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NORTH DAKOTA STATE COLLEGE

1940
SUMMER
SESSION

JUNE 10 to JULY 19



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Summer School Calendar

June 10 to July 19, 1940

- June 10, Monday—
Registration Day
- June 11, Tuesday—
Class work begins 7 a. m.
- June 12, Wednesday—
11 o'clock—assembly—each week
- June 13, Th
Su
- June 20, Th
Su
- July 4, Th
Le
- July 18, Th
10
- July 19, Fr
Su



Hilton M.
Briggs Library
South Dakota
State University

Special Features

- Botany Field Course in Black Hills**
June 12—July 19 (see p. 18)
- Short Course for Agriculture Instructors**
July 11—July 19
- Education Conference**
- Ministers' Short Course**
July 8—July 12
- Printers' Mechanical Conference**
July 19—July 20

SOUTH DAKOTA STATE COLLEGE



Summer Session 1940

South Dakota State College of Agriculture
and Mechanic Arts Bulletin

Published Quarterly by the South Dakota State College,
Brookings, South Dakota. Entered as second class
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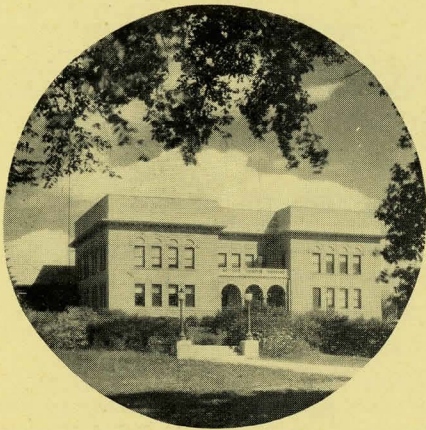
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Summer School Staff

- CHARLES W. PUGSLEY, B.S., D. Agr., *President*
CLINTON R. WISEMAN, Ph.D., *Director of Summer School; Professor of Education*
DAVID B. DONER, B.S., *Registrar*
R. A. LARSON, *Secretary of the College*
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JACK BARNES, B.S., *Assistant Professor of Physical Education*
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HENRY BLOEM, B.S., *Instructor in Agricultural Engineering*
JOHN A. BONELL, *Assistant Professor of Agricultural Engineering*
GEORGE L. BROWN, Ph.D., *Professor of Mathematics; Dean of the Faculty and of the Division of General Science*
L. M. BROWN, M.S., *Instructor, Agricultural Economics*
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ROBERT E. COFFEY, B.S., *Professor of Physical Education and Director of Athletics*
R. K. COMPTON, Ph.D., *Professor of Psychology and Education; Vice Dean of the Division of General Science*
EMILY H. DAVIS, Ph.D., *Professor of Art*
LOREN E. DONELSON, M.S., *Professor of Printing and Rural Journalism*
E. L. ERICKSON, *Instructor in Agronomy*
A. D. EVENSON, B.S., *Instructor in Printing*
LESTER S. GUSS, Ph.D., *Professor of Chemistry*
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EDWIN B. HARDING, B.S., *Composing Machines Specialist*
NELLE A. HARTWIG, M.S., *Instructor in Entomology-Zoology*
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- DANIEL H. JACOBSON, Ph.D., *Assistant Professor of Dairy Husbandry*
- NELL KENDALL, B.S., *Assistant Professor of Physical Education*
- ESTHER ROSS KORSTAD, B.S., *Instructor in Shorthand and Typewriting*
- MARTHA B. KRAUSE, M.S., *Professor of Nursing Education*
- WENDELL F. KUMLIEN, M.S., *Professor of Rural Sociology*
- FLOYD J. LEBLANC, M.S., *Professor of Pharmacy*
- H. B. MACDOUGAL, M.S., *Associate Professor of Mathematics; Acting Head of Department*
- J. E. MARTIN, M.A., *Assistant in Education*
- GEORGE McCARTY, M.A., *Professor of Speech*
- WARD L. MILLER, Ph.D., *Professor of Botany*
- THOMAS M. OLSON, M.S., *Professor of Dairy Husbandry*
- W. ALBERT PETERSON, B.Mus., *Associate Professor of Music (Piano)*
- WEBER H. PETERSON, M.S., *Instructor in Agricultural Economics*
- EDITH H. PIERSON, M.S., *Professor of Home Economics*
- LEO F. PUHR, M.S., *Associate Professor of Agronomy*
- R. E. REINHART, Ph.D., *Professor of Physics.*
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- AMANDA ROSENQUIST, M.S., *Assistant Professor of Home Economics*
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- ORLIN E. WALDER, M.A., *Assistant Professor of Mathematics, Manager Men's Dormitory*
- WILBUR O. WILSON, M.S., *Instructor in Poultry Husbandry*
- RICHARD L. WOOLBERT, Ph.D., *Assistant Professor of Rural Sociology*



The Engineering Building

General Information

The Summer Session of State College opens Monday, June 10, and continues for six weeks, closing July 19.

Courses are offered in the divisions of Agriculture, Engineering, Home Economics, General Science and Pharmacy. In the main the faculty of the Summer Session will include members of the regular faculty of the College.

Monday, June 10, is registration day. All students should register on this day and be ready for class work on the morning of Tuesday, June 11. Students should arrive in Brookings, Monday, June 10, in time to arrange for living quarters before school opens. The offices of the Director of the Summer School and of the Registrar will be open and ready to give needed assistance.

Admission

The requirements for admission to the Summer Session are the same as for other sessions of the year. Satisfaction of entrance credits means the completion of a standard high school course or its equivalent. A candidate for entrance to the freshman class of the College must present at least 15 units of entrance credit by certification or examination or both. 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.

Graduate Work

Many of the departments of the College offer work during the summer for graduate credit. In certain of the departments it is desirable that students plan to do at least some of their graduate work during the summer session. 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. Write to the Director of the Summer Session regarding opportunities and conditions under which graduate work may be taken.

Credit and Schedule

All scheduled courses carry college credit as indicated in connection with the courses. All courses are regular unless otherwise indicated in the course description. A regular course meets five times a week and carries three credits. Regular class work consists of five hours in class and ten hours in preparation per week for each three-credit course. Three hours in the laboratory where no outside work is required count for one recitation and the accompanying preparation. The normal load for a summer term is three regular courses. This amounts to nine term credits for the six weeks' summer term. The summer session schedule is arranged for most of the regular lecture classes to come in the forenoon. The first classes start at 7 o'clock and most of the laboratory classes are scheduled for the afternoon. Mimeographed schedules will be ready by May 15.

Library

The Lincoln Memorial Library is the center of Summer School activity. The office of the Director of the Summer School is in the library building, and some of the classes are held there.

The library contains approximately 67,000 volumes and 22,000 pamphlets (February 1940), carefully selected and well cataloged to facilitate instruction and research and to stimulate general reading. The library receives currently ten newspapers and about 535 journals and periodicals of both a technical and general nature. The library also has the periodical and document indexes which make long files of each valuable in the many fields of research.

Assembly and Recreation

Assembly of students and faculty members is held Wednesday at eleven o'clock of each week consisting of music by summer session orchestra, talks and entertainment.

The summer session social program is organized by a joint committee of faculty members and students. The usual events are: a mixer, a picnic and dances.

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 etc. The student activity fee covers their use. The city has a new municipal swimming pool.

Fees

The regular tuition for the six weeks term of all summer schools at the state educational institutions as prescribed by the Regents of Education is \$15.00.

The tuition fee for students who are non-residents of the state is fifty per cent more than for resident students.

A library fee of \$1.00, a Union building fee of \$1.00 and a student activity fee of \$1.00 are required for the six weeks Summer Session.

Small laboratory fees are charged for the courses requiring laboratory work. The fee is indicated in each case in connection with the description of the course.

A late 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.

Dormitories For Men

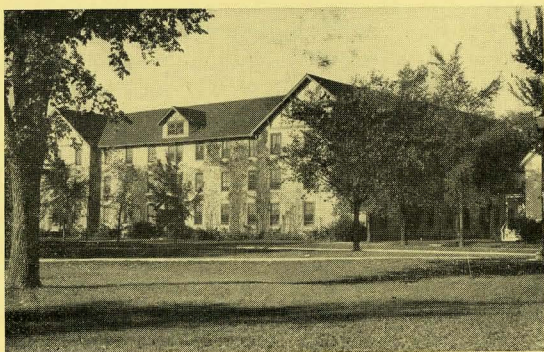
West Mens Hall, the new men's dormitory, will be open for men during the Summer Session. This dormitory will make a very fine residence for summer school students. Two well furnished living rooms and two game rooms afford attractive places for recreation and entertainment. All rooms in the dormitory are provided with two closets, built-in study tables, two

beds with inner spring mattresses, dresser with mirror, chairs and window shades. Hot and cold water is available at all times in the well equipped lavatories and shower rooms. Each student should provide himself with a mattress pad, pillow, two pairs of pillow cases, three sheets, one pair of blankets, towels and curtains. The cost of rooms in West Men's Hall is \$9.00 per student for the term, if two students occupy the same room.

Dormitories for Women

The dormitories for women are open during the Summer Session. Everything possible is done to make residence in the dormitories attractive to summer school students. Two pleasant living rooms and a large sunroom connecting the two women's dormitories afford attractive places for recreation, entertainment of guests and informal dancing. A completely equipped tea-room is available for entertaining small groups. An informal social program, centering around the dormitory regime, is planned for the summer sessions.

All rooms are large, well-ventilated and comfortably cool. Each room is provided with one or two closets and a stationary lavatory with hot and cold water, and is furnished with two single beds with mattresses, two straight chairs, a rocker, a study table, a dresser with mirror, a large rug and window shades. Each student should provide herself with a mattress pad, pillow, two pairs of pillow cases, three sheets, one pair of blankets, towels and curtains. The



Men's Dormitory

dormitory will rent pillows at 50 cents each for the six weeks session. A room in the dormitory will cost \$9.00 for the term, and board may be obtained near the campus at reasonable prices.

Board and Room for Men

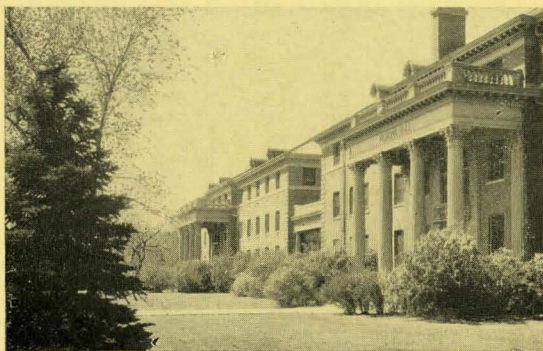
Men may obtain board at eating places near the campus at a cost of from \$4.00 to \$5.00 per week. Room may be obtained in private families at \$1.00 to \$1.50 a week and up for each student, if two persons occupy the same room.

Location

Brookings is a beautiful city with a population of approximately 5,000 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 new municipal swimming pool.

Campus and Buildings

The college campus, noted throughout the Northwest for its beautiful arrangement, its ample shade trees and spacious green lawns, lies at the north edge



Women's Dormitories

of the city. All the major buildings are available for class-rooms and laboratory use during the summer session.

The Lincoln Memorial Library affords ample reading room facilities and houses many important volumes. The Chemistry building provides not only ample laboratory room but a pleasant place in which to work free from annoying chemical odors. The Coolidge Sylvan Theatre provides an ideal place for summer entertainments and will give students an opportunity to see outdoor games and plays organized. The Coughlin Campanile, gift of a successful alumnus, adds beauty to the campus, cheering students and former graduates with its chimes.

The new Student Union Building is being completed and it is hoped that at least parts of it will be available for use of summer session students.

College Bookstore and Post Office

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

State College Station, a sub-station of the Brookings postoffice, is located on the ground floor of Central Building.

Expense

At the present time the necessary expense of attendance for the six weeks summer session is approximately as follows:

Tuition ¹	\$15.00
Board and Room	38.00
Library Fee	1.00
Union Building Fee	1.00
Activity Fee	1.00
Books and Supplies (Estimate).....	8.00
	<hr/>
Total	\$64.00

1. Fifty per cent higher tuition for students who are not residents of the state.

Students who take laboratory courses will be required to pay a small laboratory fee for each course.

Teachers' Employment Bureau

The College maintains a Teachers' Employment Bureau located in the office of the Department of Education with a secretary in charge. Graduates and

students may enroll and expect help in securing teaching positions suited to their training and experience. Complete instructions and registration blanks may be obtained at the office of the Bureau of Recommendations. An annual registration fee of \$1.00 is charged for this service. Many superintendents and principals as well as school board members visit the Bureau during the spring and summer terms to select teachers for their schools.

Black Hills Summer Camp in Botany

The Botany Department of South Dakota State College will conduct a Field Station in the Black Hills during the regular summer session. The Flora of the Black Hills will be studied. For a full description of the course, refer to the botany courses in the bulletin.

Students will live in tents and sleep on camp cots furnished by the department. In order to keep expenses down, students will be expected to serve on cooking and fire wood committees. The credit to be earned will be nine credit hours.

The following is an itemized account of estimated expenses per student:

Tuition	\$15.00
Library fee	1.00
Laboratory fee	4.00
Lodging (tent and cot)	6.00
Transportation (for field trips)	15.00
Food	5.00
Books and supplies	20.00
Incidentals (according to the demands of the individuals)	_____
Total estimated expenses not including incidentals	66.00

Each student will be expected to furnish the following:

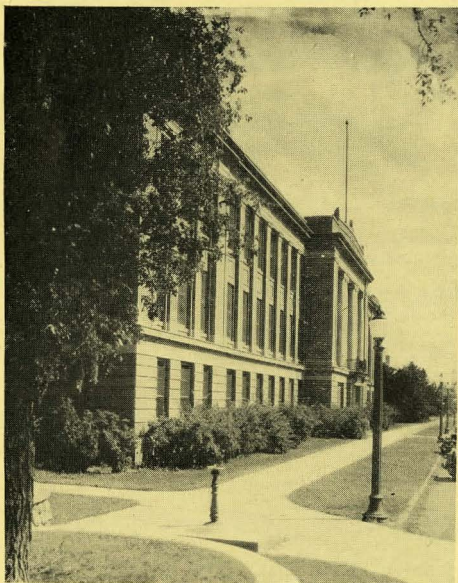
- Bedding (at least three wool blankets or equivalent)
- Pad for camp cot—not absolutely necessary
- Camp stool
- Mess kit (plate, soup bowl, cup and silverware—enamelware preferred)
- Card table (two students may use one card table)
- Heavy clothing for outdoor work (be sure to bring a heavy sweater or jacket)

The course will be conducted by Dr. Leon C. Snyder, Assistant Professor of Botany at State College. Dr. Snyder has been with the summer camp of the University of Washington, Oregon and California. For three summers, he has worked for the Forest Service in Colorado and Wyoming on plant identification work.

Students interested in attending this camp should correspond with the Botany Department at State college as soon as possible as the number of students that can be accommodated is limited. Applicants will be considered in the order received.

Conferences in Trades and Industries Work

C. O. Gottschalk, State Supervisor of Trades and Industries in South Dakota, will be at State College during the summer session and will hold special coordinator conferences.



Administration Building



A State College Campus Scene

Courses Offered

Courses are offered in twenty-seven departments in five divisions of the College. Several of the departments have built up plans for giving courses (particularly those carrying graduate credit) in alternate years. This enables students who are interested in taking certain work over a period of two or three summer sessions to block out their programs of work.

The courses 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.

For further information regarding courses offered or courses desired write to the Director of Summer Session or to the departments concerned. Where there is sufficient demand departments may offer additional courses not listed in this bulletin. The College reserves the right to withdraw any course for which there is not sufficient demand to warrant the organization of the class.

Agricultural Economics

Mr. Peterson, Mr. Brown

20 Principles of Economics. Offers training in the fundamental principles of economic science as an aid to the understanding of the modern economic problems involved in production; value and price making; money and price fluctua-

tions; distribution; international economic relations, etc. P, Sophomore standing. Five recitations a week. Three credits. Mr. Peterson.

141b Statistical Methods. Advanced phases of statistical methods, emphasizing time series analysis; first and second moment correlation; and index numbers of quantity, price and value. P, 141a. Three recitations and four hours of laboratory work a week. Three credits. Mr. Peterson.

155 Agricultural Marketing. The organizations of agricultural markets and the functions performed in them including the analysis of organized commodity exchanges, auctions, and recent trends in marketing agricultural products. P, 20. Five recitations a week. Three credits. Mr. Brown.

Agricultural Engineering

(See also Engineering Shop and Mechanical Engineering)

WOOD WORKING

Assistant Professor Bonell

11 Carpentry.¹ Elementary or fundamental course. Twenty jobs covering wood working methods and care and use of a large variety of tools and materials. Twelve hours of laboratory work per week. Two credits. Laboratory fee \$1 per credit.

11b Shop Problems for Grades.¹ For Teachers. Problems on Sawing, Planing, Gluing, Finishing, Jig-saw, Coping-saw, Moulding. Two credits. Laboratory Fee \$1 per credit.

21 Cabinet Making. Eight jobs, covering cabinet making principles and use of hardware and finishes, caning, seating and upholstering. P, 11. Six hours of laboratory work per week for each credit. Laboratory fee, \$1 per credit.

41 Wood Turning.² Twelve jobs, covering lathe tools and use of same together with turning methods. Care of lathe. P, 11. Twelve hours of laboratory work per week. Two credits. Laboratory fee, \$1 per credit.

41b Advanced Wood Turning.² Face Plate and Drive Chuck together with Wood Chuck and Built-up Turning. P, 41. Laboratory fee \$1 per credit.

Shop Methods. Shop lesson plans. Shop supplies, orders, equipment, etc. Fee \$1.

1. Of courses 11 and 11b the one in most demand will be given.

2. Of courses 41 and 41b the one in most demand will be given.

METAL WORKING

Mr. Bloem

10 Forge Shop. Use of forge and tools, hardening and tempering small tools. Helpful in repair of machinery. This course will offer a good outline in metal work for manual

training. Twelve hours of laboratory work a week. Two credits. Laboratory fee, \$1 per credit.

20 Advanced Forge Shop. Advanced work in repair and welding of farm machinery and equipment. Planning of a farm shop. Tools, arrangement and building. Twelve hours of laboratory work a week. Two credits. Laboratory fee \$1 per credit.

29 Acetylene Welding. Care and operation of apparatus. Methods of distinguishing metals. Preheating and welding of cast iron, steel, brass and aluminum. Brazing of malleable iron; oxyacetylene cutting and carbon burning. P, 10. Twelve hours of laboratory work a week. Two credits. Laboratory fee \$1 per credit.

Agronomy

Associate Professor Puhr, Mr. Erickson

Soils and Crops. A course consisting of three periods per week, three weeks of:

1. Seed Analysis, weed identification, principles of weed control, and three periods per week, three weeks.
2. Soils—formation, structure, composition, with reference wherever possible to South Dakota Soils. Offered for not fewer than five students, nor more than fifteen students.

Art

Professor Davis

Sp. Craft and Design. A presentation of the principles of design, with application to definite problems involving simple craft processes. Though emphasis will be on the design factor, a number of the problems will be carried to their completion as craft problems. The nature of the problems will be planned to meet the requirements and needs of the individual student. This course is intended for those not having a previous design training and has no prerequisite. Six laboratory hours a week for each credit. One or two credits. Laboratory fee, 50 cents.

2 Freehand Drawing and Design. A study of the principles of perspective and elementary design and composition. Exercise in drawing in outline and value from still-life, casts, nature forms and landscape. Interpretative compositions and designs. Mediums; pencil, charcoal and pen and ink. The problems will be adapted to the needs of the individual student. No prerequisite. Six laboratory hours a week, one credit. Laboratory fee, 50 cents.

25 Applied Design. The planning and construction of various articles which involve designing for definite materials and tools, and for definite space. Many problems; such as

stenciling, book-binding, block-printing, needlecraft, etc., will be given as a basis for teaching related art in schools. P, 1abc. Twelve laboratory hours a week. Two credits. Laboratory fee, 50 cents.

26 Applied Design (crafts).¹ A study of the principles of design as applied to construction and decoration in the various crafts, such as weaving, stenciling, batik, block-printing, needlecraft, etc. The student may choose the craft in which he wishes to work. P, Design 1abc or some training in drawing and design and the permission of the instructor. Six hours of laboratory a week for each credit. One or two credits. Laboratory fee, 50 cents.

27 Art Appreciation I.¹ A study of the great masterpieces of architecture, sculpture, painting and the minor arts from the standpoint of appreciation of their structural, pictorial and decorative qualities. An illustrated text will be used and each student will be expected to own a small collection of prints. Three credits. Six recitations a week.

42 Art Appreciation II. Contemporary American Painting. A study, somewhat in detail, of the art of a particular period. Lectures will be illustrated and each student will be expected to own a small collection of prints. P, 27 suggested. One credit. Two recitations a week.

1. Of courses numbered 26 and 27 the one in most demand will be given.

Botany

Professor Miller, Assistant Professor Snyder

2c 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. Open to all students. Four lectures and two three-hour periods in the laboratory or field a week. Three credits. Laboratory fee \$3. Mr. Miller.

21 Local Flora. Classification and identification of plants in the vicinity of Brookings. The chief aim is to develop such facility in the use of field manuals that familiarity can be acquired with other flora as well as with our own. Lectures deal with principles of classification. A year of collegiate botany is desirable as an antecedent to this course. Three lectures and three three-hour periods in the field a week. Three credits. Laboratory fee \$1. Mr. Miller.

121 Flora of the Black Hills. A field-laboratory course in the taxonomy and ecology of the Black Hills flora. The six weeks period of the summer school will be spent in camp in the Black Hills and the entire time devoted to botanical study. Prerequisite, one year of collegiate botany. A maximum of nine credits may be earned toward graduation. (Those interested

should write to the Botany Department for detailed information as to expense, transportation, equipment, etc.) Mr. Snyder.

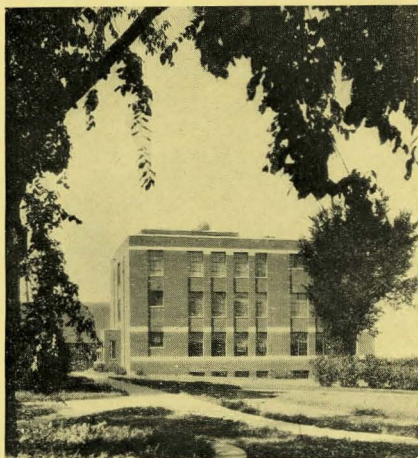
141a, or b, or c Plant Morphology. One term's work will be given according to the demand for the fall, winter, or spring course. A detailed comparison in matters of development, adult structure, and reproduction of representative forms chosen from the principal orders of great plant groups. Four lectures and four three-hour laboratory periods a week. Four credits. Laboratory fee \$3. Mr. Miller.

Chemistry

Professor Guss and assistant

1c Inorganic General Chemistry and Qualitative Analysis.¹ Third term of chemistry. Study of the metallic elements with laboratory work devoted to their examination and qualitative analysis. P, 1a, 1b, or equivalent of general college chemistry taken elsewhere. Five recitation periods and six laboratory hours a week. Four credits. Laboratory fee \$3; deposit \$3.

1. While 1c is listed this summer if a larger demand for 1a or 1b should appear, one of these courses will be substituted for 1c.
2. The offering of gravimetric or volumetric analysis will depend as above on the relative demand for either of these courses, and will not be offered unless the number of requests for the course will warrant the necessary expense of such work.



The Chemistry Building

20 Elementary Organic Chemistry. A general course covering essentials of the subject as applicable to work in agriculture, home economics, and general science. Laboratory work largely qualitative. P, 1abc. Five recitations and fifteen laboratory hours a week. Laboratory fee \$6; deposit \$3.

Advanced Courses. To special students of the subject, courses will be offered, insofar as time and limited staff permit. These courses will be individual in scope, and are of undergraduate or graduate character, according to the preparation the student has had. Such as:

161 Water Analysis. Sanitary or Complete—Reports of such analyses in proper form. P, 1, 20, 23, 24. Two or three credits. Six or nine laboratory hours a week. Laboratory fee, \$5; deposit \$5.

164 Proximate Organic Analysis. Quantitative analysis of cereals, dairy products, food adulterants, etc. P, 1, 20, 23, 24. Fifteen laboratory hours a week. Five credits. Laboratory fee \$5; deposit \$5.

263 Problems in Research. Special problems for graduate students interested in some particular line of investigation. Credit and laboratory fees depend upon the character of the problem undertaken.

Dairy Husbandry

Professor Olson, Assistant Professor Jacobsen

167 Research Problems in Advanced Dairy Bacteriology. P, General Bacteriology and Dairy Bacteriology. (Credit to be arranged). Mr. Jacobsen.

167 Research Problems in Ice Cream, Butter and Cheese. P, Manufacture of Ice Cream, Butter and Cheese. (Credit to be arranged.) Mr. Jacobsen.

167 Research Problems in Feeding Dairy Cattle. P, Farm Dairying, Animal Nutrition. (Credit to be arranged.) Mr. Olson.

167 Dairy Problems. Special work in judging dairy cattle and dairy products designed for Smith-Hughes teachers. Special attention to be given to methods of presenting the material to students. The outline of dairy courses 138 and 149 college catalog will be followed. (Credit to be arranged.) Mr. Jacobsen.

Education and Psychology

Professor Wiseman, Assistant Professors Bentley, Martin,
Professor Compton

Education Conference. Evaluation of Secondary Schools. Directed by State Department of Public Instruction. Three days.

Short Course for Teachers of Vocational Agriculture. Last three weeks of summer session. For Education course see 176 Agric. Ed. Seminar. Prof. R. R. Bentley in charge.

45 Educational Psychology. Deals with original nature, learning, transfer, mental fatigue, individual differences, etc. Required for General High School certificate, P, Rural teachers or junior standing and consent of instructor. Five times a week. Three credits, Mr. Bentley.

47 Methods of Teaching in High School. Deals with various problems of selection, organization, presentation of subject matter and measuring results in high school classes. Required for General High School certificate. P, Junior standing and consent of instructor. Five times a week. Three credits. Supt. Martin.

160 Public School Administration. Study of the organization and administration of the school system in state, county and various types of school districts. Consideration of work and responsibilities of State Department of Public Instruction, the County Superintendent, school boards, superintendents, principals, teachers and public. P, 40, or 41, 45, 47. Five recitations a week. Three credits. Mr. Wiseman.

163 High School Organization and Administration. Study of the high school and its problems. Programs of work, the schedule, extra-curricular activities, student participation, student management and guidance. P, 40 or 41, 45, 47. Five recitations a week. Three credits. Mr. Bentley.

168 Educational Statistics. Methods of dealing with quantitative educational data in Psychology and Education. Exercises in tabulation, graphical representation, and in the calculation of statistical constants, measures of dispersion and correlation. Illustrative material from school costs, school census, and standard achievement tests will be used. Required of all graduate majors in Education. Open to seniors and graduate students in Education. Five times a week. Three credits. Mr. Compton.

176 Seminar in Agricultural Education. Specific problems dealing with instruction in vocational agriculture will be chosen; such as project work, course of study, farm enterprise analysis, the local survey, etc. Readings, and the work is actually carried out, recorded and reported. P, 70, 71, 73. Four times a week. Two credits. Mr. Bentley.

262 Business Administration of Schools. Business aspects of public school administration including such problems as organization of the work of the school board, budgetary procedure, financial accounting, building plans, equipment and supplies, janitor service, school finances. P, 160—graduate standing. Five times a week. Three credits. Mr. Martin.

268 Problems in School Administration and Supervision. An advanced course—deals intensively with a few major problems. P. Ed. 160, 260. Five recitations a week. Three credits. Supt. Martin.

272 Adult Education in Vocational Agriculture. Attention will be given to both Part-time and Evening School work. Study of the needs, nature, extent and significance of adult education in Agriculture. Special attention will be given to problems dealing with the organization and management of rural adult education programs. Open to graduate students in Agricultural Education. Five times a week for six weeks. Mr. Bentley.

285 Thesis in Education. Mr. Wiseman.

Psychology

170 Mental Hygiene. This course deals with the psychology of the adjustment of normal individuals. While the study of human adjustment is of interest to everyone, students of education, social work, and personnel management will find the subject especially profitable. P, 25, 45. Five times a week. Three credits. Mr. Compton.

Engineering Shop

(See also Agricultural Engineering & Mechanical Engineering)

Professor Hoy

2a Machine Shop. 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. Open to any one interested. One to three credits. Laboratory fee \$1.50 per credit.

2b Machine Shop. A continuation of work begun in 2a, with special attention given to accuracy of work and methods for securing best results. Shop drawing, reading and working out of small shop projects. P, 2a. One to three credits. Laboratory fee \$1.50 per credit.

English

Professor Smock

1c English Composition.⁴ This is the third term of the course required of all freshmen. Five recitations a week; ten hours of preparation. Three credits.

20 Introduction to Literature.¹ This course includes a study of the principal literary types—fiction, drama, essay, biography, and poetry. Although primarily a literature course, a great deal of attention is given to composition also. P, 1abc. Five recitations a week; ten hours of preparation. Three credits.

60 Shakespeare.¹ A study of nineteenth century literature time is also given to the life of Shakespeare, the Elizabethan

theatre, and the characteristics of the period. Five recitations a week; ten hours of preparation. Three credits.

102 Social Ideals.¹ A study of nineteenth century literature with emphasis on the political, economic, and religious concepts necessary for an understanding of modern society. Credit in this course may be counted toward a major or minor in history. P, one course in English literature or English history. Five recitations a week; ten hours of preparation. Three credits.

1. The three courses having the largest enrollment will be offered.

Entomology-Zoology

Miss Hartwig

21 Human Physiology. The fundamental processes of the human body are studied in this course. Modern equipment such as kymographs, sphygmographs, haemotometers, etc., are used in some of the physiological studies. Four recitations and six laboratory hours a week. Three credits. Laboratory fee \$1.

42 Genetics. This course embraces a general discussion of genetics. A study is made of the origin of the germ cells, the germ 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, lab or 20ab. Three credits.

201 Special Problems. Individual problems in parasitology, physiology, genetics, histology, embryology, evolution, or history of zoology, to be arranged with instructor. For prerequisites, consult instructor. One, two, or three credits.

History and Political Science

Professor Harding, Assistant Professor Volstorff

23a American History. The ordeal of the Confederation; the formation of the new federal union under the constitution; history of the new government from 1789 to 1829, with stress upon the developing interpretations of the constitution and upon the problems of neutrality; the new nationalism; the Monroe Doctrine; transition to the new democracy. P, Sophomore standing. Five periods a week. Three credits. Mr. Harding.

44a American Government. A general survey of the principles and practices of the national government. The genesis of American federalism; the drafting of the Constitution, its principles and development; the suffrage; party organization and activities; the President as chief executive; growth of ex-

ecutive power and influence; the cabinet; the executive departments and civil service; administrative reorganization; congress—structure, organization and procedure; the national judiciary; federal centralization. P, Sophomore standing. Five periods a week. Three credits. Mr. Harding.

142c Contemporary Europe. A political diplomatic and economic survey of post-war Europe including studies of communism, fascism, contemporary democracies and dictatorships. Special emphasis will be given to the period since 1930 and such crises as the Italo-Ethiopian war, the Spanish Civil War, the conflict in the Far East, the German absorption of Austria, the "peace of Munich" and its aftermath. P, Junior standing and one year of college history or the consent of the instructor. Five periods a week. Three credits. Miss Volstorff.

162a International Relations. An examination of the political and economic reasons that motivate nations in their relations with one another. Why war? Basic elements in modern nationalism; the basic factors of national policy; economic nationalism; the problem of racial minorities; modern imperialism; the foreign policies of the Great Powers; regional interests; nations at war. P, Junior standing and one year of college history. Five periods a week. Three credits. Mr. Harding.

Home Economics

Professor Pierson, Assistant Professors Rosenberger, Rosenquist

30 Clothing. 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. Two hours recitations, and nine hours laboratory. Three credits. Laboratory fee \$1. Miss Rosenberger.

72 Home Management Practice. Six weeks in the home management house, with various household management problems, including the care of a child of pre-school age. P, Junior standing. Three credits. Miss Pierson.

144 Advanced Clothing. 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 and construction of garments in materials presenting special problems. Two recitations, nine hours laboratory. Three credits. Laboratory fee, \$1. Miss Rosenberger.

146 Methods of Teaching Clothing. Analysis of clothing problems; making illustrative material for Clothing courses. Two recitations and two three-hour laboratory periods a week. Two credits. Miss Rosenberger.

160 Experimental Cookery. Investigation of factors which affect standard food products by laboratory experiments and a

review of the literature on research in cookery. Two recitations, six hours laboratory. Two credits. Laboratory fee \$4. Miss Rosenquist.

166 Textile Economics. A study of the economic aspects of clothing which directly or indirectly affect the consumer. Five recitations a week. Three credits. Miss Rosenberger.

174 The House. Problems in planning and furnishing a medium priced house from the standpoint of economy, comfort and beauty. Four recitations. Six hours laboratory. Three credits. Miss Rosenquist.

263 Research in Foods and Nutrition. Feeding experiments with animals as a basis for determining the biological value of foods. For prerequisites consult advisers. Miss Pierson.

Mathematics

Associate Professor MacDougal, Assistant Professor Walder

14 College Algebra. Elementary topics, functions and their graphs, review of quadratic equations, complex numbers, permutations and combinations, probabilities, partial fractions and determinants. P, high school mathematics. Ten recitations a week. Five credits. Mr. Walder.

15 Trigonometry.² The function of acute angles, the solution of right triangles, the solution of the oblique triangle, general applications of trigonometry, P, one year of plane geometry and one and one-half years high school algebra. Ten recitations a week. Five credits. Mr. Walder.

16 Analytic Geometry.² Coordinate systems of the second degree. P, a course in college algebra and trigonometry. Ten recitations a week. Five credits. Mr. Walder.

25 Differential Calculus.³ The derivatives of algebraic trigonometric, logarithmic and exponential functions, with application to tangents, normals, maxima, and minima, curvature and singular points. P, analytic geometry. Ten recitations a week. Five credits. Mr. MacDougal.

26 Integral Calculus.³ Integration of standard forms, definite integrals, application of problems involving areas, lines, surfaces and volumes. Ten recitations a week. Five credits. Mr. MacDougal.

105 Mathematical Statistics. For graduates and undergraduates. The use and mathematical derivation of the simpler formulas and constants customarily applied in the analysis of data in the mass. P, permission to register from the instructor. Five recitations a week. Three credits. Mr. MacDougal.

110b Mathematics of Finance.⁴ The application of algebra to problems in interest, annuities, amortization, the valuation of bonds, sinking fund and depreciation. P, courses in college algebra and trigonometry. Five recitations a week. Three credits. Mr. MacDougal.

141 Theory of Equations and Determinants.⁴ A study of the theory of determinants, complex numbers, DeMoivre's Theorem, cubic and biquadratic equations. P, analytic geometry. Five recitations a week. Three credits. Mr. MacDougal.

1. Credit in courses 25 and 26 may be applied towards a graduate minor.
2. Of courses 15 and 16, the one enrolling the larger number of students will be given.
3. Of courses 25 and 26, the one enrolling the larger number of students will be given.
4. Of courses 110b and 141, the one enrolling the larger number of students will be given.

Mechanical Engineering

Assistant Professor Aldrich

(Note: It is the purpose to adapt the drawing and sketching to the needs of the student. Choice will be made from courses listed.)

3ab Engineering (or Mechanical) Drawing. Instruction and practice in the care and use of drawing instruments. Exercises in geometrical problems, castings and machine parts to familiarize the student with the conventional methods of representation and dimensioning in mechanical drawings. Exercises may be adjusted to suit the desires of mechanical drawing teachers or industrial arts students. One to three credits. Five hours of drawing room for each credit.

4abc Architectural Drawing. Rendered drawings of simple buildings including floor plans, elevations, display or perspectives and building details. Open to all students who have had some mechanical drawing. One or two credits. Five hours of drawing room practice per week for each credit.

5 Descriptive Geometry. Instruction in the graphical method of representing all geometric magnitudes, such as points, lines, planes and solids. Exercises applying the theory to mine problems, drainage, intersecting figures, pattern layout of sheet metal work and pictorial drawings of objects. P, Plane Geometry. Two credits. Ten hours per week in recitation and drawing work.

21 Technical Sketching. Development of technique and skill in freehand drafting. Exercises in measuring, proportioning and simple rendering for the various projection methods, applied to geometrical figures, machine parts, movements, ideas, buildings and landscapes. Open to all students who have had some mechanical drawing. One or two credits. Five hours of drawing room practice per week for each credit.

27 Mechanism. Elements of machinery, velocity, ratios, graphic study of velocity and acceleration, motion transmitters, such as gears, belts, cams, screws, link work, automatic feeds, straight line and quick return motions. P, Plane Trigonometry. Five credits. Six recitations and ten hours per week of drawing room practice.

Music

Professor Christensen, Associate Professor Peterson,
Assistant Professor Theman

Opportunity to study piano, pipe-organ, voice, wind or stringed instruments is offered. Individual instruction is also given in sight reading and ear training, choral technique and interpretation, conducting (Band, Orchestra, or Choral), orchestration and harmony.

A resolution of the Regents adopted March 18, 1933 provided that students may study music for college credit if at the same time they pursue an equal number of hours in some other subjects unrelated to music. All members of the music staff are free to give individual lessons.

Fees for the Term

One individual lesson per week.....	\$ 6
Two individual lessons per week.....	\$12

Pharmacy

Professor LeBlanc

143a Toxicology. A systematic physiological and chemical study of the more common poisons, together with nature, effects, and antidotes for same. Lectures will also be given concerning the medico-legal aspect. P, first and second year pharmacy courses. Text and references: Autentrieth's Detection of Poison; Holland's Toxicology; Sollman's Manual of Pharmacy; Howell's Physiology; Potter's Therapeutics and Materia Medica; Journal of Experimental Medicine. Two recitations and six hours of laboratory work a week. Four credits. Laboratory fee, \$3; deposit \$3.

143b Toxicology. As described in the general catalog this course will be offered during the session of 1940.

Other courses of graduate character regularly offered by the department will be given if there is sufficient demand for the work.

Nursing Education

Professor Krause

81 Nursing Education. A survey course introducing the student to the work of the school of nursing as a whole. It includes the historical development of schools of nursing, their organization, educational objectives, the content of the educational program and the essentials for efficient operation. Required of all students with a major in nursing education. P, or parallel Educational Psychology. Five recitations a week. Three credits.

92 Principles of Teaching in Schools of Nursing. A course dealing with the general problem of teaching and supervision in schools of nursing. Emphasis is placed upon the application

of the principles of education and teaching to the various groups in the curriculum. P, or parallel 81. Five recitations a week. Three credits.

2a Nursing Arts.¹ A course consisting of lectures, demonstrations, and practice periods dealing with nursing procedures. After the student has acquired sufficient skill the course is supplemented with supervised practice periods in the hospital. Five lectures and fifteen hours of laboratory work a week. Five credits. Laboratory fee \$3.

1. 23a Nursing Arts, 5 credits, which is a sophomore continuation course of 2a will be given in summer 1941.

Physical Education, Men

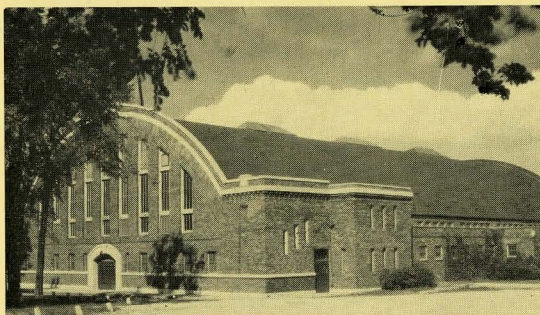
Professor Coffey, Assistant Professor Barnes, Mr. Baker

42 Basketball Coaching. A thorough study of both the theory and practice of individual and team plays; the proper technique for the extension of the fundamentals of basketball; the theory of offensive and defensive team plays. Eight hours a week for three weeks. Two credits. Mr. Baker.

62 Football Coaching. A thorough study of rules and theory of both offensive and defensive team play and strategy; the correct technique and the execution of the fundamentals of the game. Eight hours a week for three weeks. Two credits. Mr. Barnes.

49ab or c Physical Education I. Theories and practice through class and squad work of techniques, fundamental conditioning exercises, tumbling and stunts, and games of low organization. Four hours a week. Two credits. Mr. Coffey and staff.

50 Athletic Conditioning and Training. General care and treatment of athletic injuries, training rules, conditioning and training, equipment of training room, types of taping for athletic injuries. Minimum of ten hours of laboratory work in taping required. Notebook required. This course is essential



State College Armory

for men going out into the coaching field who will be responsible for the injuries incurred in competitive athletics. Four hours a week. Two credits. Mr. Coffey and staff.

61 Organization and Administration of Physical Education. Brief history and principles of past and present physical education programs; aims and objectives of physical education; curriculum content and construction; professional attitudes and ethics; administration of facilities; equipment and supplies. Four hours a week. Two credits. Mr. Coffey.

Swimming. $\frac{1}{2}$ credit.

Physical Education, Women

Assistant Professor Kendall

1ab or c Physical Education. Tennis, tap dancing, badminton, golf. Activity to be selected according to individual needs of student. Four hours per week. One credit.

20ab or c Physical Education. Tennis, badminton, golf. Activity to be selected according to individual needs of student. Four hours per week. One credit.

40 Physical Education. The theory and practice of organized play. Four hours a week. One credit.

61 Organization and Administration of Physical Education. (As described under courses for men.) Mr. Coffey.

Swimming. $\frac{1}{2}$ credit. Mr. Barnes.

Physics

Professor Reinhart

21abc General Physics. Mechanics of solids and fluids; sound; heat; electricity and magnetism; light; modern physics. P, high school algebra and plane geometry. Five recitations and six hours of laboratory work per week. Four credits. (May be taken without the laboratory work—Three credits). Laboratory fee \$2.

Of courses 21a, 21b, or 21c the course enrolling the largest number of students will be given. Of courses 50a, 50b, or 50c the course enrolling the largest number will be given.

50abc Advanced General Physics. This course is designed as a second year's work in general physics. General topics in the fields of mechanics, heat, electricity, sound, light and modern physics are considered. P, 21abc (or the equivalent) and Math 26. Five recitations and six hours of laboratory work per week. Four credits (may be taken without the laboratory work—three credits). Laboratory fee \$2.

Poultry Husbandry

Mr. Wilson

201 Poultry Research Problems. For advanced undergraduate and graduate students desiring further studies and research either in poultry nutrition, management or marketing.

A suitable problem for investigation may be assigned for work toward the Master's degree, thus affording an opportunity to obtain either a major or minor in some branch of Poultry Husbandry.

Printing and Rural Journalism

Professor Donelson, Assistant Professor Ryther, Mr. Hepner,
Mr. Harding, Mr. Hollen, Mr. Evenson, Mrs. Korstad

16a Typewriting. Keyboard practice; use and care of machines. Eight hours at machine required per week. One credit. Mrs. Korstad.

18s Shorthand. For beginning students. Gregg system. Ten recitations a week, five credits. Mrs. Korstad.

19s Shorthand. P, one year of shorthand; four recitations a week, two credits. Mrs. Korstad.

Journalism

Publicity Methods. A course for students expecting to become county agents, home economics teachers or vocational agriculture teachers. Newswriting, agricultural advertising, circular letters and other problems are studied. Four recitations a week. Two credits. Mr. Donelson.

Journalism for Teachers. Designed primarily for high school and grade teachers who supervise school papers. Four lectures a week. Two credits. Mr. Hepner.

Printing

Shop Courses for Printers. Special shop courses are offered only 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. Principles of typography are given to beginning students, including all the elements of hand composition. Laboratory fee, \$1.50 per credit. Six hours per week for each credit. Mr. Hollen.

Composing Machines. The course in composing machines includes practice and study in the repair and mechanical adjustments of composing machines including both Linotype and Intertype. Six hours per week for each credit. Laboratory fee \$2.50 per credit. Mr. Harding.

Presswork. The student may take either platen presswork or cylinder presswork, or both. Laboratory fee \$2 per credit. Six hours per week for each credit. Mr. Evenson.

Rural Sociology

Assistant Professor Woolbert

20 Principles of Sociology. A basic introductory course prerequisite to all other sociology courses. A comprehensive

study of society, with an analysis of the forces shaping human behavior in group life. P, Sophomore standing. Five recitations a week. Three credits.

168 The Family. Traces the historical development of the family in different part 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. Five recitations a week. Three credits.

261 Social Institutions. The origin, evolution, component parts and general unique characteristics of social institutions and their relation to social values; the interplay between the individual and institutions will be stressed as well as the factors involved in their progressive adaptability. P, graduate standing or consent of instructor. Five recitations a week. Three credits.

Speech

Professor McCarty

21a Extempore Speaking. Required of all candidates for degrees. The purpose of the course is to assist the student in acquiring an effective oral style—simple, clear, direct. Attention to selection and organization of material. Weekly extempore speeches are required. Sections limited to twelve. Five recitations a week. Three credits.

23a Oral Reading and Interpretation of Literature. A study of expression of thought and emotion based upon literary forms. Intended to develop skill in the oral interpretation of emotional and imaginative literature. Especially adapted to the needs of those interested in teaching English and Speech. Five recitations a week. Three credits.

43 Public Address—Practical Persuasive Speech. This course, during the summer term will be planned with special attention to the interests of two groups. Those who expect to teach speech in high school and those who are primarily concerned with the matter of personal speech improvement. Practical experience in speaking will serve as a laboratory for the study of personal and classroom problems. Five recitations per week. Three credits.