

Colorado A & M College
Bulletin

Fort Lewis Branch ~ Catalog Number

1948-1949

The Future of

The Fort Lewis Branch of Colorado A & M College

Established during the year of 1911 through a Federal grant of nearly ten sections of land and a number of buildings, the State of Colorado was given this property with the stipulation that there be maintained an educational institution at Fort Lewis. Under the supervision of The State Board of Agriculture, the Branch of the Colorado Agricultural and Mechanical College at Fort Lewis, has passed through a period of pioneering with one of the last frontier regions of Colorado and the West. During these early stages there has been constructed a physical plant with modern facilities designed to provide adequate, well-equipped dormitories, class rooms and laboratories for educational activities to conform closely with work at the home college at Fort Collins. Like the parent institution the branch has well-defined responsibilities and objectives.

Situated near the center of a large inland empire with many of its extensive resources yet to be developed, the future of the College has much in common with the future of the San Juan Basin. The opportunities for home building in this great Basin are excellent, since farming may be extended along with the reclamation of large bodies of lands as the conservation and utilization of water will permit. This along with the industrial trade and recreational possibilities and developments encourages an optimistic outlook for all established businesses and institutions in this area.

Fort Lewis with its grazing and farm lands and its experiment station, can and should have a part in the future building of this intermountain region. Rehabilitation of the men and women of our armed forces and the training of the youth of the southwest is the stimulus for extensive planning and preparation of curricula and equipment to meet future demand for higher educational facilities in the sciences, arts and fields of specialization for the professions and the vocations.

The demands for the future may not be even partially foreseen, but there can be built at Fort Lewis additional courses and facilities to provide the types of instruction, experimental research, and services that may be requested and supported by the citizens of Colorado and the San Juan Basin.

Colorado A & M College Bulletin

Fort Lewis Branch

Annual Catalog Number

1948-49

Hesperus, Colorado

Agriculture
Engineering
Forestry and Range
Management

Home Economics
Science and Arts
Pre-Veterinary Medicine

and

Foundation Training for Other Majors

COLORADO A & M COLLEGE BULLETIN

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May, 1948

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THE STATE BOARD OF AGRICULTURE

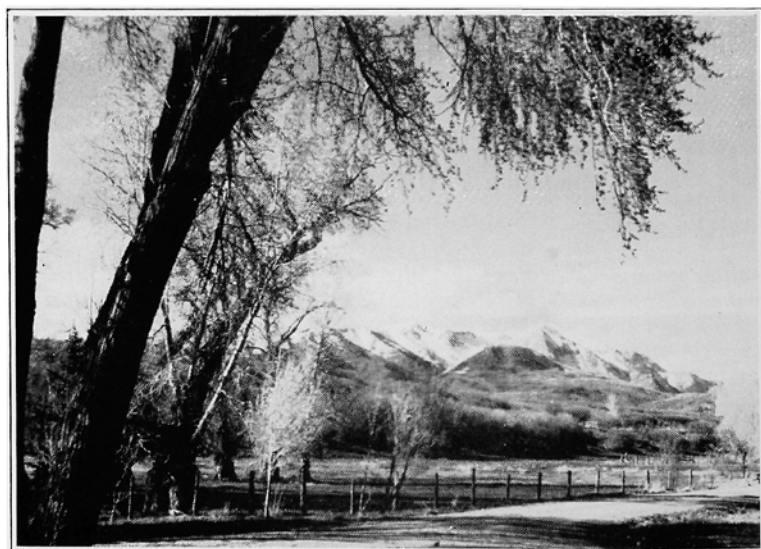
	Address	Term Expires
† Alfred M. Camp	Durango	1949
* Edward H. Divelbiss	Hotchkiss	1949
Rex C. Eaton	Eaton	1951
George B. McClave	McClave	1951
Elmer Hartner	Denver	1953
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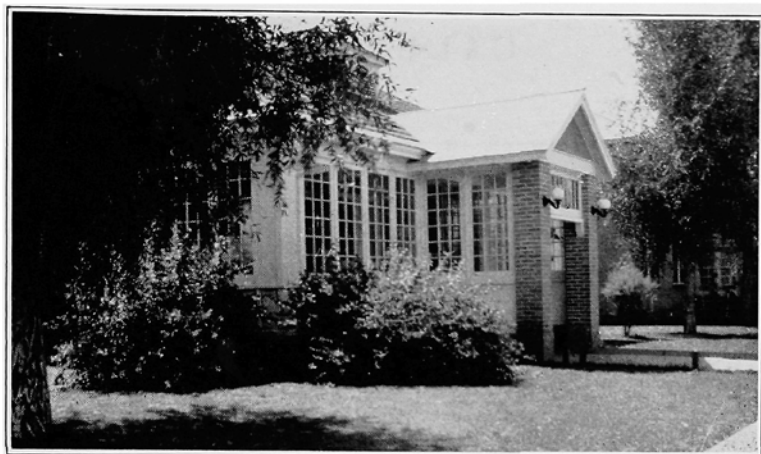
Raman A. Miller Elmer Hartner Edward H. Divelbiss



The La Plata Mountains as seen from Lory Hall, the Women's Dormitory on the Campus.

† Appointed October, 1947, to serve unexpired term of W. I. Gifford, resigned.

* Appointed December, 1946, to serve unexpired term of Robert F. Rockwell, resigned.



The Administration Building.

The Fort Lewis Branch of the Colorado A & M College is situated near the center of the San Juan Basin, an empire of large potential possibilities surrounding the four corners of the Southwest.

Privileged to serve the youth of the region by offering opportunities to begin collegiate training, Fort Lewis is presenting the 1948-49 catalog to aid high school graduates and returning veterans in planning future educational efforts.

No one can accurately forecast the future. Employment opportunities have been good. Attractive salaries and wages have encouraged many to discount training and preparation. The lessons of the past, however, challenge thinking and serve to emphasize that the men and women of tomorrow are confronted with momentous problems. There is ample reason to be concerned as to the possibilities of the establishment of permanent peace. War clouds still hover over the horizons of world relations. Certainly, if civilization is to avert complete destruction, more and more energy must be directed toward earnest, honest efforts to establish better human relations.

Trained men and women are needed in all the walks of life and I strongly urge every young man and woman to seriously consider the importance of being prepared to do the work of tomorrow generously and effectively. We invite your consideration of this Branch institution, and the courses and facilities which it has to offer with the hope that your serious desires will bring about the decision to work with us during the next college year beginning September 9, 1948.

ERNEST H. BADER, Dean

CALENDAR

1948

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1949

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College Calendar

1948

- September 9, 10, **Thursday and Friday**—Freshmen Days. All new students report at 8:00 a.m. Thursday.
- September 13, **Monday**—Registration for all students.
- September 14, **Tuesday**—Classes begin at 8:00 a.m.
- September 17, **Friday**—Registration closes and last day for schedule changes.
- November 24, **Wednesday**—Thanksgiving Holidays begin at noon. College opens at 8:00 a.m. Monday, November 29.
- November 29, **Monday**—Final examinations begin.
- December 3, **Friday**—Last day of first quarter.

Second Quarter (Winter) 1948-49

- December 6, **Monday**—Registration for all students.
- December 7, **Tuesday**—Classes begin at 8:00 a.m.
- December 10, **Friday**—Registration closes and last day for schedule changes.
- December 17, **Friday**—Christmas vacation begins at 4:00 p.m.

1949

- January 3, **Monday**—Classes begin at 8:00 a.m.
- March 7, **Monday**—Final examinations begin.
- March 11, **Friday**—Last day of second quarter.

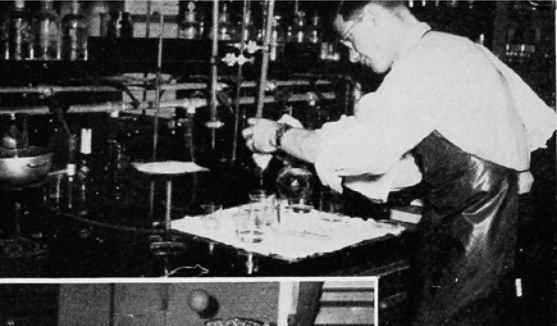
Third Quarter (Spring) 1948-49

- March 14, **Monday**—Registration for all students.
- March 15, **Tuesday**—Classes begin at 8:00 a.m.
- March 18, **Friday**—Registration closes and last day for schedule changes.
- March 25, **Friday**—Spring vacation begins at 4 p.m.
- April 4, **Monday**—Spring vacation ends at 8:00 a.m.
- May 29, **Sunday**—Baccalaureate service.
- May 30, **Monday**—Memorial Day Holiday.
- May 31, **Tuesday**—Final examinations begin.
- June 4, **Friday**—Convocation; last day of third quarter.

FORT LEWIS BRANCH FACULTY

- Newsom, I. E.**, B.S. (Colorado A & M College), D.V.S. (Kansas City Veterinary College), D.V.S. (San Francisco Veterinary College), D.Sc. (University of Colorado).....President
- Lory, Chas. A.**, Ped.B. (Colorado State Normal School) B.S., M.S., LL.D. (University of Colorado), D.Sc. (University of Denver), LL.D. (Colorado College), D.Ed. (Colorado State College of Education), D.Sc. (Colorado A & M College).....President Emeritus
- Bader, Ernest H.**, B.S. (Colorado A & M College), M.S. (University of Colorado)Dean
- Bader, L. Floy**, B.S. (Colorado A & M College).....
.....Dietitian and Instructor in Physical Education for Women
- Bergman, Walter F.**, B.S., M.S. (Colorado A & M College).....
.....Assistant Professor, Physical Education and Assistant Coach
- Broomell, Myron H.**, B.A., M.A. (University of Colorado), (Graduate study at University of California and Ohio State University)
.....Associate Professor of History
- Butler, Walter C.**, B.S. (Colorado A & M College), M.A. (Colorado State College of Education).....Associate Professor, Mathematics
- Elder, Maurice L.**, B.S. (Kansas State College).....
.....Associate Professor, Physical Education and Coach
- Ferguson, Doris**, (Fort Lewis Branch Colorado A & M College), (George Peabody College, Nashville, Tennessee).....Librarian
- Good, Margaret**, A.B. (University of Denver), (Graduate study at Northwestern University, Denver University, University of Colorado, and Colorado A & M College).....Hostess of Snyder Hall
- Hershberger, Inez**, A.B. (Kalamazoo College), (Graduate study at University of Wisconsin, University of Chicago, University of Colorado, and University of Mexico).....
.....Assistant Professor, Language and Dramatics
- Hickman, Francis W.**, B.S. (New Mexico School of Mines).....
.....Associate Professor, Engineering
- Jones, W. Norton, Jr.**, B.A. (Hendrix College, Arkansas), M.A., Ph.D. (Johns Hopkins University), (Graduate study at University of Southern California).....Professor, Chemistry
- Keller, Robert J.**, B.S., D.V.M. (Colorado A & M College).....Veterinarian
- Kinlaw, Lorine**, A.B. (Flora Macdonald College), M.A. (Duke University).....Associate Professor, English
- Koonce, Dwight**, B.S. (Colorado A & M College), M.S. (Utah State College of Agriculture).....Associate Professor, Agronomy

- Larrabee, Edith B.**, B.S. (East Texas State Teachers College)
Instructor in Home Economics
- McLain, Charles W.**, B.S., M.S. (Colorado A & M College)
Assistant Dean and Professor of Physics
- Moinat, Arthur D.**, B.S. (Colorado A & M College), M.S. (Oregon
 State College), Ph.D. (University of Illinois)
Professor, Biology and Agriculture
- Morrow, Evelyn Y.**, B.S. (East Central State College, Oklahoma),
 M.S. (Oklahoma A & M College), (Graduate study at Colorado
 State College of Education) Associate Professor, Commerce
- Needham, John William**, B.S. (Colorado A & M College)
Assistant Professor, Chemistry
- O'Brien, Irene**, B.S. (State Teachers College, Maryville, Missouri),
 M.A. (University of Missouri), (Graduate study at Peabody Col-
 lege for Teachers, Nashville, Tennessee)
Professor of Education, Dean of Women
- Ruland, Albert C.**, A.B. (Western State College), M.S. (University
 of Southern California) Instructor of Vocal Music
- Scott, J. Thomas**, B.M. (Colorado A & M College), (Graduate study
 at University of Colorado) Assistant Professor, Music
- Trump, Murray**, B.S. (University of Wyoming)
Assistant Professor of Animal Husbandry



1.—All technical students take Chemistry. 2.—The bulletin board keeps students informed. 3.—Will it go through? 4.—Engineering Physics Laboratory. 5.—Biological Science is needed in an agricultural college. 6.—The Dining Hall is a popular place. 7.—The football banquet is an annual event. 8.—The rooting section is an important part of the game.

Fort Lewis Branch

of

Colorado A & M College

FORT LEWIS is not a junior college, but is a branch of the Colorado Agricultural and Mechanical Arts College at Fort Collins. By an act of Congress approved April 4, 1910, and an act of the Eighteenth General Assembly of the State January 25, 1911, the Fort Lewis Military Reservation and Indian School lands of 6,318 acres, with buildings, became the Fort Lewis School and a part of the land-grant college system of Colorado.

Beginning in October, 1911, secondary courses in Agriculture, Home Economics, and Mechanics were offered. Four years later rural teacher-training courses were added. All secondary courses were discontinued in 1933. College work was first offered in 1927 with 27 freshmen enrolling—the first of hundreds of young people of the Southwest to receive collegiate training in the Fort Lewis School.

Students who have gone to other colleges of Colorado and to colleges of other states for their last 2 years of work have won recognition for the high standard of scholarship maintained at Fort Lewis. A student will have no difficulty in completing his college work in 4 years provided he has carried a full 2 years' load while at Fort Lewis, maintained at least a "C" average and does not change his major course, when that course is pursued in another institution.

Credits earned at the Fort Lewis Branch are placed on file with the registrar of the home institution at Fort Collins and may be applied as follows:

1. For those students who intend to receive a bachelor's degree at the parent institution as many as 105 acceptable quarter credits may be applied toward their major. This shall include acceptable work at any institution attended prior to admission at the Fort Lewis Branch.

2. Students who are majoring in elementary education or commerce may have all recorded credits transferred to the institution of their choice.

3. Courses with footnote ¹ are acceptable only toward a major in elementary education or commerce.

Campus—Buildings and Equipment.—With fifteen major buildings and a greater number of residences and smaller structures, Fort Lewis Branch of Colorado A & M College is equipped with modern and standard facilities to take care of the needs of students in securing superior collegiate training. The new library, modern and fully equipped, is the latest building addition. It is the first of a series of new structures planned in the 10-year building

program and reflects the policy which has been followed in improving and equipping the dormitories, the laboratories, classrooms and recreational facilities of the college.

Educational and Scenic Points

Location.—The Fort Lewis Branch of Colorado A & M College is located 5 miles south of Hesperus near the foot of the La Plata Mountains. The college is unique in the combination of location and educational advantages it offers. In the southwestern corner of Colorado at an elevation of 7,610 feet, the climate is mild—never too hot in the summer nor too cold in the winter. National parks, forests, deserts, mountains, scenic drives, ancient Indian ruins, and present Indian culture are all available to those interested in a first-hand study of these particular fields.

Mesa Verde.—Mesa Verde National Park offers the largest and most complete series of cliff dwellings in the United States. Because of the development of excellent roads, Mesa Verde is today becoming one of the leading national parks in the governmental system. It is located only 35 miles from the Fort Lewis campus. Park rangers often are invited to speak to school assemblies on the ancient Indian culture found at Mesa Verde.

Aztec Ruins.—The large, ancient pueblo located at Aztec, New Mexico, is now a national monument. The ruins are different from those found at Mesa Verde and contain the largest reconstructed kiva in the San Juan Basin.

Hovenweep National Monument.—Located a few miles northwest of Cortez, Colorado, on the Colorado-Utah boundary, the Hovenweep national monument consists of four groups of prehistoric towers, pueblos, and cliff dwellings.

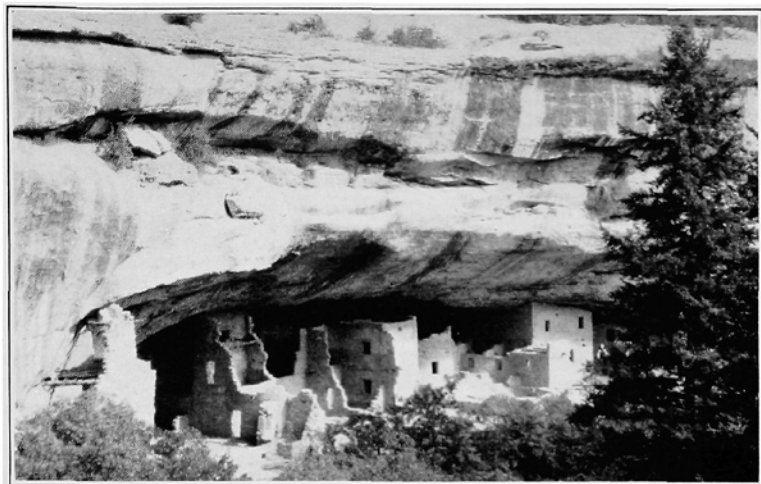
Yucca House National Monument.—The ruins are located on the eastern slope of Sleeping Ute Monument near Cortez. The ruins are of great archeological value in their representation of relics from the prehistoric inhabitants.

Chaco Canon National Monument.—Located in northern New Mexico, this monument is about a 4-hour drive from the Fort Lewis campus. The ruins are the cliff-dwelling type, probably the most famous being Pueblo Bonito.

Natural Bridges National Monument.—This monument is a series of three bridges located in southeastern Utah. These natural spans are among the largest of their kind in existence.

Rainbow Bridge National Monument.—Located to the south of the above-mentioned monument, the Rainbow Bridge is unique in symmetry and scientific interest.

Million Dollar Highway.—This is acclaimed by many tourists to be the most scenic drive in the United States. A circle tour may be taken from the campus through Durango, Silverton, Ouray, Telluride, Rico, Dolores, Cortez, Mancos and Hesperus to Fort Lewis.



Cities of the past. Fort Lewis lies within the richest archaeological region of the west.

There are many other points of scenic interest within a day's drive of the Fort Lewis campus, such as the Great Sand Dunes National Monument, Shiprock, Canyon de Chelly, and the Black Canyon of the Gunnison. Many other scenic and historic points of interest are within easy driving distance of the campus.

Several excursions are sponsored by Fort Lewis Branch during the school year for the benefit of the student body. In addition to trips by the entire student body, special excursions for certain groups are planned from time to time.

General Information

Requirements for Admission

The application for admission, which includes a transcript of the high-school record, must be submitted before the time of registration, and should be on file not later than September 1. In Colorado, blanks are available at the high-school principal's office and should be sent in as soon as possible after high-school graduation. Those desiring to apply for admission from outside Colorado should write to the registrar's office and ask for the regular Application for Admission blank. In every case the application should reach the registrar's office in time for the applicant to be notified whether his credentials are sufficient for entrance. Applications for admission from those who are graduates of unaccredited high schools will be passed upon according to the merits of each individual case.

Any person who has been graduated from an accredited Colorado high school will be eligible to register here, provided the following prescribed units have been included in his high-school course of study.

	All Divisions Except Engineering	¹ Engineering
English	3	3
Mathematics:		
² Algebra	1	1½
Plane Geometry	1	1
² Solid Geometry	---	½
Science (selected from Social Science 1, Chemistry 1, Physics 1).....	---	2
³ History	---	1
³ Electives	10	6
	—	—
	15	15

It is recommended that students in their high-school work include 2 years of history and 2 of science.

Students from unaccredited high schools also may be required to pass one of the standard college-entrance tests. Students entering college without work in history will be expected to take additional work in college.

For additional requirements for entrance to the 4-year professional course in veterinary medicine, see page 64.

Non-residents of Colorado, in addition to the above requirements, must be eligible for admission to the land-grant institution in the state where the high-school work was done.

Adult Standing Regulation.—Students over 25 years of age will be granted conditional entrance to college, except to the Division of Veterinary Medicine, upon recommendation of the Committee on Admissions, and upon passing one of the standard college-entrance intelligence tests.

A Credit Defined.—One credit is given for 1 hour of lecture or recitation work a week; or 2 hours in the laboratory. In a few instances, 3 hours of laboratory are required for 1 credit. Credit is also given for physical education on the basis of one-half credit per quarter.

¹ The requirements for admission of industrial arts students are the same as those in the column under "All Divisions Except Engineering."

² For those not having the advanced algebra or the solid geometry, opportunity will be given to clear the deficiency after entrance.

³ Of the 10 elective units permitted, not more than 6 (for engineers, not more than 4), may be presented in vocational subjects, such as agriculture, shop, home economics and commercial subjects. Any student whose high-school preparation does not meet the above requirements may make a special application to the Committee on Admissions, which will consider each application upon its merits.

Marking System and Quality Point System.—Term grades are reported by letter only. The scale of grades and quality points follows:

Grade		Quality Points Per Credit
A	(Excellent)	4
B	(Good)	3
C	(Average)	2
D	(Poor, but passing)	1
E	(Condition)	0
I	(Incomplete)	0
F	(Failure)	0
WP	(Withdrawn Passing)	0
WF	(Withdrawn Failing)	0

A grade of E (Condition) is to be given when all assignments have been completed but in quality and quantity do not quite justify a passing grade, and when, in the judgment of the instructor, the student might be able to pass a satisfactory examination after additional individual study and without repeating the subject in class. An E (Condition) must be cleared within 1 year and only a grade of D or F may be given following a condition make-up examination.

A grade of I (Incomplete) is a temporary grade indicating that a student has a satisfactory record in work completed and for justifiable reasons satisfactory to the instructor in charge was unable to complete the work of the course. An I (Incomplete) must be cleared within 1 year but no limitation is put on the grade to be given upon the clearing of the "incomplete."

Freshman May Drop Subject.—A freshman student is permitted to drop a subject at any time before the close of the first 8 weeks in residence without any record of the drop being made.

Exemption From Final Examination.—Any student whose class and test grades for the quarter will average a grade of A, may be excused from the final examination.

Scholastic Standards.—Any student in the Colorado A & M College system whose scholarship at the end of his freshman year or at any later period is below that required for graduation shall be put on probation, and both the student and his parents notified that his scholarship standing must be raised if he expects to qualify for a degree.

A student who is thus placed on probation may continue under such status for not more than 3 quarters regardless of whether or not they are consecutive. If at the end of this period the scholarship is still below that required for graduation, he may register for further work only on the recommendation of the Committee on Scholastic Standards.

A student who, for 3 quarters of his freshman year or for any quarter thereafter, fails to pass 60 percent of all the credits for which he is registered (including courses in which a WP or WF has been received) is automatically suspended for 1 quarter.

The scholastic record of every student is subject to review by his Department Head and Dean at the close of each quarter. The Department Head

or Dean may at any time refer a student to the Committee on Scholastic Standards. This committee has the authority to place on probation or suspend a student when it appears that his work is of such a character that he cannot continue with profit to himself and credit to the institution.

A student who is at any time placed on probation because of scholastic deficiencies may register for such courses only as are approved by the Head of his Department or the Dean of his Division.

If a student is subjected to probation or suspension under the foregoing regulations, both the student and his parents will be notified in writing.

Unclassified Students and Special Courses.—In the case of war veterans or others where there are good reasons for it, students may be allowed to take a special course of study; but, in such case, the student must show that he is well qualified to pursue the studies selected and select his courses under the guidance of a trained counselor. No student will be allowed to change his course during the progress of the quarter, nor will he be allowed to drop a study except by permission of the Dean.

Advanced Standing.—Students entering Colorado A & M College from other institutions of higher learning which are regularly accredited will be given standing under the following rules:

1. Credentials, which must include honorable dismissal from the last institution attended, must be presented before the student may register.
2. Advanced standing students must meet all scholarship and course requirements which apply to regular students.

Classes in Elective Subjects.—On request of ten or more students, classes in elective subjects may be offered upon approval by the regular governing body. Elective classes in which the enrollment fails to reach six will be cancelled.

Regulations Governing Class Attendance

1. Students are expected to attend all classes for which they are regularly registered.
2. All work missed by students shall be made up if required by the instructor.
3. If a student finds it necessary to be absent from class or late in attendance, he is expected to offer a satisfactory explanation to the instructor.

In determining the number of absences a student may be allowed, the instructor is expected to give consideration to the effect on the work. Some students may be allowed several absences, others cannot afford to take any. Whenever absences are a cause of delinquency, the matter should be reported to the Dean.

4. Persistent absence may be cause for discipline.

Scholarships and Loans

Joint-Honor Scholarships.—1. Scholarships are to be awarded by the Colorado State Institutions of Higher Learning on the recommendation of the faculty or committee of the faculty of each accredited high school in Colorado on the following basis:

- | | |
|----------------------------|----------------|
| (a) 1 to 25 graduates..... | 1 scholarship |
| 26 to 50 graduates..... | 2 scholarships |
| 51 to 75 graduates..... | 3 scholarships |
| 76 to 100 graduates..... | 4 scholarships |
| over 100 graduates..... | 5 scholarships |
- (b) The students to receive the scholarships must rank in at least the upper one-fourth of their graduating class in scholarship, and must have attained a score at or above an established minimum on the American Council on Education Psychological examination.
- (c) While selections shall be made primarily upon the basis of scholastic achievement and promise of collegiate success, financial need may be taken into consideration.
- (d) The length of attendance at the respective high school need not be a determining factor in the award of the scholarships.

2. At Colorado A & M College and the Fort Lewis Branch, the Joint-Honor Scholarships pay \$35 each quarter to be applied toward registration and tuition fees.

3. This scholarship will be granted for a 4-year period. The holders must maintain an accumulative average within the upper one-fourth of their respective classes in order to keep the scholarship from year to year. A year is to be considered as the equivalent to three quarters.

4. A scholarship recipient is privileged to transfer at the end of any term from one participating institution to another and retain his scholarship if he is eligible for the continued use of the scholarship in the institution from which he transfers.

5. Scholarships will be valid for the academic year beginning in September and ending with June unless permission is granted by the institution to use the Joint-Honor Scholarship during the summer session or term.

6. A scholarship to be honored must be used at the beginning of the term next following upon its issuance provided, however, that a summer term or session may intervene between its issuance and its use. It must be used for at least three quarters in each calendar year in order to remain in force.

7. In a County High School System, a graduate of a branch school is entitled to a Joint-Honor Scholarship within these regulations.

NOTE: This Certificate of Scholarship is the property of the student to whom issued, but must be presented at the institution of his choice on or before the day of registration. The Certificate of Scholarship is not valid unless accompanied by the Joint-Honor Scholarship Record Card.

Recognition-of-Merit Scholarship.—The State Board of Agriculture authorizes the award of a limited number of Recognition-of-Merit Scholarships. To qualify for one, a student must be an entering freshman, have ranked in the upper one-third of the graduating class and have demonstrated capacity for leadership through activity participation. The value of this scholarship amounts to \$35 each quarter to be applied to registration and tuition fees. The award is good for one year, but can be extended for another year if the holder maintains an accumulative average which would place him in the upper one-fourth of the freshman class, and would hold throughout the entire sophomore year.

Employment.—A number of students find employment on the farm and campus. New students with training for which there is a demand, may find employment to reduce living expense. Application with statement of training and needs should be filed with the Dean.

It is the policy of those in charge to favor students whenever service is needed. The best qualified and most willing have the preference.

Loan Funds.—Three funds have been established to give assistance to needy students, the Snyder Memorial Loan Fund, the Marie Oschner Memorial Loan Fund, and the Fort Lewis Alumni Loan Fund. Money may be borrowed after the completion of one quarter's work by worthy students. Formal application must be made to the loan-fund committee. Notes for all approved loans must be signed by the student and parents, and are drawn for 1 year or less.

Certification—Graduation

Certificates.—At the end of 2 years of work in which not less than 105 quarter credits have been earned, a certificate of accomplishment is awarded at the Final Convocation.

Teacher's Certificate.—Graduates of the Education department, who at the end of 3 years have completed the required courses, are eligible to receive a certificate entitling them to teach in the rural schools of Colorado for 5 years.

Requirements for Graduation.—A total of 210 credits and 420 quality points are required for graduation in all courses offered at Colorado A & M College, except in Civil Engineering, Forestry and Range Management, and Veterinary Medicine. In Civil Engineering, 216 credits and 432 quality points are required. In Forestry and Range Management, 228 credits and 456 quality points are required for all courses of study with the exception of the Grazing and Forest Industries majors which require 210 credits and 420 quality points. In Veterinary Medicine, 225 credits and 450 quality points are required. Nine credits must be earned in military science and tactics for men except as follows:

A student transferring to Fort Collins from an institution where Military Science and Tactics (Senior Division) is not offered or required, will be entitled to an exemption from military courses of one quarter for each full quarter of academic credit received toward graduation.

Three credits in physical education for both men and women must be earned.

Fort Lewis students may earn 2 full years of credit as required in all courses at Colorado A & M College except veterinary medicine.

One year of college work in Pre-Veterinary Medicine may be obtained at Fort Lewis.

The additional credit required for graduation in civil engineering and forestry is obtained by students from the home institution and the Fort Lewis Branch in summer camps at the close of their freshman and sophomore years.

Student Activities

Fort Lewis fosters various non-academic activities for the benefit of the student body. Winter sports enthusiasts find ample opportunity for skiing, ice skating, tobogganing, or sleigh riding. In the spring and fall, hikers may take advantage of the surrounding mountains for their favorite recreation. Other interests vary from intramural athletics to formal social functions. Opportunities for wholesome, democratic relations between faculty and student body are provided through the social program.

Student Government.—The affairs of the student body are managed by an elected student council which serves in the capacity of an executive committee. The council considers all student problems brought before it, makes recommendations, and presents its findings to the monthly meeting of the student assembly. A Judicial Council is charged with interpretation of the constitution of the associated students. Faculty members of this council serve as advisors and ex-officio members of the Student Council and all other agencies of the student government. In addition, a mayor of the Veteran's Village, dormitory presidents and officers of the classes are chosen by the respective groups which they represent. Faculty members serve as sponsors and advisors of these various organizations.

Social Life.—Social life at Fort Lewis is democratic and informal, allowing for a wide range of individual taste and interest. Special weekend social gatherings, both formal and informal, are held throughout the year. A regular social hour is held each Wednesday from 6:30 to 7:30 p.m. The mountains and forests around the College furnish the setting for many picnics, parties, and campfires. These occasions are designed to cultivate courtesy and social ease, and are not calculated to involve students in large expenditures. For the most part, the expense of these activities is covered by the regular student activity fee. A recreation and game room and student co-operative store are maintained by the student body in the basement of the Arts Building.

Student Publications.—The "Fort Lewis Collegian" is published bi-monthly by the students. Combining the features of college life with those of the business world, the college publication has a large number of subscribers. Staff members may earn credit for their work.

"The Cadet" is the college annual or yearbook. Students enjoy working hard to make their publications successful. Staff members may earn credit for their work.

Dramatics.—Dramatics occupy a strong position in the life of Fort Lewis students. New students may join the Dramatic Club, and tryouts are held for each play. The members not only develop their acting abilities, but are taught the principles of stage design, construction of sets, costuming, make-up, play writing, and directing as well.

Music.—Students are encouraged to develop their musical talents at Fort Lewis. An a cappella choir, a men's glee club, a women's glee club, an orchestra, and a band offer outlets for musically minded students. College credit may be earned by members of these organizations.

Student Assemblies.—General student assemblies are held every week. These assemblies are an essential part of the College program.

Physical Education.—All students in their first 2 years of college are required to participate in some form of physical training. The classwork of the department consists of calisthenics, football, basketball, baseball, volleyball, and tennis. Credit for physical education is given to those competing with inter-collegiate athletic teams.

Intercollegiate Athletics.—Fort Lewis is a member of the Colorado Junior College Athletic Association. In addition to playing conference rivals, the teams often compete against 4-year institutions in athletic contests. Athletes who have had 2 years of participation in the conference are immediately eligible for 2 more years of competition in 4-year colleges and universities.

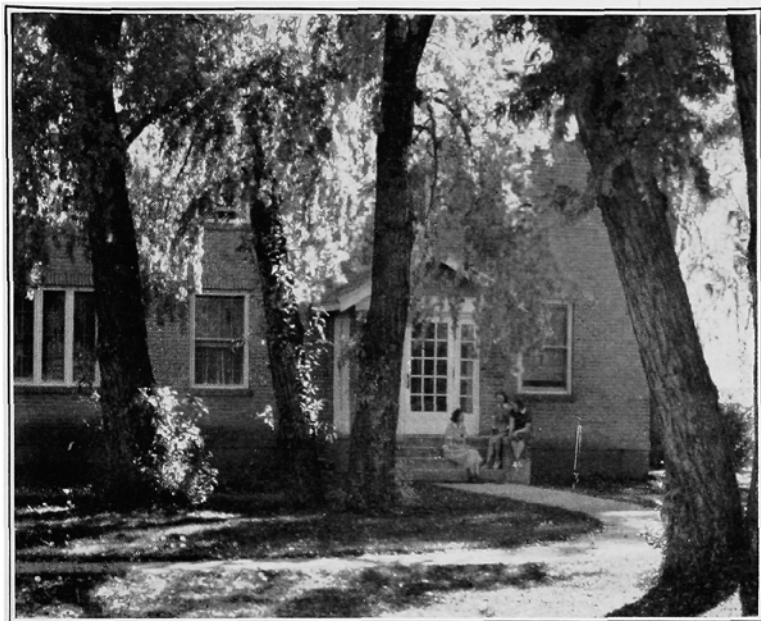
Women's Athletics.—All women may participate in the College athletics program. The purpose is to encourage women's athletics and develop leadership and good sportsmanship. Awards are given for participation in various activities.

The "A" Club.—The lettermen's club is an organization of athletes who have earned awards in sports. The purpose of the club is to maintain high standards in intercollegiate athletics.

Senior Day.—All high-school seniors in the San Juan Basin and surrounding areas are invited to Fort Lewis for a spring holiday. Games, picnics, folk and social dances, athletic contests, and a dramatic presentation are only part of the program planned by the College to welcome future students. The affair is one of the most popular of its kind in the State.

The Alumni Association.—The Alumni Association is an organization composed of all those who have been regularly enrolled at Fort Lewis. The association aims to promote the best interests of Fort Lewis and to unite former classmates. The regular annual meeting is held at Fort Lewis in the fall during Annual Homecoming Day.

The Dining Hall.—The Dining Hall at Fort Lewis is the most popular building on the campus. Meals are supervised by a trained dietitian and



The Doorway to Lory Hall, Women's Dormitory.

prepared by capable cooks. Meals are served family style by student waitresses. Students are seated at tables for six.

Lory Hall for Women.—Lory Hall for Women, a two-story building, is located at the south end of the campus, and faces the La Plata Mountains. There are 30 rooms, 26 of which are double. Each room is equipped with beds in alcoves that may be closed from the room by sliding doors. Each room also contains a study table, dresser, chairs, curtain rods, and extension light cords.

A large living room with fireplace and furnished with overstuffed furniture, lamps, piano, and radio is open for residents and their guests. A small living room where newspapers and current magazines are kept is also available and the residents of the Hall are permitted to use the gas-equipped kitchenette.

Snyder Hall for Men.—Snyder Hall is south of the Administration building and north of the Dining Hall. It is a U-shaped building and contains 37 rooms, 34 of which are double and 3 single. These bedrooms contain two alcoves, a dresser, study tables and chairs. A large well-furnished recreation room with low-beamed ceiling, rugged fireplace and pictures of athletic heroes, is popular for recreation. The building is convenient and comfortable.

Registration

Registration.—Registration for the fall quarter will take place on Monday, September 13, 1948; for the winter quarter Monday, December 6, 1948, and for the spring quarter Monday, March 14, 1949. **Students who fail to register on the dates set for registration will be charged an additional registration fee of \$5.00.** All tuition and fees must be paid in cash at the time of registration. Students may not register after the Friday following regular registration days. After registration, a fee of \$1.00 is charged for schedule changes requested by the student.

Tuition and Fees

	Quarter		
	I	II	III
Registration fee	\$ 5.00	\$ 5.00	\$ 5.00
Tuition fee	30.00	30.00	30.00
Library fee	3.00	3.00	3.00
Health fee	3.00	3.00	3.00
Key deposit (repaid on return of keys).....	1.00	-----	-----
Property deposit (repaid if property is undamaged)	5.00	-----	-----
Books (estimate)	15.00	12.00	10.00
Associated Students' Fees:			
Athletic fee	3.50	3.50	3.50
Student fee	1.50	1.50	1.50
Publication fee .....	.75	.75	.75
Cadet fee	4.50	-----	-----
Dormitory fee .....	.40	.40	.40
Class fee .....	.50	.50	.50
Student Union fee	3.00	3.00	3.00
	76.15	62.65	60.65
Special Fees:			
Non-residents of Colorado	\$60.00	\$60.00	\$60.00
Late registration	5.00	5.00	5.00
Fee for schedule change requested by student	1.00	1.00	1.00

Tuition and Fees for Part-Time Students.—A student registering for five credits or less will pay the registration fee of \$5.00; tuition \$15.00, and the library fee of \$1.00, or the total of \$21.00. No student fees will be assessed but special fees and deposits will be charged where so designated in this catalog.

A student registering for a program of six to ten credits inclusive will pay tuition and registration fee of \$20.00 plus all other regular college and student-body assessments.

Special Fees for Applied Music Lessons.—Students majoring in Music and other regularly enrolled students taking instrumental or voice lessons, pay \$15.00 per quarter for one half-hour lesson per week; \$25.00, for two half-hour lessons per week.

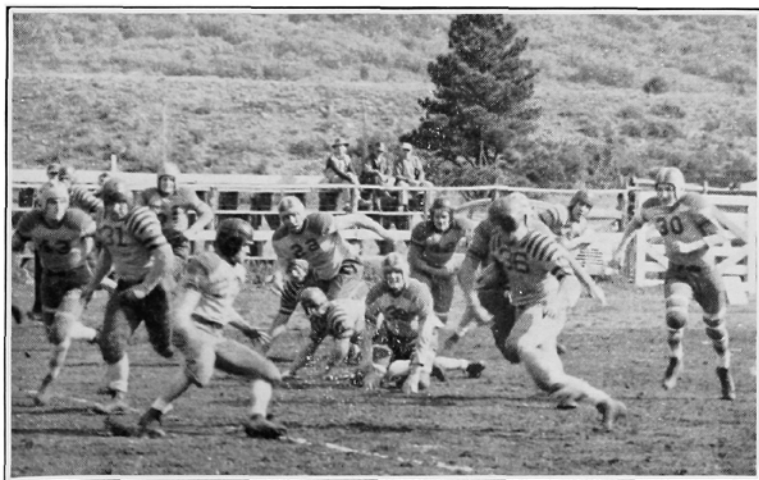
Persons not enrolled as regular college students pay \$18.00 for instrumental or voice lessons per quarter for one half-hour lesson per week.

Students registered in applied music for less than full quarter, pay \$1.75 per half-hour lesson. (No student may take lessons for less than a 4-week period).

Credit in applied music is allowed only to those who can qualify for regular college entrance.

Refunds.—A student withdrawing during the first week of the quarter may have all tuition and college fees refunded except the registration fee of \$5.00. A student withdrawing after the first week of the quarter but before the close of the fourth week may have one-half the tuition and college fees for that quarter refunded, except the registration fee of \$5.00. No refund will be made after the close of the fourth week. The amount of refund on the student activity fees varies according to the date of withdrawal and will be made in accordance with the regulations established by the Associated Students. No refund of any kind will be made to a student who is suspended or expelled for breach of discipline.

Claims for refunds for tuition and fees must be made when the student withdraws from college. All requests for the return of deposits must be made within two weeks after the close of the quarter or upon withdrawal from college.



Fort Lewis is a member of the Colorado Junior College Conference.

Scheme of Lettering Used in Course Numbers

ABBREVIATIONS

Agronomy	Ag
Geology	G
Animal Husbandry	AH
Botany and Plant Pathology.....	B
Business Subjects	BS
Business Administration	BA
Chemistry	C
Civil Engineering	CE
Economics, Sociology and History	ES
Education, Elementary	Ed
Electrical Engineering	EE
English	E
Entomology	En
Farm Mechanics	FM
Forestry	F
Home Economics	HE
Horticulture	H
Language	L
Mathematics	M
Mechanical Engineering	ME
Music	Mu
Pathology and Bacteriology.....	PB
Physical Education	PE
Physics	Ph
Physiology	VP
Poultry Husbandry	P
Range and Pasture Management.....	RM
Zoology and Parasitology.....	Z

Abbreviations used in describing courses on pages 25 to 65.

(**I** means taught fall quarter; **II**, winter quarter, **III**, spring quarter. The number of credits which a specific subject carries and the number of clock hours spent in class per week are indicated as follows: 5(3-4). The figure outside the parentheses indicates the number of credits; the first figure inside indicates the number of lectures or recitations per week and the second figure inside indicates the number of clock hours spent in laboratory).

THE DIVISION OF AGRICULTURE

Instruction in the Division of Agriculture is designed to train students in the broad field of agriculture in technical work, in conservation activities, in agricultural education, and for commercial and industrial positions in business related to agriculture. To meet these varied needs, courses leading to a bachelor of science degree are offered in Agronomy, Animal Husbandry, Entomology, General Agriculture, Horticulture, and Poultry Husbandry, with instruction also being offered in Geology in the Agronomy Department. A total of 210 credits with 420 quality points are required for graduation.

Students with a limited time for college work may pursue their own selection of courses of study when approved by the head of the department in which they take the major portion of their work.

Many of the positions open to students graduating in agriculture require farm or ranch experience. Students expecting to apply for these positions upon graduation should obtain such farm or ranch experience between the freshman and senior years if they have not previously had it.

COURSE OF STUDY FOR FRESHMAN YEAR

			Hours			
			Lec.-Lab.	I	II	III
Ag	1	Crop Production	5-0	--	--	5
AH	1	Introductory Animal Husbandry	3-4	5	--	--
B	1, 3	General Botany	3-0	3	3	--
B	2, 4	General Botany Laboratory.....	0-4	2	2	--
C	1	Inorganic Chemistry	3-4	5	--	--
C	3	Inorganic Chemistry	3-0	--	3	--
C	4	Inorganic Chemistry Laboratory	0-6	--	2	--
ES	42	National Government	2-0	--	--	2
E	2, 3, 4	English Composition	3-0	3	3	3
H	1	General Horticulture	4-2	--	--	5
M	10	Algebra	5-0	--	5	--
PE	1, 2, 3	Physical Education	0-3	0.5	0.5	0.5
				<hr/>	<hr/>	<hr/>
				18.5	18.5	15.5

Course in General Agriculture

A course of study in General Agriculture is designed for those who desire a non-specialized course in agriculture. A student may attain the same objective by majoring in an applied Plant Science (Agronomy, Horticulture) or in an applied Animal Science (Animal Husbandry, Poultry, Entomology) with careful choice of electives.

Graduates of this course of study also enter commercial and industrial positions in business related to agriculture, state and Federal agencies, and in practical agricultural pursuits.

Students may qualify to teach Vocational Agriculture by taking prescribed subjects in Vocational Education.

Students who plan to teach Vocational Agriculture should confer with the major professor of Agricultural Education in the Vocational Education Department. prior to enrolling in their sophomore year.

To qualify to teach Vocational Agriculture, students must have had at least three years of continuous farm experience after the age of fourteen.

COURSE OF STUDY IN GENERAL AGRICULTURE

Leading to a Bachelor of Science degree

Including Freshman Year

Group	Approximate minimum credits required	Selected from:
Agriculture	60	{ Field Crops Soils Animal Husbandry Dairy Manufacturing Horticulture Poultry Husbandry
Biological Science	24	{ Botany Bacteriology Entomology Genetics Zoology Physiology Forestry and Range Veterinary Medicine
Physical Science	25	{ Chemistry Mathematics Physics Geology
Engineering	12	{ Civil Mechanical
Humanities	25	{ English Economics Sociology History Foreign Language
Military and Physical Training	12	{ Physical Education Military Science
Electives	52	{ Minor field of interest
Total credits required for graduation	210	

Courses in Agronomy

The Department of Agronomy offers training in Field Crops and Soils. Students who specialize in Agronomy prepare themselves for positions as technicians in crops and soils, agricultural conservationists, farmers and farm managers, agriculturists in industry and business, and as agricultural field men and agents.

COURSES OF STUDY IN AGRONOMY

Students in Agronomy may select the Technical Field Crops Option, Technical Soils Option or the General Agronomy Option in the sophomore year. Irrespective of the option chosen, students are encouraged to choose a minor field of interest in another subject or subjects and to elect the proper courses to satisfy this interest, after consultation with their faculty advisor. Courses and substitutions must be approved by the advisor of the student and by the head of the department.

TECHNICAL FIELD CROPS OPTION

Including Freshman Year

Group	Approximate minimum credits required	Selected from:
Agriculture ¹	45	{ Field Crops Animal Husbandry Horticulture Soils
Biological Science	50	{ Bacteriology Botany Entomology Genetics Zoology
Humanities	27	{ Economics English
Physical Science	51	{ Chemistry Mathematics Physics
Military and Physical Training	12	{ Military Science Physical Education
Electives	25	{ Minor field of interest
Total credits required for graduation	210	

¹ A total of 20 credits in Field Crops courses is required.

TECHNICAL SOILS OPTION

Including Freshman Year

Group	Approximate minimum credits required	Selected from:
Agriculture ¹	54	{ Soils Animal Husbandry Field Crops Horticulture
Biological Science	20	{ Bacteriology Botany Entomology Zoology
Humanities	18	{ Economics English
Physical Science	76	{ Chemistry Geology Mathematics Physics
Military and Physical Training	12	{ Military Science Physical Education
Electives	30	{ Minor field of interest
Total credits required for graduation		210

¹ A total of 38 credits in Soils courses is required.

GENERAL AGRONOMY OPTION

Including Freshman Year

Group	Approximate minimum credits required	Selected from:
Agriculture ²	63	{ Soils Animal Husbandry Field Crops Horticulture
Biological Science	40	{ Bacteriology Botany Entomology Zoology
Engineering	4	{ Civil Engineering
Humanities	18	{ Economics English
Physical Science	48	{ Chemistry Geology Mathematics Physics
Military and Physical Training	12	{ Military Science Physical Education
Electives	25	{ Minor field of interest
Total credits required for graduation	210	

² A total of 48 credits in Agronomy courses is required.

Courses in Animal Husbandry

The Animal Husbandry courses of study are designed to prepare students for commercial, scientific, and practical animal production, including the breeding, feeding, management, processing, and marketing of livestock and livestock products. Having completed the requirements for the freshman year, students may elect one of the following courses of study: Animal Production, Animal Nutrition, Dairy Manufactures.

The general Animal Production curriculum has been planned to give students a broad, basic knowledge of Animal Husbandry and subject matter in related fields. With the approval of his advisor, the student may elect courses which particularly fit his needs and objectives. A minor field of specialization is encouraged.

The training of students in Animal Nutrition may be applied in a number of fields, such as advanced study and research, industrial nutrition advisor, laboratory technician, teaching, advertising and merchandising, feedlot operation, etc.

The Dairy Manufactures course prepares students as dairy plant operators, dairy laboratory technicians, dairy salesmen, and other work in the dairy industry.

COURSES OF STUDY IN ANIMAL HUSBANDRY ANIMAL PRODUCTION OPTION

Including Freshman Year

Group	Approximate minimum credits required	Selected from:
Agriculture ¹	70	<ul style="list-style-type: none"> Animal Husbandry Dairy Manufactures Field Crops Horticulture Poultry Husbandry Soils
Biological Science	30	<ul style="list-style-type: none"> Bacteriology Botany Entomology Genetics Physiology Zoology
Physical Science	20	<ul style="list-style-type: none"> Chemistry Mathematics
Humanities	30	<ul style="list-style-type: none"> Economics English History Language Music Sociology

¹ A total of 41 credits in Animal Husbandry courses is required.

Military and Physical Training.....	12	{ Military Science Physical Education
Electives	48	{ Minor field of interest
<hr/>		
Total credits required for graduation	210	

ANIMAL NUTRITION OPTION

Including Freshman Year

Group	Approximate minimum credits required	Selected from:
Agriculture ¹	40	{ Animal Nutrition Animal Husbandry Field Crops Horticulture Poultry Husbandry
Biological Science	40	{ Bacteriology Botany Genetics Physiology Zoology
Physical Science	55	{ Chemistry Mathematics Physics
Humanities	30	{ Economics English History Language Music Sociology
Military and Physical Training	12	{ Military Science Physical Education
Electives	33	{ Minor field of interest
<hr/>		
Total credits required for graduation	210	

¹ A total of 28 credits in Animal Nutrition and Animal Husbandry courses is required.



Agriculture is of Major Interest to both Students and Farmers of this Region.

Agronomy and Geology Courses

AGRONOMY COURSES

Ag 1. Crop Production. III. 5(5-0). Prerequisites: B 1, B 2, B 3, B 4.

A study of the principles of field crop production with special emphasis on cultural practices and botanical characteristics of crops grown in the State.

Ag 2. Soils. III. 6(5-3). Prerequisites: C 1, C 3, C 4.

A basic course dealing with the formation, properties, and management of soils with special attention given to soil conditions that affect plant growth and crop yields. The laboratory will include the study of moisture relations and elementary fertility analysis.

Ag 3. Crops Laboratory. I. 3(0-6). Prerequisite: Ag 1.

This course includes a study of botanical characteristics, classification, and judging of field crops.

Ag 18. Irrigation Practices. I. 3(3-0). Prerequisites: Ag 1, Ag 2.

A study of the systems used in irrigation, water supply, water measurement, methods of irrigation, soils in relation to irrigation, water efficiency, drainage, and the water requirements of different crops.

GEOLOGY COURSES**G 1. Physical Geology. II. 5(4-3).** Prerequisites: C 1, C 3, C 4.

A study of the earth, the materials which make up the earth, its structure, surface features, and the geological processes involved. One Saturday field trip is required.

G 2. Historical Geology. III. 5(4-3). Prerequisite: G 1.

A history of the development of the earth and its features from its origin to the present, and the accompanying evolutionary changes as revealed in the fossil record. One Saturday field trip is required.

Animal Husbandry Courses**AH 1. Introductory Animal Husbandry. I. 5(3-4).**

Selecting and evaluating beef cattle, dairy cattle, sheep, swine, and horses on a purebred and market basis. Emphasis placed on types, breeds, markets, and market classification.

AH 5. Livestock Judging. I. 2(0-4).

Selection and judging of market and breeding classes of livestock.

AH 7. Elements of Dairying. III. 3(2-2).

An introduction to the dairy industry. A brief study of the history and development of the industry and of the composition, properties, and food value of milk. An introduction to the manufacturing processes for butter, ice cream, cheese, and other dairy products.

AH 12. Feeds and Feeding. III. 5(4-2). Prerequisite: AH 1.

Feeds and their use in feeding livestock. Calculation of rations which meet requirements for maintenance, growth, and production.

AH 30. Meats. II. 4(0-8).

A study of meat from the producer's and consumer's standpoint. The slaughter, dressing, cutting, curing, and nutritive value of meats. Trips to packing plants.

Horticulture Course**H 1. General Horticulture. III. 5(4-2).** Prerequisite: 5 credits in Botany.

A general course covering the principles underlying the propagation, culture, improvement and marketing of horticultural crops.

Terminal Courses in Agriculture

A course of two years duration has been outlined for students who wish to study agricultural principles and procedures for their immediate practical value. Anyone interested in following this kind of endeavor rather than the course outlined for a college degree should write to the registrar for detailed information.



Lory Hall.

THE DIVISION OF ENGINEERING

This Division consists of the Departments of Civil Engineering, Electrical Engineering, Mechanical Engineering, and Industrial Arts and Industrial Arts Education.

The Engineering courses of study have a common freshman year and differ only slightly in the sophomore year. Basic subjects such as English, Chemistry, Mathematics, Physics, Mechanics and Drawing form an important part of the first two years. During their junior and senior years, students are directed toward their respective professions.

Civil, Electrical and Mechanical Engineering

COURSE OF STUDY FOR FRESHMAN YEAR

		Hours Lec.-Lab.	Quarters and Credits			
			I	II	III	
C	1	Inorganic Chemistry	3-4	5	-	-
C	3	Inorganic Chemistry	3-0	-	3	-
C	4	Inorganic Chemistry Laboratory	0-6	-	2	-
ES	40	Introduction to Government	2-0	2	-	-
ES	41	State and Local Government	2-0	-	2	-
ES	42	National Government	2-0	-	-	2
E	2, 3, 4	English Composition	3-0	3	3	3
M	15, 16, 17	Freshman Engineering Mathematics	5-0	5	5	5
ME	1, 2	Mechanical Drawing	0-6	2	2	-
ME	3	Descriptive Geometry	1-6	-	-	3
Ph	25	General Physics	3-4	-	-	5
PE	1, 2, 3	Physical Education	0-3	0.5	0.5	0.5
				17.5	17.5	18.5

Course in Civil Engineering

Graduates in Civil Engineering usually find work in one of the following fields: Irrigation engineering, highway engineering, structural engineering, sanitary engineering, or advanced study and research work. In the design of the Civil Engineering curriculum leading to a bachelor of science degree, these fields of probable employment have been kept in mind to provide the basic training which prepares students to enter any of these particular branches of Civil Engineering.

COURSE OF STUDY IN CIVIL ENGINEERING

SOPHOMORE YEAR

		Hours Lec.-Lab.	Quarters and Credits		
			I	II	III
CE 1	Elementary Surveying	3-3	4		..
CE 4	Advanced Surveying	2-3	..		3
CE 11	Engineering Problem Solution	0-3	1	..	
CE 15	Theoretical Mechanics (Statics).....	4-0		4	
ES 1	Economics	5-0		5	..
E 23	Public Speaking	3-0	..		3
E 50, 52	Modern Literature	2-0	2	..	2
M 36, 37, 38	Engineering Mathematics (Calculus) ..	4-0	4	4	4
Ph 26, 27	General Physics	3-4	5	5	..
PE 4, 5, 6	Physical Education	0-3	0.5	0.5	0.5
	Electives				4
			16.5	18.5	16.5

Civil Engineering Courses

- CE 1. Elementary Surveying. I. 4(3-3).** Prerequisite: M 16 or M 11.
Plane surveying methods of measuring distances, angles and elevations, including the theory and field practices used in making those measurements.
- CE 4. Advanced Surveying. III. 3(2-3).** Prerequisite: CE 1.
Geodetic surveying methods. Astronomic observations. Topographic surveys. Hydrographic surveys used in drainage and irrigation. Field practices in these branches.
- CE 11. Engineering Problem Solution. I. 1(0-3).** Prerequisite: M 16.
The theory and use of the slide rule. Formal and computational phases of the solution of problems in engineering.
- CE 15. Theoretical Mechanics (Statics). II. 4(4-0).** Prerequisites: M 36, Ph 25.
Coplanar, non-coplanar, concurrent and non-concurrent force systems. Centroids and moments of inertia.

Course in Electrical Engineering

The course of study in Electrical Engineering has for its objective the training of men for professional, industrial, or commercial careers in the application of present engineering art, and in the development of new engineering applications of electrical science.

In preparation for such a career the Electrical Engineering student must develop a working mastery of the basic sciences of mathematics and physics, not only as these sciences apply to mechanics, but especially electricity and magnetism. Equally vital to him is the ability to write and speak English effectively. Elements of chemistry and economics also will be needed.

The course leads to the degree of Bachelor of Science in Electrical Engineering.

COURSE OF STUDY IN ELECTRICAL ENGINEERING

SOPHOMORE YEAR

		Hours	Quarters and Credits		
		Lec.-Lab.	I	II	III
CE 1	Elementary Surveying	3-3	4		
CE 11	Engineering Problem Solution	0-3	1	--	
CE 15	Theoretical Mechanics (Statics).....	4-0		4	--
E 23	Public Speaking	3-0	--		3
E 50	Modern Literature	2-0	2		
EE 1	Principles of Electric and Magnetic Circuits	5-0		--	5
ES 1	Economics	5-0	--	5	--
M 36, 37, 38	Engineering Mathematics (Calculus) .	4-0	4	4	4
Ph 26, 27	General Physics	3-4	5	5	--
PE 4, 5, 6	Physical Education	0-3	0.5	0.5	0.5
	Electives				4
			16.5	18.5	16.5

Electrical Engineering Course

EE 1. Principles of Electric and Magnetic Circuits. III. 5(5-0). Prerequisites: M 37, Ph 27. Must be taken with or following M 38.

The course covers fundamental principles of electric and magnetic circuits, power and energy, induced and generated voltages.

¹ When this course is not offered at Fort Lewis, students in Electrical Engineering must take it at Fort Collins during the third quarter immediately preceding their junior year.

Course in Mechanical Engineering

Mechanical Engineering relates to the design, construction and operation of machinery; the generation and transmission of power, and the use of machines in economic production. Steam turbines, steam boilers, diesel engines, air-conditioning, refrigeration, new materials of construction—all of these are within the scope of mechanical engineering.

The course as presented at Colorado A & M College stresses fundamental principles and general application with enough specialization to fit students to enter the field of mechanical engineering after graduation.

COURSE OF STUDY IN MECHANICAL ENGINEERING

SOPHOMORE YEAR

		Hours		Quarters and Credits		
		Lec.	Lab.	I	II	III
CE 1	Surveying	3	3	4		
CE 11	Engineering Problem Solution	0	3	1		
CE 15	Theoretical Mechanics (Statics).....	4	0		4	
ES 1	Economics	5	0		5	
E 23	Public Speaking	3	0			3
E 50	Modern Literature	2	0	2		
M 36, 37, 38	Engineering Mathematics (Calculus) .	4	0	4	4	4
ME 5	Machine Drawing	0	6	2		
ME 15	Mechanism	3	0			3
ME 16	Mechanism Laboratory	0	6			2
Ph 26, 27	General Physics	3	4	5	5	
PE 4, 5, 6	Physical Education	0	3	0.5	0.5	0.5
	Electives					4
				18.5	18.5	16.5

Mechanical Engineering Courses

ME 1. Mechanical Drawing. I. 2(0-6).

Care and use of instruments; lettering; geometrical construction and projection.

ME 2. Mechanical Drawing. II. 2(0-6). Prerequisite: ME 1. A continuation of ME 1.

Isometric and other pictorial representations.

ME 3. Descriptive Geometry. III. 3(1-6). Prerequisite: ME 2.

The graphical representation of geometrical magnitudes in space.

ME 5. Machine Drawing. I. 2(0-6). Prerequisite: ME 2.

The production of detail and assembly drawings of machines.

ME 15. Mechanism. III. 3(3-0). Prerequisite: ME 5.

Elements of machinery; motion transmitting parts such as gears, belts, cams, link work, etc.

ME 16. Mechanism Laboratory. III. 2(0-6). Prerequisite: ME 5.

Drawing room practice to accompany ME 15.

THE DIVISION OF FORESTRY AND RANGE MANAGEMENT

The American public is progressively becoming more conscious of the need of managing and utilizing our natural resources in a wise and conservative manner. This brings a greater challenge than ever before to young men both in federal employment and in the fields of private endeavor. The State of Colorado in furtherance of the doctrine of wise conservative use of our resources maintains a Division of Forestry and Range Management at Colorado A & M College, where high quality technical instruction is offered. It is expected that competition in forestry and related fields will become increasingly keen; hence, only those students with better-than-average abilities should enter any one of the majors in the Division. For competent men, there will always be openings in forestry and allied professions.

Entering freshmen and transfer students will enroll in the General Science and Arts curriculum of the Division of Science and Arts until they are accepted in the Division of Forestry and Range Management. Beginning on February 1 of each year the Division will accept applications and select from the candidates the number which can be handled. For 1948 the number will be 100. All applications must be in by March 15. Students will be notified of the action taken on their application by May 1 in order that those accepted may arrange to meet the summer camp requirement.

The candidate must have completed a minimum of 2 quarters of college work before his application will be acted upon. He must have completed 3 quarters before he can be accepted and have earned 45 credits exclusive of credit for military service. In order to facilitate scheduling after acceptance by the Division and to insure graduation without loss of time, it is recommended that the candidate present 51 credits distributed as follows:

RECOMMENDED FRESHMAN YEAR

		Hours	Quarters and Credits		
		Lec.-Lab.	I	II	III
B	1, 3	General Botany	3-0	3	3
B	2, 4	General Botany Laboratory	0-4	2	2
B	23	Plant Classification	1-8	..	5
C	1	Inorganic Chemistry	3-4	5	..
C	3	Inorganic Chemistry	3-0	..	3
C	4	Inorganic Chemistry Laboratory	0-6	..	2
E	2, 3, 4	English Composition	3-0	3	3
ES	41	State and Local Government	2-0	2	..
ES	42	National Government	2-0	..	2
F	3, 4	Conservation Policy	2-0	2	2
F	34	Basic Mapping	0-8	..	3
M	10	Algebra	5-0	5	..
M	11	Trigonometry	3-0	..	3
PE	1, 2, 3	Physical Education	0-3	0.5	0.5
			18.5	17.5	18.5

Practical field instruction for a period of 12 weeks is given in the summer camp at Pingree Park, 55 miles west of Fort Collins, where permanent quarters are provided. The summer camp is a basic requirement for all degrees within the Division excepting the Forest Industries and Grazing

majors. Students in all majors, with these two exceptions, must satisfy the summer camp requirement the first summer after being accepted into the Division. The total expense per student is \$190, subject to changes as conditions warrant at the discretion of the College. Of the \$190, \$150 is for board and lodging and \$40 is for camp fees.

As a part of their class assignments, students are expected to take field trips as necessary to supplement on-campus instruction. Such trips are taken by chartered bus and paid for by the students.

After January 1, 1949, all students graduating from the Division will be required to have a minimum of two summers of acceptable field experience, one of which may be the summer camp. For majors in Forest Industries and Grazing the minimum will be three.

Students with physical handicaps who contemplate entering federal service should confer with United States Civil Service Commission. The College does not bar men who are physically handicapped, but the Civil Service Commission may.

COURSE OF STUDY IN FORESTRY AND RANGE MANAGEMENT

The Division prepares students for professional employment in forest management, forest industries, forest recreation, game management, range management, and grazing. Various Federal and state agencies employ many of the graduates, although there is an increasing opportunity with private enterprise.

Students accepted by the Division enter into the sophomore year and all courses are the same up to the beginning of the junior year. Candidates for admission into the sophomore year are held for courses as listed under Recommended Freshman Year.

SOPHOMORE YEAR

			Hours	Quarters and Credits		
			Lec.-Lab.	I	II	III
Ag	2	Soils	5-3	--	--	6
C	11	Organic Chemistry	3-6	5	--	--
CE	1	Elementary Surveying	3-3	4	--	--
E	23	Public Speaking	3-0	--	--	3
E	50, 51, 52	Modern Literature	2-0	2	2	2
ES	1	Economics	5-0	--	5	--
ES	50	General Sociology	5-0	--	--	5
G	1	Physical Geology	3-4	--	5	--
Ph	15	General Physics	3-4	--	5	--
Z	5	General Zoology	3-4	5	--	--
PE	4, 5, 6	Physical Education	0-3	0.5	0.5	0.5
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				16.5	17.5	16.5

Forestry Courses

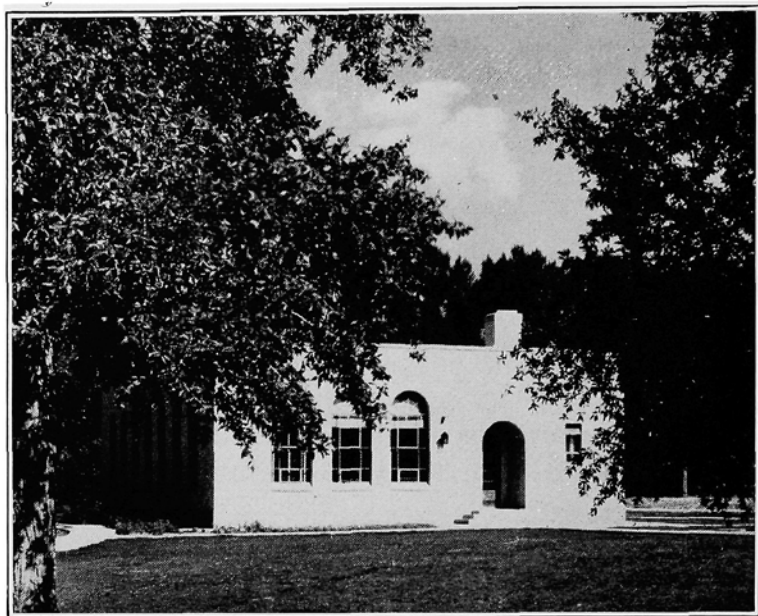
F 3. Conservation Policy. II. 2(2-0).

A survey of the forest, range, wild life and other natural resources together with the policies and programs which have been adopted for their protection and use.

F 4. Conservation Policy. III. 2(2-0). Continuation of F 3.

F 34. Basic Mapping. III. 3(0-8).

Fundamentals of forest mapping, use of staff compass, abney hand level and other specialized equipment.



The Library.

THE DIVISION OF HOME ECONOMICS

Since a majority of home economists become homemakers soon after graduation, Home Economics courses of study especially meet their needs for the responsibilities of homemaking and parenthood, and for higher education directed toward personal development and responsible community living. Home Economics courses also prepare graduates for a wide variety of professional fields.

Studies required of all students serve as an educational foundation for a range of specialized occupations. These include high-school and college home economics teaching; Extension Service work; hospital, school lunch-room, and institutional management services as dietitian; commercial work, including home economics service in business firms; and nursery school and day care center teaching and administration. Graduates who obtain suitable postgraduate study enter a wide range of professional activity including occupational therapy, research in chosen fields, and the social services.

College level Home Economics draws upon the physical, biological, and social sciences taught in other coordinate divisions of the College and applies them to the improvement of the individual and family living. Graduates occupying responsible positions find that professional success in Home Economics is usually attained only by those with better-than-average qualifications.

The sections of the subject-matter field from which students may choose a major, in preparation for a specific vocational opportunity, or graduate study are: Child Development, Foods and Nutrition, Occupational Therapy and Related Art, Home Management and Family Economics, Textiles and Clothing, and Vocational Home Economics Teaching.

COURSES OF STUDY IN HOME ECONOMICS

All students majoring in Home Economics follow the same general program for the first year. Thereafter the program depends upon the sequence chosen. The schedule of classes for the freshman year for all students follows:

		Hours		Quarters and Credits		
		Lec.	Lab.	I	II	III
C	1	Inorganic Chemistry	3-4	5	--	--
C	3	Inorganic Chemistry	3-0	--	3	--
C	4	Inorganic Chemistry Laboratory	0-6	--	2	--
E	2, 3, 4	English Composition	3-0	3	3	3
E	23	Public Speaking	3-0	--	--	3
E	51	Modern Literature, Novel	2-0	--	2	--
ES	90	Current World Problems	3-0	--	3	--
HE	01	Orientation	1-0	1	--	--
HE	1	Color and Design	1-4	3	--	--
HE	80	Elementary Textiles and Clothing Selection	5-0	--	5	--
HE	83	Principles of Clothing Construction...	0-10	--	--	5
¹ M	1	Basic Mathematics	5-0	--	--	5
Z	5	General Zoology	3-4	5	--	--
		or				
B	1	General Botany	3-0	3	--	--
B	2	General Botany Laboratory	0-4	2	--	--
PE	61, 62, 63	Physical Education	0-3	0.5	0.5	0.5
				17.5	18.5	16.5

SOPHOMORE COURSES in Home Economics will be available by petition only for the year 1948-49.

Home Economics Courses

HE 01. Orientation. I. 1(1-0).

Purposes of the home economics curricula in a land-grant college in educating for homemaking and for entering jobs in home economics and allied services. Opportunities and responsibilities of home economists. Required of entering freshmen. Transfer students may register if they have not already had a similar type of course.

HE 1. Color and Design. I. 3(1-4).

Color as found in light rays and pigments. Principles of balance, rhythm, and harmony applied to original designs. Art appreciation.

¹ Students offering on entrance three full units of mathematics including Algebra and Geometry, are exempt from the College requirement.

HE 80. Elementary Textiles and Clothing Selection. II. 5(5-0). Prerequisite: HE 1, or consent of instructor.

Application of art and economic principles to the selection of textiles and clothing.

HE 83. Principles of Clothing Construction. III. 5(0-10). Prerequisite: HE 80, or consent of instructor.

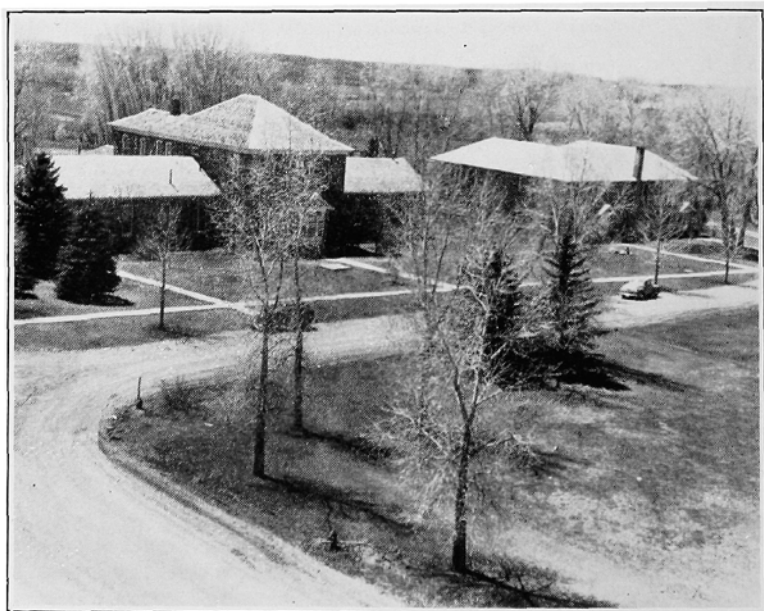
Fundamental construction processes applied to the making of cloth becoming to the individual. Study and use of commercial patterns.

FN 1. Survey of Nutrition. III. 2(1-2).

How to choose an adequate diet. How to plan and serve appetizing and nutritious meals. Designed for men and women from all departments. FN 34 and FN 42 are still required for all Home Economics students for graduation.

FN 27. Elementary Food Preparation. I, II. 3(1-4).

How to cook. Designed for men and women from all departments. FN 30 and FN 31 are required for all Home Economics students for graduation.



A View of the South End of the Campus.

THE DIVISION OF SCIENCE AND ARTS

Botany and Plant Pathology, Chemistry, Economics, Sociology, English, General Science and Arts, Mathematics, Music, Physics, Physical Education (Men and Women), Psychology and Education

The Division of Science and Arts offers several distinct types of educational training.

Basic Courses, Chiefly Freshman and Sophomore.—During their first two years in college, students from all Divisions take much of their work in the Division of Science and Arts. The basic courses of this Division prepare beginning students for the more specialized studying they will do during their later years in the Divisions of Agriculture, Engineering, Forestry and Range Management, Home Economics, and Veterinary Medicine. Foundation courses in mathematics and the basic sciences are provided by the Departments of Mathematics, Botany, Chemistry, and Physics. The Department of English and Modern Languages is concerned with the establishment of correct habits of communication and expression. The constantly changing forces of our complex civilization are the subject of study in Economics, Sociology and History. The Department of Physical Education cares for the health and well-being of the students. The Music Department adds to the enrichment and enjoyment of college years and makes a distinct contribution to the cultural life of the campus.

Majors Leading to a Degree.—Within the scope of this Land-Grant College, students may specialize in several fields of study. The major in Botany and Plant Pathology gives training for research and educational work in that field. The course in Chemistry prepares students for educational work and for research or industrial chemistry. Students majoring in Economics and Sociology prepare for research or teaching in those fields or for rural leadership or private enterprise. Major courses of study in English, Mathematics, and Physics give excellent training in those fields preparatory to teaching or graduate work. The major in Music is designed especially for training students to teach music in the public schools. The Department of Physical Education offers majors for both men and women. The course of study prepares men students for teaching physical education, for health instruction, and for coaching. Women majors in this department receive training for instructing in physical education and health. The curriculum in Psychology is designed to provide training for the following groups: Those students who desire a broad cultural background; those who are preparing for fields such as teaching and personnel service which require an understanding of human behavior and adjustment, and those who intend to work for advanced degrees in Psychology, Guidance and Counseling, or related fields.

Graduates of the 2- and 3-year courses in Education find many opportunities in the schools of the San Juan Basin. There is an increasing demand for those who have prepared to teach in our rural schools. Many Fort

Lewis graduates have established such fine teaching standards in the Basin schools that it has been impossible to supply enough candidates to meet the demand. The opportunities are good for those who are sincere in their desires and efforts to prepare adequately to teach.

In addition to these majors offered by the Colorado A & M College, other fields are open to students. If careful selection of courses is made to meet the requirements of the first 2 years, work may be continued in other institutions of higher learning.

In general, these students should satisfy the following requirements during the first 2 years:

Biological Science	9 quarter credits
English Language	9 quarter credits
Literature or Language	9 quarter credits
Physical Science	9 quarter credits
Social Science	9 quarter credits
Physical Education	3 quarter credits
Mathematics	8 quarter credits

Freshmen must register for English Language and Physical Education and should include two of the other required courses. The specific requirements not met in the freshman year should be met in the sophomore year.

Botany and Plant Pathology Courses

B 1. General Botany. I. 3(3-0).

The structure and functions of higher plants.

B 2. General Botany Laboratory. I. 2(0-4). Laboratory to accompany B 1.

Credit not given independently from credits for B 1.

B 3. General Botany. II. 3(3-0).

The development of plants from simple to complex forms.

B 4. General Botany Laboratory. II. 2(0-4). Laboratory to accompany B 3.

Credit not given independently from credits for B 3.

¹B 13. Introduction to Biological Science. II. 4(3-3).

A lecture-discussion and laboratory course in general biology. It is the aim of this course to give the student a better understanding of the plant and animal life in his environment. Life functions form the basis of discussion.

B 23. Plant Classification. III. 5(1-8). Prerequisite: A minimum of 10 credits in general botany.

Identification and systematic relationship of flowering plants.

¹ This course is acceptable only toward a major in elementary education or commerce.

Courses in Business

Courses in General Business, Accounting and Business Administration, and Secretarial Science may lead to employment at the end of two years. This work may be transferred to other institutions of higher learning where business departments are maintained.

COURSE OF STUDY FOR ACCOUNTING AND BUSINESS ADMINISTRATION

FRESHMAN YEAR

		Hours Lec.-Lab.	Quarters and Credits		
			I	II	III
B 13	Introduction to Biological Science	3-3		4	
BA 1	Introduction to Business Administration	3-0	..	3	
BS 1, 2	Typewriting	0-6	2	2	
BS 30	Introduction to Accounting	0-6	3		
BS 31	Proprietorship and Partnership Accounting	0-6		3	..
BS 32	Corporation Accounting	0-6			3
BS 36	Payroll and Social Security Accounting	3-0	..		3
ES 40	Introduction to Government	2-0	2	..	
ES 41	State and Local Government	2-0		2	..
E 2, 3, 4	English Composition	3-0	3	3	3
M 1	Basic Mathematics	5-0	..		5
Ph 1	Introduction to Physical Science	4-0	4	..	..
PE 1, 2, 3	Physical Education (Men)	0-3	0.5	0.5	0.5
PE 61, 62, 63	Physical Education (Women)	0-3	0.5	0.5	0.5
	Electives		3		3
			17.5	17.5	17.5

SOPHOMORE YEAR

		Hours Lec.-Lab.	Quarters and Credits		
			I	II	III
BA 2	Money and Banking	3-0	..		3
BS 21	Filing Systems	0-3	3		..
BS 34	Cost Accounting	0-6	3	..	..
BS 35	Advance Accounting Problems	0-6		3	..
ES 1	Economics	5-0	..	5	..
ES 35	Geography	5-0	5		..
ES 50	General Sociology	5-0	..	..	5
ES 86, 87, 88	World History	3-0	3	3	3
Ed 10	Psychology	4-0	4		..
E 22	Vocabulary Building	3-0		..	3
E 23	Public Speaking	3-0	..	..	3
PE 4, 5, 6	Physical Education (Men)	0-3	0.5	0.5	0.5
PE 64, 65, 66	Physical Education (Women)	0-3	0.5	0.5	0.5
	Electives			6	
			18.5	17.5	17.5

COURSE OF STUDY FOR GENERAL BUSINESS

FRESHMAN YEAR

		Hours Lec.-Lab.	Quarters and Credits			
			I	II	III	
B	13	Introduction to Biological Science.....	3-3		4	
BA	1	Introduction to Business				
		Administration	3-0		3	
BS	1, 2	Typewriting	0-6	2	2	
BS	10, 11	Theory of Shorthand.....	3-0	3	3	
BS	12	Intermediate Shorthand.....	3-0			3
BS	30	Introduction to Accounting	0-6	3		
BS	31	Proprietorship and Partnership				
		Accounting	0-6		3	
BS	32	Corporation Accounting	0-6			3
E	2, 3, 4	English Composition	3-0	3	3	3
E	22	Vocabulary Building	3-0			3
Ph	1	Introduction to Physical Science	4-0	4		
PE	1, 2, 3	Physical Education (Men)	0-3	0.5	0.5	0.5
PE	61, 62, 63	Physical Education (Women)	0-3	0.5	0.5	0.5
		Electives		2		5
				<hr/>	<hr/>	<hr/>
				17.5	18.5	17.5

SOPHOMORE YEAR

		Hours Lec.-Lab.	Quarters and Credits			
			I	II	III	
BA	2	Money and Banking	3-0			3
BS	13, 14	Advanced Shorthand	3-0	3	3	
BS	18	Office Practice	1-4			3
BS	19	Secretarial Practice	1-4		3	
BS	21	Filing Systems	0-3	3		
BS	34	Cost Accounting	0-6	3		
BS	35	Advanced Accounting Problems.....	3-0		3	
BS	36	Payroll and Social Security				
		Accounting	3-0			3
ES	1	Economics	5-0		5	
ES	50	General Sociology	5-0			5
Ed	10	Psychology	4-0	4		
PE	4, 5, 6	Physical Education (Men)	0-3	0.5	0.5	0.5
PE	64, 65, 66	Physical Education (Women)	0-3	0.5	0.5	0.5
		Electives		4	3	3
				<hr/>	<hr/>	<hr/>
				17.5	17.5	17.5

COURSE OF STUDY FOR SECRETARIAL SCIENCE

FRESHMAN YEAR

		Hours Lec.-Lab.	Quarters and Credits		
			I	II	III
B 13	Introduction to Biological Science.....	3-3	..	4	
BS 1, 2	Typewriting	0-6	2	2	
BS 10, 11	Theory of Shorthand	3-0	3	3	..
BS 12	Intermediate Shorthand	3-0	..	..	3
BS 30	Introduction to Accounting	0-6	3	..	..
BS 31	Proprietorship and Partnership Accounting	0-6	..	3	..
BS 36	Payroll and Social Security Accounting	3-0	..	..	3
E 2, 3, 4	English Composition	3-0	3	3	3
E 22	Vocabulary Building	3-0	..	..	3
Ph 1	Introduction to Physical Science	4-0	4	..	..
PE 1, 2, 3	Physical Education (Men)	0-3	0.5	0.5	0.5
PE 61, 62, 63	Physical Education (Women)	0-3	0.5	0.5	0.5
	Electives		2	2	5
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			17.5	17.5	17.5

SOPHOMORE YEAR

		Hours Lec.-Lab.	Quarters and Credits		
			I	II	III
BS 13, 14	Advanced Shorthand	3-0	3	3	..
BS 18	Office Practice	1-4	..	..	3
BS 21	Filing Systems	0-3	3	..	..
BS 19	Secretarial Practice	1-4	..	3	..
ES 1	Economics	5-0	..	5	..
ES 50	General Sociology	5-0	..	..	5
ES 86	World History	3-0	3	..	..
Ed 10	Psychology	4-0	4	..	..
E 23	Public Speaking	3-0	..	..	3
E 50, 51	Modern Literature	2-0	2	2	..
PE 4, 5, 6	Physical Education (Men)	0-3	0.5	0.5	0.5
PE 64, 65, 66	Physical Education (Women)	0-3	0.5	0.5	0.5
	Electives		2	4	6
			<hr/>	<hr/>	<hr/>
			17.5	17.5	17.5

Business Science Courses

BS 1. Typewriting. I. 2(0-6).

Fundamental course in mastering the technique of typewriting.

BS 2. Typewriting. II. 2(0-6). Prerequisite: BS 1 or 1 year of high-school typing.

Development of speed and accuracy.

BS 10. Theory of Shorthand. I. 3(3-0).

Fundamentals of Gregg shorthand.

BS 11. Theory of Shorthand. II. 3(3-0). Prerequisites: BS 1 and BS 10. A continuation of BS 10.

BS 12. Intermediate Shorthand. III. 3(3-0). Prerequisites: BS 1 and BS 11 or its equivalent.

Drill on brief forms and special forms. Dictation from new matter. Dictation of 80 to 100 words per minute required.

¹BS 13. Advanced Shorthand. I. 3(3-0). Prerequisites: BS 2 and BS 12 or its equivalent.

Advanced dictation. Dictation of 100 to 120 words per minute required.

¹BS 14. Advanced Shorthand. (continued.) II. 3(3-0). Prerequisite: BS 13 or its equivalent.

Advanced speed dictation and transcription.

¹BS 18. Office Practice. III. 3(1-4). Prerequisites: BS 2 and BS 12.

Combination of instruction in the use of office machines and experience in the administrative offices of the college.

¹BS 19. Secretarial Practice. II. 3(1-4). Prerequisites: BS 2 and BS 12.

Designed to place further emphasis upon speed and accuracy in typing and to stress the transcribing of letters, business forms and tabulated material.

¹BS 21. Filing Systems. I. 3(0-3). Prerequisite: BS 2 or equivalent.

A study of filing systems and practical application of principles.

¹BS 30. Introduction to Accounting. I. 3(0-6).

A beginning course in accounting which deals primarily with the mechanics of record keeping.

¹BS 31. Proprietorship and Partnership Accounting. II. 3(0-6). Prerequisite: BS 30.

The principles of accounting which apply to special books and records of proprietorship and partnership.

¹BS 32. Corporation Accounting. III. 3(0-6). Prerequisite: BS 31.

The principles of accounting which apply to special books and records of corporation.

¹BS 34. Cost Accounting. I. 3(0-6). Prerequisite: BS 31.

The principles of distributions of overhead, direct materials and labor, as to unit costs.

¹BS 35. Advanced Accounting Problems. II. 3(3-0). Prerequisite: 12 hours of accounting.

Deals with advanced accounting problems.

¹BS 36. Payroll and Social Security Accounting. III. 3(3-0). Prerequisite: BS 30.

¹BA 1. Introduction to Business Administration. II. 3(3-0).

General exploration and orientation covering the area of business.

¹BA 2. Money and Banking. III. 3(3-0). Prerequisite: Principles of Economics.

¹This course is acceptable only toward a major in elementary education or commerce.

Course in Chemistry

In this course strong basic work in inorganic, organic, analytical, and physical chemistry, mathematics, and physics are required. Most of this fundamental work comes in the first 2 years. In the junior and senior years, students are given an option in selection of the more advanced courses in Chemistry—inorganic, organic, physiological, agricultural, etc. This permits preparation with a bachelor of science degree for many different fields of work in industrial and in agricultural chemistry and in research. It also affords excellent preparation for teachers of the physical sciences and mathematics and for those who are preparing to enter a medical school.

FRESHMAN YEAR

		Hours		Quarters and Credits		
		Lec.-Lab.				
			I	II	III	
C	1	Inorganic Chemistry	3-4	5	..	
C	3	Inorganic Chemistry	3-0		3	
C	4	Inorganic Chemistry Laboratory	0-6		2	..
C	31	Inorganic Qualitative Analysis	2-0			2
C	32	Inorganic Qualitative Analysis Laboratory	0-6	..	..	3
E	2, 3, 4	English Composition	3-0	3	3	3
E	50, 51, 52	Modern Literature	2-0	2	2	2
ES	40	Introduction to Government	2-0	2	..	
ES	41	State and Local Government	2-0		2	..
ES	42	National Government	2-0	..	..	2
M	15, 16, 17	Freshman Engineering Mathematics...	5-0	5	5	5
PE	1, 2, 3	Physical Education (Men)	0-3	0.5	0.5	0.5
PE	61, 62, 63	Physical Education (Women)	0-3	0.5	0.5	0.5
				17.5	17.5	17.5

SOPHOMORE YEAR

		Hours		Quarters and Credits		
		Lec.-Lab.				
			I	II	III	
C	11	Elementary Organic Chemistry.....	3-6	5	..	..
C	15, 17	Organic Chemistry	3-0		3	3
C	16, 18	Organic Chemistry Laboratory.....	0-6		2	2
C	33	Instruments and Chemical Measurements	3-0	3		
C	35	Quantitative Analysis Laboratory.....	0-6	2	..	
C	36	Quantitative Analysis	2-9	..	5	..
M	36, 37, 38	Engineering Mathematics (Calculus) .	4-0	4	4	4
Ph	25	General Physics	3-4	..	..	5
PE	4, 5, 6	Physical Education (Men)	0-3	0.5	0.5	0.5
PE	64, 65, 66	Physical Education (Women)	0-3	0.5	0.5	0.5
		¹ Humanities		3	3	3
				17.5	17.5	17.5

¹ Humanities: At least the equivalent of one-half of a student's resident time for one year must be devoted to the study of the humanities, which may be interpreted as non-specialized courses other than the physical sciences. This is exclusive of the required English Composition and Languages. This requirement may be met at the student's convenience during his residence and prior to his graduation.

Chemistry Courses

- C 1. Inorganic Chemistry. I. 5(3-4).**
Study of the basic principles of the science and chemistry of the non-metallic elements.
- C 3. Inorganic Chemistry. II. 3(3-0).** Prerequisite: C 1. Must be accompanied by C 4. A continuation of C 1.
Includes chemistry of metallic elements.
- C 4. Inorganic Chemistry Laboratory. II. 2(0-6).**
Exercises to accompany C 3.
- C 11. Elementary Organic Chemistry. I. 5(3-6).** Prerequisites: C 3, C 4.
A study of the fundamental principles of organic chemistry and the chemistry of aliphatic compounds.
- C 15. Organic Chemistry. II. 3(3-0).** Prerequisite: C 11. Must be accompanied by C 16.
The chemistry of fats, carbohydrates, and proteins.
- C 16. Organic Chemistry Laboratory. I, II. 2(0-6).** Accompanies C 15.
- C 17. Organic Chemistry. III. 3(3-0).** Prerequisite: C 15. Must be accompanied by C 18.
Chief emphasis will be placed on the chemistry of cyclic compounds.
- C 18. Organic Chemistry Laboratory. III. 2(0-6).** Accompanies C 17.
- C 31. Inorganic Qualitative Analysis. III. 2(2-0).** Prerequisites: C 3, C 4.
Usually accompanied by C 32.
A discussion of the principles of inorganic analytical separations.
- C 32. Inorganic Qualitative Analysis Laboratory. III. 3(0-6).** Must be accompanied by C 31.
Practice in the separation and identification of common cations and anions.
- C 33. Instruments and Chemical Measurements. I. 3(3-0).** Prerequisites: C 3 and C 4.
A consideration of the theory and techniques involved in the use of modern analytical instruments in quantitative analysis. It is recommended that this course be accompanied by C 34 or C 35.
- C 35. Quantitative Analysis Laboratory. I. 2(0-6).** Prerequisites: C 31 and C 32.
Methods of quantitative analysis. This course is for chemistry majors and others who desire more practice in quantitative analysis than C 34 offers.
- C 36. Quantitative Analysis. II. 5(2-9).** Prerequisites: C 31, C 32, C 33, C 35.
A continuation of the study of the principles and practices of inorganic quantitative analysis.

- C 41. **Elements of Biochemistry. III. 3(3-0).** Prerequisites: C 15 and C 16. Must be accompanied by C 42 or C 44.
Fundamentals of biochemistry applied to animal nutrition; chemistry of digestion, assimilation, and metabolism; internal secretions, blood, and urine.
- C 42. **Elementary Biochemistry Laboratory. III. 2(0-4).** Designed especially for students in Home Economics. Exercises to accompany C 41.
Laboratory practice with various constituents of living matter; determination of important constituents of blood and urine.
- C 44. **Agricultural Biochemistry Laboratory. III. 2(0-4).** Exercises to accompany C 41.
Biochemical applications in agriculture and related industries.

Economics Course

- ES 1. **Economics. II. 5(5-0).** Prerequisite: Sophomore standing.
The study of economic principles in present-day economic organization; the production and distribution of wealth and income, money, banking, and the forces determining price.

Sociology Course

- ES 50. **General Sociology. III. 5(5-0).** Prerequisite: Sophomore standing or consent of instructor.
Origin, development, and change of the social structure, and how it affects the development of human nature; kinds of collective behavior; social control and social planning.

Geography Course

- ES 35. **Geography. I. 5(5-0).**
A comprehensive course covering: The relation of man to his environment; the effect of physical geography on man's activities. The effect of geographic environment upon the utilization of natural resources and their relation to the development of economic activity. Population as related to physical and economic aspects of geography and to the growth of nations.

History and Government Courses

- ES 9. **Colorado School Law and Government. III. 2(2-0).**
A study of the school law of Colorado and of the governmental organization of the State as related to the schools. Intended primarily for those who expect to teach in the public schools of the State.
- ES 40. **Introduction to Government. I. 2(2-0).**
A study of government as a universal social phenomenon. Attention is given to the various forms of government, and to current problems seeking solution through government.
- ES 41. **State and Local Government. II. 2(2-0).**
A fundamental course dealing with the organization, principles, and actual working of American state and local governments.

¹ This course acceptable only toward a major in elementary education or commerce.

ES 42. National Government. III. 2(2-0).

A fundamental course dealing with the organization, principles, and functions of the Federal government, with emphasis on the relationship and responsibilities of the citizen to it.

ES 80. Early American History. I. 3(3-0).

The European background to American History, the colonial period, the Revolution, and the development of the United States from Washington through Jackson (1607-1837).

ES 81. The Middle Period in American History. II. 3(3-0).

The slavery controversy, the Civil War, reconstruction, the growth of industry, and the awakening of interest in world affairs (1837-1898).

ES 82. United States in the Modern World. III. 3(3-0).

A study of American history from the Spanish-American war to the present day.

ES 86. World History. I. 3(3-0).**ES 87. World History. II. 3(3-0).****ES 88. World History. III. 3(3-0).**

This series of courses offers a survey of world civilizations. It deals with the political, social, economic, and cultural development of the world from ancient times to the present day.

ES 89. Current Topics. I. 2(2-0).

A study of current history as reported in the press.

ES 90. Current World Problems. II. 3(3-0).

A study of the problems evolving from World War II, with emphasis upon an interpretation of the news.

English Courses

E 1. English Composition Review. I. 1(3-0). Required of students who are not prepared to take E 2.

Drill in basic language skills through a remedial reading approach.

E 2. English Composition. I. 3(3-0).

Practice in both written and oral composition. This course is designed to develop correct language habits and to train the student in logical thought and effective expression.

E 3. English Composition. II. 3(3-0). Prerequisite: E 2. Continuation of E 2.

This course trains the students in collecting, organizing, and presenting material in larger units of composition.

E 4. English Composition. III. 3(3-0). Prerequisite: E 3. Continuation of E 2 and E 3.

This course takes up narrative and descriptive writing. It attempts to train the student to record what his senses respond to and to apply imagination to the facts of sensory experiences.

E 12. Journalistic Writing: Basic News Writing. I. 3(3-0).

A study of what news is, with constant practice in news gathering, interviewing, writing effective leads, style book usage, and the cultivation of accuracy and vivid news style. Copy prepared by students is submitted to the Collegian.

¹ This course acceptable only toward a major in elementary education or commerce.

- E 13. Journalistic Writing: The Copy Desk. II. 3(3-0).** Prerequisite: E 12.
A course in copyreading and editing, designed to give the student practice in judging news values, correcting copy with standard symbols, re-writing, headline writing, and marking copy for the composing room. Essential knowledge of typography, styles of page make-up, and page dummying are included.
- E 22. Vocabulary Building. III. 3(3-0).**
The study of words; designed to stimulate growth and accuracy in vocabulary.
- E 23. Public Speaking. III. 3(3-0).** Prerequisite: E 2.
A course in the fundamentals of public speaking with the emphasis on gaining self-confidence, organizing effective short talks, and insuring audience response.
- E 26. Public Discussion. I. 3(3-0).** Prerequisite: E 3.
The organization and conduct of group discussions of various types: the forum, the panel, the symposium, the debate. Emphasis on effective argument and persuasion.
- E 50. Modern Literature: Biography. I, II, III. 2(2-0).**
American life and ideals presented through biography. Thoreau's *Walden*, Dana's *Two Years Before the Mast*, and Steffen's *Autobiography*.
- E 51. Modern Literature: Novel. I, II, III. 2(2-0).**
American life and problems as presented through some significant novels. Melville's *Moby Dick*, Lewis' *Arrowsmith*, and Steinbeck's *The Grapes of Wrath*.
- E 52. Modern Literature: Poetry and Drama. I, II, III. 2(2-0).**
The form, themes, and art of modern drama and poetry and their concerns with life of today.
- E 53. American Literature from the Puritans to Bryant. I. 3(3-0).** Prerequisite: E 4.
A study of the development of American literature to the early nineteenth century with special emphasis on intellectual currents.
- E 54. American Literature from Bryant to Whitman. II. 3(3-0).** Prerequisite: E 4. Continuation of E 53.
A study of American literature from the early nineteenth century to the close of the Civil War.
- E 55. American Literature from Whitman to the Present. III. 3(3-0).** Prerequisite: E 4. Continuation of E 54.
A study of American literature from the Civil War to the present.
- E 68. Children's Literature. II. 3(3-0).** Required in the course in Education, sophomore year.
A survey of literature for the elementary schools, study of principles governing the choice of literature as well as the opportunity of making and presenting type units in the teaching of literature, the graphic arts and music.
- E 69. Children's Literature. III. 3(3-0).** A continuation of E 68.

¹ This course acceptable only toward a major in elementary education or commerce.

Course in General Science and Arts

Many students wish to obtain a college education without specializing in a particular field of study. For such, the following course in General Science and Arts provides a diversified course of study leading to a bachelor of science degree. Two years of work (or 105 quarter credits) may be earned at Fort Lewis toward this degree with a major in General Science and Arts at the parent institution. It also offers broad basic training for those who plan to continue their education in graduate or professional schools.

As far as possible this program attempts to fit the course of study to the interests and needs of the student. It is not rigidly prescribed. Although a minimum number of credits are required in a number of fields, as listed below, the course in General Science and Arts provides a maximum number of electives. The student is expected to work with his advisor in early outlining a course, which must be approved by the Dean of the Division of Science and Arts.

This course should be considered by those planning to prepare for high-school teaching in biology, chemistry, English, history, mathematics, modern languages, physics, and the social sciences; and by those who intend to study dentistry, law, medicine or business administration.

COURSE OF STUDY IN GENERAL SCIENCE AND ARTS

Group	Approximate minimum credits required	Selected from:
Physical Science	20	{ Chemistry Physics Geology Mathematics
Biological Science	20	{ Entomology Zoology Physiology Botany Bacteriology Genetics
Language-Arts	20	{ Foreign Language English Literature, etc. Music: Vocal Instrumental School Music Art: Painting Etching Art Appreciation, etc.

Social Science	20	{ History Government Political Geography Economics Sociology Psychology
<hr style="width: 100%;"/> Total required from the above.....		120
Physical Education, or Recreational Training		3
¹ Electives		87
<hr style="width: 100%;"/> Total credits required for graduation.....		210

Mathematics Courses

- M 1. **Basic Mathematics. III. 5(5-0).**
Elementary algebra and elementary statistics.
- M 10. **Algebra. I, II. 5(5-0).**
- M 11. **Trigonometry. I, III. 3(3-0).**
- M 15. **Freshman Engineering Mathematics. I. 5(5-0).** Prerequisites: 1.5 units of high-school algebra, and 1 unit of plane geometry.
- M 15a. **Freshman Engineering Mathematics. I. 5(8-0).**
For engineering students deficient in high-school algebra.
- M 16. **Freshman Engineering Mathematics. II. 5(5-0).** Prerequisite: M 15 or M 15a.
- M 16a. **Freshman Engineering Mathematics. II. 5(7-0).** Prerequisite: M 15 or M 15a.
For engineering students deficient in high-school solid geometry.
- M 17. **Freshman Engineering Mathematics. III. 5(5-0).** Prerequisite: M 16 or M 16 a.
- M 36. **Engineering Mathematics (Calculus). I. 4(4-0).** Prerequisite: M 17.
With M 37 and M 38, comprises the standard college course in calculus.
- M 37. **Engineering Mathematics (Calculus). II. 4(4-0).** Prerequisite: M 36.
- M 38. **Engineering Mathematics (Calculus). III. 4(4-0).** Prerequisite: M 37.

¹ Education and Military Science may possibly use 15 and 27 credits.

Modern Language Courses¹

- ²L 21. **First-Year Spanish. I. 5(5-0).**
A course in grammar, prose composition, reading, and conversation.
- ²L 22. **First-Year Spanish. II. 5 (5-0).** Prerequisite: L 21.
Further study of Spanish grammar with emphasis on reading, composition, and conversation.
- ²L 23. **First-Year Spanish. III. 5(5-0).** Prerequisite: L 22.
Further study of Spanish grammar with emphasis on reading, composition, and conversation.
- ²L 40. **First-Year German. I. 5(5-0).**
A course in grammar, pronunciation, and reading.
- ²L 41. **First-Year German. II. 5(5-0).** Prerequisite: L 40.
A continuation of the study of grammar, pronunciation, and reading.
- ²L 42. **First-Year German. III. 5(5-0).** Prerequisite: L 41.
A continuation of the study of grammar, pronunciation, and reading.

Music Courses

- Mu 3. **Fundamental Theory. I. 5(5-0).**
Development of melodic and rhythmic feeling through reading and dictation. Drill in the rudiments of music. Scales, intervals, triads, chord connections. Harmonization of melodies, basses and original works. Simple keyboard harmony. Work in cadence forms.
- Mu 4. **Fundamental Theory. II. 5(5-0).** Prerequisite: Mu 3. A continuation of Mu 3.
- Mu 5. **Fundamental Theory. III. 5(5-0).** Prerequisite: Mu 3.
Melodic and simple diatonic dictation. Inversions of the dominant seventh chord. Secondary seventh chords. Dominant ninth chords. Diatonic modulation. Assigned melodies and basses; original composition; keyboard harmony.
- Mu 9. **Advanced Theory. I. 5(5-0).** Prerequisite: Mu 5.
Ear training and dictation. Choral style simple chromatic melodies. Chromatic harmony used as embellishment of, and a substitute for diatonic harmony. Continued work in original composition and keyboard harmony.
- Mu 10. **Advanced Theory. II. 5(5-0).** Prerequisite: Mu 9. Continuation of Mu 9.
Further development of the chromatic element. The augmented sixth chords. Chromatic modulations; keyboard harmony.

¹ NOTE: Students having high-school credit for two years of a foreign language, may not take the first year of the same language in college for credit.

² Offered alternate years beginning 1949.

³ Offered alternate years beginning 1948.

- Mu 11. Advanced Theory. III. 5(5-0).** Prerequisite: Mu 10.
Emphasis on original composition for voice and instrument; accompaniment writing. Contrapuntal devices.
(Courses Mu 3 to Mu 11 include sight singing, ear training, harmony, and keyboard harmony.)
- Mu 15. History of Music. I. 3(3-0).**
Study of sources of our music. Beginnings of scale, notation, harmony, etc. Early schools of composition, culminating in Palestrina, Bach, and Handel.
- Mu 16. History of Music. II. 3(3-0).**
Evolution of the modern sonata traced through Haydn, Mozart, and Beethoven. Rise of Romanticism and the music of the romantic composers: Schubert, Mendelssohn, Schumann, Chopin, Liszt, and others.
- Mu 17. History of Music. III. 3(3-0).**
The opera from Gluck to Wagner. Effect of Wagner's theories on music to present day. Brahms and "the cause of absolute music." Nationalistic composers, including Tschaiowsky, Dvorak, Sibelius, and Grieg. French Impressionism: Franck, Debussy, Ravel, and others.
- Mu 52. Stringed Instrument Class. II. 3(3-0).**
Instruction in the playing of stringed instruments with instruments in the hands of students. Emphasis placed on the problems of public-school music class instruction.
- ¹Mu 77. Appreciation of Music. I, II, III. 3(3-0).**
A non-technical course in the appreciation and enjoyment of music.
- Piano. Freshman Year. I, II, III. Four credits each quarter.** Study of scales and arpeggios in various patterns. Study of Clementi and Kuhnau Sonatinas, Haydn and Mozart sonatas, easier Chopin works, and Bach inventions.

(Students planning to major in piano must satisfactorily perform for the faculty upon entering the course. Piano majors take two 30-minute private lessons per week and one 1-hour class lesson each week for all 4 years. The class lesson will include all piano majors in the school and will be conducted as a laboratory for the study of piano literature, pedagogy, accompanying, and criticism.)
- (For Music Education Majors. I, II, III. Two credits each quarter.** One half-hour private lesson per week. Music Education majors must continue piano study until they have passed a satisfactory examination.)
- Piano. Sophomore Year. I, II, III. Four credits each quarter.**
Study of Mozart and Beethoven Sonatas, Chopin Preludes, Nocturnes and easier Etudes, Bach "Well-Tempered Clavichord," Scarlatti, and modern works of medium difficulty. Further technical work according to student's needs.

¹ This course is acceptable only toward a major in elementary education or commerce.

Physical Education

Course in Physical Education for Men

The undergraduate curriculum in Physical Education for Men leading to a bachelor of science degree, is not designed for specialization in any one of its phases. The aim is rather to provide a type of training so that when a graduate becomes a teacher he is familiar with certain aspects of health education and the various aspects of Physical Education, including recreation and athletics.

COURSE OF STUDY IN PHYSICAL EDUCATION FOR MEN

FRESHMAN YEAR

		Hours Lec.-Lab.	Quarters and Credits		
			I	II	III
E	2, 3, 4	English Composition	3	3	3
ES	40	Introduction to Government	2	..	..
ES	41	State and Local Government	2	2	..
ES	42	National Government .....	..	..	2
ES	86, 87	World History	3	3	..
M	1	Basic Mathematics .....	..	..	5
PE	17	The Officiating and Management of Sports .....	..	..	3
PE	21, 22, 23	Physical Education Laboratory	2	2	2
PE	35	Personal Hygiene	3	..	..
PE	36	Community Health .....	..	3	..
PE	40	Organized Camps and Camping .....	..	..	3
VP	21	Human Anatomy and Physiology .....	..	5	..
Z	5	General Zoology	5	..	..
			18	18	18

SOPHOMORE YEAR

		Hours Lec.-Lab.	Quarters and Credits		
			I	II	III
C	1	Inorganic Chemistry	5	..	..
E	23	Public Speaking .....	..	..	3
E	50	Modern Literature	2	..	..
E	51	Modern Literature .....	..	2	..
Ed	10	General Psychology	4	..	..
ES	50	General Sociology .....	..	..	5
PE	10	Theory and Practice of Tennis	2	..	..
PE	11	Theory and Practice of Gymnastics	2	..	..
PE	12	Training Room Methods .....	..	3	..
PE	24, 25, 26	Physical Education Laboratory	2	2	2
PE	43	Industrial Recreation .....	..	..	3
PE	50	Methods of Baseball .....	..	2	..
PE	51	Methods of Track and Field .....	..	..	4
Ph	15	General Physics .....	..	5	..
		Electives .....	..	3	..
			17	17	17

Physical Education Courses for Men

All men students are required to take the equivalent of 6 quarters of Physical Education. All students will take the regular departmental physical education tests, these data being used for classification purposes. Individual exercise programs are arranged as the test results indicate are needed, or by recommendation of the physician for the Student Health Service. Practice with the varsity or freshman athletic teams may be substituted for the required work in physical education if departmental approval is secured. Physical education tests will be given each term as measures of progress and development.

Fees.—Each student must furnish his own outfit consisting of shirt, pants, supporter, socks, and shoes. He is also required to purchase a towel ticket. This entitles him to clean towels as desired during the quarter.

- PE 1. Physical Education. I. 0.5(0-3).** Required unless replaced by PE 21. Swimming apparatus, track, games, remedial or restricted as indicated by the classification tests.
- PE 2. Physical Education. II. 0.5(0-3).** Continuation of PE 1. Required unless replaced by PE 22.
- PE 3. Physical Education. III. 0.5(0-3).** Continuation of PE 2. Required unless replaced by PE 23.
Emphasis given on skills in sports and post-school activities.
- PE 4. Physical Education. I. 0.5(0-3).**
A variety of activities taught for physiological and recreational values.
- PE 5. Physical Education. II. 0.5(0-3).** Continuation of PE 4, with some selection on part of the student.
- PE 6. Physical Education. III. 0.5(0-3).** Continuation of PE 5, with some selection on part of the student.
- PE 10. Theory and Practice of Tennis. I. 2(2-0).**
A study of the fundamentals of the sport that are applicable to secondary schools.
- PE 11. Theory and Practice of Gymnastics. I. 2(2-0).** A study of the fundamentals of the sport that are applicable to secondary schools.
- PE 12. Training Room Methods. II. 3(3-0).**
First aid and preventive measures, taping, bandaging, massage and manipulation, diet, conditioning athletes.
- PE 17. The Officiating and Management of Sports. III. 3(3-0).**
A study of the rules of games and contests in relation to officiating and management in secondary schools.
- PE 21. Physical Education Laboratory. I. 2(0-5).** Must be followed by PE 22. For majors and minors only.
Instruction and practice in the fundamental skills of athletic activities.

- PE 22. Physical Education Laboratory. II. 2(0-5).** Continuation of PE 21.
- PE 23. Physical Education Laboratory. III. 2(0-5).** Continuation of PE 22.
- PE 24. Physical Education Laboratory. I. 2(0-5).**
A practice course in the body mechanics of big-muscle activities. Applied to sports in season.
- PE 25. Physical Education Laboratory. II. 2(0-5).** Continuation of PE 24.
- PE 26. Physical Education Laboratory. III. 2(0-5).** Continuation of PE 25.
- PE 35. Personal Hygiene. I. 3(3-0).**
A study of the factors of healthful living, such as heredity, anatomical, personal habits, physical fitness.
- PE 36. Community Health. II. 3(3-0).**
A study of water supply, food and milk sanitation, ventilation, sewage disposal, lighting, housing and health agencies.
- PE 39. Health Problems. I, II, III. 2(2-0).**
The development of functional knowledge in the following fields: Cause and prevention of common infections, diseases and accidents; care and development of the body; nutritional needs.
- PE 40. Organized Camps and Camping. III. 3(3-0).**
A course designed to acquaint the student with the materials, procedures, planning and responsibilities of municipal and privately organized camps.
- PE 43. Industrial Recreation. III. 3(3-0).**
A study of a selected group of carry-over activities for individual and community recreation.
- PE 50. Methods of Baseball. II. 2(2-0).**
A study of the fundamentals including batting, fielding, conditioning and training, and methods of teaching baseball.
- PE 51. Methods of Track and Field. III. 4(4-0).**
The theory and methods of coaching the events in track and field, and planning of meets.

Physical Education Courses for Women

Requirement.—Each student is required to take six quarters of Physical Education during her college course.

Physical Examination.—Each student is given a complete physical examination to ascertain her fitness for college work and to determine the type of physical activity she may elect in Physical Education.

Restricted Program.—In cases where the findings of the physical examination indicate it would be unwise for a student to participate in the normal program of required physical activities, an adjusted program of suitable activities will be substituted.

- PE 61. First-Year Physical Education. I. 0.5(0-3).**
Hockey, tennis, swimming, archery, golf and recreational sports.
- PE 62. First-Year Physical Education. II. 0.5(0-3).**
Volleyball, basketball, swimming, modern and folk dancing, archery, tennis, and physical fitness exercises.
- PE 63. First-Year Physical Education. III. 0.5(0-3).**
Basketball, baseball, swimming, modern and folk dancing, archery, tennis, golf and physical fitness exercises.
- PE 64. Second-Year Physical Education. I. 0.5(0-3).** Prerequisites: PE 61 to 63 inclusive.
- PE 65. Second-Year Physical Education. II. 0.5(0-3).** Prerequisites: PE 61 to PE 63 inclusive.
- PE 66. Second-Year Physical Education. III. 0.5(0-3).** Prerequisites: PE 61 to PE 63 inclusive.

Physics Courses

- Ph 1. Introduction to Physical Science. I. 4(4-0).**
Introduces the student to physical science in such a way as to acquaint him with some of the general concepts in the fields of astronomy, physics, meteorology and geology. An attempt is made to help the student learn to appreciate the nature of the universe in which he lives.
- Ph 15. General Physics. II. 5(3-4).** For Veterinary Medicine, Physical Education for men, Forestry, Physical Education for women, and Home Economics students.
A 1-quarter course covering the principles of mechanics of solids and liquids, heat, magnetism and electricity, sound and light, together with practical applications.
- Ph 25. General Physics. III. 5(3-4).** Prerequisites: M 15 and M 16. For students in Engineering.
A course covering the fundamental principles of mechanics and heat, forming the basis for study of applied science.
- Ph 26. General Physics. I. 5(3-4).** Prerequisite: Ph 25. For students in Engineering.
A course covering the fundamental principles of sound and light.
- Ph 27. General Physics. II. 5(3-4).** Prerequisite: Ph 26. For students in Engineering. A continuation of Ph 26.
A course covering the fundamental principles of magnetism, electricity, and modern physics.

¹ This course acceptable only toward a major in elementary education or commerce.

Course in Education

Opportunities in the field of education are many, and legislative action has made the profession much more attractive. Graduates of the three-year course at Fort Lewis are certified to teach in the rural schools of the State of Colorado with a five-year certificate.

COURSE OF STUDY FOR TEACHING

FRESHMAN YEAR

		Hours Lcc.-Lab.	Quarters and Credits			
			I	II	III	
B	13	Introduction to Biological Science.....	3-3	--	4	--
E	2, 3, 4	English Composition	3-0	3	3	3
ES	40	Introduction to Government	2-0	2	--	--
ES	41	State and Local Government.....	2-0	--	2	--
ES	42	National Government	2-0	--	--	2
ES	86, 87, 88	World History	3-0	3	3	3
ES	89	Current Topics	2-0	2	--	--
ES	90	Current World Problems	3-0	--	3	--
M	1	Basic Mathematics	5-0	--	--	5
Mu	77	Appreciation of Music	3-0	--	--	3
Ph	1	Introduction to Physical Science	4-0	4	--	--
PE	35	Personal Hygiene	3-0	3	--	--
PE	36	Community Health	3-0	--	3	--
PE	61, 62, 63	Physical Education	0-3	0.5	0.5	0.5
				17.5	18.5	16.5

SOPHOMORE YEAR

		Hours Lcc.-Lab.	Quarters and Credits			
			I	II	III	
E	22	Vocabulary Building	3-0	--	--	3
E	23	Public Speaking	3-0	--	--	3
E	50, 51, 52	Modern Literature	2-0	2	2	2
E	68, 69	Children's Literature	3-0	--	3	3
Ed	10	Psychology	4-0	4	--	--
Ed	39	Introduction to Elementary Education	4-0	4	--	--
Ed	44	Introduction to Teaching of English ..	3-0	--	3	--
Ed	41	Introduction to Teaching of Social Studies	4-0	--	--	4
ES	35	Geography	5-0	5	--	--
ES	80	Early American History	3-0	3	--	--
ES	81	Middle Period in American History...	3-0	--	3	--
ES	82	United States in the Modern World...	3-0	--	--	3
PE	64, 65, 66	Physical Education	0-3	0.5	0.5	0.5
		Electives		--	5	--
				18.5	16.5	18.5

JUNIOR YEAR

		Hours Lcc.-Lab.	Quarters and Credits			
			I	II	III	
E	26	Public Discussion	3-0	3	--	--
Ed	40	Introduction to Teaching Arithmetic ..	4-0	4	--	--
Ed	45	Philosophy of Education	3-0	--	--	3
Ed	46	School Management	5-0	5	--	--
Ed	47	Observation and Methods	5-0	--	5	--
Ed	48	Student Teaching	4-6	--	--	6
Ed	105	Educational Psychology	3-0	--	3	--
ES	1	Economics	5-0	--	5	--
ES	50	General Sociology	5-0	--	--	5
		Electives		5	3	4
				17	16	18

Psychology and Education Courses

Ed 10. General Psychology. I, II. 4(4-0). Prerequisite to all psychology courses. Sophomore standing.

Fundamental principles of psychology and their application to life, covering particularly the topics of personality, emotions, intelligence, attention, perception, learning, memory, thinking, and motivation.

¹**Ed 39. Introduction to Elementary Education. I. 4(4-0).** Required in the course in Education, sophomore year.

An introductory course acquainting the student with the essential principles and facts underlying educational activity. The school as a social institution, as a community institution, and as a community or state responsibility, is studied. The evolution of methods as a result of the educative process and the nature of learning, current practices and means of evaluating education are studied in this course.

¹**Ed 40. Introduction to the Teaching of Arithmetic. I. 4(4-0).**

Experimental studies in arithmetic methods will be studied and their findings applied to present arithmetic teaching. Special emphasis on diagnosis and remedial teaching will be given.

¹**Ed 41. Introduction to the Teaching of Social Studies. III. 4(4-0).**

In this course the student will study the units suggested in the State course of study, with the purpose of getting them into teachable form. Current studies and texts in the field of teaching social studies in the elementary school will be examined and applied.

¹³**Ed 42. Introduction to the Teaching of Reading. II. 3(3-0).** This course is required of third-year education students.

A comprehensive study of the experimental studies in reading methods, their results, and their application to pupil needs in reading is made. The course will lay emphasis on diagnosis and remedial teaching.

¹³**Ed 43. Teaching Health and Physical Education. I. 3(3-0).**

Methods and materials in the teaching of health and physical education. Program planning, recess activities, games, rhythmic activities, principles of first aid, philosophy and theory of physical education.

¹²**Ed 44. Introduction to the Teaching of English. II. 3(3-0).**

A study of the objectives of the teaching of English and language work at the grade-school level and of the best means of attaining those ends. The fields of spelling and handwriting will also be covered.

Ed 45. Philosophy of Education. III. 3(3-0). Required in the course in Education, third year.

An introductory survey of the field of philosophy of education. The biological, psychological, sociological, and historical bases of education are studied. Some time is given to the philosophy underlying modern educational practices.

¹ This course is acceptable only toward a major in elementary education or commerce.

² Offered alternate years beginning 1949.

³ Offered alternate years beginning 1948.

¹Ed 46. **School Management. I. 5(5-0).** Required in the course in Education, third year.

An introduction to the field of techniques and methods of teaching, a study of curriculum building as suggested in the state course of study, a study of objectives of elementary and secondary schools. Practical applications are made of new projects and methods of rural and elementary teaching. Type units of work are written and used in elementary school.

¹Ed 47. **Observation and Methods. II. 5(5-0).** Required in the course in Education, third year.

Observation techniques are developed and planned. Visitations to both rural schools and the campus elementary school are made at times during the year to note progress. Observation is especially directed to scientific procedures in reading, arithmetic and other elementary school subjects.

¹Ed 48. **Student Teaching. III. 6(4-6).** Required in the course in Education, third year.

Sixty hours of classroom teaching in rural grade schools is required of the student. Attention is also directed to scientific methods in the teaching of reading, arithmetic and other elementary school subjects. Students are directed in their practice teaching by the instructor and by the regular teachers.

Ed 105. **Educational Psychology. II. 3(3-0).** Prerequisite: Ed 10.

A study of the phases of psychology bearing upon the problems of teaching with emphasis on growth, intelligence, individual differences, motivation, learning, heredity, and environment.

The principles of psychology as applied to education.

DIVISION OF VETERINARY MEDICINE

A 4-year professional course in Veterinary Medicine, leading to the degree of Doctor of Veterinary Medicine, is offered to a restricted number of properly qualified applicants.

Candidates for admission to the professional course must have completed at least 15 units of high-school work, 3 of which shall be in English, 1 in Algebra, and 1 in Geometry. Following this, at least one year of acceptable college work is required, which shall contain one full year each of:

a. English

b. Chemistry

c. Biological science (Botany and Zoology)

d. A total of 45 quarter credits or 30 semester credits, exclusive of Military Science and Physical Education.

¹ This course is acceptable only toward a major in elementary education or commerce.

If preparatory work is to be taken at Fort Lewis, the student should register in the Division of Science and Arts—being careful to include the subjects listed above—with a minimum load of 15 credits per quarter, exclusive of Military Science and Physical Education. Work completed or undertaken at any other college or university must conform to the same general pattern.

It should be understood that compliance with all of the above qualifications does not necessarily secure admission to the professional course, since the number of those qualified for admission always exceeds the facilities for training.

First preference is given to bona fide residents of Colorado and second preference to those living in the Rocky Mountain region. With the present large enrollment, those living east of the Mississippi River, or in states which maintain a veterinary school cannot be admitted to the professional course.

Pathology and Bacteriology Courses

PB 21. General Bacteriology. III. 3(3-0). Prerequisite: One year of Chemistry.

An elementary study of bacteria with emphasis upon their role in everyday life.

PB 22. General Bacteriology Laboratory. III. 2(0-4).

Elementary techniques and laboratory methods in bacteriology.

Physiology Course

VP 21. Human Anatomy and Physiology. II. 5(5-0). Prerequisite: Inorganic Chemistry. Required of home economics majors.

A lecture and demonstration course in anatomy and physiology.

Zoology Courses

Z 5. General Zoology. I. 5(3-4). Designed for zoology majors, premedical, preidental, preveterinary and other students who may want a comprehensive course. Suggested for students majoring in botany or entomology.

A study of representative types of invertebrate animals, other than insects. Laboratory work consists of dissection of type specimens.

Z 7. General Zoology. II. 5(3-4). Prerequisite: Z 5. Continuation of Z 5.

A study of representative types of vertebrate animals and associated phenomena. Laboratory work consists of dissection of type specimens.

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COLORADO STATE INSTITUTIONS OF HIGHER LEARNING

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Arts College.....Fort Collins
I. E. NEWSOM, *President*

The Fort Lewis Branch of
The Colorado Agricultural and
Mechanical Arts College.....Hesperus
E. H. BADER, *Dean*

The Colorado School of Mines.....Golden
BEN H. PARKER, *President*

The Colorado State College of Education.....Greeley
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The Western State College.....Gunnison
PETER PALMER MICKELSON, *President*

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