



SOUTH DAKOTA STATE COLLEGE
Of Agriculture and Mechanic Arts

BULLETIN

1950 Summer Session

JUNE 12 TO AUGUST 4

Graduate Work

Institutes

Workshops

South Dakota State College

of Agriculture and Mechanic Arts

Bulletin

Summer School Issue

1950



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General Information

THE STATE COLLEGE Summer Session for 1950 will be an eight-week session opening on June 12 and closing on August 4.

Monday, June 12 will be registration day. Students should register on that day and be ready to start classes on Tuesday morning. Students should plan to arrive in Brookings in time to arrange for living quarters before school opens. All administrative offices will be open during the preceding Saturday forenoon.

The eight-week summer session has been arranged to be of maximum benefit to teachers, students who are now enrolled in colleges, and high school students who wish to begin their college work. Courses will be offered in all five divisions of the College—Home Economics, General Science, Agriculture, Engineering and Pharmacy.

The normal load for students in the eight-week session will be 12 quarter-hours of credit.

Students wishing to study courses not listed in the Summer Session bulletin, should write to the Dean of the particular division to determine whether special provision for studying these subjects might be made.

The College reserves the right to withdraw any courses for which there is not sufficient demand.

Enrollment Procedure and Admission.—All students entering State College for the first time must submit an application for admission on the official form and take the examinations which are used in counseling students. The examinations are given after classes start and entrance is not based on the examination. Students who have previously attended State College need not make advanced application or take placement examinations.

A student entering directly from high school should request the principal to send a transcript of his record directly to the Registrar's Office at State College before registration. A candidate for entrance to the Freshman class must present at least fifteen units of high school credit. A student who presents fourteen units may be admitted as a conditioned freshman, but must earn the additional unit in college before the close of his first year.

Who Can Benefit by Attending Summer School?

Teachers in public schools of the state who wish to broaden the field of their teaching qualifications will find many suitable courses on the schedule at State College this summer. Teachers who wish to earn a higher certificate

or a higher degree will find many courses on advanced levels in the Summer Session.

High School students who wish to begin their college work during the summer may do so at State College. Summer school is particularly valuable for entering freshmen who have not had the required mathematics courses needed especially in Engineering and Pharmacy. Beginning courses will be offered in many departments.

College students who wish to accelerate their programs, or who have been unable to take certain required courses during the college year, may find the courses which they need listed in this bulletin.

Expenses

Expenses are relatively low at State College. Tuition for the eight-weeks summer session will be \$27. Fees include a Library fee of \$1, a health fee of \$1.50, a Union fee of \$2, and an activity ticket of \$2.75. The total of tuition and general fees will be \$34.25. However, students who have not previously registered at State College must pay a matriculation fee of \$5. This fee is paid only once. It is not required of those who have previously registered at State College.

For short courses of less than the normal summer session term that are open for college credit, a fee of three dollars (\$3.00) per credit hour is charged in lieu of regular tuition and course fees. General College fees will not apply to students carrying short courses only.

Students in short courses desiring to establish College credit will pay the matriculation fee if registering for the first time.

Housing

A limited number of barracks and trailer units will be available for married students. Persons interested in such accommodations should write to Mr. Melvin B. Henrichsen, Housing Director, State College.

Women students who are not residents of Brookings are required to live in dormitories unless permission to live elsewhere is granted by the dormitory committee. Men students may secure rooms in the men's dormitories.

The charge for rooming in the College dormitories is \$20.00 for the eight weeks session.

Students who live in dormitories must bring with them a mattress pad, pillow cases, sheets, blankets and towels.

Meals are available at the Pugsley Union as well as at restaurants near the campus. The cost of meals usually ranges between \$8 and \$10 per week.

Graduate Work

Graduate work leading to the degree of Master of Science is offered in many departments at the College. The Department of Education offers a Master of Science degree in Education without requiring the usual thesis. Under this arrangement a student must work on a research project, which is the equivalent of a three or four credit course or if he wishes he may work on several practical problems within his own school situation. Of the courses listed in this bulletin, those which are numbered 100 through 199 may be taken for graduate credit, although they are open to seniors. Those numbered 200 or higher are intended primarily for graduate students.

Teachers Employment Bureau

The College has a Teachers Employment Bureau for alumni and former students who wish help in locating suitable teaching positions. The Bureau is operated by the Depart-

ment of Education. Teachers who desire to have the employment bureau notify them when suitable vacancies occur may register with the Bureau during the Summer Session.

Special Workshops

Workshop courses and institutes will be offered in various fields during the summer session. In most cases students need not be regularly enrolled in the summer session in order to enroll in one of the workshops. Students who are enrolled in the regular summer session, however, will in most cases be given an opportunity to take advantage of those workshops which are of interest to them.

Workshops which have been planned so far are:

Workshop in Crafts. 1 credit. June 12 to 30. (Art Department)

Methods of Teaching Family Relations. 3 credits. June 12 to 30. (Home Economics Division)

Driver Education and Training. 2 credits. July 12 to 17. (Education Department)

Science Education Workshop. Probably 3 graduate credits. Dates to be arranged later.

Guidance Workshop. Non-credit. Dates to be arranged later.

A number of other institutes and workshops are being arranged and will be announced as arrangements are completed.

Faculty

The teaching staff for the 1950 summer session will consist largely of the regular faculty of the College, plus a number of visiting instructors who will be called in to offer instruction in certain specialized courses.

Recreation and Social Activities

A program of organized social activities and recreation has been arranged to provide maximum entertainment and relaxation for summer session students. The program will be varied in nature and programs of interest to all groups have been arranged. Activities of a social nature will include parties, picnics and dancing. Tennis courts, baseball diamonds, equipment for archery and other sports will be available for student use. Assembly programs and professional entertainment will also be provided.

Division of Agriculture

AGRICULTURAL ECONOMICS

20 Principles of Economics 5 Cr.

Analysis of problems of production, consumption and distribution of wealth, money and value; price fluctuations and policies. Fee \$1.25.

37 Principles of Marketing 4 Cr.

Organization and structure of distribution system. Analysis of functions, including costs and services, performed by various middlemen. Fee \$1.00.

110 International Trade 3 Cr.

Emphasis on government policy and controls. Analysis of tariffs, quotas, exchange systems, trade agreements, United Nations policies and creditor position of United States in World economic activity. P, 20, 30. Fee \$.75.

125 Intermediate Economic Analysis 3 Cr.

Methodology and scope of economic science; fundamentals of value and distribution theory; relation of economic analysis to economic policy. P, 20. Fee \$.75.

195 Agricultural Policy 3 Cr.

Economic policies affecting agricultural prosperity; suggested means of reform. Emphasis on national and regional problems and inter-relationships affecting rural and national welfare. Fee \$.75.

AGRICULTURAL ENGINEERING

167ab Senior Problem 2, 3, or 4 Cr.

Original problem in design or research on Agricultural Engineering subject. Includes outlining problem, tabulating data and submitting typewritten comprehensive report of results. Fee \$1.00.

The Division of Agriculture possesses excellent livestock and equipment for handling and studying livestock, as this scene from the annual Little International Exposition indicates.

AGRONOMY

55 Grain Crops 3 Cr.

Distribution, adaptation, classification, and culture of corn, wheat, oats, barley, flax, and other crops. P, 1. Fee \$2.00.

ANIMAL HUSBANDRY

10 Horsemanship 2 Cr.

Types and breeds of riding horses, gaits, grooming, equipment, rations; basic riding instruction with English and Western type equipment. Fee \$15.00.

144 Livestock Management 4 Cr.

For majors in other departments. Survey of livestock industry; feeding practices, breeding, management, marketing, evaluating, judging and fitting of farm animals. Fee \$1.00.

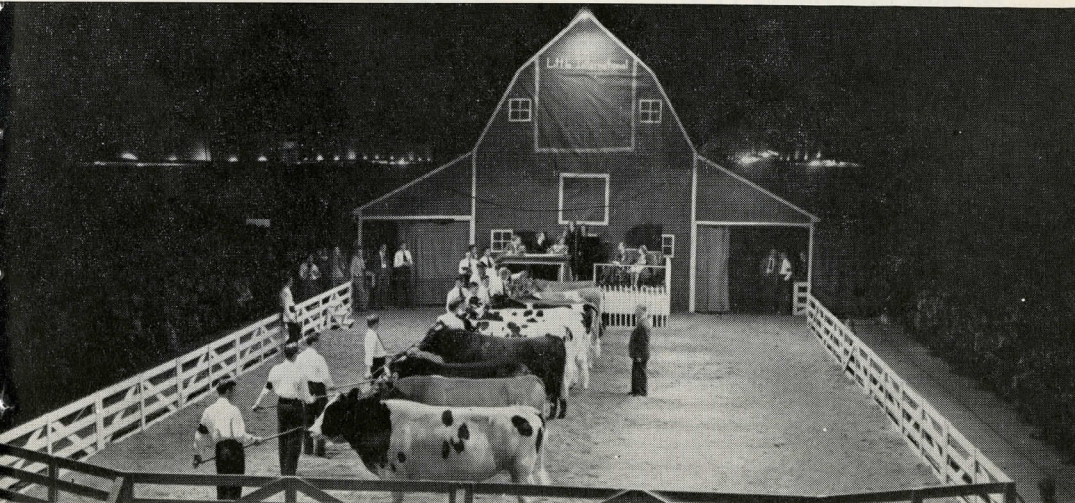
145 Swine Production 3 Cr.

Regional trends in production, improvement and management of breeding stock; feeding problems and study of swine feeding experiments; equipment for successful hog production; keeping records and fitting hogs for show or sale ring. P, 20ab, 143a. Fee \$2.00.

200 Research Problems 3-5 Cr.

Graduate students who have necessary qualifications may select problems in;

- (1) Swine production
- (2) Beef cattle production
- (3) Sheep production
- (4) Animal breeding
- (5) Meats
- (6) Nutrition problems
- (7) Range livestock production
- (8) Livestock marketing
- (9) Biometry



201 Thesis 3-8 Cr.

Graduate students majoring in Animal Husbandry may select suitable project, same to be approved by graduate committee.

205 Current Livestock Problems 3 Cr.

- (1) Biometry
- (2) Breeding
- (3) Nutrition
- (4) Physiology

Advanced discussions of newer knowledge of various phases of livestock production. In general, this course will be taught by guest professors.

BOTANY—BACTERIOLOGY**Botany****10c General Botany 4 Cr.**

Plant Kingdom: survey of great plant groups, their origin and contribution to present vegetation. Fee \$3.50.

24 Flora of the Black Hills 9 Cr.

Field-laboratory course in taxonomy and ecology of Black Hills flora. Apply to Botany Department for details of prerequisites, expense, and equipment.

27 The Local Flora 4 Cr.

Principles of taxonomy, and identification of plants in Brookings vicinity. P, 1ab or 10ab. Fee \$3.50.

Bacteriology**41 Elementary Bacteriology 5 Cr.**

For students of Pharmacy, Nursing Education, pre-medical students and others who will do advanced work in bacteriology. P, Ch 21, Fee \$3.50.

152 Virus and Rickettsial Diseases 3 Cr.

Attention given to pathogenic fungi as well as disease types mentioned. P, 142. Fee \$3.50.

160 Bacteriological Problems 1-2 Cr.

Individually assigned problems in bacteriology, mycology, or immunology. Admission upon recommendation of instructor. Fee \$1.00 per cr. hr.

ENTOMOLOGY—ZOOLOGY**22 Human Physiology 4 Cr.**

Fundamental physiological processes of human body. Kymographs, sphymographs, haemocytometers used in some of physiological studies. P, 20ab. Fee \$3.50.

41 Parasitology 3 Cr.

Chief worm and protozoan parasites of domestic animals and man, their habits, life histories and economic importance; should be preceded by Veterinary and Medical Entomology. P, 20. Fee \$3.00.

42 Genetics 3 Cr.

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

RURAL SOCIOLOGY**20 Principles of Sociology 5 Cr.**

Prerequisite to all other courses numbered above 20. Comprehensive study of Society with analysis of forces shaping human behavior in group life. Fee \$1.25.

131 Rural Sociology 3 Cr.

Sociology applied to rural society and its problems. P, 20. Fee \$.75.

132 Elements of Leadership 3 Cr.

Primarily for prospective Rural Life leaders who will work on community, county, or state level. Specifically of interest to Agricultural and Home Economics Extension Workers, Teachers, or those who work in either Social or Economic institutions with country or town people. Special emphasis given to selecting, training and supervising work of local lay leaders. P, 20. Fee \$.75.

162 Criminology 3 Cr.

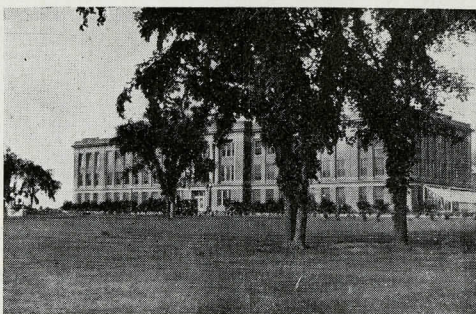
Nature and courses of crime. Making of criminal, theories of punishment. Agencies and methods of arrest, conviction, and segregation of criminals, jails, prisons, and reformatories. Probation and parole. P, 20. Fee \$.75.

165 The Small Town 3 Cr.

Intensive study of American small town with population up to 2,500; review of historical development, growth, structural fundamentals, various trade and social institutional services together with economic and social relationship to both open country areas and urban centers. P, 20. Fee \$.75.

167 Marriage 3 Cr.

Courtship and marriage period given special emphasis. Mate selection problems of unmarried, adjustment in marriage, reproduction, and child training discussed. P, 20. Fee \$.75.

The Administration Building.

Division of Engineering

GENERAL ENGINEERING

3a Engineering Drawing 2 Cr.

Development of skill in use of drawing instruments, and in mechanics of drafting. Open to all students who have had high school mathematics. Fee \$1.00.

30 Engineering Problems 2 Cr.

Systematic methods of solving representative problems. Use of slide rule and other calculating devices and machines. Habits of neatness and orderliness in calculation are cultivated. P, Math 15.

32 Statics 4 Cr.

Force systems, centroids, and moment of inertia. P, Math 26.

CIVIL ENGINEERING

3 *Plane Surveying 3 Cr.

Use, adjustment, and care of surveying instruments and field application of these instruments. P, Math 15, GE 3b. Fee \$4.50.

180abc Special Engineering Problems 1-5 Cr.

Elective course for special or detailed study of investigation. P, senior in Civil Engineering. For advanced irregular students.

Courses for senior engineers as needed.

ELECTRICAL ENGINEERING

5 Fundamentals of Radio and Television 4 Cr.

AM and FM radio and television with emphasis on receiving equipment. Treatment of underlying principles, radio, video and audio amplifiers, oscillators, detectors and rectifiers and their combination to form radio and television receivers. Laboratory work includes construction of radio receivers, trouble-shooting, and basic experiments in television. Cannot be applied towards graduation in engineering. P, high school graduation. Fee \$5.00.

141 Electricity and Magnetism 5 Cr.

Laws of electric and magnetic fields and circuits; measurements of electric and magnetic properties. P, Math 26, Phy 21c.

MECHANICAL ENGINEERING

2 Blueprint Reading 2 Cr.

Reading and interpreting blue prints. Suitable for mechanics, building trades people, and others who do not wish to take regular course in engineering drawing (or preparatory for those who have difficulty with drawing or descriptive geometry). Fee \$1.00.

*Suitable for irregular students as well as for mathematics and science teachers.

10ab Architectural Drafting Details 2 Cr.

Usual Construction details used in building trades including foundations, framing roofs, cabinets and furniture. Course can be arranged to fit needs of student considering his ability and drafting experience. Fee \$1.00.

45 Elements of Heat Power 3 Cr.

Power generation field types and study of heat power machinery. P, Math 26.

62 Mechanical Laboratory 2 Cr.

Testing of fuels and lubricating oils, engines and boilers. P, 45. Fee \$3.00.

142a Thermodynamics 3 Cr.

Fundamental principles of equipment, steam machinery, internal combustion engines, air machinery, heat transmission, refrigeration, and air conditioning. P, 45, Math 26.

149 Industrial Management 3 Cr.

Industrial ownership, organization and tendencies. Production layout and control, time and motion studies, labor problems, wage incentives and systems, employment and personnel work. P, senior standing.

162a Advanced Mechanical Laboratory 2 Cr.

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, 63. Fee \$3.00.

168 Metals 3 Cr.

Commercial methods of extraction, refining and compounding of metals and their alloys. Effects of composition, mechanical treatment and heat treatment on microstructure and properties of metals. Metal casting, working and application to engineering field. P, senior standing.

ENGINEERING SHOPS

2 Machine Shop 2 Cr.

Equipment and tools used in machine shop work, methods of laying out work, elementary principles of machine and bench work, and problems involved in use of machine tools. Fee \$6.00.

3 Advanced Machine Shop 2 Cr.

Continuation of Machine Shop 2. Further and more detailed instruction in machine shop problems and operation. Fee \$6.00.

5 Elementary Forging and Welding 2 Cr.

Introductory lectures and exercises in forging, heat treatment, oxyacetylene, and arc welding. Fee \$6.00.

10 Elementary Carpentry 2 Cr.

Use, care and conditioning of tools. Properties of various kinds of woods and processing of woods for specific purposes. Fee \$6.00.

11 Advanced Carpentry 2 Cr.

Continuation of 10 with emphasis on framing and rafter cutting. Special materials available for use in modern building. P, 10. Fee \$6.00.

12 Wood Turning 2 Cr.

Use of wood lathe, spindle, face plate, drive chuck, wood chuck operations in turning of various items, including patterns for foundry work. P, 11. Fee \$4.50.

20ab Machine Shop Problems 2 Cr.

Opportunity to undertake detailed and specialized studies of particular machines or to undertake comprehensive problems. Fee \$6.00.

MATHEMATICS**2 Solid Geometry 2 Cr.**

(Not counted toward graduation)

Required of freshman engineering students who enter without high school credit in subject.

3 Algebra (1st year H. S. continued) 5 Cr.

(Not counted towards graduation)

Required of freshmen engineering students entering with credit in only two semesters of algebra.

10 College Algebra 5 Cr.

Review of fundamental operations, factoring, highest common divisor, least common multiple and solutions of linear simultaneous equations; study of quadratic equations, exponents, radicals.

16 Analytic Geometry 5 Cr.

Co-ordinate systems, loci, straight line, general equation of second degree. Required in engineering, elective for others. P, 14, 15.

23 Descriptive Astronomy 5 Cr.

Introductory course. P, a knowledge of plane trigonometry.

27 Applied Calculus 4 Cr.

Applications of calculus to maxima and minima, series, areas, surfaces, volumes, centroids and move-

ments. Required in engineering, elective in other courses. P, 26.

105 Mathematical Statistics 5 Cr.

Analysis of data by certain elementary principles; curve fitting, measures of correlation, and meaning and calculation of a number of statistical constants. P, college courses in algebra and trigonometry.

141 Theory of Equations and Determinants 3 Cr.

Complex numbers, DeMoivre's Theorem, cubic and biquadratic equations. P, 16.

148 Differential Equations 4 Cr.

Differential equations with applications in fields of mechanics and physics. P, 26.

PHYSICS**1a Elementary Physics 4 Cr.**

Suitable for students with little mathematical background. Open to freshmen. Offered in general to all students outside engineering groups. Mechanics, heat, sound, electricity and light considered. P, high school algebra and plane geometry. Fee \$2.00.

21ab General Physics 4 Cr.

Mechanics of solids and fluids, sound, heat, electricity, magnetism, and light. P, Math 11 or 15. Fee \$2.00.

135b Modern Physics 3 Cr.

Selected topics—elementary charged particles, wave and particle theory, x-rays, atomic spectra, disintegration of nuclei and nuclear energy. P, 1c or 21c, math 26.

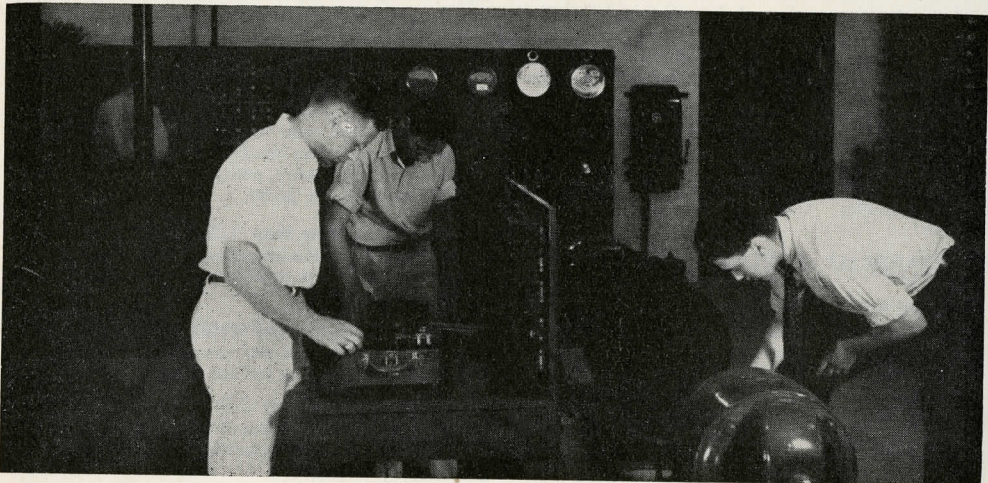
136a Modern Physics Lab 1 Cr.**3 Physics in the Modern World 2 Cr.**

Elementary survey of field of physics with emphasis on its methods and applications in everyday life.

60 Introduction to Atomic Physics 3 Cr.

Survey of important advances in modern physics during twentieth century. P, 1c or 21c.

A testing laboratory, one of several in the Division of Engineering.



Division of Home Economics

10 Textiles 3 Cr.

Emphasis on new fibers and finishes. Fee \$2.00.

30 Clothing 3 Cr.

Development of foundation pattern, flat-pattern construction, selection and construction of garment. Emphasis on selection of design and color to express individual personality. P, 11a. Fee \$3.00.

65 Supervised Student Teaching in Home Economics 5 Cr.

Offered for persons desiring credit in student teaching who have met other home economics education requirements. Not open to regularly enrolled students in Home Economics Education. Offered last four weeks of summer session. Limited registration. Fee \$4.00.

72 Home Management House 4 Cr.

Six weeks residence in home management house with experience in problems that arise in a home. P, 151.

141 Child Nutrition 3 Cr.

Present nutritional status of children; methods of judging nutrition; cause and effect of malnutrition. P, 140. Fee \$3.00.

144 Advanced Clothing 3 Cr.

Application of principles of costume design. Laboratory practice includes makeover problem and tailored suit or dress. P, 30. Fee \$3.00.

156 Textile Economics 3 Cr.

Economic aspects of clothing which directly or indirectly affect consumer. With emphasis on consumer buying. P, AgEc 20.

159 Experimental Cookery 3 Cr.

Investigation of factors which affect standard food products. P, 20, junior standing in Home Economics. Fee \$6.00.



Home Economics students may learn weaving.

160 Methods of Teaching Family Life (3-week workshop, June 12-30) 3 Cr.

Resume of various aspects of family life of concern to adolescent with methods of teaching same in high school homemaking classes or youth groups such as 4-H clubs. Thinking of Family Life Workshop recently held at University of California at Berkeley, and at Dakota Wesleyan, will serve as basis for discussion. P, Senior standing in Home Economics. Fee \$5.00.

265 Home Economics Problems 3 or 4 Cr.

Investigation of selected problems in any area of home economics.

Division of Pharmacy



41ab Drug Assaying 8 Cr.

P, ChIabc. Fee \$7.00; Deposit \$3.00.

42 Theoretical Pharmacy 4 Cr.

Medicinal alkaloids and their derivatives, glandular products, vitamins, and biologicals. P, First two years of Theoretical and Practical Pharmacy.

43 Practical Pharmacy 2 Cr.

Compounding of more simple prescriptions, packaging, labeling, and wrapping of finished product. P, First two years of Theoretical and Practical Pharmacy. Fee \$3.50; Deposit \$3.00.

46 Window Display 2 Cr.

Combination study of color schemes, and arrangements of material, lighting effects. Fee \$3.00; Deposit \$3.00.

Division of General Science

ART

2a Drawing and Composition 2 Cr.

Perspective, drawing in line and value in pencil, crayon and charcoal. Fee \$2.00.

3 Workshop in Crafts 1 Cr. (June 12-30)

Selected problems in crafts. For recreation directors and persons interested in crafts as hobby. Not open for credit to persons who have had 25abc. Class will meet 7:00—10:00 p.m. on MWTh.

25c Applied Design 2 Cr.

Weaving fee \$2.00.

30 Architectural Drawing 2 Cr.

Technique of drawing to scale, architectural drawing symbols, floor plans and details. Rendering of exterior elevations. Required of majors in interior decoration and open to other students. Fee \$2.50.

41ab Advanced Design 2 Cr.

Lettering, ceramics. Fee \$2.00.

60ab Painting 2 Cr.

Color and its properties; exercises in mixing and harmonizing color in painting, in oil or water color; emphasis given to problems of composition. P, 2abc. Fee \$2.00.

CHEMISTRY

1c Inorganic Chemistry 4 Cr.

Systematic study of metals. P, 1b. Fee \$4.00; Deposit \$3.00.

20 Semi-micro Qualitative Analysis 5 Cr.

Analysis of mixtures of inorganic compounds using semi-micro technique. P, 1c, Math 10 or 14. Fee \$4.00; Deposit \$5.00.

21 Elementary Organic Chemistry 5 Cr.

Compounds of carbon with emphasis on those of special interest to students in agriculture and general science. P, 1c. Fee \$6.00; Deposit \$5.00.

23 Gravimetric Analysis 4 Cr.

Theory and practice of elementary gravimetric analysis. P, 1c. Fee \$5.00; Deposit \$4.00.

24 Volumetric Analysis 4 Cr.

Theory and practice of elementary Volumetric Analysis. P, 1c. Fee \$5.00; Deposit \$4.00.

28a Stoichiometry 1 Cr.

Methods of calculations in quantitative analysis. Should accompany Ch 23. P, 1c.

90 Undergraduate Seminar 1 Cr.

Presentation of topic based on reference reading or original research. P, minor in chemistry. Fee \$5.00.

147 Advanced Inorganic Chemistry 3 Cr.

Selected topics in inorganic chemistry in light of modern theory. P, 1c. Fee \$75.

173 Undergraduate Research * Cr.

Special problems requiring original research. P, consent of instructor. Fee \$3.00; Deposit \$1.00 per credit hour.

174 Biochemical Research * Cr.

Research problems in applied biochemistry. P, 165b (formerly 141b).

260 Seminar 1 Cr.

Required of all graduate students majoring in chem-

Industrious students find study a pleasure in the main reading room of Lincoln Memorial Library.



istry. (Those who began graduate work before summer term 1950 will not be held to this requirement.)

262 Thesis * Cr.

Required of candidates for Master's degree in chemistry.

Note: Every effort will be made to provide graduate courses for those who need them to fill out a graduate program.

EDUCATION

45 Educational Psychology 3 Cr.

Nature of learning in man, learning curves, economical learning, rates and limits of improvement, retention of experience, differences in learning capacity, transference and interference. Required for certification. P, Psy 25, Ed 40. Fee \$.75.

63 Teaching Science in High School 3 Cr.

Fee \$.75.

67 Driver Education and Training 2 Cr.

Techniques of conducting high school level driver education and training courses. A short course of 40 hours of combination recitation and laboratory work. Fee \$5.00.

68 Teaching of Speech in High School 3 Cr.

For individuals who intend to teach in field. Philosophy, selection and use of textbook, classroom methods and techniques, evaluation and criticism. P, 47 and at least a teaching minor, or by special permission.

71 Organization and Management of Vocational Agriculture 3 Cr.

Various phases of work of vocational agriculture teacher are taken up for analysis and for constructing a program. Required for certification of teachers of agriculture. Fee \$.75.

160 Public School Administration 3 Cr.

Organization and administration of school system in state, county, and various types of school districts. Consideration of work and responsibilities of State Department of Public Instruction, County Superintendent, school boards, and superintendents and principals. Considers financial problems. P, 47. Fee \$.75.

161 Principles of Vocational Education 3 Cr.

Emphasis on vocational education as part of high school offering. Vocational education, legislation; federal and state control, reimbursement, administrator-vocational teacher relationships and vocational education in rural recreational program. Study of adult vocational education and follow-up program and guidance of adults. P, 47. Fee \$.75.

168 Educational Statistics 3 Cr.

Methods of dealing with quantitative educational data; exercise in tabulation, graphical representation, calculation of statistical constants and measures of dis-

persion and correlation. Illustrative material from school costs and school census, retardation, and standard achievement tests. P, 47. Fee \$.75.

169 The School Curriculum 3 Cr.

Nature, principles, applications, and purposes of curriculum in American public schools. P, 40, 45, 47. Fee \$.75.

220 Organization and Administration of Elementary Education 3 Cr.

Problems of superintendent in organizing and administering work of elementary school. P, 160.

245 Administration of School Guidance Program 3 Cr.

268 Problems in Education 2-4 Cr.

Advanced problems in educational administration, supervision, curriculum, guidance, and methods. P, Consent of instructor.

280 Research Problems in Education 3-4 Cr.

Required of all graduate students wishing to qualify for Master's Degree without writing a thesis. Preferable problem selected is one in own school system. Problem analyzed, data gathered and treated statistically. Reported in approved form.

285 Thesis in Education 4 Cr.

ENGLISH

1abc English Composition 3 Cr.

Drill in grammar, punctuation, and vocabulary and study of principles of rhetoric to teach student to use clear and correct English. Training also given in accurate, intelligent reading. Required of all freshmen.

20 Introduction to Literature 3 Cr.

Principal literary types—fiction, drama, essay, biography, and poetry. Although primarily literature course, attention given to composition also. Required of every sophomore unless some other arrangement obtains in his division. P, 1abc. Fee \$.75.

25 Biography 3 Cr.

Great biographies of past and present may be elected to complete sophomore English requirement. P, 20. Fee \$.75.

32 Advanced Composition 3 Cr.

Advanced writing for students other than engineers. Fee \$.75.

33 Commercial Correspondence 2 Cr.

Review of grammar, punctuation, and principles of composition with special application to writing business letters and other business forms. Not counted toward English-Journalism major, English Minor nor towards meeting general English requirement in other curricula. P, 1abc.

41a American Literature 3 Cr.

From its beginning to present days. Fee \$.75.



Painting, as this scene in an art studio shows, holds fascination for many students and provides opportunities for the development of many special talents.

42 Exposition for Engineers 3 Cr.

Advanced course in writing. Required of Juniors in Division of Engineering.

44 Short Story 3 Cr.

In addition to some writing, extensive reading in modern fiction is required. Course is cultural, not professional. P, 20 or 30. Fee \$.75.

55 Recent American and British Literature 3 Cr.

From 1900 to present. Fee \$.75.

56 The English Language 3 Cr.

Development and structure of language. Special emphasis placed on grammar, treated with historical perspective, attention also given to etymology and semantics. Students intending to teach English are to take this course. P, 20. Fee \$.75.

60 Shakespeare 3 Cr.

Representative comedies, tragedies, and chronicle-histories. P, 30 or 22. Fee \$.75.

FOREIGN LANGUAGE

10 French 3-6 Cr.

Reading course for those interested in meeting language requirements for graduate degrees. Basic French grammar with intensive study of verbs and basic vocabulary.

21a Second Year Literary French 3 Cr.

Review of grammar, irregular verbs and phonetics, advanced work in composition. Sight reading of idiomatic French prose. Outside reading. French pronunciation continued.

HISTORY AND POLITICAL SCIENCE

2a English History 4 Cr. Fee \$1.00.

24 Recent American History 4 Cr.

Political, social, and economic development, 1917 to present. Fee \$1.00.

57 South Dakota History 2 Cr.

Primarily for prospective teachers who may teach State history. Early exploration and settlement; coming of railroads; "Dakota Boom" of 1880's; territorial government; main developments since 1890. Fee \$.50.

142c Contemporary Europe 4 Cr.

World War II and after; fundamental courses, theories of operations with emphasis on Europe, Japan, China, and India; United Nations in theory and practice, important international conferences, 1938 to present. P, one year of College History. Fee \$1.00.

143a Latin America and the United States 3 Cr.

Emergence of Latin American republics. Fee \$1.00.

147 Constitutional Law 4 Cr.

Analysis of court decisions that have determined Constitution and government of today. P, 34. Fee \$1.

190abc Problems in Political Science 1-3 Cr.

Selected studies to meet needs of graduate students. Fee \$.25 per cr. hr.

LIBRARY STUDY**60a Library Administration 3 Cr.**

Stating problem of school libraries. Objectives and methods of service in small high school libraries, organization, budget and ordering, classification and cataloging, student library club, housing and equipment, records to be kept, reports to make, and methods of publicity. Fee \$.75.

60b Book Selection and Reference 3 Cr.

Standards of criteria which may be used in appraising books for school libraries. Fee \$.75.

60c Cataloging and Classification 3 Cr.

To teach students how to catalog and classify books for high school libraries. Fee \$.75.

MUSIC

Summer School 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), teaching of instrumental groups and harmony. All members of staff will be available for individual lessons. Credit may be earned toward a minor in music. Summer School band and orchestra will be directed by Professor Christensen. Students in conducting will be given an opportunity to conduct summer school groups.

Fees: Instrumental, piano, pipe organ, voice; one individual lesson per week, \$12.00; two individual lessons per week \$24.00.

Individual instruction in sight singing and choral technique and materials, harmony, conducting, and teaching of instrumental groups \$12.00.

ORIENTATION**1a Orientation ½ Cr.** Required of all freshmen.

Meet with assigned counselor each week. College rules and regulations, attention to study habits and practices, self appraisal, health problems, campus social affairs and vocational and career planning.

PHYSICAL EDUCATION AND RECREATION**Men and Women****13 First Aid Specialization 2 Cr.**

Standard Red Cross First Aid Course given under auspices of American Red Cross. Students completing this course will receive card showing registration with National Red Cross. Fee \$.50.

17 Swimming 1 Cr.

Various types of strokes and elementary water safety. Fee \$1.00 plus pool fee.

55 Kinesiology 3 Cr.

Principles of body mechanics and an anatomical analysis of physical activities. P, Z166. Fee \$.75.

61 Organization and Administration of Physical Education 3 Cr.

History and principles which have determined past and present programs, aims and objectives of physical education, administration of curricula, professional attitudes and ethics, administration of facilities, equipment and supplies. Fee \$.75.

66 Community Recreation 3 Cr.

Programs for winter, spring and summer, and fall. Fundamental relation of recreation and community. Materials and methods for leadership. Fee \$.75.

171 Advanced Problems in the Administration of Interschool Athletics 3 Cr.

Budgets, public relation problems, subsidiation, objectives of athletics, staff organization, control of interschool athletics both intercollegiate and interscholastic, and general policies of athletics. P, 61, senior standing, permission of staff.

299 Recent Literature and Research in Health, Physical Education, and Recreation 3 Cr.

Directed readings and class discussions on recent literature; steps involved in solving problems; critical analysis of research in field. P, Bachelor Degree, permission of staff.

Men**21a Physical Education Activities 1 Cr.**

Minor team sports.

49bc Advanced Physical Education Activities 1 Cr.

- (b) Self testing activities
- (c) Rhythmics

62 Football Coaching 3 Cr.

Open to juniors and seniors. Each student required to purchase rule book, text book and notebook. Offensive and defensive team play and strategy; correct technique and execution of fundamentals. Fee \$.75.

Women**20c General Physical Education 1 Cr.**

Beginners tennis. Fee \$2.00.

23b Physical Education Activities 1 Cr.

Singing games and elementary folk dancing. Fee \$2.

45c Intermediate Physical Education 1 Cr.

Teaching of archery. Fee \$2.00.

64c Advanced Physical Education Activities 1 Cr.

Intermediate Tennis. Fee \$2.00.



The auditorium, administrative offices, many classrooms and laboratories are in the Administration Building.

PRINTING AND RURAL JOURNALISM

Journalism

60 Problems and Methods 2-4 Cr.

Individual work fitted to special needs of student as determined by interests and aptitudes. P, consent of instructor. Fee \$.50 per credit.

66 Publicity Methods 3 Cr.

For students expecting to become County Agents, home economics leaders, or vocational teachers. P, Engl labc. Not for Journalism majors or minors. Fee \$.75.

67 Journalism for Teachers 2 Cr.

For high school journalism instructors or advisers; includes journalism coursework, instruction in various types of school publications, school relations. P, Engl labc. Fee \$.50.

Costs and Estimating

A five-day workshop for printers and publishers.

Newswriting

A five-day workshop for country correspondents, extension workers, or others who might be interested.

Printing

Composing Machines (Keyboard) no credit—44 hours per week.

Elementary keyboard practice. Emphasis on correct keyboard fingering. Simple newspaper style. Machine changes, daily and weekly cleaning and oiling. P, previous printing experience. Fee \$2.50 per unit.*

Composing Machines (Mechanism) no credit—44 hours per week.

Care, maintenance and adjustments of linotypes and intertypes. P, previous experience as composing machine operator. Fee \$2.50 per unit.*

Platen Presswork, no credit—44 hours per week

Introduction, including types, care, oiling, feeding, washing and press makeready. Paper, inks, rollers, and common pressroom troubles. P, previous printing experience. Fee \$2.00 per unit.*

Cylinder Presswork, no credit—44 hours per week

Mechanism and care of cylinder press. Practice feeding with both push and pull guides. Positioning forms, makeready and running forms. Inking mechanism adjustments. P, previous job press experience. Fee \$2.00 per unit.*

*Four hours laboratory per week for each unit.

SPEECH

45 Discussion 3 Cr.

Nature, values, limitations, analysis and types of discussion. Emphasis on leadership and participation. Textbook.

55 Parliamentary Procedure

Organizing and conducting meetings, special motions, procedure of motions. Experience in actual participation. P, 22 or equivalent. Textbook.

68 Teaching of Speech in High School 3 Cr.

For individuals who intend to teach in field. Philosophy, selection and use of textbook, classroom methods and techniques, evaluation and criticism. P, 47 and at least a teaching minor, or by special permission.