# COLORADO STATE TEACHERS COLLEGE BULLETIN 



CATALOG AND YEAR BOOK NUMBER

1934-1935

GREELEY

## OOLORADO STATE TEACHERS COLLEGE BULLETIN

mpared as; Bacond clase mation at the postoffice at Greeley, Colorado under the Act of suovit 25, 1912. Publinhed foun times a year, in Jánuary, February; March and May. Ougrent humadere of any of the ootlege publications may be had on application to the President of the Gollege, Greeley, Colorado.

## Colorado State Teachers College Bulletin

This catalog is condensed to save money. We believe it is better to save on catalogs than teachers or books. If in need of further information write to the president.


1934-1935

TH L: ? :<br>COLORADO STATE CC lGGE E EUCATIOR greeley, CGLORADO

GREELEY, COLORADO
PUBLISHED BY THE COLLEGE MARCH, 1934

## 1934—THE COLLEGE CALENDAR—1935

The Summer Quarter, 1934, begins June 16 and ends August 25
First half, June 16-July 21-Second half, July 23-August 25

## FALL QUARTER

Sept. 20 Thursday ...-----.......Freshman Week begins; 10:30 a. m. Gunter Hall
Sept. 24 Monday.....................Registration of freshmen
Sept. 25 Tuesday......-............Registration of upper classmen
Sept. 26 Wednesday----------.-Classes begin
Nov. 29-80 Thursday, Friday. Thanksgiving (holiday)
Dec. 8 Saturday-------------Advance registration for winter quarter
Dec. 13-14 Thursday, Friday. Final examinations
Dec. 15 Saturday...--.---.........Christmas vacation begins

1935
WINTER QUARTER
Jan. 2 Wednesday...-........Registration of new students; classes begin
Mar. 9 Saturday.--............Advance registration for spring quarter
Mar. 15-16 Friday, Saturday. Final examinations
Mar. 17 Sunday.....................Spring vacation begins

## SPRING QUARTER

| Mar. 25 | Monday.......... .- ...Registration of new students; classes begin |
| :---: | :---: |
| May 1 | Wednesday . .... Insignia Day |
| May 30 | Thursday...... ... .. .Memorial Day (holiday) |
| June 2 | Sunday....-..........-Baccalaureate |
| June 6-7 | Thursday, Friday. Final examinations |
| June 8 | Saturday................Commencement |

## SUMMER QUARTER

| June 15 | Saturday................Registration |
| :---: | :---: |
| June 17 | Monday.-................-Classes begin |
| July 4 | Thursday..............Independence Day (holiday) |
| July 20 | Saturday. $\qquad$ First half ends (registration for second half quarter) |
| July 22 | Monday..................Second half begins |
| Aug. 24 | Saturday................Summer convocation |

## TABLE OF CONTENTS

PAGE
Officers of Government and Administration ..... 4
Board of Trustees ..... 4
Officers of Administration ..... 4
Graduate Council ..... 4
Instructional Staff ..... 5
Library ..... 8
Conservatory of Music ..... 8
Special Faculty and General Lecturers ..... 9
General Information ..... 10
Government ..... 10
Function ..... 10
The Plant ..... 10
Jackson Field ..... 10
Housing Regulations ..... 10
Healith Service ..... 11
Scholarships and Loan Funds ..... 11
Waiver of Fees ..... 11
Religious Activities ..... 12
Honorary Fraternities ..... 12
Fees and Expenses ..... 12
The Graduate School ..... 13
Master of Arts Degree ..... 13
Doctor of Philosophy Degree ..... 13
Courses ..... 13
Extension Department ..... 14
Laboratory Schools ..... 15
Horace Greeley Junior College ..... 15
Student Teaching ..... 15
Admission to the College ..... 16
Matriculation of Freshmen ..... 16
Freshman Week ..... 16
Quality of Work Required ..... 16
Certificates and Degrees ..... 17
Credits ..... 18
The Curricula ..... 19
The Core Required Subjects ..... 19
Rural School Curriculum .....  20
Elementary School Curriculum ..... 21
Courses of Instruction .....  22
Index

## OFFICERS OF GOVERNMENT AND ADMINISTRATION

Harry V. Kepner, Sc.D., Ed.D.President of the Board of Trustees
George Whllard Fbasler, Ph.D., LL.D.
President of the College
Winfield Dockery Armentrout, Ed.D. Vice-President of the College
BOARD OF TRUSTEES
(Appointed by the Governor of the State of Colorado)
Earl M. Hedrick ..... Wray
Charles N. Jaokbon ..... Greeley
Harry V. Kepner, Sc.D., Ed.D. ..... Alamosa
Clifford P. Rex, D.D.S. ..... Delta
George Sullivan, D.D.S ..... Gunnison
Inez Johnson-Lewis ..... Denver
(State Superintendent of Public Instruction, Ex-Officio)
OFFICERS OF THE BOARD OF TRUSTEES
Dr. Kepner ..... President
Dr. Rex Vice-President
Mr. MoMurdo SecretaryMr. Jackson, Chairman; Dr. Kepner, Mr. HedrickExecutive Committee for Colorado State Teachers College
OFFICERS OF ADMINISTRATION
Frederick Lamson Whitney, Ph.D..-...--....-Director of the Graduate SchoolJacob Daniel Hemman, Ph.D..-----............ Director of Personnel DepartmentPaul MoKee, Ph.D............Director of Teachers College Elementary SchoolWilliam L. Wrinkle, Ph.D. Director of Teachers College Secondary SchoolAnnie Margaret McCowen, Ph.D....................Adviser of Elementary Majors
Thomas Jefferson Mahan, Ph.D. ..... Dean of Men
Edith Gale Wiebining, A.M.....--.....-........................-Associate Dean of WomenArthur Franklin Zimmerman, B.D., Ph.D..........................College ChaplainMargaret Elizabeth Bryson, A.B., A.M., M.D.-.-Medical Adviser of WomenEdward von den Steinen, M.D...............-------------------Medical Adviser of Men
THE GRADUATE COUNCILFrederick Lamson Whitney, Ph.D., Chairman; Annie M. McCowen, Ph.D.,Vice-Ohairman; J. D. Heilman, Ph.D., Secretary; W. D. Armentrout,Ed.D.; E. A. Cboss, Ph.D.; O. M. Dickerson, Ph.D.; Frank CovertJean, Ph.D.; A. E. Mallory, Ph.D.; Earle U. Rugg, Ph.D.
Georae A. Ibvin Director of Extension ServiceRegistrar
John Henry Shaw Editor of Official Publications
J. P. Culbertson.
Ruth L. Gunsaul, A.B
W. F. McMurdo ..... Treasurer
R. G. DEMPSEY

## INSTRUCTIONAL STAFF

George Willard Frasier, A.B., A.M., M.Ed., Ph.D., LL.D. Professor of Education

Winfield Dockery Armentrout, A.B., A.M., Ed.D. Professor of Education
*Grace M. Baker, B.S., B. Art Ed., A.M.
George Alexander Barker, B.S., M.S.
Samuel Clay Bedinger, LL.B., A.B., A.M.
$\dagger$ John Randolph Bell, Ph.B. A.M., Litt.D.
Ralph Thomas Bishop, A.B., A.M.
Margaret Blackburn, A.B., A.M.
Harold Granville Blue, A.B., A.M.
William Gray Bowers, B.S., A.M., Ph.D.

Professor of Art
Professor of Geography
Assistant Professor of Business Education Professor of Sociology
Professor of Industrial Arts Assistant Professor of English Professor of Sociology Professor of Chemistry Peter Brown, A.b. Instructor in Physical Education Margaret Elizabeth Bryson, A.B., A.M., M.D. Professor of Physical Education

Elizabeth Carney, A.B., A.M. Associate Professor of English; Supervising Teacher, Teachers College Secondary School

Albert Frank Carter, A.B., M.S. Professor of Library Administration, Emeritus

Jean Cave, B.S., A.M. Professor of Physical Education
James DeForest Cline B.M. Professor of Public School Music
Blanche Rumbley Collins, A.B. Assistant Professor of Public School Music; Supervising Teacher, Teachers College Elementary and Secondary Schools

Ambrose Owen Colvin, B.C.S., A.M. Professor of Business Education
Ethan Allen Cross, A.B., A.M., Ph.D.
Professor of English
Helen Caldwell Davis, A.B., A.M., Ph.D. Professor of Elementary Education
John S. Davis, B.S., A.M. Associate Professor of Physical Education Oliver Morton Dickerson, A.B., A.M., Ph.D. Professor of History and Political Science

Jule Statton Doubenmier, A.B., A.M. Assistant Professor of Physical Education; Supervising T'eacher, Teachers College Elementary and Secondary Schools
Ethel Turner Dulin, B.S., A.M. Associate Professor of Primary Education; Teachers College Elementary School
Richard Gordon Ellinger, A.B.
Associate Professor of Art
*On leave Spring quarter, 1935.
$\dagger$ On leave Fall, Winter, and Spring quarters, 1934-35.

Elizabeth Fatherson, A.B., A.M. Assistant Professor of English; Supervising Teacher, Teachers College Secondary School

George Whlliam Finley, B.S., M.S. Professor of Mathematics
Chester Kimes Fletcher, A.B., A.M. Associate Professor of Extra-Mural Education

Arthur J. Foster, B.S., A.B., A.M.

Charles Meade Foulk
Associate Professor of Extra-Mural Education

Professor of Industrial Arts
Catherine Crates Gibert, A.B., A.M.
Associate Professor of Foreign Languages

Henry Trustman Ginsburg, B.M. Instructor in Music

John W. Hancock, Jr., A.B.
Professor of Physical Education
William Henry Hargrove, B.S., A.M. Professor of Rural Education
Ezra Clarence Harrah, A.B., A.M., Ph.D. Professor of Zoology
Martha Lucille Harrison, Ph.B., A.M. Associate Professor of Kindergarten-Primary Education; Teachers College Elementary School

Josephine Mary Hawes, A.B., A.M. Associate Professor of English
Jacob Daniel Heilman, A.B., Ph.D. Professor of Educational Psychology
Fred Louis Herman, B.S., A.M. Associate Professor of Physics
Ira Woods Howerth, A.B., A.M., Ph.D.
Professor of Sociology, Emeritus
Cegil Hutchcroft, A.B., A.M.
Frank Covert Jean, A.B., A.M., Ph.D.
Instructor in Industrial Arts
Professor of Biology
Phoebe M. Kandel, R.N., B.S., A.M. Professor of Nursing Education
Elizabe'th Hays Kendel, A.B. Associate Professor of Mathematics; Supervising Teacher, Teachers College Secondary School
Winfield LeRoy Knies, A.B., A.M. Associate Professor of Business Education
Rose Lammel, A.B., A.M. Assistant Professor of Elementary Science; Supervising Teacher, Teachers College Elementary School
Elizabet'h Lehr, B.S., A.M.
Associate Professor of Elementary Education; Teachers College Elementary School
Leslie Dae Lindou, A.B., A.M. Assistant Professor of English
Elizabeth Luzmoor, B.S. Associate Professor of Elementary Education; Teachers College Elementary School

Genevieve L. Lyford, B.H.S., B.S., A.M. Professor of Pre-School Education; Teachers College Elementary School
Thomas Jefferson Mahan, A.B., A.M., Ph.D. Professor of Education
Arthur Ernest Mallory, A.B., A.M., Ph.D. Professor of Mathematics

Annie Margaret McCowen, A.B., B.S., A.M., Ph.D. Professor of Elementary Education

Paul McKee, A.B., A.M., Ph.D. Professor of Elementary Education
Sarah H. McRoberts, B.S., A.M. Instructor in Physical Education
Florence M. Meyer, A.B., A.M.
Assistant Professor of English;
Supervising Teacher, Teachers College Secondary School
Estell Elgar Mohr, B.S., A.M. Associate Professor of
Public School Music
Georgia Ethel Moore, B.S., A.M.
Associate Professor of Art
Margaret Mulroney, A.B., A.M., Ph.D. Professor of Foreign Languages
Vera Newburn, B.S., M.S. Ass'ociate Professor of Home Arts; Supervising Teacher, Teachers College Elementary and Secondary Schools
Ora Brooks Peake, A.B., A.M. Associate Professor of History
Kenneth Frederick Perry, A.B., A.M.
Professor of Industrial Arts
Ethel Blanche Pickett, B.S., A.M. Associate Professor of Home Arts
*Pauline Craig Pogue, A.B., A.M. Assistant Professor of History;
Supervising Teacher, Teachers College Secondary School
Martin Luther Robertson, A.B., A.M., Ph.D. Assistant Professor of Science; Supervising Teacher, Teachers College Secondary School

Lucy Lynde Rosenquist, B.S., Ph.B., A.M. Associate Professor of Primary Education; Teachers College Elementary School
*Margaret Moore Roudebush, Ph.B., A.B., M.S. Professor of Home Arts
Earle Underwood Rugg, A.B., A.M., Ph.D. Proféssor of Education
Otto William Schaefer, M. S. Professor of Industrial Arts, Emeritus
Edith Marie Selberg, A.B., A.M.
John Henry Shaw
$\dagger$ Helen Etta Springer, B.S.
Charles E. Stewart, A.B., A.M.

## Estelle Stinchfield

Karl Theman, B.S.
Frances Tobey, B.S., A.B., A.M.
Oliver Leonard Troxel, B.S., A.M., Ph.D. Professor of Education
**Floss Ann Turner, Ph.B. A.M. Associate Professor of
Primary Education; Teachers College Elementary School
Susan Hart Van Meter, B.S., A.M: Associate Professor of Elementary Education; Teachers College Elementary School

[^0]Sigma Pi Lambda Award-Sigma Pi Lambda, honorary educational fraternity for women, offers an award of twenty dollars to the graduate woman student who in the estimation of the committee is best qualified to meet the requirements of scholarship and personality.

Loan Funds-Numerous loan funds, aggregating more than $\$ 22,000$, are used to help worthy students. Applications for loans must be made to the treasurer of the college. Petitions are granted when the college is satisfied that the applicant is worthy of such help, will be in a position to repay the loan within a reasonable time, is doing at least average work in college, and will be a credit to Colorado State Teachers College after graduation. The student must furnish a note acceptable to the treasurer and make arrangement for its payment when due. The following comprise the loan funds: Sigma Upsilon Graduate, Senior College, Phi Delta Kappa, Y.W.C.A. Student Aid, William Porter Herrick Memorial, Greeley Rotary Club, Hospital Fund, J. C. Kendel Music Loan, Sarah Platt Decker Memorial, Nurses' Club Loan, and Normal Students.

## RELIGIOUS ACTIVITIES

The religious activities on the campus are conducted under the direction of the religious council and the chaplain of the college.

## HONORARY FRATERNITIES

Phi Delta Kappa-A professional fraternity in education open to men of junior, senior and graduate rank.

Kappa Delta Pi-A national honor society in education open to both men and women students of upper class rank.

Sigma Pi Lambda-Honorary educational fraternity for women of senior college and graduate rank.

Pi Kappa Delta-National honorary debating fraternity.
Alpha Psi Omega-National honorary dramatic fraternity.
Phi Alpha Theta-National honorary historical fraternity open to both men and women of senior college rank.

Alpha Zeta Pi-National honorary romance language fraternity.
Alpha Gamma Phi-National honorary fraternity in art open to students above freshman rank.

Pi Omega Pi-National honorary fraternity in commercial education.
Lambda Sigma Tau-Honorary science fraternity.

## FEES AND EXPENSES

The expenses of attending the college are as low as can be made possible by careful management.

1. Turtion- $\$ 15.00$ a quarter for Colorado residents and $\$ 20.00$ for non-residents.
2. Matriculation- $\$ 5.00$, paid only once. This covers intelligence test, English test, achievement test, health examination, photograph, and the necessary blanks in the registrar's office.
3. Registration- $\$ 2.50$ payable each quarter following matriculation.
4. Healti Service- $\$ 1.00$ each quarter.
5. Library - $\$ 2.50$ each quarter.

Failure to fulfill any of these requirements within the time limit fixed in the program distributed at the time of registration will involve an additional fee of $\$ 1.00$ for each such failure. After September 1, 1934, matriculation and registration fees will be required of all students regardless of when they enrolled in college.
6. Special Examinations-Students having permission to take examinations at other than the scheduled time will pay a fee of $\$ 2.00$.
7. Music-Fees are charged for individual lessons in voice, piano, organ, violin, and other musical instruments in the college Conservatory of Music.

## THE GRADUATE SCHOOL

The purpose of the Graduate School is to increase the student's efficiency as a teacher and an independent worker in the field of education. To achieve these ends, three main phases of his education are emphasized: (1) A better background of academic information in his major and related fields; (2) more inclusive knowledge in the professional field of education and educational psychology, to the end that he may better understand the learner's mind, the laws of growth, and the means to be employed in personal development; (3) an acquaintance with the elements of research method and technic in order to give some degree of facility in recognizing, attacking, and solving problems similar to those that will later confront him in his professional life.

For detailed information on rules, requirements and curriculum, see the Graduate School Announcement.

MASTER OF ARTS DEGREE-Any student having a bachelor's degree from a reputable institution authorized by law to confer degrees and approved by the Graduate Council may be admitted to the Graduate School. A student's first quarter is considered to be a test of his ability to do acceptable graduate work. Any student whose record or personal qualifications at the end of the first quarter are unsatisfactory will not be admitted to candidacy for the degree.

DOCTOR OF PHILOSOPHY DEGREE-The college offers course and research work leading to the degree of doctor of philosophy. This involves the equivalent of at least two years of graduate work above the master's degree, and no degree will be conferred in less than three calendar years. Residence courses to the amount of at least four quarters of work are required. This is done only during successive summer quarters. During the academic year, while the student is under contract, field studies are carried on under the direction of the major professor. Formal admission to candidacy is decided on during the second summer of residence, after examination on the first field study.

COURSES-The divisional administration of the curriculum on the undergraduate level is not continued into the Graduate School, except that work leading toward the doctor's degree is offered only in the Division of Education. However, the student will find the majority of graduate courses listed with those of the seven instruction divisions. These are courses numbered $100-200$ to $199-299$ for both undergraduate and graduate students, and courses numbered 200 and 300 for graduate students only.

The following research courses are offered:
Res. 222-Individual Research Study-2 or 4 hours
Students may register for a maximum of eight hours only. If more than four hours are taken, succeeding units should deal with different projects. The director of the Graduate School approves every registration,
and a final typed report of each project must be filed in the graduate office before credit is recorded.

Res. 223-Research for Graduate Students-2 hours
This course is recommended for all candidates for the master's degree. The content will deal primarily with the development of a scientific attitude and an understanding of the method of reflective thought through studies of the actual traits and research methods of reputable scientists.

Res. 224, 225, and 226-Conference Courses for Graduate Students2,4 , and 4 hours.
These are individual conference courses for the candidate for the master's degree. Res. 224 is for the purpose of selecting a research problem, writing the agendum of plans and procedures, and carrying the project through to completion. A typed copy of the agendum, signed by both major and advisory professors, must be filed in the graduate office before the admission of the student to candidacy for the master's degree.

DOCTOR'S FIELD STUDY COURSES-These are individual conference courses for candidates for the degree of doctor of philosophy offered in the Division of Education.

Ed. 322-Research Preliminary to Field Study Work-4 hours
This is taken during the first summer quarter of residence. It should result in a selection of a particular field of research and in setting up plans for the first field study in agendum form.

Ed. 323a, 323b, and 323c-Graduate Research Credit for Field Study No. 1-Each course 4 hours-Maximum 12 hours.
Ed. 324a, 324b, and 324c-Graduate Research Credit for Field Study No. 2-Each course 4 hours-Maximum 12 hours
Ed. 325a, 325b, and 325c-Graduate Research Credit for Field Study No. 3-Each course 4 hours-Maximum 12 hours

## EXTENSION DEPARTMENT

Every effort is made to organize classes in those communities where a group of people wish to study the same course. In addition to the offcampus classes, the Extension Department will upon demand of fifteen or more students organize classes to meet upon the campus during late afternoons, evenings, or Saturdays. All classes taught on the campus carry residence credit.

For the convenience of those who cannot meet in extension classes the college provides individual correspondence courses.

Twenty-four quarter hours of extension credit (all types) is the total number of hours which may be applied toward meeting requirements for the completion of the two-year rural course; thirty-six quarter hours is the total of extension credit which may be applied toward meeting requirements for completing three years of the four-year elementary curriculum. Forty-eight hours is the total of extension credit which may be applied toward meeting the requirements for the completion of the bachelor of arts degree.

Students who expect to graduate while in non-residence must communicate with the registrar before the opening of the quarter in order that proper arrangements may be made. In such cases, the last extension course, if in progress, must be completed and graded ten days before the end of the summer quarter and the beginning of the fall quarter.

Students in residence are not permitted to take work by correspondence. This regulation shall not be interpreted as prohibiting students from completing four quarter hours in correspondence between the end of the summer quarter and the beginning of fall quarter.

## LABORATORY SCHOOLS

The college provides opportunity for the laboratory study of problems in the theory and art of teaching. The courses providing for this work are offered in sequence, beginning with directed observation of classroom methods and procedures, progressing into participation, and culminating in the work in which the student becomes responsible for the pupil's learning under expert supervision. The elementary course in this sequence is Pre-Teaching Observation (Ed. $50-150$ ). The advanced laboratory course is student teaching (Ed. 51-151). The course providing for the laboratory study of problems in supervision is Ed. 152-252.

Teachers College Elementary School comprises pre-school, kindergarten, and the first six grades. Teachers College Secondary School is a six-year unit comprising the junior high school (grades seven, eight, and nine), and the senior high school (grades ten, eleven, and twelve). Beginning with the academic year 1934-35 the college is establishing an experimental junior college which extends the period of secondary education two years.

## HORACE GREELEY JUNIOR COLLEGE

Colorado State Teachers College is carrying on an extensive experiment with the secondary curriculum under the direction of the faculty of the secondary school and with the advice of a committee of the North Central Association. As part of this experiment the secondary school has been expanded to the junior college level.

With the opening of the college year in 1934, the Horace Greeley Junior College will accept two groups of college freshmen. Each group will be limited to fifty students.

Group $A$ will be given the usual freshman curriculum as found in the best junior colleges. Group $B$ will be given a new integrated curriculum the purpose of which will be the completion of general education.

By action of the faculty and the Board of Trustees, all students finishing either curriculum will be admitted to full junior standing in the college.

Students of Horace Greeley Junior College will pay the same fees and have all privileges of other college students.

Students to be admitted to these two groups will be carefully selected from those who apply for membership. Application for admission should be addressed to the president of Colorado State Teachers College.

## STUDENT TEACHING

Proficiency is the basis for determining the amount of student teaching to be done and this is evaluated as "Satisfactory" "Incomplete" or "Failure."

All assignments for student teaching are made by the director of student teaching. Students offering advanced standing from other institutions must make arrangements regarding student teaching with the director of student teaching immediately upon matriculation at the college.

No student is eligible for student teaching whose college grades average below 2.5 prior to his application for student teaching, or whose grades in the subject matter field assigned for teaching average below 3. Each student shall be required to make a score above the tenth percentile point on the subject matter entrance tests.

COLORIES $\because \cdots \quad$. i. : rachion

Minimum Residence Requirement-The college does not grant any certificate or degree for less than three full quarters of undergraduate study, during which time the student must have earned at least forty-eight quarter hours of credit. If the student's first graduation is with the bachelor of arts degree, he must have spent at least three quarters in residence. Students who have already taken the two year course must spend in residence at least two additional quarters for the bachelor of arts degree. Those who have completed three years of the elementary school curriculum must spend at least one additional quarter in residence for the degree. For the maximum amount of extension credit allowed, see page 15.

Correspondence students when enrolling in residence should apply to the Extension Department for an extension of time which will permit the completion of correspondence courses at a time when the student is not enrolled in residence courses. Students in residence are not permitted to enroll in correspondence courses during vacations except during the vacation between the end of the summer quarter and beginning of the fall quarter.

## CREDITS

All credit toward graduation is computed in "quarter-hours." The term "quarter-hour" means a subject given one day a week through a quarter of a year, approximately twelve weeks. Most of the college courses call for four recitations a week.

Credit for Physical Exercise Courses-A physical exercise course is required of all freshmen and sophomores unless physical disability is certified by the college physician. No credit will be allowed for physical exercise courses in the senior college.

Student Load-The normal load for junior college students is seventeen hours, including a physical exercise course carrying a credit of one hour. The normal load for all other students is sixteen hours.

During the first quarter, the student whose score on a reliable intelligence test falls above the ninety-third percentile point for college students may be permitted to carry four hours beyond the normal load; the student whose score falls between the eighty-fourth and ninety-third percentile points inclusive may be permitted to carry two hours beyond the normal load. During subsequent quarters a student whose grade average is 4 (B) or above will be permitted to carry two or four hours above the normal load, depending upon such factors as health, test scores, and the time required to complete graduation. The student whose average grade falls below 2.5 will be required to carry two or four hours below the normal load. These regulations apply also to students attending the summer quarter.

Release of Transcript Credits-A matriculated student is given one transcript of credits without charge. For each succeeding transcript a charge of $\$ 1.00$ is made.

Application for any certificate or degree must be made to the registrar at least sixty days before the close of the quarter in which the certificate or degree is to be granted. Applications filed after that date shall be subject to a charge of $\$ 2.00$.

Time Limit for Completion of Courses-Candidates for the limited rural certificate (two-year course) will be allowed three years to complete requirements effective at matriculation. Another three years will be allowed to complete the work of the third and fourth years under the requirements effective at the time the student begins resident work of the third year. Candidates for the limited elementary certificate (threeyear course) will be allowed four years to complete the requirements under conditions effective at matriculation. Two additional years will be allowed to complete requirements for the bachelor of arts degree effective at the time the student begins residence work of the fourth year.

## THE CURRICULA

Throughout this catalog courses numbered 1-99 are primarily first and second-year subjects; 100-199 are third and fourth-year. Those numbered 200 and above are graduate work. Senior college students must select at least two-thirds of their courses in the senior college.

The curricula are built upon four principles: (1) The inclusion of a common group of general, cultural, and background courses; (2) the inclusion of a common group of professional courses; (3) the inclusion of a group of sequences in each curriculum to give adequate instruction in and preparation for teaching in two or more different subjects (preferably three); (4) leaving ample room for individual choices by students so that their education may be suited to their own likes and preferences while preparing them for a definite place in the teaching profession.

Curricula are offered to prepare teachers for the rural schools, elementary schools, secondary schools, and the special subjects-business education, physical education, music, fine and industrial arts. The secondary and special subjects curricula require teaching proficiency in three fields (a major of forty-eight hours and two minors of twenty-four hours). The elementary curriculum requires sequences prerequisite to proficiency in content in art, music, literature, science, and social studies. A general secondary curriculum is provided for those students who do not care to select a major in any one subject. To meet the requirement of this curriculum the students select twenty-four hours in four different subjects.

Functional groupings of subjects and departments has become an accepted principle in educational policy. In line with this policy the college has developed a synthesis of the material of instruction through the organization of seven divisions as follows:

## I. EDUCATION

II. FINE AND INDUSTRIAL ARTS

## III. HEALTH AND PHYSICAL EDUCATION

## IV. LITERATURE AND LANGUAGES

v. MUSIC

## VI. SOCIAL STUDIES

VII. SCIENCE

THE CORE REQUIRED SUBJECTS FOR THE FRESHMAN YEAR

| Sec. X |  | Sec. Y |  | Sec. $\mathbf{Z}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fall |  |  |  |  |  |
| Eng. 40a | 4 hrs . | Eng. 40a | 4 hrs . | Eng. 40a | 4 hrs . |
| Ed. 1 | 4 hrs . | H. \& P. E. 1 | 4 hrs . | Ed. ${ }^{\text {d }}$ | 4 hrs . |
| Sci. 3a | 4 hrs . | Sci. 3d | 4 hrs . | S.S. ${ }^{\text {Phe }} 41$ |  |
| Phys. Ed. | 1 hr . | Phys. Ed. | 1 hr . | Phys. Ed. | 1 hr . |
| Winter |  |  |  |  |  |
| Eng. 40b | 4 hrs . | Ed. 1 | 4 hrs . | Eng. 40b | 4 hrs . |
|  |  | Eng. 40b |  |  | 4 hrs . |
| S. S. 41 | 4 hrs . | Sci. 3 b | 4 hrs . | Sci. 3a | 4 hrs . |
| Phys. Ed. | 1 hr . | Fhys. Ed. | 1 hr . | Phys. Ed. | 1 hr . |
| Spring |  |  |  |  |  |
| Eng. ${ }^{40}$ | 4 hrs . | Eng. 40c | 4 hrs . | Eng. 40c | 4 hrs . |
| H. \& P. E. 1 | 4 hrs . | ${ }_{\text {Sci }}{ }_{\text {S }} \mathbf{3 c}$ | 4 hrs . | Sci. 3 b | 4 hrs . |
| Sci. 3c Phys. Ed. | $4{ }_{1}^{4} \mathrm{hrs}$. | S. S. ${ }_{\text {Phys. Ed. }}$ | 4 hrs . | Elective Phys. Ed. | $\begin{aligned} & 4 \\ & 1 \\ & 1\end{aligned} \mathrm{hrs}$. |

THE CORE REQUIRED SUBJECTS FOR THE SOPHOMORE YEAR
Sec. $\mathbf{X}$

| Fall |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Art 50a | 2 hrs . | Art 50a | 2 hrs . | Art 50a | 2 hrs . |
| Mus. 50a | 2 hrs . | Mus. 50a | 2 hrs . | Mus. 50a | 2 hrs . |
| S. S. 2a | 4 hrs. | S.S. 2 a | 4 hrs. | S. S. 2 a | 4 hrs . |
| Phys. Ed. | 1 hr . | Phys. Ed. | 1 hr . | Sci. 3c Phys. Ed. | 4 hrs. |
| Winter |  |  |  |  |  |
| Art 50b | 2 hrs . | Art 50b | 2 hrs . | Art 50b | 2 hrs . |
| Mus. 50 b | 2 hrs . | Mus. 50 b | 2 hrs . | Mus. 50b | 2 hrs . |
| S.S. 2 b | 4 hrs . | S. S. 2 b | 4 hrs . | S. S. 2 b | 4 hrs . |
| Phys. Ed. | 1 hr . | Phys. Ed. | 1 hr . | Phys. Ed. | 1 hr . |
| Spring |  |  |  |  |  |
| Art 50c | 2 hrs . | Art 50c | $2 \mathrm{hrs}$. | Art 50c | 2 hrs . |
| Mus. 50c | 2 hrs . | Mus. 50c | 2 hrs . | Mus. 50 c | 2 hrs . |
| S.S. 2 c | 4 hrs. |  | 4 hrs . |  | 4 hrs . |
| Phys. Ed. | 1 hr . | Phys. Ed. | 1 hr . | Phys. Ed. | 1 hr . |

REQUIRED JUNIOR YEAR, S. S. 185; SENIOR YEAAR, Ed. 195. Time placement of observation and student teaching varies with the length of the course. Ed. 116 is required of all students except elementary majors.

## RURAL SCHOOL CURRICULUM FRESHMAN YEAR

Sec. X
Sec. Y


SOPHOMORE YEAR


## ELEMENTARY SCHOOL CURRICULUM

 FRESHMAN YEARSec. X
Sec. Y
Sec. Z

| Fall <br> Mus. 52 | Art 2 | S. S. 44 |
| :--- | :--- | :--- |
| Winter <br> Art 2 | S. S. 44 | Mus. 52 |
| Spring <br> S. S. 44 | Mus. 52 | Art 2 |

SOPHOMORE YEAR
Sec. $\mathbf{X}$
Sec. Y
Sec. Z

| Fall |  |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { Eng. 13 } \\ & \text { Eng. } 11-111 \end{aligned}$ | Ed. 76 <br> Elec. or Minor* | $\begin{aligned} & \text { Eng. } 21-121 \\ & \text { S. S. } 45 \end{aligned}$ |
| Winter |  |  |
| Ed. 76 <br> Eng. 21-121 | S. S. 45 Eng. 11-111 | Eng. 13 <br> Elec. or Minor* |
| Spring |  |  |
| Ed. 110 <br> Ed. 50-150 | Eng. 13 <br> Eing. 21-121 | ${ }_{\text {Ed. }}^{\text {Eng. }} 6$ |

JUNIOR YEAR
Sec. $\mathbf{X}$
Sec. Y
Sec. Z

| Fall <br> Ed. 151 <br> Electives or <br> Minors* | Ed. 110 <br> Ed. $50-150$ <br> S. S. 146 | Sci. 101 |
| :--- | :--- | :--- |
| Winter <br> Ed. 111 <br> Sci. 1101 <br> S. S. 45 |  |  |
| Spring <br> Ed. 112 <br> S. S. 146 | Ed. 156 <br> Electives or <br> Minors* | Ed. 110 <br> Ed. $50-150$ <br> S. S. 146 |

## SENIOR YEAR

Sec. X
Sec. Y
Sec. Z

| Fall <br> Sci. 132 | Ed. 112 | Ed. 111 <br> S. S. 191 |
| :--- | :--- | :--- |
| Winter <br> S. S. 191 | Sci. 132 | Ed. 112 |
| Spring | S. S. 191 | Sci. 132 |

[^1]
## EDUCATION

The courses outlined herewith have been arranged for the purpose of making all students familiar with the professional information, principles, and techniques of the teaching profession.

The two-year course in rural education, outlined on page 20 , is intended for students who plan to teach on limited certificates in the rural and consolidated schools.

The completion of three years of the four year elementary curriculum, page 21, is designed for students who plan to teach on the limited certificate in village and city elementary schools.

The senior courses are advanced in nature for students who wish to obtain the bachelor of arts degree after successful teaching experience or who wish to continue their four years of education prior to entering upon teaching. Conditions of supply and demand of teachers today warrant four years of professional education as a minimum.

Graduate courses in education are offered, leading particularly to the master of arts and doctor of philosophy degrees. Such graduate work is primarily for experienced teachers, supervisors, and administrators who wish still more advanced education for such positions as superintendencies, elementary and high school principalships, supervisors, college teachers, advisers of girls, guidance work, measurements, and research activity.
*1. Introduction to Education. Four hours.
3. Language arts in Rural Schools. Four hours.

Prerequisite, Ed. 1.
16. Camp Fire Girls' Leadership. Two hours.
17. Boy Scout Work (Summer quarter only). Two hours.
41. Parent-Teacher Organization and Practice. Two hours.

50-150. Pre-Teaching Observation. Four hours.
51-151. Student Teaching. Equivalent to eight hours.
Prerequisite, 50-150.
60. Individual Instruction in Rural Schools. Four hours.
*76. Psychology of Learning. Four hours.
Prerequisite, Ed. 1.
77-177. Child Development. Four hours.
100-200. Unit Course in Education (Summer quarter only). Each course one hour.
*106-206. Character and Moral Education (Summer quarter only). Two or four hours.

108-208. Visual Aids in Education (Summer quarter only). Two hours.

Prerequisite, funior standing.

[^2][^3][^4]116-216. Secondary Education. Four hours.
Prerequisite, junior standing.
*117-217. Extra Curricular Activities and Guidance (Summer quarter only). Four hours.

117a-217a. Citizenship Education in Elementary Schools (Summer quarter only). Two or four hours.

117c-217c. Citizenship Education in Secondary Schools (Summer quarter only). Two or four hours.

118-218. Problems in Guidance and Counseling. Four hours.
119-219. Problem of Study and Discipline (Summer quarter only). Four hours.
120. Individual Educational Research for Senior College Students. Two or four hours.
*125. General Psychology. Four hours.
*127-227. Teachers' Classroom Tests. Four hours.
128-228. Mental Hygiene. Four hours.
130-230. Recent Developments in Rural Life. Four hours.
*135-235. History of Education with Special Reference to Modern Times (Summer quarter only). Two hours.
*136-236. History of Education in the United States. Four hours. 137-237. Comparative Education (Summer quarter only). Two hours.
*140. Platoon School Organization (Summer quarter only). Two hours.
141. Administration of Village and Consolidated Schools. Four hours.

142-242. School Administration. First course. Four hours.
143-243. School Administration. Second course. Four hours.
144-244. School Administration. Third course. Four hours.
*145-245. Technique of Making the School Curriculum. Four hours. Prerequisite, junior standing.
146-246. Advanced Curriculum Construction. Four hours.
Prerequisite, junior standing.
152-252. Student Supervision. Four hours.
158. Advanced Observation. Four hours.

160-260. The Pre-School (Summer quarter only). Four hours.

[^5]
## BOOK BINDING AND LEATHERCRAFT

38 a,b,c. Bookbinding. Six hours. Two hours each quarter.
39. Advanced Bookbinding. Two or four hours.
139. Advanced Bookbinding. Two or four hours.

## CLOTHING

40. Dress Appreciation. Four hours.
41. Clothing Design and Construction. Four hours.
42. Clothing (A continuation of 41). Four hours.
43. Textiles and Costume Design. Two hours.

CRAFTS
73. General Craft. Two hours.

75-175. Pottery. Two hours.
76-176. Craft Processes and Design. Two or four hours.
Prerequisite, 4 , or the equivalent.
104a-204a. Textile Processes. Two hours.
118-218. Stagecraft and Pageantry. Two hours.
124-224. Processes in Print-Making. Two or four hours.
DESIGN AND COLOR
4-104. Design. Four hours.
6. Industrial Arts Design. Two hours.
17. Lettering. Two hours.

112-212. Color Theory and Design. Four hours.

DRAWING AND COMPOSITION
3-103. Freehand Drawing and Perspective. Four hours.
16-116. Composition. Four hours.
23.a.b. Elements of Mechanical Drawing. Four hours. Two hours each quarter.

101-201. Figure Drawing. Four hours.
115-215. Advanced Drawing. Two hours.
123. The Drawing of Shop Problems. Two hours.

125-225. Modeling. Two hours.

## FOODS AND COOKERY

43. Foods and Cookery. Four hours.
44. Cookery and Table Service. Four hours.
45. Foods and Cookery for Men. Four hours.
46. Nutrition. Four hours.

Open to both men and women to aid students in their food habits, and In their work as teachers or coaches.
92. Cookery and Table Service for Homemakers. Four hours.

Unit Courses in Cooking-Units are to be given one hour per day for one half quarter. One hour credit for each:

96a. Foods and Refreshments for Social Gatherings.
96b. Foods for Holiday Festivities.
97a. Foods for Luncheons or Suppers.
97b. Foods and Dinners.

## METAL

32. General Metal Work. Two hours.
33. Sheet Metal. Two hours.

34-134. Art Metal. Two hours.

## PAINTING

5-105. Water Color Painting. Hours by arrangement.
120-220. Oil Painting. Hours by arrangement.

## PRINTING

29 a,b,c. Elements of Printing. Six hours. Two hours each quarter.
30 a,b,c. Advanced Theory and Practice of Typographic Design. Six hours. Two hours each quarter.

31-131. Advanced Theory and Practice of Typographic Design. Two or four hours.

## WOODWORKING

26 a,b,c. Elements of Woodworking. Six hours. Two hours each.
27. Woodworking. Four periods. Two hours.

85 a,b,c. Woodturning. Six hours. Two hours each.
86-186. Advanced Woodworking. Four perods. Two hours.

## HEALTH AND PHYSICAL EDUCATION

All freshmen and sophomore students are required to take one activity course each quarter in residence. Of the six courses required of women two must be in sports and two must be in dancing, unless a student has an excuse from the school medical adviser. Corrective gymnastics will be substituted for women for an activity course upon presentation of a request from the medical adviser of women. Excuses from any other doctor must be referred to the school physician.

An extensive program of intramural athletics is provided for both men and women. It has for its aim competitive athletics for every student, and carries on a completely organized program which attempts to bring every student who wishes to compete into some athletic activity each quarter. No credit is given, but prizes are awarded in the form of medals and trophies. Intramural athletics for women are handled through the Physical Education Association and the Women's Athletic Association.

There is no major for men in Health and Physical Education. Required courses for men who will minor in Health and Physical Education:

Firet Year Health and Phys. Ed. 30, 50, 52<br>Second Year Health and Phys. Ed. 21, 33, 53, F. \& I. A. 91<br>Third Year Health and Phys. Ed. 125, 169, Sci. 117<br>Fourth Year Health and Phys. Ed. 165, 166, 168, 169, 170

Women majoring in Health and Physical Education are required to take the following courses:

Health and Physical Education 2, 12, 13a, 16, 31, and 32, to meet the core requirements of six hours of Physical Education during freshman and sophomore years. Majors must have had sufficient training in 13, 14, 15, 17, and 30 during high school work to prepare them for the more advanced work given in major courses or else take them in college for no credit. Where such preparation has not been had 13 and 30 should be taken during the freshman year in order to be prepared for the more advanced work when offered.

An examination consisting of both written and practical work must be taken in Health and Physical Education 13, 14, 15, 17, and 30 in order for a major to be exempt from taking the course. Any major is free to take a like examination in any of the above numbered courses required for majors to meet the six hours of Physical Education required if she feels that she has had their equivalent in high school.

Four hours of student teaching in Physical Education is required.
In addition to the core subjects listed on pages 19, 20, the following courses are required of women who major in Health and Physical Education:

First Year Health and Phys. Ed. 2, 12, 31, 45 a,b, Sci. 41<br>Second Year Health and Phys. Ed. 13a, 16, 32, 47 a,b, 50, 51<br>Third Year Health and Phys. Ed. 100 a,b, 120 a,b, 122, 129 a,b, 132, 137, Sci. 117, Ed. 116, F. \& I. A. 91<br>Foubti Yeab Health and Phys. Ed. 103 a,b, 125, 135, Sci. 132, Ed. 125.

Majors are required to take one quarter of student teaching in the campus school for four hours credit and one quarter in the off-campus schools. Each major must have two minors outside the division.

Suggested courses for women who wish to minor in Health and Physical Education:

Health and Phys. Ed. 2, 11, 12, 13, 14, 15, 17, 18, six of which may be used to meet the general physical education requirements for all junior college students. In addition the following courses must be taken in this division: Health and Phys. Ed. 46, 47, 48, 50, 51, 129, 130, 135, 137.

1. Personal Hygiene. Four hours.

45 a,b. Freshman Practice. Four hours. Two hours each quarter.
47 a,b. Sophomore Practice. Four hours. Two hours each quarter.
50. First Aid. Two hours.
51. Theory of Playground Organization. Two hours.
52. Theory of Play and Minor Sports. Four hours.
53. Tests and Measurements in Physical Examinations. Two hours. 100 a,b. Junior Practice. Four hours. Two hours each quarter.

102-202. Problems in Health Education. Two hours.
103 a,b. Senior Practice. Four hours. Two hours each quarter.
106. Home Hygiene and Care of the Sick. Four hours.

120 a,b.-220 a,b. Applied Anatomy. Six hours. Four hours first quarter, two hours second quarter.

122-222. Kinesiology. Two hours.
125-225. Physiology of Exercise. Four hours.
129 a,b. Coaching of Sports for Women. Four hours. Two each quarter.
131. Pageantry. Two hours.
132. Theory of Individual Gymnastics. Four hours.

135-235. History and Principles of Physical Education. Four hours.
136. Playground Supervision. Two hours.
137. Presentation of Materials in Physical Education. Four hours.
165. Football Coaching. Four hours.
166. Basketball Coaching. Four hours.
168. Track Coaching. Two hours.
169. Baseball Coaching. Two hours.
170. Organization and Administration of Athletics and Physical Education. Four hours.

For graduate research courses, see pages 13 and 14.

## ACTIVITY COURSES AND SPORTS

For Women-Dancing, including: 1. Clog and Athletic; 1a. Advanced Clog and Athletic; 2. Natural; 4. Fundamental Rhythms; 5. Folk; 6 Social.

Sports, including: 12. Soccer; 13. Tennis; 14. Basketball; 15. Baseball; 16. Hockey; 17. Volleyball; 18. Field and Track; 19. Golf; 30. Swimming. Students enrolled in swimming classes will be required to pay for laundering suits.

Miscellaneous: 11. Plays and Games; 20. Horseback Riding; 33. Individual Gymnastics; 34. Fundamental Gymnastics.

For Men-11. Plays and Games; 13. Tennis; 14. Basketball; 15. Softball; 17. Volleyball; 21; Mat Work; 22. Double Tumbling; 30. Swimming; 33. Gymnastics; 34. Spring Football.

Varsity Sports: 35. Freshman Football; 36. Football; 37. Freshman Basketball; 38. Swimming; 39. Gymnastics; 40. Wrestling; 41. Track; 42. Basketball; 43. Tennis.

## LITERATURE AND LANGUAGES

The Division of Literature and Languages offers courses in the literature, language studies, and the teaching of the following languages: English, French, German, Latin, and Spanish. Since the requirements for majors and minors in English and Foreign Languages are different, these are stated separately in the following pages.

## ENGLISH MAJORS

An English teacher in a high school may be called upon at one time or another to do all of the following things:
I. Teach classes in English and American Literature.
II. Teach composition classes; all the techniques of writing.
III. Conduct the high school paper.
IV. Direct debating, dramatic and speaking contests.
V. To correct speech defects of pupils.
VI. Direct the current reading of the pupils.

To prepare prospective English teachers to meet these situations the division requires the following basic essential courses:

Eng. 56 a,b, 58 a,b,c, 62, 63, 64, 100a, 110 a,b,c, 111, 118, 126.
In addition the student should add eight to eleven hours selected in accord with his special interest from the following courses:

Oral: Eng. 13, 17, 112, 114, 118. Composition: Eng. 100b, 100 c.
Literature: Eng. 132, 133, 134, 142, 155 a,b.
An English major must have proficiency in one language in addition to English before receiving the bachelor of arts or master of arts degree. This additional language may be Latin, French, Spanish, or German. The demand for teachers indicates that the Latin and English combination is the best one. The best arrangement of all is English, Latin, and either Spanish or French. The department strongly recommends proficiency in Latin and one modern language, but does not require this. Proficiency in languages shall be determined by objective testing. In Latin it will consist of ability to read (silently and orally) and to translate standard Latin prose into good English, and to write easy Latin composition. In a modern language the requirement is the same except that ability to carry on an ordinary conversation is added to the requirements.

This proficiency may be acquired altogether in the high school before coming to college, partly in high school and partly in college, or wholly in college. A student who has had two years of a foreign language in high school may reasonably expect to meet the proficiency requirements at once or at most by taking an additional eight or twelve hours of that language in college. Two years of high school language plus eighteen college hours is sufficient to meet the college requirements for a minor in that language, and the North Central requirement for certification to teach it in secondary schools.

English majors may be allowed one minor in a foreign languageLatin, Spanish, French, or German. The other minor must be entirely outside the Division of Literature and Languages.

## FOREIGN LANGUAGE MAJORS

Students expecting to be certificated as foreign language teachers must be proficient in one foreign language before being accepted for entrance upon that major. This proficiency may be acquired in high school
or partly in high school and partly in college. Before being granted the bachelor of arts or master of arts degree the candidate must be proficient in one or more language chosen from the following:

Latin, Spanish, French, German (Greek or Italian may be offered by students having already acquired one or the other before entering the college).

A foreign language major shall consist of proficiency in the use of the language, plus twenty-four hours in courses in the literature of that language.

The foreign language major will have the use of two languages (proficiency in one and adequate preparation in another). The student may use English as one minor if he so chooses, but is required to take the other minor outside the division.

The Book Hour. Once a week (Wednesdays 3:00 to $4: 30 \mathrm{p} . \mathrm{m}$.) the Library and Literature and Language Division will conduct a book hour in the Little Theater. Book reviews, play readings, readings from short story, novels, poetry, and miscellaneous literature. Talks on current books as guides to reading. Attendance voluntary. No credit.

## ENGLISH

13. Story Telling. Four hours.
14. Voice Training. Two hours.

18-118. Debating. Two hours.
21-121. Literature for the Elementary School. Four hours.
40 a,b,c. World Literature. Nine hours. Three hours each quarter.
56 a,b. American Literature. Four hours. Two hours each quarter.
58 a,b,c. A Survey of English Literature. Nine hours. Three hours each quarter.
62. Firbt Course in Speaking. Two hours.
63. Play Production and Dramatice. Two hours.
64. Organs of Speech and Phonetics. Two hours.

100 a,b,c. Journalism. Six hours. Two hours each quarter.

* 110 a,b,c. Advanced Composition and Creative Writing. Six hours. Two hours each quarter.

111. The English Language for Teachers. Four hours.
112. Children's Theater. Four hours
113. advanced Play Produotion. Four hours.

Prerequisite English 63.
*126. The Teaching of English in the Hige School. Four hours. 131-231. The Short Story. Four hours.

* 132 -232. The Development of the Novel. Four hours.
*133-233. The Recent Novel. Four hours.
*134-234. Modern Drama. Four hours.
142-242. Victorian Poetry. Four hours.
155 a,b-255 a,b. Shakespeare's Comedies, Historical Plays and Tragedies. Eight hours. Two hour each quarter.

160. Literature of the Old Tebtament. Four hours.

- Given also by correspondence.

161. Literatube of the New Testament. Four hours.
162. Old English. Four hours.
163. Chaucer and Middle English. Four hours.
164. Comparative Literature-Greek and Latin. Four hours.
165. Comparative Literature-Italian, Spanish and French. Four hours.
166. Comparative Literature-German, Scandinavian, and Russiau. Four hours.

For graduate research courses, see pages 13 and 14.
FRENCH
1-2-3. Elementary French. Twelve hours. Four hours each quarter.
*5-6-7. Intermediate French. Twelve hours. Four hours each quarter.

105 a,b. The Classical Theatre. Eight hours. Four hours each quarter.
107. Seventeenth Century Prose. Four hours.
205. Eighteenth Century French Literature. Four hours.
206. French Romanticism. Four hours.
207. Twentieth Century French Literature. Four hours.

## SPANISH

1-2-3. Elementary Spanish. Twelve hours. Four hours each quarter.
*5-6-7. Intermediate Spanish. Twelve hours. Four hours each quarter.
*105. Romantic Drama. Four hours.
*106. Modern Drama. Four hours.
*107. Modern Novel. Four hours.
108. Modern Poetry and Essay. Four hours.
131. The Teaching of Romance Languages. Four hours.
205. Don Quijote. Four hours.
206. Classical Drama. Four hours.
207. Classical Prose and Poetry. Four hours.

## LATIN

1-2-3. Elementary Latin. Twelve hours. Four hours each quarter.
*5. Crcero. Four hours.
*6-7. Vergil. Eight hours. Four hours each quarter.
105. Livy. Four hours.
106. Pliny. Four hours.
107. Horace. Four hours.

GERMAN
1-2-3. Elementary German. Twelve hours. Four hours each quarter.
*5-6-7. Intermediate German. Twelve hours. Four hours each quarter.
For. Lang. 131. Teaching of Foreign Languages. Four hours.
For graduate research courses, see pages 13 and 14.
*Given also by correspondence.

$$
\begin{aligned}
& 7 \text { :-1"•rin }
\end{aligned}
$$

$$
\begin{aligned}
& \text { i.i. . . } \therefore \text {, ... ریi. }
\end{aligned}
$$

## MUSIC

The Music Division consists of the department of public school music and the conservatory of music. It is maintained primarily for the purpose of thoroughly preparing teachers in public school music. The student life of the college is influenced directly by the large part music plays in all the student activities. It is necessary to maintain a large and well prepared music faculty in order properly to educate the public school music supervisor. Thus, it becomes possible to offer high-class instruction to those who are interested in the study of vocal and instrumental music.

Student recitals are given which provide the students an opportunity to appear in public. During the school year an oratorio is given by the college chorus, and the glee clubs of the institution give an opera each spring.

The college orchestra and band offer excellent training for those interested. The Greeley Philharmonic Orchestra is a symphony orchestra of fifty members, comprised of talent of the college and city which gives monthly concerts. The standard symphonies are studied and played. Advanced students capable of playing music used by the organization are eligible to join upon invitation of the director.

All majors in music must pass a third grade test on the piano and must be able to sing with an agreeable quality by time of graduation. Orchestra or band required each quarter. Chorus or glee club required each quarter.

Pianos are rented at $\$ 4.00$ per quarter. Band and orchestral instruments are rented at $\$ 5.00$ per quarter.

In addition to the core subjects listed on pages 19,20 , music majors are required to take the following:

Music 1a,b,c, 2a,b,c, 53a,b,c, 54, 55, 102a,b,c, 103a,b, 114, 120a,b.
Music majors must select two twenty-four hour minors outside the department.

Required courses for students from other departments who chose a minor in music:
I. Classroom Supervision: Music 1 a,b,c, 53, a,b,c, 54, 114 and six hours of applied music.
II. Instrumental Supervision: Music 1 a,b,c, 2a,b,c, 55, 114, and eight hours of applied music.

Music majors must show proficiency in applied music. Twelve credit hours will be given upon recommendation of the applied music committee. Applied music will include band, orchesfra, chorus, and small instruments. (It follows from the foregoing statement that applied music will not appear in the student's quarterly program load.)

One quarter hour of credit is given for one lesson a week with practice under the instruction of a member of the music division of the college faculty. Students who are not majors or minors in music may offer not less than three or more than twelve hours credit in applied music.

Excellent teachers are maintained in order that all students of the college may have the benefit of the best instruction. Instruction is offered in the following:

30-130. Voice; 31-131. Piano; 32-132. Violin; 33-133. PipeOrgan; 34. Class Piano; 35-135. Brass and Reed Instruments; 36136. Cello.

The following musical organizations are open to all studen ss and membership may be obtained through selection:

40-140. Mendelssohn Club (men); 41-141. Schumann Club (women) ; 42-142. Advanced Orchestra; 43-143. Advanceò Band; 44-144. A cappella Choir.

1 a,b,c. Music Reading, Theory and Elementary Songs. Six hours. Two hours each quarter.

2 a,b,c. Playing Musical Instruments. Six hours. Two hours each quarter.

50 a,b,c. Outlines of Music. Six hours. Two hours each quarter.
52. Music in the Elementary School. Four hours.

53 a,b,c. Harmonic Analysis and Advanced Choral Materials. Six hours. Two hours each quarter.
54. Teaching Vocal Music in Schools. Four hours.
55. Instrumental Materials and Class Procedure. Two hours.

102 a,b,c. Harmony, Counterpoint, and Composition. Six hours. Two hours each quarter.

103 a,b. Orchestration and Composicion. Four hours. Two hours each quarter.
114. Teghnique and Practice of Conducting. Two hours.

120 a,b. History of Music. Eight hours. Fours hours each quarter.

## SCIENCES

The primary aim of the Division of Sciences is to prepare science teachers for the public schools. It also endeavors to provide certain courses that are specifically designed to give students in other fields an adequate background for their professional work, and to prepare them for the common activities of life.

Students majoring in science will select one of the two following general plans:
I. They may take the following Science core (Students following this plan are not required to take Science 3 a.b) :

Science 21-22, 42†, 43, 156, 77*, 180, 62††, 63, 103-104, 11-12.
In addition to the above Science core the student will select twentyeight hours in the Biological Sciences, Mathematics or the Physical Sciences.

Students selecting this plan must take in addition at least one minor of twenty-four hours in a field outside the Science Division.
II. Students may major in Mathematics by taking the following courses:

Science $75 \mathrm{a}, \mathrm{b}, 76,78 \mathrm{a}, \mathrm{b}, \mathrm{c}$, and $82,175,176$; and eight hours
from the following group: Science 178, 179, 181, 182, 183.
Freshmen who are to major in Mathematics should plan to begin their work with Science 75a if they have had only one year of high school algebra, and with Science 78 if they have had a year and a half or more. In addition to the major in Mathematics, students must also take two minors of at least twenty-four hours each, one of which must be in a field outside the Sclence Division.

## MINORS FOR MAJORS FROM OTHER DIVISIONS

Students majoring in other departments may take minors in any of the following fields:

1. Biological Science: Sci. 11, 12, 21, 22, 130.
2. Mathematics: Sci. 75 a.b., 76, and two other four-hour mathematics courses; or Sci. 78 a,b,c and two other four-hour mathematics courses.
3. Physical Science: Sci. 41, 42, and 43 if the student has had no high school chemistry; Sci. 42, 43, and 47 if he has had a year of high school chemistry. If the student has had no high school physics, Sci. 61, 62, and 63; if he has had a year of high school physics, Sci. 62 and 63.
[^6]
## UNSPECIALIZED SCIENCE COURSES

*3 a,b,c. Introduction to Science. Three quarters. Four hours each. 101. Elementary Science. Four hours. Field trips arranged.

## PROFESSIONALIZED SCIENCE COURSES

103-104, 203-204. The Teaching of Science. Two quarters. Four hours each.

## BOTANY

21-22. General Botany. Two quarters. Four hours each. Four hours class; three hours laboratory.
121-221. Plant Physiology. Four hours.
Prerequisite, Botany 21 and 22. Four hours class, four hours laboratory.
126-226. Botanical Technique and Plant Histology. Four hours.
Offered in 1934 and alternate years. Prerequisite Bot. 21. Three hours class; five hours laboratory.

127-227. Systematic Botany. Four hours.
Three hours class; four hours laboratory and field.
130-230. General Bacteriology. Four hours.
Four hours class, three hours laboratory.

## BIOLOGY

131-231. Evolution. Four hours.
132-232. Genetics and Eugenics. Four hours.
For graduate research courses, see pages 14 and 15.
1
CHEMISTRY
41. General Chemistry. Four hours.

Three hours class; three hours laboratory.
42. General Chemistry. Four hours.

Three hours class; three hours laboratory.
*43. General Qualitative Chemistry. Four hours.
Two hours class; five hours laboratory.
48. Qualitative Analysis. Four hours.

Prerequisites, Chem. 41, 42, and 43. Two hours class; five hours laboratory.

141-241-142-242. Organic Chemistry. Two quarters. Four hours each. Prerequisites, Chem. 41, 42. Three hours class; three hours laboratory.

144-244. 145-245. Quantitative Analysis. Two quarters. Four hours each.

Prerequisites, Chem. 41, 42, 43, and 48.
151-251. Physiological Chemistry. Four hours.
Prerequisites, Chem. 41 and 42. Three hours class; three hours laboratory.

For graduate research courses, see pages 13 and 14.

[^7]
## GEOLOGY

156. Elementary Geology. Four hours.
157. Historical Geology. Four hours.
158. Geology of the Rocky Mountains. Four hours.

Four hours class; field trips as desired.

## MATHEMATICS

*75 a,b. College Algebra. Eight hours. Four each quarter.
*76. Plane Trigonometry. Four hours.
77. General Mathematics. Four hours.

78 a,b,c. General Mathematics. Three quarters. Four hours each.
81. Mathematical Instruments and Surveying. Two or four hours.
*82. Analytic Geometry. Four hours.
*175. Differential Calculus. Four hours.
*176. Integral Calculus. Four hours.
*177. Theory of Equations. Four hours.
*178. Arithmetic in Lower Grades. Two hours.
*179. Arithmetic in the Intermediate Grades. Two hours.
180. Descriptive Astronomy. Four hours.

Four hours class; field observation arranged.
*181-281. The Mathematics of the Junior High School. Four hours.

* 182-282. The Teaching of Algebra. Four hours.
* 183-283. Geometry for Teachers. Four hours.
*184-284. Higtory of Mathematics. Two hours.
*285. Advanced Calculus. Four hours.
A continuation of the work given in Math. 101 and 102.
*286. Differential Equations. Four hours.
For graduate research courses, see pages 13 and 14.


## PHYSICS

61. Elementary Physics. Four hours.

Three hours lecture; four hours laboratory.
62-63. General Physics. Two quarters, Four hours each.
Three hours lecture; four hours laboratory.
161. Heat and Mechanics. Four hours.

Prerequisites, Phys. 62; 63. Four hours lecture; four hours laboratory.
162. General Electricity. Four hours.

Prerequisites, Phys. 62, 63. Four hours lecture; four hours laboratory.

[^8]163. Light and Sound. Four hours.

Prerequisites, Phys. 62, 63. Four hours lecture; four hours laboratory.
166-266. Radio Transmission and Reception. Four hours.
Prerequisites, Phys. 62 and 63. Three hours lecture; three hours laboratory.

167-267. Photography and Photochemical Phenomena. Four hours. Two hours lecture; four hours laboratory.

168-268. Contemporary Physics. Four hours.
169-269. X-rays, Cosmic Rays, and Other Types of Electromagnetic Waves. Four hours.

Prerequisites, Phys. 61, 62, 63. Three hours lectures. Two hours laboratory.

170-270. Physics of the Automobile and of the Arrplane. Four hours.

Two hours lecture; four hours laboratory.
For graduate research courses, see pages 13 and 14.

## ZOOLOGY

11-12. General Zoology. Two quarters. Four hours each.
Three hours class; four hours laboratory.
13. Bird Study. Four hours.

Four hours class; field trips arranged.
113-213. Zoological Technique and Animal Histology. Four hours.
Prerequisites, Zool. 11 and 12 or equivalent. Three hours class; five hours laboratory.

114-214. Elementary Entomology. Four hours.
Three hours class; four hours laboratory.
115. Economic Zoology. Four hours.

117-217. Human Physiology. Four hours.
Three hours class; four hours laboratory.
119-219. A Field Course in Zoology. Four hours.
120. Embryology. Four hours.

Three hours class; four hours laboratory.
211. Morphology of the Vertebrates. Four hours.

Prerequisites, Zool. 11 and 12.

## SOCIAL STUDIES

The Division of Social Studies has three main functions. In the first place, it offers specific preparation for those who are to teach materials in the public schools. At the present time this includes history, political science (civics,) economics, geography, sociology, and various combinations of these subjects under varying names.

Its second function is to prepare special teachers of business education, including the related skills of shorthand, typewriting, accounting, handwriting, and office appliances.

Its third function is to provide a cultural background in the general fields of past civilizations, modern governments, modern society and its problems, theories of social progress, and international relations for those who have no intention of devoting the major portion of their time to teaching social subjects, but wish to understand the civilization in which they live.

Three programs are offered for those who major in the Social Studies:
I. A general program which will prepare the student to teach all of the six subjects most frequently found in the junior and senior high schools and that are separately certified under the rules of the North Central Association. These are: American history, economics, political science, European history, geography, sociology.
II. An alternative plan in which students may, with the consent of their advisers, plan larger sequences in at least three of the above subjects. These should include both social and political types.
III. Preparation for teaching business and commercial education with less preparation in the other social studies. This must include a twelve-hour sequence in economics and in each of two other social subjects; proved proficiencies in the business skills (bookkeeping, shorthand, and typewriting), and Social Studies 118 and 119.

## GENERAL REQUIREMENTS

I. All who take programs (I) or (II) must plan a teaching sequence in each of two subjects entirely outside the Social Studies sufficient to meet minimum standards in the North Central Association.
II. Those who take program (III) must plan one such sequence outside of the Social Studies.
III. Final electives in the senior year should not be used until requirements listed above have been met.
IV. A course in the teaching of the Social Studies is required of all majors.
V. The general courses numbered Social Studies 2 a,b,c, listed in the college core, may be omitted and other courses substituted on the written approval of the student's adviser.

## GENERALIZED COURSES

1. a,b,c. Social Studies for Rural Schools. Three quarters. Four hours each.
2. a,b,c. An Introduction to the Social. Studies. Three quarters. Four hours each.
3. Socro-Economics (Formerly Math. 50). Four hours.

## PROFESSIONALIZED COURSES

113-213. The Teaching of the Social Studies in the Elementary School. Four hours.

117-217. The Teaching of the Soclal Studies in the Secondary School. Four hours.

118 a,b. The Teaching of Shorthand and Typewriting. Four hours. Prerequisite, Proficiencies 20b and 20d, or the equivalent.
119-219. The Secondary School Business Curriculum. Four hours.

## BUSINESS EDUCATION

Profictencies in Business Skills-Credit in quarter hours toward the Bachelor or Arts Degree may be established for proficiency in the business skills as follows:
S. S. 20. (a) Bookkeeping-eight hours; (b) Gregg Short-hand-eight hours; (c) Office Appliances-four hours; (d) Type-writing-four hours; (e) Handwriting-two hours.

Proficiencies must be demonstrated by the student through passing an examination which will satisfy the examination committee that the student is qualified in his own mastery of skill to teach the subjects in the secondary school. The examinations will be given every quarter and the student who fails in one may take another. Special laboratories will be available for study and preparation for the examinations. A student who registers for one laboratory section will be restricted to a twelve hour program, except in the case of Proficiency 20 e .

21. Secretarial Practice. Four hours. Prerequisite, 20 b , or the equivalent.<br>*22. Business Mathematics. Four hours.<br>*23-123. Business Law. Four hours.<br>127-227. Partnership and Corporation Accounting. Four hours.<br>Prerequisite, Proficiency 20, or the equivalent.<br>128-228. The Analysis of Financial Statements. Four hours.<br>Prerequisite, Proficiency 20, or the equivalent.<br>129-229. Problems in Business Education. Four hours.<br>For graduate research courses, see pages 13 and 14.

## ECONOMICS

Suggested Sequences:
I. S. S. 130, 136
II. S. S. $130,134,136$
III. S. S. $130,132,134$, and 135 or 136
130. Principles of Economics. Four hours.
*131. World Economic Geography. Four hours.
*132. Applied Economics. Four hours.
133. Marketing. Four hours.

134-234. Money and Banking. Four hours.

[^9]135-235. Business and Financial History of the United States. Four hours.
*136-236. Elementary Principles of Investment. Four hours. 137-237. Business Organization. Four hours.
138. Retail Merchandising. Four hours.

## GEOGRAPHY

Suggested Sequences:
I. S. S. 40,41
II. S. S. $44,45,46$ or $142,143,144$
III. S. S. $25,65,66,191$

40-140. Human Geography. Four hours.
41. World Geography. Four hours.

42-142. Geography of the Rocky Mountain Indian. Two hours.
43-143. Islands of the Sea. Two hours.
44-144. The Continents of the New World. Four hours.
*45-145. Europe and Her African Colonies. Four hours.
*46-146. Asia and Australia. Four hours.

* 140-240. Climate and Civinization. Four hours.

141-241. Contrasting Regions. Four hours.
142-242. The Mongolian and Malay Worlds of Southern Asia.
143-243. Present Day Europe. Four hours.
144-244. The Resources of Soviet Russia. Four hours.
145-245. Geography and World Power. Four hours.
*146-246. Geographic Influence in American History. Four hours.
147-247. Geography and Community Life. Four hours.
148-248. Conservation of Natural Resources. Four hours.
249. Intensive Geography of Greeley and Vicinity. Two hours. For graduate research courses, see pages 13 and 14.

## HISTORY

Suggested Sequences:
American History-S. S. 50 b,c, or 158, 263,264 , and one of the following 263,264 , or 266.

European History-S. S. 51, 52, 54 a, b, c, 151, or 51, 52, 260 , 265.

50 a,b, c.-150. American History. Three quarters. Four hours each.
51. Contrlbutions of the Ancient and Medieval World to Modern Civilization. Four hours.

[^10]52. The Expansion of European Civilization in Modern Times. Four hours.
53. History of Education and its Relation to Western Civilizations. Four hours.

54 a, b, c.-154. A History of Modern Europe. Three quarters. Four hours.

55-155. Contemporary History. Two hours.
56-156. History of Colorado. Two hours.
151-251. Ancient Social History. Four hours.
152-252. Western American History. Four hours.
153-253. English History. Four hours.
158-258. Social and Industrial History of the United States. Four hours.
259. The Reformation. Four hours.
260. Medieval Life and Institutions. Four hours.
261. The French Revolution. Four hours.
262. The Great Colonial Empires of the Twentieth Century. Four hours.
263. The American Revolution. Four hours.
264. Slavery, Secession, Civil War, and Reconstruction. Four hours.
265. History of the Industrial Revolution. Four hours.
266. The Literature of American History. Two hours.
267. Latin-American History. Four hours.
268. History of the Far East. Four hours.
269. Seminar in Historical Techniques. Two hours.

For graduate research courses, see pages 13 and 14.

POLITICAL SCIENCE
Suggested Sequences:
I. S. S. 170, 171
II. S. S. 170, 171, 174
III. S. S. $170,171,173,174$
*170. Government of the United States. Four hours.
*171. State Government. Four hours.
172. Municipal Government. Four hours.

173-273. History of the Foreign Policy of the United States. Four hours.

174-274. International Relations. Four hours.
275. Political Science Theory. Four hours.

For graduate research courses, see pages 13 and 14.

[^11]COLCRNA S :.. $\quad \therefore \quad \therefore$ ESUCATIOR cise - b emenado

## SOCIOLOGY

## Suggested Sequences:

I. S. S. 180, 183
II. S. S. $180,160-260$, and $165-265$
III. S. S. 105, 125-225, 145-245, and 185-285

80-180. The Home and Family Relationships. Four hours.
81-181. Child Care and Child Welfare. Four hours.
82-182. The Education of the Consumer. Four hours.
*83. Sociology of Rural Life. Four hours.
*185. Introduction to Sociology. Four hours.
186-286. The Sociology of Crime. Four hours.
187-287. Revolution and Religious Change. Four hours.
188-288. Modern Social Problems. Four hours.
189-289. General Anthropology. Four hours.
190-290. Social Evolution. Four hours.
*191-291. Human Personality and Social Behavior. Four hours.
192-292. The Sociology of the Family. Four hours.
193-293. Theories of Social Progress. Four hours.
194-294. Achievements in Sociological Research. Four hours.
For graduate research courses, see pages 13 and 14.

[^12]
## INDEX

Page
Administration ..... 4
Admission ..... 16
Anthropology ..... 46
Art ..... 26
Art Metal ..... 29
Astronomy ..... 40
Bachelor of Arts Degree ..... 17
Band ..... 37
Biology ..... 39
Board and Room ..... 11
Board of Trustees ..... 4
Bookbinding ..... 28
Botany ..... 39
Business Education ..... 43
Calendar ..... 2
Cello ..... 37
Certificates ..... 17
Chemistry ..... 39
Chorus ..... 37
Coaching ..... 31
Conservatory of Music ..... 36
Core Subjects ..... 19
Correspondence Study ..... 14
Courses of Instruction ..... 19-46
Credits ..... 18
Curricula ..... 19
Debating ..... 34
Degrees ..... 13, 17
Departmental Requirement ..... 19-21
Design ..... 28
Diplomas and Degrees ..... 17
Doctor of Philosophy Degree ..... 13
Dormitories .....  .11
Dramatic Art ..... 83
Economics .....
Education ..... 22
Elementary Certificates ..... 17
Elementary School Curriculum ..... 21
English ..... 33
Entrance Requirements ..... 16
Expenses ..... 12, 13
Extension Department ..... 14
Faculty ..... 5-9
Fees and Expenses ..... 12, 13
Fine and Industrial Arts ..... 26
Foods and Cookery ..... 28
Foreign Languages ..... 33
Fraternities ..... 12
French ..... 35
Freshmen Matriculation ..... 16
Function of the College ..... 10
General Information ..... 10
Geography ..... 44
Geology ..... 40
German ..... 35
Government of the College ..... 10
Grading System ..... 17
Graduate Council ..... 4
Graduate Courses ..... 13, 14
Graduate School ..... 13
Health and Physical Education ..... 30
Health Service ..... 11
History ..... 44
Page ..... 27
Homerary
Honorary Fraternities ..... 12
Horace Greeley Junior College ..... 15
Housing Regulations ..... 10
Industrial Arts ..... 26
Instructional Staff ..... 5-19
Jackson Field ..... 10
Journalism ..... 34
Junior College ..... 15
Laboratory Schools ..... 15
Languages ..... 33
Latin ..... 35
Life Certificate ..... 17
Limited Certificate ..... 17
Literature and Languages ..... 33
Living Accommodations ..... 11
Loan Funds ..... 11
Location of the College ..... 10
Matriculation ..... 12, 16
Master of Arts Degree ..... 13
Mathematics ..... 46
Matriculation ..... 12, 16
Music ..... 36
Nursing Education ..... 24
Officers of Administration ..... 4
Officers of the Board of Trustees ..... 4
Oil Painting ..... 29
Orchestral Music ..... 37
Organ ..... 37
Painting ..... 29
Physical Education ..... 30
Physical Examinations ..... 11
Physics ..... 40
Piano ..... 37
Pipe Organ ..... 37
Plant ..... 10
Political Science ..... 45
Printing ..... 29
Psychology ..... 23
Religious Activities ..... 12
Required Work ..... 16
Requirements in Student Teaching ..... 15
Romance Languages ..... 33
Rooming Regulations ..... 11
Rooms ..... 11
Rural Certificate ..... 17
Rural School Curriculum ..... 20
Scholarships ..... 11
Sciences ..... 38
Social Studies ..... 42
Sociology ..... 46
Spanish ..... 35
Student Government ..... 10
Student Loan Funds ..... 11
Student Teaching ..... 15
Trustees ..... 4
Tuition ..... 12
Unit of Credit ..... 18
Violin ..... 37
Voice Culture ..... 37
Woodworking ..... 29
Zoology ..... 41

COLORADO STATE TEACHERS COLLEGE IS a Class A nember of the American 1. Association of Teachers Colleges and of the North Central Association of Colleges and Secondary Schools.


[^0]:    $\dagger$ On leave Fall, Winter, and Spring quarters, 1934-35.
    *On leave Winter, Spring, and Summer quarters, 1935.
    **On leave Winter and Spring quarters, 1935.

[^1]:    * The elementary curriculum requires sequences prerequisite to proficiency in content in art, music, literature, science and social studies.

[^2]:    *110-210. Improvement of Instruction in Reading and Literature. Four hours.

    First advanced course in elementary education.

[^3]:    - Given also by correspondence.

[^4]:    *111-211. Improvement of Instruction in Language, Spelling and Writing. Four hours.

    Second advanced course in elementary education. Prerequisite, junior standing.
    *112-212. Improvenent of Instruction in Arithmetic and Content Subjects. Four hours.

    Third advanced course in elementary education. Prerequisite, junior standing.

    115-215. Educational and Vocational Guidance (Summer quarter only). Four hours.

[^5]:    *Given also by correspondence.

[^6]:    $\dagger$ If the student has had no high school chemistry, Sci. 41 must also be taken.
    $\dagger \dagger$ If the student has had no high school physics, Sci. 61 must also be taken.

    - For Physics majors.

[^7]:    *Given also by correspondence.

[^8]:    -Given also by correspondence.

[^9]:    *Given also by correspondence.

[^10]:    - Given also by correspondence.

[^11]:    *Given also by correspondence.

[^12]:    -Given also by correspondence.

