

Colorado Agricultural College Bulletin



Fort Lewis School of Agriculture

HESPERUS, COLORADO

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West Side of Campus.

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CALENDAR FOR 1915-1916

Entrance Examinations.....	Monday, September 27,	1915
Registration of Students.....	Tuesday, September 28,	1915
Thanksgiving Recess.....	Thursday, November 25,	1915
Christmas Vacation.....	December 18 to January 3,	1916
First Term Closes.....	December 17,	1915
Second Term Opens.....	January 3,	1916
Second Term Closes.....	March 24,	1916

The Fort Lewis School of Agriculture was opened on October 2, 1911, as a branch of the State Agricultural College, using the lands and buildings of the Fort Lewis Indian School, which were given to the State of Colorado by Act of Congress, April 4, 1910, and accepted by the State January 25, 1911.

The School has well equipped laboratories, shops, power house, dormitories, kitchen, dining hall and dairy; registered cattle, sheep and hogs, a good dairy herd, and a fair farm machinery equipment. Additional apparatus, machinery and tools will be added before school opens in the fall.

The buildings are all electric lighted and supplied with clear, fresh water from the mountains.

The Twentieth General Assembly voted the School a levy of two one-hundredths of a mill. This assures the income and makes real progress possible for the School. More land will be cleared for experimental purposes, more registered live stock secured, and a larger faculty employed. During the summer many campus improvements will be made, and new forges and lathes installed in the shops.

Two courses are being offered this year—the usual course in Agriculture, and the Rural Teachers' Training Course. The first course prepares one to farm to better advantage, the second trains one for the work of teaching in the rural schools.

Advantages.—Come to Fort Lewis where practical courses in agriculture, rural teachers' training and household arts are offered, where good instruction is offered by instructors trained for the work they are doing, where the dormitories are supervised with care, where the instructors live on the grounds with the students, where the distracting influences of a city do not exist, where students may work out a portion of the cost of attending, where the water is pure and abundant, where the buildings are comfortable, and well lighted, where good board is offered at reasonable prices, where all expenses are low and the environment good.



Chemistry.



A Corner in the Dining Room.

Admission.—Students who have completed the eighth grade will be admitted without examination. Students who have not completed the eighth grade may be asked to take an examination in Arithmetic, United States History, English Grammar, Geography, Reading and Spelling. Students who have taken work in an accredited high school, will be given due credit for the work done. Maturity of years and practical experience will be given consideration, but the student must not consider these sufficient to admit him. Wherever there is a question concerning the student's qualification to enter he should confer with the Principal before coming to school.

Duties.—Students care for their own rooms. Those who live within one hundred miles of the school can send laundry home by parcel post. The school does not do laundry work for students. Each student must bring his own bedding above the mattress; towels, comb and brushes.



Military Drill.

COURSE OF STUDY FOR YOUNG MEN.

FIRST YEAR.

First Term.		Second Term.	
Field Crops	5	Crop Raising	5
Bench Work in Wood.....	(10)	Breeds	5
Stock Judging	2 (6)	Forge Work	(10)
English	5	English	5
Arithmetic	5	Arithmetic	5
Drill	(3)	Drill	(3)

SECOND YEAR.

First Term.		Second Term.	
Botany	3 (2)	Botany and Insect Studies..	3 (2)
Physics	3	Physics	3
Physics Laboratory	(4)	Physics Laboratory	(4)
English	5	English	5
Algebra	5	Algebra	5
Drill	(3)	Drill	(3)
Farm Machinery	(3)	Farm Motors	(3)

THIRD YEAR.

First Term.		Second Term.	
Diseases of Farm Animals..	5	Stock Feeding	5
Chemistry	3	Chemistry	3
Chemistry Laboratory.....	(4)	Chemical Laboratory	(4)
Soils	3	Farm Management and	
Soils Laboratory.....	(4)	Farm Accounts	5
English	5	Breeding	5
Civics	5	Dairying	(10)
Drill	(3)	Drill	(3)

COURSE OF STUDY FOR YOUNG WOMEN.

RURAL TEACHERS' TRAINING COURSE.

FIRST YEAR.

Field Crops or		Crop Raising or	
General Agriculture	5	General Agriculture	5
Manual Training	(10)	English	5
English	5	Arithmetic	5
Arithmetic	5	American History	5
American History	5	Cooking	(10)

SECOND YEAR.

English	5	Algebra	5
Algebra	5	Physics	3 (4)
Physics	3 (4)	Geography, Physical	5
Geography, Political	5	Botany	3 (2)
Botany	3 (2)	Personal Hygiene and	
Cooking	(10)	Home Nursing	5
English	5	English	5

THIRD YEAR.

Sewing	(10)	Dressmaking	(10)
English and		Special Methods	5
American Literature	5	School Management	
Theory and Art of Teaching	5	and Law	5
Civics	5	Observation and Practice...	5
Chemistry	3 (4)	Chemistry	3 (4)

Library reading, music, rhetoricals and physical exercises throughout the year.

Spelling may be required throughout the course.

Figures indicate number of recitation hours a week.

Figures in parentheses indicate hours of practical work a week.

Passing Grade.—The passing grade of the school is 75, made up of recitation, test, notebook and final examination grades.

Pupils are expected to spend their time in study from 6:45 to 10:00 during each evening of the week, except one at the week-end.



The Kitchen.

ESTIMATED EXPENSES FOR THE SESSION OF SIX MONTHS

FOR BOYS.

Board at \$15.00 per month.....	\$ 90.00
Room at \$2.00 per month.....	12.00
Uniform	17.00
Books and stationery.....	10.00
Entrance and Library Fee	5.00
Forge and Bench Fees.....	4.00
Incidental Expenses	10.00
Total.....	\$148.00

FOR GIRLS.

Board	\$ 90.00
Room	12.00
Gymnasium Suit	5.00
Books and Stationery	9.00
Entrance and Library Fee.....	5.00
Science Fees	4.00
Incidental Expenses	10.00
Total.....	\$135.00

A fee of twenty dollars per year is charged to those who are not residents of Colorado.

Payments in Advance.—Fees and tuition must be paid for the six months in advance. Full deposit must be made for the uniform when the measurements are made at the time of enrolling. Board and room must be paid for one month in advance. There will be no refund for board for an absence of a day or two. There will be no refund of room rent so long as the room is held, and no reduction in fees and tuition to those who come later or leave before the close of school.

Buildings.—The Fort Lewis building equipment includes the boys' dormitory, dining hall, office, shops and power house, dairy building, girls' dormitory, gymnasium, six residences, two barns, silo and a number of store houses. The school house, the boys' dormitory, dining hall and the office are steam heated.

Recreation.—At the week ends some kind of recreation is had at the school. The entertainments are along the following lines: Literary, moving and stereopticon pictures, parties, and school dances which are held once a month. Lectures, readings and musical entertainments are held whenever the opportunity offers. Much attention is given to organized play.

Athletics.—The school has a room fairly well equipped with gymnasium apparatus. During the fall there are basketball, baseball, running and vaulting contests. The field day meets held once a month, during the fall, are enjoyed by all.



Military Drill.—Three periods a weeks for twenty-four weeks. Military drill in uniform is required of all boys enrolled. Officers are selected by examination, and work is given in the manual of arms, squad and company formations. Two prizes are awarded each year to the men most proficient in drill. The prize winners for the past year were Platt Hammond and Ed. Willis.

Uniforms.—Uniforms for military drill are required. These uniforms may be worn during recitation hours and on dress occasions.

Overalls and jumpers are required in shop work.

White caps and aprons are required in dairy work and aprons in the chemistry laboratory. The boys' uniforms are made of better material than are suits ordinarily selling for twice the amount. They wear well and are very neat.

Literary Work.—The school has two literary societies: one, the Ammons Society, of which all members of the school are members; and the Senior Debating Society, of which seniors and juniors may become members. Valuable practice in public speaking and debating is gained thru the appearance upon the programs in these two societies.

Sunday Services.—Undenominational Sunday School services are held each Sunday morning at 10.30 o'clock. Preaching services are frequently held on Sunday afternoon or evening.

Library.—Bailey's Encyclopaedia of Agriculture, the New International Encyclopaedia, the Standard Dictionary and a number of other books have recently been added to our library.

Papers and Magazines.—The school is a subscriber to the Country Gentleman, Wallace's Farmer, Technical World, Saturday Evening Post, Good Housekeeping, Craftsman, and a number of other good magazines. Complimentary copies of the Field and Farm, Colorado Dairyman, Bayfield Blade and the Ignacio Chieftain are sent to the school.



Soils and Agronomy Room.

AGRICULTURE.

Field Crops and Crop Raising.—First Year. Five periods a week for twenty-four weeks. Text—Wilson and Warburton. Students make a study of wheat, corn, oats, barley, rye and other cereals, forage crops, alfalfa, grasses, potatoes, sugar beets and other root crops. Students are taught how to judge, select, test and care for seeds of the different useful plants. They are also taught the different plant diseases and pests and how to treat or eradicate them. They are taught the best cultural methods, the best methods of caring for harvested crops and other useful facts concerning the crops grown on the farm.

Stock Judging.—First Year. Five periods a week for twelve weeks. Text, Purdue University Bulletin No. 29. A study of the typical forms and characteristics of different breeds of farm animals. The animals are brought before the students and they apply the information gained from texts and instructors in pointing out the desirable and undesirable qualities of each animal.

Breeds of Farm Animals.—First Year. Five periods a week for twelve weeks. Types and Breeds of Farm Animals, Plumb. A study of the characteristics and markings of one breed of farm animals as distinguished from another. The school is fortunate in having pure bred Percherons, Herefords, Shorthorns, Holsteins, Oxfords, Rambouillets, Duroc Jerseys, Berkshires and Tamworths in addition to good grade cattle and horses. Nearly one hundred fine stereopticon slides, illustrating all of the best breeds of horses, cattle, sheep and hogs, are available for class use.

Botany and Insect Study.—Second Year. Five periods a week for twenty-four weeks. Bailey, Green and Hunter. A study of the seed and the resulting plant and flower, together with the harmful insects and diseases that may attack the plants. Attention is given to the best methods of eradicating harmful weeds and insects and promoting the growth of the useful.

Diseases of Farm Animals.—Third Year. Five periods a week for twelve weeks. Veterinary Studies for Agricultural Students, Reynolds. Instruction is given in the care and management of farm animals: First, how to properly care for them to guard against disease, and thus secure the best growth or greatest degree of usefulness; second, how to recognize the common diseases, and to nurse them in time of disease. Special attention is given to hygiene and farm sanitation.

Soils.—Third Year. Seven periods a week for twelve weeks. Soils and Soil Fertility, Whitson and Walster. Fee, fifty cents a term. A study of plant food, preparation of the soil, physical conditions of the soil that affect soil productivity, systems of rotation, manures and commercial fertilizers and similar topics are taken in this course.

Stock Feeding.—Third Year. Five periods a week for twelve weeks. Feeds and Feeding, Henry. The feeding value of the different crops for animals is first studied and balanced rations are then worked out for various classes of farm animals.



Making Butter.

Farm Management and Farm Accounts.—Third Year. Five periods a week for twelve weeks. Farm Management, Warren. Among the subjects treated are the following: Why farm; who should farm and who should not; cost of farming; hired help on the farm; tenants on the farm; types of farming; diversified and specialized farming; intensive and extensive farming; maintaining the fertility of the soil, size of farm, capital; farm labor, farm equipment; cropping system; marketing farm products; choice of a region; choosing and buying a farm; farm records and accounts.

Breeding Farm Animals.—Third Year. Five periods a week for twelve weeks. Domesticated Plants and Animals, Davenport. A study of the need of improvement in plants and animals; influences of ancestry; selection and environment; systematic improvement of animals; origin of our domesticated plants and animals.

Dairying.—Third Year. Ten periods a week for twelve weeks. Bulletins and Books of Reference. A study is made of the different breeds of dairy animals and their characteristics, food, care and products. Dairy barns and dairy buildings are planned. The DeLaval, U. S., Sharpless, and Lily separators are used by the class. Each member of the class is given actual practice in testing milk with the Babcock tester, making cheese and butter and doing other dairy work. The dairy equipment will be largely increased before next winter. The dairy machinery is operated by an electric motor.

Experiments.—Experiments with fall and spring grains, corn, peas, and potatoes are being carried on.

MATHEMATICS.

Arithmetic.—First Year. Five periods per week for twenty-four weeks. Milne's Complete. Drill upon the four fundamental operations, factoring at sight, lowest common multiple, tests for divisibility of numbers, common and decimal fractions, mensuration, denominate numbers with tables, U. S. land survey, Standard time, longitude and time, percentage, profit and loss, commission and brokerage (1st case), taxes, trade discount, simple interest, bank discount (1st case), proportion and square root, measurement of hay, cisterns, silos and land.

Algebra.—Second Year. Five periods a week for twenty-four weeks. Wells and Hart. The fundamental operations, factoring, fractions, simple equations, radicals and quadratics are studied.

SCIENCE.

Physiology and Hygiene.—Second Year. Five periods a week for twelve weeks. A study of the proper sanitary conditions that should surround school and farm houses with special reference to sources of domestic water and the disposal of refuse, are studied. A sufficient study of physiology is made to give a good foundation for the work in hygiene.

Physics and Physics Laboratory.—Second Year. Milliken and Gale (Revised). Fee, one dollar a term. Three hours of class or recitation work and four hours of laboratory work per week for twenty-four weeks. A study is made of simple machines, pneumatics, hydrostatics, heat, light, sound and electricity and their application to every-day problems.

Chemistry.—Third Year. Three hours class and four hours laboratory per week for twenty-four weeks. Chemistry and Its Relation to Daily Life, Kahlenberg and Hart. Fee, one dollar a term. After studying the fundamental principles of pure chemistry, the application of chemistry to the farm and home life is taken up. The chemical properties and values of foods, and the chemical changes and effects due to cooking and baking are studied. The elements affecting plant growth and soil fertility are studied, and the value of manure and commercial fertilizer taken up.



Farm Motors.

MECHANIC ARTS.

Farm Machinery and Farm Motors.—Second Year. Three periods a week for twenty-four weeks. Davidson and Chase. The study of the underlying principles of machines, and of the materials most used in farm machines is taken up. After this comes a detailed study of farm machines of various types, and their care. The various forms of power available for farm use, such as windmills, gas engines, traction engines, water wheels, electric generators are studied and compared.

Forge Work.—First Year. Ten periods a week for twelve weeks. Fee, two dollars. After some preliminary work from blueprints in shaping and welding and tempering, the construction and tempering of steel tools is taken up, as well as plane sharpening, making of cleavices, ice tongs, ironing doubletrees, etc.

Bench Work.—First Year. Ten periods a week for twelve weeks. Fee, two dollars. The use and care of wood-working tools and the sharpening and setting of saws, are taught. Some work on exercises from blueprints is given, which is followed by the practical work, such as furniture making; construction of window and door frames, doubletrees and eveners, gates, feeding racks and troughs, water tanks, etc.



Physics.

ENGLISH.

First Year. Five periods a week for twenty-four weeks. Reed and Kellogg's English Grammar. A study of the essentials of English grammar.

Second Year. Five times a week for twenty-four weeks. Progressive Course in English for Secondary Schools, Stebbins. A study of the correct forms in writing and speaking. Letter-writing, written and oral compositions are given particular attention.

American Literature.—**Third Year.** Five periods a week for twelve weeks. Primer of American Literature, Watkins. The purpose of this work is to make the pupils more nearly familiar with our best American authors and their writings. It is hoped that the students will learn to enjoy books, particularly those which picture the beauties found in country life.



The Water Wheel and Electric Generator.

CIVICS.

Third Year. Five periods a week for twelve weeks. Governments—local, county, state and national—are studied. This is a course of training in citizenship.

HISTORY.

First Year. Five periods a week for twenty-four weeks. School History of the United States, by Mace. A good text-book is followed in part, particular attention being paid to the history of agricultural development in the United States and to the methods of teaching history.

GEOGRAPHY.

Political and Physical.—Second Year. Five periods a week for twenty-four weeks. A good text is used in each subject. Maps and charts, books of travel, and advertising folders are used as supplementary material. Much attention is given to map study, industrial geography and methods of teaching geography.



Contestants for Medals.

PEDAGOGY.

Theory and Art of Teaching.—Third Year. Five periods a week for twelve weeks. Good text-books, dealing with the problems of instruction, drill, testing, review, methods of assigning lessons, calling on pupils and teaching the elementary school subjects, are studied.

Special Methods.—Third Year. Five periods a week for twelve weeks. The best methods of teaching reading, arithmetic, language, geography, and history, are discussed and illustrated.

School Management and Law.—Third Year. Five periods a week for twelve weeks. Among the topics for study are: The physical environment of the pupils and the school house, general sanitation, the teacher and his preparation and his relation to the school board, parents and pupils, the first day of school, the program, incentives to study, examinations, promotions, moral training and rules and punishments. The School Laws of Colorado are studied during a portion of the term.

Observation and Practice.—Third Year. Seven periods a week for twelve weeks. This consists of the observation of class-room instruction, and a discussion of the same, followed by actual practice work under supervision and direction.

DOMESTIC SCIENCE AND ART.

Sewing.—Practice in making all the different sewing stitches and the application of the stitches to the different garments. Fee two dollars. The use of the machine and different kinds of machine garments. Cotton garments are made in this class.

Dressmaking.—The use of the commercial and drafted patterns, cutting and fitting of garments. Fee two dollars. In this course the students are taught to make their own patterns, also to make the necessary changes in commercial patterns.

Cooking I.—The more simple recipes will be used in the cooking the first year. Fee two dollars. Attention will be paid to experiments with starch, baking powders and other cooking materials.

Cooking II.—A continuation of Cooking I, with more advanced recipes such as the methods of bread making and many other recipes. Fee two dollars. The cost of food. Planning meals at a low cost per person. Preparing and serving meals. A great deal of attention is paid to the planning of economical and nutritious meals.



NAMES OF THOSE WHO HAVE ATTENDED THE FORT LEWIS SCHOOL SINCE OCTOBER, 1911.

Baker, Hilliard.....Cherry, Colo.	Daniels, Tom...Pagosa Springs, Colo.
Baird, LauraBreen, Colo.	Dean, Chas.Redmesa, Colo.
Baird, Mrs. Callie.....Breen, Colo.	Decker, EarlMancos, Colo.
Breeden, HelenVirginia	De Lusch, Mrs. Milton.Durango, Colo.
Breeden, RalphBreen, Colo.	Deti, PierinaGriffith, Colo.
Brimhall, AlmaFruitland, N. M.	
Brown, Harold.....Arizona	Edwards, AlvinArizona
Burns, Walter....Flora Vista, N. M.	
McCartney, MetaDurango, Colo.	Fielding, LeonardMancos, Colo.
	Fielding, MaryMancos, Colo.
Cumfield, HiramArrtola, Colo.	Flaugh, Leon...Pagosa Springs, Colo.
Cavenas, Mrs. Muriel...Breen, Colo.	Fredlund, FredElco, Colo.
Chambers, Robert, Farmington, N. M.	Fredlund, ReubenElco, Colo.
Chockley, MarianArboles, Colo.	
Cook, EdnaDurango, Colo.	Gonner, Dorothy.....Durango, Colo.
Craft, HowardKline, Colo.	Green, ClaudeDurango, Colo.

Halls, Dilworth	Mancos, Colo.	Pierce, Allen	Aztec, N. M.
Halls, J. Lewis	Mancos, Colo.	Pinkstaff, Rhoda	Aztec, N. M.
Halls, Lillie	Redmesa, Colo.	Pollock, Bertha	Allison, Colo.
Halls, Roy	Mancos, Colo.	Pollock, Ethel	Allison, Colo.
Hamilton, Will	Kline, Colo.	Rathjen, Robert	Aztec, N. M.
Hammond, Lydia	Mancos, Colo.	Reeder, Orin	Durango, Colo.
Hammond, Platt	Mancos, Colo.	Rockwell, Mabel	Durango, Colo.
Hare, Will	Bloomfield, N. M.	Roubidoux, E. R.	Cortez, Colo.
Harrison, Winn	Breen, Colo.	Sever, Eugene	Flora Vista, N. M.
Hatch Joseph	Fruitland, N. M.	Shaferhoff, Joseph	Durango, Colo.
Hatcher, Oscar	La Boca, Colo.	Slade, Clarence	Redmesa, Colo.
Hately, Dean	California	Slade, Ida	Breen, Colo.
Hott, Powell	Tiffany, Colo.	Simpson, Pat	Breen, Colo.
Hubbard, M.	Shiprock, N. M.	Simpson, Roy	Breen, Colo.
Hunt, Alice	Hesperus, Colo.	Smith, Donald	Cortez, Colo.
Huntington, J.	Hesperus, Colo.	Smith, Hiram	Mancos, Colo.
Jaquez, Onofre	Blanco, N. M.	Snyder, Frank	Dolores, Colo.
Kermode, Alfred	Cortez, Colo.	Snyder, Paul	Hesperus, Colo.
Kimsey, Mrs. Kate	Hesperus, Colo.	Snyder, T. J.	Dolores, Colo.
Leiper, Harold	Illinois	Sullivan, Frank	Durango, Colo.
Longenbaugh, S.	Cortez, Colo.	Sullivan, Jose	Durango, Colo.
McCall, Rex	Arriola, Colo.	Stinson, Mrs. Susie	Kline, Colo.
McCartney, Tom	Durango, Colo.	Taylor, George	Ignacio, Colo.
McCulloch, Clay	Durango, Colo.	Taylor, Leo	Redmesa, Colo.
McCulloch, Lillie	Durango, Colo.	Taylor, Lydia	Redmesa, Colo.
McCulloch, Robert	Durango, Colo.	Thayer, D. C.	Helena, Mont.
McEwan, Reuben	Cortez, Colo.	Thomas, Virgil	Mancos, Colo.
McIntyre, Lizzie	Breen, Colo.	Thompson, Clarence	Ignacio, Colo.
McNamee, Laughlin	La Plata, N. M.	Thompson, Mrs. Jennie	Bayfield, Colo.
Micheal, Ray	Hesperus, Colo.	Thompson, Sylvia	Ignacio, Colo.
Mueller, Anna	Florida	Todd, George	Cortez, Colo.
Neil, Frank	Ignacio, Colo.	Townsend, Mrs. Irene	Aztec, Colo.
Nelson, Frank	Durango, Colo.	Tozer, Clyde	Moqui, Colo.
Nicholson, M.	Hesperus, Colo.	Turner, Morrill	Ignacio, Colo.
North, Ruth	Cortez, Colo.	Weston, James	Mancos, Colo.
O'Brien, Roy	Durango, Colo.	Wilden, Oscar	Redmesa, Colo.
Olbert, Walter	Durango, Colo.	Willis, Ed.	Durango, Colo.
		Woodberry, Ward	Cortez, Colo.



Using the Babcock Milk Tester.



FORT LEWIS SCHOOL GRADUATES.

1914

McCulloch, Robert
Reeder, Orin

1915

Fretlund, Reuben
McCulloch, Clay
Michael, Ray



The Greenhouse.