. Hrs.		Cr. Hrs.
First Quarter		Fourth Quarter	
MG 130 Credit Fund.	3	MG 230 Cred. Proc.	3
MG 105 Intro. to Bus.	3	MG 209 Bus. Org. & Mgt.	3
AC 111 Accounting	5	MG 207 Bus. Law I	3
M 110 Math for Bus.	3	DP 111 Prin. of Bus. Data Proc.	3
EG 131 Bus. Comm.	3	Gen. Studies Elective ¹	3
	17		15
Second Quarter		Fifth Quarter	
MG 131 Credit Fund.	3	MG 231 Cred. Counsl. & Acct. Handling	3
M 120 Stat. for Bus. & Ind.	3	MG 201 Off. Mgt.	3
AC 112 Accounting	5	MG 205 Bus. Fin.	3
EG 132 Bus. Comm.	3	BU 297 Coop. Work Exp. or Elective ²	3
Soc. Sci. Elective ¹	3	Elective ¹	3
	17		15
Third Quarter		Sixth Quarter	
MG 132 Credit Fund.	3	MG 237 Cred. Mgmt.	3
MG 213 Prin. of Mktg.	3	MG 233 Case Studies in Cred.	3
EC 211 Prin. of Econ.	3	MG 232 Cred. Reporting	3
EG 133 Bus. Comm.	3	BU 297 Coop. Work Exp.	
Science Elective ¹	3	or	
	15	BU 299 Ind. Study ²	6
			15

¹Consult faculty advisor or counselor for recommended electives.

²BU 299 (Independent Study) or Elective may be chosen only in event appropriate work station is not available.

TOTAL CREDIT HOURS: 94

DATA PROCESSING-PROGRAMMER (N)

TWO-YEAR PROGRAM

	Cr. Hrs.		Cr. Hrs.
First Quarter			
DP 111 Prin. of Bus. Data Proc.	3	DP Elective - Group I ³	5
MG 105 Intro. to Bus.	3	DP Elective - Group II ⁴	5
Math Elective:		Business Elective ²	3
DP 121 Applied Computer Math I		Social Science Elective ²	3
M 111 College Algebra			16
Communications Elective ¹	3		
Elective ²	3		
	17		
Second Quarter			
DP 112 Adv. Prin. of Bus. Data Proc.	5	Fifth Quarter	Cr. Hrs.
Math Elective:	5	DP Elective - Groups II ⁴	5
DP 122 Applied Computer Math II		DP 231 Systems Analysis I	3
M 112 Trig. and Functions		Business Electives ²	6
Communications Elective ¹	3	Social Science Elective ²	3
AC 111 Accounting	5		17
	18		
Third Quarter			
DP Elective - Group I ³	5	Sixth Quarter	Cr. Hrs.
Communications Elective ¹	3	DP 232 Systems Analysis II	3
AC 112 Accounting	5	M 150 Math. of Finance	
Business Elective ²	3	or	
	16	M 120 Statistics for Bus.	3
		Electives	10
			16

¹Communications 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

²Consult advisor for recommended electives to fulfill these requirements.

³Data Processing Electives - Group I:
 DP 213 Assembler Language I
 DP 216 Cobol I
 DP 221 Fortran IV, I
 DP 224 PL/I, I

⁴Data 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: 100

DATA PROCESSING-OPERATIONS TECHNICIAN (N)

NINE-MONTH PROGRAM

	Cr.		Cr.
First Quarter	Hrs.	Third Quarter	Hrs.
DP 111 Prin. of Bus. Data Proc.	3	DP 125 Data Proc. Records Control	3
EG 131 Bus. Comm.	3	DP 131 Computer Oper. II	5
MG 105 Intro. to Bus.	3	Business Electives ¹	6
M-110 Math for Bus.	3	Electives ¹	3
Social Science Elective ¹	3		<hr style="width: 100%;"/>
	<hr style="width: 100%;"/>		17
	15	TOTAL CREDIT HOURS:	48
Second Quarter	Cr.		
	Hrs.		
DP 112 Adv. Prin. of Bus. Data Proc.	5		
DP 130 Computer Oper. I	5		
English Elective:			
EG 131 Bus. Comm.			
EG 132 Bus. Comm.			
Business Elective ¹	3		
	<hr style="width: 100%;"/>		
	16		

¹Consult advisor for recommended electives to fulfill these requirements.

GENERAL CLERICAL (A-N-R)

12-MONTH PROGRAM

	Cr.		Cr.
First Quarter	Hrs.	Third Quarter	Hrs.
MG 105 Intro. to Bus.	3	SC 112 Intermediate Typing (or by placement)	4
EG 131 Bus. Comm.	3	SC 130 Mach. Trans. I	3
SC 110 Typing (or by placement)	4	EG 133 Bus. Comm.	3
M 100 Develop. Math		DP 111 Prin. of Data Proc.	3
or		Bus. Elective	3
M 110 Math for Bus.	3		<hr style="width: 100%;"/>
SC 105 Filing & Rkd. Control	3		16
	<hr style="width: 100%;"/>		
	16		
Second Quarter	Cr.	Fourth Quarter	Cr.
	Hrs.		Hrs.
AC 109 Bookkeeping & Accounting	5	SC 113 Prod. Typing	4
EG 132 Bus. Comm.	3	SC 131 Mach. Trans. II	3
SC 111 Typing II or (by placement)	4	PY 100 Human Relations in Bus. & Ind.	
M 110 Math for Bus.		or	
or		PY 107 Psychology of Pers. Dev.	3
Elective (Bus.)	3	SC 200 Office Proc.	5
SC 103 Bus. Machines	3	SC 100 Dup. Machines	2
	<hr style="width: 100%;"/>		<hr style="width: 100%;"/>
	18		17

This course could be completed in less than 12 months if typing background is sufficient.

TOTAL CREDIT HOURS: 67

INSURANCE (A)

TWO-YEAR PROGRAM

	Cr.		Cr.
First Quarter	Hrs.	Fourth Quarter	Hrs.
AC 111 Accounting	5	EG 131 Bus. Comm.	3
MG 105 Intro. to Bus.	3	MG 213 Prin. of Mkt.	3
M 110 Math for Bus.	3	IN 205 Analysis of Ins. Funct.	3
PY 107 Psych. of Pers. Dev.	3	IN 203 Prin. of Risk Mgt.	3
IN 110 Intro. to Ins.	3	MG 225 Salesmanship	3
	17		15
Second Quarter	Cr.	Fifth Quarter	Cr.
	Hrs.		Hrs.
AC 112 Accounting	5	EG 132 Bus. Comm.	3
IN 123 Prin. of Prop. & Liability Ins.	3	MG 214 Prin. of Mkt.	3
MG 207 Bus. Law I	3	IN 221 Ins. & Taxation	3
EC 211 Prin. of Econ.	3	IN 223 Prin. of Ins. & Prop. Loss Adjusting	3
IN 121 Prin. of Life & Health Ins.	3	Elective ¹	3
	17		15
Third Quarter	Cr.	Sixth Quarter	Cr.
	Hrs.		Hrs.
AC 113 Accounting	5	MG 201 Office Mgt.	3
IN 133 Life & Prop. Ins. Law	3	MG 240 Small Bus. Adm.	3
EC 212 Prin. of Econ.	3	MG 205 Bus. Finance	3
IN 131 Bus. Ins.	3	IN 231 Estate Plan. & Life Ins.	3
	14	Elective ¹	3
			15

¹Consult counselor or faculty advisor for recommended electives.

TOTAL CREDIT HOURS: 93

INDUSTRIAL MANAGEMENT (R)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr.	Hrs.
First Quarter		
M 110 Math for Bus.	3	
AC 111 Accounting	5	
EG 131 Bus. Com.	3	
IM 103 Industrial Safety	3	
IM 101 Elements of Supervision	3	
	17	

	Cr.	Hrs.
Second Quarter		
AC 112 Accounting	5	
PY 107, Psych. of Personal Dev.	3	
EG 133 ¹ Bus. Comm.	3	
Math Elective	4-5	
M 105 Introductory Algebra		
M 106 Inter. Algebra		
M 111 College Algebra		
Social Science Elective	3	
	18-19	

	Cr.	Hrs.
Third Quarter		
IM 104 Work Simplification & 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 Administration	3	
	15	

SECOND YEAR

	Cr.	Hrs.
Fourth Quarter		
IM 201 Employee Dev.	3	
S 110 Intro. to Speech	3	
EC 108 Labor Relations	3	
EG 132 Bus. Comm.	3	
IM 202 Theory & Application of Behav. Sci.	3	
	15	

	Cr.	Hrs.
Fifth Quarter		
MG 209 Bus. Org. & Mgt.	3	
MG 205 Bus. Fin.	3	
MG 207 Bus. Law I	3	
MG 201 Off. Mgt.	3	
Elective	3	
	15	

	Cr.	Hrs.
Sixth Quarter		
IM 203 Mgt. by Objectives	3	
Social Science Elective	3	
MG 239 Wage and Salary Adm.	3	
Electives	6	
	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: 94-96

INTERNATIONAL SECRETARIAL¹ (N)

TWO-YEAR PROGRAM

	Cr.		Cr.
First Quarter	Hrs.	Fourth Quarter	Hrs.
MG 105 Intro. to Bus.	3	SP 260 Span. for Off. Personnel	3
Spanish (by placement) ²	5	MG 209 Bus. Org. & Mgt.	3
Spanish Typing (by placement)	4	SC 127 Shorthand Speed Building	4
SC 110		SC 105 Filing & Rkd. Control	3
SC 111		Elective ⁴	3
SC 112			16
EG 131 Bus. Comm.	3		
PY 100 Hum. Relat. in Bus. & Ind.	3		
	18		
			Cr.
			Hrs.
Second Quarter		Fifth Quarter	
M 110 Math for Bus.	3	SP 261 Span. for Off. Personnel	3
SC 125 Gregg Shorthand Principles	4	SC 128 Shorthand Trans.	4
Spanish (by placement) ²	5	SC 123 Gregg Span. Shorthand Prin.	4
Typing ³	4	Elective	3
SC 112			14
SC 113			
EG 132 Bus. Comm.	3		
	19		
			Cr.
			Hrs.
Third Quarter		Sixth Quarter	
AC 111 Accounting	5	SP 262 Span. for Off. Personnel	3
SC 126 Gregg Shorthand Principles	4	SC 259 Internatl. Secretarial Procedures	3
Spanish (by placement) ²	5	SC 124 Spanish Shorthand Transcription	4
SC 132 Mach. Trans., Spanish	3	SC 129 Specialized Dictation	4
	17	BU 297 Coop. Work Exp.	
		or	
		BU 299 Indep. Study, or Elective ⁵	3
			17

¹Students intending to transfer to a 4-year institution read page 59, "Division of Business and Management Programs for the Transfer Students".

²Students will be placed at a foreign language level suited to their competency at entrance.

³Students who have had previous instruction and/or experience in typing will be given a proficiency examination to determine proper placement.

⁴Consult faculty advisor for recommended elective.

⁵BU 299 (Independent Study) or elective may be chosen only in event appropriate work station is not available.

TOTAL CREDIT HOURS: 101

KEY PUNCH (N)

THREE-MONTH PROGRAM*

	Cr.	Hrs.
DP 102 Key Punch Lab.	8	
MG 105 Intro. to Bus.	3	
DP 125 Data Proc. Records Control	3	
RP 111 Prin. of Bus. Data Proc.	3	
	17	

*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 YEAR

	Cr.	Hrs.
First Quarter		
MG 105 Intro. to Bus.	3	
SC Typing I ¹	4	
English Elective: ²		
EG 131 Bus. Comm.		
EG 111 Eng. Comp.	3	
Math Elective: ²	3-4	
M 110 Math for Bus. & Ind.		
M 105 Intro. Algebra		
M 106 Inter. Algebra		
Soc. Science Elective ²	3	
	16-17	
Second Quarter		
SC 125 Gregg Shorthand Prin. ¹	4	
SC 112 Intermediate Typing	4	
English Elective: ²		
EG 132 Bus. Comm.		
EG 112 Eng. Comp.	3	
SC 103 Bus. Machines	3	
Psy. Elective: ²		
PY 100 Hum. Rel. in Bus. & Ind.		
PY 107 Psy. of Pers. Dev.		
PY 111 General Psy.	3	
	17	
Third Quarter		
DP 111 Prin. of Bus. Data Proc.	3	
SC 126 Gregg Shorthand Prin.	4	
SC 113 Prod. Typing	4	
English Elective: ²		
EG 133 Bus. Comm.		
EG 113 Eng. Comp.	3	
SO 111 Intro. to Soc.	3	
	17	

SECOND YEAR

	Cr.	Hrs.
Fourth Quarter		
SC 127 Shorthand Speedbuilding	4	
AC 111 Accounting	5	
MG 209 Bus. Org. & Mgt.	3	
MG 207 Bus. Law I	3	
SC 200 Office Proc.	5	
	20	
Fifth Quarter		
SC 128 Shorthand Translation	4	
AC 112 Accounting	5	
SC 210 Legal Sec.		
Procedures & Terminology	3	
MG 208 Bus. Law II	3	
BU 297 Coop Work Exp. or Elective	3	
	18	
Sixth Quarter		
SC 206 Legal Dic. & Trans.	3	
SC 130 Mach. Trans. I	3	
Economics Elective: ²		
EC 109 Applied Econ.		
EC 211 Prin. of Econ.	3	
BU 297 Coop. Work Exp. or Bus. Elective	3	
Elective ²	3	
	15	

¹Students who have had previous instruction and/or experience in typing and shorthand will be given proficiency examinations to determine proper placement.

²Consult faculty advisor or counselor for recommended electives.

MARKETING MANAGEMENT (A-N-R)

TWO-YEAR PROGRAM

FIRST YEAR	Cr. Hrs.	SECOND YEAR	Cr. Hrs.
First Quarter		Fourth Quarter	
AC 111 Accounting	5	MG 209 Bus. Org. & Mgt.	3
MG 105 Intro. to Bus.	3	MG 207 Bus. Law I	3
EG 131 Bus. Comm.	3	MG 205 Bus. Finance	3
SC 103 Bus. Machines	3	EC 211 Prin. of Econ.	3
DP 111 Prin. of Bus. Data Proc.	3	M 120 Stat. for Bus. & Ind.	3
	<hr style="width: 50%; margin: 0 auto;"/> 17		<hr style="width: 50%; margin: 0 auto;"/> 15
Second Quarter		Fifth Quarter	
AC 112 Accounting	5	MG 120 Credit Mgt.	3
MG 213 Prin. of Mkt.	3	MG 216 Personnel Adm.	3
EG 132 Bus. Comm.	3	MG 217 Prin. of Retailing	5
MG 200 Prin. of Advertising	3	MG 208 Bus. Law II	3
MG 225 Salesmanship	3	BU 297 Coop. Work Exp. ³	3
	<hr style="width: 50%; margin: 0 auto;"/> 17		<hr style="width: 50%; margin: 0 auto;"/> 17
Third Quarter		Sixth Quarter	
AC 113 Accounting	5	MG 211 Prin. of Buying	3
MG 214 Prin. of Mkt.	3	MG 210 Bus. Policies	3
MG 227 Sales Management	3	BU 297 Coop. Work Exp. ³	3
EG 133 Bus. Comm.	3	Electives ²	6
M 110 Math for Bus. or	3		<hr style="width: 50%; margin: 0 auto;"/> 15
M-150 Math of Finance	3		
	<hr style="width: 50%; margin: 0 auto;"/> 17		

¹Students intending to transfer to a 4-year institution read page 59, "Division of Business and Management Programs for the Transfer Student".

²Consult faculty advisor for recommended electives.

³Bu 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: 98

MEDICAL SECRETARIAL (A)

NINE-MONTH PROGRAM

FIRST QUARTER	Cr. Hrs.	SECOND QUARTER	Cr. Hrs.
MG 105 Intro. to Bus.	3	Psy. Elective: ¹	
English Elective: ¹		PY 100 Hum. Rel. in Bus. & Ind.	
EG 131 Bus. Comm.		PY 107 Psy. of Pers. Development	3
EG 111 Eng. Comp.	3	Eng. Elective: ¹	
SC 125 Gregg Shorthand Prin. ²		EG 132 Bus. Comm.	
or		EG 112 Eng. Comp.	3
SC 120 Alpha Shorthand I	4	SC 126 Gregg Shorthand Prin. ²	
SC 110 Typing I ²	4	or	
HE 100 Medical Term.	2	SC 121 Alpha Shorthand Prin. II ²	4
	<hr style="width: 50%; margin: 0 auto;"/> 16	SC 112 Intermediate Typing ²	4
		HE 105 Nursing Proc. & Prof. Relationships	3
			<hr style="width: 50%; margin: 0 auto;"/> 17
Third Quarter			
SC 103 Bus. Mach.	3		
English Elective: ¹			
EG 133 Bus. Comm.			
EG 113 Eng. Comp.	3		
SC 130 Mach. Transcription I	3		
SC 200 Office Proc.	5		
SC 113 Production Typing ²	4		
	<hr style="width: 50%; margin: 0 auto;"/> 18		

¹Consult counselor or faculty advisor for recommended electives.

²Students who have had previous instruction and/or experience in typing and shorthand will be given proficiency examinations to determine proper placement.

TOTAL CREDIT HOURS: 51

MEDICAL SECRETARIAL (A-N)

TWO-YEAR PROGRAM

FIRST YEAR		SECOND YEAR	
First Quarter		Fourth Quarter	
MG 105 Intro. to Bus.	Cr. Hrs. 3	SC 127 Shorthand Speed Building	Cr. Hrs. 4
SC 110 Typing I (or by placement)	4	AC 109 Bookkeeping & Accounting	4
English Elective: ¹		or	
EG 131 Bus. Comm.		AC 111 Accounting Prin.	5
or		SC 130 Machine Transcription I	3
EG 111 Eng. Comp.	3	SC 113 Production Typing	4
M 110 Math for Bus.	3	HE 100 Medical Terminology	2
B 100 Basic Human Biology	4		18
	17		
Second Quarter		Fifth Quarter	
SC 125 Gregg Shorthand Prin.	Cr. Hrs. 4	SC 128 Shorthand Transcription	Cr. Hrs. 4
SC 111 Typing II (or by placement)	4	AC 111 Accounting Prin.	4
EG 132 Bus. Comm.	3	or	
SC 103 Bus. Machines	3	AC 112 Accounting Prin.	5
SC 105 Filing & Records Control	3	SC 200 Office Procedures	5
	17	SC 100 Duplicating Machines	2
		SC 131 Machine Transcription II	3
			19
Third Quarter		Sixth Quarter	
SC 126 Gregg Shorthand Prin.	Cr. Hrs. 4	MG 201 Office Mgt.	Cr. Hrs. 3
SC 112 Typing Intermediate (or by placement)	4	MG 207 Bus. Law I	3
EG 133 Bus. Comm.	3	SC 129 Specialized Dictation	3
Psychology Elective:		or	
PY 100 Hum. Rel. in Bus.		Business Elective	3-4
PY 107 Psychology of Per. Dev.	3	BU 297 Coop. Work Exp.	3
PY 111 General Psychology	3	Elective	3
DP 111 Prin. of Bus. Data Proc.	3		15-16
	17		

¹Students may elect to take EG 111, English Composition. However, ALL who are enrolled in this program MUST take EG 132 **Business Communications**.

TOTAL CREDIT HOURS: 103-104

OFFICE ADMINISTRATION¹ (N)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr.	
First Quarter	Hrs.	
MG 105 Intro. to Bus.	3	
EG 131 Bus. Comm.	3	
Math Elective: ²		
M 110 Math for Bus.		
M 105 Intro. Algebra		
M-106 Inter. Algebra	3-4	
Typing (by placement) ³		
SC 110 Typing		
SC 111 Typing		
SC 112 Typing	4	
PY 100 Hum. Rel. in Bus. & Ind.	3	
	16-17	
	Cr.	
	Hrs.	
Second Quarter		
AC 111 Accounting	5	
EG 132 Bus. Comm.	3	
Math Elective: ²		
M 150 Math of Finance		
M 105 Intro. Algebra		
M 106 Inter. Algebra		
M 111 College Algebra (5 cr. hrs.)	3-5	
SC 200 Office Proc.		
or		
SC 112 Typing	4-5	
SC 103 Bus. Machines	3	
	18-21	
	Cr.	
	Hrs.	
Third Quarter		
AC 112 Accounting	5	
EG 133 Bus. Comm.	3	
DP 111 Prin. of Bus. Data Proc.	3	
MG 209 Bus. Org. & Mgt.	3	
SC 105 Filing & Records Control	3	
	17	

SECOND YEAR

	Cr.	
Fourth Quarter	Hrs.	
AC 113 Accounting	5	
DP 112 Advanced Prin. of Bus. Data Proc.	5	
PY 107 Psy. of Per. Dev.	3	
Economics Elective: ²		
EC 109 Applied Econ.		
or		
EC 211 Prin. of Econ.	3	
	16	
	Cr.	
	Hrs.	
Fifth Quarter		
MG 201 Office Mgt.	3	
Management Elective: ²		
MG 216 Personnel Adm.		
MG 210 Bus. Policies		
MG 240 Small Bus. Adm.		
MG 120 Credit Mgt.	6	
Social Science Elective ²	3	
BU 297 Coop. Work Exp. or Elective ⁴	3	
	15	
	Cr.	
	Hrs.	
Sixth Quarter		
MG 210 Bus. Policies	3	
MG 207 Bus. Law I	3	
MG 212 Case Studies in Administrative Assistance	3	
Electives ²	3	
BU 297 Coop. Work Exp.		
or		
BU 299 Independent Study ⁴	3	
	15	

¹Students intending to transfer to a 4-year institution read page 59, "Division of Business and Management Programs for the Transfer Student".

²Consult faculty advisor for recommended electives.

³Students who have had previous instruction and/or experience in typing will be given a proficiency examination to determine proper placement.

⁴BU 299 or 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: 97-101

PUBLIC ADMINISTRATION (R)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr. Hrs.
First Quarter	
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

	Cr. Hrs.
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
Elective	3
	18-19

	Cr. Hrs.
Third Quarter	
AC 220 Prin. of Govt. Acctg. & Budget	5
EG 133 Bus. Comm.	
or	
S 110 Intro. to Speech	3
M 120 Stat. for Bus. & Ind.	3
MG 205 Bus. Finance	3
PS 114 American State & Local Govt.	3
	17

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
EC 109 Applied Econ.	3
MG 207 Bus. Law I	3
MG 216 Personnel Adm.	3
PR 209 Public Relations	3
Elective	3
	15

	Cr. Hrs.
Fifth Quarter	
GE 230 Urban Geography	3
MG 208 Bus. Law II	3
MG 239 Wage and Salary Adm.	3
PY 100 Hum. Rel. in Bus. & Ind.	3
SO 107 Sociology of Per. Dev.	3
	15

	Cr. Hrs.
Sixth Quarter	
EC 108 Labor Relations	3
MG 212 Case Studies in Adm. Assistant	3
BU 297 Coop. Work Exp.	
or	
Electives ¹	6
Social Science Elective	3
	15

¹Electives 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: 97-98

REAL ESTATE (R)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr. Hrs.
First Quarter	
MG 105 Intro. to Bus.	3
English Elective ¹	
EG 131 Bus. Comm.	
or	
EG 111 Eng. Comp.	3
AC 111 Accounting	5
RE 101 Real Estate Prin. & Practices	3
PY 100 Hum. Rel. in Bus. & Ind.	3
	17

Second Quarter

	Cr. Hrs.
M 110 Math for Bus.	3
EG 132 Bus. Comm.	3
AC 112 Accounting	5
Elective	3
PY 111 Gen. Psychology	3
	17

Third Quarter

	Cr. Hrs.
SC 110 Typing I	4
SC 103 Bus. Machines	3
EG 133 Bus. Comm.	
or	
S 110 Intro to Speech	3
RE 103 Real Estate Fin.	3
RE 104 Real Estate Law	3
	16

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
RE 201 Prin. of Ins.	3
MG 225 Salesmanship	3
RE 202 Real Estate Appraisal	3
RE 203 Real Estate Trends	3
Elective ²	3
	15

Fifth Quarter

	Cr. Hrs.
MG 209 Bus. Organ. & Mgmt.	3
EC 109 Applied Economics	3
M 120 Stat. for Bus. & Ind.	3
Social Science Elective ²	3
BU 299 Independent Study ³	3
	15

Sixth Quarter

	Cr. Hrs.
RE 204 Land Resources	3
PS 114 American State & Local Government	3
SW 106 Special Social Problems	3
Elective ²	3
BU 299 Independent Study ³	3
	15

¹students may elect to take EG 111, English Composition. However, all students in the program must take EG-132.

²These electives should be chosen from course offerings dealing with demographic elements of mobility, population, and income distribution.

³With the counsel of both the instructor and persons in the real estate field, this course should be utilized to study for real estate exams.

TOTAL CREDIT HOURS: 95

SECRETARIAL SCIENCE (A-N-R)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr.	Hrs.
First Quarter		
MG 105 Intro. to Bus.	3	
SC 110 Typing I (or by placement)	4	
English Elective: ¹		
EG 131 Bus. Comm.		
or		
EG 111 Eng. Comp.	3	
M 110 Math for Bus.	3	
Social Science Elective	3	
	16	

	Cr.	Hrs.
Second Quarter		
SC 125 Gregg Shorthand Prin.	4	
SC 111 Typing II (or by placement)	4	
EG 132 Bus. Comm.	3	
SC 103 Bus. Machines	3	
SC 105 Filing & Records Control	3	
	17	

	Cr.	Hrs.
Third Quarter		
SC 126 Gregg Shorthand Prin.	4	
SC 112 Intermediate Typing (or by placement)	4	
EG 133 Bus. Comm.	3	
Psychology Elective:		
PY 100 Hum. Rel. in Bus.		
PY 107 Personal Development		
PY 111 General Psychology	3	
DP 111 Prin. of Bus. Data Proc.	3	
	17	

SECOND YEAR

	Cr.	Hrs.
Fourth Quarter		
SC 127 Shorthand Speed Building	4	
AC 109 Bookkeeping & Accounting		
or		
AC 111 Accounting	5	
SC 130 Machine Trans. I	3	
SC 113 Production Typing	4	
Economics Elective:		
EC 109 Applied Econ.		
EC 211 Prin. of Econ.	3	
	19	

	Cr.	Hrs.
Fifth Quarter		
SC 128 Shorthand Trans.	4	
AC 111 Accounting		
or		
AC 112 Accounting	5	
SC 200 Office Proc.	5	
SC 100 Dup. Machines	2	
SC 131 Machine Trans. II	3	
	19	

	Cr.	Hrs.
Sixth Quarter		
MG 201 Office Management	3	
MG 207 Bus. Law I	3	
SC 129 Specialized Dictation		
or		
Business Elective	3-4	
BU 297 Coop. Work Exp.	3	
Elective	3	
	15-16	

¹Students may elect to take EG 111, English Composition. However, ALL who are enrolled in this program MUST take EG 132, **Business Communications**.

TOTAL CREDIT HOURS: 103-104

STENOGRAPHIC (A)

NINE-MONTH PROGRAM

Students who have studied Gregg Shorthand and can pass a proficiency test at 60 words per minute may elect to continue the Gregg program indicated below. All students

who have had no previous shorthand training, or those not electing the above option, will be assigned to Alphabetic Shorthand.

	Cr.
First Quarter	Hrs.
MG 105 Intro. to Bus.	3
EG 131 Bus. Comm.	3
Shorthand:	
SC 126 Gregg Shorthand Prin. or	
SC 120 Alpha Shorthand Prin. I	4
Typing: ²	
SC 110 Typing I or	
SC 111 Typing II	4
SC 103 Bus. Mach.	3
	17

	Cr.
Second Quarter	Hrs.
EG 132 Bus. Comm.	3
Shorthand:	
SC 127 Shorthand Speed Building or	
SC 121 Alpha Shorthand Prin. II	4
Typing: ²	
SC 111 Typing II or	
SC 113 Prod. Typing	4
DP 111 Prin. of Bus. Data Proc.	3
M 110 Math for Bus.	3
	17

	Cr.
Third Quarter	Hrs.
AC 111 Accounting	5
SC 130 Mach. Trans. I	3
SC 128 Shorthand Trans.	4
Psy. Elective: ¹	
PY 100 Hum. Rel. in Bus. & Ind. or	
PY 107 Psy. of Pers. Develop.	3
Bus. Elective ¹	3
	18

¹Consult counselor or faculty advisor for recommended electives.

²Students who have had previous instruction and/experience in typing will be given a proficiency examination to determine proper placement.

TOTAL CREDIT HOURS: 52

STENOGRAPHIC (A-N-R)

TWELVE-MONTH PROGRAM

	Cr.
First Quarter	Hrs.
MG 105 Intro. to Bus.	3
EG 131 Bus. Comm.	3
Shorthand: ¹	
SC 125 Gregg Shorthand Prin. or	
SC 120 Alpha Shorthand I (or by placement)	4
Typewriting: ² SC 110 Typing (or by placement)	4
M 110 Math for Bus.	3
	17-18

	Cr.
Second Quarter	Hrs.
EG 132 Bus. Comm.	3
Shorthand:	
SC 126 (Gregg) Shorthand Prin. or	
SC 121 (Alpha) Shorthand Prin. II (or by placement)	4
Typewriting:	
SC 111 Typing II (or by placement)	4
SC 103 Bus. Mach.	3
SC 105 Filing & Records Control	3
	17

	Cr.
Third Quarter	Hrs.
SC 112 Intermediate Typewriting (or by placement)	4
SC 127 Shorthand Speed Building	4
AC 109 Bookkeeping & Accounting	5
DP 111 Prin. of Bus. Data Proc.	3
Psy. Elective:	
PY 100 Hum. Rel.	
PY 107 Per. Dev.	3
	19

	Cr.
Fourth Quarter	Hrs.
SC 113 Production Typing	4
SC 128 Shorthand Trans.	4
SC 130 Machine Trans. I	3
SC 200 Office Proc.	5
BU 297 Coop. Work Exp.	3
	19

¹If a student has sufficient shorthand background, it is recommended that he challenge the introductory course and delay enrollment into the sequence of shorthand courses until the second quarter as indicated above.

²If a student has typewriting background, it is recommended that he challenge the introductory course in typewriting and enroll in the appropriate course during the second or third quarter as indicated above.

TOTAL CREDIT HOURS: 72-73

WORD-PROCESSING TYPIST (N-R)

	Cr. Hrs.		Cr. Hrs.
First Quarter		Third Quarter	
SC 110 Typing I	4	SC 113 Prod. Typing	4
EG 095 Comp. Bus. Comm.	3	SC 200 Office Proc.	5
SC 105 Filing & Records Control	3	SC 131 Machine Trans. II	3
AC 109 Bookkeeping & Accounting	5	EG 132 Bus. Comm.	3
	15		15

	Cr. Hrs.
Second Quarter	
SC 118 Word Processing Typing	6
EG 131 Bus. Comm.	3
SC 130 Machine Trans. I	3
DP 111 Prin. of Bus. Data Proc.	3
	15

TOTAL CREDIT HOURS: 45

TRANSPORTATION AND TRAFFIC MANAGEMENT (A)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr. Hrs.
First Quarter	
TT 101 Fund. of Commercial Transportation I	3
TT 130 Mgt. Tools — Concepts I	3
English Elective: ¹	
EG 131 Bus. Comm.	
EG 111 Eng. Comp.	
EG 106 Occ. Comm.	3
Math Elective: ¹	
M-110 Math for Bus.	
M 105 Intro. Algebra	
M 106 Inter. Algebra	3-4
MG 105 Intro. to Bus.	3
	15-16

	Cr. Hrs.
Second Quarter	
TT 102 Fund. of Commercial Transportation II	3
TT 131 Mgt. Tools & Concepts II	3
English Elective: ¹	
EG 112 Eng. Comp.	
EG 107 Occ. Comm.	3
Math Elective: ¹	
M 102 Applied Math I	
M 105 Intro. Algebra	
M 106 Inter. Algebra	
M 111 Col. Algebra	3-5
EC 108 Labor Relat.	3
	15-17

	Cr. Hrs.
Third Quarter	
TT 103 Fund. of Commercial Transportation III	3
TT 132 Mgt. Tools & Concepts III	3
English Elective: ¹	
EG 133 Bus. Comm.	
EG 107 Occ. Comm.	3
Econ. Elective: ¹	
EC 109 Applied Econ.	
EC 211 Prin. of Econ.	3
Elective: ¹	3
	15

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
TT 120 International Trade I	3
TT 110 Trans. Reg. I	3
TT 141 Econ. of Trans. I	2
TT 105 Traf. Mgt. & Phy. Distr. I	3
EG 132 Bus. Comm.	3
Elective: ¹	3
	17

	Cr. Hrs.
Fifth Quarter	
TT 121 International Trade II	3
TT 111 Trans. Reg. II	3
TT 142 Econ. of Trans. II	2
TT 106 Traf. Mgt. & Phy. Distr. II	3
MG 213 Prin. of Mktg.	3
Elective: ¹	3
	17

	Cr. Hrs.
Sixth Quarter	
TT 122 International Trade III	3
TT 143 Econ. of Trans. III	2
TT 112 Trans. Reg. III	3
TT 107 Traf. Mgt. & Phy. Distr. III	3
MG 207 Bus. Law I	3
Elective: ¹	3
	17

¹Consult faculty advisor or counselor for recommended electives.

TOTAL CREDIT HOURS:96-99

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.

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

(Red Rocks Campus only)

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 Accounting (Cost Accounting) (A-N-R)5 credit hours

Prerequisite or Corequisite: AC 113
Accounting or equivalent

A study of the fundamental elements of production costs and their distribution. Concepts and procedures applicable to job order, process and standard cost systems are presented. Orientation on 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

(Red Rocks Campus only)

Prerequisite: AC 213 Accounting or equivalent

A study of Standard, Joint and Marginal Costing, covering cost variances, by-products, scrap, and spoiled defective goods. Emphasis is on budgeting, analysis of cost data and managerial decision making tools including the break-even point and gross profit analysis. (5 hours per week plus programmed laboratory as needed)

AC 215 Introduction to Accounting Systems5 credit hours

Prerequisite: AC 113 Accounting and DP 112
Advanced Principles of Business Data
Processing

A study of the integration of computers and accounting, the installation and control of accounting systems in various business applications, and an analysis of tools available for implementation of an accounting system 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 Accounting5 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 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 level. 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)



Data Processing

DATA PROCESSING

DP 102 Key Punch Laboratory (F, W, S, SS) (N) 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. (10 hours per week, plus lab as directed by instructor)

DP 111 Principles of Business Data Processing (F, W, S, SS) (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 Data Processing (F, W, S, SS) (N) 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 (F, S) 5 credit hours

Prerequisite: DP 112

Coding and execution of simple business programs using RPG. (5 hours per week)

DP 115 Basic (W, SS) 3 credit hours

Prerequisite: DP 112

Coding and execution of simple business program using BASIC. (3 hours per week)

DP 121 Applied Computer Mathematics (F, W, S) (N) 5 credit hours

Application of data processing techniques to simple business mathematics problems. (5 hours per week)

DP 122 Applied Computer Mathematics II (F, W, S) (N) 5 credit hours

Prerequisite: DP 121

Continuation of DP 121 using more advanced applications. (5 hours per week)

DP 125 Data Processing Records Control (F, W, S, SS) (6) 3 credit hours

Prerequisite: DP 111

A basic course designed to give the student an understanding of the scheduling, documentation, recording, and security procedures needed for efficient control of data and data files. (3 hours per week)

DP 130 Computer Operations I (W, S) (N) 5 credit hours

Prerequisite: DP 111

An introduction to the basic techniques of computer operations including the handling and maintenance of input/output devices and console operations for a batched job environment. (Meets 10 hours per week)

DP 131 Computer Operations II (S, SS) (N) 5 credit hours

Prerequisite: DP 130

Continuation of DP 130. An introduction to computer operation in a multiprogramming environment. (Meets 10 hours per week)

DP 213 Assembler Language I (F, S) (N) 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 (W, SS) (N) 5 credit hours

Prerequisite: DP 213

Continuation of DP 213 using more advanced applications (5 hours per week)

DP 216 Cobol I (F, S) (N) 5 credit hours

Prerequisite: DP 112

Coding and execution of simple business programs using COBOL. (5 hours per week)

DP 217 Cobol II (W, SS) (N) 5 credit hours

Prerequisite: DP 216

Continuation of DP 216 using more advanced applications. (5 hours per week)

DP 221 Fortran IV, I (F) (N) 5 credit hours

Prerequisite: DP 112

Coding and execution of simple business programs using Fortran IV. (5 hours per week)

DP 222 Fortan IV. II (W) (N) 5 credit hours

Prerequisite: DP 221

Continuation of DP 221 using more advanced applications. (5 hours per week)

DP 224 PL/II (F) (N) 5 credit hours

Prerequisite: DP 112

Coding and execution of simple business programs using PL/I. (5 hours per week)

DP 225 PL/I II (W) (N) 5 credit hours

Prerequisite: DP 224

Continuation of DP 224 using more advanced applications. (5 hours per week)

DP 231 Systems Analysis I (W) (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 (S) (N) 3 credit hours

Prerequisite: DP 231; Continuation of DP 231

(3 hours per week)



Industrial Safety and First Aid

INDUSTRIAL MANAGEMENT

(Red Rocks only)

IM 101 Elements of Supervision (R) 3 credit hours

This course will provide instruction in the basic elements of planning, organizing, directing, and controlling. An exposure to the current theories of motivation will also be included. (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

A course covering the accepted methods of work measurement and their relationship to the control of costs. Topics will include incentive programs, motion study, etc. (3 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)

INSURANCE

(Auraria only)

IN 110 Introduction to Insurance (A)3 credit hours

This course deals with the basic principles of insurance and risk. Various kinds of insurance are discussed; the primary objective of the course is an orientation to the many kinds of insurance and their purposes. (3 hours per week)

IN 121 Principles of Life and Health Insurance (A)3 credit hours

Nature and functions of life insurance, annuities, and health insurance with particular attention to types of policies and their provisions, programming, rate making, reserves, taxation, regulation, and company organization and management. (3 hours per week)

IN 123 Principles of Property and Liability Insurance (A)3 credit hours

The more important property and casualty insurance policies, and, from the insurer's viewpoint, problems of rate making, underwriting, loss, adjustment, reinsurance, financial statements and reserves, loss prevention, and insurance surveys. Variations among various property and casualty lines, including fire, marine, automobile, workmen's compensation, liability, and bonding. (3 hours per week)

IN 131 Business Insurance (A)3 credit hours

Various kinds of insurance for the business firm are studied. The special needs of the individual proprietor, partnerships, and corporations receive attention. Special disability insurance, life insurance on key men, and split dollar plans are discussed. (3 hours per week)

IN 133 Life and Property Insurance Law (A)3 credit hours

This course applies basic principles of business law to the life and property insurance field. Special attention is given to the law of contract and agency, law of liability, the life insurance contract, policy provisions, settlement options and beneficiary designations. (3 hours per week)

IN 203 Principles of Risk Management (A)3 credit hours

This course defines the major categories of risk and how insurance handles each. It also reviews the basic theories of risk management. (3 hours per week)

IN 205 Analysis of Insurance Functions (A)3 credit hours

This course covers in detail an analysis of the various insurance functions especially applicable to property and casualty insurance. Some of the topics covered will be underwriting practices, loss prevention, rate making. (3 hours per week)

IN 221 Insurance and Taxation (A)3 credit hours

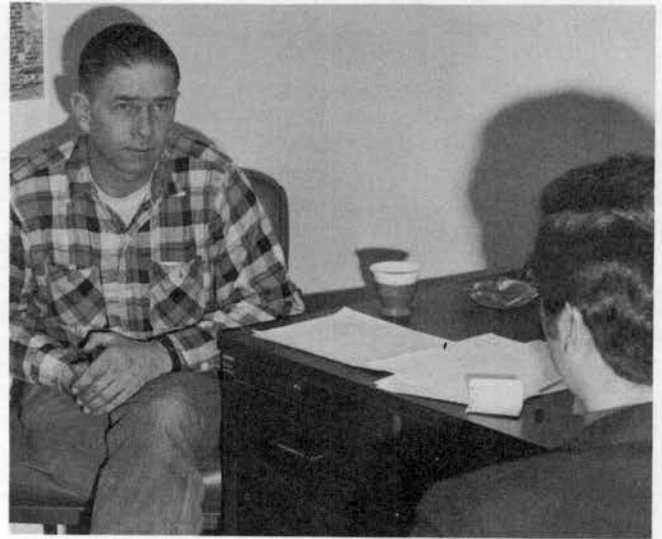
The effect of income, estate, and gift taxation on an insurance program are discussed in this course. These taxes are considered for the individual and the business enterprise also. (3 hours per week)

IN 223 Principles of Insurance and Property Loss Adjusting (A)3 credit hours

Reviews basic concepts in loss adjusting as well as defining practical applications of loss adjusting. (3 hours per week)

IN 231 Estate Planning and Life Insurance (A)3 credit hours

Topics studied include: disposition of property in estates and trusts, administration of estates, federal estate taxation,



Credit Management

federal gift taxation, planning through trusts and will, and the place of life insurance in estate planning. (3 hours per week)

BUSINESS AND 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 organization, finance, managerial control, production, distribution, personnel, and the interdependence of business and government. (3 hours per week)

MG 120 Credit Management (A-N-R)3 credit hours

Course concerns itself with the actual operation of a credit department. Includes a comprehensive evaluation of such things as credit approval and credit identification, authorization, accounts receivable procedure, collection fundamentals and methods, and rehabilitating the delinquent account. (3 hours per week)

MG 130 Credit Fundamentals (A)3 credit hours

A comprehensive study of the background of credit, how it came into being, securing new business, controlling the account, and collecting the account. This first quarter concentrates on retail credit and treats the development and mechanics of installment credit. (3 hours per week)

MG 131 Credit Fundamentals (A)3 credit hours

Prerequisite: MG 130

A continuation of MG 130, this quarter develops the background, function, and growth of wholesale and industrial credit, including a brief resume of the procedures used in securing, approving, and collecting such accounts. Also acquaints the student with the domestic and international media through which the American credit system operates. (3 hours per week)

MG 132 Credit Fundamentals (A)3 credit hours

Prerequisite: MG 130

Covers the principles of mortgage lending as related to credit. Also includes a thorough explanation of foreclosure and bankruptcy and how these factors affect mortgage loan credit. Offers in detail the various methods of securing new business by savings and loan associations and mortgage bankers. (3 hours per week)

MG 200 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 201 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 communication 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 204 Office Procedures and Administration3 credit hours

Develops a knowledge of office services and procedures in order to foster an understanding of the interrelationships of office functions, office services, and office facilities. Presents methods of recognizing and solving office communication problems, and an awareness of successful human relations, changing technologies and philosophies of business and the technical terminology used in business. (3 hours per week)

MG 205 Business Finance (A-N-R)3 credit hours
Prerequisite: MG 105, Econ. 109 or 211, AC 113

Reviews functions and roles of the various financial institutions as they interact with the individual consumer and the economic environment. Studies the impact of fiscal and monetary policy on the business environment. Designed as an introductory course in finance. (3 hours per week)

MG 206 Business Finance (A-N-R)3 credit hours
Prerequisite: MG 205

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. Designed primarily for second year students and community businessmen. (3 hours per week)

MG 207 Business Law I (A-N-R)3 credit hours
Prerequisite: MG 105

Introduction of ordinary legal aspects of business transactions involving such topic 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 208 Business Law II (A-N-R)3 credit hours
Prerequisite: MG 207

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 209 Business Organization and Management (A-N-R)3 credit hours

Prerequisite: MG 105 and MG 209

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)

MG 210 Business Policies (A-N-R)3 credit hours
Prerequisites: MG 105 and MG 209

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)

MG 211 Principles of Buying (A-N-R)3 credit hours
Prerequisite: MG 217

Designed for the student who wishes to specialize in this area, the course covers both principles and practices in the buying field. Professional buyers from the Metropolitan area will be invited to teach various units and lead discussions of typical buying problems. (3 hours per week)

MG 212 Case Studies in Administrative Assistance (N-R)3 credit hours

This is an upper-level course for secretarial science and office administration students, though it has value implications for all business majors. Using the case study-seminar approach, it encourages critical thinking and decision-making in those office situations where a person must project himself into the capacity of his own supervisor, associate, or staff employee in determining a course of action or an appropriate response. (3 hours per week)

MG 213 Principles of Marketing (A-N-R)3 credit hours

Prerequisite: MG 105

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 214 Principles of Marketing (A-N-R)3 credit hours

Prerequisite: MG 213

A continuation of MG 213. Covers pricing policies, promotional activities, marketing in special fields, and market analysis. Especially suited to students planning career objectives in the field of distribution. (3 hours per week)



Principles of Buying

MG 216 Personnel

Administration (A-N-R) 3 credit hours

Prerequisite: MG 105 or MG 213

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 217 Principles of Retailing (A-N-R) 5 credit hours

Prerequisite: MG 105 or MG 213

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. (5 hours per week)

**MG 218 Credit Operations
and Procedures 3 credit hours**

Course concerns itself with the actual operation of a credit department. Includes a comprehensive evaluation of such things as credit approval and credit identification, authorization, accounts receivable procedure, collection fundamentals and methods, and rehabilitating the delinquent account. (3 hours per week)

MG 225 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 226 Salesmanship (A-N-R) 3 credit hours

Prerequisite: MG 225

A continuation of the introductory course; this phase of the sequence studies techniques and psychological factors involved in business transactions with emphasis on sales demonstrations and classroom practice. (3 hours per week)

MG 227 Sales Management (A-N-R) 3 credit hours

Prerequisite: MG 225 and MG 209

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 230 Credit Procedures (A) 3 credit hours

Prerequisite: MG 132

Concerns itself with the actual operation of a credit department. Includes a comprehensive evaluation of such things as credit approval and credit identification, authorization, accounts receivable procedure, collection fundamentals and methods, and rehabilitating the delinquent account. (3 hours per week)

**MG 231 Credit Counseling and
Account Handling (A) 3 credit hours**

Prerequisite: MG 230

Techniques in interviewing and counseling credit applicants. (3 hours per week)

MG 232 Credit Reporting (A) 3 credit hours

Prerequisite: MG 230

Course will provide up-to-date procedures of the credit reporting industry. Details involved in the securing and main-

tenance of credit files, both individual and commercial, will be analyzed. (3 hours per week)

MG 233 Case Studies in Credit (A) 3 credit hours

Prerequisite: MG 232

Using the case study method, students will have an opportunity to apply their business knowledge to actual credit problems and evaluate various solutions under professional guidance. (3 hours per week)

MG 237 Credit Management (A) 3 credit hours

Prerequisite: MG 233 or permission of instructor

A concluding course to bring together all the many facets of credit procedure, with emphasis on the administrative and decision-making functions of the qualified credit manager. (3 hours per week)

**MG 239 Wage and Salary
Administration (R) 3 credit hours**

Prerequisite: MG 216 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 Small Business
Administration (N) 3 credit hours**

Prerequisites: MG 105 and AC III Accounting

A study of small business and its importance in the American economy. Problems of small business operation will be analyzed through the use of case studies. A business simulation game will be an integral part of this course. (3 hours per week)



Salesmanship

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

(Red Rocks only)

RE 101 Real Estate Principles and Practices (R) 3 credit hours

A fundamental real estate course covering the economic, legal, financial, marketing, managerial and operational aspects of real estate. The day by day operations and roles of the broker covering listings, prospecting, advertising, financing, etc. will be surveyed. (3 hours per week)

RE 103 Real Estate Finance (R) 3 credit hours

Analysis of real estate financing, including lending policies and problems in financial transactions in residential, commercial and special purpose properties. Methods of financing properties is emphasized. (3 hours per week)

RE 104 Real Estate Law (R) 3 credit hours

Law of real property, transfers, deeds, leases, escrows, etc. Law as it affects brokers and salesmen. This course is oriented toward the law as it applies in Colorado. (3 hours per week)

RE 201 Principles of Insurance (R) 3 credit hours

Basic course in insurance, risk and risk bearing, and insurance regulation as it applies to the real estate field. (3 hours per week)

RE 202 Real Estate Appraisal (R) 3 credit hours

An introductory course covering the purposes of appraisals, the appraisal process and the different approaches, methods and techniques used to determine the value of various types of property. (3 hours per week)

RE 203 Real Estate Trends (R) 3 credit hours

An attempt will be made to recognize current attitudes, trends in uses for real estate and change in utilization. (3 hours per week)

RE 204 Land Resources (R) 3 credit hours

Physical, economic and institutional factors that affect, condition and control man's use of these resources. (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 pictures. (2 hours per week plus lab as needed)

SC 103 Business Machines (A-N-R) 3 credit hours

Prerequisite or co-requisite: 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 non-business 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 a minimum of 2 lab hours)

SC 112 Intermediate Typing (A-N-R) 4 credit hours

Prerequisite: SC 111 or equivalent

Typing speed of 25 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 the following office situations: general, technical, accounting, professional, government, and executive. (15 hours per week plus lab as directed)



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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. (5 hours per week plus lab as directed)

SC 118 Word Processing Typing (N-R) ...6 credit hours

Prerequisite: Any prior course in typing

This course is designed for the short-term candidate who must refurbish typing skills in a limited period of time, either for direct employment or as part of a prerequisite to another course of study. Student will spend two hours per day in the class, developing stroking power, accuracy, and speed. An extensive variety of copy material will be used, directly related to actual office experience. (10 class hours per week, plus lab as needed)

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 Steno-script 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 Alphabetical Shorthand Principles II (A-N-R)4 credit hours

Prerequisite: SC 120 or proficiency examination

This course develops speed in taking business letter dictation to 80 wpm and faster. Typewritten transcription is introduced. The basic rules of sentence structure, punctuation, capitalization, etc., are reviewed in preparation for job-entrance tests and Civil Service Examinations. 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 practice hours as directed)

SC 123 Spanish Gregg Shorthand Principles (N)4 credit hours

(North Campus only)

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

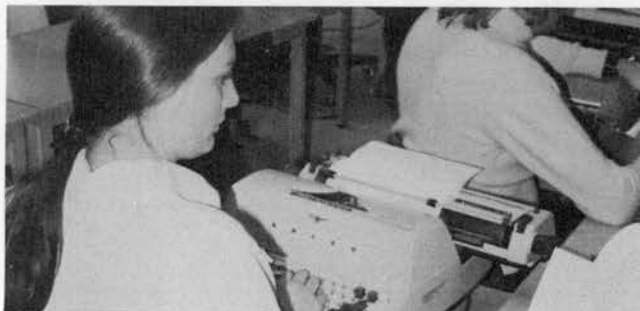
(North Campus only)

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-R)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. (10 hours per week, plus practice as directed).



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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 129 Specialized Dictation (A-N-R)4 credit hours

Prerequisite: SC 128, and such courses as the student's program may require

This course is designed to provide reinforcement of dictation and transcription skills. Students who have not achieved 100 words per minute in speed or who have not attained 98 percent accuracy in transcription are encouraged to enroll in this course. (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

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. (5 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 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 dictating transcription. (5 hours per week plus lab as needed)

SC 259 International Secretarial Procedures (N) 3 credit hours

(North Campus only)

Prerequisite: SC 128

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 Spanish for Office Personnel (N) 3 credit hours

(North Campus only)

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. (3 hours per week)

SC 261 Spanish for Office Personnel (N) 3 credit hours

(North Campus only)

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. (3 hours per week)

SC 262 Spanish for Office Personnel (N) 3 credit hours

(North Campus Only)

Prerequisite: SC 261

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) 3 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. (3 hours per week)

TT 102 Fundamentals of Commercial Transportation II (A) 3 credit hours

(Formerly Introduction to Traffic Transportation)

Prerequisite: TT 101 or permission of instructor

A continuation of TT 101. (3 hours per week)



Office Practice

**TT 103 Fundamentals of Commercial
Transportation III (A)3 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. (3 hours per week)

**TT 105 Traffic Management and
Physical Distribution I (A)3 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. (3 hours per week)

**TT 106 Traffic Management and
Physical Distribution II (A)3 credit hours**

Prerequisite: TT 105

A continuation of TT 105 covering warehousing, inventory control, material handling and packaging. (3 hours per week)

**TT 107 Traffic Management and
Physical Distribution III (A)3 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. (3 hours per week)

TT 110 Transportation Regulations I (A) .3 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. (3 hours per week)

**TT 111 Transportation
Regulations II (A)3 credit hours**

Prerequisite: TT 110

A comprehensive study of cases applying policies for transportation regulations and employing decisions of special interests in traffic administration. (3 hours per week)

**TT 112 Transportation
Regulations III (A)3 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 the preparation of cases. (3 hours per week)

TT 120 International Trade I (A)3 credit hours

Prerequisite: Permission of instructor

A comprehensive course in the field of Import - Export



Traffic and Transportation

Operations combining basic theory with practical application, such as the facets of including credits, documentation, government controls, promotion sales and transportation legislation. (3 hours per week)

TT 121 International Trade II (A)3 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. (3 hours per week)

TT 122 International Trade III (A)3 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. (3 hours per week)

**TT 130 Management Tools
and Concepts I (A)3 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. (3 hours per week)

**TT 131 Management Tools
and Concepts II (A)3 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. (3 hours per week)

**TT 132 Management Tools
and Concepts III (A)3 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. (3 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 forwarder 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)

**BU 297 Cooperative Work
Experience0 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 Study1 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.



Secretarial Science

**DIVISION OF COMMUNITY AND
PERSONAL SERVICE OCCUPATIONS**

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AUDIO-VISUAL TECHNOLOGY (R)

FIRST YEAR

	Cr. Hrs.
First Quarter	
EG 106 Occup. Comm.	3
M 105 Intro. to Algebra	4
MG 105 Intro. to Business	3
AV 100 Intro. to Media	3
Elective	3
	16

	Cr. Hrs.
Second Quarter	
EG 107 Occup. Comm.	3
PY 107 Psych. of Pers. Dev.	3
AV 102 Audio-Visual Basic Elec.	3
AV 103 AV Library Services	4
Elective	3
	16

	Cr. Hrs.
Third Quarter	
PY 100 Human Rel. in Bus. & Ind.	3
AV 200 Prod. of AV Materials	4
EG 108 Occup. Comm.	3
AV 297 Coop. Work Exp.	3
Elective	3
	16

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
AV 201 Television Production	6
AV 203 Proj. Equip. Maint.	4
AV 299 Independent Study	3
Elective	3
	16

	Cr. Hrs.
Fifth Quarter	
AV 205 Audio-Visual Electronics	4
AV 206 Duplicating Processes	3
AV 297 Coop. Work Exp.	4
Elective	3
	14

	Cr. Hrs.
Sixth Quarter	
AV 202 Audio-Visual Photog.	3
AV 204 Trans. Equip. Maint.	4
AV 297 Coop. Work Exp.	4
Elective	3
	14

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.

TOTAL CREDIT HOURS: 92

BUILDING INSPECTION (R)

	Cr. Hrs.		Hrs.
First Quarter		Second Quarter	
CA 211 Blueprint Reading for Building Trades	3	BI 216 Intro. to Design Fund.	3
BI 100 Bldg. Codes and Stand.	3	BI 104 Field Inspection Tech.	4
EG 108 Occup. Comm.	3	BI 105 Soils and Grading	3
BI 102 Construction Materials	4	BI 106 Electrical Inspection	3
BI 103 Mechanical Inspection	3	BI 112 Plan Review	3
	16		16

	Cr. Hrs.
Third Quarter	
BI 110 Plumbing Inspection	3
BI 214 Cons. Organ. and Manag.	3
BI 215 Utilities Inspection	3
BI 218 Housing Inspection and Programs	3
BI 297 Coop. Work Exp.	4
	16

TOTAL CREDIT HOURS: 48

CLASSROOM INSTRUCTIONAL ASSISTING (R)

FIRST YEAR

	Cr. Hrs.
First Quarter	
CI 110 Classroom Instructional Techniques I	3
SC 110 Typing I	4
AV 100 Intro. to Media	3
EG 111 English Comp.	3
PS 113 Amer. Nat. Gov't.	3
	16

	Cr. Hrs.
Second Quarter	
EG 112 English Comp.	3
S 110 Intro. To Speech	3
B 111 General Biology	5
CI 111 Classroom Instructional Techniques II	3
Math Elective	3
	17

	Cr. Hrs.
Third Quarter	
CI 112 Classroom Instructional Technique III	3
HS 107 Hangups and Happenings in Amer. History	3
AR 101 Basic Drawing	3
Physical or Biological Science Elective	4-5
	13-14

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
PS 114 Amer. State and Local Gov't.	3
MU 145 Music for Children	3
EG 113 English Comp.	3
LI 145 Literature for Children and Adolescents	3
SO 107 Socio. of Pers. Dev.	3
	15

	Cr. Hrs.
Fifth Quarter	
HS 220 Colorado History	3
PY 107 Psych. of Pers. Dev.	3
SO 223 Youth in Society	3
CI 297 Coop. Work Experience	4
Elective	3
	16

	Cr. Hrs.
Sixth Quarter	
PY 220 Educational Psychology	3
PY 111 General Psychology	3
Social Science Elective	3
CI 297 Coop. Work Experience	5
	14

EMPLOYMENT OPPORTUNITIES: Increasing demands for higher quality instructional programs including more individualized instruction, new and revised curriculums, and major innovations in the educational process, all of which demand more time by professional staff members suggest that the future of classroom instructional assistants is very bright.

TOTAL CREDIT HOURS: 91-92

CLASSROOM TEACHER ASSISTING (A-N)

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 aides to fill existing job needs in local schools.

Topics usually included are: personal and child psy-

chology, 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.

The 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 systems in the local area. Aides for vocational or occupational programs at the secondary level must also meet state certification requirements which exceed this course.

EARLY CHILDHOOD EDUCATION ASSISTING (N-R)

THREE-QUARTER PROGRAM

First Quarter	Cr. Hrs.
¹ English Credit	3
² CC 103 Orientation to Program Practicum	6
CC 108 Introduction to Teaching the Young Child	4
CC 102 Creative Activities	3
PE 101 First Aid	1
	17

Second Quarter	Cr. Hrs.
² CC 104 Student Lab. Experience	6
CC 109 Methods of Teaching the Young Child	4
PY 221 Dev. Psy. (Child Growth & Dev.)	3
LT 200 Audio-Visual Graphics	
or	
AV 100 Introduction to Media	4-3
	17-16

Third Quarter	Cr. Hrs.
² CC 105 Supervised Student Participation	6
PY 123 Child Guidance Techniques	3
PY 222 Dev. Psy. (Child Growth & Dev.)	6
CC 210 Family & Community Relations	4
PY 107 Psychology of Personal Development	
or	
GC 100 Guidance Counseling	3
	19

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.

¹English Credit selected on approval/or recommendation of advisor

- EG 090 Communications Lab
- RD 101 Basic Reading
- EG 106 Occupational Communications
- SC 110 Typing I - Beginning course or other

²Program Practicum Core - CC 103, CC 104, CC 105 - Must be taken sequentially, each of the three may be offered every quarter.

TOTAL CREDIT HOURS: 52-53

Additional Course Offerings for refresher or updating:

- CC 201 Workshop of Ideas 4 Credit Hours
- CC 202 Workshop of Things 4 Credit Hours

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

First Quarter	Cr. Hrs.	Fourth Quarter	Cr. Hrs.
¹ English Credit	3	PY 111 General Psy.	3
PY 221 Dev. Psy. (Child Growth & Development) I ..	3	CC 108 Intro. to Teaching the Yng. Child	4
PE 101 First Aid	1	² CC 106 Supervised St. Participation	6
CC 102 Creative Activities	3	CC 210 Family & Community Relations	4
² CC 103 Orientation to Program Practicum	6		17
	16		
Second Quarter	Cr. Hrs.	Fifth Quarter	Cr. Hrs.
PY 222 Dev. Psy. (Child Growth & Develment) II ..	3	PY 112 Gen. Psy.	3
PY 107 Psy. of Personal Development or		CC 109 Methods of Teaching the Yng. Child	4
GC 100 Guid. Couns.	3	² CC 107 Sup. Student Participation	6
² CC 104 Supervised Lab Experience	6	CC 211 Child Care & Prog. Sup. & Adm.	4
LT 200 Audio-Visual Graphics or			17
AV 100 Intro. to Media	4-3		
SO 111 Intro. to Soc.	3	Sixth Quarter	Cr. Hrs.
	19-18	CC 212 Child Care Center Business Operations	4
Third Quarter	Cr. Hrs.	F 108 Nutrition	3
S 110 Intro. to Speech or		LI 145 Literature for Children & Adolescents	3
EG 107Occu. Comm.	3	CC 120 Poise & Personality	3
PY 123 Child Guidance Tech.	3	Elective	3
² CC 105 Supervised Student Part	6		16
MU 145 Music for Child	3		
	15		

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 completing the specific experience requirements of the State Social Services Licensing Unit.

¹English credit selected upon recommendation or approval of advisor: EG 090 Communications Lab., RD 101 Basic Reading, EG 106 Occupation, Communication SC 110 A or other typing course.

²Program Practicum Core—CC 103, CC 104, CC 105, must be taken sequentially; each of the three may be offered every quarter.

Additional Course offerings for refresher or updating:

CC 201 Workshop of Ideas	4 credit hours
CC 202 Workshop of Things	4 credit hours

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 (N-R)**

SOCIAL SERVICE CREDIT REQUIREMENT

	Cr. Hrs.
CHILD DEVELOPMENT AND NURSERY EDUCATION18 ¹	
CHILD DEVELOPMENT	9
CC 103 Ort. to Program Practicum	6
CC 108 Introduction to Teaching Young Children ..	4
CC 109 Methods of Teaching Young Children	4
*PY 123 Child Guidance Techniques	3
*PY 221 Dev. Psych. (Child Growth & Development) I	3
*PY 222 Dev. Psych. (Child Growth & Development) II	3
*PY 107 Psychology of Personal Development	3
RELATED AREAS	
CC 102 Creative Activities	3
CC 201 Workshop of Ideas	4
MU 145 Music for Children	3
LI 145 Literature for Children and Adolescents	3
CC 104 Supervised Lab Experience	6
Cr. Hrs.	
PSYCHOLOGY	4-5
*PY 123 Child Guidance Techniques	3
*PY 221 Dev. Psych. (Child Growth & Development) I	3
*PY 222 Dev. Psych. (Child Growth & Development) II	3
PY 111 General Psychology	3
PY 112 General Psychology	3
*PY 107 Psychology of Personal Development	3
ADMINISTRATION	
*CC 210 Family & Community Relations	4
CC 211 Child Care Prog. Supv. & Adm.	4
CC 212 Child Care Center Business Operations	4
MG 209 Business Org. & Management	3
Cr. Hrs.	
SOCIOLOGY	4-5
SO 111 Introduction to Sociology	3
*CC 210 Family & Community Relations	4
NUTRITION	
F-108 Nutrition	3

*Courses are applicable to both disciplines but credit will be given in only one.

¹A total of 18 hours, 9 each from the Child Development and 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 hrs. 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.

ENVIRONMENTAL CONTROL TECHNOLOGY (R)

FIRST YEAR

	Cr. Hrs.
First Quarter	
EG 106 Occup. Comm.	3
M 102 Applied Math I	3
B 110 Intro. to Environment	3
PS 161 Political Leadership	3
WW 100 Intro. to Water-Wastewater	3
	15

	Cr. Hrs.
Second Quarter	
EG 107 Occup. Comm. or	
S 110 Intro. to Speech	3
M 103 Applied Math II	3
B 111 General Biology	5
EV 101 Environmental Health	3
	14

	Cr. Hrs.
Third Quarter	
EG 108 Occup. Comm.	3
M 104 Applied Math III	3
C 101 Fund. of Chemistry	4
EV 107 Solid Waste Pollution	3
EV 203 Food Sanitation	3
	16

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
EV 207 Vectors and Pesticides	5
C 103 Fund. of Chemistry	4
EV 201 Atmospheric Pollution	5
SI 121 Environmental Science	4
	18

	Cr. Hrs.
Fifth Quarter	
EV 205 Pollution Control Systems	4
PY 100 Human Rel. in Bus. & Ind.	3
SI 122 Environmental Science	4
EV 297 Coop. Work Experience	5
	16

	Cr. Hrs.
Sixth Quarter	
EV 299 Independent Study	4
EV 220 Pollution Samp. and Analy.	4
EV 297 Coop. Work Experience	4
SI 123 Environ. Science	4
	16

EMPLOYMENT OPPORTUNITIES: The Environmental Control Technology program is planned in response to the rising concern with problems of pollution. This program of study is designed to prepare students for employment as technicians in governmental pollution control agencies, industrial pollution control, water supply, water resources, engineering consulting firms, city engineering offices, and related activities. Emphasis is placed upon the technician's role in pollution control functions, utility distribution and collection system layout, surveys, and sampling and testing procedures.

TOTAL CREDIT HOURS: 95

FIRE SCIENCE TECHNOLOGY (R)

	Cr. Hrs.		Cr. Hrs.
First Quarter		Fourth Quarter	
FS 100 Intro. to Fire Science and Suppression	3	FS 220 Fire Insurance	3
FS 104 Fire Co. Organ. & Proc.	3	C 101 Fund. of Chemistry	4
EG 106 Occup. Comm.	3	FS 212 Fire Prot. Equip. & Systems	3
PY 100 Human Rel. in Bus. & Ind.	3	Elective	3
M 102 Applied Math I	3	Social Science Elective	3
	15		16
Second Quarter		Fifth Quarter	
FS 110 Fire Apparatus and Equip.	3	FS 208 Hazardous Materials I	3
S 110 Intro. to Speech or		FS 202 Fund. of Fire Prevention	3
EG 107 Occup. Comm.	3	FS 204 Related Codes & Ordinances I	3
FS 250 Blprt. Reading for Firemen	3	C 103 Fund. Chemistry	4
SO 107 Socio. of Pers. Dev.	3	FS 216 Private Fire Protection Systems	3
M 103 Applied Math II	3		16
	15		
Third Quarter		Sixth Quarter	
FS 106 Fire Fighting Tactics and Strategy	3	FS 205 Related Codes & Ordinances II	3
FS 206 Rescue Practices	3	FS 214 Fire Dept. Administration	3
FS 108 Fire Hydraulics	3	FS 218 Fire Investigation	3
P 101 Fund Physics	3	FS 209 Hazardous Materials II	3
EG 108 Occup. Comm.	3	Elective	3
	15		15

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.

TOTAL CREDIT HOURS: 92

FIRE SERVICE TRAINING (R)

NINE-MONTH PROGRAM

	Cr. Hrs.		Cr. Hrs.
First Quarter		Third Quarter	
FS 100 Intro. to Fire Science and Suppression	3	FS 106 Fire Fighting Tactics and Strategy	3
FS 104 Fire Co. Organ. & Proc.	3	FS 112 Defensive Driving for Firemen	3
RD 101 Skills for College Reading I	3	FS 205 Related Codes and Ord. II	3
PY 100 Human Rel. in Bus. & Ind.	3	FS 206 Rescue Practices	3
Math Elective	3	Elective	3
	15		15
Second Quarter		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.	
FS 110 Fire Apparatus and Equip.	3		
S 110 Intro. to Speech or			
EG 107 Occupational Comm.	3		
FS 230 Blprt. Reading for Firemen	3		
FS 204 Related Codes and Ord. I	3		
FS 202 Fund. of Fire Prevention	3		
	15		

TOTAL CREDIT HOURS: 45

FOOD SERVICE (N)

This program is supported by appropriate related courses for those needing a program for self-employment or management entry. Completion of any one quarter in Food Production merits a Certificate of Completion. A Certificate of Achievement is awarded for completion of three quarters in Food Production plus electives totaling at least 18 credit hours and a minimum of 3 credit hours of Cooperative Work Experience. An AA degree will be awarded upon completion of Food Production and Man-

agement courses totaling 96 credit hours (or their equivalent in work experience) combined with 30 hours of appropriate electives; or for a combination of courses that include five quarters of Food Production and Management totaling 80 credit hours (or equivalent work experience) plus 49 credit hours of appropriate electives as specified in the program. In addition, the General Education requirements for an AA degree which are in effect at the time of enrollment must be met satisfactorily.

FOOD PREPARATION - 3 QUARTERS

Grill, Broil, Sautee, Fry	I	II	III
Soups, Sauce, Consume	I	II	III
Beverages, Salads, Sandwich	I	II	III
Sanitation & Safety	I	II	III
Equipment	I	II	III
Baker Helper	I	II	III
	—	—	—
	16	16	16

	Cr. Hrs.
*F 108 Nutrition	3
*EG 106 Occupational Communications	3
*M 100 Developmental Math	3
*PY 100 Human Relations in Business & Industry	3
*MG 105 Introduction to Business	3
*PY 107 Psychology of Personal Development	3

*Electives, two per quarter - to be taken concurrently with Food Service program.

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.

FOOD MANAGEMENT - 3 QUARTERS

The Food Management program may be taken as part of the two year program in food service or may be elected without the first year program by the student having work

experience in food production and wanting to expand production skills and/or enter the management phase of commercial eating establishments.

Catering	I	II	III**
Meat Cutting	I	II	III**
Menu Planning	I	II	III**
Food & Beverage Planning	I	II	III**
Beverage Control	I	II	III**
Food Management	I	II	III**
Food Science	I	II	III**
	—	—	—
	16	16	16

	Cr. Hrs.
*AC 109 Bookkeeping & Accounting	5
*MG 217 Principles of Retailing	5
*MG 209 Business Organization and Management	3
*MG 210 Business Policies	3
6th Quarter Electives	
**Advanced Food Production III	16
*Business and Management	3
*Accounting	5
*Social Sciences	3

**During the sixth quarter of the two year program the student may elect either Food Production III or additional courses in business management or a combination of Food Production III and business courses, depending upon his occupational objective. If the management option is chosen, nine credit hours of business and social science plus nine credit hours cooperative work experience in management must be completed.

*Cooperative Work Experience is mandatory for each Food Production or Food Management program. It may be taken either as part of the course block or in addition to it depending upon the student's occupational objectives and training needs. Arrangements will be made through instructor and the division director.

EMPLOYMENT OPPORTUNITIES: Completion of the two year program in the food production option will qualify the student 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)

FIRST YEAR		Cr. Hrs.	SECOND YEAR		Cr. Hrs.
First Quarter			Fourth Quarter		
EG 106	Occ. Comm.	3	MG 209	Bus. Org. & Mgt.	3
*HM 105	Front Office Procedures	3	PY 107	Psy. of Pers. Dev.	3
*HM 151	Hotel-Motel Org. & Adm.	3	*HM 117	Hotel-Motel Basic Acctg.	3
*HM 103	Intro. to Hotel-Motel Mgt.	3	HM 297	Coop. Work Exp. or Elective	6
*HM 203	Hotel-Motel Motor Mgt.				<hr style="width: 100%;"/>
	or				15
MG 209	Bus. Org. & Mgt.	3			
		<hr style="width: 100%;"/>			
		15			
Second Quarter			Fifth Quarter		
M 100	Dev. Math	3	MG 216	Pers. Adm.	3
SO 111	Intro. to Sociology	3	PY 100	Hum. Rel. in Bus. & Ind.	3
*HM 115	Hotel-Motel Law	3	MG 212	Case Studies in Adm. Asst.	3
*HM 109	Supervisory Housekeeping	3	*HM 119	Food & Bev. Mgt. & Serv.	
HM 297	Coop. Work Exp. or Elec.	4		or	
		<hr style="width: 100%;"/>	*HM 123	Food & Bev. Purchasing	3
		16	HM 297	Coop. Work Exp. or Elective	4
					<hr style="width: 100%;"/>
					16
Third Quarter			Sixth Quarter		
AC 109	Bookkeeping and Acctg.	5	*HM 201	Hotel-Motel Sales	3
MG 213	Prin. of Marketing	3	*HM 121	Food & Bev. Control	3
*HM 111	Supervisory Development			Elective	3
	or		HM 297	Coop. Work Exp. or Elective	6
*HM 205	Training & Coaching Tech.	3			<hr style="width: 100%;"/>
*HM 107	Maint. & Engr.	3			15
HM 297	Coop. Work Exp. or Elective	4			
		<hr style="width: 100%;"/>			
		18			

*These courses fulfill the requirements for a Professional Certificate of Recognition awarded by the American Hotel-Motel Educational Institute.

EMPLOYMENT OPPORTUNITIES: Successful completion of this program affords students 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.

TOTAL CREDIT HOURS: 95

INSTITUTIONAL HOUSEKEEPING (A)

FIRST YEAR

	Cr.
First Quarter	Hrs.
EG 106 Occ. Comm.	3
SO 111 Intro. to Sociology	3
EH 100 Intro. to Inst. Housekeeping	3
EH 107 Safety & Sanitation	3
HM 151 Hotel-Motel Org. & Adm.	3
Elective	3
	18

	Cr.
Second Quarter	Hrs.
PY 111 General Psychology	3
EH 105 Maintenance & Controls	3
M 100 Dev. Math	3
Elective	3
EH 297 Coop. Work Exp. or Elective	4
	16

	Cr.
Third Quarter	Hrs.
EC 109 Applied Economics	3
Elective	3
EH 109 Basic Interior	3
AC 111 Accounting	5
EH 297 Coop. Work Exp. or Elective	3
	17

SECOND YEAR

	Cr.
Fourth Quarter	Hrs.
EH 111 Purchasing Budget & Rec.	4
HM 115 Hotel-Motel Law	3
MG 209 Bus. Org. & Mgt.	3
PY 107 Psychology of Pers. Dev.	3
	13

	Cr.
Fifth Quarter	Hrs.
MG 216 Pers. Adm.	3
PY 100 Human Rel. in Bus. & Ind.	3
EH 297 Coop. Work Exp. or Electives	6
	12

	Cr.
Sixth Quarter	Hrs.
EH 115 Pers. Mgt.	3
MG 212 Case Studies in Adm. Asst.	3
EH 297 Coop. Work Exp. or Elective	6
Elective	3
	15

EMPLOYMENT OPPORTUNITIES: Upon successfully completing the requirements of the Institutional Housekeeping Program, the graduate will be qualified for immediate job entry level assignments in hospitals, educational institutions and business and industry.

TOTAL CREDIT HOURS: 91

INTERPRETER/TUTOR

SIX-QUARTER PROGRAM

FIRST YEAR		SECOND YEAR	
First Quarter	Cr. Hrs.	Fourth Quarter	Cr. Hrs.
EG 151 Beginning Manual Com.	3	EG 251 Spec. Manual Com.	3
EG 151L Manual Com. Lab	0	EG 201 Survey of Com.	3
EG 131 Bus. Com.	3	PY 123 Child Guidance Techniques	3
PY 111 Gen. Psych.	3	Specialty Area	6-7
Specialty Area ¹	6-7		<hr style="width: 100%;"/>
	<hr style="width: 100%;"/>		15-16
	15-16		
Second Quarter	Cr. Hrs.	Fifth Quarter	Cr. Hrs.
EG 152 Intermediate Manual Com.	3	EG 252 Supervised Practicum in Intg. I	3
EG 152L Manual Com. Lab	0	PY 220 Educ. Psych.	3
EG 111 Eng. Comp.	3	LT 200 Audio-Visual Graphics	4
PY 221 Devel. Psychology	3	Specialty Area	6-7
Specialty Area	6-7		<hr style="width: 100%;"/>
	<hr style="width: 100%;"/>		16-17
	15-16		
Third Quarter	Cr. Hrs.	Sixth Quarter	Cr. Hrs.
EG 153 Advanced Manual Com.	3	EG 253 Supervised Practicum in Intg. II	6
PY 222 Devel. Psychology	3	PY 200 Psych. of the Deaf	3
HI 100 Techniques of Tutoring	3	Specialty Area	6-7
Specialty Area	6-7		<hr style="width: 100%;"/>
	<hr style="width: 100%;"/>		15-16
	15-16		

*Students majoring in Interpreting will be required to participate in an additional 3 hours per week of laboratory work.

¹The specialty area may be any specific occupational area chosen by the student-in-training.

EMPLOYMENT OPPORTUNITIES: Interpreter/Tutors are presently in critical demand at public schools, state training institutions for the deaf, and colleges implementing programs in which deaf students are integrated with the regular student body. As the program for hearing-impaired students grows on the three campuses of the Community College of Denver, so will the need for additional qualified interpreter/tutors. Add to this the emergence of new post-secondary programs for the deaf in the current year, to be located in several parts of the country, and the picture of employment opportunities for interpreter/tutors appears very bright.

TOTAL CREDIT HOURS: 91-97

LIBRARY ASSISTING (N)

THREE-QUARTER PROGRAM

First Quarter	Cr. Hrs.	Second Quarter	Cr. Hrs.
LT 100 Intro. to Lib. Or.	3	LT 120 Public Desk Services	3
LT 200 Aud.-V-Graph.	4	LT 130 Tech. Serv.	4
SC 110, 111 Typ. by placement	4	DP 125 Data Proc. Records Control	3
DP 111 Prin. of Business D.P.	3	SC 103 Bus. Mach.	3
AC 109 Bookkeeping & Accounting	5	M 110 Math for Bus.	3
	19		16

Third Quarter	Cr. Hrs.
LT 140 Tech. Cat.	4
SC 105 Filing & Rec. Cont.	3
SC 110 or 111 Typing	4
LT 297 Coop. Wk. Exp.	3
	14

EMPLOYMENT OPPORTUNITIES: Industrial-economic growth studies conducted in the Denver Metropolitan region indicate an increased need for services technology occupations. The Library Information technical assistant is one of the service occupations which has rapid growth potential and advancement for employees in area libraries. Demand for the pre-trained job ready worker is in excess of the supply. 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. Beginning salaries are above those employed without pre-job training. Many hundreds of business and industrial offices of the region now or will employ technical information personnel in the 1970's to cope with the publishing explosion and information network developments.

TOTAL CREDIT HOURS: 49

LIBRARY TECHNOLOGY (N)

SIX-QUARTER PROGRAM

	Cr. Hrs.		Cr. Hrs.
First Quarter		Fourth Quarter	
LT 100 Intro. to Library Org.	3	LT 200 Aud.-V-Graph.	4
EG 106 Occ. Comm. or		Soc. Sci. Elective	3
EG 111 Eng. Comp.	3	DP 130 Computer Operations I or	
M 100 Dev. Math or		Lang Elective	5
M 110 Math for Bus.	3	Lit. Elective or	
PY 100 Human Rel. in Bus. & Ind. or		Soc. Sci. Elective	3
PY 107 Psy. of Pers. Dev.	3		15
SC 110 or 111 Typ. by placement or			
MU 100 Mus. Apprec.	3-4		
	15-16		
	Cr. Hrs.	Fifth Quarter	Cr. Hrs.
Second Quarter		LT 210 Bus. & Sci. Inf. or	
LT 120 Public Desk Services	3	LT 230 Tech. Asst. Inf. Man.	3-4
LT 130 Technical Services	4	LT 280 Lib. Inf. Sk. Dv.	5
EG 107 Occ. Comm. or		Soc. Science Elective	3
DP 111 Prin. of Bus. Data Processing	3	Lang. or Soc. Sci. Elective	3
DP 125 Data Proc. Records Control	3	Lit. Elective	3
LI 141 Intro. to Lit.	3		17-18
	16		
	Cr. Hrs.	Sixth Quarter	Cr. Hrs.
Third Quarter		LT 297 Coop. Wk. Ex.	3
LT 140 Tech. Cat.	4	Soc. Sci. Elective	3
LT 150 Mat. Sel. for Tech. Asst.	3	Lang or Soc. Sci. Elective	3
EG 108 Occ. Comm. or		Business Elective	3
EG 113 Eng. Comp.	3	Elective	3
SC 103 Bus. Mach. or			15
MU 145 Mus. for Chld.	3		
DP 112 Advanced Prin. of Business Data Processing or			
LI 143 Int. to Lit.	3-5		
	16-18		

TOTAL CREDIT HOURS: 94-99

RECREATIONAL LEADERSHIP (R)

FIRST YEAR

	Cr. Hrs.
First Quarter	
EG 106 Occup. Comm.	3
SO 107 Socio. of Pers. Dev.	3
RL 100 Intro. to Rec. Services	3
MU 100 Music Appreciation	3
B 130 Basic Health Science	4
	16

	Cr. Hrs.
Second Quarter	
S 110 Intro. to Speech	3
PY 107 Psych. of Pers. Dev.	3
RL 120 Creative Drama	3
RL 140 Social Recreation	3
RL 102 Tech. of Program Planning and Org.	3
	15

	Cr. Hrs.
Third Quarter	
PS 114 American State and Local Gov't.	3
RL 141 Arts and Crafts	2
PY 111 General psychology	3
SO 120 Marriage and the Family	3
Elective	3
	14

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
RL 200 Team Sports	2
Social Science Elective	3
RL 206 Dance Activities	2
RL 111 Field Work	4
Elective	3
	14

	Cr. Hrs.
Fifth Quarter	
RL 202 Indiv. Lifetime Sports	2
RL 203 Outdoor Rec. and Camping	3
Social Science Elective	3
RL 112 Field Work	4
Elective	3
	15

	Cr. Hrs.
Sixth Quarter	
RL 205 Water Related Activ.	2
Social Science Elective	3
RL 204 Games and Rhythms	4
RL 113 Field Work	4
Elective	3
	16

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, and other organizations.

TOTAL CREDIT HOURS: 90

SENIOR CITIZEN ACTIVITY ASSISTING (R)

NINE-MONTH PROGRAM

	Cr. Hrs.
First Quarter	
SR 100 Intro. to Geriatrics	3
RL 100 Intro. to Rec. Services	3
B 130 Basic Health Science	4
PY 107 Psy. of Personal Devel.	3
SR 105 A.D.L. Laboratory	3
	16

	Cr. Hrs.
Second Quarter	
PE 101 First Aid	1
SO 107 Socio. of Pers. Dev.	3
RL 141 Arts and Crafts	2
SR 110 Institutional Organization	3
SR 297 Coop. Work Experience	6
	15

	Cr. Hrs.
Third Quarter	
SR 112 Activities for Sr. Citizens	3
RL 201 Group Leadership	3
SW 100 Intro. to Social Work	3
SR 297 Coop. Work Exp.	6
	15

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 care 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.

TOTAL CREDIT HOURS: 46

SOCIAL WORKER ASSISTING (R)

FIRST YEAR

	Cr. Hrs.
First Quarter	
EG 106 Occup. Comm.	3
PY 107 Psych. of Pers. Dev.	3
SO 111 Intro. to Sociology	3
SW 100 Intro. to Social Work	3
HS 120 History of Black People	3
	15

	Cr. Hrs.
Second Quarter	
S110 Intro. to Speech	3
PY 111 General Psychology	3
B 130 Basic Health Science	4
SO 112 Intro. to Sociology	3
SW 110 Field Work	3
	16

	Cr. Hrs.
Third Quarter	
PY 221 Child Growth & Dev.	3
SO 113 Intro. to Sociology	3
SW 102 Princ. of Interviewing and Report Writing	4
SW 111 Field Work	4
	14

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
EC 107 Consumer Economics	3
PS 114 American State and Local Gov't.	3
SO 120 Marriage and the Family	3
Social Science Elective	3
Elective	3
	15

	Cr. Hrs.
Fifth Quarter	
PY 112 General Psychology	3
HS 110 Hist. of Chicano People	3
SO 211 Current Social Issues	3
SW 112 Field Work	4
Elective	3
	16

	Cr. Hrs.
Sixth Quarter	
SO 223 Youth in Society	3
SO 220 Minority Groups in Amer. Society	3
SW 106 Special Social Problems	3
SW 113 Field Work	3
PY 210 Social Psychology	3
	15

EMPLOYMENT OPPORTUNITIES: This program is designed to prepare students for entry into a variety of agencies which provide social services to the community. Upon completion of the program, the graduate is prepared for employment in private or public enterprises of a human welfare nature.

TOTAL CREDIT HOURS: 91

TRAFFIC ENGINEERING TECHNOLOGY (R)

FIRST YEAR

	Cr. Hrs.
First Quarter	
TE 100 Intro. to Traffic Eng.	3
EG 107 Occup. Comm.	3
M 102 Applied Math I	3
D 111 Drafting I	4
TE 106 Princ. of Traffic Admin. and Safety	3
	16

	Cr. Hrs.
Second Quarter	
TE 108 Control Devices	3
EG 108 Occup. Comm.	3
M 103 Applied Math II	3
AV 200 Prod. of AV Materials	4
Elective	3
	16

	Cr. Hrs.
Third Quarter	
M 104 Applied Math III	3
TE 200 Field Traffic Survey	6
UP 202 Data Processing for Planning	3
TE 202 Traffic Laws and Regulations	3
	15

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
TE 102 Tech Physics I	4
M 120 Stat. for Bus. & Ind.	3
TE 204 Geometric Design	6
Elective	3
	16

	Cr. Hrs.
Fifth Quarter	
TE 103 Tech. Physics II	4
TE 211 Traffic Accid. Invest.	4
TE 203 Model Traffic Ord.	3
Social Science Elective	3
	14

	Cr. Hrs.
Sixth Quarter	
TE 210 Traffic Studies	6
TE 212 Urban Trans. Planning	6
TE 297 Coop. Wor. Exp.	4
	16

TOTAL CREDIT HOURS: 93

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 7 quarters for persons interested in learning about the total field of horticulture while the 3 quarter programs are geared to specific job entry categories.

	Cr.		Cr.
First Quarter	Hrs.	Fifth Quarter	Hrs.
*UH 100 Introduction to Urban Horticulture	2	UH 201 Nursery Management	4
UH 102 Landscape Plant Materials	4	UH 203 Horticultural Equipment & Facilities	3
UH 104 Plant Science	4	AC 109 Bookkeeping & Accounting	
Math Elective	3	or	
EG 106 Occupational Comm.		AC 111 Accounting	5
or		Business Management Elect.	3
EG 111 English Composition	3		15
	16		
		Sixth Quarter	Cr.
			Hrs.
Second Quarter	Cr.	UH 205 Landscape Maintenance	3
	Hrs.	UH 207 Greenhouse Management	4
UH 106 Plant Science	4	UH 209 Horticulture Business Operations	3
UH 108 Landscape Planning	4	***Suggested Elective	3
EG 107 Occupational Communications		Industrial Occupations Elective	3
or			16
EG 112 English Comm.	3		
Elective	3	Seventh Quarter	Cr.
	14		Hrs.
		UH 211 Diseases & Pests	4
Third Quarter	Cr.	UH 213 Turf Production & Management	4
	Hrs.	PY 107 Psychology of Personal Development	3
UH 110 Soils & Fert.	4	UH 297 Cooperative Work Experience	
UH 112 Horticultural Science	4	or	
EC 211 Principles of Economics	3	***Elective	4
PY 100 Human Relations in Business & Industry	3		15
	14		
		*Optional - Student may substitute elective with instructor's approval.	
Fourth Quarter	Cr.	**Evening Courses will require Saturday Field Trips.	
	Hrs.	***Suggested Electives: Horticulture-Floral Design Workshop UH 114; UH 221 Horticulture Seminar, UH 221 Horticulture Seminar, UH 219 Perspective Drawing, UH 116 Merchandising Horticulture Products.	
UH 297 Cooperative Work Experience	8	Business & Management-MG 209 Business & Organization Management, MG 213 Principles of Marketing, MG 217 Principles of Retailing & Merchandising.	
UH 215 Special Horticulture Study	4		
	12		

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 Associate Degree in Horticulture.

TOTAL CREDIT HOURS: 102

URBAN HORTICULTURE (N)

THREE-QUARTER PROGRAM

Nursery Management and Landscape Maintenance Option

	Cr. Hrs.		Cr. Hrs.
First Quarter			
UH 102 Landscape Plant Materials	4	UH 110 Soils & Fert.	4
UH 104 Plant Science	4	UH 211 Diseases & Pests	4
UH 201 Nursery Management	4	PY 107 Psychology of Personal Development	3
Math Elective	3	**Elective	3
	15		14
Second Quarter			
UH 108 Landscape Planning	4		
SE 111 Basic Principles of Eng. & Carb.	5		
UH 205 Landscape Maintenance	3		
Business Management Elective	3		
EG 106 Occupational Communications	3		
	18		

*Evening courses will require Saturday field trips.
**Suggested Electives: Horticulture Seminar, Perspective Drawing.

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 Achievement.

TOTAL CREDIT HOURS: 47

URBAN HORTICULTURE (N)

THREE-QUARTER PROGRAM

Greenhouse Management Option

	Cr. Hrs.		Cr. Hrs.
First Quarter			
UH 104 Plant Science	4	UH 110 Soils & Fertilizers	4
UH 203 Hort. Equipment & Facilities	3	UH 112 Horticultural Science	4
Industrial Occupation Elective	5	UH 211 Diseases & Pests	4
Math Elective	3	UH Elective	3
	15		15
Second Quarter			
UH 106 Plant Science	4		
UH 207 Greenhouse Management	4		
SE 111 Basic Principles of Eng. & Carb.	5		
PY 107 Psychology of Personal Development	3		
	16		

*Evening courses will require Saturday field trips.
**Suggested Electives: Horticulture Seminar, Floral Design Seminar, Merchandising Horticultural products.

EMPLOYMENT OPPORTUNITIES: The Greenhouse 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.

TOTAL CREDIT HOURS: 46

URBAN HORTICULTURE (N)

THREE-QUARTER PROGRAM

Turf Management Option

	Cr. Hrs.		Cr. Hrs.
First Quarter			
UH 104 Plant Science	4	UH 110 Soils & Fertilizers	4
UH 203 Horticultural Equipment & Facilities	3	UH 211 Diseases & Pests	4
SE 111 Basic Principles of Eng. & Carb.	5	UH 213 Turf Production & Management	4
Math Elective	3	**Elective	3
	15		15
Second Quarter			
UH 106 Plant Science	4		
PY 107 Psychology of Personal Development	3		
UH 205 Landscape Maintenance	3		
UH 215 Special Studies in Horticulture	4		
EG 106 Occupational Communications	3		
	17		

*Evening courses will require Saturday Field Trips.
**Suggested Electives: Horticulture Seminar, Merchandising Horticultural Products.

EMPLOYMENT OPPORTUNITIES: The Turf Management option provides the basis for entry level job skills in Golf Course maintenance.

TOTAL CREDIT HOURS: 47

URBAN HORTICULTURE (N)

LANDSCAPE CONSTRUCTION (AND DESIGN) OPTION

First Quarter	Cr. Hrs.	Third Quarter	Cr. Hrs.
UH 104 Plant Science	4	UH 217 Advanced Landscape Planning	4
D 111 Drafting I	4	UH 208 Landscape Surveying	2
UH 201 Nursery Management	4	UH 110 Soils & Fertilizers	4
UH 102 Landscape Plant Materials	4	UH 219 Landscape Perspective Drawing	4
	—	MG 225 Salesmanship	3
	16		—
			17
Second Quarter	Cr. Hrs.	Summer Quarter	Cr. Hrs.
CT 123 Cont. & Spec.	5	UH 221 Basic Landscape Construction, Estimating & Bidding	8
UH 205 Landscape Maintenance	3		—
UH 108 Landscape Planning	4		8
PY 107 Psychology of Personal Development	3		—
Math Elective	3		8
	—		—
	18		8

EMPLOYMENT OPPORTUNITIES: This program is designed to prepare the students for positions with landscape contractors as supervisory personnel; and with landscape architects as landscape technicians and assistants.

TOTAL CREDIT HOURS: 59

URBAN PLANNING TECHNOLOGY (R)

FIRST YEAR

First Quarter	Cr. Hrs.	Fourth Quarter	Cr. Hrs.
EG 106 Occup. Comm.	3	SU 103 Basic Surveying	4
M 102 Applied Math I	3	UP 200 Statistics for Planning	3
UP 100 Intro. to Planning	3	UP 202 Data Processing for Planners	3
B 110 Intro. to Environment	3	AV 200 Prod. of AV Materials	4
HS 251 History of Cities	3		—
	—		14
	15		
Second Quarter	Cr. Hrs.	Fifth Quarter	Cr. Hrs.
EG 107 Occup. Comm. or		UP 207 Pictorial Drafting	4
S 110 Intro. to Speech	3	G 111 Intro. to Geology	4
M 103 Applied Math II	3	PS 114 American State and Local Gov't.	3
D 111 Drafting I	4	EC 109 Applied Economics	3
UP 110 Prob. in Urban Planning	3	UP 297 Coop. Work Experience	3
GE 230 Urban Geography	3		—
	—		17
	16		
Third Quarter	Cr. Hrs.	Sixth Quarter	Cr. Hrs.
EG 108 Occup. Comm.	3	UP 205 Map Reading and Photo Interpretation	3
M 104 Applied Math III	3	UP 210 Planning Law	3
UP 102 Data Collecting Tech. and Evaluation	3	UP 297 Coop. Work Exper.	4
AR 105 Basic Design	3	UP 299 Independent Study	3
Elective	3	Elective	3
	—		—
	15		16

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.

TOTAL CREDIT HOURS: 93

WATER-WASTEWATER TECHNOLOGY (R)

FIRST YEAR		SECOND YEAR	
		Cr.	Cr.
		Hrs.	Hrs.
First Quarter		Fourth Quarter	
EG 106	Occup. Comm.	3	C 103 Fund of Chemistry
M 102	Applied Math I	3	WW 200 Hydraulics for Water and Wastewater Tech. 5
WW 100	Intro. to Water and Wastewater	3	FP 203 Fund. of Hydraulics and Pneumatics
B 111	General Biology	5	WW 203 Water Purification
		14	15
		Cr.	Cr.
		Hrs.	Hrs.
Second Quarter		Fifth Quarter	
EG 107	Occup. Comm.	3	WW 210 Microbiology for Water
M 103	Applied Math II	3	and Wastewater Tech.
B 112	General Biology	5	WW 220 Sanitary Chemistry
WW 102	Water and Wastewater Systems	3	WW 204 Wastewater Treatment Methods
Elective	3	WW 297 Coop. Work Experience
		17	16
		Cr.	Cr.
		Hrs.	Hrs.
Third Quarter		Sixth Quarter	
EG 108	Occup. Comm.	3	WW 225 Instrumentation and Controls
C 101	Fund. of Chemistry	4	WW 206 Water and Wastewater Admin. and Finance 3
PY 100	Human Relations in Business and Industry	3	WW 205 Water and Wastewater Equip. Maintenance ..
WW 105	Water-Wastewater Mechanics	3	WW 297 Coop. Work Experience
Elective	3	Elective
		16	16

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.

TOTAL CREDIT HOURS: 94

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.

Please contact the Division Director of Community and Personal Service Occupations for an updated brochure.

AUDIO-VISUAL TECHNOLOGY

AV 100 Introduction to Media (N-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 projector 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 the maintenance and care of slide, filmstrip, overhead, opaque projectors as well as 8mm and 16mm motion picture machines. (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 reproduction of various graphic designs; provides opportunity to develop skills in offset printing, mimeographing and spirit duplicating. (3 hours per week)

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. (3 hours lecture, 2 hours lab 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 construction 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 of 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

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)

EARLY CHILDHOOD EDUCATION AND MANAGEMENT

CC 102 Creative Activities (N-R) 3 credit hours
 The intent of this course is to provide learning experiences encouraging creativity and self-expression in children through the use of suitable activities and materials. Experiences in basic drawing, painting, pasting, cutting, clay and play dough are included. (3 hours per week)

CC 103 Orientation to Program Practicum (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, in relation to early childhood education and development. Appropriate licensing regulations are introduced and qualified. (2 hours lecture and 8 hours lab per week)

CC 104 Supervised Laboratory Experience (N-R) 6 credit hours
 Prerequisite: CC 103
 Practicum in the Community College Children's Center. Participation as well as discussion and application of methods for guiding children's learning experiences are involved. (2 hours lecture and 8 hours lab per week)

CC 105 Supervised Student Participation (N-R) 6 credit hours
 Prerequisite: CC 104
 Practicum in approved day care center; continuation of CC 104. (1 hour lecture and 10 hours lab per week)

CC 106 Supervised Student Participation (N-R) 6 credit hours
 Prerequisite: CC 105
 Practicum in approved day care centers; continuation of CC 105. (1 hour lecture and 10 hours lab per week)

CC 107 Supervised Student Participation (N-R) 6 credit hours
 Prerequisite: CC 106
 Practicum in approved day care centers; continuation of CC 106. (1 hour lecture and 10 hours lab per week)

CC 108 Introduction to Teaching The Young Child (NR) 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. (4 hours per week)

CC 109 Methods of Teaching the Young Child (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. Students design various materials and aids for use in teaching. (4 hours per week)

CC 120 Poise and Personality (R) 3 credit hours
 Emphasis on four general areas of good grooming; proper dress, general appearance, social graces and speech. (3 hours per week)

CC 201 Workshop of Ideas (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 (N-R) 4 credit hours
 Prerequisite: CC 201 or permission of instructor
 Examination of commercial and teacher made materials related to current learning models. Teachers design and create teaching materials for their own classroom. (4 hours per week)

CC 210 Family & Community Relations (N-R) 4 credit hours
 This course gives a basic understanding of the dynamics of family interaction and the effects upon the child. Community resources are studied in application to home and school needs. Techniques to achieve parent involvement are evaluated. (4 hours per week)

CC 211 Child Care. Prog. Supervision & Admission (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 212 Child Care Center Business Operations (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)



Methods of Teaching the Young Child

CLASSROOM INSTRUCTIONAL ASSISTING

CI 110 Classroom Instructional Techniques I (R) 3 credit hours

An introductory course in education, designed to acquaint the classroom instructional assistant major with public education. Study of the nature of growth and development and of the principles and theories of learning as they apply to school children. Study of the role and responsibility of a classroom instructional assistant in instructional techniques and communications techniques with children. Relationship of the classroom instructional assistant to the professional teacher and administrator. (3 hours per week)

CI 111 Classroom Instructional Techniques II (R) 3 credit hours

A study of the procedures used in everyday classroom experience including an introduction to school plant, schedules, attendance reports and records and other clerical functions performed by the teacher. An analysis of the basic procedures of test composition, interpretation and evaluation, with special emphasis on scoring and recording objective tests, classroom papers and outside assignments. (3 hours per week)

CI 112 Classroom Instructional Techniques III (R) 3 credit hours

Opportunity to explore specific grade levels and subject areas. Observation in actual classroom under supervision of a credentialed teacher. Develop understanding of the school's role in the community and discuss problems which typically arise in school-community relations. Trainees are introduced to the use of available community resources and agencies. (2 hours lecture, 2 hours lab per week)

INSTITUTIONAL HOUSEKEEPING

EH 100 Introduction to Institutional Housekeeping (A) 3 credit hours

Defines and discusses responsibilities assigned to the housekeeping department. Establishes the relations of a housekeeper to the paying guests, visitors, other employees and the employer. (3 hours per week)

EH 105 Maintenance & Control (A) 3 credit hours

Emphasizes the care and maintenance of rooms, floors, walls, miscellaneous areas and equipment. Also includes the supervision of personnel and the management of equipment, materials, and laundry. (3 hours per week)

EH 107 Safety & Sanitation (A) 3 credit hours

Develops procedures for coping with fire and planning evacuations; analyzes component elements of disaster planning and accident prevention. Principles and methods of controlling bacteria and pests; familiarization with isolation cleaning. Knowledge of state, city and county regulations for sanitation and safety and their application to actual operations. (3 hours per week)

EH 109 Basic Interior (A) 3 credit hours

Principles of decorating involving color schemes, styles, room planning and furnishing, lighting and psychological effects on occupants. (3 hours per week)

EH 111 Purchasing, Budgeting and Records (A) 4 credit hours

Projection of expenses involving equipment, labor, and

supplies; analysis of principles of accounting and typing; conducting research on the quality and utilization of textiles, construction characteristics of furniture, rugs, mattresses, springs and institutional equipment. Consideration for linen control and room arrangement. (4 hours per week)

EH 115 Personnel Management (A) 3 credit hours

Functions of departmental organization with particular emphasis on job designation, work simplification and daily inspection routines. Application of theoretical concepts to conducting interviews, employee training and supervision. (4 hours per week)

ENVIRONMENTAL CONTROL TECHNOLOGY

EV 101 Environmental Health (R) 3 credit hours

A broad study of the principles of public health practices. Specific problems concerning air, water, noise, and solid waste pollution relative to the environment will be investigated in quantitative terms and various solutions discussed. Field trips used to complement and illustrate class work. (4 hours per week)

EV 107 Solid Waste Pollution (R) 3 credit hours

An in-depth study of source of solid waste pollution and methods of control and abatement. Specific attention is paid to modern sewage treatment in all forms with frequent field trips to investigate facilities. (4 hours per week)

EV 201 Atmospheric Pollution (R) 5 credit hours

A study of air pollution in relation to public health. Sources and classification of pollutants, pollution meteorology, sampling and measurement techniques, principles and methods employed in control are covered in lectures, field work, and class projects. (7 hours per week)

EV 203 Food Sanitation (R) 3 credit hours

The application of sanitary principles to the processing, storage, distribution and serving of foods including meats, poultry, and sea food, canned and frozen foods, bakery products, and beverages. (3 hours per week)

EV 205 Pollution Control Systems (R) 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. (6 hours per week)

EV 207 Vectors and Pesticides (R) 5 credit hours

This course includes the study of those parasites which produce disease with particular reference to the human host, and those animals and arthropods that are important in the transmission of disease. (6 hours of lecture and field experience per week)

EV 220 Pollution Sampling and Analysis (R) 4 credit hours

A basic course defining the pollution problems with emphasis on training technicians in the methods of determining pollutants of common interest. (5 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; pre-planning 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 202 Fundamentals of Fire Prevention (R)3 credit hours

Prerequisite: FS 100 Introduction to Fire Science and 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. (3 hours 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 an analysis of building codes. (3 hours per week)



FS 206 Rescue Practice (R)3 credit hours

Rescue practices, the human body, emergency care of victims, childbirth, artificial respiration, toxic gases, chemicals and diseases, radioactive hazards, rescue problems, and techniques. (3 hours per week)

FS 208 Hazardous Materials I (R) 3 credit hours

Prerequisite: C 101 Fundamentals of 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; sprinkler systems, protective systems for special hazards; fire alarm and detection systems. (3 hours 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 230 Blueprint Reading for Firemen)

An analysis of private protection systems. Course covers organization and operations of private fire brigades, complete water system layouts. A study and evaluation of methods employed in determining location of structures in relation to processes involved and protection required. (3 hours per week)

FS 218 Fire Investigation (R) 3 credit hours

Prerequisite: FS 208 Hazardous Materials I

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 court 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 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)

FOOD SERVICES

Food Preparation I (N)16 credit hours

Students are given basic training to work at all food production stations of a commercial kitchen. Fundamentals of the jobs of broiler cook, fry cook, short order, breakfast cook, pantry worker and baker's helper are taught. Students have opportunity to specialize in one or more areas for job entry level training within one quarter; or students may use this course as a foundation for further training in food production skills. Cooperative work experience will be part of a student's training if his objective is to enter the labor force at the end of a quarter's training. (20 hours per week)

Food Preparation II (N)16 credit hours

Advance the student's food preparation skills and understanding of commercial equipment, safety and sanitation practices. Students may specialize for job entry level or go on to Food Preparation III. If this is to be the terminal quarter for a student, cooperative work experience will be part of his program. (20 hours per week)

Food Preparation III (N)16 credit hours

By completing this quarter's training plus cooperative work experience suitable to his job objective, the student will be prepared to work as a second cook, dinner cook or as a specialist in any one of the usual food production stations of a commercial kitchen. (20 hours per week)

Food Preparation I, II, III (or their equivalents) are prerequisites for the second year of food service training.



Food Service

F 108 Nutrition (N-R)3 credit hours

The principles of nutrition applied to maintaining good health is the core of this program. Emphasis is placed upon the student's evaluation of his own diet for nutritional adequacy and on adapting personal and cultural food patterns for better nutrition. Specific sections are designed to support objectives of different occupational programs. (3 hours per week)

Section A: Places emphasis upon the relation of dietary habits to the physical, social and psychological development of children. Application of principles of good nutrition in menu planning and food preparation in commercial food services is also stressed. Ways to meet community needs for nutrition education are also considered.

Section B: Gives special consideration to deficiency diseases and malnutrition. It includes study of therapeutic diets and their effectiveness in treating illness. This section is geared to the needs of students training in the health occupations.

Food Management I (N)16 credit hours

Prerequisites: Food Preparation I, II, III or equivalent

The second year's training in Food Services is designed to extend the student's culinary skills and to prepare him for managerial responsibilities in commercial food production. Advanced work at all the main kitchen stations will be included.

Study and work at the broiler station involves the preparation of meat, fish, poultry and other broiled foods prepared and garnished for serving. Job entry skill as broiler cook can be completed in one quarter. Menu and meal service planning for all phases of food service will be introduced in Food Management I. This includes making production schedules and order lists, use of personnel operating reports and portion control. During Food Management II and III food service operations of increasing complexity will be studied: snack bar, cafeteria, coffee shop, restaurant and banquet.

Food science involves study of the composition of food groups, the effects of heat and cold and of chemicals used as catalysts, preservatives and flavoring. (20 hours per week)

Food Management II (N)16 credit hours

Prerequisites: Food Preparation I, II, III or equivalent

Food Management II includes study of the marketing world and how it operates. Language of buying and how to use it in precise written specifications and in verbal dealings with market agents. Buying of all types of food products and beverages will be included. Beverage cost controls used in hotels, motels, restaurants and clubs will be studied: wine cellar operations, perpetual inventories, bar control, sales and cost distribution. Food Management, specific application of food control systems for all types of feeding operations, includes: a combination of theory and practice to develop business and financial knowhow for self employment or entry into a management job.

Catering: techniques used by the catering industry in the transportation of food and equipment, the art of setting up for eye appeal, a banquet or a hot or cold buffet.

Ice Sculpturing: the art of carving ice as centerpieces to be used for buffets and banquets.

Meat Cutting: gives the student practical knowledge of the commercial cuts of meat used by the hotel and rest-

aurant industry. How to portion control and identify grades of meat as to yield and quality. (20 hours per week)

Food Management III (N)16 credit hours

Prerequisites: Food Preparation I, II, III or equivalent

The sixth quarter of the Food Services program is designed to give students the option of extended training in food preparation techniques or management skills. The food production block will focus on advanced techniques in meal preparation. Management courses can be elected concurrently with the food production block or may be elected as alternates when that suits the individual's occupational objectives better. Cooperative work experience will be incorporated into each student's schedule in any quarter of the second year program as best meets his individual objectives. Previous food service work experience will be evaluated on an individual basis to help each student enter the program at the level which will help him to gain new skills and advance toward his occupational objectives. (20 hours per week)

HEARING IMPAIRED

HI 091 Tutorial Assistance (N)0 credit hours

Special tutorial laboratory for hearing impaired students who need instruction, drill, reinforcement, etc., in a particular subject area. Candidates are admitted by permission only. Tutors are appointed to work individually or in small groups with students having a common tutorial need.

HI 100 Techniques of Tutoring (N)3 credit hours

Supervised tutoring sessions with deaf students, with emphasis on meeting the hearing impaired students' comprehension level together with translating new vocabulary into the understandable modality of the language of signs. (5 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 hotel. 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 relations 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, causal 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)



Library Technology

LIBRARY TECHNOLOGY

LT 100 Introduction to Library Organization (N)3 credit hours

Introduces the student to a brief history of books and libraries with equipment, vocabulary and use of information. Surveys library and information tasks, operations and the technical assistant's staff role. (3 hours per week)

LT 120 Public Desk Services (Circulation & Reference (N)3 credit hours

Prerequisite: LT 100

Surveys duties and responsibilities of the Library Technical Assistants in circulation and reference divisions of libraries. Major instruction will begin in the clerical circulation duties of materials control records. Assistant reference study will stress research materials and methods and user service duties. (3 hours per week)

LT 130 Technical Services (N)4 credit hours

Prerequisite: LT 120

To provide understanding of the basic functions of technical services, and prepare the student in technical operations of acquisition, preparation, and maintenance of materials for library-information facilities. Technical operations of the catalogs and files is emphasized. (3 hours lecture and 3 hours lab per week)

LT 140 Technician Cataloging (N)4 credit hours

Prerequisite: LT 130

Introduces the student to basic catalog procedures and organization for application in schools, small libraries, and other information collections: includes pamphlets and audio-visual materials. (3 hours of lecture and 2 hours lab per week)

LT 150 Materials Selection for Technical Assistant (N)3 credit hours

Prerequisite: LT 120

Clerical duties in the selection and processing of materials for the library collection. Utilizes current publications, systems, standard catalogs, National-Union lists, and forms preparation to give basic instruction in procedures to maintain collections.

LT 200 Audio-Visual Graphics (N)4 credit hours

Prerequisite: LT 120 or permission of instructor

A basic familiarization course concerning communications medial instruction includes operation of audio-visual equipment and records control methods for their use. Preparation of graphic materials, transparencies and display techniques for a variety of specialized materials is an integral part of instruction.

LT 210 Business and Science Information (N)3 credit hours

Prerequisite: LT 120

Identifies and instructs in the information system and resource materials used in business, education and science research information facilities. Students will receive training on the use of directories, handbooks, looseleaf services, etc., as related to technical assistant service in the subject.

LT 230 Technical Assistant Information Management (N)4 credit hours

Prerequisite: LT 130

Examines and relates the principles of management to the technical supervisor's role. Gives basic instruction in the supervision of other clerical personnel. Explores the management of library information equipment and materials, related field laboratory exercise in case study of library information facilities. (3 hours lecture and 2 hours lab per week)

LT 280 Library Information Skills Development (N)5 credit hours

Prerequisite: LT 130 & LT 140

The student is supervised in the improvement of previously learned skills in library information interests of their choice. Student may explore development and advances of automation, special catalogs, index preparation and retrieval methods, operating in school, college, public and special libraries in which they plan to work. Students enrolled will have demonstrated an ability for independent study. (2 hours guidance and 6 hours field lab 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 interrelationship 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 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 as a junior leader. Exposure to leadership responsibilities of

planning, conducting, and evaluating an activity or program should result. (6 hours per week)

RL 112 Field Work (R)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 a direct leader with the responsibility for planning, conducting, and evaluating an activity or program. (6 hours per week)

RL 113 Field Work4 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 of the group's or individual's desired experience. (6 hours per week)

RL 120 Creative Drama (R)3 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. (6 hours per week)

RL 140 Social Recreation (R)3 credit hours

Introduces methods and materials for planning, organizing, 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 club. Emphasis is on constructing, administering, promoting and teaching crafts. (4 hours per week)



Recreational Leadership

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 sports rather than mastery of performance skills. (4 hours per week)

RL 201 Group Leadership (R) 3 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. (3 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 skill. (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) 4 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. (6 hours per week)

RL 205 Water Related Activities (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)



Recreational Leadership

SENIOR CITIZEN ACTIVITY ASSISTING

SR 100 Introduction to Geriatrics (R) 3 credit hours

Physical, mental and psychological 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 105 A.D.L. Laboratory (R) 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 (R) 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. (3 hours per week)

SR 112 Activities for Senior Citizens (R) 3 credit hours

Prerequisite: SR 100 Introduction to Geriatrics
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)



Senior Citizen Activity

SOCIAL WORKER ASSISTING

SW 100 Introduction to Social Work (R)3 credit hours

A study of public and private welfare agencies and social services with an emphasis on the basic philosophy, techniques and functions of the professional social worker in the handling and working with people on an individual and direct basis. (4 hours per week)

SW 102 Principles of Interviewing and Report Writing (R)4 credit hours

Application of concepts and methodology to the investigation of social problems. Use of proper interviewing techniques with individuals and/or groups involved in social work. The preparation of formal and informal reports for various types of welfare agencies and social services. Report data will be compiled from the results of statistical applications, case histories and surveys. (6 hours per week)

SW 106 Special Social Problems (R)3 credit hours

Study of social institutions as reflected in such current problems as crime and delinquency, human mobility, alcoholism, divorce, unemployment, mental derangement, housing, and personal demoralization. (3 hours lecture, 2 hours lab per week)

SW 110 Field Experience (R)3 credit hours

Prerequisite: SW 100 Introduction to Social Work and completion of 15 credit hours of approved course work or permission of Division Director.

The field experience course provides the opportunity for the student to enlarge his scope through direct service in agencies providing help to clients, under professional supervision. The student will be enabled to integrate his educational understanding with the field experience, and learn how he relates to people. (1 day per week)

SW 111 Field Experience (R)4 credit hours

Prerequisite: SW 110 Field Experience
See description for SW 110. (8 hours per week)

SW 112 Field Experience (R)4 credit hours

Prerequisite: SW 111 Field Experience
See description for SW 110. (8 hours per week)

SW 113 Field Experience (R)3 credit hours

Prerequisite: SW 112 Field Experience
See description for SW 110. (6 hours per week)



Social Worker Assisting

TRAFFIC ENGINEERING TECHNOLOGY PROGRAM

TE 100 Introduction to Traffic Engineering (R)3 credit hours

This course offers a general overview of the field of traffic engineering technology and provides an insight into related career opportunities. It relates human factors and driver characteristics to the vehicle, roadway and environment. Traffic characteristics are defined in terms of speed, design, speed zoning, density, gaps and lags, and traffic volume. The course serves as an introduction for traffic engineering technology students and as a survey course for students majoring in other related fields. (3 hours per week)

TE 102 Technical Physics I (R)4 credit hours

This is an introductory course in practical physics covering matter, measurements, mechanics, and machines. Laboratory time is provided for demonstrations and experiments to help clarify the principles and procedures covered in class. (3 hours lecture, 2 hours lab per week)

TE 103 Technical Physics II (R)4 credit hours

This is an introductory course in practical physics covering heat, light, sound, magnetism and electricity. Laboratory time is provided for demonstrations and experiments to help clarify the principles and procedures covered in class. (4 hours lecture, 3 hours lab per week)

TE 106 Principles of Traffic Administration and Safety (R)3 credit hours

By studying traffic administration and safety, the student learns how budget, public relations, interagency problems and other systems operations affect traffic engineering. Stresses traffic safety as a basic consideration for all technical aspects of the field. The student is shown that the field traffic surveys, control devices, geometric design, traffic studies, traffic laws and urban transportation planning constitute the major subject areas of traffic engineering technology. (3 hours per week)

TE 108 Control Devices (R)3 credit hours

In the general context of design maintenance and placement, the course emphasizes sign (illumination, lettering, response time, type and design) signals (cycle lengths, phases, offsets, equipment and maintenance) markings, lighting (highway, intersections, special areas) and delineation. (3 hours per week)

TE 200 Field Traffic Survey (R)6 credit hours

By collecting actual field data, the student solves problems relating to accident reporting, collision diagraming, intersection surveys, pedestrian volumes, and parking studies related to control, financing, design, demand characteristics, meters, terminals, vehicle dimension, signs and parking. Emphasis will be placed on the method and equipment required for the collection of field data, the writing of reports and the formulation of recommendations to solve these related problems. (3 hours lecture, 6 hours lab per week)

TE 202 Traffic Laws and Regulations (R)3 credit hours

A thorough study of federal, state, and local laws and regulations provides the legal framework to be used in geometric design, vehicle characteristics, wheel loads, bus stops, parking signs, signal, marking, pedestrian and driver characteristics, warrants and general traffic law enforcement. (3 hours per week)

TE 203 Model Traffic Ordinances (R)3 credit hours
 (Course descriptions and curricula are presently being developed by experts in this field.)

TE 204 Geometric Design (R)6 credit hours
 Horizontal, vertical, and transitional curves, vertical curves, super elevation, pavement grip, widening, curb radii, shoulders, acceleration and deceleration lanes, channelization, stopping distance, reaction in braking time, sight distance and channelization combine with other considerations in the geometric design of roadways in rural, urban and down-town areas. The design laboratory is used for the geometric layout and the preparation of geometric design plans for the solution of practical field problems. (3 hours of lecture, 6 hours lab per week)

TE 210 Traffic Studies (R)6 credit hours
 Using actual field problems the student is taught how to plan and execute traffic engineering studies. Studies concerned with illumination, origin and destination, speed and volume stress the basic concepts of counting procedures, counting equipment ADT, cordons, flow maps, short counts, peak hour platoon flow, composition, thirtieth HV, and other traffic concepts. Emphasis is also placed on the use of data processing and statistics to reduce bulk data and analyze results. (3 hours lecture, 6 hours lab per week)

TE 211 Traffic Accident Investigation (R)4 credit hours
 This course will include such things as the nature and causes of accidents, planning an investigation, classification of accidents, taking measurements, accident scene evidence, road and weather conditions, tire mark evidence and interpretation, and interpreting facts. (2 hours lecture, 2 hours lab per week)

TE 212 Urban Transportation Planning (R)6 credit hours
 This course combines new concepts in benefit, cost, economics, analysis, traffic forecasting and needs studies with the fundamental concepts learned in previous courses to plan large scale transportation systems. Although a traffic engineering technician would probably not be involved in such a large scale undertaking early in his career, he is shown how small segments of a project are carefully woven into a master planning concept. (3 hours lecture, 6 hours lab per week)



Traffic Engineering

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 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 (N)4 credit hours
 A study of the fundamental principles of plant growth with major emphasis upon the seed plants. (6 hours per week, lecture and lab)

UH 106 Plant Science (N)4 credit hours
 Prerequisite: UH 104
 A continuation of Plant Science UH 104, including factors affecting flowering, seeds, fruits, plant genetics and the lower plants. (6 hours per week, lecture and lab)

UH 108 Landscape Planning (N)4 credit hours
 Prerequisite: 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 and Fertilizers (N)4 credit hours
 Prerequisite: UH 104
 The properties and management of soils in relation to plant growth with emphasis on the principles of soil fertility and practice of fertilizer use. (6 hours per week, lecture and lab)

UH 112 Horticulture Science (N)4 credit hours
 Basic horticultural practices are considered; soil and water management, pruning, propagation, grafting, and the relationship of plants to their environment. (6 hours per week, lecture and lab)

UH 114 Floral Design Workshop (N)4 credit hours
 Practical experience in handling and arrangement of flowers. Students will design their own centerpieces, corsages, and floral arrangements for special occasions and holidays. (6 hours per week, lecture and lab)

UH 116 Merchandising Horticultural Plants (N)1 credit hour
 Display and selling of plants produced in horticulture greenhouse. (1 hour per week)

UH 201 Nursery Management (N)4 credit hours
 Prerequisite: UH 102 and UH 108
 Propagation, planting, crop rotation, business and cultural practices involved in operating a nursery. (6 hours per week, lecture and lab)

UH 203 Horticultural Equipment and Facilities (N)3 credit hours
 A study of the equipment, structures and facilities utilized in horticultural operations; equipment uses and applications, construction methods and bidding and estimating. (3 hours per week)

UH 205 Landscape Maintenance (N)3 credit hours

Identification, cultural requirements, and use of herbaceous plant materials and maintenance practices. (3 hours per week)

UH 207 Greenhouse Management (N)4 credit hours

Prerequisite: UH 104

Environmental control, culture and production methods employed in producing some of the leading florist crops. (6 hours per week, lecture and lab)

UH 208 Landscape Surveying (N) 2 credit hours

Students will learn to use surveying and land measurement equipment as applied to landscape planning. Level and rod will be used to establish grades, evaluations and contour lines. (5 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)

UH 211 Disease and Pests (N) 4 credit hours

Identification, prevention and control of disease 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 and Bidding (N) 8 credit hours**

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 wall and step construction, edging, gravel and mulching techniques and estimating costs. (10 hours per week, lecture and lab)

**UH 213 Turf Production and
Management (N)4 credit hours**

Prerequisite: UH 104

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 215 Special Studies in
Horticulture (N)4 credit hours**

This course provides opportunity for the student to investigate an area of special interest or to develop knowledge gained through prior experience in the field, under the supervision of a qualified faculty member. (Hours arranged)

**UH 217 Advanced Landscape
Planning (N)4 credit hours**

Prerequisites: UH 102, UH 108, NH 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**

Prerequisite: UH 108

Students will learn how to illustrate landscaping plans in three dimensional drawings. (6 hours per week, lecture and lab)

UH 221 Seminar in Horticulture (N)1 credit hour

Students must have completed 45 credit hours, at least 15 of which must be in horticulture or a related science. (Hours arranged)



Urban Horticulture



Urban Horticulture

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 Data 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 intra-firm 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 project 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 in 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)

WATER - WASTEWATER TECHNOLOGY

WW 100 Introduction to Water and Wastewater (R)3 credit hours

Overview of subject field; disease transmittal, hygienic excreta disposal, sources, protection and treatment of water, insect and rodent control, solid waste collection and disposal, food sanitation, swimming pool sanitation, industrial hygiene, radiological sanitation. (3 hours per week)

WW 102 Water and Wastewater Systems (R)3 credit hours

Prerequisite: WW 100 Introduction to
Water and Wastewater

A course to familiarize the student with the elementary engineering aspects of water and wastewater systems. Included are water quality and composition, ground and surface water supplies, water and wastewater treatment processes, plant equipment operation and maintenance, and related topics. (2 hours lecture, 2 hours lab per week)

WW 105 Water-Wastewater Mechanics (R)3 credit hours

An introduction to analysis and design of linkages, cams, gears and other machine components. The components are studied in terms of their motion characteristics and their application in the design of a mechanism. (3 hours per week)

WW 200 Hydraulics for Water and Wastewater Technology (R)5 credit hours

Prerequisite: M 103 Applied Math II and
WW 102 Water and Wastewater Systems

A basic study of closed conduit and open channel flow, including stream flow, subterranean flow, runoff, pump characteristics and wave action. (3 hours lecture, 4 hours lab per week)

WW 203 Water Pollution (R)3 credit hours

Prerequisite: WW 100 Introduction to
Water and Wastewater

Elementary engineering aspects of design, operation and maintenance of water purification systems. Aeration sedimentation, filtration, chlorination, coagulation, bacteriological control, softening, storage, health standards, maintenance, safety. (3 hours per week)

WW 204 Wastewater Treatment Methods (R)3 credit hours

Prerequisite: WW 100 Introduction to Water
and Wastewater

Elementary engineering aspects of design, operation and maintenance of wastewater systems, treatment methods, selection, plant, industrial wastes, rules and regulations, maintenance, safety. (3 hours per week)

**WW 205 Water and Wastewater
Equipment Maintenance (R)3 credit hours**
Prerequisite: WW 200 Hydraulics for
Water and Wastewater Technology
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 and Wastewater
Administration and Finance (R)3 credit hours**
Prerequisite: WW 100 Introduction to Water
and Wastewater
Sound practices in project service costs, rate structures,
municipal finance, safety programs and personnel practices
are to be taught. Guest lecturers representing various water
utilities will present their views, methods and practices.
(3 hours per week)

**WW 210 Microbiology for Water and
Wastewater Technology (R)5 credit hours**
Prerequisite: B 112 General Biology
A basic course in microbiology with emphasis on micro-
organisms, and on the laboratory procedures for identify-
ing and differentiating organisms peculiar to water and
wastewater treatment, and related public health and stream
sanitation problems. (3 hours lecture, 6 hours lab per
week)

WW 220 Sanitary Chemistry (R)4 credit hours
Prerequisite: C 102 Fundamentals of Chemistry
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 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 waste-
water plants. Typical performance characteristics, accuracy
and applications of instruments are studied. (3 hours lec-
ture, 2 hours lab per week)

SEMINARS AND WORKSHOPS

Most of the courses offered by the Division of Com-
munity 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 occupa-
tional objective. He works under the immediate super-
vision of experienced personnel at the business, industry or
agency involved, with a College instructor providing co-
ordination. Prerequisites for enrollment in Cooperative
Work Experience are permission of the instructor and ap-
proval of the division director.

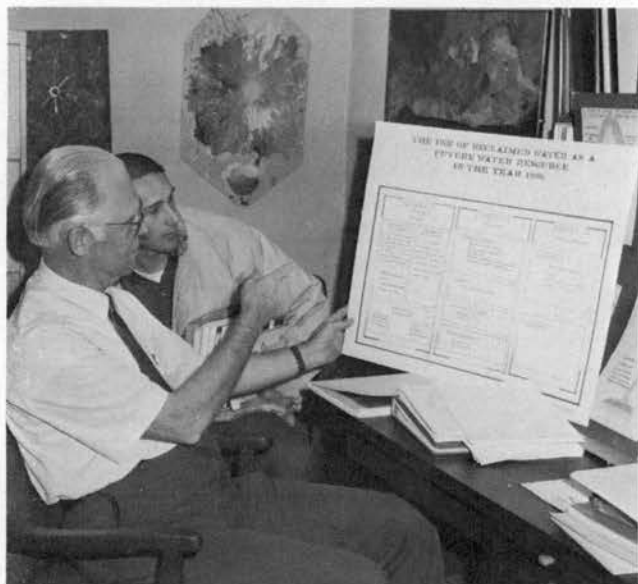
The amount of time spent in cooperative work experience
will vary somewhat from program to program and to meet
student's individual needs.

CREDIT HOURS ARRANGED

INDEPENDENT STUDY

**—299 Independent
Study (A-N-R)Credit Hours Arranged
1-12 credit hours**

Independent study is available in each of the major areas of
the Division of Community & Personal Service Occupa-
tions. The course provides opportunity for a student to
study intensively a specific topic of interest under the di-
rection of a qualified faculty member. Permission to en-
roll for independent study must be obtained from the
Division Director and the assigned instructor. The num-
ber of credit hours to be allowed for successful comple-
tion of the course will be determined cooperatively by the
instructor and the Division Director.



Water and Wastewater

**DIVISION OF
HEALTH OCCUPATIONS**

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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 resources for patient care; therefore, the number of students in each program is limited to the number that can be accommodated at the hospitals. 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 licensing laws and regulatory agencies in the health field. A student must have the G.E.D. or high school diploma prior to entering the Practical Nursing Program. This requirement must be met before the student can take the Nursing Licensing Examination; the X-Ray and Inhalation Therapy Registry Examinations; and the Dental Assisting Certification Examination.

Associate Degree Programs are structured within the basic frame work of two years; however, each program may be individualized according to the students' needs. It is recommended that the individual with family responsibilities 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 will be 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 Typ.	4
B 100 Bas. Hum. Bio.	4
DA 110 Ornt. Dnt. Ass't.	3
F 108 Nutrition	3
	17

	Cr. Hrs.
Second Quarter	
Communications	3
AC 109 Bookkeeping & Accounting	5
B 123 Hum. Ant. Phys.	4
DA 112 Int. Dent. Ass't.	3
	15

	Cr. Hrs.
Third Quarter	
Communications	3
Elective	3
DA 120 Dent. Sci.	4
DA 118 Dent. Matrls.	3
DA 114 Dent. Off. Procedures	3
	16

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
PY 100 Hum. Rel. in Bus. & Ind.	3
HE 210 Emerg. Meas.	2
DA 200 Dent. Opr. Pro.	5
DA 205 Dent. Roent.	3
DA 212 Intro. Clin. Ex.	2
	15

	Cr. Hrs.
Fifth Quarter	
DA 220 Adv. Dent. Oper. Procedures	8
DA 240 Adv. Clinical Experience I	8
	16

	Cr. Hrs.
Sixth Quarter	
DA 222 Adv. Dent. Oper. Procedures 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 will have office responsibilities and laboratory duties.

TOTAL CREDIT HOURS: 95

INHALATION THERAPY ASSISTING (A-N)

NINE-MONTH PROGRAM

First Quarter	Cr. Hrs.	Second Quarter	Cr. Hrs.
M 100 Dev. Math	3	HE 105 Nursing Proc. & Ethics	3
EG 106 Occ. Com.	3	EG 107 Occ. Comm.	3
HE 107 Basic Science	5	HE 106 Basic Science	5
IT 101 Ther. Dev.	5	IT 103 Bas. Ther. Meas.	5
	16		16

Third Quarter	Cr. Hrs.
HE 100 Med. Term	2
PY 100 Hum. Rel. in Bus. & Ind.	3
HE 108 Basic Science	3
IT 105 Patient Care Measures	5
Elective	3
	16

EMPLOYMENT OPPORTUNITIES: The need for a prepared Inhalation Therapist has been recognized in the provision of health care services. The completely prepared therapist, under the supervision of the physician, will contribute to improved patient care through communication with the physician. As the role of the therapist is more clearly defined it is evident that an assistive level of personnel, directly supervised by the qualified therapist, will enable more complete provision of health care services.

TOTAL CREDIT HOURS: 48

INHALATION THERAPY (N)

Registry Program

THREE QUARTERS

A program to enable registered nurses or individuals with a bachelor degree in biological or related sciences to become prepared for Registration. The completion of ninety-six hours of instruction through the Registry Program and one year of clinical experience in inhalation therapy under medical supervision will enable the student to be eligible to take the Inhalation Therapy Registry Examination.

INHALATION THERAPY TECHNOLOGY (N)

TWENTY-ONE MONTH PROGRAM

FIRST YEAR

	Cr. Hrs.		Cr. Hrs.
First Quarter			
Communications	3	IT 108 Clinical Appl.	8
C 101 Fund. of Chem.	4	IT 110 Applied Chem. & Physics	3
M 105 Introductory Alg. or Elective	4	IT 120 Respiratory Anat. & Physiology	3
Psych. Elective	3		14
HE 100 Med. Term	2		
	16		
SECOND YEAR			
Second Quarter			
Communications	3	Fifth Quarter	
C 103 Fund. of Chem.	4	B 140 Intro. to Micro.	4
B 123 Human Anat. & Physio.	4	IT 202 Ped. Resp. Tech.	5
HE 105 Nurs. Pro. & Prof. Rel.	3	IT 204 Pulmon. Func.	5
	14		14
Third Quarter			
Communications	3	Sixth Quarter	
B 124 Human Anat. & Physio.	4	IT 206 Princ. of Pro. Vent.	10
P 101 Fund. Physics	3	IT 211 Resp. Patho-physiology	3
HE 110 Drugs & Drug Admin.	3		13
IT 100 Intro. to Resp. Tech.	3	Seventh Quarter	
	16	IT 297 Coop. Work Exp.	6
		IT 210 Dept. Admin.	3
		IT 220 Seminar	3
			12

EMPLOYMENT OPPORTUNITIES: The program in Inhalation Therapy Technology is designed to prepare therapists to work under the supervision of a physician responsible for Inhalation Therapy Department in health service agencies. The therapist operates, maintains, and administers the equipment used in patient care and is employed in hospitals, medical and research laboratories. Upon completion of the program the student will receive an A.A. degree and is eligible to take the Registry Examination offered by the Association of Registered Inhalation Therapists.

TOTAL CREDIT HOURS: 99

NURSING (N)

ASSOCIATE DEGREE NURSING PROGRAM

FIRST YEAR

	Cr. Hrs.
First Quarter	
Communications	3
HE 100 Med. Term.	2
B 100 Basic Human Biology (C 101 Alternate)	4
Psychology Elective	3
*N 100 Intro. to Nursing	6
	18

	Cr. Hrs.
Second Quarter	
B 123 Human Anatomy & Physiology	4
HE 110 Drugs & Drug Admin. (Nutrition-Alternate) ...	3
PY 221 Child Growth & Development	3
*N 102 Nursing Prob. I	8
	18

	Cr. Hrs.
Third Quarter	
B 124 Human Anatomy - Physiology	4
F 108 Nutrition (HE 110 Drugs & Drug Admin. Alternate)	3
PY 222 Child Growth & Development	3
*N 104 Nursing Prob. II	8
	18

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
Communications	3
B 140 Intro. to Microbiology	4
*N 200 Maternal Child Nursing	8
	15

	Cr. Hrs.
Fifth Quarter	
Communications	3
P 101 Fundamentals of Physics	3
*N 202 Nursing Intervention in Emotional Crises	8
	14

	Cr. Hrs.
Sixth Quarter	
Elective if Desired (Social Science)	3
*N 204 Contemporary Nursing	9
	12

*Each nursing course includes laboratory (patient care experience). Three laboratory hours earn one credit, and 2 auto-tutorial hours earn one credit.

TOTAL CREDIT HOURS: 90-95

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.

	Cr. Hrs.
First Quarter	
NA 110 Basic Personal Care	8
NA 120 Patient Care Measures	8
	16

Each nursing course includes laboratory (clinical experience). Three laboratory hours earn one credit.

To earn the Associate Degree, the student must complete a minimum of 90 credit hours, earn a cumulative grade point average of 2.0 and complete 9 credit hours of English. The Nursing Program requires 94 hours plus a suggested 9 hours of electives of the student's own choosing.

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.

PRACTICAL NURSING (A)

NINE-MONTH PROGRAM

First Quarter	Cr. Hrs.	Second Quarter	Cr. Hrs.
HE 107 Basic Science	5	HE 106 Basic Science	5
VN 100 Personal Care of Patients	6	VN 110 Maternal and Child Care	7
VN 102 Nutrition	2	English Elective	3
English Elective	3	Psychology Elective	3
	<hr/> 16		<hr/> 18

Third Quarter	Cr. Hrs.
HE 108 Basic Science	3
VN 120 Medical-Surgical Nursing	10
VN 122 Personal and Vocational Relationships	1
Sociology Elective	3
	<hr/> 17

EMPLOYMENT OPPORTUNITIES: Following successful completion of this program and the State Board for Practical Nursing Examination for licensure, the graduate will be prepared to work in beginning licensed practical nurse positions. He or she will be qualified to administer basic nursing care to people of all ages who have common illnesses. Positions may be obtained in hospitals, doctor's offices, clinics, or nursing homes. Many opportunities for employment are available.

TOTAL CREDIT HOURS: 51

REGISTERED NURSE REFRESHER COURSE

FIVE WEEK COURSE

A five week course designed for the inactive registered nurse to review and update knowledge and skills as they relate to planning and giving nursing care to a patient or group of patients. Clinical practice on medical-surgical services in a nearby hospital will be correlated with classroom instruction.

NA 230 Registered Nurse
Refresher CourseCredit Hours 8

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

First Quarter	Cr. Hrs.	Second Quarter	Cr. Hrs.
EG 131 Bus. Comm.	3	EG 132 Bus. Comm.	3
B 100 Basic Human Biology	4	AC 109 Bookkeeping & Accounting	5
SC 110 or 112-Typing	4	OA 120 Ocular Anatomy & Phys.	3
OA 100 Intro. to Optom. Assisting	3	OA 102 Opt. Office Procedures	3
PY 100 Hum. Rel. in Bus. & Ind.	3	OA 104 Frame Selection-Adjustment	2
	<hr style="width: 100%; border: 0.5px solid black;"/> 17		<hr style="width: 100%; border: 0.5px solid black;"/> 16

Third Quarter	Cr. Hrs.
PY 123 Child Guidance Tech.	3
PY 107 Psych. of Pers. Dev.	3
OA 106 Opt. Clin. Procedure	6
OA 110 Vocational Relationships	3
	<hr style="width: 100%; border: 0.5px solid black;"/> 15

EMPLOYMENT OPPORTUNITIES: The prepared optometric assistant will work under the supervision of the optometrist or ophthalmologist in offices or clinics. Increased emphasis on visual health will increase the need for this worker.

TOTAL CREDIT HOURS: 48

RADIOLOGIC TECHNOLOGY (N)

NUCLEAR MEDICINE

*CERTIFICATE PROGRAM

First Quarter	Cr. Hrs.	Third Quarter	Cr. Hrs.
RT 200 Orient. to Tech. Method.	3	NT 206 Adv. Nucl. Tech.	4
NT 202 Intro. Nucl. Tech.	4	NT 207 Adv. Applied Nucl. Med. Tech.	8
C 101 Fund. of Chem.	4	NT 215 Chem. of Nucl. Med.	3
NT 203 Intro. to Applied Nucl. Tech.	8		<hr style="width: 100%; border: 0.5px solid black;"/> 15
	<hr style="width: 100%; border: 0.5px solid black;"/> 19		
Second Quarter	Cr. Hrs.	Fourth Quarter (Summer)	Cr. Hrs.
R 210 Rad. Bio. & Path. I	3	NT 220 Reg. Review	6
NT 204 Interm. Nucl. Med. Tech.	4	NT 297 Coop. Work Exp.	6
NT 205 Intermed. App. Nucl. Med. Tech.	8		<hr style="width: 100%; border: 0.5px solid black;"/> 12
C 102 Fund. of Chem.	4		
	<hr style="width: 100%; border: 0.5px solid black;"/> 19		

*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 already registered (or eligible for registry) as an MT (ASCP), RT (ARRT), or RN. 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: 116

RADIOLOGIC TECHNOLOGY (N)

NUCLEAR MEDICINE

FIRST YEAR

	Cr. Hrs.
First Quarter	
Communications	3
HE 100 Med. Terms	2
B 100 Basic Human Bio. or	
C 101 Fund. of Chem.	4
RT 100 Intro. to Rad. Tech.	4
M 105 Introductory Alg.	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
M 106 Intermed. Alg.	4
	18
Third Quarter	
B 124 Hum. Anat. & Phys.	4
RT 108 Intro. to Rad. Positioning	2
P 105 Rad. Physics	4
Psychology (Elective)	3
M 107 Intro. Geom. & Trig.	4
	17

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
RT 200 Orient. to Tech. Method	3
NT 202 Int. Nucl. Med. Method Tech.	4
NT 203 Intro. to Applied Nucl. Tech.	8
HE 205 Survey of Med-Sug. Diseases	3
	18
Fifth Quarter	
R 210 Rad. Bio. & Path. I	3
NT 204 Intermed. Nucl. Med. Tech.	4
NT 205 Intermed. Applied Nucl. Med. Tech.	8
C 102 Fun. of Chem.	4
	19
Sixth Quarter	
NT 206 Adv. Nucl. Tech.	4
NT 207 Adv. Nucl. Med. Tech.	8
NT 215 Chem. of Nucl. Med.	3
	15
Seventh Quarter (Sum.)	
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: 116

RADIOLOGIC TECHNOLOGY (N)

GENERAL DIAGNOSTIC (X-ray)

FIRST YEAR

	Cr.	Hrs.
First Quarter		
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	
M 105 Introductory Alg.	4	
	17	

	Cr.	Hrs.
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	
M 106 Intermed. Alg.	4	
	18	

	Cr.	Hrs.
Third Quarter		
P 105 Radiation Physics	4	
RT 110 Intro. to Rad. Positioning	4	
XT 111 Intro. to Clinical X-ray Tech.	4	
B 124 Human Anat. & Phys.	4	
	16	

SECOND YEAR

	Cr.	Hrs.
Fourth Quarter		
Psychology (Elective)	3	
HE 205 Survey of Med. & Surgical Diseases	3	
XT 212 Rad. Positioning	4	
XT 213 Adv. Clinical Tech.	8	
	18	

	Cr.	Hrs.
Fifth Quarter		
XT 214 Special Pos. Techniques	4	
XT 215 Applied Spec. Positioning Tech.	12	
	16	

	Cr.	Hrs.
Sixth Quarter		
XT 216 Spec. Proc. & Tech.	3	
XT 217 Applied Special Procedures Techniques	12	
	15	

	Cr.	Hrs.
Seventh Quarter		
XT 218 Advanced Rad. Tech.	3	
XT 219 Applied Advanced Radiographic Technique ..	12	
	15	

	Cr.	Hrs.
Eighth Quarter		
XT 220 Reg. Review	6	
XT 297 Coop. Work Exp.	6	
	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 anywhere in the United States and Canada. With increased use of X-ray for both diagnosis and treatment, there is a growing shortage of qualified technologists, both male and female. There are many opportunities for advancement to supervisory and administrative positions.

A student is required to complete the total twenty-four month program to be eligible for the Associate Degree. Upon successful completion of this program the graduate will be eligible for the Registry Examination given by the American Registry of Radiologic Technologists and the American College of Radiology. The program is being conducted in cooperation with Denver hospitals and is approved by the Council of Medical Education of the American Medical Association, The American College of Radiology, The Board of Trustees of The American Registry of Radiologic Technologists, The American Society of Radiologic Technologists, and Veteran's Administration.

TOTAL CREDIT HOURS: 127

RADIOLOGIC TECHNOLOGY (N)

RADIATION THERAPY

FIRST YEAR

	Cr. Hrs.
First Quarter	
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
M 105 Introductory Alg.	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
M 106 Intermed. Alg.	4
	18
Third Quarter	
B 124 Hum. Anat. & Phys.	4
RT 108 Intro. to Rad. Positioning	2
P 105 Rad. Physics	4
Psychology (Elective)	3
M 107 Intro. Geom. & Trig.	4
	17

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
R 202 Intro. to Rad. Therapy	4
R 203 Intro. to Applied Rad. Therapy	8
RT 200 Orient. to Tech. Method	3
HE 205 Survey of Med.-Surg. Disease	3
	18
Fifth Quarter	
R 204 Interm. Rad. Therapy	4
R 205 Interm. Applied Rad. Therapy	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: 112

RADIOLOGIC TECHNOLOGY (N)

RADIATION THERAPY

*Certificate Program

	Cr. Hrs.		Cr. Hrs.
First Quarter		Third Quarter	
RT 200 Orient. to Tech. Method.	3	R 206 Adv. Rad. Ther.	4
R 202 Intro. to Rad. Therapy	4	R 212 Rad. Bio. & Path. II	3
R 203 Intro. to Applied Rad. Therapy	8	R 207 Adv. Applied Rad. Therapy	8
	15		15
Second Quarter		Fourth Quarter	
R 204 Interm. Rad. Therapy	4	Communications	3
R 210 Rad. Bio. & Path. I	3	R 220 Reg. Review	6
R 205 Interm. Applied Rad. Therapy	8	R 297 Coop. Work Exp.	6
	15		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 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: 60

SURGICAL TECHNICIAN (A)

NINE-MONTH PROGRAM

A basic program to prepare a technician for the operating room. The practice of this worker may be adapted for preparation as a delivery room technician.

	Cr. Hrs.		Cr. Hrs.
First Quarter		Second Quarter	
English Elective	3	HE 107 Basic Sci.	5
HE 105 Nrsng. Proc. & Prof. Relationship	3	Psychology Elective	3
HE 106 Basic Sci.	5	ST 105 Operating Room Tech.	9
HE 100 Medical Termin.	2		17
ST 100 Intro. to Surgery Tech.	4	Third Quarter	
	17	HE 108 Basic Sci.	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

Prerequisite: Admission to Dental Assisting Program

General orientation to College and history of dentistry. The role of the American Dental Assistants' Association, Code of Ethics, certification of dental assistants, professional organizations. (3 hours per week)

DA 112 Introduction to Dental Assisting (N) 3 credit hours

Prerequisite: DA 110 (may be taken concurrently)

Continuation of orientation. Dental practices, ethics, terminology, health and grooming employment and job demands, patient education, psychology and public relations in dental practices. (2 hours lecture and 4 hours laboratory per week)

DA 114 Dental Office Procedure (N) 3 credit hours

Prerequisite: AC 109 Recordkeeping and Accounting 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 4 hours laboratory 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 4 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 and 4 hours laboratory per week)

DA 200 Dental Operator Procedures (N) 5 credit hours

Prerequisite: DA 112

This 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 8 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 4 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 4 hours laboratory per week)

DA 220 Advanced Dental Operator Procedures I (N) 8 credit hours

DA 222 Advanced Dental Operator 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

Each student must have 400 minimum clock hours in Clinical Work Experience prior to the National Certification Examination. This clinical experience is provided through the courses listed above. 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.

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.

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 110 Drugs & Drug Administration (A-N)3 credit hours
Prerequisites: 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.

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)

INHALATION THERAPY TECHNOLOGY

IT 100 Introduction to Respiratory Technology (N)3 credit hours

Course is designed to trace the history of and the development of Inhalation Therapy. This includes routine respiratory therapy consisting of the administration of oxygen and medical gases in cylinders and piped oxygen supply systems. The application and mechanics of flowmeters and regulators. Ethical and legal implications and responsibilities relating to Inhalation Therapy will be presented. Introduction to resuscitative measures. Field trips to other departments and industrial companies. (3 hours per week)

IT 108 Clinical Application (N)8 credit hours
Prerequisite: IT 100

Introduction to procedures of aerosol techniques, intermittent positive pressure therapy, oxygen analyzers and the principles of safety. Students will study, operate, and learn the mechanics of all respiratory therapy devices. They will learn to assemble, disassemble, clean, and sterilize all respiratory therapy apparatus. Time will be spent in Medical, Surgical, and Coronary Units; students will receive instruction in the management and care of patients on prolonged artificial ventilation. Techniques of suctioning and care of tracheotomy patients will be introduced. (3 hours lecture - 20 hours clinical experience per week)

IT 110 Applied Chemistry and Physics (N)3 credit hours
Prerequisite: C 103, P 101

Chemistry and Physics concepts related to the field of Inhalation Therapy. A review of basic gas laws and how they apply to the Inhalation Therapy machinery. (e.g., flowmeters, regulators, respirators) There is a strong emphasis on oxygen and carbon dioxide transport, the oxyhemoglobin curve, and blood gases. (3 hours per week)

IT 120 Respiratory Anatomy and Physiology (N)3 credit hours
Prerequisite: B 124 (may be taken concurrently)

Basic respiratory anatomy is covered in detail. Included are the regulation and control of respiration. A more detailed study of blood gases. There is an introduction of some of the pathological states of the respiratory system. (3 hours per week)

IT 202 Pediatric Respiratory Technology (N)5 credit hours
Prerequisites: IT 108, IT 120

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 - 8 hours clinical experience per week)

IT 204 Pulmonary Function (N)5 credit hours
Prerequisites: IT 108, IT 120

This course will familiarize the student with pulmonary function studies. He will learn the meaning of the studies and be able to interpret them. He will become familiar with the machinery and use it for the tests. (e.g., Collins, Stead-Well's body plethysmograph). (3 hours lecture - 8 hours clinical experience per week)

IT 206 Principle of Prolonged Ventilation (N)10 credit hours
Prerequisites: IT 108, IT 120

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. (3 hours lecture - 28 hours clinical experience per week)

IT 210 Department Administration (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. (3 hours per week)

IT 211 Respiratory Pathophysiology (N)3 credit hours
Prerequisite: IT 120

This course goes into detail of cardiopulmonary disorders. (e.g., asthma, emphysema, cor pulmonale) Etiology and course of the disease are discussed. Treatment by the Inhalation Therapist is emphasized. (3 hours per week)

IT 220 Seminar in Inhalation Therapy (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)

INHALATION THERAPY ASSISTING

IT 101 Care and Use of Therapy Devices (A-N) 5 credit hours

An introduction to the field of Respiratory Therapy. Oxygen, humidity, aerosol therapy, safety measures, cleaning and maintenance of related equipment. (5 hours lecture per week)

IT 103 Basic Therapy Measures (A-N) 5 credit hours

Therapy with gases other than oxygen, airway management, pressure breathing treatments. Cleaning and maintenance of basic equipment included. (5 hours lecture per week)

IT 105 Patient Care Measures (A-N) 5 credit hours

Continuation of IT 103, more complex therapy measures related to pulmonary pathophysiology (mechanical ventilation, resuscitation, chest physiotherapy). Emergency care and adaption to special needs of patients. (3 hours lecture and 8 hours of laboratory and clinical experience per week)

INHALATION THERAPY REGISTRY PROGRAM

(96 Hours)

IT 212 Basic Inhalation Therapy (N) 3 credit hours

Prerequisite: R.N., or B.S., or B.A. in
Biologic Science

This course includes basic chemistry, physics, anatomy, and physiology as applied to Inhalation Therapy and an introduction to procedures on aerosol techniques, intermittent positive pressure breathing, and oxygen analyzers. (3 hours per week)

IT 216 Inhalation Therapy Measures (N) .3 credit hours

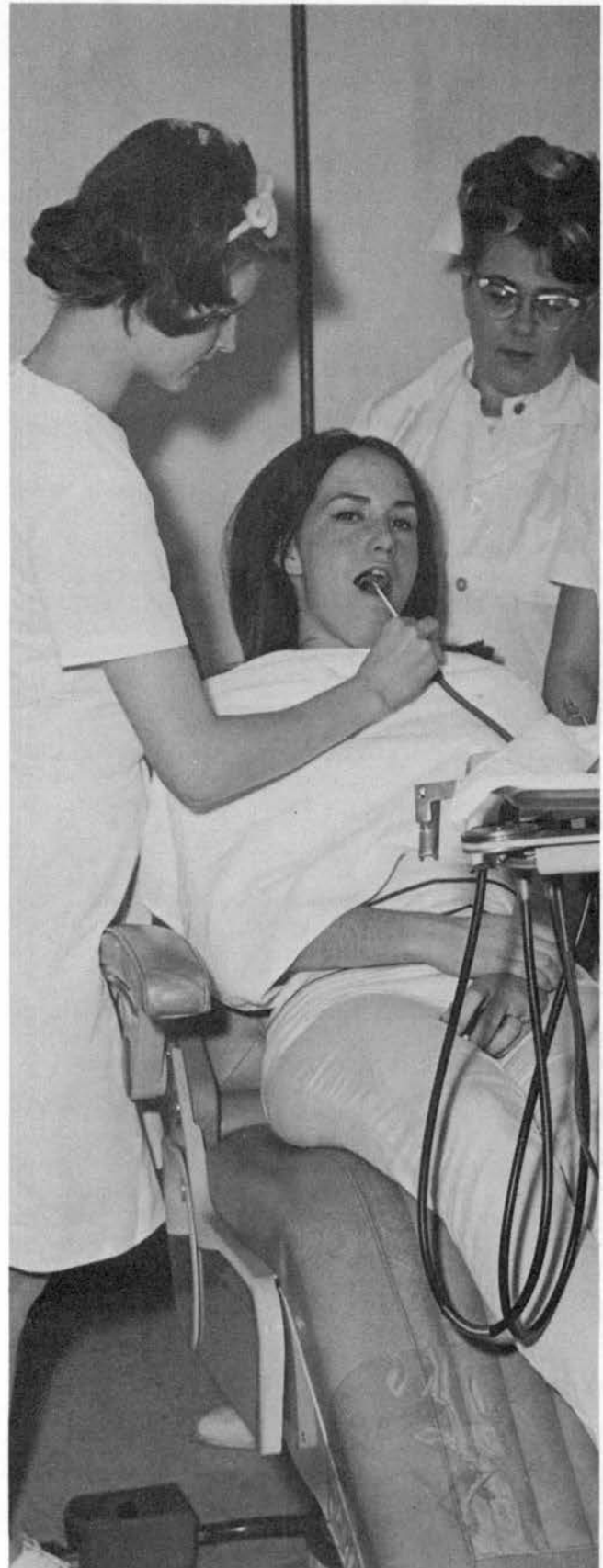
Prerequisites: IT 212 or instructor's permission

An introduction to safety measures and basic principles of physics as applied to Inhalation Therapy equipment and the comprehensive study of pathophysiology as related to respiratory diseases. The methods and techniques of cardiopulmonary resuscitation are included. (3 hours per week)

IT 218 Integrated Inhalation Therapy (N) 3 credit hours

Prerequisites: IT 216 or instructor's permission

This course includes advanced respiratory therapy measures. Pediatric respiratory therapy is emphasized. Blood gas analysis and pulmonary function, organization and administration of a department testing are included. (3 hours per week)



Health Services—North Campus



Dental Assisting—North Campus

NURSING

N 100 Introduction to Nursing (N)6 credit hours

Prerequisites: HE 100, B 100 or equivalent, or permission of instructor (may be taken concurrently)

An introduction to nursing and the role of the nurse technician, in relation to other members of the health team. The course includes basic nursing skills necessary in caring for patients of all ages with common health problems. Based on the needs of people, the content is organized around psychosocial & physiologic needs. The knowledges and skills needed to meet these needs are included. This course presents correlated theory and guided clinical learning experiences. (3 hours lecture, 6 hours laboratory-clinical experience per week and 2 hours auto-tutorial lab)

N 102 Nursing Problem I (N)8 credit hours

Prerequisites: N 100, B 123, or permission of instructor (may be taken concurrently)

Further development of nursing skills with assessment and planning of nursing care. Diet therapy principles are integrated throughout the course. Emphasis is placed on the problem-solving process in reducing patient stress and effecting patient rehabilitation care and prevention of illness. Subject areas include deviations from homeostasis caused by injury, infection, cancer, and neurological impairment. Principles from the biologic sciences are included as they relate to the pathological processes. (5 hours lecture, 6 hours laboratory-clinical experience, and 2 hours ATL per week)

N 104 Nursing Problems II (N)8 credit hours

Prerequisites: N 102, B 124, HE 110, or permission of instructor (B 124 and HE 110 may be taken concurrently)

A continuation of the principles of nursing intervention closely correlated with anatomy and physiology. This third Nursing course builds on physiological principles and psychological concepts presented in N 102. The Nursing Problems consist of deviations from homeostasis in transportation of oxygen, chemicals, and nutrients throughout the circulatory, respiratory, renal, and gastrointestinal systems, along with problems of elimination of metabolic wastes. Appropriate therapeutic diets are included in discussions of nursing care. Mental health concepts are emphasized to assist the patient to cope with his disease processes. (5 hours lecture, 6 hours lab, and 2 hours ATL per week)

N 200 Maternal Child Nursing (N)8 credit hours

Prerequisites: PY 121 & 122, N 100, HE 110, B 124, N 100, or instructor's permission

This is an introductory course in Maternal Child Nursing, utilizing the family centered approach within the framework of developmental tasks. It deals with nursing care of the family unit during the maternity cycle and the infants and children from birth to adolescence. The course deals with maternal-child care as normal entities and with complications in both as deviations from the norm. The student gains experience in modifying basic principles common to nursing to meet the individual needs of patients who are working through a particular developmental task. (5 hours lecture, 9 hours lab)

N 202 Nursing Intervention in Emotional Crises (N)8 credit hours

Prerequisites: 9 hours of psych, including PY 121 & 122, N. 100, or with instructor's permission

This course is designed to develop an understanding of the role of the nurse as a member of the mental health team in prevention, crisis situations and care of the mentally ill. Basic principles of psychiatric nursing will be studied, building upon the knowledge previously gained in meeting the psychosocial needs of patients. Learning experiences will be offered in a variety of community settings and focused on nursing intervention in emotional crises of people of all ages. (5 hours lecture, 9 hours lab)

N 204 Contemporary Nursing (N)9 credit hours

Prerequisite: N 200, N 202

This course is a summary and correlation of nursing experiences with emphasis upon total patient care and the functioning technical nurse as a member of the health team. An appreciation of nursing in the past, contemporary nursing problems and future needs directly involving a technical nurse will be included. There will be discussion and evaluation of problems and functions a technical nurse encounters. (5 hours lecture, 12 hours lab)

N 212 Review of Nursing Principles3 credit hours

Prerequisites: Instructor's Permission

Review and synthesis of nursing theory preparing the student for job readiness.

N 090 Nursing Directed Laboratory1 credit hour

(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.

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)

REGISTERED NURSE REFRESHER COURSE

NA 230 Registered Nurse Refresher Course (N)8 credit hours

Emphasis is on medical-surgical nursing knowledge and skills to include: new equipment, medication therapy, intravenous therapy, fluid and electrolytes, cardiopulmonary resuscitation, legal aspects and team nursing. Major trends in Maternal-Child and Psychiatric nursing also included. (4 hours lecture, 16 hours clinical experience per week)

NUCLEAR MEDICINE TECHNOLOGY

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 of thyroid activity 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, scalars 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 (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 pyrogencity tests, radiochemical and radioisotopic purity, labeling procedures, regulations, equipment and nuclide suppliers. (2 hours lecture and 4 hours laboratory per week)

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 immed-

iate supervision of experienced personnel at the hospital involved, with a College instructor providing general coordination. Prerequisites for enrollment in Cooperative Work Experience are permission of the instructor and approval of the division director.

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 - 9 hours lab or independent study)

OPTOMETRIC ASSISTING

OA 100 Introduction to Optometric Assisting (N)3 credit hours

An introduction to visual health and therapy measures and the role and responsibilities of the optometric assistant. (3 hours per week)

OA 102 Optometric Office Procedure (N)3 credit hours

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. (2 hours lecture and 4 hours office experience 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 106 Optometric Clinical Procedures (N)6 credit hours

A continuation of OA 102 with emphasis on the more complex tasks of the optometric assistant (visual training - contact lens dispensing). Students will be placed in offices and clinics for clinical laboratory experience. (2 hours lecture and 16 hours clinical experience)

OA 110 Vocational Relationships (N)3 credit hours

This course is designed to give the student a knowledge and understanding of the fundamentals of ethics, public relations and the legal responsibilities involved in the optometric profession. (3 hours per week)

OA 120 Ocular Anatomy and Physiology (N)3 credit hours

A study of the human eye and surrounding structures as they relate to visual function and health. An introduction to diseases of the eye and orbit is included. (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 superficial 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 intercautary 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) 4 credit hours

Prerequisite: Acceptance into program or permission from instructor

A basic general orientation course covering the three spec-

ialties 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. (3 hours lecture and 2 hours laboratory 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) 4 credit hours

Prerequisite: RT 100

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 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)

SURGICAL TECHNOLOGY

ST 100 Introduction to Surgical Technology (A) 4 credit hours

An introduction to the relationship of surgical therapy to the health care field. Basic functional areas such as sterilization, environmental and supply care measures are included. (2 hours lecture and 4 hours laboratory-clinical per week)

ST 105 Operating Room Techniques (A) 9 credit hours

Prerequisite: ST 100 and HE 107 or consent of instructor

An introduction to disease entities and related surgical therapy. The student will become thoroughly familiar with instruments, suture, etc., directly related to each surgical therapy measure. (5 hours lecture and 16 laboratory-clinical per week)

ST 110 Applied Surgical Technology (A) 12 credit hours

Prerequisite: ST 105 and TE 106 and HE 107 or consent of instructor

A continuation of ST 105 emphasizing the application of basic knowledge through clinical experience. (3 hours of lecture and 32 hours laboratory-clinical per week)

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 experience per week)

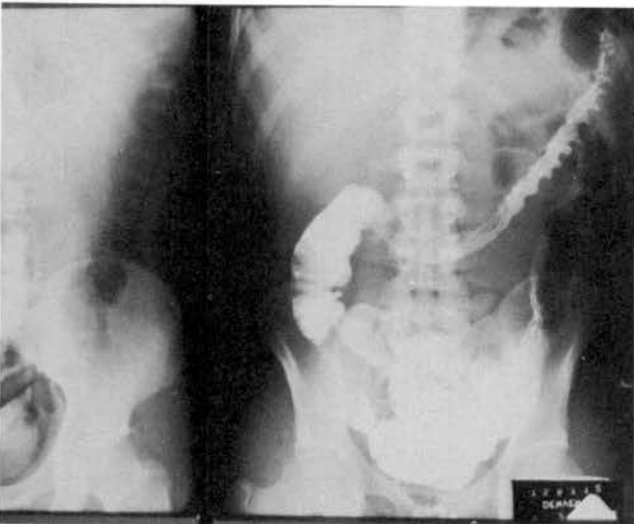
VN 120 Medical-Surgical Nursing (assisting role of the LPN) (A)10 credit hours

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, inter-departmental 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 111 Introduction to X-ray Clinical Techniques (N)4 credit hours

Prerequisites: RT 100, RT 110 (or may be taken concurrently with RT 110)

This is a laboratory course which will introduce the students to the clinical setting. Experience will be gained working with patients, performing radiographic examinations under the direct supervision of a Registered Technologist. (12 hours week in affiliated hospital)

XT 212 Radiographic Positioning (N)4 credit hours

Prerequisite: RT 110, XT 111, Bio. 123

This is a continuation of RT 110, in radiographic positioning and related anatomy. Included are the G.I. tract, urinary tract, skull, cervical, thoracic and lumbosacral spine, pelvis and hips and thorax. The laboratory hours include positioning demonstrations with positioning skill development by use of phantom in energized X-ray laboratory. (5 hours lecture/lab per week)

XT 213 Advanced Clinical Techniques (N)8 credit hours

(Must be taken concurrently with XT 212)

A clinical laboratory course in which students will gain experience and develop skills in performing radiographic examination of patients under the direct supervision of Registered Technologists. This course includes 2 hours a week of film critique to be given at the hospital. (24 hours week in affiliated hospital)

XT 214 Special Positioning and Techniques (N)4 credit hours

(Must be taken concurrently with XT 215)

Prerequisite: XT 212, XT 213, Bio. 124, P 105, HE 105, HE 100

Includes a detailed study of factors affecting radiographic quality chemistry of radiography and film processing and a continuation of special positioning of skull, etc. Also included is the assignment of individual research papers. (4 hours of lecture/lab per week)

XT 215 Applied Special Positioning and Techniques (N)12 credit hours

Prerequisites: XT 214 (or may be taken concurrently)

A clinical laboratory course in which students gain experience in advanced techniques and positioning as described in XT 214. Included are 2 hours a week of film critique given at the hospital. (36 hours week in affiliated hospital)

XT 216 Special Procedures and Techniques (N) 3 credit hours

(Must be taken concurrently with XT 217)

Prerequisite: XT 214, XT 215

A continuation of XT 214 with a study of pediatric radiography, special radiographic procedures, Nuclear Medicine and Radiation Therapy Techniques. (3 hours week lecture)

XT 217 Applied Special Procedures and Techniques (N) 12 credit hours

Prerequisite: XT 216 (or may be taken concurrently)

A clinical laboratory course in which students gain experience in special procedures and advanced clinical techniques. Included are 2 hours week of film critique given at the hospital. (36 hours week in affiliated hospital)

XT 218 Advanced Radiographic Techniques (N) 3 credit hours

(Must be taken concurrently with XT 219)

Prerequisite: XT 216, XT 217

A continuation of XT 216, includes mammography, intra-oral radiography, equipment maintenance and departmental administration. (3 hours week of lecture/lab)

XT 219 Applied Advanced Radiographic Techniques (N) 12 credit hours

Prerequisite: XT 218 (or may be taken concurrently)

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 hospital. (36 hours week in affiliated hospital)

XT 220 Registry Review (N) 6 credit hours

Prerequisite: XT 218 (or permission from Instructor)

A 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 and 9 hours laboratory per week)

Students will gain practical experience by working 4½ days a week in the Radiology Department of the affiliated hospitals under the direct supervision of Registered Technologist. This work experience is called a clinical internship and will consist of 12 months of continuous experience in the hospital. (52 weeks with 2 weeks vacation — total clinical hours = 2,290). Film critique and conferences will be conducted approximately two hours a week in the hospital during this internship.

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 opportunity for the student to investigate an area of special interest or to further develop knowledge gained through prior experiences in the field, under the supervision of a qualified faculty member.



Health Services

DIVISION OF INDUSTRIAL OCCUPATIONS

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APPLIANCE AND REFRIGERATION MECHANICS (A)

NINE-MONTH PROGRAM

	Cr. Hrs.		Cr. Hrs.
First Quarter		Third Quarter	
AE 100 Basic Ap. & Ref. Mech.	16	AE 130 Adv. Appl. & Ref. Mech.	16
Math Elective	3	Elective	3
Elective	3	Coop. Work Exp.	
	22	or	
		Tech. Proj. (297 or 299)	3
			22
Second Quarter		Optional Courses:	
AE 120 Appl. & Ref. Mech.	16	EM 100 Refrigeration and Air Conditioning (A&B)	
English Elective	3	EM 101 Advanced Refrigeration and Air Condition-	
PY 100 Hum. Relations in Bus. & Ind.	3	ing (A&B)	
	22		

EMPLOYMENT OPPORTUNITIES: Installing and Repairing appliances, refrigeration and air conditioning equipment. Students are qualified (when successfully completing the course) to enter departments of appliance sales and service firms or to be self-employed.

TOTAL CREDIT HOURS: 66

Optional Courses:

AE 297 Coop. Work Exper	3-12
AE 299 Independent Study	1-12

ARCHITECTURAL TECHNOLOGY (N-R)

NINE-MONTH COURSE

	Cr. Hrs.		Cr. Hrs.
First Quarter		Third Quarter	
AT 101 Intro. to Arch. Tech.	16	AT 103 Intro. to Working Drawings	16
EG 106 Occ. Comm.	3	EG 108 Occ. Comm.	3
M 102 Appl. Math I	3	M 104 Appl. Math III	3
	22		22
Second Quarter		Optional Courses: Cooperative Work Experience	
AT 102 Arch. Draft.	16		
EG 107 Occ. Comm.	3		
M 103 Appl. Math II	3		
	22		

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: 66

ARCHITECTURAL TECHNOLOGY (N-R)

TWO-YEAR PROGRAM

FIRST YEAR		SECOND YEAR	
First Quarter		Fourth Quarter	
AT 101	Intro. to Arch. Tech.16	AT 204	Arch. Wrk. Dwg. I12
EG 106	Occ. Comm. 3	CT 223	Structures I 4
M 102	Appl. Math I 3	AT 224	Arch. Hist. I 5
	22		21
Second Quarter		Fifth Quarter	
AT 102	Arch. Draft.16	AT 205	Arch. Wrk. Dwg. II12
EG 107	Occ. Comm. 3	CT 227	Structures II 5
M 103	Appl. Math II 3	AT 225	Arch. Hist. II 5
	22		22
Third Quarter		Sixth Quarter	
AT 103	Intro. to Working Drawings16	AT 206	Arch. Wrk. Dwg. III 16
EG 108	Occ. Comm. 3	AT 232	Professional Seminar
M 104	Appl. Math III 3	or	
	22	AT 297	Coop. Work Exp.3-12
			21-33

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 practice.

TOTAL CREDIT HOURS: 131-143

AUTOMOTIVE MECHANICS (A-N-R)

NINE-MONTH PROGRAM

First Quarter		Third Quarter	
AM 101	Basic Engine, Carburetors, Ignition and Tune-up16	AM 103	Transmissions and Power Trains16
EG 106	Occ. Comm. 3	AM 297	Coop. Work Exp.3-12
	19	or	
		EC 107	Cons. Ec. 3
			19-28
Second Quarter		NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio: 4 cr. hrs./5 contact hrs. 8 cr. hrs./10 contact hrs. 12 cr. hrs./15 contact hrs.	
AM 102	Brake, Chassis and Wheel Alignment16		
M 100	Dev. Math 3		
	19		

EMPLOYMENT OPPORTUNITIES: Entry level mechanic in a service station or garage.

TOTAL CREDIT HOURS: 57-66

NOTE: Auraria Campus—Emphasis on Foreign Automobiles.

AUTO BODY SERVICE (N)

TWO-YEAR PROGRAM

FIRST YEAR		Cr. Hrs.	SECOND YEAR		Cr. Hrs.
First Quarter			Fourth Quarter		
AB 111	Auto Body Repair & Refin.	16	AB 214	Frame, Unit Body Straight & Refin.	16
EG 106	Occ. Comm.	3	M 100	Dev. Math	3
		—	EC 107	Cons. Ec.	
		19		or	
			Elective		3
					—
					22
Second Quarter		Cr. Hrs.	Fifth Quarter		Cr. Hrs.
AB 112	Auto Body Repair & Refin.	16	AB 215	Major Straight Body Align & Refin.	16
EG 107	Occ. Comm.	3	EC 108	Labor Rel.	3
		—	PY 100	Hum. Rel. in Bus. & Ind.	3
		19			—
					22
Third Quarter		Cr. Hrs.	Sixth Quarter		Cr. Hrs.
AB 113	Auto Body Repair & Refin.	16	AB 216	Body Rebuild & Refin.	16
EG 108	Occ. Comm.	3	AB 297	Coop Work Exp.	3-12
		—		or	
		19	Elective		6
					—
					19-28

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

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, manager trainee, order writer in dealership, salesman in automotive supply house.

TOTAL CREDIT HOURS: 120-129

AUTO BODY SERVICE (N)

NINE-MONTH PROGRAM

First Quarter		Cr. Hrs.	Third Quarter		Cr. Hrs.
AB 111	Auto Body Repair & Refin.	16	AB 113	Auto Body Repair & Refin.	16
EG 106	Occ. Comm.	3	AB 297	Coop. Wrk. Exp.	3-12
		—		or	
		19	EC 107	Cons. Ec.	3
					—
					19-28
Second Quarter		Cr. Hrs.	NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:		
AB 112	Auto Body Repair & Refin.	16		4 cr. hrs./5 contact hrs.	
M 100	Dev. Math	3		8 cr. hrs./10 contact hrs.	
		—		12 cr. hrs./15 contact hrs.	
		19			

EMPLOYMENT OPPORTUNITIES: Entry level mechanic in a service station or garage.

TOTAL CREDIT HOURS: 57-66

AUTOMOTIVE MECHANICS (A-N-R)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr. Hrs.
First Quarter	
AM 101 Basic Engine Carburetors, Ignition & Tune Up	16
EG 106 Occ. Comm.	3
	19
Second Quarter	
AM 102 Brake, Chassis & Wheel Alignment	16
EG 107 Occ. Comm.	3
	19
Third Quarter	
AM 103 Transmissions & Power Trains	16
EG 108 Occ. Comm.	3
	19

NOTE: Part-time students may enroll in the above Industrial Occupational courses based upon the following ratio:
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
AM 204 Basic Service Repair & Air Cond.	16
M 100 Dev. Math	3
EC 107 Cons. Ec. or	
Elective	3
	22
Fifth Quarter	
AM 205 Engine Const. & Rebuilding	16
EC 108 Labor Rel.	3
PY 100 Hum. Rel. in Bus. & Ind.	3
	22
Sixth Quarter	
AM 206 Diagnosis & Dynamometer Oper.	16
AM 297 Coop. Work Exp.	3-12
or	
Elective	6
	19-28

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 service representative. A foundation for the potential service manager or garage foreman.

TOTAL CREDIT HOURS: 120-129

BRICKLAYING (R)

NINE-MONTH PROGRAM

	Cr. Hrs.		Cr. Hrs.
First Quarter		Third Quarter	
BL 100 Bricklaying I	16	BL 103 Bricklaying III	16
M 100 Developmental Math	3	EG 106 Occ. Comm.	3
	19		19
Second Quarter		OPTIONAL COURSES: Labor relations; Welding; Carpentry; Cooperative Work Experience.	
BL 102 Bricklaying II	16	NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio: 4 cr. hrs./5 contact hrs. 8 cr. hrs./14 contact hrs. 12 cr. hrs./15 contact hrs.	
PY 100 Human Rel. in Bus. & Ind.	3		
	19		

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.

TOTAL CREDIT HOURS: 57

BUSINESS MACHINE TECHNOLOGY (A)

TWO-YEAR PROGRAM

FIRST YEAR		SECOND YEAR	
First Quarter		Fourth Quarter	
OM 100A	Cr. Hrs.	OM 200	Cr. Hrs.
Intro. to Royal Typewriters	12	Intro. to Electric Adders	12
OM 102	4	OM 205	3
Bus. Machine Terminology		Bus. Machine, Bus. Management	
MG 209	3	EG 106	3
Business Org. and Management		Occ. Comm.	
	19		18
Second Quarter		Fifth Quarter	
OM 100B	Cr. Hrs.	OM 201	Cr. Hrs.
Intro. to Smith Corona 250 Typewriter	12	Intro. to Calculators	12
OM 103	4	OM 202	12
Salesmanship		Intro. to Spirit Duplicators	
SC 105	3		24
Business Machines			
	19		
Third Quarter		Sixth Quarter	
OM 100C	Cr. Hrs.	OM 203	Cr. Hrs.
Intro. to Adler Electric Typewriters	12	Product Testing	4
OM 101	4	OM 204	12
Typewriter Troubleshooting		Adder and Calculators Troubleshooting	
	16		16
		OPTIONAL COURSES:	
		OM 297	3-12
		Coop. Work Exp.	
		OM 299	1-12
		Independent Study	

TOTAL CREDIT HOURS: 112

CARPENTRY (R)

NINE-MONTH PROGRAM

First Quarter		Third Quarter	
CA 101	Cr. Hrs.	PY 100	Cr. Hrs.
Carpentry I	16	Hum. Rel. in Bus. & Ind.	3
M 102	3	CA 103	16
Applied Math I		Carpentry III	
	19		19
Second Quarter		NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio: 4 cr. hrs./5 contract hrs. 8 cr. hrs./10 contact hrs. 12 cr. hrs./15 contact hrs.	
CA 102	Cr. Hrs.		
Carpentry II	16		
EG 106	3		
Occ. Comm.			19
	19		

OPTIONAL COURSES: Labor Relations; Welding; Co-operative Work Experience; Contracts and Specifications; Estimating and Construction Costs; Blueprint Reading; 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.

TOTAL CREDIT HOURS: 57

CARPENTRY (R)

TWO-YEAR PROGRAM

NOTE: The First Year of this Program is the same as the Nine-Month Carpentry Program.

Fourth Quarter	Cr. Hrs.	Fifth Quarter	Cr. Hrs.
CA 201 Carpentry IV	12	CA 202 Carpentry V	12
CA 211 Blueprint Reading for Building Trades	3	CA 212 Construction Contracts & Specifications	3
D 111 Drafting I	4	Elective	4
	19		19

OPTIONAL COURSES: Plumbing; Bricklaying; Materials in Industry; Cooperative Work Experience; Labor Relations; Electrical Installation; Research Problems.

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio.
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

Sixth Quarter	Cr. Hrs.
CA 203 Carpentry VI	12
CA 213 Estimating Construction Costs	3
Elective	4
	19

EMPLOYMENT OPPORTUNITIES: Occupational opportunities will be found with private builders, residential builders, general contractors and other industries that maintain their own buildings. This program or area may be accepted toward apprenticeship training.

TOTAL CREDIT HOURS: 57

TWO-YEAR PROGRAM—TOTAL CREDIT HOURS: 114

CIVIL TECHNOLOGY (N)

TWO-YEAR PROGRAM

FIRST YEAR

First Quarter	Cr. Hrs.
D 111 Drafting I	16
EG 106 Occ. Comm.	3
M 102 Appl. Math I	3
	22

Second Quarter	Cr. Hrs.
CT 114 Physical & Structural Properties of Soils & Rocks	5
M 103 Appl. Math II	3
P 101 Fund. of Physics	3
C 101 Fund. of Chemistry	4
	15

Third Quarter	Cr. Hrs.
CT 102 Basic Surveying	12
CT 123 Contracts & Specifications	5
M 104 Appl. Math III	3
	20

SECOND YEAR

Fourth Quarter	Cr. Hrs.
CT 202 Surveying II	12
CT 213 Fluid Dynamics	5
CT 223 Structures I	4
	21

Fifth Quarter	Cr. Hrs.
CT 206 Photogrammetry	8
CT 214 Civil Tech. Lab.	8
CT 227 Structures II	5
	21

Sixth Quarter	Cr. Hrs.
CT 203 Route Location Surveys & Design	8
CT 225 Estimating Const. Costs	5
CT 228 Professional Practice	3
	16

EMPLOYMENT OPPORTUNITIES: The Civil 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.

TOTAL CREDIT HOURS: 115

COMMERCIAL ART (A)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr. Hrs.
First Quarter	
English Elective	3
AR 101 Basic Draw.	3
AR 105 Basic Design	3
CM 100 Lettering and Typography	4
CM 150 Descriptive Drawing	3
	16

	Cr. Hrs.
Second Quarter	
English Elective	3
AR 102 Basic Draw.	3
AR 106 Basic Design	3
CM 101 Typography & Layout	4
PY 100 Hum. Rel. in Bus. & Ind.	3
Elective	3
	19

	Cr. Hrs.
Third Quarter	
S 110 Intro. to Speech	3
AR 103 Basic Draw.	3
AR 107 Basic Design	3
CM 103 Typography & Layout	4
Math Elective	3
	16

OPTIONAL COURSES:

CM 297 Coop. Work Experience	3-12
CM 299 Independent Study	1-12

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
PT 101 Basic Photog.	4
CM 201 Adv. Design & Rendering	4
AR 201 Second Year Drawing	3
CM 207 Adv. Theory & Production	3
	14

	Cr. Hrs.
Fifth Quarter	
PT 102 Intermediate Photography	4
CM 202 Adv. Design & Rendering	4
CM 204 Visual Merch.	4
CM 297 Coop. Work Exp.	2
AR 245 Printmaking	3
Elective	3
	20

	Cr. Hrs.
Sixth Quarter	
CM 209 Adv. Illus.	4
CM 203 Adv. Design & Rendering	4
PY 107 Psych. of Pers. Development	3
CM 297 Coop. Work. Exp.	
or	
Elective	3
Elective	3
	17

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.

TOTAL CREDIT HOURS: 102

COMMERCIAL INDUSTRIAL ELECTRICITY (R)

NINE-MONTH PROGRAM

First Quarter	Cr. Hrs.	Third Quarter	Cr. Hrs.
IE 101 Electrical Instruments and Measurement	16	IE 103 Electrical Installation, Planning and Codes	16
M 102 Applied Math I	3	FP 103 Industrial Hydraulic Controls and Circuits	4
	19	EG 106 Occupational Communications	3
			23
Second Quarter	Cr. Hrs.	OPTIONAL COURSES:	
IE 102 Industrial Electronics	16	Human Relations in Business and Industry; Math; Co-	
M 103 Applied Math II	3	operative Work Experience; Welding; Blueprint Read-	
	19	ing; Fluid Power.	

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following Ratio:
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

EMPLOYMENT OPPORTUNITIES: Job entry as an electrician's helper. Assist electrician to install and repair electrical wiring, fixtures and equipment.

TOTAL CREDIT HOURS: 61

COMMERCIAL INDUSTRIAL ELECTRICITY (R)

TWO-YEAR PROGRAM

NOTE: The First Year of the Two-Year Program is the same as the Nine-Month Program.

Fourth Quarter	Cr. Hrs.	Fifth Quarter	Cr. Hrs.
IE 201 Alternating Current Machines	16	IE 202 Electrical Power Systems	16
PY 100 Hum. Rel. in Bus. & Ind.	3	IE 105 Electrical Trades Blueprint Reading	3
	19		19
NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:		Sixth Quarter	Hrs.
4 cr. hrs./5 contact hrs.		IE 203 Operating Problem Analysis	16
8 cr. hrs./10 contact hrs.		Elective	3
12 cr. hrs./15 contact hrs.			19

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. Basic courses in communication, mathematics and social sciences add to the individual performance on the job.

TWO-YEAR—TOTAL CREDIT HOURS: 118

DIESEL MECHANICS (R)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr.
First Quarter	Hrs.
DM 101 Diesel Engine Principles	16
M 102 Applied Math I	3
	19

	Cr.
Second Quarter	Hrs.
DM 102 Diesel Engine Maintenance I	16
WE 111 Gas Welding	4
	20

	Cr.
Third Quarter	Hrs.
DM 103 Diesel Engine Maintenance II	16
EG 106 Occupational Communications	3
	19

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

EMPLOYMENT OPPORTUNITIES: This course gives a thorough preparation for entering the Diesel Service Field, such as heavy 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.

SECOND YEAR

	Cr.
Fourth Quarter	Hrs.
DM 201 Diesel Engine Maintenance III	16
WE 112 Arc Welding	4
	20

	Cr.
Fifth Quarter	Hrs.
DM 202 Diesel Engine Maintenance IV	16
PY 100 Hum. Rel. in Bus. & Ind.	3
	19

	Cr.
Sixth Quarter	Hrs.
DM 203 Diesel Engine Maintenance V	16
EC 108 Labor Relations	3
	19

TWO YEAR PROGRAM—TOTAL CREDIT HOURS: 116

ELECTRONIC TECHNOLOGY (A-N-R)

TWO-YEAR PROGRAM

OBJECTIVE: The objective of the total curriculum in Electronics Technology is to produce a competent electronics technician. The electronic technician must be capable of working and communicating with engineers, scientists and production personnel in his specialized work.

FIRST YEAR

	Cr.
First Quarter	Hrs.
ET 101 Basic Elect. & AC Theory	16
Mathematics Elective	3
	19

	Cr.
Second Quarter	Hrs.
ET 102 Solid State Devices & Vacuum Tubes	16
Mathematics Elective	3
	19

	Cr.
Third Quarter	Hrs.
ET 103 Applied Elect. Layout & Fabrication	16
Mathematics Elective	4
	20

SECOND YEAR

General Option

	Cr.
Fourth Quarter	Hrs.
ET 240ab Intro. to Instruments & Measurements	8
ET 250a Intro. to Digital Elect.	4
P 101 Fund. of Physics	3
	15

	Cr.
Fifth Quarter	Hrs.
ET 250b Intro. to Digital Elect.	4
ET 221 Communications Systems I	4
ET 242a Electronic Troubleshooting	4
EG 107 Occ. Comm.	3
	15

	Cr.
Sixth Quarter	Hrs.
ET 231 Intro. to Electro Mechanical Devices	8
ET 222 Communications Systems II	4
ET 297 Coop. Work Exp.	3-12

*NOTE: For part-time students see note on next page.
 NOTE: (R) first year only.

15-24

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.

TOTAL CREDIT HOURS: 103-112

ELECTRONICS TECHNOLOGY (N)

Communications Option

SECOND YEAR

	Cr.		Cr.
Fourth Quarter	Hrs.	Sixth Quarter	Hrs.
ET 240ab Intro. to Instruments & Measurements I	8	ET 224 Radio License Preparation II	4
ET 231 Intro. to Electromechanical Devices	8	ET 226 Mobile Radio-telephone Systems II	12
	16		16
	Cr.		
	Hrs.		
Fifth Quarter			
ET 223 Radio License Preparation I	4		
ET 225 Mobile Radio-telephone Systems I	12		
	16		

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:
 4 cr. hrs./5 contact hrs.—a
 8 cr. hrs./10 contact hrs.—ab
 12 cr. hrs./15 contact hrs.—abc

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: 106

ELECTRONICS TECHNOLOGY (N)

Electro-Mechanical Option

SECOND YEAR

	Cr.		Cr.
Fourth Quarter	Hrs.	Sixth Quarter	Hrs.
ET 231 Intro. to Electro-Mechanical Devices	8	ET 233 Electro-Mechanical Devices III	8
ET 240ab Intro. to Instruments & Measurements	8	ET 235 Control Systems	4
	16	ET 297 Coop. Work Exp.	3-12
			15-24
	Cr.		
	Hrs.		
Fifth Quarter			
ET 232 Electro-Mechanical Devices II	8		
ET 234 Servo & Synchro Systems	4		
P 101 Fund. of Physics	3		
	15		

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

EMPLOYMENT OPPORTUNITIES: Opportunities include work in sales and service, operations and other areas in the Electromechanical field.

TOTAL CREDIT HOURS: 103-112

ELECTRONIC DIGITAL TECHNOLOGY (R)

Second-Year Option Program

The First Year of this Program is the same as the Basic Electronic Program.

	Cr. Hrs.
Fourth Quarter	
ET 250 Intro. to Digital Electronics	16
Elective	3
	19

	Cr. Hrs.
Sixth Quarter	
ET 252 Computer Peripheral & Complete Systems Analyses	16
Elective	3
	19

TOTAL CREDIT HOURS: 57

	Cr. Hrs.
Fifth Quarter	
ET 251 Computer Technology	16
Elective	3
	19

OPTION COURSES: Cooperative Work Experience; Independent Study; Math; Physics.

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

WORK EXPERIENCE: 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.

TWO-YEAR PROGRAM—TOTAL CREDIT HOURS: 115

INDUSTRIAL ELECTRONICS (R)

Second-Year Option Program

	Cr. Hrs.
Fourth Quarter	
ET 260 Industrial Logic Systems	16
Elective	3
	19

	Cr. Hrs.
Sixth Quarter	
ET 262 Assembly Line Techniques	16
Elective	3
	19

OPTIONAL COURSES: Cooperative Work Experience; Applied Physics; Data Processing; Drafting; Math.

	Cr. Hrs.
Fifth Quarter	
ET 261 Control Circuits for Industrial Applications	16
Elective	3
	19

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

EMPLOYMENT OPPORTUNITIES: The student upon completion will be qualified to service and maintain an automated assembly line. Modify such system whenever a change is required. Repair AC and DC Motors which would control industrial circuits.

TOTAL CREDIT HOURS: 115

INSTRUMENTATION TECHNOLOGY (Option)

(Auraria Only)

SECOND YEAR

	Cr. Hrs.		Cr. Hrs.
Fourth Quarter			
ET 240 Intro. to Instru. & Measure I		ET 231a Intro. to Electro-Mech. Devices	4
Measuring Princ. (Elec.)	16	ET 242 Elec. Troubleshooting	12
M 106 Inter. Algebra	4	Elective	3
P 102 Physics for Instru. I	3		19
	23		
Fifth Quarter			
ET 241 Measuring Princ. II	12	To Be Taken	
ET 250a Intro. to Digital Elect.	4	Any of Above Quarters	
ET 221 Comm. Systems I	4	ET 297 Coop. Work Exp.	3-12
PY 100 Hum. Rel. in Bus. & Ind.	3	ET 299 Independent Study	1-12
	23		

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.

TOTAL CREDIT HOURS: 124-133

GRAPHIC ARTS TECHNOLOGY (A)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr. Hrs.		Cr. Hrs.
First Quarter			
GA 100 Intro. to Graphic Arts	12	Fifth Quarter	
SC 110 Typing I	4	GA 210 Advanced Lithographic	
PT 101 Basic Photo.	4	Operations & Computerized Typesetting	12
	20	AR 245 Printmaking	3
		Math Elective	3
			18
Second Quarter			
GA 110 Offset Lithography Fundamentals	12	Sixth Quarter	
CM 101 Typography & Layout	4	GA 297 Coop. Work Exp.,	
English Elective	3	GA 299 Independent Study and/or Elective	12
	19	PT 222 Color Photography I	4
		PY 100 Hum. Rel. in Bus. & Ind.	3
			19
Third Quarter			
GA 120 Basic Offset Lithographic Press		GA 100, 110, 120, 200, 210 are 16 contact hours weekly	
Operations & Production	12	Special Night Classes	
PT 200 Photography and Art	3	GA 150 Process Camera	
CM 103 Typography & Layout	4	& Halftones	4 cr. hrs. 6 contact hrs.
	19	GA 160 Offset Press	
		Operations	4 cr. hrs. 6 contact hrs.
		*GA 170 Color	
		Separations	2 cr. hrs. 3 contact hrs.
		GA 299 Independent Study	
		*(prerequisite: GA 110 or GA 150 and/or instructor's consent)	

SECOND YEAR

	Cr. Hrs.		Cr. Hrs.
Fourth Quarter			
GA 200 Intermediate Lithographic		Required Courses	
Operations & Process Color	12	GA 297 Coop. Work Exp.	3-12
SC 111 Typing II	4	GA 299 Independent Study	1-12
GA 299 Independent Study	3		
	19		

TOTAL CREDIT HOURS: 114

HEAVY EQUIPMENT OPERATION SERVICE (R)

NINE-MONTH PROGRAM

		Cr. Hrs.			Cr. Hrs.
First Quarter			Third Quarter		
DM 101 Diesel Engine Principles		16	EO 106 Heavy Equipment Operation II		16
WE 111 Gas Welding		4	EG 106 Occ. Comm.		3
		—	PY 100 Hum. Rel. in Bus. & Ind.		3
		20			—
					22
Second Quarter		Cr. Hrs.	OPTION COURSES: Cooperative Work Experience; Diesel Mechanics; Hydraulics, Welding.		
EO 105 Heavy Equipment Operation I		16	NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:		
M 100 Developmental Math		3	4 cr. hrs./5 contact hrs.		
		—	8 cr. hrs./10 contact hrs.		
		19	12 cr. hrs./15 contact hrs.		

EMPLOYMENT OPPORTUNITIES: Men who successfully complete the program will be qualified to enter the construction field as maintenance men, servicemen or preapprenticeship heavy equipment operators.

TOTAL CREDIT HOURS: 61

HYDRAULIC MECHANICS (R)

NINE-MONTH PROGRAM

		Cr. Hrs.			Cr. Hrs.
First Quarter			Third Quarter		
FP 100 Hydraulic Fundamentals		16	FP 103 Industrial Hydraulic Controls and Circuits		16
M 102 Applied Math I		3	PY 100 Hum. Rel. in Bus. & Ind.		3
		—			—
		19			19
Second Quarter		Cr. Hrs.	NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:		
FP 102 Hydraulic Generators (Pumps and Motors)		16	4 cr. hrs./5 contact hrs.		
EG 106 Occ. Comm.		3	8 cr. hrs./10 contact hrs.		
		—	12 cr. hrs./15 contact hrs.		
		19			

EMPLOYMENT OPPORTUNITIES: Hydraulic Mechanic in any shop or overhaul and repair facility for hydraulic pumps, cylinders and control valves.

TOTAL CREDIT HOURS: 57

FLUID POWER

SECOND-YEAR PROGRAM

(Fluidics, Hydraulics, Pneumatics)

NOTE: The First Year Fluid Power Program is the same as the HYDRAULIC MECHANIC PROGRAM.

		Cr. Hrs.			Cr. Hrs.
Fourth Quarter			Sixth Quarter		
FP 200 Fundamentals of Pneumatics		16	FP 202 Fluidics		16
M 103 Applied Math II		3	Elective		3
		—			—
		19			19
Fifth Quarter		Cr. Hrs.	TOTAL CREDIT HOURS: 57		
FP 201 Principles of Instrumentation		16	NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:		
P 101 Fund. Physics		3	4 cr. hrs./5 contact hrs.		
		—	8 cr. hrs./10 contact hrs.		
		19	12 cr. hrs./15 contact hrs.		

EMPLOYMENT OPPORTUNITIES: Graduates are prepared to enter the mobile machinery and automotive-type vehicle fields. Work performed may be on farm tractors and implements, industrial trucks, earthmoving equipment, self-propelled vehicles of all kinds, instrumentation, hydraulic equipment design and other commercial-industrial applications.

TWO-YEAR PROGRAM—TOTAL CREDIT HOURS: 114

INDUSTRIAL-MECHANICAL DRAFTING TECHNOLOGY (A-N-R)

NINE-MONTH PROGRAM

	Cr. Hrs.		Cr. Hrs.
First Quarter		Third Quarter	
D 111 Drafting I	16	D 113 Mech. Draft. II	16
EG 106 Occ. Comm.	3	M 103 Appl. Math II	
	19	or	
		Coop Work Exp.	3-12
			19-28
Second Quarter			
D 112 Mech. Draft. I	16		
M 102 Appl. Math I	3		
	19		

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: 57-66

INDUSTRIAL-MECHANICAL DRAFTING TECHNOLOGY (A-N-R)

TWO-YEAR PROGRAM

FIRST YEAR		SECOND YEAR	
	Cr. Hrs.		Cr. Hrs.
First Quarter		Fourth Quarter	
D 111 Drafting I	16	D 211 Engineering Drafting	16
M 102 Appl. Math I	3	P 101 Fund. of Physics	3
Elective	3	PY 100 Hum. Rel. in Bus. & Ind.	3
	22		22
Second Quarter		Fifth Quarter	
D 112 Mech. Draft. I	16	D 212 Related Draft Concepts	16
M 103 Appl. Math II	3	Elective	3
Elective	3	EC 108 Labor Rel.	3
	22		22
Third Quarter		Sixth Quarter	
D 113 Mech. Draft. II	16	D 213 Mat. Handling & Facility Draft.	16
EG 106 Occ. Comm.	3	EC 107 Cons. Ec.	
Elective	3	or	
	22	Elective	3
			19

EMPLOYMENT OPPORTUNITIES: At the end of the two-year drafting, 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:129

MECHANICAL DRAFTING TECHNOLOGY—Option (N)

Option

A two-year curriculum based on the Industrial-Mechanical Drafting Technology program that provides comprehensive training for the Mechanical draftsman seeking an orientation to the metal working industries. This curriculum is coordinated with the Machine Trades curriculum.

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
D 211 Engineering Drafting	16
P 101 Fund. of Physics	3
PY 100 Hum. Rel. in Bus. & Ind.	3
	22

	Cr. Hrs.
Fifth Quarter	
MS 100 Basic Machine Tool Operation & Theory	16
D 261 Project in Drafting	4-8
Elective	3
	23-27

	Cr. Hrs.
Sixth Quarter	
MS 100 Basic Machine Tool Operation & Theory	16
EC 107 Cons. Ec.	3
D-297 Coop. Work Exp.	3-12
	22-31

TOTAL CREDIT HOURS: 57-137

INDUSTRIAL-MECHANICAL DRAFTING TECHNOLOGY (N)

Industrial Pipe Drafting Emphasis

Option

A two-year curriculum based on the Industrial-Mechanical Drafting technology program comprising a double major in Industrial-Mechanical and Industrial Pipe Drafting. This comprehensive training allows the student to work in a variety of fields utilizing or specializing in industrial pipe systems: industrial or engineering facilities that work with chemicals, oil, gas, food, paper or other process applications.

The pipe drafting courses are available to those students and professional draftsmen seeking a knowledge of industrial piping techniques. These courses will be offered three evenings per week, starting in the fall quarter and concluding in the spring quarter.

Minimum entry requirements: D 111, an equivalent introduction to drafting or consent of the instructor.

FIRST YEAR

Same as Industrial-Mechanical Drafting Technology

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
D 211 Engineering Drafting	16
D 250 Intro. to Pipe Drafting	8
	24

	Cr. Hrs.
Fifth Quarter	
D 212 Related Draft. Concepts	16
D 251 Ind. Pipe Drafting	8
	24

	Cr. Hrs.
Sixth Quarter	
D 213 Material Handling & Facility Drafting	16
D 252 Adv. Ind. Pipe Drafting	8
	24

TOTAL CREDIT HOURS: 138

INVENTORY CONTROL (A)

	Cr. Hrs.
First Quarter	
SC 110 Typing I	4
English	3
IC 110 Inventory Control	12
	19

	Cr. Hrs.
Second Quarter	
SC 111 Typing II	4
M 100 Bus. Math	3
IC 120 Inventory Control	12
	19

	Cr. Hrs.
Third Quarter	
Math Elective	3
AC 109 Accounting & Bookkeeping	5
IC 130 Inventory Control	12
	20

OPTIONAL COURSES:	
IC 297 Coop. Work Exp.	3-12
IC 299 Independent Study	1-12

TOTAL CREDIT HOURS: 58

MACHINE SHOP (N)

NINE-MONTH PROGRAM

First Quarter	Cr. Hrs.	Second Quarter	Cr. Hrs.
MS 100 Basic Machine Tool Operation & Theory	16	MS 100 Basic Machine Tool Operation & Theory	16
M 102 Appl. Math I	3	EG 106 Occ. Comm.	3
	19		19

Third Quarter	Cr. Hrs.
MS 100 Basic Machine Tool Operation & theory	16
M 103 Appl. Math II	
or	
MS 297 Coop. Work Exp.	3-12
	19-28

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: 57-66

MACHINE SHOP (N)

FIRST YEAR

SECOND YEAR

First Quarter	Cr. Hrs.	Fourth Quarter	Cr. Hrs.
MS 100 Basic Machine Tool Operation & Theory	16	MS 200 Special Machine Tools, Setups & Processes	16
M 102 Appl. Math I	3	EG 106 Occ. Comm.	3
	19	PY 100 Hum. Rel. in Bus. & Ind.	3
			22

Second Quarter	Cr. Hrs.
MS 100 Basic Machine Tool Operation & Theory	16
M 103 Appl. Math II	3
	19

Third Quarter	Cr. Hrs.
MS 100 Basic Machine Tool Operation & Theory	16
M-104 Appl. Math III	3
	19

Fifth Quarter	Cr. Hrs.
MS 200 Special Machine Tools, Setups & Processes	16
EG 107 Occ. Comm.	3
EC 108 Labor Rel.	3
	22

Sixth Quarter	Cr. Hrs.
MS 200 Special Machine Tools, Setups & Processes	16
EG 108 Occ. Comm.	3
Elective	3
or	
Coop. Work Exp.	3-12
	22-31

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

MINERAL INDUSTRY TECHNOLOGY (R)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr. Hrs.
First Quarter	
MI 101 Mining	1
D 111 Drafting I	4
G 111 Intro. to Geology	4
M 102 Appl. Math I	3
EG 106 Occ. Comm.	3
Elective	3
	18

	Cr. Hrs.
Second Quarter	
M 101 Mining	3
MI 103 Mining Drafting	8
G 112 Physical Geology	4
M 103 Appl. Math II	3
	18

	Cr. Hrs.
Third Quarter	
MI 104 Ore Deposits	4
MI 105 Mineral Explorations	4
SU 103 Basic Surveying	8
M 104 Appl. Math III	3
	19

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
MI 201 Mining	3
MI 202 Rock and Mineral Sampling	8
SU 104 Advanced Surveying	4
C 101 Fund. of Chemistry	4
	19

	Cr. Hrs.
Fifth Quarter	
MI 203 Mine Design	4
MI 204 Mining Equipment	8
MI 205 Plant Product Sampling	4
SU 105 Mine Surveying	4
	20

	Cr. Hrs.
Sixth Quarter	
MI 206 Metal and Alloy Sampling	4
MI 207 Mill Equipment Operating Techniques	4
MI 208 Mining and Mineral Law	3
MI 209 Mine Safety and Ventilation	3
MI 297 Coop. Work Exp.	6
	20

EMPLOYMENT OPPORTUNITIES: The objective of this total curriculum is to prepare students to become competent Mineral Industry Technicians. The mineral industry is a \$25 billion operation where many technicians are needed.

TOTAL CREDIT HOURS: 114

PHOTOGRAPHY (A)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr.	Hrs.
First Quarter		
PT 101 Basic Photo.	4	
AR 105 Basic Design	3	
AR 101 Basic Drawing	3	
Eng. Elective	3	
PT 107 History of Photo. I	4	
CM 100 Lettering & Topography	4	
	21	

	Cr.	Hrs.
Second Quarter		
PT 102 Inter. Photo.	4	
AR 106 Basic Design	3	
AR 102 Basic Drawing	3	
Eng. Elective	3	
PT 108 History of Photo. II	4	
AR 245 Printmaking (silkscreen)	3	
GA 150 Process Camera & Halftones	2	
	23	

	Cr.	Hrs.
Third Quarter		
PT 103 Advance Photo.	4	
AR 107 Basic Design	3	
AR 103 Basic Drawing	3	
GA 100 Intro. Graphic Arts	4	
	14	

OPTIONAL COURSES:

PT 297 Coop. Work Exp.	3-12
PT 299 Independent Study	1-12

SECOND YEAR

	Cr.	Hrs.
Fourth Quarter		
PT 201 Photo. and Art	3	
GA 100 Intro. Graphic Arts (GA 110)	4	
GA 150 Process Camera and Halftones	2	
Eng. Elective	3	
	14	

	Cr.	Hrs.
Fifth Quarter		
PT 220 Photo. Journalism I	3	
PT 222 Color Photo. I	8	
	11	

	Cr.	Hrs.
Sixth Quarter		
PT 224 Intro. to Motion Photo.	4	
PT 225 Motion Photo. and the Media	4	
PT 226 Editing Motion Photo.	4	
PT 245 Film Making	4	
	16	

PT 109 May Be Taken As Elective	
PT 200 May Be Taken As Elective	
PT 221 May Be Taken As Elective	
PT 223 May Be Taken As Elective	

TOTAL CREDIT HOURS: 99

PLUMBING (R)

NINE-MONTH PROGRAM

	Cr.	Hrs.
First Quarter		
PL 111 Plumbing I	16	
M 100 Developmental Math.	3	
	19	

	Cr.	Hrs.
Second Quarter		
PL 112 Plumbing II	16	
EG 106 Occ. Comm.	3	
	19	

	Cr.	Hrs.
Third Quarter		
PL 113 Plumbing III	16	
PY 100 Hum. Rel. in Bus. & Ind.	3	
	19	

OPTIONAL COURSES: Welding, Cooperative Work Experience, Carpentry, Bricklaying, Electrical Installation.

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

EMPLOYMENT OPPORTUNITIES. This course is designed for job entry for the student who wants to work in the plumbing trades.

TOTAL CREDIT HOURS: 57

QUALITY ASSURANCE (A)

TWO-YEAR ASSOCIATE DEGREE PROGRAM

FIRST YEAR

	Cr. Hrs.
First Quarter	
English Elective	3
Math Elective	5
D 111 Drafting I	4
QA 100 Intro. to QA	4
ET 101A Basic Electricity & DC Theory	4
	20

	Cr. Hrs.
Second Quarter	
English Elective	3
Math Elective	4
QA 101 Principles of QA	4
D 112 Mech. Drafting I	4
	15

	Cr. Hrs.
Third Quarter	
P 101 Fund. Physics	3
QA 102 Principles of QA II	7
ET 101B Basic Electricity & AC Theory	4
	14

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
P 112 College Physics	5
QA 201 Theory & Application of QA I	7
	12

	Cr. Hrs.
Fifth Quarter	
QA 206 Metrology	2
QA 205 Nondestructive Testing	2
Humanities Elec.	3
Tech. Relat. Elect.	8
QA 202 Theory & Application of QA II	4
	19

	Cr. Hrs.
Sixth Quarter	
QA 207 Elec. QA	2
QA 208 Procurement QA & Prin. of N.C.	3
English Elective	3
QA 203 Advanced QA	4
	12

OPTIONAL COURSES:

QA 297 Coop. Work Exp.	3-12
QA 299 Independent Study	1-12

TOTAL CREDIT HOURS: 92

RADIO AND TELEVISION SERVICE (N)

NINE-MONTH PROGRAM

	Cr. Hrs.
First Quarter	
ET 101 Basic. Elect. & AC Theory	16
M 102 Appl. Math I	3
	19

	Cr. Hrs.
Second Quarter	
ET 102 Solid State Devices & Vacuum Tubes	16
EG 106 Occ. Comm.	3
	19

	Cr. Hrs.
Third Quarter	
RA 130 Adv. TV Servicing	16
PY 100 Hum. Rel. in Bus. & Ind.	
or	
RA 131 Tech. Proj.	
or	
RA 297 Coop. Work Exp.	3-12
	19-28

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

EMPLOYMENT OPPORTUNITIES: The Radio and Television Servicing program is designed to enable the student to be employable in a number of electronic areas which utilize circuit analysis and troubleshooting techniques. Some of the major areas of potential employment are as follows:

1. Independent radio/television serviceman
2. TV research and development technician (factory level).
3. TV distributor technician—advising customers and assisting in training other servicing organizations.
4. Operations Technician—checking and troubleshooting electronic control devices and systems, working with closed circuit TV and checking out skilled plant workers in operation of electronically controlled equipment.

TOTAL CREDIT HOURS: 57-66

SPORT CRAFTS AND SPECIALTY AREA MECHANICS (N)

NINE-MONTH PROGRAM

First Quarter	Cr. Hrs.	Third Quarter	Cr. Hrs.
SE 111 Basic. Prin. of Engines Carb. & Ign.	16	SE 113 Trans., Clutches, Final Drives & Brakes	16
M 100 Dev. Math	3	**SE 297 Coop. Work Exp.	3-12
	19	or	
		PY 100 Hum. Rel. in Bus. & Ind.	3
			19-31
Second Quarter	Cr. Hrs.	**Elective	
SE 112 Engine Tuneup and Rebuild.	16	NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio: 4 cr. hrs./5 contact hrs. 8 cr. hrs./10 contact hrs. 12 cr. hrs./15 contact hrs.	
EG 106 Occ. Comm.	3		
	19		

EMPLOYMENT OPPORTUNITIES: Entry into small engine mechanic service field as a small engine 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: 57-69

SURVEYING (R)

TWO-YEAR PROGRAM

FIRST YEAR		SECOND YEAR	
First Quarter	Cr. Hrs.	Fourth Quarter	Cr. Hrs.
SU 112 Drafting and Physical Measurement	8	SU 203 Intermediate Surveying	12
M-102 Applied Math I	3	SU 214 Surveying Calculations	5
EG 106 Occ. Comm.	3		17
G 111 Intro. to Geology	4		
	18		
Second Quarter	Cr. Hrs.	Fifth Quarter	Cr. Hrs.
SU 113 Surveying Drafting	8	SU 206 Photogrammetry	8
GE 230 Urban Geography	3	SU 223 Error Analysis	4
M 103 Applied Math II	3	SU 215 Special Surveying Problems	4
EG 107 Occ. Comm.	3		16
	17		
Third Quarter	Cr. Hrs.	Sixth Quarter	Cr. Hrs.
SU 102 Basic Surveying I	12	SU 204 Advanced Surveying	8
M 104 Applied Math III	3	CT 123 Contracts and Specifications	5
EG 108 Occ. Comm.	3	SU 216 Legal Aspects of Surveying	4
	18	SU 217 Technical Project	4
			21

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.

TWO-YEAR PROGRAM—TOTAL CREDIT HOURS: 107

TECHNICAL ILLUSTRATION (A)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr.	Hrs.
First Quarter		
English Elective	3	
Math Elective	3	
D 111 Drafting	4	
TI 111 Freehand Sketching	4	
AR 101 Basic Drawing	3	
	16	

	Cr.	Hrs.
Second Quarter		
Math Elective	3	
D 112 Mech. Drafting I	4	
AR 102 Basic Drawing	3	
Elective	3	
	14	

	Cr.	Hrs.
Third Quarter		
Math Elective	3	
D 113 Mech. Drafting II	4	
TI 112 Isometric, Dimetric & Trimetric Drawing	3	
PY 100 Hum. Rel. in Bus. & Ind.	3	
AR 105 Basic Design	3	
	16	

SECOND YEAR

	Cr.	Hrs.
Fourth Quarter		
TI 211 Rendering I	4	
CM 201 Advertising Design & Rendering	4	
TI 214 Air Brush Techniques I	3	
PY 107 Psy. of Pers. Development	3	
PT 101 Basic Photo.	3	
	16	

	Cr.	Hrs.
Fifth Quarter		
CM 202 Advertising Design & Rendering	4	
MG 209 Bus. Organ. & Manag.	3	
MG 226 Salesmanship	3	
TI 215 TI Seminar	3	
Elective	3	
TI 216 Air Brush Techniques II	4	
	20	

	Cr.	Hrs.
Sixth Quarter		
GA 100 Intro. to Graphic Arts	8	
TI 218 Special Problems	6	

OPTIONAL COURSES:		
TI 297 Coop. Work Exp.	3-12	
TI 299 Independent Study	1-12	
	14	

TOTAL CREDIT HOURS: 99-113

VENDING MACHINE REPAIR (A)

TWO-YEAR PROGRAM

FIRST YEAR

	Cr.	Hrs.
First Quarter		
ET 101 Basic Elec. & AC Theory	16	
M 102 Applied Math I	3	
	19	

	Cr.	Hrs.
Second Quarter		
ET 102 Solid State Devices & Vacuum Tubes	16	
M 103 Applied Math II	3	
	19	

	Cr.	Hrs.
Third Quarter		
VM 100 Vending Machine I	16	
M 104 Applied Math III	3	
	19	

SECOND YEAR

	Cr.	Hrs.
Fourth Quarter		
VM 120 Vending Machine II	16	
	16	

	Cr.	Hrs.
Fifth Quarter		
VM 130 Vending Machine III	16	
	16	

	Cr.	Hrs.
Sixth Quarter		
VM 140 Vending Machine IV	16	
	16	

OPTIONAL COURSES:		
VM 297 Coop. Work Exp.	3-12	
VM 299 Independent Study	1-12	

TOTAL CREDIT HOURS: 105-120

WELDING AND FABRICATION (A-N-R)

NINE-MONTH PROGRAM

First Quarter	Cr. Hrs.	Third Quarter	Cr. Hrs.
WE 111 Gas Weld	16	WE 113 Arc Weld Adv.	16
M 100 Dev. Math	3	EC 108 Labor Rel.	3
	19	or	
		WE 297 Coop. Work Exp.	3-12
			19-28
Second Quarter	Cr. Hrs.	NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio: 4 cr. hrs./5 contact hrs. 8 cr. hrs./10 contact hrs. 12 cr. hrs./15 contact hrs.	
WE 112 Arc Weld	16		
EG 106 Occ. Comm.	3		
	19		

EMPLOYMENT OPPORTUNITIES: Mechanic in any facility requiring experienced or specialized welding repair or fabrication.

TOTAL CREDIT HOURS: 57-66

WELDING AND FABRICATION (A-N-R)

TWO-YEAR PROGRAM

FIRST YEAR		SECOND YEAR	
First Quarter	Hrs. Cr.	Fourth Quarter	Cr. Hrs.
EG 106 Occ. Comm.	3	WE 204 TIG & MIG WELD	16
	19	M 100 Dev. Math	3
		EC 107 Cons. Ec.	3
		or	
		Elective	3
			22
Second Quarter	Cr. Hrs.	Fifth Quarter	Cr. Hrs.
WE 112 Arc Weld	16	WE 205 Ornamental Iron Work (A, N)	
EG 107 Occ. Comm.	3	or	
	19	WE 207 Layout and Development (R)	16
		EC 108 Labor Rel.	3
		PY 100 Hum. Rel. in Bus. & Ind.	3
			22
Third Quarter	Cr. Hrs.	Sixth Quarter	Cr. Hrs.
WE 113 Arc Weld Adv.	16	WE 206 Pipe Weld & Fabrication	16
EG 108 Occ. Comm.	3	WE 297 Coop. Work Exp.	3-12
	19	or	
		Elective	6
			19-28

NOTE: Part-time students may enroll in the above Industrial
 Occupations courses based upon the following ratio:
 4 cr. hrs./5 contact hrs.
 8 cr. hrs./10 contact hrs.
 12 cr. hrs./15 contact hrs.

EMPLOYMENT OPPORTUNITIES: Welding Technicians for entrance into a welding and/or fabrication trade.

TOTAL CREDIT HOURS: 120-129

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.

AUTO BODY SERVICE (N)

AB 111 Auto Body Repair and Refinishing (N) 16 credit hours

Body and component nomenclature, body filling material and the refinishing with modern lacquers, acrylics and enamels. Proper use of equipment. (20 hours per week)

AB 112 Auto Body Repair and Refinishing (N) 16 credit hours

Prerequisite: AB 111 Auto Body Repair and Refinishing

Repair of automobiles damaged in collisions. Use of tools to effect these repairs on exterior panelling, trim and hardware. Alignment of body components. Surface preparation for refinishing, spot and complete painting. (20 hours per week)

AB 113 Auto Body Repair and Refinishing (N) 16 credit hours

Prerequisite AB 111 and AB 112 Auto Body Repair and Refinishing

Advanced assessment and repair of damaged auto body parts. Individual assignment from initial inspection to final repair. Advanced course in auto refinishing stressing speed and quality workmanship. Proper mixing and matching of colors, refinishing problems and special color effects. (20 hours per week)

AB 214 Frame, Unit Body Straightening and Refinishing (N) 16 credit hours

Prerequisite: All first year courses

Repair of automobile frame having various designs. Use of portable frame straightening equipment, wheel balancing and alignment as related to frame damage on conventional and unitized construction. Repair of damage caused by front-end, rear-end and side collisions. (20 hours per week)

AB 215 Major Straightening Body Alignment and Refinishing (N) 16 credit hours

Prerequisite: All first year courses

Assessment and repair of major auto body damage, reinforcing methods and sectioning of unitized body and conventional frames. Individual project assignments. Intended as an advanced course requiring independent analysis and decision-making. (20 hours per week)

AB 216 Body Rebuilding and Refinishing (N) 16 credit hours

Prerequisite: All first year courses

Advanced study in damage estimating, economics of auto body repair and parts replacement. Auto Body shop management and organization, customer relations and job scheduling. (20 hours per week)



Auto Body Service

APPLIANCE AND REFRIGERATOR MECHANICS

AE 100 Basic Appliance and Refrigeration Mechanics (A) 16 credit hours

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)

AE 120 Appliance and Refrigeration Mechanics (A) 16 credit hours

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)

AE 130 Advanced Appliance and Refrigeration Mechanics (A) 16 credit hours

Lecture and study assignments on diagnosis of trouble and recommended procedures for repair or 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)



Automotive Mechanics

AUTOMOTIVE MECHANICS (A-N-R)

AM 101 Basic Engine, Carburetors, Ignition, and Tune-Up (A, N, R) 16 credit hours

Principles, design, construction of modern automotive engines. Introduction to the fundamentals of electricity, batteries, ignition systems, engine tune-up procedures and the theory, operation, and overhaul of one-two-and four barrel carburetors. Operation and service of direct current and alternating charging systems. (20 hours per week)

AM 102 Brake, Chassis, and Wheel Alignment (A, N, R) 16 credit hours

Hydraulic principles and theory as applied to the automotive hydraulic brake system including service on drum and disc brakes. Theory of wheel alignment, balancing, and steering systems including service on live units, nomenclature, theory and service of chassis and suspension systems on passenger cars and light trucks. (20 hours per week)

AM 103 Transmissions and Power Trains (A, N, R) 16 credit hours

Prerequisite: AM 101 Basic Engine, Carburetors, Ignition and Tune-Up or Consent of Advisor

Construction, operation, and service techniques for standard transmissions, drive lines, rear axle assemblies and clutches, including practical experience on shop units and live cars. Principles of operation and service procedures of automatic transmissions. (20 hours per week)

AM 204 Basic Service Repair and Air Conditioning (A, N, R) 16 credit hours

Prerequisite: AM 101 Basic Engine, Carburetors, Ignition and Tune-Up or Consent of Advisor

Service procedures used on vehicle inspection and adjustment of the engine, electrical system and overall operation of the vehicle. Study of service procedures on new and used car inspection and adjustment. Operation and service of automotive air conditioning and charging units on live units (20 hours per week)

AM 205 Engine Construction and Rebuilding (A, N, R) 16 credit hours

Prerequisite: AM 101 Basic Engine, Carburetors, Ignition and Tune-Up or Consent of Advisor

Construction, operation, parts and service procedure for two and four cycle engines, cooling systems and lubrication systems. Micrometers, gauges and engine hand tools, engine rebuilding procedures and mechanical operations for cylinder reconditioning, pistons and rings, valves, and bearing service. (20 hours per week)

AM 206 Diagnosis and Dynamometer Operation (A, N, R) 16 credit hours

Prerequisite: AM 101 Basic Engine, Carburetors, Ignition and Tune-Up or Consent of Advisor

Diagnostic procedures used in dealerships and garages on the overall automobile; emphasis on diagnosis of engines and components with latest test equipment. Basic methods of testing horsepower and engine torque with the chassis dynamometer. (20 hours per week)

ARCHITECTURAL TECHNOLOGY

AT 101 Introduction to Architectural Technology (N, R) 16 credit hours

Introduction to basic drawing, lettering, and projection systems employed by the professional architectural draftsman. Field trips to various architectural, engineering, and fabricators' drafting rooms, field trips to construction sites to familiarize the student with professional standards, building construction methods and equipment. (20 hours per week)

AT 102 Architectural Drafting (N, R) 16 credit hours

Prerequisite: AT 101 Introduction to Architectural Drafting

Basic architectural drafting techniques, dimensions, notations, sheet organization, the development of floor plans, elevations, details and sections for a small structure. Emphasis in graphic and lettering techniques of the professional draftsman. (20 hours per week)

AT 103 Introduction to Working Drawings (N, R) 16 credit hours

Prerequisite: All First and Second Quarter Courses

Working drawings and specifications, as legal documents and instruments of communication to the contractor and client. The drafting segment of this course will stress practical problems involving the use of building codes and specifications. (20 hours per week)

AT 204 Architectural Working Drawings I (N, R) 12 credit hours

Prerequisite: All First Year Courses

Design and drafting of a simple steel framed commercial structure, analyzed as a structural system in the concurrent Structures I course. The student will be required to adjust and adapt architectural details for compatibility with structural drawings. Site planning, grading contour lines. (15 hours per week)

AT 205 Architectural Working Drawings II (N, R) 12 credit hours

Prerequisite: All First Year Courses

The integration of mechanical and electrical equipment, miscellaneous building equipment, elevators, and stair design. Working with a steel structure, the students will utilize this building, and the structural problems involved in it, for the concurrent Structures II course. (15 hours per week)

AT 206 Architectural Working Drawings III (N, R) 16 credit hours

Prerequisite: All First Year Courses

This course will be devoted to the individual student's particular employment goals and the further development of the student's particular area of interest or vocational opportunities. The class will develop a complete set of working drawings. (20 hours per week)

AT 224 Architectural History I (N, R) 5 credit hours

Prerequisite: All First Year Courses

An analysis of historical forms, styles, and structures as developed by various societies in response to evolving cultural and technological developments. Drafting, and architectural model building will be used to illustrate concepts of form, mass, and structural relationships. The primitive beginnings of building to the architecture of the Renaissance. (5 hours per week)

AT 225 Architectural History II (N, R) 5 credit hours

Prerequisite: All First Year Courses

A continuation of Architectural History I. A detailed examination of post-Renaissance forms in the 17th, 18th, and 19th centuries. The development of contemporary architecture, its leading proponents, and the development of an architectural philosophy. (5 hours per week)

AT 232 Professional Seminar (N, R) 5 credit hours

Prerequisite: All First Year Courses

The student will be required to investigate job opportunities, interviews with various local firms, prepare a professional resume both written and graphic. This course will be conducted with the Community College Placement Service, and the Cooperative Work Experience Coordinator. Professional practice for architects and draftsmen, legal obligations, etc. (5 hours per week)



Bricklaying

BRICKLAYING (R)

BL 100 Bricklaying I (R) 16 credit hours

This course will take the student into the phase of bricklaying that is basically used in home construction. It will deal with spreading mortar, laying brick to a line, building brick corners, laying sills, and other types of bricklaying, commonly used in brick veneering. The student will learn to lay block to line and build corners using different size blocks. (20 hours per week)

BL 102 Bricklaying II (R) 16 credit hours

Prerequisite: BL 100 or consent of Instructor

This course is a continuation of developing the skills learned in BL 100. At the end of this course, the student should be ready to work on home construction. (20 hours per week)

BL 103 Bricklaying III (R) 16 credit hours

Prerequisite: BL 102 or consent of Instructor

This is an advanced course offered to those students who want to learn the skills needed to enter into commercial work. This will include laying both brick and block and will concentrate on over-the-wall techniques used in commercial construction. (20 hours per week)

CARPENTRY (R)

CA 101 Carpentry I (R) 16 credit hours

An introduction to building codes and zoning ordinances is given. Construction blueprints will be studied to instruct the student on the various methods of interpreting drawings used for the construction industry. Identification of building materials is given and the use of carpentry tools and equipment as the course progresses places emphasis on the importance of using the right tool for the job. Visits to construction sites will be a part of this course. Shop safety will be stressed when tools and equipment are being used. (20 hours per week)

CA 102 Carpentry II (R) 16 credit hours

Various carpentry jobs will be planned for this course. Skills are developed as the student performs these jobs working with blueprints using the tools and equipment as required. Job sites will be visited. Building codes and ordinances are studied. Shop safety is stressed. (20 hours per week)

CA 103 Carpentry III (R) 16 credit hours

Students will have the opportunity to build a structure working with blueprints. The required specifications for the structure will be studied and proper construction procedures will be developed. Practical application will enhance the student's knowledge of the carpentry trade. Building codes are studied and shop safety is stressed. (20 hours per week)

CA 201 Carpentry IV (R) 12 credit hours

A continuation of Carpentry III

The student will have the opportunity to advance to more difficult construction jobs. Emphasis is placed upon building a structure from a blueprint and applying proper construction techniques as the job progresses. Safety is stressed. (15 hours per week)

CA 202 Carpentry V (R) 12 credit hours

An insight into other areas of the construction industry is studied. The student is introduced to basic brick work, electrical and plumbing installation and the student will have the opportunity to determine at which point the electricians and mechanics will be "roughed" in. Safety is stressed. (15 hours per week)

CA 203 Carpentry VI (R) 12 credit hours

Students will be presented with a blueprint and under close supervision, will complete the job assigned. The required information to complete the job will be outlined according to proper procedures as done on the job. Safety is stressed. (15 hours per week)

CA 211 Blueprint Reading for the Building Trades (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)

CA 212 Construction Contracts and Specifications (R) 3 credit hours

Construction contracts are studied. Bidding procedures are given. Instruction is provided in the preparation of contracts and building specifications. Practical application will give a more comprehensive picture of the construction industry. (3 hours per week)

CA 213 Estimating Construction Costs (R) 3 credit hours

The functions and operations of a construction office, including planning, scheduling, estimating, purchasing, cost accounting and control is given. (3 hours per week)

CA 214 Research Problem (R) 4 credit hours

Each student will be required to demonstrate thorough knowledge obtained throughout the Carpentry Program, the ability to complete a carefully selected problem with the minimum teacher assistance. The responsibility to complete the selected problem is placed upon the student. (This is an elective course - hours to be arranged.)

PLEASE NOTE: All Carpentry courses are by the consent of the Instructor.

COMMERCIAL ART

CM 100 Lettering and 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. (6 hours per week)

CM 101 Typography and 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. (6 hours per week)

CM 103 Typography and 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 (6 hours per week)



Carpentry

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. (6 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 on individuality, critical judgment and creativity. Emphasis on preparing problems for reproduction. (6 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. (6 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. (6 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. (6 hours per week)

CM 207 Advertising Theory and Production (A) 3 credit hours

Study of the advertising field, business procedure, methods of reproduction, quantity and quality control in the Graphic Arts. Further study of typography, typesetting, estimating and various copy fittings techniques and marking production proofs. (6 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. (6 hours per week)

CM 245 Commercial Silk Screening (A) 2 credit hours

A study of film and photographic silkscreening for commercial purposes. Course is designed for people in the graphics area with demonstrations in commercial silk screening and classroom experience in silk screening. (3 hours per week. Can be taken as elective.

CIVIL TECHNOLOGY (N)

CT 102 Surveying I (N) 12 credit hours

Prerequisite: M 103 (2nd Quarter Math and concurrent enrollment in M 104 (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 technology endeavor. (15 hours per week)

CT 114 Physical and Structural Properties of Soils and Rocks (N) 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 123 Contracts and Specifications (N) 5 credit hours

The Law of Contracts and its application to engineering projects. Specification writing, adequacy and application. 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 202 Surveying II (N) 12 credit hours

Prerequisite: CT 102 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 203 Route Location Surveys and Design (N) 8 credit hours

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 206 Photogrammetry (N) 8 credit hours

Prerequisite: CT 102 Surveying and CT 202 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 reaches. (10 hours per week)

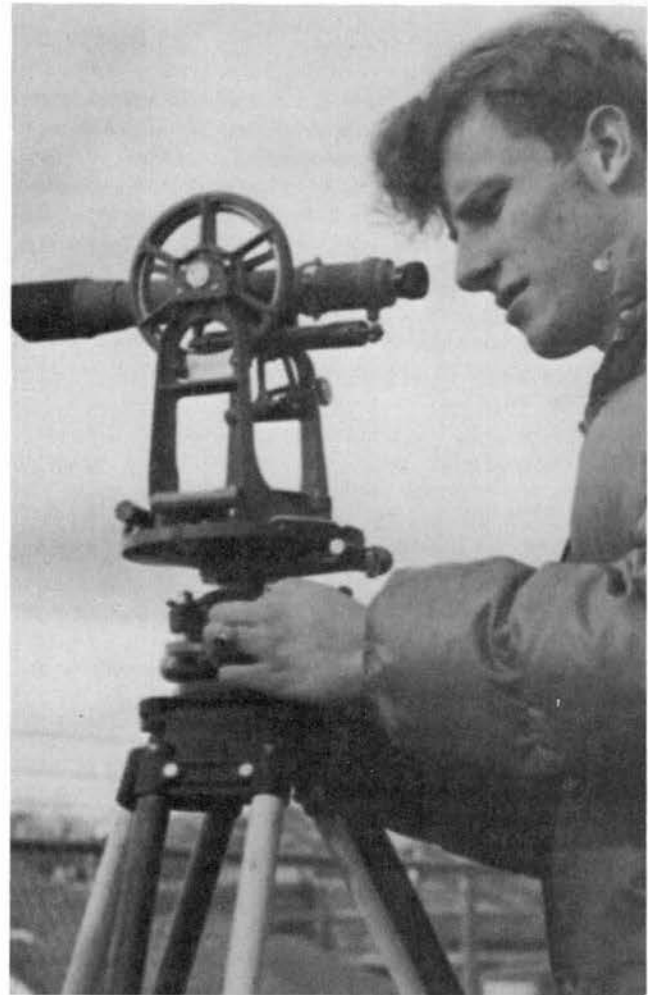
CT 213 Fluid Dynamics (N) 5 credit hours

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)

CT 214 Civil Technology Laboratory (N) 8 credit hours

Prerequisite: CT 114 Physical & Structural Properties of Soils & 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)



Civil Technology

CT 223 Structures I (N) 4 credit hours

Mechanical properties of materials; stresses and strains in members subjected to tension, compression and shear. Graphical and trigonometrical analysis of space frames, including trusses. Force systems: coplanar, parallel, concurrent, nonconcurrent and noncoplanar. (4 hours per week)

CT 225 Estimating Construction Costs (N) 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 227 Structures II (N) 5 credit hours

Prerequisite: CT 223 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 228 Professional Practice (N) 3 credit hours

Prerequisite: At least 50 hours credit in the Civil 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 Technology. (3 hours per week)

INDUSTRIAL MECHANICAL DRAFTING TECHNOLOGY

D 111 Drafting I (A, N, R)16 credit hours

Basic drafting techniques and principles including: Lettering, linework, geometric construction, sketching, orthographic projection, introduction to dimensioning, isometric drawing, sections and conventions. An exploration of the various fields of drafting will be conducted both by student application in the drafting room and by tours of industry. (20 hours per week)

D 112 Mechanical Drafting I (A, N, R) 16 credit hours

Prerequisite: D 111 Drafting I or consent of Advisor

Introduction to the application of mechanical drafting concepts: Orthographic projection, isometric and pictorial drawings, sections and conventions, basic descriptive geometry, fastening devices and welding practices. Dimensioning practices, charts, diagrams and inking procedures. Assembly and detail drawings of machined and welded assemblies. (20 hours per week)

D 113 Mechanical Drafting II (A, N, R)16 credit hours

Prerequisite: D 112 Mechanical Drafting I or consent of Advisor

Applied descriptive geometry, intersections, developments and problems utilizing various materials and manufacturing processes. The working drawing, dimension and tolerance development. (20 hours per week)

D 211 Engineering Drafting (A, N, R)16 credit hours

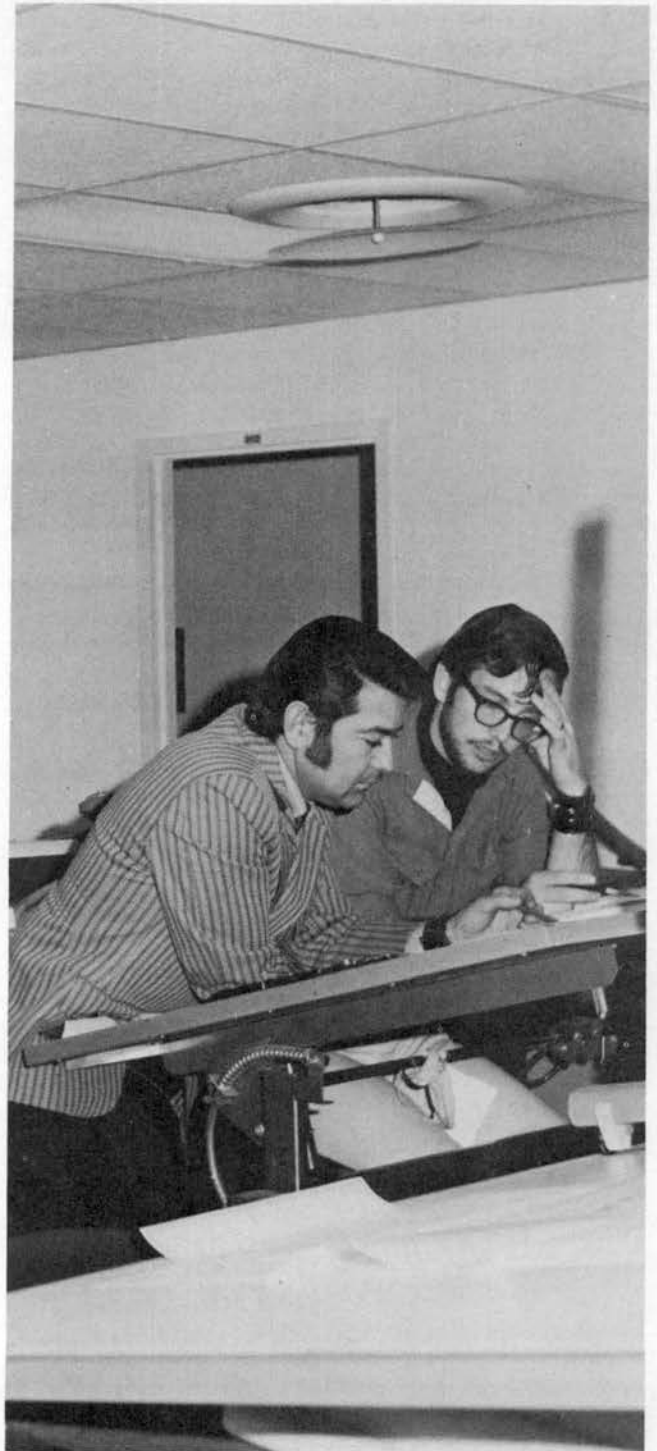
Prerequisite: D 113 Mechanical Drafting II or consent of Advisor

Selection of drive systems and components, the application of Smoley's tables and the solution of triangles in drafting problems. Applications of small mechanical and machine components and systems. The development of large mechanical assemblies, tanks and equipment. (20 hours per week)

D 212 Related Drafting Concepts (A, N, R)16 credit hours

Prerequisite: D 211 Engineering Drafting or consent of Advisor

An advanced course to acquaint the mechanical draftsman with an understanding of the integration of the following disciplines to the mechanical field: Architectural, Civil, Electrical, Structural, Pipe, Hydraulic and Pneumatic systems. (20 hours per week)



Drafting



Drafting

D 213 Material Handling and Facility Drafting (A, N, R)16 credit hours

Prerequisite: D 212 Related Drafting Concepts or consent of Advisor

Principles of material handling incorporated into a plant facility development problem. Application of flow sheets, design, modification to and the installation of plant equipment. (20 hours per week)

D 250 Introduction to Pipe Drafting (N) 8 credit hours

Prerequisite: D 111, equivalent or permission of Instructor

Review of lettering, sketching, projection techniques and an introduction to piping methods, conventions, materials, symbols, process and mechanical flow diagrams. Instrumentation and methods of representation. Single and double line drawings, piping specifications and material estimating and take-off. (10 hours per week)

D 251 Industrial Pipe Drafting (N)8 credit hours

Prerequisite: D 250 Introduction to Pipe Drafting

Introduction to nomenclature on vessels, piping and equipment. Foundation and structural considerations and standard piping details, plans and elevations. (10 hours per week)

D 252 Advanced Industrial Pipe Drafting (N)8 credit hours

Prerequisite: D 251 Industrial Pipe Drafting

Introduction to piping spool, shop and isometric drawings, definitions, dimensions, general notes and callouts. Preparation of a complete set of piping plans and elevations. (10 hours per week)

D 261 Project in Drafting (N) 4-8 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. This project will then be produced by the student in the Machine Shop.

DIESEL MECHANICS

DM 101 Diesel Engine Principles (R) 16 credit hours

The student becomes familiar with the construction, nomenclature, relationship of parts and principles of Diesel engines. A thorough study is made of the variations in design of the constructional features of Diesel engines and their components. Disassembly, inspection, reassembly and operation is included. (20 hours per week)

DM 102 Diesel Engine Maintenance I (R)16 credit hours

Prerequisite: DM 101 or consent of Instructor

The first course in a sequence of five Diesel engine maintenance courses designed to provide the student with actual overhaul lab experience on Diesel engines. Proper procedures in maintenance, inspection of parts, repairs and tests, analysis of malfunctions and efficiency of making repairs is given. (20 hours per week)



Drafting

DM 3 Diesel Engine Maintenance II (R)16 credit hours

Prerequisite: Consent of Instructor

The second course in a sequence of five Diesel engine maintenance courses designed to provide new experiences on different models of Diesel Engines. The student studies engines and all components. Theory, construction and operations of all components and systems provide practical experience in a laboratory situation. Shop operation and planning is given. (20 hours per week)

DM 201 Diesel Engine Maintenance III (R) 16 credit hours

Prerequisite: Consent of Instructor

Such overhaul operations are performed on Diesel engines so the student will gain a knowledge of the problems involved in troubleshooting procedures. He becomes familiar with testing procedures, methods of assembly and disassembly and operations. (20 hours per week)

DM 202 Diesel Engine Maintenance IV (R)16 credit hours

Prerequisite: Consent of Instructor

Shop practice is offered in the service of Diesel injector and fuel supply systems. Overhaul lab experience or Diesel engines relating to fuel injectors is covered. Design and layout of an engine base, engine instrument and control panels, and methods of assembly and techniques are covered. (20 hours per week)

DM 203 Diesel Engine Maintenance V16 credit hours

Prerequisite: consent of Instructor

The laboratory work offered in this course informs the student on such operating characteristics of Diesel engines as brake, horsepower, torque, fuel consumption and mechanical and thermal efficiencies. He becomes familiar with the use of planimeters, cylinder indicators, pyrometers, gage tester flowmeters, dynamometer, and other types of testing equipment through actually diagnosing and correcting problems found in Diesel engines. (20 hours per week)

DM 204 Special Problems (R)3 credit hours

This course provides opportunity for each student to engage in intensive study and research on specific topics, working under the direction of the Diesel Mechanic Instructor. Can be taken as an elective. (Hours arranged)

APPLIANCE AND REFRIGERATION MECHANICS

EM 100 Refrigeration & Air Conditioning (1A & 1B) (A)

Designed, through lecture and study assignments, to aid the student in assembling the basic and advanced fundamentals of the trade. It is fast moving, heavy study assignments and lecture in the study and related areas whereby the student is able to accomplish, in one quarter, what is normal to cover in three quarters of lecture.

EM 101 Advanced Refrigeration & Air Conditioning (IIA & IIB) (A)

Designed, through lab and shop job assignments, to develop the manipulative skills of the student sufficient for job entry. The student fabricates piping, solders, brazes, installs flares and sweat fittings, tests electrical circuits, controls, etc. Repairs existing equipment as well as dismantles, assembles, evacuates and charges systems with some of the latest testing devices of the trade.

HEAVY EQUIPMENT

EO 105 Heavy Equipment Operation I (R) 16 credit hours

Basic maintenance and servicing procedures, including preventive maintenance, safe operating practices, and operation of various heavy equipment machines. (20 hours per week)

EO 106 Heavy Equipment Operation II (R) 16 credit hours

Operation of heavy equipment, preventive maintenance, safe operating practices, grade stake observations, cuts and fills, profiles and stationing, and if possible, several visits to actual construction sites are made. (20 hours per week)

ELECTRONICS TECHNOLOGY

ET 101 Basic Electricity & 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 of 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, R) 16 credit hours

Prerequisite: ET 101 Basic Electricity & 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, R) 16 credit hours

Prerequisite: ET 102 Solid State Devices & 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, R) 4 credit hours

Prerequisite: ET 103 Applied Electronics, Layout & Fabrication

Basic electronic circuits and applications. Analysis of circuitry and equipment associated with amplifiers, oscillators, power supplies, radio transmitters, receivers, antennas and transmission lines. (4 hours per week)

ET 222 Communications Systems II (A, N, R) 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. (4 hours per week)

ET 223 Radio License Preparation I (N) 4 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. (4 hours per week)

ET 224 Radio License Preparation II (N) 4 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. (4 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, R) 8 credit hours

Prerequisite: ET 103 Applied Electronics, Layout & Fabrication

Alternating and direct current machines, single phase and three phase machines, motors, generators, and associated control and measurement methods. (10 hours per week)

ET 232 Electromechanical Devices II (N) 8 credit hours

Prerequisite: ET 231 Introduction to Electro-Mechanical Devices

A continuation of ET 231. Electromechanical Devices I,

direct current generators, induction, capacitor and universal motors, single-phase power transformer, three-phase power transformers and distribution transformers and three-phase wound rotor motors.

**ET 233 Electromechanical
Devices III (N) 8 credit hours**

Prerequisite: ET 232 Electromechanical
Devices II

A continuation of ET 232. These phase motors, alternators, synchronization, frequency and phase conversion, self synchronous control and electronic speed control. (10 hours per week)

ET 234 Servo and Syncro System (N) 4 credit hours

Principles of servo and syncromechanisms in controlling the direction and amount of rotation of an electric motor. The transmission of data from one location to another. (4 hours per week)

ET 235 Control Systems (N) 4 credit hours

Electronic control systems used in industry, automatic and manual systems employing such devices as switches, relays, contactors, transformers, breakers, protective units and others. (4 hours per week)

**ET 240 Introduction to Instruments
& Measurements (A, N, R) 16 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 oscilloscopes. 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
Troubleshooting (A, N, R) 12 credit hours**

Trouble analysis and proper troubleshooting procedures. Electronic equipment diagnosis for alignment and defective components using systematic procedures. (Lecture hours and laboratory 15 hours)

**ET 250 Introduction to Digital
Electronics (A, N, R) 16 credit hours**

Prerequisite: ET 103 Applied Electronics,
Layout & 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 251 Computer Technology (R) 16 credit hours

Prerequisite: Consent of the Instructor

Use of the digital computer to solve industrial problems, such as logic, sequence failure, shift register inoperative and digital counter that has malfunctioned. Practical experience in troubleshooting a small commercial computer. Associated test equipment is utilized in isolating malfunctions. (20 hours per week)

**ET 252 Computer Peripheral and
Complete Systems Analysis (R) 16 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. (20 hours per week)

NOTE: Credit hours for the Electronic Digital Technology and Industrial Electronics Technology Programs will be adjusted when courses are offered in the evening classes.

ET 260 Industrial Logic Systems (R) 16 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. (20 hours per week)

**ET 261 Control Circuits for
Industrial Application (R) 16 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 contactors, 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 servomechanisms, logic circuit application as associated in industrial use. (20 hours per week)

ET 262 Assembly Line Techniques (R) 16 credit hours

Prerequisite: Consent of the Instructor

The applications of electronics on an assembly line operation. Multiplier, D-A and A-D conversions, thyatron controls, motor translators, delay lines, real time clocks, variable clocks, solenoid drivers and controls. Photo-electric controls and special counters associated with industrial applications. The use of AC and DC motor controls on the assembly application. (20 hours per week)



Electronics

HYDRAULIC MECHANICS

FP 100 Hydraulic Fundamentals (R)16 credit hours

An introductory course in hydraulics and its many uses related to industrial fluid power, basic components of hydraulic systems, formulas and A.S.A. symbols. (20 hours per week)

FP 102 Hydraulic Generators (Pumps and Motors) (R)16 credit hours

Prerequisite: FP 100 or consent of Instructor

Introduction to hydraulic pumps, gears, piston and van types. Installation maintenance, classification of pumps, and volume and pressure requirements. (20 hours per week)

FP 103 Industrial Hydraulic Controls and Circuits (R)16 credit hours

Combination lecture-laboratory course designed to acquaint students with pressure, volume and directional valves both manual and electrically-operated controls.

FP 104 Hydraulic Generators (Pumps and Motors) (R)4 credit hours

The purpose of this course is to provide the student with basic uses of hydraulics relating to industrial applications. Offered to day and evening students as an elective. (5 hours per week)

FP 200 Fundamentals of Pneumatics (R)16 credit hours

Air compressors, regulators, controls, valves and air cylinders are disassembled, repaired and reassembled and tested. (20 hours per week)

FP 201 Principles of Instrumentation (R)16 credit hours

Instrument and gauges, flowmeters and measuring devices are disassembled, repaired, calibrated and tested for accuracy. (20 hours per week)

FP 202 Fluidics (R)16 credit hours

Basic introduction to fluidics—glossary of terms for fluidics. (20 hours per week)

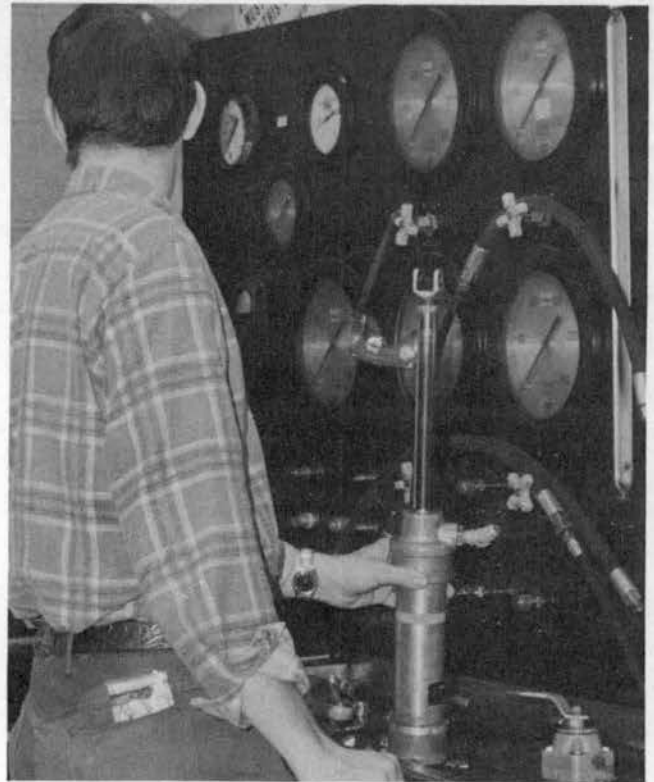
FP 203 Fundamentals of Hydraulics and Pneumatics (R)3 credit hours

The basic theories of hydraulics and pneumatic systems. Combinations of various circuits. Basic designs and functions of circuits and motors, controls, electrohydraulic servomechanisms, plumbing filtration, accumulators, and reservoirs. Offered to day and evening students as an elective. (4 hours per week)

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. (16 hours per week)



Hydraulics

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 half-tones, preparation of the printing plate and basic press practices, laying out and stripping the flat. Emphasis on half-tone photography, laying out and stripping the flat, plate making; basic press operations and bindery operations. (16 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. (16 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 offset 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 and 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. (16 hours per week)

GA 210 Advanced Lithographic Operations & Computerized Typesetting (A) ... 12 credit hours

Advanced training of skills, including color separation and computerized typesetting. (16 hours per week)

INVENTORY CONTROL

IC 110 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.

IC 120 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.

IC 130 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 large corporate complications.

COMMERCIAL INDUSTRIAL ELECTRICITY

IE 101 Electrical Instruments and Measurements (R) 16 credit hours

The work in this course is confined to a study of basic electricity, Ohm's Law, Kirchoff's Law, electrical power and energy and electrical measurement. To insure a firm foundation in industrial electricity, typical job requirements are studied through laboratory experiments arranged in logical order, progressing from simple to more complex devices and circuits. Safety procedures are followed as practical application is stressed. (20 hours per week)

IE 102 Industrial Electronics (R) 16 credit hours

This course is designed to provide the principle concepts of electronic components and circuits. Principles of vacuum tubes and transistors, tuned circuits and basic circuits for power supplies. The use of test devices and measuring instruments place emphasis on practical application. Application in the control of industrial electronic equipment associated with troubleshooting procedures is taught. Safety procedures are followed. (20 hours per week)



Electronics

IE 103 Electrical Installation Planning and Codes (R) 16 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. (20 hours per week)

IE 104 National Electric Code (R) 3 credit hours

A course especially designed for students desiring an elective or upgrading on codes and regulations (3 hours per week)

IE 105 Electrical Trades Blue Print Reading (R) 3 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. (3 hours per week)

IE 201 Alternating Current Machines (R) 16 credit hours

The work in this course is confined to a study of mechanical-electrical power devices. Alternators, single-phase mo-



Electronics

tors and three-phase motors, transformers, voltage regulators, generators, as well as the auxiliary control equipment necessary for these devices are studied. Installation and maintenance requirements for alternating current power equipment are given. (20 hours per week)

IE 202 Electrical Power Systems (R)16 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. (20 hours per week)

IE 203 Operating Problem Analysis (R) 16 credit hours

A study is made of the proper procedure to be used in testing for troubles of electrical systems and their correction. The methods used in setting up and supervising a program of preventive maintenance, troubleshooting, equipment receiving, data recording, and cost accounting are also studied. (20 hours per week)

MINERAL INDUSTRY TECHNOLOGY

MI 101 Mining (History, Romance, Magnitude, Future (R)1 credit hour

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. (One hour per week)

MI 102 Mining (R)3 credit hours

Continuation of MI 101. (3 lecture hours per week)

MI 103 Mining Drafting (R)3 credit hours

Prerequisite: Drafting I

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 lab 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. (2 hours lecture, 3 hours lab 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) 8 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. (2 hours lecture, 4 hours lab 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)8 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. (10 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. (3 hours lecture, 3 hour lab 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)



Mining

MACHINE SHOP

MS 100 Basic Machine Tool Operation and Theory (N) 16 credit hours

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

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)

BUSINESS MACHINE TECHNOLOGY

OM 100A Introduction to Royal Typewriters (A)12 credit hours

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. (15 hours per week)

**OM 100B Introduction to Smith-Corona
250 Typewriters (A) 12 credit hours**

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. (15 hours per week)

**OM 100C Introduction to Adler
Electric Typewriters (A) 12 credit hours**

Complete disassembly and reassembly of Adler electric typewriters, using factory adjustments; following proper sequence. Accustoms the students with proper disassembly and reassembly procedures. Familiarizes students with individual parts and their operation and function with other mechanisms. Theory of typewriter principles. (15 hours per week)

OM 101 Typewriter Troubleshooting (A) 4 credit hours

Gives the students the language used by manufacturers and service technicians. (4 hours per week)

**OM 102 Business Machine
Terminology (A) 4 credit hours**

Gives the student an understanding of the language used in industry to special tools, adjustments, and parts. (4 hours per week)

OM 103 Salesmanship (A) 4 credit hours

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. (4 hours per week)

**OM 200 Introduction to
Electric Adders (A) 4 credit hours**

Complete disassembly and reassembly of adding machines, 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 adding machine principles. (15 hours per week)

**OM 201 Introduction to
Calculators (A) 12 credit hours**

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. (15 hours per week)

**OM 202 Introduction to
Spirit Duplicators (A) 12 credit hours**

Complete disassembly and reassembly of spirit duplicators, 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 duplicators principles. (15 hours per week)



Business Machines

OM 203 Product Testing (A) 4 credit hours

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 a check of his work. (6 hours per week)

**OM 204 Adder and Calculator
Troubleshooting (A) 12 credit hours**

Gives students a knowledge of how to locate problems faster and to correct them efficiently. Shows students how to distinguish between different problems. (15 hours per week)

**OM 205 Business Machine
Business Management (A) 3 credit hours**

This course is designed to give the student a better overall understanding of the business machine industry. How shops are set up, how better to serve your customers, and how different areas and locals will vary but still produce the desired effects. Field trips are included. (3 hours per week)

PLUMBING

PL 111 Plumbing I (R) 16 credit hours

This initial course will acquaint the student with shop procedures and the safety requirements needed in the Plumbing Trade. The Plumbing Code will be used extensively throughout the quarter. Safety as well as theory will be applied. Shop work will include the use and operation of thread-cutting equipment. Calculation and assembly of standard pipe measurement will be studied in detail. Instruction will be conducted by lecture, demonstration and shop work. (20 hours per week)

PL 112 Plumbing II (R) 16 credit hours

This course is a continuation of Plumbing I. Shop procedures and safety will be stressed even more this quarter. The Plumbing Code will be used in detail throughout this quarter. Various jobs will be assigned each student during the quarter. Shop work will include the use and operation of thread-cutting equipment. Calculation and assembly of standard pipe measurements will be studied in detail. Instruction will be conducted by lecture, demonstration and shop work. (20 hours per week)



Plumbing

PL 113 Plumbing III (R) 16 credit hours

This course is the last in the series of the Plumbing Program. The Plumbing Code will be studied in detail this quarter. Students will be assigned projects involving the use of blueprints and/or specifications. Each student will complete assigned projects with a minimum amount of instruction. Shop work will include the use and operation of thread-cutting equipment. Calculation and assembly of standard pipe measurement will be studied in detail. Instruction will be conducted by lecture, demonstration and shop work. (20 hours per week)

COMMERCIAL PHOTOGRAPHY

PT 101 Basic Photography (A) 4 credit hours

Prerequisites: English Elective, Basic Drawing, Basic Design, Graphics, or the consent of the instructor

The camera, reflex, 8mm, view cameras. Basic darkroom procedures and techniques; composition and critiques. Emphasis will be put on darkroom procedures. (4 hours per week)

PT 102 Intermediate Photography (A) 4 credit hours

Prerequisites: Basic Photography, English Elective, Basic Drawing, Basic Design, Graphics, or consent of instructor

A continuation of PT 101. The camera as a reporting tool; reflex, 35mm, view camera as a communicative device. Darkroom techniques, printing, developing, film cropping, composition, critiques. (3 hours per week)

PT 103 Advanced Photography (A) 4 credit hours

Prerequisites: English Elective, Basic Photography, Basic Drawing, Basic Design or consent of the instructor

A continuation of PT 101 and PT 102. The camera as a tool; the physics of height and the chemistry of photographic emulsion will be discussed in detail. (3 hours per week)

PT 107 History of Photography I (A) 4 credit hours

Will cover the early photographic process, and camera. (5 hours per week)

PT 108 History of Photography II (A) 4 credit hours

Will cover the camera as it has been modified—past to present. (5 hours per week)

PT 109 The Camera (A) 4 credit hours

Students should have a knowledge of the different types of cameras in use today. The course will aid him in understanding all types of cameras; from the Brownie to the more complex systems. (5 hours per week)



Photography

PT 200 Photography and Art (A)3 credit hours

Study of photography as an art and how it relates to the other arts. Darkroom procedures will be based on distortions, photographic images, photograms and photo-sculptures. (3 hours per week)

PT 201 Photography and Art (A)3 credit hours

Study of photography as an art form. The technical and creative problems involved in producing photographic images will be discussed in detail. (3 hours per week)

PT 220 Photojournalism I (A) 3 credit hours

An introduction to journalistic photography. Newspaper, magazine and motion photography will be discussed. (3 hours per week)

PT 222 Color Photography I (A)8 credit hours

An introduction to color photography. Will cover the reversal film, the color negative and darkroom procedures. (12 hours per week)

PT 223 Color Photography II (A) 4 credit hours

A continuation of PT 222. The course will cover the color negative, the print, and darkroom color techniques, plus different methods of copying material with color film. (5 hours per week)

**PT 224 Introduction to Motion
Photography (A)4 credit hours**

Introduction to motion photography will cover the different types of motion cameras, and film involved in producing motion pictures. (5 hours per week)

**PT 225 Motion Photography
and the Media (A) 4 credit hours**

How motion photography and the mass media work together as a communicative device. (5 hours per week)

PT 226 Editing Motion Photography (A) 4 credit hours

The course will prepare the student in the area of telling stories on motion pictures. (5 hours per week)

PT 245 Film Making (A)4 credit hours

The course will enable the student to have a true knowledge of how educational movies are made for reproduction and presentation. (5 hours per week)

Prerequisite for PT 221-226: Students must have the consent of the instructor in order to enroll in these.

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**

Prerequisite: QA 101

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 100

Provides a background in industrial nondestructive testing. Emphasis is given to the methods used to predict 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 100

A study of advanced inspection methods and principles peculiar to the electronics industry. (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)

RADIO AND TELEVISION SERVICE

RA 130 Advanced Television Servicing (N) 16 credit hours

Practical application of troubleshooting techniques including methodical analysis of problems in black and white and color televisions. Bugged TV's will serve as test vehicles to develop speed in troubleshooting—utilizing test equipment found in any commercial television shop. (20 hours per week)

RA 131 Technical Project (N) 1-12 credit hours

A practical demonstration of the student's ingenuity in the application of principles of radio and television. Projects in the realm of building test equipment, radio and television receivers, design of special test equipment for particular areas and/or construction of a television camera.

SPORTS CRAFTS AND SPECIALTY AREA MECHANICS

SE 111 Basic Principles of Engines, Carburetion & Ignition (N) 16 credit hours

Principles, design, construction, servicing, and operation of small engines (both two-cycle and four-cycle), theory and practical applications. Introduction to fundamentals of electricity, magnets, ignition, battery ignition, construction, operation, and storage battery systems of motorcycles, snowmobiles, chainsaws, motorscooters, go-carts, and outboard motors. (20 hours per week)

SE 112 Engine Tune-Up & Rebuilding (N) 16 credit hours

Theory of operation and diagnosis of service procedures on carburetors and ignition of small engines. Troubleshooting, construction and rebuilding engines, valve refacing and rod and cap reconditioning. (20 hours per week)

SE 113 Transmissions, Clutches, Final Drives & Brakes (N) 16 credit hours

Construction, operation, and service procedures on transmissions, clutches, final drives, and brakes used on motorscooters, go-carts, and motor boats, both inboard and outboard. Three-speed, 4-speed, and 5-speed cycle transmissions, forward and reverse scooter units, clutch units, and torque sensing clutches, drives, forward and reverse units for boats and snow-mobiles.

Included also is a section on Business and Management for people engaged in the Small Engine-Sport Crafts business. Business Management will cover responsibilities, personnel, facilities, equipment, working conditions, and relations between the business, community, and society. (20 hours per week)



Radio and Television

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 slope chaining; 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 measurements 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 & 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. (5 hours lecture per week)

SU 216 Legal Aspects of Surveying (R)4 credit hours

The applied laws relating to surveying in general and the surveying of real property boundaries in specific are covered. Searching, writing and filing of deeds are covered. (4 hours lecture per week)

SU 223 Error Analysis (R)4 credit hours

Practical and theoretical considerations of errors. Elementary statistics. (3 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)

TECHNICAL ILLUSTRATION

TI 111 Freehand Sketching (A)4 credit hours

Freehand drawing covering the different systems of making a three-dimensional drawing. Different media are employed and basic techniques are studied. (8 hours per week)

TI 112 Isometric, Dimetric, and Trimetric Drawing (A)3 credit hours

Instrument drawing of three-dimensional axonometric drawings showing objects at different angles with the plane projection. (6 hours per week)

TI 211 Rendering I (A)4 credit hours

This course provides fundamental training necessary to produce line and continuous tone drawings through use of graphic pencil, carbon pencil, litho pencil, as well as various types of pens and ink. (9 hours per week)



Surveying

TI 214 Airbrush Technique I (A)3 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. (hours arranged)

VENDING MACHINE TECHNOLOGY

VM 100 Vending Machine I (A)16 credit hours

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 120 Vending Machine II (A)16 credit hours

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 130 Vending Machine III (A)16 credit hours

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 140 Vending Machine IV (A)16 credit hours

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)



Vending Machines

WELDING AND FABRICATION

WE 111 Gas Welding (A, N, R)16 credit hours

Beginning welding course for welding and fabrication majors. The use of oxyacetylene equipment to perform butt, lap and fillet welds with mild steel plate. Introduction to filler rod, brazing, cast iron welding and silver soldering. Practical laboratory experience and actual industrial application. (20 hours per week)

WE 112 Arc Welding (A, N, R)16 credit hours

Prerequisite: WE 111 Gas Welding

Safety, electrode selection and power supplies. Operations to be performed are butt, lap and fillet welds using straight and reverse polarity on mild steel plate, cast iron welding, hand surfacing and carbon arc cutting. Practical laboratory experience and actual industrial application. (20 hours per week)

**WE 113 Arc Welding
Advanced (A, N, R)16 credit hours**

Prerequisite: WE 112 Arc Welding

An extension of the skills acquired in WE 112, leading to American Welding Society Code 9 Certification. Special applications based on welding techniques. Related work in mathematics. Blueprint reading, special projects and American Welding Society testing procedures. (20 hours per week)

**WE 204 Metal Inert-Gas and Tungsten
Inert-Gas Welding (A, N, R)16 credit hours**

Prerequisite: All First Year Courses

Specialized techniques involving MIG and TIG welding. The welding of mild-steel, aluminum and stainless steel sheet and plate. Procedures for welding steel, stainless steel, aluminum pipe and other exotic metals. Testing of welded joints. (20 hours per week)

WE 205 Ornamental Iron Work (A, N) ... 16 credit hours

Prerequisite: All First Year Courses

Ornamental iron designs, ornamental iron posts, railings, fencing, various guards, and wrought iron furniture. Layout, scroll bending, bill of materials and time estimating. Practical laboratory experience and actual industrial application. (20 hours per week)

**WE 206 Pipe Welding and
Fabrication (A, N, R)16 credit hours**

Prerequisite: All First Year Courses

Flame cutting with oxy-acetylene torch using both hand and machine methods. Joint preparation and layout, all position welding using E 6010 and E 7018 electrodes. Practical laboratory experience and actual industrial application. (20 hours per week)



Welding

WE 207 Layout and Development—(RED ROCKS CAMPUS ONLY) 16 credit hours

Intersections of metal surfaces and development of metal surfaces of various kinds from flat patterns and templates. (20 hours per week)

COOPERATIVE WORK EXPERIENCE

***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

299 Independent Study 1-12 credit hours

Independent study is available in each of the major areas within the Division of Industrial Occupations. 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 faculty member. Prerequisite for enrollment is permission of the instructor and the Division Director. The number of quarter hours of credit (1-12) to be awarded for successful completion of the course will be determined by the Division Director. (Max. of 12 credits will be allowed in any program)



Heavy Equipment

APPRENTICESHIP ENTRY

The Community College of Denver will endeavor to fulfill any need for workers in industrial occupations. To fulfill job-entry requirements, the prospective employee may enroll in pre-apprentice training. Training will include both related theory and the development of skills in a shop or laboratory. This acquisition of knowledge and development of skills may result in the student becoming eligible for apprenticeship training. A student may be granted hour-for-hour credit or partial credit for his pre-apprenticeship training toward his apprenticeship requirement when he becomes indentured. All such pre-apprentice occupational programs are initiated and will be conducted in conjunction with advisory groups from industrial management and advisory groups representing organized labor. The first such pre-apprentice training to be initiated by the Community College of Denver will be a pre-apprentice training program in the masonry trades.

NOTE: Part-time students may enroll in the above Industrial Occupations courses based upon the following ratio:
4 cr. hrs./5 contact hrs.
8 cr. hrs./10 contact hrs.
12 cr. hrs./15 contact hrs.

CENTER FOR
HEARING IMPAIRED

**CENTER FOR
HEARING IMPAIRED**

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INTERPRETER/TUTOR

SIX-QUARTER PROGRAM

FIRST YEAR

	Cr. Hrs.
First Quarter	
EG 151 Beginning Manual Com.	3
EG 151L Manual Com. Lab	0
EG 131 Bus. Com.	3
PY 111 Gen. Psych.	3
Specialty Area ¹	6-7
	15-16

	Cr. Hrs.
Second Quarter	
EG 152 Intermediate Manual Com.	3
EG 152L Manual Com. Lab	0
EG 111 Eng. Comp.	3
PY 221 Devel. Psychology	3
Specialty Area	6-7
	15-16

	Cr. Hrs.
Third Quarter	
EG 153 Advanced Manual Com.	3
PY 222 Devel. Psychology	3
HI 100 Techniques of Tutoring	3
Specialty Area	6-7
	15-16

SECOND YEAR

	Cr. Hrs.
Fourth Quarter	
EG 251 Spec. Manual Com.	3
EG 201 Survey of Com.	3
PY 123 Child Guidance Techniques	3
Specialty Area	6-7
	15-16

	Cr. Hrs.
Fifth Quarter	
EG 252 Supervised Practicum in Intg. I	3
PY 220 Educ. Psych.	3
LT 200 Audio-Visual Graphics	4
Specialty Area	6-7
	16-17

	Cr. Hrs.
Sixth Quarter	
EG 253 Supervised Practicum in Intg. II	6
PY 200 Psych. of the Deaf	3
Specialty Area	6-7
	15-16

*Students majoring in Interpreting will be required to participate in an additional 3 hours per week of laboratory work.

¹The specialty area may be any specific occupational area chosen by the student-in-training.

EMPLOYMENT OPPORTUNITIES: Interpreter/Tutors are presently in critical demand at public schools, state training institutions for the deaf, and colleges implementing programs in which deaf students are integrated with the regular student body. As the program for hearing-impaired students grows on the three campuses of the Community College of Denver, so will the need for additional qualified interpreter/tutors. Add to this the emergence of new post-secondary programs for the deaf in the current year, to be located in several parts of the country, and the picture of employment opportunities for interpreter/tutors appears very bright.

TOTAL CREDIT HOURS: 91-97

THE CENTER FOR THE HEARING IMPAIRED

The Community College of Denver inaugurated, in 1968, a two-year pilot program in which deaf students pursued their studies in the same classrooms with the hearing. That program proved to be successful, and the first degrees and certificates were awarded as part of the total college graduation ceremonies of June, 1970.

The Center for the Hearing Impaired is established upon the concept that the deaf can best be educated in essentially the same environment with the hearing, since their adult lives must be spent in a society of hearing peers. In conjunction with this integrated concept, the College has adopted the "total communications" approach in dealing with the deaf, because it employs oral, manual, auditory, and multi-media techniques to suit the backgrounds and physical requirements of almost every type of hearing-impaired candidate.

FUNCTIONS AND SUPPORT SERVICES OF THE CENTER

The Center for the Hearing Impaired is located on the North Campus, but it also provides some of the following services for the deaf on all three campuses of the College.

Preparatory Program (N)

To reinforce basic skills, ease the adjustment to a mixed classroom, and provide appropriate orientation to college life, the Center operates a preparatory program during the initial quarters of a candidate's enrollment. Special instructors certified in deaf education teach background subjects while the student is concurrently enrolled in selected integrated classes.

Interpreters (A-N-R)

Though increasing numbers of faculty at the Community College of Denver are preparing themselves for the "total communication" concept through in-service training, integrated lecture courses are staffed by both college instructors and a professional interpreter/tutor. Experience has shown that, irrespective of their personal communication preferences, all deaf students benefit from the service of the interpreter/tutor.

Special Counseling, Advising and Testing Service (N)

A staff of counselors and related service personnel trained to deal specifically with the problems of the deaf is retained to provide academic and personal counseling, psychological and vocational testing, and referral service for those with medical problems or multiple handicaps.

Tutorial Assistance (A-N-R)

Tutorial laboratories are scheduled at various times during the day for those who wish to avail themselves of this individualized assistance. These laboratories are staffed with professional people trained in tutorial work covering a broad spectrum of collegiate fields.

Placement Service (N)

The Center works with the College Placement Offices and retains a vocational specialist at the North Campus to help locate appropriate employment for its graduates in the Colorado area. Out-of-state students are assisted by vocational rehabilitation counselors in their respective states.

Notetakers (A-N-R)

At the recommendation of the instructor, the Center will provide a notetaker to record in outline form the essential elements of the classroom instruction. These notes are then duplicated and distributed to the hearing-impaired members of the class as a further aid to their study.

PROGRAMS OPEN TO HEARING-IMPAIRED STUDENTS

Thirty-seven of the occupational programs listed in this catalog are available for the deaf students, with additional programs being developed. For a current listing of these specific occupational areas open to the deaf, candidates should write to:

Director, Center for the Hearing Impaired
Community College of Denver, North Campus
1001 East 62nd Avenue
Denver, Colorado 80216

DETERMINATION OF THE CANDIDATE'S PROGRAM OF STUDIES

Hearing-impaired students will prepare their schedules in cooperation with an assigned counselor at the North Campus. These students are expected to complete the same recommended curriculum in their chosen career majors as all other degree or certificate candidates of the College. For example, a student desiring to qualify for an Associate Degree in Accounting must complete all the courses prescribed for the accounting curriculum listed on pages and of this catalog. However, a significant portion of the first- and second-quarter schedules of students sponsored by the Center will be devoted to courses in the preparatory program described above. *Therefore, deaf students should allow from three to six months longer to complete a program than the time suggested in this catalog.*

Except for the preparatory program, there is no distinction made for classes open to the hearing impaired. To illustrate, DP 111 Principles to Data Processing, as described elsewhere in the catalog, bears the same course content, quarter credit hours, and laboratory requirements for every student enrolled in that course. However, preparatory classes for the deaf are listed in each quarter schedule at the North Campus with the suffix H to indicate that the instructor in that room will be using the simultaneous method (both oral and manual) and that the enrollment will be restricted to deaf students. In every other respect these courses are essentially the same as those without the suffix. For example, M 100 Developmental Mathematics has the same objectives as M 100 described elsewhere in the catalog, but it is taught by a staff member professionally certified in deaf education.

SUPPORT SERVICE COSTS FOR THE HEARING IMPAIRED

Tuition and fees for all students at the Community College of Denver are listed in the General Information section. However, it can be readily seen from the comprehensive support services described above that a sizeable staff of professional personnel must be retained to implement the integrated concepts for the special benefit of hearing-impaired candidates. While the Colorado State Board for Community Colleges and Occupational Education funds a significant portion of the cost, it is necessary to supplement this revenue with a nominal support service charge of \$220 per quarter for each student.

HOUSING

Because the Community College of Denver was established primarily to serve local residents in the Denver area, housing facilities are not provided. Applicants seeking admission from outside the city accept the responsibility of arranging their own accommodations. A registry of appropriate rooming and boarding facilities is maintained in the Center for those who wish referral assistance in locating suitable quarters.

FINANCIAL AID

Candidates who apply to the Center are usually qualified for financial assistance from their own state offices for vocational rehabilitation. Students considering enrollment in the program at the Community College of Denver should contact their own rehabilitation counselors to determine the extent of their individual eligibility. Depending upon the circumstances in each applicant's case, the counselor will issue authorization papers to the Center prior to the beginning of each quarter, covering the costs for that quarter. It is the responsibility of the client to see that these authorization papers reach the Center no later than three weeks before the opening date of the quarter.

PROCEDURES FOR ADMISSION

Students interested in applying for admission to the Community College of Denver with support service from the Center for the Hearing Impaired should write for full information and application forms to:

Director, Center for the Hearing Impaired
Community College of Denver, North Campus
1001 East 62nd Avenue
Denver, Colorado 80216

ADVISORY COMMITTEE FOR THE CENTER FOR THE HEARING IMPAIRED

Dr. Parnell McLaughlin	State Department of Social Services
Director	Division of Rehabilitation Social Services Building Denver, Colorado
Mr. Ralph P. Crawford	Mountain Bell Telephone Company
Systems Staff Supervisor	Room 760, 930 - 13th Street Denver, Colorado
Mr. Lee Brooks	Pupil Personnel Unit
Assistant Director	Colorado Department of Education 408 State Office Building Denver, Colorado
Miss Peggy Chambers	Denver Public Schools
Coordinator for Hearing and Visual Handicaps	414 - 14th Street Denver, Colorado
Dr. Armin Turechek	Colorado School for the Deaf and Blind
Superintendent	Kiowa and Institute Streets Colorado Springs, Colorado
Mrs. Carol Sponable	Colorado Registry of Interpreters for the Deaf
Secretary	740 Birch Street Denver, Colorado

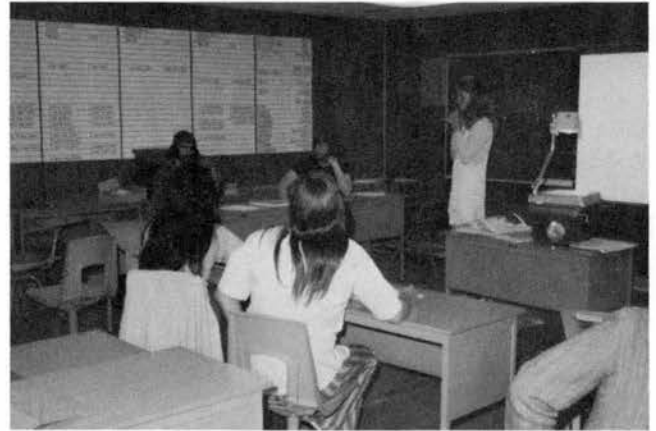
THE CENTER FOR THE HEARING IMPAIRED

Interpreter/Tutor Degree Program

In addition to its service functions, the Center for the Hearing Impaired offers a unique instructional program for the training of interpreter/tutors for the deaf. This program leads to an Associate Degree in Interpreter/Tutoring as an occupational career objective, with credits applicable to other occupational programs.

This program is the only one of its kind in the United States, with candidates employable in a variety of professional positions at state schools for the deaf, public school special education departments, and colleges with integrated classes for the hearing and the deaf.

Students interested in learning more about this new occupational field may write to the Director, Center for the Hearing Impaired, for further information. A summary of the curriculum appears on the following page. Course descriptions will be found elsewhere in the catalog.



Hearing Impaired

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.

HEARING IMPAIRED

HI 091 Tutorial Assistance (N) 0 credit hours

Special tutorial laboratory for hearing impaired students who need instruction, drill, reinforcement, etc., in a particular subject area. Candidates are admitted by permission only. Tutors are appointed to work individually or in small groups with students having a common tutorial need.

HI 100 Techniques of Tutoring (N) 3 credit hours

Supervised tutoring sessions with deaf students, with emphasis on meeting the hearing impaired students' comprehension level together with translating new vocabulary into the understandable modality of the language of signs. (5 hours per week)



Hearing Impaired



Interpreter-Tutor

ADMINISTRATION AND
FACULTY LISTING

GENERAL ADMINISTRATION

MULTI-CAMPUS

Leland B. Luchsinger	President
G. Owen Smith	Assistant to the President
Thomas R. Lutes	Director of Business Affairs
Anthony D. Calabro	Director, MDTA Program
Kenneth H. Hutchison	Director, Personnel
Mary M. Buerger	Public Information Officer
Wayne R. Moore	Acting Director, Purchasing
Nick Rossi	Director, Special Services

ADMINISTRATIVE PERSONNEL

MULTI-CAMPUS

CAMPUS DIRECTORS

Donald H. Godbold	Campus Director (Auraria)
John H. Swenson	Campus Director (North)
Joseph K. Bailey	Campus Director (Red Rocks)

DEANS, GENERAL STUDIES

To be appointed	Dean, General Studies (Auraria)
Martin Van Dyke	Dean, General Studies (North)
William M. Boast	Dean, General Studies (Red Rocks)

DEANS, OCCUPATIONAL STUDIES

Donald E. Goodwin	Dean, Occupational Studies (Auraria)
Donald R. Mankenberg	Dean, Occupational Studies (North)
Donald G. Lindahl	Dean, Occupational Studies (Red Rocks)

DEANS, STUDENT SERVICES

George F. Yee	Dean, Student Services (Auraria)
Carl R. Wahlberg, Jr.	Dean, Student Services (North)
Richard H. Post	Dean, Student Services (Red Rocks)

CAMPUS BUSINESS MANAGERS

Harold Tibbs Director, Business Services (Auraria)
E. Theodore Archuleta Director, Business Services (North)
Charles Green Director, Business Services (Red Rocks)

MDTA

Frank Rodriquez Coordinator, MDTA (Auraria)
Gene Martinelli MDTA Employment Service Counselor
(North)
Gilbert L. Yocum Coordinator Program Development
(Skill Center) (North)
Harlan Porter Coordinator, MDTA Skill Center
(Red Rocks)

COMMUNITY REPRESENTATIVE

Sara Collier Community Services
Coordinator (Auraria)
Dave Braman Community Services
Coordinator (North)

COMPUTER CENTER

Joe Gomez Director, Computer Center
William E. Starr Assistant, Data Processing

DIVISION DIRECTORS AND ASSOCIATES

MULTI-CAMPUS

BUSINESS AND MANAGEMENT OCCUPATIONS

Joseph Kossik Division Director (Auraria)
Donald W. Archer Division Director (North)
Howard R. Davis Division Director (Red Rocks)

COMMUNICATION AND ARTS DIVISION

John Jaramillo Division Director (Auraria)
Dean E. McDonald Division Director (North)
Thomas M. Jenkins Division Director (Red Rocks)

COMMUNITY AND PERSONAL SERVICE OCCUPATIONS

Glenda Lyle Lead Instructor (Auraria)
Gary J. Walker Division Director (North)
Jo Elen K. Zgut Division Director (Red Rocks)

COUNSELING

Gerald Ulrich Division Director (Auraria)
Kenneth B. Ashcraft Division Director (North)
Donald F. Carson Division Director (Red Rocks)

HEALTH OCCUPATIONS

*Audrey Jones Division Director (Auraria)
Audrey Jones Division Director (North)
Janice Smith Coordinator (Auraria)

CENTER FOR THE HEARING IMPAIRED

Theodore S. Guttadore Division Director (North)

INDUSTRIAL OCCUPATIONS

Loren Belker Division Director (Auraria)
Ralph A. Duncan Division Director (North)
Clarence A. Feister Division Director (Red Rocks)

LEARNING MATERIALS CENTER

*Vivian Brockman Division Director (Auraria)
Vivian Brockman Division Director (North)
Muriel Woods Division Director (Red Rocks)
Anthony Dedrick Librarian (Auraria)
Mary O'Donnell Coordinator (Auraria)
Clark C. Wong Assistant Director (North)
Betty A. Robinson Librarian (North)
Suzanne Sexty Librarian (North)
Alice Main Librarian Associate (North)
Robert Berg Coordinator, Audio-Visual (Red Rocks)
Janet Welsh Librarian Technician (Red Rocks)

SCIENCE AND MATHEMATICS

Maxine Foreman Division Director (Auraria)
Robert R. Evans Division Director (North)
H. Rex Craig Division Director (Red Rocks)

SOCIAL SCIENCE

Frank Robinson Division Director (Auraria)
Paul G. Graves Division Director (North)
David P. Nelson Division Director (Red Rocks)

*Supervisory affiliate with the Auraria Campus

STUDENT SERVICES

MULTI-CAMPUS

DEANS, STUDENT SERVICES

George F. Yee Dean, Student Services (Auraria)
Carl Wahlberg Dean, Student Services (North)
Richard H. Post Dean, Student Services (Red Rocks)

ADMISSIONS AND RECORDS

Waymond Tinsley Registrar (Auraria)
Richard C. Lynch Registrar (North)
James L. Sullivan Registrar (Red Rocks)
To be appointed Assistant to Registrar (Auraria)
Mark M. Boyko Assistant to Registrar (North)
V. Lynn Simpson Assistant to Registrar (Red Rocks)

REGISTRARS

BOOKSTORES

Rayma Haas Bookstore Manager (Auraria)
Paulette J. Hessel Assistant Manager, Bookstore (North)
Katheryn L. Owens Assistant Manager, Bookstore

COUNSELING

Gerald Ulrich	Division Director (Auraria)
Kenneth B. Ashcraft	Division Director (North)
Donald F. Carson	Division Director (Red Rocks)
Ottawa Harris	Counselor (Auraria)
Ed Martinez	Counselor (Auraria)
Fernie B. Moore	Counselor (Auraria)
Judy Dysart	Counselor, MDTA (Auraria)
Loretta Hinds	Counselor, Area Vocational Guidance (Auraria)
Robert Hoffman	Counselor, Testing (Auraria)
Julia Cisco	Counseling Associate (Auraria)
Melinda Rilev	Counseling Associate (Auraria)
Louise Schoof	Counseling Associate (Auraria)
Ken Gerdine	Counseling Associate (Auraria)
Charles D. Epperson	Counselor, Area Vocational Guidance (North)
Dianne M. Aigaki	Counselor (North)
Morrie G. Albright	Counselor (North)
Corolin Balunas	Counselor (North)
Alan Carson	Counselor (North)
Polly S. Holoubek	Counselor (North)
Kenneth A. Johnson	Counselor (North)
Edith O. Kochenour	Counselor (North)
M. Tom Metz	Counselor (North)
Martha Chance	Counselor, Area Vocational Guidance ,Red Rocks)
Daniel Anderson	Counselor (Red Rocks)
Annette Van Berckelaer	Counselor (Red Rocks)
Virginia L. Carrillo	Counselor (Red Rocks)
Kent Hodgson	Counselor (Red Rocks)
Judy Harrell	Counselor Associate (Red Rocks)
Nicanor Ulibarri	Counselor Associate (Red Rocks)

FINANCIAL AID

Russ Simpson	Coordinator (Auraria)
Ronald D. Thornton	Coordinator (North)
Robert L. Zamarripa	Coordinator (Red Rocks)

NYC, PROJECT II

Joyce Parks	NYC, Project II (Auraria)
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PLACEMENT

Dennis Beckel	Coordinator (Auraria)
John R. Waldeck	Coordinator (North)
W. Ted Giles	Coordinator (Red Rocks)

SCHOOL NURSES

Patricia Connell	Health Counselor (Auraria)
JoAnne Garcia	School Nurse (North)
Sandra LaRusso	School Nurse (Red Rocks)

STUDENT ACTIVITIES

Ronald Young	Coordinator, Student Activities (Auraria)
Orlando H. Trujillo	Coordinator, Student Activities (North)
James L. Corsentino	Coordinator, Student Activities (Red Rocks)

BUSINESS AND MANAGEMENT OCCUPATIONS

Auraria Campus

Kossik, Joseph Division Director
Meer, Peter Instructor, Business Management
Pigford, Lois Instructor, Secretarial Science
Rucker, Jennie Instructor, Secretarial Science
Smith, Judy Instructor, Accounting
Thomas, Judy Instructor, Secretarial Science

North Campus

Archer, Donald W. Division Director
Bowe, Mary E. Instructor, Business
Collins, Marian J. Instructor, Business
DeVriendt, Russell G. Instructor, Business
Earle, William E. Instructor, Business
Espinoza, Joseph C. Instructor, Business
Frisby, Nancy L. Instructor, Business
Garrison, Ann C. Instructor, Business
Jarrell, Dale E. Instructor, Business
Leaming, Marjorie P. Instructor, Business
Lewis, Lorene Instructor, Business
Mitchell, Ruth F. Instructor, Business
Montoya, Ronald R. Instructor, Business
Riggs, Linda J. Instructor, Business
Roberts, Joan M. Instructor, Business
Rodasta, Tony J. Instructor, Business
Ruby, Dorman W. Instructor, Business
Terada, James Instructor, Business
Walters, Ronald T. Instructor, Business

Red Rocks Campus

Davis, Howard R. Division Director
Arnsparger, John C. Instructor, Accounting
Bauer, Susan J. Instructor, Merchandising
Braswell, Michael K. Instructor, Business and Management
Hobkirk, Macie Instructor, Secretarial Science
Perry, Bruce L. Instructor, Business and Management
Romero, Rita E. Instructor, Secretarial Science
Schulz, B. Kay Instructor, Accounting
Stutzman, Roy V. Instructor, Business and Management
Sunata, Haruko Instructor, Secretarial Science
Wiebe, LeeVern Instructor, Data Processing

CENTER FOR THE HEARING IMPAIRED

North Campus

Guttadore,
Theodore S. Division Director
Curlee, Pamela A. Instructor for the Hearing Impaired
Haney, James H. Instructor/Counselor for the Hearing Impaired
Johns, Stephen G. Instructor for the Hearing Impaired
McHowell, Elaine E. Instructor, Interpreter/Tutor Program
Washburn, Arthur O. Coordinator-Instructor for the Hearing Impaired
Westfall, Norma R. Instructor for the Hearing Impaired

COMMUNICATION AND ARTS

Auraria Campus

Jaramillo, John Division Director
Brigham, Elizabeth Instructor, French, Journalism
Carter, Mel Instructor, Art
Knauber, David Instructor, Occupational Communication
Miles, Kathleen Instructor, English Composition
Phillips, Pamela Instructor, Literature & Drama
Rivera, Timothy Instructor, Spanish, Chicano Studies
Siddeek, Maria Instructor, Reading, English Composition

North Campus

McDonald, Dean E. Division Director
Belker, June Instructor, English
Boast, Mary C. Instructor, Basic Communication
Couch, John H. Instructor, English and Journalism
Dolan, James T. Instructor, English
Frankel, Betty J. Instructor, Basic Communication
French, Treva M. Instructor, English
Hoglin, Donald A. Instructor, English
Horne, Charles E. Instructor, Basic Communication
Lavroff, Ellen C. Instructor, Spanish
Makovsky, Evelyn B. Instructor, English and Speech
McLeran, Paul D. Instructor, English and Drama
Olsen, Shigeiko M. Instructor, Basic Education
Ott, Charles F. Instructor, Art
Parsell, Hazell S. Instructor, Music
Richards, William R. Instructor, Special Programs
Sabus, John F. Instructor, Physical Education
Strong, Anne E. Instructor, Adult Basic Education
Sweeney, Roger L. Instructor, English
Ulman, Florence A. Instructor, Speech
Wennen, Mary A. Instructor, English
Zeches, Hubert E. Instructor, Basic Communication

Red Rocks Campus

Jenkins, Thomas M. Division Director
Coen, Roy M. Instructor, Fine Arts
Decker, Roy M. Instructor, Physical Education
Gordon, Dewitte C. Instructor, Communication & Arts
Hoffman, Natalie Instructor, Communications Lab
Ingerson, Marcia Instructor, MDTA Lab
Johnson, Elizabeth Instructor, Communication & Arts
Littlefair, Wendy Instructor, Communication & Arts
Pigford, Clementine Instructor, MDTA Lab
Sweet, Benjamin C. Instructor, Communication & Arts

COMMUNITY AND PERSONAL SERVICE OCCUPATIONS

Auraria Campus

Lyle, Glenda Lead Instructor

North Campus

Walker, Gary J. Division Director
 Jorgenson, Avis E. Coordinator-Instructor, Early Childhood Education
 Lehman, Velma M. Instructor, Child Care
 Mailander, Dennis Instructor, Food Services
 Nelis, William D. Instructor, Horticulture
 O'Shea, James V. Instructor, Horticulture
 Paul, Mary Instructor, Library Technology
 Robnett, Harris H. Instructor, Library Technology
 Vaden, James L. Instructor, Food Services

Red Rocks Campus

Zgut, Jo Elen K. Division Director
 Berg, Jr., Robert Instructor, Audio Visual Services
 Davis, Virgil Instructor, Fire Science
 Decker, Roy M. Instructor, Physical Education
 Ormsby, Jane Instructor, Social Worker Assisting
 Pisciotta, Anthony A. Instructor-Coordinator, Fire Science Technology

HEALTH OCCUPATIONS

Auraria Campus

Smith, Janice Health Coordinator, Multi-Campus
 Hale, Rosemarie Instructor, Licensed Practical Nurse
 Johnson, Barbara Instructor, Licensed Practical Nurse
 Lefebre, Rose Mary Instructor, Operating Room Technician
 Lundgren, Linda Instructor, Nurse Assisting
 Powell, Darlene Instructor, Basic Science
 Velazquez, Janet Instructor, Basic Science
 Whaley, Emma Instructor, Allied Health

North Campus

Jones, Audrey A. Division Director
 Archuleta, Vidilia S. Instructor, Nurse Aide Program
 Anthony, Barry T. Instructor, Radiologic Technology
 Bontrager, Kenneth L. Coordinator, Radiologic Technology
 Cook, Margie Nell Instructor, Nursing
 Edwards, Carol M. Instructor, Dental Assisting
 Goggans, Patricia E. Instructor, Pulmonary Function
 Hale, Beverly B. Coordinator/Instructor, Inhalation Therapy

Harboe, Ruth M. Coordinator, Nursing
 Lancaster, Yvonne Instructor, Nursing
 Lehman, Malcolm E. Coordinator/Instructor, Inhalation Therapy
 Mueller, Alma L. Instructor, Nursing
 Mutzebaugh, Carole A. Instructor, Nursing
 Roberts, Evelyn Instructor, Radiologic Technology
 Schmidt, Judy V. Instructor, Nursing
 Vogel, Thomas M. Instructor, Radiologic Technology
 West, Birdell B. Instructor, Nursing
 Zabriskie, Felistis Instructor, Nursing

Red Rocks Campus

Baden, Carol Instructor, Nursing

INDUSTRIAL OCCUPATIONS

Auraria Campus

Belker, Loren Division Director
 Allen, Dedrick Instructor, Photography
 Alston, Robert Instructor, Auto Mechanics
 Brown, James Instructor, Appliance Repair & Electronics
 Garbutt, Beth Instructor, Commercial Art
 Lowry, John Instructor, Graphic Arts
 Rogers, Guy Instructor, Drafting
 Williams, Gary Instructor, Salesmanship & Typewriter Repair

North Campus

Duncan, Ralph A. Division Director
 Adams, Hugh B. Instructor, Welding & Fabrication
 Brandt, Warren H. Instructor, Civil Technology
 Daffin, Donald E. Instructor, Auto Body Service and Painting
 Fedro, William E. Instructor, Drafting
 Goodwin, Edward S. Instructor, Electronics
 Kalish, Jack Instructor, Radio and TV Service
 Langdorf, Jr., George W. Instructor, Electronics
 Moore, William I. Instructor, Architectural Technology
 Muirhead, Gerald S. Instructor, Sports Crafts and Special Area Mechanics
 Semp, Jacobus H. Instructor, Machine Shop
 Seward, Roland H. Instructor, Welding & Fabrication
 Sheldon, Gary A. Instructor, Auto Mechanics
 Shivers, Marvin L. Instructor, Auto Mechanics
 Stephens, Carl R. Instructor, Drafting
 Taylor, Aaron G. Instructor, Auto Mechanics
 Thomas, John R. Instructor, Electronics
 Van Pelt, Dale M. Instructor, Machine Shop
 West, Jack D. Instructor, Machine Shop
 Wheeler, Charles D. Instructor, Electronics
 Winterhalder, Roy A. Instructor, Auto Body Service
 Yoder, Raymond Instructor, Welding & Fabrication

Red Rocks Campus

Feister, Clarence A. Division Director
Birch, Johnie L. Instructor, Automotive Mechanics
Busnardo, Ernest E. Instructor, Heavy Equipment
 Operation & Service
Deaver, Larry E. Instructor, Drafting
Erkel, James W. Instructor, Welding
Hedge, Delford J. Instructor, Carpentry
Holland, Truby J. Instructor, Fluid Power
Hood, Robert B. Instructor, Welding & Fabrication
Jordan, Leon D. Instructor, Auto Mechanics
Maxwell, Billy J. Instructor, Electronics
Medina, Julius J. Instructor, Drafting
Morris, William E. Instructor, Welding and
 Fabrication
Mulay, Raymond Coordinator, Cooperative Work
 Experience
Neunzert, Gabriel M. Instructor, Surveying
Oblock, Donald B. Instructor, Diesel Mechanics
Rudden, Richard W. Instructor, Bricklaying
Williams, Roy F. Instructor, Electronics

SCIENCE AND MATHEMATICS

Auraria Campus

Foreman, Maxine Division Director
DeRoos, Barry Instructor, Chemistry
Johnson, Sidney Instructor, Developmental
 Mathematics
Wille, Gerald Instructor, Algebra

North Campus

Evans, Robert R. Division Director
Bouse, Edward F. Instructor, Mathematics
Burton,
 Gwendolyn R. Instructor, Biology
Collins, Margaret H. Instructor, Chemistry
Dotson, Gerald R. Instructor, Biology
Gimmestad,
 Beverly J. Instructor, Mathematics
Hannaforde, James E. Instructor, Biology
Johnson, Ruth Instructor, Biology
Lewis, Jeanne D. Instructor, Chemistry
Owen, Aubrey P. Instructor, Mathematics
Palmer, David C. Instructor, Physics
Johnson, Ruth N. Instructor, Biology, Zoology and
 Physiology
Sukle, Daniel J. Instructor, Physics
Taylor, Robert L. Instructor, Chemistry
Younger, Paul J. Instructor, Mathematics

Red Rocks Campus

Craig, H. Rex Division Director
Ford, Alfred Instructor, Physics

Lederer, Eric M. Instructor, Mathematics
Owen, Elwyn R. Instructor, Geology
Salzman, John D. Instructor, Chemistry
Selos, Frances B. Instructor, Mathematics
Tomkinson,
 Charles J. Instructor, Mathematics
Tuggle, Dorothy K. Instructor, Mathematics
Wofford, Rowena Instructor, Biological Science

SOCIAL SCIENCE

Auraria Campus

Robinson, Frank Division Director
Killeen, John Instructor, Psychology
Noyes, Lance Instructor, Sociology
Sumner, David Instructor, History
Thomas, Jefferson Instructor, Psychology

North Campus

Graves, Paul G. Division Director
Amick, David Instructor, Psychology
Brasselero, Michael Instructor, Economics
Carpenter, Garrett R. Instructor, Philosophy
Cordova, Ben Instructor, Psychology & Sociology
Davis, William A. Instructor, Political Science &
 Philosophy
Dudley, David A. Instructor, Geography
Hinga, John P. Instructor, Sociology
Hunter, Kenneth T. Instructor, Anthropology
Hurley, Robert M. Instructor, History
Koch, Joseph J. Instructor, History
Olson, Linda Instructor, Psychology
Robinson, John A. Instructor, History and Sociology
Small, Cynthia Instructor, Government
Springer,
 Leonidas K. Instructor, Psychology
Schupbach, Warren Instructor, Economics and
 Geography
Van Dyke, Louis J. Instructor, Psychology

Red Rocks Campus

Nelson, David P. Division Director, Instructor,
 History
Courson, Ronald Instructor, Psychology
Joy, Carla M. Instructor, History and English
McBroom,
 Emmerett G. Instructor, Geography
Prince, Robert J. Instructor, Anthropology and
 Sociology
Scheib, James R. Instructor, Economics
Schreibman, Walter Instructor, Psychology
Wellisch, William Instructor, Sociology