

In transferring credits earned in the Summer Schools of 1919, 1920, 1921 we transfer three term credits for each course completed. This is what we now accept for these credits.

SUMMER SCHOOL

JUNE 10-JULY 23, 1919



**North Carolina State College
of Agriculture and Engineering**

West Raleigh, N. C.

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OFFICERS OF ADMINISTRATION

W. C. RIDDICK, A.B., C.E., LL.D.....	President of the College
W. A. WITHERS, A.M., D.Sc.,	Vice-President of the College and Director of the Summer School
C. F. MILLER, B.S., Ph.D.....	Treasurer
NANNIE CARRINGTON DINWIDDIE	Adviser of Women
MRS. ELIZA S. MCGEEHEE.....	Secretary
HUBERT BENBURY HAYWOOD, JR., M.D.....	Physician
FRANCES WELCH	Dietitian
MARTHA A. DOWD	Manager Teachers' Bureau
FRED A. OLDS.....	Conductor of Tours

The Council of the Summer School includes the President, the Director, and the following:

- HON. T. W. BICKETT, Governor of North Carolina.
DR. E. C. BROOKS, State Superintendent of Public Instruction.
DR. T. P. HARRISON, Dean of the State College of Agriculture and Engineering.
C. B. WILLIAMS, Dean of Agriculture, State College.
B. W. KILGORE, Director of the Experiment Station and Extension Service.
T. E. BROWNE, State Supervisor of Vocational Education.

Communications concerning the Summer School should be addressed to

W. A. WITHERS, *Director*.

Rooms 216-217, Winston Hall, West Raleigh, N. C.

FACULTY

THOMAS CICERO AMICK

Mathematics

Professor of Mathematics, Elon College

Graduate of Peabody College; teacher at Liberty Academy, N. C.; Ingram Institute, Va.; Liberty Normal College, N. C.; Western Maryland College; Elon College; student at University of North Carolina Summer School; State Normal College, Ala.; University of Chicago; University of Virginia; Ph.D., Central University.

MAUD BARNARD

Story-Telling

Student at North Carolina College for Women; Student at University of North Carolina Summer Schools; Teacher in Iotla High School and Franklin Graded School; Rural School Supervisor of McDowell County; Campus Story-Teller and Instructor in Story-Telling and Primary Education, Cullowhee Normal Summer School.

EDWARD LEIGH BEST

Education

Superintendent of Franklin County Schools

Student at University of North Carolina and Columbia University.

ISABELLE WORTH BOWEN

Swimming

Graduate Peace Institute; Student State College Summer School.

THOMAS EVERETT BROWNE *Conference for Agricultural Teachers and Workers*

Director for the State Board of Vocational Education and
State Supervisor of Farm-Life Schools

B.A., Wake Forest College; teacher of Latin and Higher English, Atlantic Collegiate Institute, N. C.; County Superintendent of Schools, Hertford County; Farm Demonstration Agent; District Agent in Farm Demonstration Work for Eastern District; State Agent, Boys' Corn Club Work; Professor of Extension, State College of Agriculture and Engineering; State Agent in Charge of Agricultural Club Work; State Supervisor, Secondary Agricultural Education.

LEON EMORY COOK

Vocational Education

Associate Professor of Vocational Education, State College of
Agriculture and Engineering

A.B., Cornell; B.S., in Agriculture, Cornell; M.S., in Agriculture, Cornell; Instructor in Agriculture and Principal of Worcester (N. Y.) High School; Assistant in Rural Education, Cornell University, Summer Session, and during regular session; graduate student same.

MAY HILL DAVIS

Industrial Manual Training

Handicraft Teacher, State School for the Blind

Graduate of St. Mary's School, Raleigh; Instructor in Basketry, Cullowhee Normal Summer School; Chairman of the Arts and Crafts Department, Federation of Women's Clubs, North Carolina.

JAMES BEWLEY DERREUX

Physics and General Science

Assistant Professor of Physics, State College of
Agriculture and Engineering

A.B., A.M., University of Tennessee; Graduate Student in Physics, Laboratory Assistant, University of Chicago.

NANNIE CARRINGTON DINWIDDIE

French

Teacher in Gunston Hall, Washington, D. C.

For seventeen years Associate Principal of Peace Institute; four years abroad studying languages in France and Switzerland; student in Summer School of Columbia University; teacher in Fairmont Seminary, Washington, D. C.

MARTHA A. DOWD

Normal Music (Piano)

Normal Training in Piano, St. Mary's School, Raleigh

Secretary North Carolina Music Teachers' Association; President North Carolina Music Teachers' Association; Member of the Association of Presidents and Past Presidents of the State and National Music Teachers' Association; Pupil of Edwin Farmer, formerly of the Peabody Conservatory; pupil of Clarence G. Hamilton, Associate Professor of Music at Wellesley College; Member of Board of Examiners for Teachers' Certificates in the Progressive Piano Lessons.

JOHN MILTON FOSTER

Drawing and Shop Work

Assistant Professor of Machine Design and Applied Mechanics, State College

B.M.E., University of Kentucky; graduate student, Peabody College; Construction Engineer, Allis-Chalmers Co., Milwaukee, Wis.; teacher of Manual Training in seventh and eighth grades, Nashville City Schools; teacher in first, second, third and fourth year High School Mechanic Arts course, Hume-Fogg High School, Nashville, Tenn.; Assistant Chief Mechanical Engineer on erection of Government Chemical Plant with George A. Fuller Co., Lyles, Tenn.; Member of Society for Promotion of Engineering Education.

FRANK MARION HARPER

Latin

Agent of the United States Bureau of Education

Ph.B., University of North Carolina; A.M., University of Georgia; graduate student in Latin and Greek, University of Chicago, four summer quarters; teacher of Latin and Greek in high school and college for seventeen years; Superintendent of Schools for Raleigh Township for eleven years.

CHARLES MCGEE HECK

Physics and General Science

Professor of Physics, State College of Agriculture and Engineering

A.B., Wake Forest College; A.M., Columbia University; research student, University of Berlin; Assistant Professor of Physics, University of Nebraska, and Colorado College.

LAWRENCE EARL HINKLE

Education and Spanish

Professor of Modern Languages, State College of Agriculture and Engineering

A.B., University of Colorado; A.M., Columbia University; Instructor, Scarritt-Morrisville College; Headmaster, Cokesbury Academy; Professor in Northwestern State Normal.

EDGAR ALLAN HODSON

Field Crops and Soils

Assistant Professor of Agronomy, Delaware Agricultural College

B.S., Alabama Polytechnic Institute; M.S., North Carolina State College of Agriculture and Engineering; graduate student in Farm Crops and Plant Breeding, Cornell University; Instructor in Agronomy State

College of Agriculture and Engineering; Instructor in Agriculture, University of North Carolina Summer School; Assistant in U. S. Bureau of Markets.

HARRY HOWELL

Education

Superintendent of the Raleigh Public Schools

Ph.B., University of North Carolina; principal and later superintendent of the Washington (N. C.) city schools; superintendent successively of the High Point and of the Asheville city schools.

ELIZABETH JOHNSTON

Games

Supervisor and Teacher of First Grade in Hanes School,
Winston-Salem, N. C.

Graduate of Lucy Cobb College, Athens, Ga.; student University of Georgia Summer School; Teacher in Primary Grade at Highlands, N. C.

BENJAMIN FRANKLIN KAUPP

Poultry Husbandry

Professor of Poultry Science, State College of Agriculture
and Engineering

B.S. and M.S., Colorado Agricultural College; D. V. M., Kansas City Veterinary College; formerly Veterinary Inspector U. S. Department of Agriculture; Professor of Pathology, Colorado Agricultural College; Director of Anatomy Laboratory and First Vice-President Kansas City Veterinary College; graduate student, University of Chicago, and Cornell University; Author of *Animal Parasites and Parasitic Diseases, Poultry Diseases, Poultry Culture, Sanitation and Hygiene, and Anatomy of Domestic Poultry*; Pathologist, North Carolina Experiment Station and Department of Agriculture.

JOHN CLEGG LOCKHART

Education

Superintendent of Wake County Schools

A.B., University of North Carolina; graduate student, Columbia University Summer School; Principal of Macclesfield High School; Principal of Apex Graded School; Superintendent of Dunn Graded Schools; Principal of Wakeon High School; Conductor of Teachers' Institute.

DONALD MCCLUER

Swine Production

Assistant Professor of Animal Husbandry, State College of
Agriculture and Engineering

B.S., Mississippi Agricultural College; Graduate Student University of Illinois; County Agricultural Agent, North Carolina Extension service

MARY MCGILL

Voice and Chorus

Vocal Teacher Meredith College

Edinburgh Ladies College, Edinburgh, Scotland; Pupil of James A. Moonie, Edinburgh; Voice pupil of Frank E. Morse, Boston, Mass. (Morse Vocal School Certificate); New England Conservatory of Music; Faelton Pianoforte School, Boston, Mass. (Certificate).

MRS. JANE S. MCKIMMON

Home Food Conservation

State Home Demonstration Agent and State Director of Home
Economics

Peace Institute; Simmons College Summer School.

VIRGINIA LAFAYETTE NELSON *Intermediate Demonstration School*
Teachers' College, Columbia University

Graduate of State Female Normal School, Virginia; Student at University of Virginia Summer School; Teacher in High School at Oak Level, Va., Radford, Va., Bristol, Tenn., and Saltville, Va.; Graduate Student, Columbia University.

MARY ANDERSON PAGE *Writing*
Supervisor of Penmanship, Raleigh City Schools

Graduate St. Mary's School; State Normal College; State College Summer School.

THOMAS CLEVELAND REED *Animal Husbandry and Farm Dairying*

B.S., University of Missouri; Graduate Assistant, A.M., in Agriculture, University of Missouri; Instructor in Dairy Husbandry, University of Missouri.

JOSEPHINE SCHIFFER *Home Economics*
Head of Department of Home Economics, Meredith College.

Graduate of Drexel Institute, Philadelphia; B.S., Columbia University; Director of Home Economics, Girls' Classical School and Teachers' College, Indianapolis, Indiana, East High School, Des Moines, Iowa, and Brenau College, Gainesville, Georgia; Lecturer on and Teacher of Dietetics, in Indianapolis Hospital, and Chester County Hospital, Chester County, Pennsylvania.

GEORGE SUMMEY, JR. *English and History*
Associate Professor of English, State College of Agriculture and Engineering.

Ph.D., Columbia University; Former Managing Editor of the North Carolina Review; Instructor in English, Summer Session of the Alabama Polytechnic Institute, author of *Modern Punctuation; Its Utilities and Conventions*, compiler of *Style Book of the State College of Agriculture and Engineering*.

EFFIE MAY WILLIAMSON *Primary Demonstration School*
Member of Faculty, Teachers' College, Columbia University

B.S., Teachers' College, Columbia University; Diplomas, Coe Academy, Cedar Rapids, Iowa, and East Central State Normal, Ada, Oklahoma; student at Coe College, Cedar Rapids, Iowa; Teacher in Primary Grades, Cedar Rapids, Iowa; Tulsa, Oklahoma, and Muskogee, Alabama; Supervisor, Ada, Oklahoma; Elementary Supervisor, Dorchester County Schools, Maryland.

RHETT YOUNG WINTERS *Agriculture*
Plant Breeding Agronomist, North Carolina Experiment Station

B.S., Clemson Agricultural College; M.S., University of Florida; Ph.D., Cornell University; Assistant Botanist, Florida Experiment Station; Assistant in Plant Breeding, Instructor in Plant Breeding, Cornell University.

ANNIE S. WORKMAN

Primary Work

Instructor in Demonstration School, Peabody College

A.B., Winthrop College; Student at Peabody College; Instructor in Normal Course, Laurens, S. C.; Teacher in North Carolina Graded Schools; Teacher in North Carolina County Institutes; Teacher in Demonstration School, University of North Carolina Summer School; Student, Columbia University.

ROBERT E. LEE YATES

Mathematics

Professor of Mathematics, State College of Agriculture and
Engineering

A.M., Wake Forest College; Student of Higher Mathematics, University of Chicago.

GENERAL INFORMATION

HISTORY AND PURPOSE.

During the summer of 1918, by authority of the Board of Trustees, the North Carolina State College of Agriculture and Engineering will give to the teachers of the State the opportunity of using, for six weeks, its magnificent plant, the value of which is in excess of one million dollars.

The Trustees have authorized the summer session in order that the splendidly equipped and centrally situated college plant may be useful at a time when teachers, principals, supervisors, superintendents, and others have most leisure. As the public has a vital interest in the education of teachers and leaders, the College can do no better work during the summer than put its equipment at the disposal of those teachers, school officials, and agricultural workers who are ambitious to increase their usefulness.

The courses have been arranged to cover the subjects taught in the primary, grammar, and high school grades. They will, therefore, be adapted to teachers and to officials connected with any department of school work.

The first session of the school was held in 1903 during the presidency of Dr. George T. Winston, the registration being 338. The second session in 1904 was under the directorship of Dr. J. Y. Joyner, and the attendance reached 840. There were no sessions of the school from 1905 to 1916, inclusive. In 1917 the enrollment was 517. In addition, 14 soldiers were enrolled in French during that session.

During the 1918 session there was an enrollment of 311 teachers, 61 home demonstration agents, 63 practice school pupils, 28 attendants at the Agricultural Conference, 95 house-keepers and other non-teachers, making a total of 558. Seventy-one counties and five other States were represented in the student body. The pupils of the school were made up of 51 men, 444 women, 30 boys and 33 girls. In addition to the above there were 98 soldiers enrolled in the study of French.

Courses have been arranged to include primary and grammar grade subjects, as during 1918. Provision more ample than heretofore has been made for high school subjects. Instruction in elementary agriculture is given to enable teachers to comply with the State law regarding that subject. Vocational agricultural courses are given to prepare teachers in high schools to avail themselves of the benefits of the Smith-Hughes Act. In addition, courses preparatory for college entrance are given in English, history, mathematics and science. Credit courses for Freshmen are given in mathematics and physics.

In addition, this school will afford a splendid opportunity to secure or renew a Teacher's Certificate; to increase efficiency as a teacher; to prepare for leadership in the new education for agriculture and the other industries; to receive inspiration from association with fellow teachers and to enjoy a sojourn at the State's capital and educational center.

Raleigh is centrally and conveniently situated on the main lines of the Seaboard Air Line and Norfolk-Southern railways and on the Greensboro-Goldsboro line of the Southern Railway.

The College, in West Raleigh, may be reached by street cars bearing the sign "Hillsboro." All other cars except marked "South street" transfer to the Hillsboro Street line.

To reach the College from the Union Station, take the Blount Street car southbound immediately in front of station, and transfer at the Confederate Monument (Salisbury Street, Hillsboro, and Capitol) to the car marked "Hillsboro." Do not take the car northbound from station, because this would mean an inconvenient delay.

Raleigh has been variously named the city of schools, the city of churches, the city of oaks, and the city of homes. Whichever be the right name, it is a hospitable and attractive place, the center of the State Government, and a city which has good streets, handsome public buildings, and excellent public utilities. The State Museum, the Capitol, the Department of Agriculture, and the numerous industrial plants furnish rare opportunities for those who have eyes to see.

The people of Raleigh have rendered material aid to the school, which is counted among the permanent institutions in the Capital City.

RAILWAY FARES.

Under the present rules of the United States Railway Administration, there will be no reduced round trip rates for summer schools this year.

FEEES AND EXPENSES.

The expenses for the entire session will be as follows:

Tuition	\$ 9.00
Room rent, each person (two in a room).....	6.00
Board	25.00
	\$40.00

This includes breakfast, June 10 through supper, July 23.

There will be a key deposit of 25 cents, refunded upon return of the key. In some classes there will be a small fee to cover the cost of materials used. Such fees are designated under the descriptions of the courses in question.

In a limited number of cases one may be able to room alone upon payment of \$9 room rent.

All charges are payable strictly in advance, and there will be no refund of room rent or tuition after the first ten days. In computing refund for board after the expiration of ten days charges will be made at the weekly rates.

Room, board and tuition for those arriving late or present less than the entire session will be charged at the following rates:

Per week ..	\$8.00
Per day	1.35

Charges for table board for less than the entire session will be as follows:

Per week	\$5.00
Per day	1.00
Per meal40

The dining hall will be under the charge of Miss Frances Welch, Dietitian of Meredith College, a lady who has had extended experience in catering.

Charges for individual meals will be collected at the Dining Hall, at the meal rate. Any one desiring to take advantage of the cheaper daily or weekly rate must make payment at the Treasurer's office in advance.

The Summer School will be glad to entertain friends of those registered in the school who wish to visit them over night or longer, the rates charged being those indicated above. No guest of any member, however, is expected to occupy any room without being previously assigned thereto by the Treasurer, who will be found in his office at all times between 8:30 a. m. and 4:30 p. m. There will be no reduction in rates for children.

A fee of \$5 will be charged for those registered only in the Housekeepers' Course in Home Economics, or only in any other course of not more than five hours a week. Those who take more than the Housekeepers' Course or more than five hours in other subjects will pay full tuition (\$9).

ROOM RESERVATION.

Students should apply for room reservations as early as possible. This will save much delay upon arrival.

REGISTRATION.

Students must visit the Treasurer first and pay all fees before registering in courses of instruction. The Treasurer's office (Room 212) and the office of registration (Room 216) will be in Winston Hall, second floor.

Students are urged to register on Tuesday, June 10, in order that they may begin class work at the beginning; but there will be opportunity to register on Wednesday, June 11.

HOURS OF WORK.

It is important to notice that students are required to take fifteen hours weekly in order to earn certificates, and that no one will be permitted to take more than twenty hours for credit. It has been the experience of Summer School faculties that ambitious students, unless prevented by a rigid rule, will take much more work than they can assimilate, with the result that they are bewildered rather than instructed, and that they go stale instead of being heartened by their work.

In addition to the fifteen or twenty hours regularly taken, each student will be allowed a limited number of visiting hours.

Except where there is specification to the contrary, each course is given five hours a week.

The Summer School authorities reserve the right to cancel any course for which the registration is less than ten.

BOARD AND LODGING.

Board may be had in College. See schedule of charges. A limited number of young ladies may earn a part of their expenses by waiting on the tables in the College dining-room. Applications for these positions should be addressed to the Director.

Male students attending the summer session will be assigned rooms in Watauga Hall and the Third and Fourth dormitories. Married couples will be assigned rooms on one floor of Holladay Hall.

The County and Home Demonstration Agents will be at the college in a body from June 3 to June 13. Mrs. Jane S. McKimmon will be in charge of these ladies.

In case it is desired to change the room assignment, permission to do so must first be obtained through the Treasurer's office.

Many of the homes in Raleigh will supply board and lodging. A list of these may be had upon application.

BAGGAGE.

Students arriving at Raleigh are advised to bring their baggage checks to the Registration office, where arrangements will be made to have baggage brought to students' rooms. Transfer fee, 25 cents.

POSTAL ARRANGEMENTS.

Except for students boarding in Raleigh, mail should be addressed to West Raleigh, N. C. The West Raleigh postoffice is near the College.

WHAT STUDENTS SHOULD BRING.

Those who room in the College will need to bring sheets for single bed, pillow-cases, spreadings, towels, a pillow, and a mirror.

Those desiring the benefit of the Y. M. C. A. Swimming Pool should bring bathing suits.

BOOKS AND STATIONERY.

For the convenience of students, books and stationery will be sold at the Summer School Bookstore.

The Summer School will use, so far as they cover the ground, text-books adopted by the State. The State adoptions include books used in the first seven grades.

CHAPEL.

Chapel services will be held every week day morning.

SWIMMING.

The swimming pool in the Y. M. C. A. building will be open to the registered members of the Summer School without charge. Swimming classes for ladies will be held under the instruction of Miss Isabelle Bowen. Children under nine

years of age will not be admitted to the pool. The pool will be open to the male members of the school at hours hereafter to be arranged.

MEDICAL ATTENDANCE.

The services of the College Physician and use of the Infirmary will be restricted to registered members of the school rooming and boarding in College. Except in case of protracted illness, there will be no additional charge for this service; but consultations must be at the Infirmary at the hours designated by the College Physician.

The Physician will make daily visits to the Infirmary.

SPECIAL COURSE FOR TEACHERS OF AGRICULTURE.

For the benefit of teachers of Vocational Agriculture, the Department of Vocational Education of the State College will offer three weeks of special concentrated training in Farm Management and Methods. This course will run from July 7 to 23, inclusive. July 24-25 will be devoted to the Agricultural Workers Conference. More definite announcements will be made later.

TEACHERS BUREAU.

The Teachers' Bureau will, without charge, assist principals to secure teachers who may be registered in the school and assist teachers registered in the school to learn of positions which are open. Miss Martha A. Dowd, of St. Mary's School, will be manager of the Teachers' Bureau.

School Boards and Superintendents are invited to notify the Employment Bureau of their needs.

DEMONSTRATION SCHOOL.

The course designated under Education, VIII, and Education XVIII, will give interesting and thoroughly practical demonstrations of useful methods of teaching. The work of the Demonstration School will be planned so as to be a help to the rural teacher having two or more grades as well as to the graded school teacher having only one grade. The work of the second and third grades will be conducted by Miss Effie Williamson, of Teachers' College, Columbia University. The fourth and fifth grade will be conducted by Miss Virginia Nelson, of Columbia University. It is to be hoped that the Summer School students will set apart regular daily periods for observation work in the Demonstration School.

CONFERENCE OF AGRICULTURAL WORKERS.

This conference (designated elsewhere as Agriculture X) will be under the chairmanship of Professor T. E. Browne, State Supervisor of Farm Life Schools and Acting Director for the State Board of Vocational Education. The dates are July 24-25.

Among the lecturers will be Dr. E. C. Brooks, State Superintendent of Public Instruction; Mr. C. H. Lane, of Atlanta, Ga., Federal Agent for the Vocational

Agriculture. Dr. Clarence Poe, Editor of *The Progressive Farmer*, and Mr. B. W. Kilgore, Director of Agricultural Experiment Station and Extension Service.

The Department of Agriculture, the College, and the Experiment Station will be represented, and there will be a large attendance of County Superintendents, County Supervisors, and others who are interested in agriculture and education.

The College will provide board and lodging to those attending this special agricultural course at above rates. Ample provision will be made for married couples. It will be necessary for those who lodge in the College dormitories to bring sheets, pillowcases, spread, towels, and mirror. It will be also necessary for those attending to register at the Summer School office immediately upon arrival. Applications for rooms should be made in advance. These may be secured by day prior to the conference without extra charge.

This will offer an unusual opportunity for the wives of those attending the conference to enjoy at very moderate rates, a brief stay at the State's capital and educational center. It is hoped that as many as possible will avail themselves of this excellent chance.

LIBRARY AND READING ROOM.

The College Library, containing about eight thousand volumes, with about a hundred and fifty periodicals, will be at the disposal of the Summer School.

The Olivia Raney Library and the State Library will also be open to Summer School students for reference work.

THE DAILY ASSEMBLY.

At the morning assembly each week day, there will be religious exercises, the opening exercises of the School, with singing, short addresses by visitors or members of the faculty, and story-telling. The community singing will be under the direction of Miss McGill.

DAILY PERIODS.

	Begins	Ends
First period	8:00	8:45
Second period	8:50	9:35
Third period	9:40	10:25
Chapel	10:30	10:55
Fourth period	11:00	11:45
Fifth period	11:50	12:35
Sixth period	12:40	1:25
Dinner hour	1:30	2:25
Seventh period	2:30	3:15
Eighth period	3:20	4:05
Ninth period	4:10	4:55
Tenth period	5:00	5:45

THE SOCIAL CENTER.

The Y. M. C. A. Building will be the social center of the School. This building contains a reading room, an auditorium, several reception rooms, a bowling alley, a gymnasium, and a swimming pool. The chaperon in charge of this building will be the Adviser of Women, Miss Nannie Carrington Dinwiddie, of Washington, D. C.

It will be the duty and pleasure of the Adviser of Women to be of service to our students in every way in her power—especially in trying to give them a good time while here.

Miss Dinwiddie has had many years of experience in such work in our own State, and has had further training in France and in Washington.

RECREATIONS.

Although the Summer School is a place for serious work no effort will be spared to make the session enjoyable. Among the recreations planned are popular lectures, moving pictures, folk-dancing, plays, games, and expeditions to points of interest in or near Raleigh, personally conducted by Colonel Fred A. Olds, Director of the Hall of History. There will also be opportunity to enjoy swimming, tennis, bowling, and other kinds of exercise. There will be abundant recreation without extra expense.

STORY-TELLING, PAGEANTS AND COMMUNITY SINGING.

Miss Barnard's course in Story-Telling as a Community Factor will include programs for community meetings, parents' days, and special holidays such as Thanksgiving, Christmas and Washington's birthday. Plans for contests for county and group commencements will also be given as well as suggestions for work in Sunday schools and prayer meetings. A number of these programs will probably be carried out at the usual twilight story hour on Tuesdays and Thursdays. As community singing is a phase of social life that adds much to the pleasure of those participating, the whole school will be urged to take part frequently in this form of recreation. The community singing will be conducted in the College Auditorium by Miss Mary McGill, teacher of vocal music at Meredith College. Meetings for this purpose will be held after supper.

A series of popular lectures is being arranged. Speakers and subjects will be announced.

There will be a Fourth of July pageant in which a considerable part of the School will participate, and there will be a pageant prepared and presented by the classes in Physical Education and Games. These pageants will be attractive in themselves, and will also be an interesting demonstration of what can be done by way of adding interest to occasions of ceremony in the schools.

DEPARTMENTS OF INSTRUCTION.

AGRICULTURE

(See also Education, Science.)

The teaching of agriculture in the rural schools of the State is of fundamental importance. If properly presented to the pupils it should not only be exceedingly interesting to them but be as valuable for mind training as any other subject. When properly presented it will be a means of linking the students to rural life and of developing in them an interest in efforts taken in the building up of life in the country. Not only this, but it will bind them to the farm by cords that cannot be severed by the attractions of city life.

I. B. Cr. Teaching of Elementary Agriculture. For description of this course, see Education XV. Mr. Winters.

***II. D. Field Crops.** This course will consist of the following:

- (a) Grain crops (corn, wheat, and oats).
- (b) Forage crops (grasses and legumes).
- (c) Cash crops (cotton and tobacco, etc.).

The time devoted to each crop will in so far as is practicable be in proportion to the value of the crop in North Carolina.

The work will consist of lectures, references, and practical work, with special attention to sources of subject matter, material, and equipment for each subject.

As a part of the practical work the student will make a detailed outline with references, notes, and illustrative material for the course as applied to the conditions under which he will be teaching. Mr. Hodson.

***III. D. Soils.** This course like the course in Field Crops will be modified to suit the conditions under which the student will be teaching. As a part of the practical work the student will make out a detailed outline for this work as mentioned in the preceding course.

Special attention will be given to local soils, crop rotations, tillage, and fertilizers, with appropriate practical exercises. The work in this subject will be closely correlated with Field Crops. Mr. Hodson.

***IV. D. Teaching Agriculture in the High School.** Required of first year students in the emergency course in Vocational Education. This course aims to give the specific helps needed by a teacher of Agriculture. The following topics are among those to which special attention is given: Farm and school accounting, cataloguing and filing bulletins, organization of subject matter, lesson planning, laboratory, field and class management, equipment, projects, use of illustrative material, etc. Five double periods a week. Mr. Cook.

***V. D. Animal Husbandry.** This course deals with the importance of Animal Husbandry in its relation to general agricultural problems, with especial consideration of North Carolina conditions. A brief study is made of the origin and distribution of the types and breeds of farm animals. The general

considerations of the principles of livestock judging and the keeping of records as a means of selection of profitable animals, the principles of breeding for the improvement of animals, and the principles of feeding farm animals are considered. Special emphasis is given to the care, feeding, management, and selection of horses and mules, and specific projects adaptable to the use of High School students are planned and studied. For those teachers coming from sections of the State where beef cattle and sheep are kept, projects may also be planned as to care, feeding, and management of these animals. Those taking the course will have the further advantage of studying textbooks and livestock journals used in reference readings. Five two-hour periods each week, first three weeks. Mr. Reed.

***VI. D. Farm Dairying.** The studies of this course deal with dairy types and breeds, the use of score card in judging, comparative judging, selection based on type and records of production, calf raising, care and management, feeding and housing. Other studies made are secretion and composition of milk and its food value for both animals and humans, the testing of milk, skim milk, buttermilk, and cream for butter-fat, the home care of milk and cream, the use and care of farm cream separators, cream ripening and farm butter-making, and the marketing of cream and butter. Projects will be planned and studied dealing with these various phases of dairy farming that may be used later as projects for students. Five two-hour periods each week, last three weeks. Mr. Reed.

***VII. D. Elementary Poultry Work.** This course is designed to meet the needs of men preparing to teach Vocational Agriculture. There will be taught the fundamentals of farm poultry work; how to make a combination sitting and brooding coop; how to make a hen's nest, set the hen, care and feed the hen; the care and feeding of the hen and her flock; how to protect the chicks from the hawks and other enemies, as rats; simple methods of handling eggs; how to grade eggs for the market and to select eggs for setting; how to select birds for breeding, and the care and management of the farm flock; kinds of feeds best suited and how to mix them; how to care for and feed the flock in the winter for eggs; the community circle and cooperative community poultry work; breeds best suited for utility and for eggs; how to select and breed for vigor, and best results for which the mating is being made. This course is intended to aid the teacher in organizing and conducting poultry projects. Five double periods, first three weeks. Dr. Kaupp.

***VIII. D. Swine Production.** This course deals with the Swine Industry, first as to meat production and second, as to the development of pure bred animals to be used for breeding purposes. The work given includes the feeding of swine in dry lot and on pastures; feed mixtures and proportions most satisfactory to use; care and management; housing, both in colony and individual houses; marketing, on foot and as meat; and pasture crops and rotations adaptable to big projects or small-scale operations. Some time will be given to a discussion of the types and breeds of swine with their adaptability to climatic and other conditions. Frequent use will be made of the College herd to give practical demonstrations in judging and management of swine. Five double periods a week, the last three weeks. Mr. McCluer.

***IX. D. Teaching Agriculture in the High School, Advanced Course.** Required of second year students in the emergency course in Vocational Education. This course will continue some phases of the work of course IV, which is prerequisite to course IX. The work will consist of the principles of teaching, mainly as related to agricultural subject matter. As far as possible, the work will be conducted on the principle: "We Learn to Do by Doing." Emphasis will be placed on the proper use of the double period and supervised practice; how to combine the different types of exercises—laboratory, field, recitation, and supervised study; the technique of organizing and presenting agricultural subject matter, particularly that of animal husbandry; use of illustration and questions in inciting the desired response; and community work of the agricultural teacher. The work will correlate with that given in the subject matter courses in animal husbandry. Five double periods a week. Mr. Cook.

X. Conference of Agricultural Workers. July 24 and 25. Conference of superintendents, extension workers, teachers of agriculture and specialists. The conference will be addressed by the State's most prominent agricultural and economic experts and specialists. Mr. T. E. Browne, Chairman.

Course for Preparation of Teachers of Vocational Agriculture. In order to help meet the demand for teachers of Vocational Agriculture in the State, the 1919 Summer School at the State College of Agriculture is offering two special courses to those teachers in service who desire to prepare themselves to teach agriculture. In order to be admitted to these courses, teachers will be required to meet the following qualifications, namely: (1) They must have had at least two years' teaching experience in rural sections. (2) They must have completed at least three years of instruction in science of college grade or its equivalent. (3) They must have had at least five years of practical farm experience since they were fifteen years old, or its equivalent.

Men who comply with the above requirements and complete the special courses given at the State College during the Summer School to the satisfaction of the instructors and the Director will be granted a special temporary certificate to teach agriculture, by the State Board of Examiners. The special courses (brief outlines of which are given above) have been approved by the State Board for Vocational Education and the Federal Board for Vocational Education.

As indicated, the course for the first summer's work will consist of two double periods daily devoted to crops and soils, and five double periods each week for special methods of teaching agriculture.

For those men who completed the first summer's work given during the Summer School of 1918 a course in Animal Husbandry and Special Methods will be offered. This course will consist of three weeks of one double period daily in general Animal Husbandry, and three weeks of one double period daily in Poultry Production. For the last three weeks will be given a course in Dairy Management and a course in Swine Production, each to cover one double period daily. In addition to these technical courses will be given a six weeks course in Advanced Special Methods of Teaching Agriculture.

During the last week of the Summer School there will be held a conference of agricultural workers which these special teachers, the farm-life school teachers, and others interested will be expected to attend. Representatives of the Federal Board for Vocational Education, together with a number of the State's leading educators, will be present and assist with the conference. The dates of the conference are July 24 and 25.

MECHANICAL DRAWING AND MANUAL TRAINING.

The courses in Mechanical Drawing and Manual Training herein offered are primarily educational, and are intended to fit the teacher to use and apply them to supplement the elementary education of the child. Manual Training and Mechanical Drawing offer fine mental training, for they train the mind through the hands and eyes. The use of the rule as a measuring instrument, compels the student to master the use of fractions. Wherever applied in the secondary schools, courses in these subjects have added to the interest of both pupils and parents and have been the means of keeping boys longer in school.

I. D. Mechanical Drawing, Elementary. A course designed for those teaching or expecting to teach this work in the intermediate grades or in high school. For those wishing to teach this work in intermediate grades the work will consist of lettering practice, line exercises, making simple mechanical drawings, using two views of each object, and the proper use of the T-square, drawing board, and triangles. For high school teachers, more advanced drawings will be studied, and the drawings inked. The use of all the drawing instruments will be taught, and working drawings and conveniences will be taken up, and the reading of blue prints and instrument practice will be studied. Mr. Foster.

II. D. Mechanical Drawing, Advanced. A course corresponding to the freshman year of mechanical drawing in an engineering college or university. Designed to remove conditions in Freshman Mechanical Drawing or to prepare the student to enter Sophomore Mechanical Drawing. Mr. Foster.

III. D. Manual Training, Elementary. A course designed for those who are teaching or expect to teach this work in the intermediate grades or high school. This will be a course conducted in the woodshop. For those who wish to teach this work in the intermediate grades the work will consist of making simple objects; the proper use of the saw, plane, and chisel will also be taught. The fundamental principles of laying out stock and the correct methods of procedure will be emphasized. The high school work will be more advanced, taking up objects which require more skill and thought. In addition to the use of hand tools, the application of the wood-working machines will be taught, and actual use made of them. The sharpening of tools and care of equipment will also be taught. Mr. Foster.

IV. D. Manual Training, Advanced. A course corresponding to the Freshman year of woodshop in an engineering college or university. A course designed to remove conditions in Freshman Woodshop and to prepare students to enter Sophomore Woodshop. Mr. Foster.

V. A. Basketry. Basketry for all grades; caning chairs, tools, etc.; pine-needle work; raffia and reed basketry; chair seating in woven work. The purpose of this work is to meet the needs of the average school, showing the uses of various materials suitable for handwork in both rural and city school. The place of industrial work in education should be that of practical value, and the handwork taught will be supplemented by talks on materials, methods, and dyeing used in basketry. Miss Davis.

VI. A. Basketry, Advanced. This course is intended for those who have completed Basketry, V, during the 1917 or 1918 session or its equivalent at another summer school. A greater variety in weaves, handles, and shapes will be introduced, using the reed and raffia; also chair-caning and pine-needle work will be made special features. Miss Davis.

NOTE.—The materials used in the courses in basketry will be sold to the students at cost price in the work room.

EDUCATION.

I. B. General Primary Methods. This course will include a study of methods in primary reading, language, literature, spelling, arithmetic, and seat work.

II. B. Primary Reading. The course in Primary Reading will follow the adopted text *Teaching Children to Read* (Klapper). It will be given largely to the problems of reading in the first three grades and to the relation of reading to the process of study. Topics: Need for reading in a child's life, reading as a basis for language, supplementary materials, grade libraries, the study and comparison of texts, the mechanics of reading, essentials in phonic studies, drills. Miss Workman.

III. B. Primary Language. The course in Primary Language will cover problems in oral and written language for the first three grades. Topics: Aims and purposes of language; place and value of oral work; language habits and language power; freedom and spontaneity in expression; main centers for rich language work; relation to reading; form studies; a course in language for grades one, two and three. Miss Workman.

IV. B. Primary Arithmetic. The course in Primary Arithmetic or Number Work covers the first three grades. Topics: The child's number sense and number experience, development of a practical number sense; numbers through counting, measuring, estimating, and testing; place of oral work; correlation with activities of school, home, and community; concrete and objective work; abstract work; drills; results to be achieved in the primary grades; courses of study for grades one, two and three. Miss Workman.

V. A. Primary Drawing. Realistic study of nature; reduction of realistic forms to conventional; adaptation of conventional forms to pattern, with explanations; principles of color in art, its relation to nature and to decoration; decorative lettering; elements of perspective aerial and linear; principles of art. This course is arranged with special reference to having teachers present the subject. Miss Workman.

VI. A. Story-Telling, Primary. In this course will be given a brief history of story-telling, stories of classroom work, and stories and poems for special occasions, together with plans for story-telling contests for county commencements, etc. Model lessons and outlines for primary opening exercises will be given on Wednesday of each week. Three periods. Miss Barnard.

VII. A. Games, Primary. The purpose of this course is to teach the educational value of organized play. An effort will be made to develop through self-activities the play spirit in all undertakings. This course will include informal and graded exercises in gymnastics, national folk dances, singing, marching, and dramatic games suitable for schoolroom and playground. Suggestions for arranging festivals and pageants will be given in both classes. Inexpensive costumes will be designed and made by students preparatory to the Play Pageant, which is the climax of this course. Games will be conducted on the lawn at twilight on Mondays, Wednesdays, and Fridays. Classes will be held in two sections, each section meeting two hours a week. Fee, covering cost of materials, 25 cents. Two periods. Miss Johnston.

VIII. Demonstration School, Second and Third Grades. The course of study prescribed by the State will be followed in the work of the second and third grades. Special work will be done in these grades along the following lines: Memory work, songs and poems, physical culture, singing, games, and folk dances. A special program of memory work and physical training will be presented at the end of the session. Miss Williamson.

IX. B. General Grammar Grade Methods. This course will consider the content and method of the fourth, fifth, sixth and seventh grades. The content matter will be considered by type lessons, and training will be afforded in the method of teaching the various subjects in the grammar grades through lesson, plans, discussions, and assigned readings. Textbook: Raper's How to Teach the Elementary Subjects. Mr. Best.

X. B. Reading and Language. Text-books, reading literature, books IV and V; Practical English; Essential Studies in English; Reading Circle books on the State list. The reading will be studied from the following standpoints: Providing for motive; evaluation of facts; organization of facts, and initiative on the part of the pupils. Reference books: Huey's Psychology of Reading, McMurry's Special Method in Reading. Mr. Howell.

XI B. English for the Grades. Grammar and elementary compositions form the basis of the greater part of the course, as time allows, reading in the grades below the high school will be discussed. Textbooks Robbins and Row's Essential Studies in English, Book II.

XII. B Teaching of History. This course will include a review of American History and a study of methods of teaching history in the grammar grades. Text-book, Our Republic. Reference books, Johnson's Teaching of History and Wayland's How to Teach American History. Mr. Lockhart.

XIII. B. Teaching of Arithmetic, Grammar Grades. The object of this course will be twofold, to give, so far as possible, a thorough knowledge of this important branch of mathematics; and to train the student in the principles that underlie the teaching of arithmetic. The four fundamental principles—addition, subtraction, multiplication, and division—will be applied in practical problems of every day life. Lectures, individual assignments, lesson plans, and standard tests will be given a place in the course. The members of the class will be expected to work out model lessons and assignments. Time will be taken for general criticisms and discussions. Mr. Amick.

XIV. B. Teaching of Geography, Grammar Grades. A course in teaching geography in the grammar grades. Five hours a week for six weeks. The minimum essentials for an elementary course in geography will be worked out and the geographic influences upon local, State, and national life will be shown. Lectures, assignments, research work, illustrative materials, devices, standard tests, and lesson plans will find place in the program. Members of the class will be called upon to prepare and bring before the class model lessons in geography. These lessons will be followed by criticisms and general discussions. Miss Nelson.

XV. B. Cr. Teaching of Elementary Agriculture. This course is intended for teachers who wish to prepare for teaching agriculture in the grammar grades. It will consist of brief discussions and simple demonstrations of farm crops, seed selection, soils, fertilizers, weeds, insects, and plants' diseases. A portion of the work will be presented in short field trips and by practical exercises.

The course is outlined to fit in with the seasonal conditions of an average school term. All of the demonstrations and exercises will be done with simple appliances which may be had in any community. The work will be coordinated with the text of Burkett, Stevens, and Hill, and with the manuals published by the State Board of Education. Two sections. Mr. Winter.

XVI. A. Grammar Grade Story-Telling. The purpose of this course is to give the teacher stories for both classroom and outside work. Special attention will be given the story as an aid to discipline and a help in community organization. The usual work in dramatization, county commencement programs, etc., will be given. Opening exercises will be outlined and planned for the grammar grades. Three periods. Miss Barnard.

XVII. A. Games, Grammar Grade. The purpose of this course is to teach the educational value of organized play. An effort will be made to develop through self-activities the play spirit in all undertakings. This course will include informal and graded exercises in gymnastics, national folk dances, singing, marching, and dramatic games suitable for schoolroom and playground. Suggestions for arranging festivals and pageants will be given in both classes. Inexpensive costumes will be designed and made by students preparatory to the Play Pageant, which is the climax of this course. Games will be conducted on the lawn at twilight on Mondays, Wednesdays, and Fridays. Classes will be held in two sections, each section meeting two hours a week. Fee, covering cost of materials used 25 cents. Two periods. Miss Johnston.

XVIII. Demonstration School, Fourth and Fifth Grades. The State prescribed course of study will be followed, and special work will be done in memory work and physical training. A Pupil's Reading Circle will be conducted in connection with English work. Patriotism will play an intensive part in the work, and the opportunity of making every recitation a patriotic one will be demonstrated. No tuition will be charged members of the school taking this course, but they will be expected to register for the course at the opening of the session, and must provide themselves with the necessary texts and materials. Miss Nelson.

XIX. Ar. Cr. History of Education. A course tracing briefly educational development from primitive times down to the present. As much attention as possible is given to the origin and development of educational theories and their application to present day problems. Work based upon Graves's Student's History of Education. Mr. Hinkle.

XX. B. C. Preparing the Elementary Curriculum. This course will be organized primarily for the teachers of the city schools of Raleigh, who are planning to prepare complete and detailed courses of study for the elementary grades. During the Summer School they will attempt a beginning in English, history, geography, and arithmetic. Others interested in the same problem may join the class. Mr. Howell.

XXI. B. C. Classroom Management. Text-book, Bagley's Classroom Management. The purpose of this course is to study the various problems that will confront the teacher in the classroom and the school community. Special attention will be given to matters of routine, discipline, promotion, the making of lesson plans and daily schedules, the management of the recitation, etc. Reference books, Bagley's Educative Process, Thorndike's Principles of Teaching, and Seely's School Management. Mr. Best.

XXII. B. C. School Administration. The purpose of this course will be primarily to familiarize the students with the plan of school administration in North Carolina regarding (a) county schools, (b) special charter schools, (c) the new certification law. Running parallel with this study, selected chapters of Cubberly's School Administration and Sheddon's High School Administration will be studied. Investigations and reports. Mr. Best.

XXIII. B. C. Principles of Teaching, Elementary. The purpose of this course is to make clear the principles of psychology which are involved in teaching and to show definitely their application in the work of the classroom. The aims or ends of education will be considered in so far as they influence the methods involved in the teaching process. Strayer and Norsworthy, How to Teach. Mr. Lockhart.

XXIV. C. Principles of Teaching, Advanced. A course dealing with the most essential features of the present day problems in teaching. Lectures, reports, and discussions. Work based upon Thorndike's Principles of Teaching. Supplemental parallel readings and reports. Mr. Hinkle.

XXV. C. Educational Psychology. The fundamental facts of psychology presented from the standpoint of educational theory and practice. No previous knowledge of the subject is necessary. Work based upon Colvin's Learning Process. Mr. Hinkle.

XXVI. C. High School Organization. A course dealing with the essentials of our high school system; its organization, management, and control. Some attention will be given to a comparison with the secondary systems of other countries. Required for renewal of high school certificates. Texts: Colvin's Introduction to High School Teaching, Dressler's School Hygiene, and Johnson's Modern High School. Mr. Hinkle.

XXVII. C. Administration of City Schools. Problems of administration more or less peculiar to graded schools: interpretation and adaptation of a

course of study; making school programs; supervision of teaching and rating of teachers; improvement of teachers in service; graduation and promotion of pupils; retardation and elimination of pupils; child accounting; measurement of results of instruction; use, interpretation, and application of the standard tests and scales; supervised study; uniform statistical and financial records; school reports. This course is intended primarily for those responsible for the administration and supervision of elementary instruction, superintendents, supervisors, principals of elementary schools, and principals of high schools containing elementary classes. Mr. Howell.

XXVIII. C. Teaching of English in the High School. See English III, below.

XXIX. C. Teaching of Languages. The problems and methods of language teaching applied to elementary and secondary work. Language work is considered from its broadest standpoint, so that the course is of value alike both to the teacher of ancient languages and to the modern language teacher. Lectures, discussions, and reports. Mr. Hinkle.

XXX. C. Teaching of Mathematics. This course is offered to teachers. The object will be to give in a series of lectures the best methods of teaching each branch of the subject. Several lectures will be delivered on the history of mathematics, and the subject of method will be developed from the historical standpoint. The teaching of arithmetic, algebra, and geometry will be the main subjects considered. The inspirational side of the study of mathematics will be stressed, and it is hoped that this course in the pedagogy as well as the history of mathematics will be a help to the struggling teacher who has not yet found basal principles upon which to construct courses in this science. Mr. Amick.

XXXI. B. C. Measurement in Elementary Education. Gives a knowledge of standard tests and scales and practice in their use. Topics: Planning investigation; selection, administration, and scoring of test; tabulation of data; statistical treatment; graphic presentation; uses of results for the improvement of instruction. Miss Nelson.

ENGLISH.

(See also Education.)

It is recommended that every student taking a course in English be provided with a fountain pen and with a loose-leaf notebook for sheets eight by ten inches, with rings six inches apart. Students who have typewriters are advised to use them, especially for preparation of papers assigned in the English Composition course. The most useful students' dictionaries are the Desk Standard Dictionary and Webster's Secondary School Dictionary.

I. B. Reading and Language. Equivalent to Education, X, above. Mr. Howell.

II. B. English for the Grades. Grammar and elementary composition form the basis for the greater part of the course. As time allows, reading in the grades below the high school will be discussed. Textbook, Robbins and Row's Essential Studies in English, Book II.

III. C. Teaching English in the High School. Emphasis will be laid upon the adaptation of the ordinary means—writing, reading, recitation, and such practice in public speaking as high school conditions permit—to the major ends of high school work in English. The class will consider means of inducing high school students to take the very considerable pains involved in good mechanics, clear thought, accurate and expressive wording, and good structure in the paragraph and longer composition. The subject will be approached with reference partly to preparation for college, but mainly to the daily need for skill in the spoken and written word. There will be discussions of methods in the teaching of paragraph and sentence structure, of punctuation, of grammar in relation to sentence and paragraph, or pronunciation, and of elementary public speaking. Mr. Summey.

IV. C. E. English Composition, for Teachers and for College Entrance. A practical course in the fundamentals of composition with reference to thinking and communication. The course will include the following: grammar in relation to sentence and paragraph; sentence form in relation to the larger units of composition; the paragraph as a unit and as a step in the development of the longer composition; words in relation to accurate and expressive communication; spelling as a part of the decorum of written English; and pronunciation as a factor in agreeable and dignified speech. Syntax will be studied strictly in its rhetorical aspect. Punctuation as a means of clear grouping and proper management of emphasis will be included in practically every lesson on the sentence and paragraph. The course will be adapted to the needs of teachers, whether of grades or high school, and of students preparing to enter college. Incidentally there will be some discussion of methods in the teaching of composition. Textbooks: *Style Book of the State College of Agriculture and Engineering* (copies free to students in this course) and *Robbins and Row's Essential Studies in English, Book II.* Mr. Summey.

V. C. E. English and American Literature. For teachers and for college entrance. This course, designed to meet the needs of grade and high school teachers and of students seeking admission to college, will concentrate attention on individual literary works rather than on the history of literature. The British and American texts studied will include minimum college entrance requirements, with parallel reading. The literature will be studied mainly for content and purpose. This course will deal with literature as a living thing, not as a subject to be got up for an examination or credited on an entrance certificate. The aim will be to give such systematic knowledge as an examiner would require, together with genuine and vital appreciation. Textbook: *College Requirements in English (Riverside Literature Series).* Students owning histories of English and American literature should bring them as reference books. Mr. Summey.

HISTORY.

(For the Teaching of History, see Education XV.)

I. C. E. American History. A content course with only incidental attention to method. After a rapid review of the revolutionary period, attention

will be given to the outstanding features of United States History from the adoption of the Constitution—growth of territory, the westward movement of the frontier, the industrial revolution, the States' rights and slavery questions, the issues of the Civil War, the Monroe Doctrine and the evolution of the United States as a great power, the Spanish-American War and its results, the Panama canal, and the European War. Textbook: *Our Republic*.

II. C. E. Modern European History. In this course the facts of European history will be studied with reference to the origins and issues of the European war. The major topics will be the Napoleonic wars, the Congress of Vienna, governmental changes in France, the unification of Italy, the rise of Germany, and the more important European alliances. Textbook: *Robinson and Beard's Outlines of European History, Part II*. Mr. Summey.

HOME ECONOMICS.

I. D. Elementary Cooking, for Teachers. Food composition and preparation and relation of food to general health and well-being will be considered. This course to be adapted to the needs of the teacher in elementary grades with limited equipment. Fuels, apparatus, utensils, marketing, and the serving of simple meals, including the school lunch, will be discussed. Two three-hour, one two-hour laboratory period, and one lecture each week. Miss Schiffer.

II. D. Elementary Sewing and Handwork. A study of the fundamental principles underlying the making of garments and household linens. The course will include the use and care of the sewing machine and the application of hand and machine sewing to garments. Students provide materials subject to the approval of the teacher. Two two-hour laboratory periods each week. Miss Schiffer.

III. D. Dietetics. A lecture and laboratory course arranged to give a concrete idea of dietary standards, with consideration of such problems as child diet, school lunches, family menus, fuel values, and cost of food in relation to the family budget. Miss Schiffer.

IV. Homemakers Course. This course is designed to assist homemakers to understand the principles and processes involved in the proper preparation of foods. Food composition and combination will be studied in connection with the planning and serving of meals in the home, together with marketing from the standpoints of quantity, quality, and sources of supply. Two three-hour periods each week of laboratory and lecture work. Miss Schiffer.

LANGUAGE.

I. C. E. Beginners' Course in Latin. In this course the weight of emphasis will be upon method. Mr. Harper.

II. C. E. Caesar. A feature of this course will be the use of stereoptican to illustrate the life of the Romans in the time of Caesar. Mr. Harper.

III. C. E. Virgil. In this course the *Aeneid* will be studied. Life among the ancient Romans will be illustrated by stereoptican views. Mr. Harper.

IV. C. E. French: Elementary. Reading and oral practice with elements of grammar. This course is intended for students who have no previous knowl-

edge of French. Practice in the pronunciation and hearing of French will be afforded by means of reading, dictation, and, as early as practicable, the recitations will be conducted at least partially in French. Texts: *Le Premier Livre*, Meras; *Le Petit Vocabulaire*, Meras. Miss Dinwiddie.

V. C. E. French: Advanced. French in secondary schools, study of material, lectures, recitations and papers. This course aims to organize the various kinds of knowledge necessary for teaching French in secondary schools. It deals with the subject-matter and with the apparatus of French teaching, giving practical work in the most approved modern methods of teaching the language. Texts. *Conversational Reader*, Bierman and Frank; *Huit Contes Choisis*, Maupassant. Miss Dinwiddie.

VI. C. E. French Conversation. The object of this course is to give to the student a thorough appreciation and, as far as possible, mastery of the French language as an instrument of expression. The exercises will consist of reading aloud, reproduction, reciting from memory, and composition. Text: *Daudet, Huit Contes Choisis; Lamartine, Gaziella*. This popular course will be given twice every week, early in the evening, so that all teachers or students desiring to attend may do so without conflict. It is hoped that the larger part of the students not already enrolled for French may find in this class an answer to the general need for some practical work in the subject. Miss Dinwiddie.

VII. C. E. Elementary Spanish. Reading, translation, composition, and conversation. Designed for those who have had no previous training in the language. The course will be presented in such manner as to give a basis for a spoken knowledge. Text: *Marion y Des Garenes, Introduccion a la Lengua Castellana*. Mr. Hinkle.

MATHEMATICS.

I. C. Beginners' Algebra for Teachers. This course is intended for those who have some knowledge of algebra and wish to learn methods of teaching as well as the principles underlying the subject. The course will begin with the most elementary principles and concepts of algebra and will cover as much ground as the advancement of the students and their application will allow. Two to three hours daily should be devoted to the study of the subject. Mr. Amick.

II. C. High School Algebra, for Teachers This will be a review course emphasizing methods of teaching algebra. While a great proportion of the time will be devoted to the development of the principles, to the study of problems, and to the mastery of material, the leading idea will be that the class consists of men and women who will devote their time to teaching, and are taking the course that they may be better prepared to make the subject interesting and instructive to their pupils. The following subjects will be studied: Simple equations, involution, evolution, exponents, radicals, quadratics, and simultaneous quadratic equations. Special emphasis will be laid upon the solution of problems illustrating the principles. Mr. Amick.

III. C. Plane Geometry for Teachers. The course will be a rapid review of all the principal parts of the plane geometry, and presupposes some knowledge of the subject. Considerable stress will be laid on methods of proof and

on the great propositions of the plane geometry. The logical connections of the theorems and processes of elementary geometry, the definitions and the fundamental concepts, the axioms, and the nature of geometrical proof will all receive their proper share of time. Methods of attack, the theory of geometric graphical solution, and the problems pertaining to the principles studied will also be thoroughly demonstrated. Mr. Amick.

IV. C. The Teaching of Mathematics. For description of this course, see Education, XXX. Mr. Amick.

V. C. E. Algebra for College Entrance. This course in algebra embraces factoring, highest common factor, lowest common multiple, fractions, equations a spoken knowledge. Text: Marion y Des Garennes, *Introduccion a la Lengua* involution, evolution, theory of exponents and radicals. Five periods a week. Textbook: Well's New Higher Algebra. Mr. Yates.

VI. C. E. Plane Geometry for College Entrance. This course is offered to prospective students of the State College of Agriculture and Engineering. It offers them an opportunity to obtain credit for college entrance on three books of plane geometry, this being the entrance requirement for the fall of 1919 on account of the interruption in high school work during the fall of 1918. Emphasis is placed upon the leading propositions, and special attention is given to the solution of original problems. Textbook: Wentworth and Smith's Plane and Solid Geometry. Five periods a week. Mr. Yates.

VII. Algebra for College Credit. This course begins with quadratic equations and completes permutations and combinations, embracing ratio and proportion, variation, the progressions, the binomial theorem, undetermined coefficients, and logarithms. Textbooks: Well's New Higher Algebra. Five periods a week required of students who wish to obtain credit on first term College Algebra. Mr. Yates.

VIII. Advanced Algebra for College Credit. The general theory of equations, the solution of higher equations, determinate, etc. Two periods a week required of students who wish to obtain freshman credit on second term Advanced Algebra. Textbooks: Wells's New Higher Algebra. Two periods. Mr. Yates.

IX. Solid Geometry for College Credit. This course begins with and completes solid geometry, and includes numerous original exercises. Three periods a week required of students who wish to obtain credit on second term solid geometry. Textbooks: Wentworth and Smith's Plane and Solid Geometry. Three credits. Mr. Yates.

MUSIC.

I. A. Public School Music. Methods of music instruction, sight singing, ear training, rhythm, training the child's voice, note songs, individual and part singing, chorus conducting. Miss McGill.

II. D. Normal Course in Piano Teaching. This course will consist of a daily lecture on the following subjects: (1) exercises for touch, (2) the trill, (3) scales, major and minor, (4) common chords and arpeggios, (5) octaves and double thirds, (6) the pedal, (7) dominant seventh and diminished seventh chords, chromatic exercises. Each lecture will be illustrated with practical examples. There will be on exhibition a selection of desirable teaching mate-

rial for Grades 1, 2, 3, and 4, from the classic and modern schools, with illustrations and explanations. Miss Dowd.

SCHOOL LAW.

I. School Law. The aim of this course is to prepare the teacher to train the children in citizenship, and also to qualify the teacher to become a leader in the civic life of the community. The sections of the school law pertaining to the duties of teachers will receive special emphasis, and the sections in regard to voting special taxes, the establishment of farm-life and county high schools, and the enforcement of the compulsory attendance law will be studied carefully. Those who complete this course satisfactorily will be excused from the state examinations upon this subject. First section, two hours first three weeks, three hours second three weeks; second section, three hours first three weeks, two hours second three weeks. Mr. Best.

SCIENCE.

I. C. E. General Science. A course in general science has become part of the work of most of the best high schools of the country and is now being introduced in many grade schools. It is probably the most thought-provoking course a boy or girl may take at that period of life. But to be able to teach it one must have more than a book knowledge of the subject; the teacher must have caught some of the inspiration and gotten the larger interpretation of the unity and interaction of the forces in nature that alone can be given by one who has made this his life work and thought. To accomplish this end this course is given. Not only by those who intend to teach general science but by those who feel that they need to be in closer contact with the great progress and thought of the scientific world and be able to use its illustrations in their other teaching, should this course be elected. Methods and various texts will also be discussed, but the course will largely be one of interest and instruction in the basis of the science. Mr. Heck.

Physics for College Credit. A complete college course in physics will be given in two parts so that during the six weeks the maturer teachers or students who have finished one year of college work and require physics before entering their second year may have a full course in the subject. The following is an outline of the two courses:

II. C. E. Physics A. Lectures and recitations daily for the six weeks on Mechanics and Heat as given in Black and Davis's Practical Physics. Credit for Freshman Physics, first term. Mr. Derieux.

III. C. E. Physics B. Lectures and recitations daily for the six weeks on Electricity, Sound, and Light as given in Black and Davis's Practical Physics. Credit for Freshman Physics, second term. Mr. Heck.

IV. C. E. Physical Laboratory. A complete laboratory course of thirty instructive and interesting experiments following the outlines of the work as given in the best colleges and paralleling Physics A and B above. Two consecutive hours each day for six weeks. Mr. Derieux.

Note: Courses II and III are the equivalents of the standard college course and will be accepted for credit in the course, and other institutions. They also give the teacher an admirable basis for teaching, as special work will also be given to teachers in the course on how to construct and care for laboratory apparatus. As there is yearly a great demand for teachers of Physics and Chemistry, ambitious teachers would insure their usefulness and advancement by taking such a standard accredited course.

SWIMMING.

I. Swimming. Several colleges today are requiring students to be able to swim as a prerequisite for graduation. The Summer School will afford an opportunity for the registered members to take swimming lessons. Classes for ladies will be conducted under competent instruction. Children under nine years of age will not be admitted to the pool. Daily, after close of all other classes. Miss Bowen.

WRITING.

I. A. Palmer Method. Courses will be offered in blackboard work, critic classes, and classes in the mechanics and pedagogy of the Palmer method of business writing. Some time will also be given to conferences. Two sections. Miss Page.

HOW TO SECURE OR RENEW STATE TEACHERS' CERTIFICATES.

The courses of study offered in this school have been examined, and approved by the State Board of Examiners and Institute Conductors and the following statements relating to credit have been prepared by them:

Courses Marked A. Original Credit.

Only one A course may be used toward securing Original Credit and on the following certificates:

- Elementary Teacher's Certificate.
- Primary Teacher's Certificate.
- Grammar Grade Teacher's Certificate.
- Supervisor's Certificate.

Renewal Credit.

1. Elementary Teacher's Certificate—Only one A course may be used toward renewal. The other course must be marked B.
2. Primary Teacher's Certificate—Two A courses may be used toward renewal. The third course must be marked B.
3. Grammar Grade Teacher's Certificate—Two A courses may be used toward renewal. The third course must be marked B.
4. Supervisor's Certificate—Two A courses may be used toward the renewal of a Supervisor's Certificate. The third course must be marked B.

5. High School Principal's Certificate—Only one A course may be used toward renewal. One course marked B may be selected. One course must be marked C.

6. Superintendent's Certificate—Same as High School Principal's.

7. Special Certificates. One A course may be used toward renewal, provided there is an A course pertaining to the special subject named in the certificate.

Courses Marked B.

B courses may be substituted for A courses but A courses may not be substituted for B courses.

Courses marked B may be used as follows:

1. Elementary Teacher's Certificate.

Complete Original Professional Credit: Three five-hour courses and School Law. Two courses marked B must be selected. The third course may be an A or B course.

Renewal Credit: One course marked B must be selected. The other course may be marked A or B.

2. Primary Teacher's Certificate.

Complete Original Professional Credit: School Law and six five-hour courses, three of which must be in special primary methods.

Five courses marked B must be selected, three of which are in special primary methods. Only one A course may be selected. Six B courses may be chosen.

Partial Original Credit may be obtained on three courses: One A and two B courses or three B courses

Renewal Credit: Two A courses and one B course or three B courses or three courses selected from A and B. (Only two A courses may be selected.)

3. Grammar Grade Teacher's Certificate.

Complete Original Professional Credit: School Law and six five-hour courses, three of which must be in special grammar grade methods. Five courses marked B must be selected, three of which are in special grammar grade methods. Only one A course may be chosen. Six B courses may be selected.

Partial Original Professional Credit may be obtained on three courses: One A course and two B courses or three B courses.

Renewal Credit. Two A courses and one B course or three B courses, or three courses selected from A and B. (Only two A courses may be selected.)

4. Supervisor's Certificate.

Complete Original Professional Credit: School Law and six five-hour courses in elementary education. Five courses marked B must be chosen. Only one A course may be selected. Six B courses may be used.

Partial Original Professional Credit may be obtained on three courses: One A course and two B courses or three B courses.

Renewal Credit: Two A courses and one B course or three B courses (Courses pertaining to elementary work selected.)

5. High School Principal's Certificate:
Credits given under C.
6. Superintendent's Certificate:
Credits given under C.

Courses Marked C and Cr. C courses may be used toward securing original and renewal credit on the following certificates: High School Teacher's Certificate, High School Principal's Certificate, Superintendent's Certificate.

C-r courses may be used for renewal credit only, and on the above named certificates

1. High School Teacher's Certificate.

Complete Original Credit: School Law and three five-hour courses in education. Three courses marked C must be selected.

Renewal Credit: Two C or C-r courses, one course of which must be in secondary education.

2. High School Principal's Certificate.

Complete Original Professional Credit: School Law and six five-hour courses, three of which must be in secondary education. Three C courses must be selected, the other courses may be C or B.

Partial Original Professional Credit: Three C courses, or three courses selected from C and B or three B courses.

Renewal Credit: Three five-hour courses, two of which must be in education. (One of these must be in secondary education.) Three courses selected from C and C-r may be used to renew this certificate. One C or C-r course must be selected—only one A course or two B courses may be used.

3. Superintendent's Certificate.

Original Credit: Same as High School Principal's.

Renewal Credit: Same as High School Principal's.

Courses Marked D.

D. Courses are for Original and Renewal Credit on Special Certificates. See Sec. 15-19 and Sec. 64 Rules and Regulations, 1919. Special Certificates expiring in 1919 will be renewed on successful experience, thereafter on professional work.

Renewal Credit: Two D courses may be selected or one D course and one A course. (The A course must pertain to the special subject named in the certificate.)

Since the preparation of the above, the State Board of Examiners and Institute Conductors has adopted a resolution that any educational course be accepted for original or renewal credit this year, except where certain classes of certificates require for credit secondary educational courses and others require elementary courses. With these exceptions the Board puts no restrictions upon the choice of courses for credit.

COURSES FOR COLLEGE ENTRANCE.

The courses in English Composition, English and American Literature, American History, Modern European History, Latin, French, Algebra, Plane Geometry, General Science, Shopwork and Drawing are offered for candidates for College entrance. By taking one of these courses a student who is somewhat deficient in preparation may be able to enter the Freshman Class without conditions. Each course offered for College entrance represents one-fourth Carnegie unit.

COURSES FOR COLLEGE CREDIT.

The Summer School will this year offer for College credit Freshman courses in Mathematics, Physics, Shopwork, Drawing. Courses in French and Spanish may be taken for this purpose. Each course will be accepted in this College for the coming collegiate year as the equivalent of one term's work in that subject. College students who are looking forward to teaching will increase their efficiency greatly by taking some of the courses in Education.

SCHEDULE OF CLASSES.

The following schedule is published to enable members of the school to arrange their courses of study before registration and thus avoid delay in reporting to classes.

The Demonstration School will be held during the 2d, 3d, and 4th periods.

The schedule for Vocational Agricultural courses will be published upon Registration Day.

In the following schedule is given first an abbreviation indicating the department, then the number of the subject in that department, a letter or letters indicating the valuation, the name of the course and the name of the teacher.

This schedule is subject to revision at the request of the teacher and class concerned.

First Period.

Agr. I.	B. Cr.	Teaching of Elementary Agriculture, First Section	Winters
Ed. XI.	B.	English for the Grades	
Ed. XII.	B.	Teaching of History	Lockhart
Ed. XXV.	C.	Educational Psychology	Hinkle
Ed. XXX.	C.	Teaching of Mathematics in High School	Amick
Hist. II	C.	Modern European History	Summey
Home Ec. I.	D.	Elementary Cooking (M. W. & F.)	Schiffer
Home Ec. II.	D.	Elementary Sewing (T. and Th.)	Schiffer
Lang. II	C.	Caesar	Harper
Math. VIII.		Advanced Algebra for College Credit (Tu. and Th.)	Yates
Math. IX.		Solid Geometry for College Credit (M. W. and F.)	Yates
Sci. I.	C.	General Science	Heck

Second Period.

Agr. I	B. Cr.	Teaching of Elementary Agriculture, Second Section	Winters
Draw. V.	A.	Basketry, First Section	Davis
Ed. IV.	B.	Primary Arithmetic	Workman
Ed. XIII.	B.	Teaching Arithmetic in Grammar Grades	Amick
Ed. XXII.	B. C.	School Administration	Best
Ed. XXIII.	B. C.	Principles of Teaching	Lockhart
Ed. XXVII.	C.	Administration of City Schools	Howell
Hist. I	C.	American History	
Home Ec. I.	D.	Elementary Cooking (M. W. and F.)	Schiffer
Home Ec. II	D.	Elementary Sewing (Tu. and Th.)	Schiffer
Lang. VII.	C.	Elementary Spanish	Hinkle
Sci. II	C.	Physics (a) for College Credit	Heck

Third Period.

Draw. I.	D.	Mechanical Drawing, Elementary	Foster
Draw. V.	A.	Basketry, Second Section	Davis
Ed. II.	B.	Primary Reading	Workman
Ed. X.	B.	Reading and Language	Howell
Ed. XIX.	Ar. Cr.	History of Education	Hinkle
Ed. XXI.	B. C.	Classroom Management	Best
Eng. IV.	C.	English Composition, for Teachers and College entrance	Summey
Home Ec. III.	D.	Dietetics (M. T. W. and F.)	Schiffer
Lang. I.	C.	Beginners' Latin	Harper
Lang. V.	C.	French, Advanced	Dinwiddie
Math. III.	C.	Beginners' Algebra, for Teachers	Amick
Math. V	C	Algebra, for College entrance	Yates
Sc. III.	C.	Physics, for College credit	Heck

Fourth Period.

Draw. II.	D.	Mechanical Drawing, Advanced	Foster
Ed. III.	B.	Primary Language	Workman
Ed. VI.	A.	Primary Story-Telling (M. W. and F.)	Barnard
Ed. IX.	B.	General Grammar Grade Methods	Best
Ed. XX.	B. C.	Preparing the Elementary Course	Howell
Ed. XXIX.	C.	Teaching of Language	Hinkle
Ed. XXXII.	A.	Community Building, Story-Telling	Barnard
Eng. V.	C.	English and American Literature	Summey
Home Ec. IV.		Homemakers' Course (M. W. and F.)	Schiffer
Lang. III.	C.	Virgil	Harper
Math. II	C.	High School Algebra, for Teachers	Amick
Math. VII.		Algebra, for College credit	Yates
Music I.	A.	Public School Music	McGill

Fifth Period.

Draw. III.	D.	Manual Training, Elementary	Foster
Draw.	A.	Basketry, Third Section	Davis
Ed. V.	A.	Primary Drawing	Workman
Ed. XIV.	B.	Teaching of Geography	
Ed. XVI.	A.	Story-Telling, Grammar Grade (M. W. and F.)	Barnard
Ed. XVII.	A.	Games, Grammar Grade (Tu. and Th.)	Johnston
Ed. XXVI.	C.	High School Organization	Hinkle
Home Ec. IV.		Homemakers' Course (M. W. and F.)	Schiffer
Lang. IV.	C.	French, Elementary	Dunville
Math. III.	C.	Plane Geometry, for Teachers	Amick
Math. VI.	C.	Plane Geometry, for College entrance	Yates
Sch. Law I.		School Law, Section 1 (M. W. and F.)	Best
Sc. IV.	C.	Physical Laboratory	Heck
Writ. I.	A.	Palmer Method	Page

Sixth Period.

Draw. IV.	D.	Manual Training, Advanced	Foster
Draw. VI.	A.	Basketry, Advanced	Davis
Ed. I.	B.	General Primary Methods	Williamson
Ed. VII.	A.	Games, Primary (Tu. and Th.)	Johnston
Ed. XXIV.	C.	Principles of Teaching, Advanced	Hinkle
Ed. XXVIII.	C.	Teaching of English in High School	Summey
Ed. XXXI.	B. C.	Measurement in Elementary Education	
Music II.	D.	Normal Course in Piano Teaching	Dowl
Science IV.	C.	Physical Laboratory	Heck
School Law I		School Law, Section 2, (Tu. Th. and F.)	Best
Writing I.	A.	Palmer Method, Section 2	Page

CALENDAR

- June 10. Summer School begins. Registration.
June 11. Class work begins.
June 3-13. Home Demonstration Agents.
July 4. Independence Day. Pageant.
July 7-23. Special Course for Agricultural Teachers.
July 23. Summer School Examinations.
July 24-25. Conference of Agricultural Workers.
July 24-25. State Examinations.
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A FEW SUGGESTIONS

Do not fail to register in time for the first class. Work should be planned so as to begin and proceed promptly.

Do not attempt too much. *Select a course, not more than twenty hours for credit, before coming to the College.* (See schedule of hours, page 34.) Confer with your Superintendent or write the Director of the Summer School. Do not try to change courses. Select your work as far as possible in advance, and then stick to it.

Do not neglect the social side of the Summer School life. It is desirable that all who attend should go away in better health and spirits than when they came.

Do not forget to ask early for dormitory rooms which may be desired.

A fee of \$1 will be charged for changing any course after June 14.

In transferring credits earned in the Summer School of 1919, 1920, 1921 we transfer three term credits for each course completed. This is what we now accept for these credits, if Catalog states that this work is to be counted for College credit.