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March
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SUMMER QUARTER

First Term June 7 to July 13
and Term July 14 to August 20

Train for Life in War
or Peace at

**SOUTH DAKOTA
STATE COLLEGE
OF AGRICULTURE
AND MECHANIC
ARTS** ❖ ❖ ❖ ❖

BULLETIN

THIS BOOK DOES
CIRCULATE

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Registration Procedure

ORDER OF REGISTRATION

1. All women students should consult the Dean of Women, Miss Volstorff.
2. All new students should clear with the Registrar's office concerning entrance credits.
3. All new students who enter with college credits from other institutions should consult the Registrar to have credits evaluated.
4. All students should secure registration cards from the Registrar's office.
5. Each student should observe the following order when classifying: Go to the dean of the respective division or Director of the Junior College, who will advise him as to his work and together with departmental representatives, will help him fill out a registration card. The subjects should be written on the card in ink.

INSTRUCTIONS FOR REGISTERING

1. Always make out your schedule on a tentative blank first and have it approved before copying to the registration card.
2. All writing on the classification cards should be in ink.
3. Be sure to indicate in the proper columns the correct name of each course, the course number, number of credit hours, and the periods and days of meeting.
4. Instructors should add the names of students to the proper class roll at the time the card is signed.
5. Junior and senior students should have their cards signed in the proper places by the heads of their major and minor departments.

The departmental representative should sign the registration card when completed and also place the student's name on the class roll in connection with any subjects that have been entered on the card.

After the card has been filled out it should be presented to the dean of the division or the Director of the Junior

College, who will retain it if it meets with his approval, and make out a statement of fees which the student will be required to pay. **The student's registration is complete when the fees are paid at the Secretary's office. Failure to do this within the time allotted to registration will result in the student's being charged the late registration fee.**

CHANGES IN CLASSIFICATION: Any change in classification must be made by the dean of the division in which the student is enrolled, or by the Director.

After a student is enrolled in a subject, absences from classes of the subject are recorded until he secures written permission from the dean of his division to drop the subject and files this statement in the Registrar's office.

A fee of fifty cents (50c) will be charged for all changes in classification made at the request of the student after the first week of the term involving either enrollment in a new subject, dropping a subject, or a change in sections.

In general a grade of "F" is recorded for any subject dropped after the second week of the term.

ABBREVIATIONS AND ROOM NUMBERS

Ad—Administration Building; AE—Agricultural Engineering Building; Ar—ROTC Armory; C—Central Building; Ch—Chemistry Building; CA—Classroom Annex; Dy—Dairy Building; DyP—Dairy Judging Pavilion; E—Engineering Building; EH—East Hall; Ex—Extension Building; ExA—Extension Annex; Gr—Greenhouse; Gym—Gymnasium; Ho—Horticulture Building; Lib—Library; N—North Building; SP—Stock Pavilion; U—Union Building; Vet—

Veterinary Building; P, Prerequisite; R (in credit column) Required without credit.

In numbering rooms the first digit indicates the floor on which the room is to be found excepting in case of basement rooms which are numbered from 1 to 99 inclusive. Ad 206 is on the second floor of the administration building, Lib 5 is in the basement of the Library. Odd numbers are placed on the east and south and even numbers on the west and north.

ADMINISTRATIVE OFFICES OF REGISTRATION

President—Ad 222; Dean of Agriculture—Ad 217; Dean of Engineering—E 102; Dean of Home Economics—Ad 218; Dean of Pharmacy—Ad 123; Dean of

Physical Education—Ad 217; Dean of Science—Ad 217; Dean of Student Affairs—Ad 217; Director, Junior College—Ad 217; Director, Research and Measurement—Ad 218; Business Agent—Ad 217; Registrar



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Briggs Library
South Dakota
State University

1943 Summer Quarter
SOUTH DAKOTA STATE COLLEGE
of Agriculture and Mechanic Arts
BULLETIN

SUMMER QUARTER CALENDAR

First Term

June 7, Monday	Registration Day
June 8, Tuesday	Class work begins at 7:00 a. m.
June 9, Wednesday	Assembly students and faculty Freshman Assembly 1:00 General Assembly 2:00
July 13, Tuesday	Graduation Exercises 10:30 a. m. First Term closes at 4:00 p. m.

Second Term

July 14, Wednesday	Registration Day
July 15, Thursday	Class work begins at 7:00 a. m.
August 20, Friday	Second Term closes at 4:00 p. m.

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No. 3

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General Information

In planning its offering for the 1943 Summer Quarter, South Dakota State College has endeavored to provide such work and courses which will meet most effectively the needs and demands of its summer quarter student body.

Continuing a practice begun last year, the college will again provide work for a summer quarter of two terms, giving students the opportunity of enrolling in either or both terms. The divisions of the College have sought to provide a program which will fit in well with the college work of the other three quarters so that students who wish to do so, may, by attending classes through the four quarters, complete the work for the B.S. degree in less than three calendar years. This plan accommodates different groups of students: high school seniors who have been recommended for college work by their school officials; graduates of high schools just beginning their college work; our regular college students; and, graduate students and teachers who wish to take advanced work.

Courses will be offered in the divisions of Agriculture, Engineering, Home Economics, Pharmacy and General Science. Students may register in the Junior College and select subjects from any of the five divisions. The faculty of the summer quarter will almost entirely be members of the regular faculty of the College. The main difference between the summer quarter and the quarters of the regular school year is that the former is divided into terms, each a unit in itself with courses undertaken being completed within the term.

Monday, June 7, is Registration Day for the first term. Students should register on that day and be ready for class work on the morning of Tuesday, June 8. Students should arrive in Brookings in time to arrange for living quarters before school opens. All administrative offices will be open and ready to give needed assistance.

Admission

The requirements for admission to the Summer Quarter are the same as for other quarters of the year. Satisfaction of entrance credits means the completion of a standard high school course. A candidate for entrance to the freshman class of the Junior College must present at least 15* units of entrance credit by certification or examination, or present at least 12 units of entrance credit together with a recommendation for college work as a special freshman from his superintendent or principal. Others may be admitted as special students to courses they are qualified to pursue. Credit toward a degree will be given only to students who satisfy the entrance requirements. All students entering the College for the first time must submit an application for admission on the official forms and take the entrance examinations for use in guidance and counseling with the students. The examinations are given after classes start and entrance is not based on these examinations. Students entering direct from high school should have their superintendent or principal send a high school transcript directly to the Registrar's office before registering.

Graduate Work

Many of the departments of the College offer work during the summer for graduate credit. In certain departments it is desirable that students plan to do at least some of their graduate work during the summer quarter. Those who are interested in graduate work should write to the Chairman of the Graduate Committee for regulations concerning entering upon and requirements of graduate work at State College.

* Students who present 14 units may be admitted as conditioned freshmen but must earn the additional unit before the close of their first year in college.

War-Time Educational Objectives

While students who wish to do so will find ample opportunity to pursue a conventional collegiate program, the College is aware of the fact that many young men and women will prefer to take courses which will give them immediate advantages should they enter the Armed Services or private employment. With this thought in mind the Summer Quarter program has been set up to facilitate and to encourage this type of training. A few of the special opportunities are outlined below.

Pre-Induction Training. It is a well established fact that in the past the young man who has had even a small amount of college training has had a tremendous advantage over the one who did not have the college background. The college man's advantage has been particularly great where his background in higher education was supplemented by training in ROTC basic military before entering service. Recent figures indicate that approximately 80 per cent of the young men accepted for Officer Candidate schools had some college training.

In view of the intense demand for military recruits with college training in the fields of science and technology, the Summer Quarter schedule has been so arranged that a student may virtually complete a full year of college freshman mathematics during the quarter. If he chooses to do so, he may complete a combination course in mathematics and physics, or in mathematics and chemistry by attending both Summer Quarter terms. Certain elementary engineering and shop courses will also be open to entering freshmen. The technical and general training provided should contribute to the student's ability to make a satisfactory record in Army and Navy examinations which may be given at future dates.

Commercial Education. Girls who wish to improve their background for office employment will find an excellent opportunity to do so by enrolling in the "speeded-up" programs in shorthand, typewriting, and office practice.

Printing and Journalism. The man-power shortage in the fields of printing and journalism has prompted the College to organize special intensified courses in printing and newspaper publication. By concentrating on restricted areas of work a student may learn to operate the linotype or a printing press in a relatively short time. These courses are also highly recommended for "refresher" training.

Teacher-Training Program. Although there is a teacher-shortage in all high school subject-matter areas the shortage seems to be particularly acute in the fields of science, mathematics, and in the specialized fields generally. Assuming that under these circumstances it will be necessary for certain teachers in certain schools to change from one teaching assignment to another, State College is organizing its schedule to provide opportunities for teachers who are otherwise qualified to become reasonably effective teachers in the "critical" fields in one summer quarter.

While it is highly desirable that teachers who wish to take summer work to prepare for teaching in these subjects should have had some previous training in these areas, it is not absolutely essential that they have an appropriate college background. Assuming that a teacher has had high school algebra and plane geometry and a reasonable aptitude for mathematics, this individual can acquire enough credits in mathematics in two summer terms to meet the North Central Association requirements. The North Central Association requirements for teachers of physics, chemistry, or biology, can be met by any high school teacher in one summer quarter provided that teacher has had at least one three credit course in any course that may be classified as a science. Persons who are interested in teaching commercial subjects can accumulate from 18 to 20 credits in this field. In addition

to the academic subject matter, the several departments concerned are also offering methods courses for the teaching of their respective subjects.

The demand for high school teachers of agriculture, home economics, and industrial arts, is as great and possibly greater than that in any of the above mentioned fields and teachers who wish to extend their training in these subjects will find excellent opportunity to do so.

Credit

All scheduled courses carry college credit as indicated in connection with the courses. The normal load for a summer term is eight or nine quarter credits.

Brookings

Brookings is a beautiful city with a population of approximately 5,400 located in the east central part of the state on the Chicago and Northwestern railroad. It also has several bus lines leading into it. Its shaded streets and well-kept lawns make it an unusually attractive place in which to spend the summer. Lake Campbell is but a short distance from the city. The Sioux River is a popular picnic point. Nearby golf courses are available for summer recreation. Brookings has a fine municipal swimming pool. Brookings has two beautiful city parks with picnic and recreational facilities; including swimming, horse shoe, tennis, music concerts, etc.

Lincoln Memorial Library

The Lincoln Memorial Library at South Dakota State College is the heart of the summer school activities. Many of the offices of the various departments are located in the library building and also many of the classes meet there.

The Library itself contains 76,865 (April, 1943) volumes and 26,000 pamphlets carefully selected and well-catalogued to facilitate instruction and individual research and also to stimulate general reading. The library receives currently many newspapers and maintains subscriptions to 565 journals and periodicals of both a technical and general nature. It maintains all the necessary reference books and indexes for both periodicals and documents which make the long files of each valuable in the many fields of research.

The library is also a federal and state document depository and has also been designated as the new center of war information by the Office of War Information.

Pugsley Union

The Pugsley Union is primarily a student enterprise, operated as the college social, recreational, and service center. It is maintained by and for the students, faculty, and alumni as their college club, with facilities for service and pleasure. Every student, by payment of the specified fee, is an active member of the Union and has a voice in its direction.

During the summer quarter the Union will operate all facilities for which there is a demand. Meal and fountain service will be in operation from 6:30 a. m. throughout the day. Game and recreation facilities will operate when the demand warrants. Lounge, meeting and club facilities will be available at all times. Arrangements for social functions and meetings may be made in the Union Director's office, room 202.

To enable students to purchase books and other supplies necessary for their work, the student association maintains a bookstore located in the Pugsley Union.

Housing Facilities

Due to the presence of certain Army training units on the Campus, the dormitories are not available for civilian use at the present time. The College has, however, made arrangements for the housing of young women in "cottage dormitories" which provide all of the comforts and conveniences heretofore enjoyed by dormitory residents. Freshmen women under twenty-one years of age, who are not residents of Brookings, are required to live in these homes unless special permission to room elsewhere is granted by the Dormitories Committee.

Upper-class women and men students have little difficulty in securing favorable and conveniently situated rooming places in private homes in the vicinity of the campus. The cost of private rooms for either men or women will range from \$1.25 to \$2.00 per week. The cost of rooms in the "cottage dormitories" range from \$7.50 to \$8.00 per summer term of five and one-half weeks. Students wishing to room in the "dormitories" should provide themselves with a mattress pad, two pairs of pillow cases, three sheets, one pair of blankets and towels.

Fees Per Term

Tuition*	.....	\$12.00
Library	.....	.50
Health	.....	1.25
Union	.....	1.50
Activity Ticket	.....	2.00
		<hr/>
	Total	\$17.25

* Fifty percent higher tuition for students who are not residents of South Dakota.

Other Expenses

Small laboratory fees are charged for the courses requiring laboratory work. The fee is indicated in each case with the description of the course. A late registration fee of \$2.00 will be collected from all students who complete their registration and pay their fees subsequent to the time announced for that purpose. The cost of books will vary with the course. Used copies may frequently be purchased at reduced cost. Text books and supplies are available at the Union Book Store.

Meals and fountain service are available at the Pugsley Union, as well as at other eating places near the Campus. At the present time the cost of meals at most of these establishments will range between \$5.00 and \$6.00 per week.

Assembly and Recreation

The Summer Quarter social and recreational program is organized to give a maximum of entertainment and relaxation without necessitating excessive travel. Assembly programs, consisting of talks by imported and local speakers, professional entertainments, and performances by State College music organizations, are held each Wednesday afternoon at 1:00 p.m. for the Junior College and at 2:00 p.m. for the Senior College. Activities of a more social nature consist of mixer parties, picnics and dances. These activities are organized by a joint committee of faculty members and students.

Organized recreation for both men and women is provided for under the general direction of the Physical Education Department. The College is well equipped with tennis courts, ball diamond, golf course, archery equipment, etc. The recently completed municipal swimming pool and several city parks can, by special arrangement with the city authorities, be made available for student use.

Teachers Employment Bureau

The College maintains a Teachers' Employment Bureau for graduates and students who wish to secure help in locating suitable teaching positions. The Bureau is maintained and operated by the Department of Education and is in charge of a full-time secretary. Complete instructions for registering may be secured at the office of the Bureau at Room 109 Library Building. An annual registration fee of \$1.00 is charged for this service.

There appears to be a shortage of teachers along several high school lines with high school salaries up considerably over those of the last few years. Those who have not taught for a few years, particularly married women, might through summer attendance take refresher courses in subject matter courses and education courses and secure teaching certificates. There is an urgent demand for teachers of science and mathematics due, in many cases, to men leaving for the armed service. Many teachers who have basic work in those fields may through refresher courses in such work in summer session become qualified for very good positions in the field and, in many cases, be assured of a position before they take the work.

Courses Offered

In order to provide ample opportunity for those students who are attempting to complete their college education in the shortest possible time, the College is offering a wide range of courses for the Summer sessions. Courses are being offered in each of the five major divisions and in twenty-six departments. Where there is a sufficient demand additional courses not listed in this bulletin may be offered. The College, in turn, reserves the right to withdraw any courses for which there is not sufficient demand to warrant the organization of the class.

Courses listed in this bulletin have the same number as those found in the 1942-43 Annual Catalogue and are intended to cover the same material. The student is referred to the Annual Catalogue in case the abbreviated course description does not provide sufficient information. Further information regarding courses may also be had by writing to the Deans of the Divisions.

In general, the courses listed in these pages are classified as follows: Those numbered 1-19 are of Freshman rank; 20-39 Sophomore rank; 40-59 Junior rank; 60-79 Senior rank; 100-199 undergraduate and graduate rank; 200 or above primarily for graduates. The symbol "P," following the course descriptions, refers to the pre-requisites for the course in question. In cases where the student has unusual qualifications the pre-requisites may be waived.

Division of Agriculture

Agricultural Economics

20 Principles of Economics 5 Cr. 1st Term

The fundamental principles of economic science as an aid to the understanding of the modern economic problems involved in production and distribution.

110 International Trade 3 Cr. 2nd Term

Review of theories of international trade and foreign exchange. Basis of interregional exchange; advantages of trade; barriers to trade; P, 20, and junior standing.

166 Land Economics 3 Cr. 2nd Term

Land as a factor of production; classification, appraisal and valuation; types of land tenure; taxes as they affect the use of land; land use planning; P, 20, and junior standing.

179 Agricultural Cooperation 3 Cr. 1st Term

The principles of cooperation as applied to farmers cooperative marketing associations, and their place in the economic system; P, 11 hrs. Economics.

Agronomy

1 Field Crops 3 Cr. 2nd Term

Elementary definitions of genetic principles, necessarily observed in breeding crop plants. Illustrations from staple or special crops as: Corn, Sorghum, Small Grains, Legumes (Alfalfa, Sweet Clover, Soy Beans).

Field observations of such crops as part of several research projects, in latter half of course.

One important objective, to arrive at discussion of principles and practices that have to be observed for improving yield and quality of crops with reference to immediate and future food supply with special reference to war emergency.

25a Soils 3 Cr. 1st Term

Elementary definitions. Processes whereby soils were formed from original materials. What soils are made of. The use of soils in crop production. Effect of soil treatments upon soils themselves with special reference to crop production and food supply. Some discussion of soil as the material basis of civilization.

Subject matter and credits will be adapted to needs of students registering. One main objective will be to point toward proper soil utilization, as maintaining and increasing food supply immediately and permanently as a war measure.

35 Seed Inspection and Weed Identification 3 Cr.

1st Term

A discussion of seed and seed supply, first to become familiar with what seed comprises in general, and its function in crop production. Sources of seed supply with illustrations from staple crops. Harvesting, processing, storing of seed. The seed industry and seed trade as related to farming and commerce. Processes and some practice in seed testing. Identification of weeds, collection, and specimens.

Discussions and practices with bearing on acquiring and using seed which will promote a maximum production and high quality in crops in the present war emergency.

Botany-Bacteriology

BOTANY

10abc General Botany 4 Cr. 10ac 1st Term

10b 2nd Term

Laboratory fee \$2, deposit \$1 for each course

10ab, Botany of seed plants; a consideration of those problems which plants must solve if they are to develop successfully from seed to maturity; problems of germination, nutrition, growth, adjustment, reproduction and dispersal.

10c, Botany of the plant kingdom; a rapid survey of plant groups more primitive than seed plants. The purpose is to gain a systematic acquaintance with the variety of plant types.

24 Man's Use of Plants 2 Cr. Both Terms

A study of man's dependence on plants for his food, clothing, fuel and shelter, his industries and his pleasure; P, 10c.

27 The Local Flora 3 Cr. Both Terms

Laboratory fee \$1

Fundamental principles of taxonomy and the identification of plants in the vicinity of Brookings. The chief aim is to develop accuracy and facility in the use of field manuals; P, 10c.

*45 General Plant Pathology 5 Cr. Both Terms

Laboratory fee \$2, deposit \$2

A short survey of the entire field of plant disease; P, 10c.

*150ab Plant Physiology 5 Cr. 150a 1st Term

150b 2nd Term

Laboratory fee \$3, deposit \$2

A study of plant functions; P, 10c and Chem 1c.

170 Botanical Problems Cr. arranged
Both Terms

Laboratory fee \$2 (not collected if work does not require use of laboratory equipment), deposit \$1 per credit hour.

Open only to students with enough botanical background to be able to work with a minimum of supervision.

BACTERIOLOGY

41 Elementary Bacteriology 5 Cr. Both Terms
Laboratory fee \$3, deposit \$2

Cultural studies of bacteria, principles of enzyme action, classification of bacterial organisms; P, Chem 21.

46 Microbiology of Water and Sewage 4 Cr
1st Term

Laboratory fee \$3, deposit \$2

Microbiological problems associated with water

supplies, water purification and sewage disposal; P, Chem 21.

142 Principles of Infection and Immunity 5 Cr.
2nd Term

Laboratory fee \$4, deposit \$2

A study of bacterial infection, antibodies, vaccines, blood typing; P, 41.

160 Bacteriological Problems Cr. arranged
Both Terms

Laboratory fee \$2 (not collected if work does not require work with laboratory equipment), deposit \$1 per credit hour.

Open only to students with enough botanical background to be able to work with a minimum of supervision.

* One of these courses will be offered, but not both.

Entomology—Zoology

20ab General Zoology 4 Cr. 20a 1st Term
20b 2nd Term

Laboratory fee \$1, deposit \$1 per term

The fundamental principles of animal morphology, physiology, reproduction, embryonic development, genetics, classification, ecology, geographic distribution, paleontology and evolution.

22 Human Physiology 4 Cr. Both Terms

Laboratory fee \$.50, deposit \$1

The fundamental physiological processes of the human body. Histological slides are used for the study of tissues while anatomical models and the

organs of the domesticated animals are used for the study of the structure of organs and systems; P, 20ab.

42 Genetics 3 Cr. Both Terms

A general discussion of genetics, the origin of the germ cell, the germ cell cycle, embryological development as determined by heredity and modified by environment, the cytology of the germ cells, the relation of the chromosome material to genetics, the theory of the gene, linkage, crossing over, non-mendelian inheritance, experimental evolution and related phenomena; P, 20ab.

Rural Sociology

20 Principles of Sociology 5 Cr. 1st Term

A basic introductory course prerequisite to all other sociological courses numbered above 20. A comprehensive study of society, with an analysis of the forces shaping human behavior in group life.

131 Rural Sociology 3 Cr. 1st Term

The principles of sociology applied to the study of rural society and its problems; P, 20.

144 Urban Sociology 3 Cr. 2nd Term

The sources and characteristics of urban populations, the geographical settings, structural characteristics, institutions, folkways and social problems of the modern city; P, 20.

167 Marriage 3 Cr. 1st Term

The courtship and marriage period is given special emphasis. Mate selection, problems of the unmarried, adjustment in marriage, reproduction, and child training are discussed; P, 20.

168 The Family 3 Cr. 2nd Term

Traces the historical development of the family in different parts of the world with the main emphasis on the American family. Consideration is given to the importance of family life, personal relations within the family and social changes affecting it; P, 20.

Division of Engineering

Civil Engineering

3 Plane Surveying 3 Cr. 1st Term

Laboratory fee \$3

Theory and practice of surveying, including care and use of tape, compass, level and transit; field problems including profiles, cross sections, traverses, and area determinations; P, Math 15, ME 3b.

25 Topographic Surveying 3 Cr. 2nd Term

Laboratory fee \$3

Transit-stadia and plane-table surveys of representative field areas. Preparation of a finished map; P, CE 3.

57a Junior Seminar 1 Cr. Full Quarter

Oral reviews of articles from the literature of engineering, technical magazines, and technical society publications, with class discussion. Written outlines required; P, Junior standing in CE.

142ab Engineering Mechanics 4 Cr. Full Quarter

Force systems, resultants, friction, motion, moments of inertia; force, mass and acceleration; work and energy; impulse and momentum. Stress analysis as applied to boilers, beams, column, riveted joints, springs and other structural members. Includes simple stress, combined stresses, deflections, eccentric loading, impact and fatigue; P, Math 27.

161c Framed Structures 4 Cr. Full Quarter

Stress analysis, design, detailing, fabrication and erection of structural steel frames and members.

Graphical and analytical methods of determining stress and deflections in statically determinate systems. Conventional load systems considered. Complete designs and drawings for representative structures such as roof trusses, railway and highway bridge trusses, and plate girders; P, 142c.

163b Reinforced Concrete 3 or 2 Cr. Full Quarter

Reinforced concrete beams, columns, footings, foundations, retaining walls, culverts, bridges and buildings are considered as problems in stress analysis, design, and detail. A brief consideration of the methods of analysis of continuous frames; P, 142c.

172a Principles of Sanitary Engineering 5 Cr. Full Quarter

Principles of development and design of water distribution systems and treatment plant; rainfall and runoff, sanitary and combined sewerage systems and disposal plants, inspection of modern water and sewerage systems. Analysis of public health problems; P, 170, Bact 31.

177 Engineering Economy 3 Cr. Full Quarter

Methods of estimation of costs of engineering projects. The determination of the most economical arrangement of structural units. The selection of the most economical structural types for given conditions. Problems in the finance of engineering projects; P, Senior standing in Engineering.

Electrical Engineering

40 Electrical Machinery 4 Cr. Full Quarter

Laboratory fee \$2

Principles of electric and magnetic circuits; direct current and alternating current motors, generators, and auxiliary equipment, all briefly studied. This course is for non-electrical engineering students; P, Math 26, Phy 21.

141 Electricity and Magnetism 5 Cr. Full Quarter

Electric and magnetic circuits; measurements of electric and magnetic properties; P, Math 26, Phy 21.

163b Alternating Current Machinery 3 Cr.

Full Quarter

Construction and characteristics of various types of alternating current machinery; P, 161.

164b Advanced Dynamo Laboratory 2 Cr.

Full Quarter

Laboratory fee \$2

Measurements in alternating current circuits, including polyphase power, phase angles and phase sequences. Operation and testing of alternating current generators, transformers, and motors. With

calculations and reports. May be taken for one credit each term with less emphasis on report writing by students in Mechanical Engineering. (To accompany 163ab or 167ab)

167a Alternating Current Equipment 3 Cr.

Full Quarter

Characteristics of alternating current motors and other equipment used in applying electrical power to mechanical drive. Includes elementary work on vacuum tubes. For students in Mechanical Engineering; P, 161.

170 Electrical Problems Cr. arranged

Full Quarter

Special problems on electrical machinery, electrical circuits, transmission systems, etc. Problems may be chosen partly for review or may be advanced individual studies, and may include laboratory studies.

174 Electrical Waves 3 Cr.

Full Quarter

Study of fields by the methods of vector analysis, with emphasis on electric and magnetic phenomena. Applications of the method to electromagnetic radiation, antennae and wave guides; P, 161, 171.

Mechanical Engineering

3ab Engineering Drawing 2 Cr. 2nd Term

Development of skill in the use of drawing instruments, and in the mechanics of drafting. Standard practice of lettering, projection, penciling, inking, dimensioning and sectioning of drawing made from geometrical problems, exercises, and machine parts. Open to all students who have had high school mathematics.

5 Descriptive Geometry 2 Cr. 1st Term

The theory of drafting applied to geometrical magnitudes, such as points, lines, planes and solids. Problems relating to solid inter-section; sheet metal development; pattern layout; pictorial representations; drainage and mining; P, Plane Geometry.

44 Heat Engines 5 Cr. Full Quarter

An introductory course, including a survey of the power generation field, types of plants and equipment. A study of the characteristics and performance of power units and the selection of equipment for various services; P, Junior standing.

45 Elements of Heat Power 3 Cr. Full Quarter

An introductory course, including a survey of the power generation field, types of plants used, and some study of heat power machinery; P, Junior standing.

142b Thermodynamics 3 Cr. Full Quarter

Fundamental principles underlying the design and operation of the following types of equipment: Steam machinery, internal combustion engines,

air machinery, heat transmission, refrigeration, and air conditioning; P, 45, Math 26.

161b Engineering Design 2 Cr. Full Quarter

Solution of typical problems involved in the design of steam engines, steam turbines, internal combustion engines and assembly drawings of machines. Some opportunity is given to select a project of interest to the student; P, 142ab, 144.

162b Advanced Mechanical Laboratory 2 Cr. Full Quarter

Laboratory fee \$2

Standard tests and analysis of boilers, steam pumps, condensers, engines and turbines; internal combustion engines, including gas, gasoline, oil, automotive and aviation; tests and determination of characteristics of fans, steam, air, and hydraulic flow devices; heating, ventilating, air conditioning, refrigeration and equipment; P, 142ab.

163 Internal Combustion Engines 2 Cr. Full Quarter

Study of the theory, design and operation of gas, gasoline and oil engines of various types; P, 142ab.

164 Heating, Ventilation and Air Conditioning 4 Cr. Full Quarter

Principles underlying the design of heating, ventilating and air conditioning systems in common use; computation of heat loss and gain in buildings; proportioning of ducts and piping systems for steam and hot water heating; study of apparatus and control systems; P, 45.

Engineering Shop

2 Machine Shop 2 Cr. 1st Term

Laboratory fee \$3

A study of equipment and tools used in machine shop work, methods of laying out work, elementary principles of machine and bench work, and problems involved in the use of machine tools.

5 Elementary Forging and Welding 2 Cr. 1st Term

Laboratory fee \$3

Introductory lectures and exercises in forging, heat treatment, oxy-acetylene and arc welding.

10 Elementary Carpentry 2 Cr. 1st Term

Laboratory fee \$2

Use, care and conditioning of tools. A study of the properties of various kinds of woods and the processing of woods for specific purposes.

Division of Home Economics

Home Economics

30 Clothing 3 Cr. 1st Term

Laboratory fee \$1

Development of the foundation pattern, flat pattern construction, and the selection and construction of a garment. Emphasis on selection of design and color to express individual personality; P, 11a.

Ed 53 Adult Homemaking Education 2 Cr. 1st Term

History, philosophy, and objectives of adult education in general home economics. Curriculum and methods of teaching applied particularly to home economics. Opportunity is provided for developing teaching units, planning means of publicity and for observation of adult classes.

72 Home Management House 4 Cr. Both Terms

Six weeks residence in the home management house with actual experience in problems that arise in the management of a home.

75 Child Development 3 Cr. 1st Term

A study of the physical and mental growth of children during the pre-school years. The students enrolled in this course spend two hours a week at the Nursery School, observing the children according to a prescribed procedure; P, Ed 45.

77 Child Development Laboratory 3 Cr. 1st Term

Laboratory fee \$1

Students assist in the Nursery School for the purpose of providing contact with children and the management of behavior reactions. Each student makes an intensive study of one child; P, 75.

144 Advanced Clothing 3 Cr. 1st Term

Laboratory fee \$1

Application of principles of costume design to promote more independence, initiative, originality and art in planning and adapting garments for different types of figures. Laboratory practice to include remodeling for a child and the construction of a dress; P, 30.

146 Methods of Teaching Clothing 3 Cr. 1st Term

Analysis of problems; making of illustrative material for clothing courses.

160 Experimental Cookery 3 Cr. 1st Term

Laboratory fee \$4

Investigation of factors which affect a standard food product by laboratory experiments and a review of the literature on research in cookery.

166 Textile Economics 3 Cr. 1st Term

A study of the economic aspects of clothing which directly or indirectly affects the consumer; P, Ag Econ.

174-175 The House 3 Cr. 1st Term

Planning and furnishing of a medium-priced home from the standpoint of economy, convenience, comfort, and beauty. (Combination of House Planning and Home Furnishing.)

264 Nutrition Seminar 2 Cr. 1st Term

Assigned readings and discussions of topics in the field of foods and nutrition with special attention to recent literature bearing on problems in dietetics in both normal and pathological conditions; P, 140, 141.

Division of Pharmacy

Nursing Education

Entering Nursing Education students will take chemistry 1a and English 1a the first quarter and chemistry 1b and English 1b the second quarter.

Advanced students in Nursing Education will receive their practical training at Sioux Valley Hospital, Sioux Falls, South Dakota.

Pharmacy

Entering pharmacy students will take chemistry 1a and English 1a the first quarter and chemistry 1b and English 1b the second quarter.

46 Window Display 2 Cr. 2nd Term

Laboratory fee \$2, deposit \$3

The work in window display is made up of a combination study of color schemes, and arrangements of material used in display. Lighting effects will also be given careful consideration.

60ab Dispensing 4 Cr. each term 60a 1st Term
60b 2nd Term

Laboratory fee \$3, deposit \$3 each term

This course is designed to acquaint the student with the actual work that comes before him in the store, and give him the practical side of the work. P, all courses of Theoretical and Practical Pharmacy. Two recitations and six hours of laboratory work a week. Text: Scoville's Art of Compounding.

62ab Pharmacology 4 Cr. each term
62a 1st Term, 62b 2nd Term

Laboratory fee \$3, deposit \$3 each term

The course in Pharmacology is designed to embrace a knowledge of the action of the more important drugs and preparations dispensed by the pharmacist. A careful study of the dose, therapeutic action and mode of administration comprises the major portion of the course. Laboratory work consists of biologic assays and antidotal treatment of common poisons; P, 23abc.

143a Toxicology 2 Cr. 1st Term

An introduction to the study of the nature, effects and antidotes of poisons as well as their classification. P, junior standing. Text and references: McNally's Toxicology; Authenrieth's Detection of Poisons; and Sollman's Manual of Pharmacology. Primarily for students electing one term's work in the field.

Division of General Science

Art

- 1abc Design** 3 Cr. each term* 1a 1st Term
1bc 2nd Term
Laboratory fee \$.50 per term
A foundation course intended to serve as a basic prerequisite for all other art work.
- 2 Freehand Drawing** 1 or 2 Cr.* Both Terms
Laboratory fee \$.50 per term
A study of the principles of perspective. Exercises in outline and value from cast, nature forms and still life. Interpretative compositions.
- 25 Applied Design** 2 Cr.* 1st Term
Laboratory fee \$.50
The designing and execution of various problems involving the definite use of materials, tools and processes, will be used to further the understanding of design through actual application and execution; P, 1abc.
- 26 Crafts** 1 or 2 Cr.* Both Terms
Laboratory fee \$.50 per term
A study of the principles of design as applied to construction and decoration in the various crafts of pottery, basketry, weaving, wood carving, stenciling, block-printing, needlecraft, etc.; P, 1abc.
- 42 Advanced Art Appreciation** 1 Cr.* 1st Term
A study, somewhat in detail, of the art of a particular period to be selected by the group; P, 27.
- Special Craft and Design** 1 or 2 Cr.* 2nd Term
Laboratory fee \$.50 per term
Intended for those who have had no previous work in Design but who would like to do some work in the crafts. The problems are adjusted to the group.
- * Three periods of laboratory work for each credit. Additional courses will be added to meet the needs of students.

Chemistry

- 1ab Inorganic Chemistry** 4 Cr. 1a 1st Term
1b 2nd Term
Laboratory fee \$3, deposit \$3 per term
A general survey of the field of inorganic chemistry, with emphasis on chemical laws and theories and non-metallic elements.
- 1c Inorganic Qualitative Analysis** 4 Cr. 1st Term
Laboratory fee \$4, deposit \$3
Analysis of mixtures of common inorganic compounds. Systematic study of the metals; P, 1b.
- 21 Elementary Organic Chemistry** 5 Cr.
Both Terms
Laboratory fee \$6, deposit \$5 per term
A study of the compounds of carbon with emphasis on those of special interest to students of agriculture and general science; P, 1c.
- 23 Gravimetric Analysis** 4 Cr. 1st Term
Laboratory fee \$5, deposit \$4
Theory and practice of elementary gravimetric analysis; P, 1c.
- 24 Volumetric Analysis** 4 Cr. 2nd Term
Laboratory fee \$5, deposit \$4
Theory and practice of elementary volumetric analysis; P, 1c.
- 28ab Stoichiometry** 1 Cr. 28a 1st Term
28b 2nd Term
A study of the methods of calculations used in quantitative analysis. Should accompany courses 23 and 24; P, 1c.
- 161 Water Analysis** 3 Cr. 1st Term
Laboratory fee \$5, deposit \$5
Analysis of water to determine its potability and value as a boiler water and preparation of reports of such analysis; P, 23, 24.
- 163ab Physical Chemistry** 5 Cr. 163a 1st Term
163b 2nd Term
Laboratory fee \$5, deposit \$5 per term
An introductory course in physical chemistry; P, 21, 23, 24, Math 25, Physics 21c.
- 173 Undergraduate Research** Cr. arranged
Both Terms
Laboratory fee \$1, deposit \$1 per credit hour
Special problems requiring original research; P, consent of instructor.
- 174 Biochemical Research** Cr. arranged
Both Terms
Laboratory fee \$1, deposit \$1 per credit hour
Research problems in applied biochemistry; P, consent of instructor.
- 190ab Seminar** 1 Cr. 190a 1st Term
190b 2nd Term
Presentation of topic based on reference reading and original research; P, Minor in Chemistry.

Education and Psychology

Psy 25 Elementary Psychology 3 Cr. Both Terms

An introduction to the fundamental principles of human behavior, with a laboratory study of one's own abilities and traits of personality.

45 Educational Psychology 3 Cr. Both Terms

Nature of learning curves, economic learning, rates and limits of improvement, the retention of experience, differences in learning capacity, transference and interference. Required for certification; P, Psy 25.

47 Methods of Teaching in High School 3 Cr. 1st Term

A general methods course. Deals with standard and newer classroom procedures. Required for certification; P, 40, 45.

62b Teaching Sciences in High School 3 Cr. 1st Term

Deals with aims and values of science as a school subject, selection and organization of subject matter, classroom procedures and measurement of results.

There is an unusually strong demand for science teachers; P, 45, 47 and at least a minor in some field of science.

137 Educational and Vocational Guidance 3 Cr. 1st Term

Deals with both educational and vocational guidance; needs, aims and functions, means and methods. Considerable attention to testing and counseling; P, 40, 45, 47.

164 Educational Measurements 3 Cr. 1st Term

Laboratory fee \$1.00

Test movement in education. The principal tests designed to measure achievement in high school

subjects. Does not cover mental testing; P, 45, 47, senior or graduate in Education.

169 Principles of the Curriculum 3 Cr. 2nd Term

Study of the nature and purpose of the curriculum in American public schools. Principles governing the construction and remaking the curriculum including present war time adjustments; P, 45, 47, senior or graduate in Education.

175 Education Seminar (Current Education Problems) 3 Cr. 1st Term

Study of the most pressing educational problems in South Dakota and the United States; P, senior or graduate in Education.

220 Organization and Administration of Elementary Education 3 Cr. 1st Term

Deals with the problems of the superintendent in organizing and administering the work of the elementary school; P, senior or graduate in Education.

260 Principles of Supervision 3 Cr. 2nd Term

Problems in the scientific supervision of teacher; the planning and organization of supervision; studies of supervisory function; classroom visitation and conference; the improvements of teacher in service; rating of teachers; evaluation of supervision; P, senior or graduate in Education.

272 Adult Education in Vocational Guidance 3 Cr. 1st Term

Deals with part-time and evening school work. How to organize and manage a rural adult-education program through the agriculture department; P, seniors and graduates in Agricultural Education.

285 Thesis Both Terms

English

1a English Composition 3 Cr. 1st Term

First term of course required of all freshmen.

1b English Composition 3 Cr. 2nd Term

Second term of the course required of all freshmen.

1c English Composition 3 Cr. 1st Term

Third term of the course required of all freshmen.

20 Introduction to Literature 3 Cr. Both Terms

A study of the principal literary types: Fiction, drama, essay, biography, and poetry; P, 1abc.

24 Essay 3 Cr. 1st Term

A study of essays, ancient and modern; P, 20.

42 Advanced Composition 3 Cr. Full Term

Reading and writing of practical types; P, 1abc.

44 Short Story 3 Cr. 2nd Term

The emphasis will be either on reading or writ-

ing according to the interests and needs of the students; P, 20.

56 The English Language 3 Cr. 1st Term

A study of the development and structure of the language; P, consent of the instructor.

60 Shakespeare 3 Cr. 1st Term

A study of representative comedies and tragedies; P, consent of the instructor.

102 Social Ideals 3 Cr. 2nd Term

A study of the literature of the last two centuries with emphasis on such concepts as liberty, democracy, and totalitarianism. The course is designed to give a background for understanding the present clash of ideologies. Credit in this course may be counted toward a major or minor in history; P, consent of the instructor.

Foreign Languages

- 1a Spanish** 4 Cr. 1st Term Other instruction will be given in Spanish to accommodate, as far as possible, students who have some knowledge of the language and wish further study.
- The elements of Spanish grammar with abundant oral and written exercises.
- 1b Spanish** 4 Cr. 2nd Term
- Sp Spanish** 1st Term Courses will be offered in French, Italian and Portuguese if there is sufficient demand.
- Sp Spanish** 2nd Term

History and Political Science

- 2ab English History** 4 Cr. 2a 1st Term federalism; the Constitution, its formation, principles, and development; party organization and activities; the President as chief executive; the Cabinet, growth of executive influence; departments; independent establishments and their re-organization; Congress, structure, organization and procedure; the national judiciary; national finance; federal centralization; P, Sophomore standing.
- 2b 2nd Term
- A foundational survey of the constitutional, political, economic, and social history of England from the earliest times to the present.
- 23ab The American Nation** 4 Cr. 23a 1st Term
- 23b 2nd Term
- Standard courses in American history. Special emphasis upon political development and constitutional growth. 23a, 1783 to 1841; 23b, 1841 to end of the century; P, Sophomore standing.
- 26a Economic History of the United States** 3 Cr. Full Quarter
- The imperial frontier; production and commerce in the British colonies; land policies in state and nation; agricultural conquest of the West; the economics of slavery; the decline of foreign commerce; the rise of domestic commerce; manufactures and expanding markets; the formation of the laboring class. Period covered, approximately to 1860; P, Junior standing.
- 34 American Government** 4 Cr. 1st Term
- The National government; genesis of American
- 44 State and Local Government** 4 Cr. 2nd Term
- The State and the Nation; constitutional basis of state government; organization, functions, and popular control; rapid survey of county, city, and township organization. Emphasis upon South Dakota constitution and government; P, Sophomore standing.
- 142b Contemporary Europe** 4 Cr. 1st Term
- Europe between two wars. A study of the nineteen twenties, the period of settlement, and the thirties, the period of crisis culminating in the Second World War. A political, diplomatic, and economic survey of post-war Europe including studies of Bolshevism, Fascism, Nazism, present day dictatorships and important world conferences; P, Junior standing and one year of college history.

Library Study

- 60a Library Administration** 2 Cr. 1st Term
- A general course stating the problem of school libraries. Objectives and methods of service in the small high school libraries, organization, budget and ordering, classification and cataloguing, student library club, housing and equipment, records to be kept, reports to make, and methods of publicity.
- 60b Book Selection and Reference** 2 Cr. 2nd Term
- Standards of criteria which may be used in appraising books for school libraries.
- 60c Cataloguing and Classification** 2 Cr. 1st Term
- This course is to teach students how to catalogue and classify books for high school libraries.

Mathematics

- 10a College Algebra** 2½ Cr. 1st Term
- College algebra for General Science and non-engineering students.
- 11a Trigonometry** 2½ Cr. 1st Term
- For General Science and non-engineering students.
- 14 College Algebra** 5 Cr. 1st Term
- Elementary topics, functions and their graphs, review of the quadratic equation, complex numbers, theory of equations, permutations, and combinations, partial fractions, logarithms and determinants; P, three semesters of high school algebra.

15 Plane Trigonometry 5 Cr. Both Terms

The function of acute angles, the solution of the right triangle, the solution of the oblique triangle, general applications of trigonometry; P, one year of plane geometry and one and one-half years of high school algebra.

16 Analytic Geometry 5 Cr. Both Terms

Co-ordinate systems, loci, the straight line, the general equation of the second degree; P, 14, 15.

25 Differential Calculus 4 Cr. Both Terms

Formal differentiation with applications to engineering and science; P, 12 or 16.

26 Integral Calculus 4 Cr. 2nd Term

Formal integration with applications; P, 25.

27 Applied Calculus 4 Cr. 1st Term

Applications of the calculus to maxima and minima, series, areas, surfaces, volumes, centroids and movements; P, 26.

115 College Geometry 3 Cr. 1st Term

Advanced theorems in plane geometry.

Military Science and Tactics

1a,b,or c Military Science 1 Cr. Both Terms

Laboratory fee \$.25

First year basic course. Required of all freshmen.

20a,b,or c Military Science 1 Cr. Both Terms

Laboratory fee \$.25

Second year basic course. Required of all sophomores.

Music

The Summer term provides opportunity for study in piano, pipe organ, voice, and wind or stringed instruments. Individual instruction will also be given in sight reading and ear training, choral techniques and interpretation, conducting (Band, Orchestra, or Choral), orchestration and harmony. All members of the staff will be available for individual lessons. Credit may be earned toward a minor in music.

A summer school chorus will be organized by Mr. Theman and a symphony orchestra and a band will be organized by Mr. Christensen if organization permits. Students in choral and instrumental conducting will be given an opportunity to direct these groups.

Fees per Term

One individual person per week.....	\$ 6.00
Two individual lessons per week.....	\$12.00

Physical Education and Recreation

MEN

1a,b,or c Physical Education I 1 Cr. Both Terms

Laboratory fee, including towel service, use of equipment, etc., \$1.50

Required of all freshmen. Emphasis on physical fitness.

20a,b,or c Physical Education II 1 Cr. Both Terms

Continuation of 1abc Required of all sophomores. Laboratory fee, including towel service, use of equipment, etc., \$1.50

61 Organization & Admin. of Phys. Educ. 2 Cr. 1st Term

Sp Coaching High School Sports 2 Cr. 1st Term

Techniques of coaching football, basketball, and track on the high school level. A general review course for the high school coach. Open to juniors, seniors, and graduate students.

Sp Swimming 1 Cr. Both Terms

WOMEN

1a, b,or c Physical Education 1 Cr. Both Terms

Laboratory fee, including towel service, use of equipment, etc., \$1.50

Required of all freshmen.

20a,b,or c Physical Education 1 Cr. Both Terms

Laboratory fee, including towel service, use of equipment, etc., \$1.50. Required of all freshmen.

40 Physical Education 1 Cr. Both Terms

Laboratory fee, including towel service, use of equipment, etc., \$1.50

Theory and practice of organized play.

61 Organization & Admin. of Phys. Educ. 2 Cr. 1st Term

Sp Swimming 1 Cr. Both Terms

Physics

- 1a Elementary Physics** 4 Cr. 1st Term
Laboratory fee \$2
Course will cover mechanics and certain phases of heat; P, high school algebra and plane geometry.
- 1b Elementary Physics** 4 Cr. Both Terms
Laboratory fee \$2
Course will cover electricity and magnetism; P, 1a.
- 1c Elementary Physics** 4 Cr. 2nd Term
Laboratory fee \$2
Course will cover heat, light, and sound. P, 1a.
- 21a General Physics** 4 Cr. 1st Term
Laboratory fee \$2
General physics course for engineering students. Mechanics; P, Math 11 or 15.
- 21b General Physics** 4 Cr. 2nd Term
Laboratory fee \$2
Electricity and magnetism; P, 21a.
- 131ab Advanced General Physics** 3 Cr. each term
131a 1st Term, 131b 2nd Term
P, 1c or 21c, Math 26.

- 132ab Advanced General Physics Laboratory**
1 Cr. per term 132a 1st Term, 132b 2nd Term
Laboratory fee \$2 per term
- 135ab Modern Physics** 3 Cr. each term
135a 1st Term, 135b 2nd Term
Deals with recent developments in the field of physics. Topics covered include: Elements of radio, electron tubes, electrical oscillations and waves, polarized light, atomic structure, radio activity, etc.; P, 1c or 21c, Math 26.
- 136ab Modern Physics Laboratory** 1 Cr.
136a 1st Term, 136b 2nd Term
Laboratory fee \$2 per term
Should accompany or be taken subsequently to Physics 135a and Physics 135b respectively.
- 145 Meteorology** 3 Cr. 1st Term
A study of the various factors affecting weather and climate. Designed in particular to acquaint the student with the phases of meteorology most useful in the interpretation of meteorological observations and the forecasting of weather conditions; P, 1c or 21c.

Printing and Rural Journalism

- 16a Typewriting** 1 Cr. Both Terms
Laboratory fee \$1 per term
Graded exercises to learn "touch method" are first given. Care of machines; correspondence and various forms; billing and tabulating; manifolding and mimeographing.
- 18ab Shorthand** 5 Cr. 18a 1st Term
18b 2nd Term
This course continues throughout the year. The Gregg system is taught.
- 19ab Advanced Shorthand** 2 Cr. 19a 1st Term
19b 2nd Term
An intensive review of shorthand with special emphasis on dictation and development of speech; P, 18abc.

- 24 Newswriting** 3 Cr. 2nd Term
The beginning course in journalism. Includes a study of news sources and news values; actual practice in gathering and writing news is emphasized; P, English 1abc.
- 51 Feature Writing** 3 Cr. 2nd Term
A course covering the writing of news features and special feature articles; particular emphasis placed on methods of popularizing scientific material; P, 24.
- 66 Publicity Methods** 3 Cr. 1st Term
A course for students expecting to become county agents, home economics leaders, or vocational teachers. Newswriting, agricultural advertising and writing of agricultural sales letters; P, Eng 1abc.

Printing

- Shop Course for Printers** Both Terms
Special shop courses are offered during the summer session in presswork, typography, and composing machines for men and women of the printing trades who wish to develop their skill in the various shop phases of printing. No entrance requirement is necessary other than previous experience in one of the printing trades.
- Typography** Both Terms
Laboratory fee \$1.50 per credit
Principles of typography are given to beginning students, including all the elements of hand composition.

- Composing Machines** Both Terms
Laboratory fee \$2.50 per credit
The course in composing machines includes practice and study in the repair and mechanical adjustments of all the composing machines including both Linotype and Intertype. Six hours per week for each credit.
- Press Work** Both Terms
Laboratory fee \$2 per credit
The student may take either platen presswork or cylinder presswork, or both.

Speech

14a Dramatic Production 2 Cr. 2nd Term

This course aims at giving an understanding of, and practice in, dramatic activity, theory and directing experience gained by producing a one act play, production experience, instruction in elements of stagecraft and lighting; and practice in theatrical make-up.

22 Extempore Speaking 3 Cr. Both Terms

This course, required for graduation, may be taken during any term of the year. To assist the student in acquiring an effective oral style—simple, clear, direct. Attention to the selection, organization and presentation of material; P, Eng labc.

23a Oral Reading and Interpretation of Literature 3 Cr. Both Terms

The expression of thought and emotion based upon literary forms. Intended to develop skill in oral interpretations of emotional and imaginative literature. Voice training with exercises and selections.

43 Public Address; Practical Persuasive Speech 2 Cr. 1st Term

The various forms of public address and public discussion. The purpose here is to determine the elements of persuasive speech and to provide a variety of individual experience. Original work by members of the class; P, 22.

Class Schedules

CODE: First column indicates catalog number of course; second column, quarter hours of credit; third column, day or period of classes; fourth column, term in which course is offered. An asterisk (*) indicates that the time, credit, or instructor is to be arranged for. Abbreviations for buildings are found on page 2.

Division of Agriculture

Course Number	Credits	Time	Term	Building & Room	Instructor
Agricultural Economics					
20	5	MTWTF I	1	Lib 110	Lundy
110	3	MWF I	2	Lib 110	Lundy
166	3	MWF III	2	Lib 110	Lundy
179	3	MWF IV	1	Lib 110	Lundy
Agronomy					
1	3	MWF III	2	Ad 102	Hume, Franzke
25a	3	MWF IV	1	Ad 102	Puhr
35	3	MWF III	1	Ad 102	Erickson
Botany—Bacteriology					
Botany					
10a	4	MWF III	1	Ad 308	Miller
10b	4	MWF III	2	Ad 308	Miller
10c	4	MWF II	1	Ad 308	Harris
24	2	TT IV	1,2	Ad 308	Miller
27	3	MWF IV	1,2	Ad 308	Miller
45+	5	MTWTF I	1,2	Ad 308	Harris
150a†	5	MTWTF I	1	Ad 308	Harris
150b	5	MTWTF I	2	Ad 308	Harris
170	*	*	1,2	Ad 308	Miller-Harris
† One of these courses will be offered but not both.					
Bacteriology					
41	5	MTWTFS III	1,2	Ad 132 (MWF)	Grismer
46	4	MTWTF IV	1	Ad 132	Grismer
142	5	MTWTFS III	2	Ad 132	Grismer
160	*	*	1,2		Grismer

Course Number	Credits	Time	Term	Building & Room	Instructor
Entomology-Zoology					
20a	4	MTWTF II	1	Ho 101	Hartwig
20b	4	MTWTF II	2	Ho 101	Hartwig
22	4	MTWTF I	2	Ho 101	Hartwig
42	3	MTTF I	1	Ho 101	Hartwig

Course Number	Credits	Time	Term	Building & Room	Instructor
Rural Sociology					
20	5	MTWTF II	1	Lib 4	Sauer
131	3	MWF I	2	Lib 4	Sauer
144	3	TTS II	2	Lib 4	Sauer
167	3	MWF I	1	Lib 4	Sauer
168	3	MWF II	2	Lib 4	Sauer

Division of Engineering

Civil Engineering

Electrical Engineering

Mechanical Engineering

Engineering Shop

Senior College schedule in Civil, Electrical and Mechanical Engineering to be arranged.
See course description for offering on pages 13 and 14.

Division of Home Economics

30	3	MTWTFS I	1		Rosenberger
Ed 53	2	*	1		Walker
72	4	*	1		Pierson
75	3	MWF I	1		Young
77	3	*	1		Young
144	3	MTWTFS III	1		Rosenberger
146	3	*	1		Rosenberger
160	3	MTWT III, IV	1		Rosenquist
166	3	MWF II	1		Rosenberger
174-75	3	MWF I, *	1		Rosenquist
264	2	*	1		Pierson

Division of Pharmacy

46	2	MF III, IV, W III	2	Ad 132	Eidsmoe
60a	4	MTWTF II	1	Ad 132	Eidsmoe
60b	4	MTWTF II	2	Ad 132	Eidsmoe
62a	4	MTWTF I	1	Ad 132	Ahlquist
62b	4	MTWTF I	2	Ad 132	Ahlquist
143a	2	TT III	1	Ad 132	LeBlanc

Division of General Science

Art

1a	3	MTWTFS III	1	Ad 230	Davis
1b	3	MTWTFS III	2	Ad 230	*
1c	3	MTWTFS III	2	Ad 230	*
2	1 or 2	*	1,2	Ad 230	Davis
25	2	MTWTFS II	1	Ad 230	Davis
26	1 or 2	MWF IV	1,2	Ad 230	Davis
42	1	MWF I	1	Ad 229	Davis
Sp	1 or 2	*	2		*

Course Number	Credits	Time	Term	Building & Room	Instructor
Chemistry					
1a	4	MTWTFS I	1	Ch 307	Burr
1b	4	MTWTFS I	2	Ch 307	Burr
1c	4	MTWTFS II	1	Ch 307	Burr
21	5	MTWTFS II	1,2	Ch 302	Webster
23	4	MTWTFS III	1	Ch 307	Burr
24	4	MTWTFS III	2	Ch 307	Burr
28a	1	TT IV	1	Ch 307	Burr
28b	1	TT IV	2	Ch 307	Burr
161	3	MWF IV	1	Ch 307	Burr
163a	5	MTWTFS II	1	Ch 303	Binnewies
163b	5	MTWTFS II	2	Ch 303	Binnewies
173	*	*	1,2		Webster
174	*	*	1,2		Rhian
190a	1	M III	1	Ch 107	Webster
190b	1	M III	2	Ch 107	Webster

Education and Psychology

Psy 25	3	MWF III	1,2	Lib 107	Klein-Bentley
45	3	MWF I	1,2	Lib 107	Bentley
47	3	MWF IV	1	Lib 107	Bentley
62b	3	TTS II	1	Lib 107	Wiseman
137	3	MWF II	1	Lib 107	Wiseman
164	3	TTS II	1	Ad 229	Klein
169	3	MWF II	2	Lib 107	Wiseman
175	3	MWF III	1	Ad 229	Martin
220	3	MWF II	1	Ad 229	Martin
260	3	TTS II	2	Lib 107	Wiseman
272	3	TTS I	1	Lib 107	Bentley
285	*	*	1,2		Staff

English

1a	3	MWF II	1	Lib 110	Giddings
1b	3	MWF II	2	Lib 110	Giddings
1c	3	TTS III	1	Lib 110	Giddings
20	3	MWF II	1,2	Lib 103	Smock
24	3	TTS II	1	Lib 110	Giddings
42	3	TT II	1,2	Lib 103	Smock
44	3	MWF II	2	Lib 108	*
56	3	MWF III	1	Lib 110	Giddings
60	3	MWF III	1	Lib 103	Smock
102	3	TTS III	2	Lib 103	Smock

Foreign Language

Spanish

1a	4	M TTF III	1	Lib 208	MacLaggan
1b	4	M TTF III	2	Lib 208	MacLaggan

Other instruction in Spanish to be arranged. Courses in French, Italian and Portuguese may be offered if there is sufficient demand.

Course Number	Credits	Time	Term	Building & Room	Instructor
History and Political Science					
2a	4*	MTTF III	1	Lib 108	Black
2b	4	MTTF III	2	Lib 108	Black
23a	4	MTTF II	1	Lib 108	Black
23b	4	MTTF II	2	Lib 108	Black
26a	3	TT III	1,2	Lib 104	Harding
34	4	MTTF II	1	Lib 104	Harding
44	4	MTTF II	2	Lib 104	Harding
142b	4	MTTF III	1	Lib 5	Volstorff
Library Study					
60a	2	TT I	1	Lib 5	Stallings
60b	2	TT I	2	Lib 5	Stallings
60c	2	MW I	1	Lib 5	Linscheid
Mathematics					
10a	2.5	MWF II	1	Lib 5	*
11a	2.5	TTS II	1	Lib 5	*
14	5	MTWTF IV	1	Lib 4	Walder
15	5	MTWTF I	1,2	Lib 3	MacDougal
16	5	MTWTF II	1,2	Lib 3	Wente
25	4	MTTF III	1,2	Lib 3	Wente
26	4	MTTF II	2	Lib 4	MacDougal
27	4	MTTF III	1	Lib 4	Walder
115	3	MWF IV	1	Lib 3	MacDougal
Physics					
1a	4	MTTF III	1	E 205	Squier
1b	4	MTTF II	1,2	E 205	Squier
1c	4	MTTF III	2	E 205	Squier
21a	4	MTTF II	1	E 202	Reinhart
21b	4	MTTF II	2	E 202	Reinhart
131a	3	MWF IV	1	E 202	Reinhart
131b	3	MWF IV	2	E 202	Reinhart
132a	1	Tu IV	1	Lab	Reinhart
132b	1	Tu IV	2	Lab	Reinhart
135a	3	MWF IV	1	E 205	Squier
135b	3	MWF IV	2	E 205	Squier
136a	1	Th IV	1	Lab	Squier
136b	1	Th IV	2	Lab	Squier
145	3	MWF III	1	E 202	Reinhart
Printing and Rural Journalism					
16a	1	MWF I	1,2	U 402	Korstad
18a	5	MTWTF III	1	U 401	Korstad
18b	5	MTWTF III	2	U 401	Korstad
19a	5	MTWTF II	1	U 401	Korstad
19b	5	MTWTF II	2	U 402	Korstad
24	3	MWF II	2	Lib 104	Donelson
51	3	MWF III	2	Lib 104	Donelson
66	3	MWF III	1	Lib 104	Donelson
Speech					
14a	2	TT II	2		McCarty
22	3	MWF III	1,2	Lib 203	McCarty
23a	3	MWF IV	1,2	Lib 5	McCarty
43	2	TT II	1	Lib 103	McCarty