

UNIVERSITY OF NEW MEXICO  
COLLEGE OF LIBERAL ARTS  
OFFICE OF DEAN



# BULLETIN

OF THE

## University of New Mexico

WHOLE NO. 43

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CATALOGUE SERIES

MARCH, 1907

VOLUME 16

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### CATALOGUE

1906-1907

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ANNOUNCEMENTS FOR 1907-1908

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ALBUQUERQUE, NEW MEXICO

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Published Quarterly by the University of New Mexico. Entered May 1, 1906, at Albuquerque, New Mexico, as second class matter, under act of Congress of July 16, 1894

# Publications

OF THE

## University of New Mexico

ALL the University Publications are issued as Bulletins. These are arranged in a continuous series, numbered consecutively. The Bulletins are classified according to subject matter and each class is given a separate title and carries its own volume number. These classes issued to date are as follows:

*Catalogue Series, Vols. I-XVI; whole numbers 1-14, 40, 43.*

*Biological Series, Vols. I, II; whole numbers 19-22, 29-39. (Hadley Laboratory Bulletin, Vols. I, III).*

*Geological Series, Vols. I, II; whole numbers 15-18, 23-28. (Hadley Laboratory Bulletin, Vols. I, II).*

*Educational Series, Vol. I; whole numbers 41, 42.*



BULLETIN

— OF —

THE UNIVERSITY OF NEW MEXICO

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CATALOGUE, 1906-1907

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**Announcements 1907-1908**

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ALBUQUERQUE, NEW MEXICO.

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EVENING CITIZEN PRESS  
ALBUQUERQUE

## Advantages

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The University of New Mexico offers the best of advantages for a thorough college education under the most healthful climatic conditions and at small cost.

There are many young men and women in the Northern and Eastern States, compelled to give up their school work on account of ill health, who will find it possible to continue their studies here under the favorable climatic conditions, and to improve in health at the same time. To these the University offers special advantages, and solicits correspondence with them.

You are cordially invited to visit the University at any time.

All requests for information should be addressed to the Registrar,

UNIVERSITY OF NEW MEXICO,  
Albuquerque, N. M.

## University Calendar

1907. January 7—Monday. Second Semester begins.  
February 22—Friday. Washington's Birthday.  
By Proclamation. Arbor Day.  
April 30—Tuesday. University Play.  
May 4—Saturday. Intercollegiate Athletic Contest.  
May 5—Sunday. Baccalaureate Address.  
May 7—Tuesday. Oratorical Contest.  
May 8—Wednesday. Examinations for Second Semester Completed.  
May 9—Thursday. Class Day Exercises; Alumni Banquet.  
May 10—Friday. Commencement.  
May 11—Saturday. Summer vacation begins.  
August 19—Monday. First Semester begins; Assembly of Students; Examinations and Presentation of Certificates; Registration.  
September 2—Monday. Labor Day.  
November 28, Thursday, to  
December 1, Sunday.—Thanksgiving Recess.  
December 12—Thursday. Declamation Contest.  
December 20—Friday. Examination for First Semester completed.
1908. January 6—Monday. Second Semester begins.  
February 22—Saturday. Washington's Birthday.  
By Proclamation. Arbor Day.  
April 28—Tuesday. University Play.

May 2—Saturday. Intercollegiate Athletic Contest.

May 3—Sunday. Baccalaureate Address.

May 5—Tuesday. Oratorical Contest.

May 6—Wednesday. Second Semester Examinations Completed.

May 7—Thursday. Class Day Exercises; Alumni Banquet.

May 8—Friday. Commencement.

## **Board of Regents**

HIS EXCELLENCY HERBERT J. HAGERMAN, Governor of the Territory of New Mexico, ex-officio.

PROF. HIRAM HADLEY, Superintendent of Public Instruction, ex-officio.

HON. E. V. CHAVEZ, Term Expires 1907.

HON. HENRY L. WALDO, Term Expires 1908.

DR. JAMES H. WROTH, Term Expires 1909.

HON. E. S. STOVER, Term Expires 1910.

HON. FRANK W. CLANCY, Term Expires 1911.

### *Officers*

HON. FRANK W. CLANCY, President.

DR. JAMES H. WROTH, Secretary and Treasurer.

## Departments of the University

The departments of instruction of the University of New Mexico are the following:

- I. *College of Letters and Science:*  
Courses leading to the degree of A. B.
- II. *School of Engineering:*  
Three complete years in Civil, Electrical, Mechanical and Mining Engineering.
- III. *School of Education:*  
Courses providing thorough professional instruction in the Science of Education.
- IV. *Preparatory School:*  
Complete four-year courses.
- V. *Commercial School:*  
Complete four-year course of preparatory and commercial branches.



## Faculty for 1906-1907

WILLIAM G. TIGHT, President,  
*Professor of Geology.*

*B. S., Denison University 1886; M. S., ibid 1887; Ph. D., University of Chicago 1901; Professor of Geology Denison University 1886-1900; President and Professor of Geology University of New Mexico, 1901-*

JOSEPHINE S. PARSONS,

*Principal of Commercial Department.*

*A. B., University of New Mexico 1904; Student Stanford University 1896; Graduate Student University of California 1904-05; Principal Commercial Department University of New Mexico 1893—.*

CHARLES E. HODGIN, Dean,

*Professor of Education.*

*B. Pd., University of New Mexico 1894; Indiana State Normal School 1881; Principal Public Schools Trafalgar, Indiana; Instructor in Education Richmond Normal School 1882-4; Principal Albuquerque Academy 1887-91; Superinendent Albuquerque Public Schools 1891-97; Principal Normal School, University of New Mexico 1897-04; Graduate Student University of California 1903-4; Professor of Education University of New Mexico 1905—.*

JOHN WEINZIRL,

*Director of Hadley Climatological Laboratory, Professor of Chemistry and Biology.*

*B. S., University of Wisconsin 1896; M. S., ibid 1898; Ph. D., ibid 1906; Principal of High School,*

*Fairchild, Wisconsin, 1893-94; Assistant Professor of Biology, University of New Mexico, 1898-1900; Professor of Biology and Chemistry and Director of Hadley Climatological Laboratory, ibid, 1900—.*

ETHEL A. HICKEY,

*Professor of English.*

*A. B., University of Kansas 1898; Instructor in English and German, Hiawatha High School, Kansas, 1898-1901; Professor of English University of New Mexico, 1901—.*

RUPERT F. ASPLUND, Secretary,

*Professor of Latin and Greek.*

*A. B., Illinois College 1896; Instructor in Illinois Public Schools 1896-98; Instructor in Illinois College 1898-1900; Principal Whipple Academy, Jacksonville, Illinois 1900-02; Professor of Latin and Greek University of New Mexico 1902—.*

AURELIO M. ESPINOSA,

*Professor of Romance Languages.*

*A. B., University of Colorado 1902; M. A., ibid. 1904; Assistant in Spanish and French University of Colorado 1901-02; Instructor, ibid, summer quarters 1904 and 1905; Professor of Modern Languages University of New Mexico 1902-06; Professor of Romance Languages 1906—.*

MARTIN F. ANGELL,

*Professor of Physics and Mathematics.*

*B. S., University of Wisconsin 1902; M. A., ibid. 1905; Assistant in Physics University of Wisconsin 1902-03; Professor of Physics and Mathematics University of New Mexico 1903-04; Graduate Student and Assistant in Physics University of Wisconsin 1904-05; Professor of Physics and Mathematics University of New Mexico 1905—.*

JOHN H. CRUM,

*Professor of Elocution and Oratory.*

*B. O., Soper School of Oratory 1904; M. A., ibid, 1905; Instructor in Elocution and Oratory Soper School of Oratory 1903-04; Professor of Elocution and Oratory University of New Mexico 1904—.*

DELLA J. SISLER,

*Librarian and Instructor in Library Science.*

*B. L. S., University of Illinois 1905; Library Cataloger Kansas State Normal 1900-03; Librarian and Instructor in History University of New Mexico 1905-06; Librarian and Instructor in Library Science 1906—.*

D. M. RICHARDS,

*Professor of History.*

*A. B., Oberlin College 1876; Principal of Second Ward School Stuart, Iowa; Superintendent of Schools Gallup, N. M., 1893-1901; Principal of Preparatory Department New Mexico College of Agriculture and Mechanic Arts 1901-06; Professor of History University of New Mexico 1906—.*

JOHN N. CADBY,

*Professor of Engineering.*

*B. S. (E. E.), University of Wisconsin 1903; Draughtsman Northern Electric Manufacturing Company 1903-04; Chief Draughtsman Milwaukee Electric Railway and Light Company 1904-05; Superintendent of Electrical Testing, ibid, 1905-06; Instructor Milwaukee Central Y. M. C. A. High School 1904-06; Professor of Engineering University of New Mexico 1906—.*

LILLIAN G. HUGGETT,

*Instructor in German and Latin.*

*A. B., University of New Mexico 1906; Assistant*

*in Latin University of New Mexico 1904-06; Instructor German and Latin, ibid, 1906.*

JOHN R. TASCHER,  
*Assistant in Mathematics.*

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### *Standing Committees*

#### *Catalogue,*

RUPERT F. ASPLUND, CHARLES E. HODGIN,  
AURELIO M. ESPINOSA.

#### *Schedule and Curriculum,*

M. F. ANGELL, D. M. RICHARDS, ETHEL A. HICKEY.

#### *Student Standing,*

CHARLES E. HODGIN, RUPERT F. ASPLUND,  
J. N. CADBY.

#### *Commencement,*

AURELIO M. ESPINOSA, ETHEL A. HICKEY,  
JOHN H. CRUM.

#### *Publications,*

JOHN WEINZIRL, CHARLES E. HODGIN,  
RUPERT F. ASPLUND.

#### *Athletics,*

J. N. CADBY, M. F. ANGELL, DELLA J. SISLER.

#### *Music,*

JOHN H. CRUM, JOSEPHINE S. PARSONS,  
LILLIAN G. HUGGETT.

#### *Class Advisers,*

Collegiate Department: Seniors, Prof. Hodgins;  
Juniors, Prof. Angell; Sophomores, Miss Hickey;  
Freshmen, Prof. Asplund.

Preparatory Department: Fourth year, Prof.  
Espinosa; Third year, Prof. Weinzirl; Second year,  
Prof. Richards; First year, Miss Parsons.

## General Information

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### *Origin and History*

The University had its origin in an act passed February 28, 1889, by the Territorial Legislative Assembly of New Mexico, the bill being introduced by Hon. B. S. Rodey, who worked faithfully for its passage, and who has remained a firm friend of the institution.

The following extracts are taken from the act:

SECTION 1. There is hereby created and established within and for the Territory of New Mexico, an institution of learning to be known as "The University of New Mexico." Said institution is hereby located at or near the Town of Albuquerque, in the County of Bernalillo, within two miles north of Railroad Avenue in said town, upon a tract of good, high and dry land, of not less than twenty acres, suitable for the purpose of such institution, which said land shall, within six months from the passage of this act, be donated and conveyed, free of any cost and expense, to the Territory of New Mexico, by G. W. Mylert; provided, that no improvements or buildings as hereinafter provided for, shall be made or erected upon said land until such deed is duly executed, recorded and filed in the office of the Secretary of the Territory, as hereinafter provided.

SEC. 7. The University of New Mexico, hereby created and established, is intended to be the State University, when New Mexico shall be admitted as a state into the Union, and as such is entitled to all the donations of lands and other benefits under all acts of Congress, now in force or hereafter to be enacted, for the benefit of such educational institutions in the future state.

SEC. 8. The object of the University hereby created shall be to provide the inhabitants of the Territory of New Mexico and the future state, with the means of acquiring a thorough knowledge of the various branches of literature, science and arts.

SEC. 9. The management and control of said University, the care and preservation of all property of which it shall become possessed, the creation and construction of all buildings necessary for its use, and the disbursement and expenditure of all moneys appropriated by this act, shall be vested in a board of five Regents, to consist of five qualified voters, who shall be owners of real estate in this Territory.

SEC. 11. The Regents of the University and their successors in office, shall constitute a body corporate under the name and style of "The Regents of the University of New Mexico," with the right, as such, of suing and being sued, of contracting and being contracted with, of making and using a common seal, and altering the same at pleasure.

SEC. 14. The Regents shall have power and it shall be their duty to enact laws, rules and regulations for the government of the University.

SEC. 15. The University shall have departments, which shall hereafter be opened at such times as the Board of Regents shall deem best, for instruction in

science, literature, and the arts, law, medicine, engineering, and such other departments and studies as the Board of Regents may, from time to time, decide upon, including military training and tactics.

SEC. 16. The immediate government of the several departments shall be intrusted to their respective faculties, but the Regents shall have the power to regulate the course of instruction, and prescribe the books and authorities to be used in the several departments, and also to confer such degrees and grant such diplomas as are usually conferred and granted by other Universities. The Regents shall have the power to remove any officer connected with the University, when in their judgment the interests require it.

(a.) The University created by this act shall be open to the children of all residents of this Territory and such others as the Board of Regents may determine, under such rules and regulations as may be prescribed by said board, whenever the finances of the institution shall warrant it, and it is deemed expedient by said Board of Regents.

SEC. 17. No sectarian tenets or opinions shall be required to enable any person to be admitted as a student or employed as a tutor or other instructor in said University, but the same shall be forever non-sectarian in character. \* \* \*

When the bill became a law, Governor L. Bradford Prince, then New Mexico's chief executive, appointed the following Board of Regents: G. W. Mylert, Henry L. Waldo, Mariano S. Otero, Elias S. Stover, Frank W. Clancy.

The Governor and the Superintendent of Public Instruction, then Amado Chaves, were ex-officio members of the Board.

The Regents who have been continued from the beginning are E. S. Stover, F. W. Clancy, and H. L. Waldo. Others whose names have appeared since are, W. B. Childers, J. H. Wroth, J. C. Armijo, and E. V. Chaves.

The first faculty elected consisted of President, E. S. Stover; Principal, George S. Ramsey; Alcinda L. Morrow, Marshall R. Gaines, Albert B. Cristy, G. R. Stouffer and Andrew Groh.

Many changes have since occurred in the faculty. Prof. Hiram Hadley was vice-president in charge from 1894 to 1897. Dr. C. L. Herrick, the second president of the institution, served from 1897 to 1901. Upon his resignation, Dr. W. G. Tight was chosen by the Regents.

After the passage of the act in the legislature of 1889, creating the University, the first Board of Regents secured the required amount of land, and began the erection of a large building, as soon as the funds were available. The structure was completed and accepted by the Board in May, 1892.

The Normal School of the University was the first to be organized, and was opened on June 15, 1892, for a summer term. In September of the same year the Preparatory School was opened, and in November of 1893 the Commercial School was added.

In 1896 a gymnasium was erected and equipped with as much apparatus as the funds would permit.

The Hadley Laboratory, largely the gift of Mrs. Walter C. Hadley, supplemented by donations from friends in Albuquerque and in other parts of the Territory, was erected in 1899. This building affords accommodations for the science work with a special view to climatological investigations, a feature of research de-



sired by Mrs. Hadley.

Dormitory facilities were made possible in 1902, when rooms for men were fitted up on the second floor of the main building, while a cottage on the campus was made into a girls' dormitory. In 1904, the men's quarters were moved to a separate building situated quite near the campus. In 1906, two dormitories were erected and equipped with all modern conveniences. The cottage is now devoted entirely to the purposes of a dining hall.

There has taken place a marked improvement on the University campus during the past five years. There is now in operation a complete irrigation system consisting of a two hundred and fifty foot well with a twenty foot windmill, tanks holding seven thousand gallons, and a reservoir with a capacity of a quarter of a million gallons. This system has made possible the growth of hundreds of trees and plants. Drives have been laid out with the best landscape effect, and the whole makes a beautiful park of a once barren mesa.

The courses of study and the departments have been extended from time to time during the past twelve years, until now the institution offers full preparatory and college courses of four years each. The Commercial School affords efficient training for a business career together with a general high school education. The School of Education gives a five years' course, including professional and academic branches. The School of Engineering offers three complete years of technical study.

#### *Location*

The University campus is situated on the mesa, a short distance east of the city. The view of the valley

of the Rio Grande and of the mountains is most beautiful and inspiring. A more favorable location for health and out-of-door recreation could scarcely be found.

The walk to the University from the city is healthful exercise. For those who desire to ride, a conveyance is run at a low fare to accommodate teachers and students.

### *University Environment*

Albuquerque, the county seat of Bernalillo county, is pleasantly situated in the valley of the Rio Grande. It is easily reached from any part of the Territory, being centrally located on the lines of the Atchison, Topeka & Santa Fe, the Santa Fe-Pacific Railroad, and the Albuquerque Eastern (under construction). The climate is very even and the air so bracing that students unable to pursue their studies in other climates, may do so here and improve in health at the same time. On account of its climate and altitude the city is much frequented as a health resort.

Albuquerque is a modern city, with a population of about 15,000, having electric lights and street cars, a free public library, good streets, a variety of good mercantile and manufacturing establishments, four banks, two daily newspapers, and other accompaniments of modern civilization.

Albuquerque is an educational center. Besides the University, there are many schools of different kinds, including an excellent system of public schools.

During the year many musical and literary entertainments are given, and the large and refined audiences that patronize these give unmistakable evidence of the culture of the citizens.

The student who enters the University is at once surrounded by an educational atmosphere that cannot do otherwise than exert a refining influence and stimulate him to effort.

Albuquerque is a city of churches. Almost every religious denomination is represented. These all gladly welcome the students to the religious and social life.

### *Buildings*

The Administrative Hall contains the President's office, the Library of about 7,000 volumes, the Assembly hall and numerous recitation rooms. The building is a large and commodious brick structure of three stories, besides the basement, and is well furnished throughout.

The Hadley Science Hall furnishes accommodations for the Department of Science. The building is the generous gift of Mrs. Walter C. Hadley, supplemented by donations from friends of education throughout the Territory. The laboratory was primarily established for climatological research and its arrangements are most satisfactory for scientific work.

The gymnasium is a substantial frame building of good size and well equipped with apparatus for physical culture. There is also an out-door gymnasium, constructed of iron pipes, affording a frame-work to which are attached chest bars and weights, traveling and flying rings, trapeze, striking bags, and horizontal, parallel and vaulting bars.

The Dormitories, one for men and one for women, furnish accommodation for students who desire to live on the campus. These buildings are two-story structures and are equipped with all modern conveniences.

The Dining Hall is an attractive modern cottage;

where board by the month, week, day or meal may be secured.

The Central Heating Plant is housed in a separate building of Pueblo architecture.

### *The Library*

The University library contains about 7,000 volumes, exclusive of unbound pamphlets and duplicates. This includes both the main library and the departmental libraries, which are shelved in rooms adjoining lecture rooms.

In exchange for the Bulletins of the University the library receives a large amount of valuable scientific literature. There are now more than one hundred societies and universities on the exchange list.

The University is one of the United States depositories for public documents. Many valuable reference books are received from this source. These books are accessible to the public during library hours.

A dictionary catalog is being made, listing all material by author, subject and title, thus making all the resources of the library readily accessible.

The library is open every day, except Saturday and Sunday, from 8:30 A. M. to 5:00 P. M.

Aside from complimentary periodicals and exchanges the library subscribes regularly for the following periodicals:

American historical review.

American monthly review of reviews.

Annalen der physik.

Atlantic monthly.

Biblical world.

Bookman.

Centrallblatt fur bakteriologie.

Century.  
Chemical abstracts.  
Classical journal.  
Classical review.  
Dial.  
Draughtsman.  
Economic geology.  
Engineer.  
Harper's monthly.  
International journal of ethics.  
Journal of American history.  
Journal of biological chemistry.  
Journal of experimental medicine.  
Journal of geology.  
Journal of infectious diseases.  
Journal of the American chemical society.  
Journal of the American medical association.  
Library journal.  
Literary digest.  
McClure's magazine.  
Modern language notes.  
Modern philology.  
North American review.  
Outlook.  
Physical review.  
Popular science monthly.  
Public libraries.  
Putnam's monthly.  
Reader's guide to periodical literature.  
Records of the past.  
School journal, N. Y.  
Science abstracts—physics.  
Scientific American.  
Scientific American supplement.

Speaker.

Stenographer.

Talent.

Teachers' magazine.

Technical world magazine.

Ueber land und meer.

World's work.

Zeitschrift fur tuberkulose und heilstatten.

### *Laboratories*

Few institutions as young as the University are so well supplied with the facilities for laboratory and research work. This is due to the fact constantly held in mind by the management that the first essential in all scientific work is experimentation and illustration, and that text-books are of secondary importance. To this end the equipments are increased as rapidly as possible from the resources of the institution.

The Hadley Climatological Laboratory furnishes a home for the scientific departments. On the first floor are found the zoological, botanical and geological laboratories, each equipped with the usual apparatus. In the botanical department the collection of native plants is especially worthy of mention. The equipment in geology is very complete and contains several thousand specimens, several lithological microscopes, etc. On this floor is also found a large lecture room for the use of the departments.

On the second floor are the departments of physics, chemistry, and bacteriology. The laboratories are very well equipped for the usual courses offered and it is hoped soon to materially increase the equipment. Instruments have been recently installed for observing carefully all climatological phenomena.

In the basement are located the assaying and machine shops. In assaying the equipment consists of a Bosworth furnace, rock crusher, rubbing board, etc. and it is quite complete. The shops are equipped with a gasoline engine, a dynamo, direct and alternating current motors and switch board. Individual motors operate wood and iron-turning lathes, illustrating the best methods of electrical generation and distribution of power. There are also many kinds of wood and iron working tools and machinery.

The Hadley Laboratory was especially designed by its beneficent founder for the study of the effects of the various factors which enter into the remarkable climate of the semi-arid Southwest. This study was intended to bear more especially upon the problem of tuberculosis and its cure by climatic agencies. To this end all the scientific departments of the University contribute.

At present there is an urgent need of funds for carrying out effectually the work in this line, and it is hoped that adequate resources may be provided at an early date. Such funds should be available for special apparatus not ordinarily found in the class room, and for carrying on physiological experiments.

During this year considerable progress in research work has been made, and a number of papers are now in preparation for publication. Several articles have appeared in the leading journals of America, such as the Journal of the American Medical Association, American Journal of the Medical Sciences, etc., and all will finally appear in the Bulletin of the University, which is published with the co-operation of Mrs. W. C. Hadley.

*Natural History and Archaeological Museum*

The University has a fair nucleus of a working museum. All friends of the University are requested to assist in procuring materials illustrating the natural and economic resources of the Territory. It is of special interest to secure the remains of the works of prehistoric races before it shall be too late. All donations will be permanently stored in the University and will be accredited to the giver.

*University Publications*

All the University publications are issued as bulletins. These are arranged in a continuous series, numbered consecutively. The bulletins are classified according to subject matter, and each class is given a separate title and carries its own serial number.

The Catalogue Series reaches the sixteenth volume with the present issue. It contains general information about the University, descriptions of requirements for entrance and graduation, courses of study, and a register of students, regents, faculty and alumni.

The Bulletin of the Hadley Climatological Laboratory contains articles on biological subjects and contributions from the University Geological Survey, giving opportunity for the publication of the results of research work. These are also numbered in the Biological and Geological series of the University Bulletin.

*Student Publications*

The U. N. M. Weekly is the publication of the student body and is devoted to University news, literary matter, and general college interests.

"The Mirage" is the college year book, or "an-



nual." It is profusely illustrated and its pages offer opportunity for the expression of college life.

### *Student Organizations*

Voluntary literary societies, the Khiva for the men, and the Estrella for the women, have proven very useful in affording opportunities for the cultivation of literary tastes, and for familiarizing the students with parliamentary principles. The spirit of wholesome competition and rivalry lends interest to the efforts of the members of these societies. The Athletic Association, advised by a board of control, has charge of all college and intercollegiate football, baseball, basketball games, and track meets. The Editorial Boards of the U. N. M. Weekly and the Mirage offer the students opportunity for the practice of energy and enterprise. The students of the Engineering Department are organized in the University of New Mexico Society of Engineers.

### *Alumni Association*

The University of New Mexico Alumni Association was organized in 1894. Its purposes are to aid in promoting the interests of the University of New Mexico and to cultivate sociability and good fellowship among its members. The annual meeting and annual dinner occur at the University during commencement week. At this annual meeting all officers of the association are chosen. The present officers are: Roy Stamm, 1898, President; Ralph Tascher, 1903, Secretary and Treasurer.

### *University Extension*

The various members of the University faculty hold themselves ready to respond to calls for lectures

before institutes, University extension centers, clubs, and assemblies, whenever such service does not interfere with the regular work in the institution. Several of the instructors who have had experience in the lecture field and in institute work, are ready to give regular instruction in the institutes of the state and in educational organizations. Calls for work should be addressed to the individual professors, or to the Registrar, Prof. C. E. Hodgin.

### *Aim*

The University has enjoyed an honorable reputation for thorough work and high standards, and it is the endeavor of the Board of Regents and the Faculty to maintain these standards and to furnish the means for excellent mental discipline. Every effort will be made to develop the student physically, intellectually, socially, and morally, in the best possible manner. The policy of the University, while very strictly avoiding sectarianism in any form, is positively and strongly in favor of developing and maintaining high ethical and moral standards. All students, unless excused by the President, are required to attend the regular Assembly exercises, which consist of music, scripture readings, and addresses by members of the Faculty and prominent men in all walks of life.

There is in Albuquerque one thriving church or more of almost every religious denomination, Jewish, Protestant and Catholic. These all gladly welcome the students to their religious and social life. It is desirable that each student identify himself with the church of his choice.

*The Administration*

The Preparatory School, the College of Letters and Sciences, the School of Engineering, the School of Education, and the Commercial School are administered by their respective principals and faculties, under the direction of the general faculty. Upon matriculation the student obligates himself to observe the unwritten law of polite society, and to discharge faithfully all college obligations. Individual honor and loyalty to the institution, and the deportment of ladies and gentlemen are indispensable requisites to college residence.

The Territory of New Mexico offers the advantages of the University, at a merely nominal fee, to all persons of either sex who meet the entrance requirements. It therefore is the patron of those who seek its advantages and honors. It cannot be the patron of idleness or misconduct. It offers every assistance possible to those who assiduously pursue their work with diligence, and conduct themselves according to the accepted rules of propriety. In order to help students more effectively, class advisers are assigned from the members of the Faculty, one for each class in the institution.

In any case where the student does not appear to be benefited by the advantages offered by the University, or manifests an unwillingness cheerfully to assist in maintaining good order, or indulges in practices which are detrimental to others or to the reputation of the college, his parents or guardian will be promptly and frankly informed of the facts in the case. If the student's conduct, or work, continues unsatisfac-

tory thereafter, he will be dismissed, or his parents will be requested to withdraw him.

### *Diplomas and Certificates*

Diplomas of graduation from the Preparatory School will be conferred on all who complete satisfactorily sixteen units of work, including the ten and a half required units, and who maintain unimpeachable deportment. In addition to the above, those who complete the work of the School of Education receive its diploma.

Certificates of proficiency may be given upon the completion of subjects like Stenography, Bookkeeping, etc., and upon the satisfactory completion of the work of any one year.

Diplomas of graduation will be conferred upon students who complete a four years' course of study in the college. With this diploma is conferred the degree of Bachelor of Arts, which is the only baccalaureate degree conferred in the College of Letters and Sciences.

The degree of Bachelor of Pedagogy is conferred upon students who complete three years of college work in addition to the School of Education course, and who have given satisfactory evidence of two full years of successful teaching experience after graduation.

The University is prepared to offer courses leading to the degrees of Master of Arts, and Doctor of Philosophy, along limited lines, and by special action of the Faculty.

No student will receive a diploma or degree from this University who has not been in residence at least one year.

*Accredited Schools*

Students presenting diplomas of graduation or proper credentials from accredited schools are admitted without examination, provided, however, that if the student has not completed the 10½ units of work required of all applicants for admission to the College of Letters and Science, the part lacking of this work will be entered on the records as a "condition" that must be made up and for which the student will receive no college credit. Accredited high schools of New Mexico are classified as follows:

- (a) Admitting to the College of Letters and Science.  
Albuquerque, W. D. STERLING, Superintendent.  
Carlsbad, Wm. M. HEINEY, Superintendent.  
Deming, J. F. DODEVER, Superintendent.  
Gallup, W. H. DECKER, Superintendent.  
Las Vegas, R. R. LARKIN, Superintendent.  
Raton, A. D. HOENSHELL, Superintendent.  
Roswell, C. D. THOMPSON, Superintendent.  
Santa Fe, J. A. WOOD, Superintendent.
- (b) Admitting to the Fourth year of the Preparatory Department:  
Artesia, B. F. BROWN, Superintendent.  
Portales, C. W. PRUGH, Superintendent.
- (c) Admitting to the Third year of the Preparatory Department:  
Alamagordo, E. R. GRAHAM, Superintendent.  
Clayton, R. I. TEMPLETON, Superintendent.  
Hagerman, W. F. OSBORNE, Superintendent.  
Santa Rosa, R. H. TEMPLETON, Superintendent.

*Registration*

The student upon entering presents himself to the President at the office and receives the necessary

blanks for registration. He then goes to the instructors under whom he is to have work, for their signatures to his registration card. He next sees the treasurer for the payment of the incidental and other fees, and finally files his card with the Registrar.

No student is considered registered as a member of the University until his registration is fully completed.

An extra fee is charged for registration later than five days after the opening of the semester.

#### *Attendance*

It is highly desirable that students should begin their work with the first day of the semester as indicated in the calendar, since losses which are incurred then can never be fully made up and the student is at a disadvantage throughout the year. Students may be admitted at any time, but it is strongly recommended that studies begin with the fall semester. This is considered so important that the Regents have fixed a fee for late registration. Every student, unless excused by the Faculty, is required to attend at least three recitations or laboratory exercises daily. Parents or guardians who desire information concerning the conduct, class standing, or punctuality of the student, can obtain the same at any time by application to the Registrar, as a careful record is kept of the work and character of each student. Such a report will be regularly sent at the end of each semester.

Any student who falls behind in his work will be reported to his parents, or guardian, at the end of each month, and should such failure to do good work be the result of idleness, or misconduct, on the part

of the student, the parents may be asked to withdraw the student at any time.

### *Absences*

After registering, students are required to attend all their class exercises. A failure to attend any such exercise is counted an absence. The second absence suspends the student from the class. Before he can again attend the class he must present a written excuse for such absence to the office and secure an admission card to be presented to the instructor. Any student is subject to account for absences at any time, and may be dismissed by the Faculty for such absences. Absences to the extent of 20 per cent. from any one class debars the student from receiving a passing grade in that class, except by special examination. For absences from Assembly and other general exercises, the student is accountable to the President.

### *Dismissal*

Students who desire to drop any study for which they are registered must get the permission of the Instructor and the Registrar.

A student who leaves the University before the close of a semester without the permission of the President will not be considered as having been honorably dismissed.

### *Method of Grading*

Students are graded according to their class standing and by examinations. An accurate record is kept of the work of each student in each class. Examinations are held in each class at the end of each semester. The average standing is found by combining the aver-

age class standing with the examination standing in the ratio of three to one; that is, the class standing counts three times as much as the examination standing. Students making a grade 90-100 are marked A; 80-90, B; 70-80, C; 60-70, D; below 60, E. Students whose daily standing is A are excused from final examinations. Satisfactory completion of the work of any class requires a general standing of not less than seventy per cent. A student whose average is less than sixty per cent is not passed, and must pursue the work a second time with the next regular class.

#### *Examinations*

1. An examination is held at the close of each semester or on the completion of any subject.
2. All students are required to attend all examinations in the studies pursued.
3. When a student's general standing in any class falls below seventy, the Instructor shall report the student to the Registrar as "conditioned." A student reported as "conditioned" may receive credit for the study if the condition imposed by the Instructor is removed before the next semester in which the study is again offered. Conditions must be removed by special examination and payment of the usual fee. Otherwise the student must again pursue the study in the regular class in the same manner as the student whose study is reported as "not passed."
4. Special examinations taken at other times than regularly with the class, and not entrance examinations for standing, can be taken only by presenting to the examiner a permit card from the Registrar and by the payment of a special fee.



*Class Standing*

To obtain class standing at entrance, or to maintain class standing during the pursuit of a course, the student's conditions must not exceed one-third of the work required for that class.

*Prizes and Scholarships*

The Dr. J. A. Henry Scholarship Prize. Through the generosity of Dr. Henry an annual prize is given to the student who maintains the highest general scholarship. No student is eligible to this prize two years in succession. Awarded in 1905-6 to Edmund Ross.

The Dr. W. G. Hope History Prize. Dr. Hope has established an annual prize for the best scholarship in United States History. Prize awarded in 1905-6 to Fleda Smith.

The Dr. E. M. Wilson Prize. Dr. Wilson has offered a prize of \$25 to the student who is instrumental in bringing the largest number of new students to the University. The winner of this prize must obtain at least ten new students. Not awarded in 1905-6.

Declamation Prizes. Prizes for the Annual Declamation Contest, open to all regular students. Contest for 1905-6, first prize given by Dr. J. A. Henry; second prize, S. E. Newcomer. First prize awarded in 1905-6 to Charles Horton; second, to J. Ralph Tascher.

Citizens' Oratorical Prizes. Three cash prizes given by lawyers, ministers, and insurance agents, for special contest in oratory. First prize in 1905-6 awarded to J. Ralph Tascher.

Interscholastic Preliminary Oratorical Contest.

Prize given by Mr. B. Ruppe. Awarded in 1905-6 to Grover Emmons. Mr. Emmons also won the Inter-scholastic Contest.

The Cecil Rhodes Scholarship. In accordance with the provisions of the will of Cecil Rhodes awarding two scholarships to each state and territory in the United States, New Mexico has the privilege of sending two students to Oxford, England, every three years. The appointing power for the Territory of New Mexico is vested in the Faculty of the University. Awarded in 1904-5 to Thomas Sydney Bell.

### *Dormitories and Dining Hall*

Two large dormitories were erected in the summer of 1906. They are two-story brick structures of Pueblo style of architecture. In these buildings students who desire to live on the campus will find the most modern conveniences, including bath, electric light and steam heat. The dormitories consist of suites of rooms, each suite containing a large study room and two sleeping rooms, and intended to accommodate two students. The study room is furnished with a table, book cases, chairs and shades. Each bedroom contains a single bedstead, with mattress and pillows, dressing table and closet. Each student, therefore, must supply bed clothes, such as sheets, pillow slips, blankets and coverlets for a single bed. Students must also supply towels and other necessary linen. The Proctor, who is a member of the Faculty, will see that all the rooms in the men's dormitory are properly cared for and that the rules of government are strictly adhered to. A matron has full charge of the women's dormitory. Students must care for their own rooms, a requirement which is not so much a matter of economy as of dis-

cipline and education, as by this means are inculcated habits of cleanliness and thoughtfulness.

The general dining hall is an attractive modern cottage where good board is supplied.

It is recommended to parents and guardians that students should room and board on the grounds, as they are then more directly under the supervision of the Faculty, the discipline required and the observance of study hours being more conducive to good work.

The cost of living at the University, including room, board, lights, and fuel, is \$20 per month. Students attend to their own laundry.

Living can be obtained in the city in good private families, where students have the comforts of home, and are surrounded by good influences, at \$25 per month and upwards.

In selecting boarding places in the city, students should consult the President, who will cheerfully assist all in finding good homes. The Faculty claim the right, and consider it a duty, to exercise a supervisory care at all times over those who do not make their homes with their parents or other natural guardian. To this end the Faculty may properly object to students being at unsuitable places. Students may be called upon whenever it is necessary, to render an account of the manner in which they spend their time when not at the University.

### *Self-Support*

The University has but a small amount of work at its command to offer students, but it is usually possible for them to find congenial employment by which may be defrayed a large portion of their ex-

penses. During the coming year a special effort will be made to assist students to find employment.

### *Expenses*

Tuition is free to residents of New Mexico; to others, \$10 per semester.

An annual incidental fee of \$5 is required of all students; also a Library fee of 50 cents and a gymnasium fee of 50 cents.

Students in laboratory, field and shop courses pay a fee of \$1 per semester hour. An additional deposit of \$1 per hour may be required by the head of any department to cover individual breakage, a part or all being returned to the student at the end of the year.

A fee of \$1 is charged for registration after the first week of either semester.

Living at the University costs \$20 per month, including room, board, light and heat.

All University bills must be paid or satisfactory arrangements made, on date of entrance. No credit for work can be given until all bills are paid.

## College of Letters and Sciences

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### Requirements for Admission

Students are admitted to the College of Letters and Sciences either on satisfactory examination in the required units for entrance, or upon the presentation of the diploma of the University Preparatory School, or of an accredited high school. Certificates of schools not accredited will be considered on the merits of the branches offered. Examinations will be held in all subjects required for admission at the time specified in the University Calendar. Students may, however, take these examinations at the close of the school year when the finals in the Preparatory School are held.

Applicants for admission as undergraduates must be at least sixteen years of age, must present certificates of honorable dismissal from the school previously attended and must have completed the requirements for admission as here described.

Fifteen units are required for admission. A "unit" is defined as a course in a subject covering one school year of thirty-six weeks, with four recitation pe-

riods of at least forty-five minutes each per week. The fifteen units must be distributed as follows:

English .....	3
Language other than English .....	2
Mathematics .....	2 $\frac{1}{2}$
History .....	1
Science .....	2
Elective .....	4 $\frac{1}{2}$
	15

The 4 $\frac{1}{2}$  elective units may be chosen from the following:

English, 1, 2.	Psychology, $\frac{1}{2}$ , 1.
Greek, 1, 2, 3.	Solid Geometry, $\frac{1}{2}$ .
Latin, 2, 3, 4.	Trigonometry, $\frac{1}{2}$ .
French, 1, 2.	Physical Geog'phy, $\frac{1}{2}$ , 1.
German, 1, 2.	Botany, $\frac{1}{2}$ , 1.
Spanish, 1, 2.	Zoology, $\frac{1}{2}$ , 1.
History, 1, 2, 3.	Chemistry, $\frac{1}{2}$ , 1.
Civics, $\frac{1}{2}$ .	Physics, $\frac{1}{2}$ , 1.

Other subjects offered may be accepted upon their merits by the committee on students' standing.

Students intending to pursue Latin and Greek must present 4 units in language other than English, at least 2 of which must be in Latin.

Students intending to pursue science or engineering courses should present Solid Geometry.

### Description of Preparatory Units

The following statements describe more fully the work to be covered in the different unit courses of particular subjects. The unit course of study is defined

as a course covering a school year of not less than thirty-six weeks with four periods of at least forty-five minutes each per week.

#### English (4 Units)

1. *Rhetoric*. One composition each week. Class reading: Merchant of Venice, Silas Marner, Gareth and Lynette, Lancelot and Elaine, and the Passing of Arthur. General reading: Ivanhoe, and whatever other classics the Instructor wishes to assign.

2. *Rhetoric*. One composition each week. Class reading: Julius Cæsar, Ancient Mariner, Life of Johnson. General reading: De Coverley Papers, and whatever other classics the Instructor may wish to assign.

3. *Brief Course in American Literature*. Reading of representative poems and prose selections. Brief course in English Literature and completion of college entrance requirements in reading: L'Allegro, Il Penseroso, Comus, Lycidas, Speech on Conciliation, The Princess, Life of Goldsmith, Lady of the Lake, and Macbeth.

4. *English Literature*. Class and general study of representative poetry and prose from the time of Chaucer.

#### History (3 Units)

1. *American History*,  $\frac{1}{2}$  Unit. A study of United States History through the Constitutional period preparatory to Civics.

2. *Civics*,  $\frac{1}{2}$  Unit. A study of the forms of government of our nation, states, territories, and their subdivisions, their historical development and their governing principles.

3. *Ancient History*. A study of the civilization and governments of the Oriental nations, the Greeks, and the Romans, as found in Myers' *Ancient History* or its equivalent.

4. *Mediaeval and Modern History*. A study of the leading nations of the world from 800 A. D. to the present time, as given in Myer's *Mediaeval and Modern History*, or its equivalent.

#### Psychology (1 Unit)

1. For a unit's credit a course, at least equivalent to that of Gordy's *New Psychology*, including methods of studying Psychology, brain and nervous system as basis for mind study, the problems of consciousness, etc.

#### Latin (4 Units)

1. *First Year*. A thorough drill in forms, syntax and vocabulary. The student should be able to translate easy Latin sentences into English and simple English sentences into Latin.

2. *Caesar*. Four books of Caesar's Gallic War, or an equivalent amount taken from Latin of equal difficulty. Prose composition: Five English sentences translated into Latin daily. Book II of Cæsar's Gallic War should be mastered.

3. *Cicero*. Six orations of Cicero, the Second Catalinarian to be the basis for examination as to points of syntax and translation. Prose composition: Five English sentences to be translated into Latin daily.

4. *Vergil*. Six books of Vergil's Aenid. Written translation and questions in forms, syntax and prosody will be based on Book I; oral translation from



other books. Prose composition: One hour each week with review of forms and syntax.

### Greek (3 Units)

1. *First Year.* Introductory lessons, with practice in forms, syntax, and in a limited vocabulary for reading Xenophon. The student should be able to translate easy sentences from Greek into English, or English into Greek.

2. *Xenophon's Anabasis.* Four books should be read and five English sentences translated in Greek daily. The examination will consist of thorough and comprehensive questions on the first book and eight translations of easy Greek selections.

3. *Homer's Iliad.* Three books should be read carefully and others rapidly. There should be much practice in reading the Greek and mastery of Epic forms.

### Spanish (2 Units)

1. *First Year.* An elementary study of Spanish covering a year's work in the language. This should comprise: (1) Careful drill in pronunciation, an accurate study of inflections and conjugations, agreement of adjectives, participles and a knowledge of the regular and the more common of the irregular verbs, in the indicative and subjunctive tenses. (2) Ability to translate at sight ordinary Spanish into English, and easy prose into Spanish. (3) Familiarity with at least a limited vocabulary of spoken Spanish. (4) Translation and reading of about 150 pages of simple Spanish prose.

2. *Second Year.* A study of the language covering a second year in the study of Spanish. This should

comprise: (1) An accurate pronunciation, and ability to converse in Spanish on familiar subjects. (2) A thorough knowledge of the forms of the language, with much drill in syntax. (3) The translation of about 500 pages of Spanish into English, and ability to translate with ease English prose into Spanish. (4) An accurate knowledge of the inflections and conjugations.

### French (2 Units)

1. *First Year.* An elementary study of French, with emphasis on the following points: (1) Careful drill in pronunciation (Matzke's Primer is strongly recommended). (2) A knowledge of the more simple inflections and conjugations, including use of article, partitive sign, agreement of adjectives and past participles, and knowledge of the regular and the most common irregular verbs. (3) Drill in translating English into French, and ability to translate at sight easy prose from English into French. (4) Reading of about 200 pages of French prose with translation into English.

2. *Second Year.* An advanced study of French, for a second year. The course should include: (1) A thorough mastery of French pronunciation. (2) Careful drill in inflections and conjugations, with study of grammar completed. (3) Abundant practice in composition and conversation, based on texts read. (4) Reading and translation of about 600 pages of French.

### German (2 Units)

1. *First Year.* Knowledge of elementary Grammar, including pronunciation, simple composition and conversation. Reading of about 200 pages of easy German.

2. *Second Year.* The reading of simple German

poems, modern German prose, including several stories and plays, and at least two of Schiller's dramas or the works of Lessing.

### Mathematics (3 1-2 Units)

1. *Elementary Algebra*. The four fundamental operations, factoring, highest common factor, lowest common multiple, complex fractions, the solution of equations of the first degree containing one or more unknown quantities, radicals, zero, fractional and negative exponents.

2. *Plane Geometry*. Including the solution of numerical problems and original exercises.

3. (a) *Solid Geometry*,  $\frac{1}{2}$  Unit. Including properties of dihedral and polyhedral angles, pyramids, cylinders, cones, and spheres.

(b) *Advanced Algebra*,  $\frac{1}{2}$  Unit. Quadratic equations, the binomial theorem, progressions and the use of logarithms.

4. (a) *Plane Trigonometry*,  $\frac{1}{2}$  Unit. Including the six trigonometrical functions, proof of important formulae, solution of right and oblique plane triangles.

### Physics (1 Unit)

1. The required unit includes an amount of class work represented by Carhart and Chute's High School Physics, or Millikan and Gale's First Course in Physics. The instruction in the class room should be supplemented by work in the laboratory to the extent of at least two hours a week throughout the school year.

### Chemistry (1 Unit)

1. To secure a unit's credit the student must

have had a full year's work in descriptive Chemistry, covering both the metals and non-metallic elements, and their common compounds. Laboratory work must accompany the course.

### Natural Science (3 Units)

1. *Botany, 1/2 or 1 Unit.* Special attention to the structure and morphology of phanerogamous plants. Complete written descriptions and the classification of a certain number of phanerogams are required. This work should be supplemented by lectures and demonstrations on the histology of phanerogamous tissue and on the structure and embryology of typical cryptogams.

2. *Zoology, 1/2 or 1 Unit.* Dissections should be made of the representative forms of the main groups of the animal kingdom. In this work written descriptions and drawings are required. In the use of the text and by means of lectures the evidence of a gradual development of animal forms may be reviewed. Principles and methods of classification illustrated by reference to collections.

3. *Elementary Physical Geography, 1/2 or 1*

A detailed study of the atmosphere, the ocean and the land forms, with special reference to their influence on the distribution of life. Recitations must be supplemented by laboratory work. Notebooks will be considered a part of the examination.

### *Deficient Preparation*

An applicant who does not pass the examination for admission on some of the required subjects or whose diploma or certificate does not cover the full requirements for admission may be admitted conditionally;

provided, that the deficiency does not exceed two of the required units. This deficiency may be made up by pursuing the subjects in the Preparatory School.

### *Advanced Standing*

Students coming from other institutions who have taken standard college work equivalent to the work offered in this college may enter the regular course for which they present a certificate without examination, or such examination only as is necessary to determine the class standing and the work for which they are fitted. Such students are also required to present certificates of honorable dismissal.

### *Special Students*

Persons who are not candidates for a degree or who for sufficient reason are not able to pursue a regular course may be entered as special students and may pursue such studies as they may desire and for which they are fully prepared. Such special students are subject to all the other requirements of the University.

### **Requirements for Graduation**

The preparation for admission to college must of necessity determine to an extent the character of the work pursued. Certain definite requirements are made of all students from certain groups of subjects, and all students must complete the prescribed work of some special line of study which runs through three or four years. At the same time the student is granted such freedom in the selection of his work as will be of most educational value, from the point of view of personal choice. Students are required to carry at least fifteen hours of work per week unless excused by the President

and are not permitted to carry over eighteen hours without permission of the Faculty.

The completed work of eight semesters amounting to one hundred and twenty hours and the required rhetorical is the minimum necessary for graduation.

An "hour" is the conventional unit consisting of one hour of recitation or lecture work, or its equivalent of two hours laboratory, field or shop work, per week for one semester.

### *Prescribed Work*

Any student who is a candidate for a degree must take 43 hours of prescribed work as here indicated. At least 24 of these 43 unit hours should be taken during the Freshman year, including English and Trigonometry, or College Algebra:

English .....	6
Mathematics .....	5
Science (Physics, Biology or Chemistry)	16
Language (other than English).....	16
	—
Total .....	43

The 16 units required in language, other than English, must consist of two years in one language, unless the student has had one year of a language which he pursues in college.

Rhetoricals are required of all students except Seniors. One declamation each semester is required of Freshmen; one essay to be read each semester, of Sophomores; and one oration each semester, of Juniors. These exercises will be public. If, however, a student is a member of some University literary or scientific society, he may give his declamation, essay or oration in a regular open meeting of that society.

*Elective Work*

Of the 120 hours required for graduation, 43 hours are outlined in the preceding section. In selecting the remaining 77 hours the student must be guided by the system of major and minor electives. The major electives must be chosen in some one department, which election determines the course in which the student is entered. The minimum amount of work for a major is 24 hours and the maximum 40, according to the requirements of the department in which the major subjects are being taken. If any part of the prescribed work lies in that department it is included in the amount required for the major. At least eight hours of the major subject must be taken at this University. Majors may be taken in English, History, Latin, Greek, Romance Languages, Education, Physics, Mathematics, Biology, Chemistry, Geology, and Engineering.

All candidates for the degree A. B. must present a graduating thesis, the subject of which shall be approved by the head of the department in which the candidate is doing the work. The thesis must represent some phase of the student's work in his major subject. It must be typewritten on good paper, 8x10 in size, and bound according to specifications by the Librarian of the University. Having been approved and accepted by the head of the department, it becomes the property of the University, and must be deposited in the Library before May 1st.

A student may change his major subject only by permission of the Faculty, but in so doing the student must complete all the work required in his major for graduation, no matter how much may have been taken

in other departments.

The minor electives are chosen by the student under the direction of the professor in charge of the major which he is taking from any department of the University. Upon the completion of one hundred and twenty hours and compliance with all the requirements for graduation, the degree of Bachelor of Arts will be conferred. Degrees are conferred and diplomas issued at the annual commencement. A student who does not lack, at the time of the annual commencement, more than eight hours to complete the work, may complete this work before the opening of the Fall Semester and receive a diploma bearing the date of the current year.

The following is a suggestive outline of studies to be taken in the Freshmen and Sophomore years:

#### *Freshmen*

##### *Required*

English, 6 hours.  
 Mathematics, 2, 3 or 5 hrs  
 Language, 8 hours.  
 Science, 8 hours.

##### *Elective*

History, 8 hours.  
 Language, 8 hours.  
 Chemistry, 8 hours.  
 Mathematics, 2 or 3 hrs.

#### *Sophomores*

##### *Required*

Language, 8 hours.  
 Science, 8 hours.  
 Mathematics, 2 or 3 hrs

##### *Elective*

History, 8 hours.  
 Language, 8 hours.  
 English, 6 hours.

In his Junior and Senior years the student will pursue his major subject in some one department and take such minor subjects as the head of that department shall direct. A complete statement of each subject offered in the University will be found under the "General Description of Courses."



## School of Engineering

The School of Engineering was organized in 1906 and the attendance and work done has been very encouraging. The purpose of this department is to train and prepare men to enter the various engineering professions, giving them a four years' college course, leading to the degree of A. B. in engineering. Our aim is always to make entrance requirements and requirements for graduation both up to the standard of leading engineering schools throughout the country. The courses have been outlined to include both professional and cultural studies, in order that the student may not only receive instruction in the theory and practice of engineering work, but may at the same time broaden his views and develop his ability to clearly and effectively present his views verbally or in written reports. Owing to the rapid development in engineering methods and practices, it is necessary that the young engineer should be trained to solve new problems and learn the general principles of applied science, rather than collect a large store of data, no matter how valuable it may be at present. The courses have been outlined so as to include enough of at least one foreign language to enable the graduate to read articles in the technical periodicals of that language. The theoretical and

mathematical branches are taken up in the earlier part of the courses, while the application and specialization make up the latter part. Original investigation and experimental research will be taken up during the fourth year of the course.

### *Equipment*

In addition to the general library, which is at the disposal of all students, there are a number of engineering and other scientific periodicals and books on the reading table and in the departmental libraries of the Science Building.

The Engineering School has instruments for elementary field work in surveying; there are farms laid out on the University grounds for the purpose of giving the student practice in the use of the various surveying instruments. Special attention is given to the use of the level, compass, and transit, with attachments.

The machine shops afford facilities for carpenter work, wood turning, forge work, bench and machine work in iron, pattern making, and installing and assembling of machinery.

The draughting room is equipped with desks and drawing boards, but each student is required to furnish his own instruments, T-square, triangles, etc., for draughting work.

Realizing the value of an organization for presenting and discussing papers on engineering subjects, the students of the Engineering School have organized the University of New Mexico Society of Engineers. This organization combines club and literary society features with a study of current engineering literature. It is a live, flourishing organization, to which practically all of the engineering students belong.

### *Inspection Tours*

From time to time throughout the course inspection tours are made, under the direction of an Instructor, to engineering and industrial establishments in the city of Albuquerque. Through the courtesy of these concerns it is possible for the engineering students to get a much better idea of the actual process and methods in use in up-to-date, practical shops than could possibly be gained in the shops of an educational institution where the equipment must of necessity be limited and more or less obsolete. In this way the observation work in connection with the discussions and practical work at the University shops offer excellent opportunity for the student to become familiar with shop practice.

### *Special Students*

Special students, not working for a degree, may be permitted to take special studies without passing the entrance requirements upon giving satisfactory evidence that they can do so advantageously.

### **Entrance Requirements**

Entrance requirements are the same as those for admission to the College of Letters and Sciences, which are described at the beginning of the description of the College of Letters and Sciences, (see page 36).

### **Undergraduate Courses**

Three years of four-year courses are offered in Civil, Mechanical, Electrical and Mining Engineering, since this seems to cover the present demand; however, by properly selecting electives a stu-

dent could take three years of a four-year course in General Engineering, or two years of a four-year course in Sanitary, Chemical, or Municipal Engineering. Subjects not included in the description of courses may be given in case there is sufficient demand.

### *Required Work*

All candidates for a degree in Engineering are required to present 140 hours of college work; of these the following 63 hours are required of all engineering students:

German, 3, 4 and 5; French or Spanish, 3 and 4..	6
English ..)	6
Mathematics .....	15
Chemistry .....	8
Physics .....	16
Mechanical Drawing .....	5
Structural Engineering .....	2
Steam Engineering .....	3
Hydraulic Engineering .....	2
<hr/>	
Total .....	63

Of the above list at least 28 hours must be taken the first year, and at least 20 hours the second year. In addition to the above list, the following work is required of candidates for graduation by groups:

#### CIVIL ENGINEERING GROUP

Structural Engineering .....	5
Hydraulic Engineering .....	1
Surveying .....	19

#### ELECTRICAL ENGINEERING GROUP

Physics .....	8
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Mechanical Drawing .....	8
Electrical Engineering .....	5
Shop Work .....	4

## MECHANICAL ENGINEERING GROUP

Mechanical Drawing .....	13
Shop Work .....	10
Structural Engineering .....	2
Steam Engineering .....	3

## MINING ENGINEERING GROUP

Structural Engineering .....	2
Surveying .....	7
Geology .....	10

*Thesis*

The conditions governing work on theses will be found set forth under the head of Elective work in the College of Letters and Sciences, (see page 45).

*Elective Work*

In selecting the remaining work the student is under the direction of the professor with whom he is taking his major work. The number of hours elective work for Civil and Electrical Engineering students is 52, for Mechanical 49, and for Mining Engineering students, 58. The detailed statement of Engineering branches will be found under General Description of Courses.

## School of Education

The purpose of the Course in Education is to provide thorough professional instruction for teachers. The academic work is carried on with the University classes, the Normal students thus having the advantage of scholastic work with specialists in the various departments, of ample apparatus and equipment, of the large library, of lectures, of literary societies, and of all privileges incident to participation in University life.

The conscious aim of this department is to bring together the essentials of all that directly bears upon pedagogy from descriptive, physiological, and experimental psychology; from the history of education; from ethics, and from a comparative study of the present educational systems—to the end that students may gain such knowledge of the nature and function of the subject to be taught, as will give ability and power in the process of teaching. But the primary object throughout the course is to secure for the teacher adequate intellectual and moral development, high educational ideas, and the unfolding of his own originality and resourcefulness.

The students of this department have most excellent opportunities for observing regular school work in the modern and progressive schools of the City of Al-

buquerque, where all grades are represented, including a well equipped and excellent High School. There is a decided advantage in observing work where there are several teachers of each grade. Visits are made under the direction of the Instructor at intervals throughout the year.

Before graduation each Normal student is required to teach a designated amount of time that there may be an opportunity for putting theory into practice.

All students who complete the regular Preparatory Course as outlined in the catalogue, or who have graduated from some accredited high school, may be admitted to the Course in Education, as the fifth year's work. The professional studies, however, may be interpolated throughout the Preparatory Course, under direction of the instructor in charge. Upon the completion of the Preparatory Course of four years and the year's professional work, a diploma will be granted. The holder of this diploma is entitled to a five years' professional certificate as issued by the Territorial Board of Education.

If a student completes all the work required in the School of Education and pursues for three years subjects offered in the College of Letters and Sciences including the prescribed work, he will be given the degree of A. B. If in addition to his work in the School of Education he completes three years of college work not including the prescribed units in the College of Letters and Sciences, he will be given the degree of B. Pd.

Complete statements of the courses required of students in the School of Education will be found under the heads of Education and Philosophy in the General Description of Courses.

## General Description of Courses

In the following detailed statements of courses a number and name is used to indicate each course in a department. The semester in which the course falls is given, as is also the time of recitation. The figure and letter at the end of the italics indicate the number of unit hours of credit given for that course toward graduation, and usually the number of recitations or lectures per week.

### *English*

1. *Composition. First Semester. 11:30. 3 h.*  
This course demands the preparation of themes on subjects selected to afford exercise in the various modes of rhetorical expression, with special reference to gathering and ordering of material.
2. *Criticism and Literature. Second Semester. 11:30. 3 h.*  
An introduction to literary criticism; and critical class reading of writers of the Nineteenth Century, especially. Essays on subjects involving collateral reading in the works of authors discussed.
3. *The Drama. First Semester. 2:20. 3 h.*  
The development of the drama from the Miracle plays to the closing of the theaters.
4. *Shakespeare. Second Semester. 2:20. 3 h.*  
Critical study of Shakespeare's style and thought in some of the most important plays, Themes.
5. *English Literature of the Eighteenth Century. First Semester. 3:10. 3 h.*  
Study of the "Classic Age" and of the "Tran-



sition Period." Library reading required.

6. *The Development of English Prose. Second Semester.* 3:10. 3 h.

Particular attention paid to the prose of the Nineteenth Century. Library reading required. Themes.

### Greek

1. *Elementary Course. First Semester.* 3:10. 4 h.  
Forms, syntax, vocabularies and composition.
2. *Xenophon. Second Semester.* 3:10. 4 h.  
The Anabasis, Books I and II. Prose composition.
3. *Xenophon. First Semester.* 11:30. 4 h.  
The Anabasis, Books III and IV. Prose composition..
4. *Homer. Second Semester.* 11:30. 4 h.  
The Iliad, Books I-III. Homeric grammar and prosody.
5. *Hellenistic Greek. First Semester.* 10:40. 2 h.  
Reading and interpretation of St. Luke's gospel and the Acts of the Apostles. (Not offered in 1907-08).
6. *Lysias. Second Semester.* 10:40. 2 h.  
Selected orations. Study of Greek oratory. (Not offered in 1907-08).
7. *Greek Historians. First Semester.* 10:40. 2 h.  
Selections from Herodotus and Thucydides. Outlines of Greek history.
8. *Plato. Second Semester.* 10:40. 2 h.  
The Apology. Study of the history of Greek Philosophy.
9. *Advanced Greek Grammar. First Semester.*  
9:50. 3 h.

This course is offered for those students especially who are preparing for the Rhodes' Scholarship examinations.

10. *Greek Drama. Second Semester. 9:50. 2 h.*

Euripides' *Iphigenia in Taurus*, and Sophocles' *Antigone*. Reading Aeschylus' *Prometheus Bound* and Aristophanes' *Clouds* in translations. (Not offered in 1907-08).

### *Latin*

1. *Cicero and Livy. First Semester. 1:30. 4 h.*

*De Amicitia*, with outlines of Roman philosophy. Selections from Livy, Books XXI, XXII.

2. *Horace. Second Semester. 1:30. 4 h.*

Odes and Epodes. Latin versification. Other lyric writers in translations.

3. *Latin Literature. First Semester. 10:40. 2 h.*

Outlines of the literature with historical settings. The course is based on selections from Latin prose and verse. (Not offered in 1907-08).

4. *Plautus and Terence. Second Semester. 10:40. 2h.*

The *Trinummus* of Plautus and the *Phormio* of Terence. Other plays of these writers will be read in translations. (Not offered in 1907-08).

5. *Advanced Latin Prose. First Semester. 9:50. 2h.*

This course is required of students taking courses 1, 2. It is open to others, especially to those preparing for the Rhodes' Scholarship examinations for Oxford.

6. *Roman Satire. First Semester. 10:40. 2 h.*

Selections from Horace, Juvenal and Per-  
sius.

7. *Tacitus and Pliny. Second Semester. 10:40.*  
2 h.

Tacitus' *Germania*. Pliny's Letters, Book  
X. Study of later Roman history and literature.

### Romance Languages

#### *Spanish*

1. *Elementary Course. First Semester. 11:30.*  
4 h.

Hills & Ford's Spanish Grammar. Worman's Spanish primers. The elements of grammar, reading, pronunciation and conversation. Special emphasis is laid on the acquisition of a correct pronunciation, and a speaking knowledge of the language is one of the ends in view.

2. *Advanced Course. Second Semester. 11:30. 4 h.*

This course is a continuation of Course I with a more advanced study of grammar, reading and conversation. Essays and stories in Spanish with daily drill in composition and conversation. Modern Spanish stories and plays. Alarcón's "El Capitán Veneno" and Echegaray's "El Poder de la Impotencia."

3. *Spanish Literature of the XIX Century. First Semester. 2:20. 3 h.*

A study of the masterpieces of modern Spanish prose, with studies in the history and literature of modern Spain. Reading and translation of works from Pérez Galdós, Alarcón, Pereda and Valdés.

4. *Spanish Literature of XIX Century Continued. Second Semester. 2:20. 3 h.*

The drama of modern Spain. Lectures on Spanish dramatic literature. Reading and translation from the works of José Echegaray, Nuñez de Arce and López de Ayala.

5. *Spanish Conversation. First Semester.* 2:20.  
2 h.

For students who have had Courses 1 and 2 or their equivalent. Essays and stories in Spanish with practical exercises in composition and conversation.

6. *Advanced Spanish Conversation. Second Semester.* 2:20. 2 h.

Prerequisites: Courses 1, 2 and 5. Essays and stories in Spanish with practical drill in conversation. Occasional debates in Spanish.

(Courses 3, 4, 5 and 6 constitute the regular full year's work in second year Spanish, but students may elect only 3 and 4, or 5 and 6.)

7. *History of Spanish Literature. First Semester.*  
1:30. 2 h.

Lectures in Spanish, on the Literature of Spain from its beginnings to the Age of Lope de Vega. Arpa y López "Literatura Española."

8. *History of Spanish Literature, Continued. Second Semester.* 1:30. 2 h.

Lectures in Spanish on the Literature of Spain, from the Age of Lope de Vega to the present time. Arpa y López "Literatura Española." (Courses 7 and 8 are conducted entirely in Spanish.) (Not to be given in 1907-08.)

9. *History of Spanish Literature. First Semester.*  
1:30. 2 h.

The History of Spanish Literature from its beginning to the present time. A rapid course in

the History of Spanish Literature given in English, and open to all advanced students. No knowledge of Spanish is necessary as a prerequisite. (Given in alternate years.) (To be given in 1907-08.)

10. *Beginning Spanish Second Semester.* 10:40.  
5 h.

A rapid course for advanced students. Hills & Ford's "Spanish Grammar," Ramsay's "Spanish Reader," Echegaray's "El Poder de la Impotencia." Students who complete this course satisfactorily may enter the regular second year class.

11. *Old Spanish. First Semester.* 2 h.

Introduction to Spanish Philology. Lectures on Old Spanish Phonology and Morphology. The Sources of the Spanish Language; El Poema del Cid (Pidal); Pidal's "Gramática Histórica Española" (Madrid, 1905).

#### French

1. *Elementary Course. First Semester.* 9:00. 4 h.

Frazer and Squair's French Grammar; Francois and Giroud "Simple French." The aim is to give students an opportunity to read write and speak French correctly, and to this end, Grammar, Pronunciation and easy exercises in Reading and Conversation are the essential features of this course.

2. *Advanced Course. Second Semester.* 9:00. 4 h

Advanced study of Grammar, Reading and Conversation. Modern French novels and plays. "Le Voyage de Monsieur Perrichon;" Bruno's "Tour de la France;" "Tartarin de Tarascon."

3. *French Literature of the XIX Century. First Semester.* 1:30. 3 h.

Reading and translation from the works of Daudet, Maupassant, Marimée, and Labiche et Martin. Conversation and composition based on Francois' "Elementary French Prose Composition."

4. *French Literature of the XVII and XVIII Centuries. Second Semester.* 1:30. 3 h.

The rise and development of the French drama. Corneille, Racine, Molière and Beaumarchais. Composition and conversation based on Francois' "Advanced French Composition."

5. *History of French Literature. First Semester.* 9:50. 2 h.

Duval's "Histoire de la Littérature Française." Lectures and outside reading.

6. *History of French Literature. Second Semester.* 9:50. 2 h.

Lanson's "Histoire de la Littérature Française" and Pellissier's "Le Mouvement Littéraire au XIX e siècle. (Courses 5 and 6 are given in French.)

#### *Italian*

1. *Elementary Course. First Semester.* 9:50. 2 h.

Grandgents' Italian Grammar; Bowen's Italian Reader. Grammar, pronunciation and translation.

2. *Advanced Course. Second Semester.* 9:50. 2 h.

Italian Literature of the XVIII and XIX Centuries. Advanced work in grammar and conversation. Goldoni's "Il Vero Amico," and some prose work of D'Annunzio or Fogazzaro.

**German**

1. *Elementary Course. First Semester.* 9:00. 4 h.  
Otis' "Elementary German Grammar. Mueller and Wenkebach's *Gluck Auf*. A course in elementary grammar, pronunciation, translation, and conversation.
2. *Elementary Course. Second Semester.* 9:00. 4 h.  
Grammar continued, composition, memorizing of simple German lyrics. Storm's "Geschichten aus der Tonne," Zschokke's "Der Zerbrochene Krug."
3. *Second Year Course. First Semester.* 2:20.  
4 h.  
Composition and conversation, two hours. Reading, two hours. Memorizing of German lyrics. Mueller's "Deutsche Liebe," Nichols' "Three German Tales."
4. *Second Year Course. Second Semester.* 2:20.  
4 h.  
Life and Works of Friedrich Schiller, the historical drama, "Wilhelm Tell;" "Maria Stuart;" Life and Works of Lessing; Emilia Galotti; "Minna Von Barnhelm."
5. *Advanced Course. Second Semester.* 2:20. 1 h.  
A course in scientific German, open to students who have completed 1, 2 and 3.

**History**

1. *Mediaeval History. First Semester.* 1:30. 4 h.  
A general survey of the history of continental Europe from the fall of Rome to the close of the Fifteenth Century.
2. *Modern European History. Second Semester.*  
1:30. 4 h.

A general survey extending from the close of the Fifteenth Century to the present time.

3. *English History. First Semester. 2:20. 4 h.*

A general survey with especial reference to economic and social conditions.

4. *American Colonial and Revolutionary History. Second Semester. 2:20. 4 h.*

Especial emphasis will be given to the European influences, to the motives and methods of colonization, and to the social and economic history.

5. *Economics. Second Semester. 11:30. 3 h.*

A general study of the principles of economics and the development and significance of modern problems. Assigned readings and reports by students.

6. *Money and Banking. Second Semester. 11:30. 2h.*

Organization of National banks, privileges and restrictions, operation of clearing houses, etc. Lectures, readings and reports.

### *Library Science*

1. *Elementary Course. First Semester. 9:00. 2 h.*

The purpose of this course is to teach students how to use the library and to give them a general idea of library work. Special emphasis will be given to the principles which should guide in the selection of books for a school library and to the relation of the public library to the public school.

2. *Elementary Course. Second Semester. 9:00. 2 h.*

The purpose of this course is to teach students how to care for a library. The following



subjects will be included in the course: How to order books and periodicals, trade bibliography, accessioning, classification, author numbers, shelf listing, simple cataloging, mechanical preparation of books for the shelves, how to care for gifts and exchanges.

3. *Advanced Course. First Semester. 9:00. 2 h.*  
Open to students who have completed Library II. Advanced work in cataloging, classification and reference. Other subjects included in the course are: Care of serials, binding, charging systems, library legislation, organization and administration.

#### *Education*

1. *History of Education. First Semester. 1:30. 5 h.*  
Education in the Orient, the ancient classical nations, and in Europe before and after the Reformation, including discussions of great educational leaders. Reference texts: Davidson, Monroe and Painter.
2. *Education in the United States Second Semester. 1:30. 4 h.*  
Educational conditions in colonial, revolutionary, and reorganization periods. Study of leading educational institutions and state systems. Influence of the church on education. Work presented by topical outlines, questions, lectures and library readings. Dexter's *History of Education in the United States*, the special reference, with Brown's *Making of Our Middle Schools*.
3. *School Management. Second Semester. 1:30. 1 h.*

The fundamental laws of the school. The law evolving the organism. The organism executing the law. Influence of social combinations. School economy. Text: Tompkins' School Management.

4. *Orthoepy. First Semester. 9:00. 3 h.*

The purpose of the work in orthoepy is to give a scientific basis for teaching the sounds of the language, an intelligent use of the dictionary, and the cultivation of the voice. The subject is viewed under the following topics: Vocal physiology as the basis for voice production; phonology; analysis and classification of vocal elements; diacritical marking; imperfections of English orthography; noted attempts at perfect phonetic representation; orthoepic elements—syllabication, accentuation, articulation; vowels and consonants in unaccented syllables; special dictionary study; comparisons of systems of dictionary markings; onomatopy; theories of the origin of speech and language; difference between speaking and singing tones. Special reading work will involve a consideration of rythm in human speech and animal utterances, the discovery and significance of inflection, and the employment of gesture.

5. *Educational Methods. Second Semester. 9:00. 5 h.*

"The law in the mind and the thought in the thing determine the method." In a general view of the subject of methodology consideration is given to the teaching process, analysis and synthesis, induction and deduction, correlation, concentration, apperception, theory of the culture epochs, etc. Specifically, application of general principles is

considered, and steps pointed out in teaching the various school subjects.

*Reading.* Nature of reading, its general and comparative value. Analysis of the reading process. Mental steps in expression. Reading as a mode of thinking. Relative importance of silent and oral reading. Various methods of teaching reading. Supplementary reading.

*Numbers.* Special stress is placed upon the development and close relation of the various phases of arithmetic. Psychological nature, origin, and development of number, which is the measurement of energy. Form, size and weight defined as results of energy. The decimal system. Roman notation, its regular varying scale. Practical presentation of the important subjects of fractions and percentage.

*Geography.* The scheme of concentration with geography as the center. What it includes as a science. Logical and chronological analysis of geographical facts. The earth as a whole and as a member of the solar system. Knowledge to be gained by observation, by inference, by testimony. Study of type forms. Use and abuse of text-books, and maps. Importance of local geography. Consideration of a course of study in geography for the grades. Correlation of history with geography.

*History.* The method work in history seeks to turn the student from the lifeless forms of memorized dates and diagrams to the dynamical interpretation of history as the movement of a people toward freedom. The two factors involved are mind and the facts of history. Historic forces.

The organizing principle—the growth of institutional life. Educational and ethical value of correct interpretation. History in the grades. Use of biography. Historical reading for grades and comparison of text-books in history.

*Child Study* Attention is given to different methods of studying the child, historical accounts of child study movement, records of results from experiments and observation, children of uncivilized peoples, child character in history and fiction, abnormal conditions in children, physical characteristics, plays, secret languages, fears, affections, ideas of punishment and reward.

Attention will be given to methods in physiology, penmanship, and orthography.

### *Philosophy*

1. *Psychology. First Semester. 11:30. 5 h.*

The general subject matter of psychology. Prevailing methods in psychological study. Relation of psychology to other subjects. The brain and nervous system as the physical basis of conscious activity. Conditions of effective mental action—consciousness, attention, habit. Study of sensation. Investigations of the processes of knowing involving a study of presentation—perception; representation—memory and imagination; reflection—judgment, reasoning. Feeling. Willing.

2. *Psychology. Second Semester. 11:30. 4 h.*

Psychology applied to education as the basis of rational pedagogic work. Course 1 or equivalent required for admission to this course. General operations of the mind—acquisition, assimila-

tion, reproduction, with emphasis placed on their educational relation. Constant attention is given in the study of psychology to its bearing upon life and character, and to the application of its principles in the regular school work. Lectures, and readings in Gordy's and Roark's psychologies.

3. *History of Philosophy. Second Semester.* 11:30.  
1 h.

Brief survey of systems of philosophy, ancient and modern. Lectures and assigned readings.

4. *Ethics. First Semester.* 9:00. 2 h.

Theoretical ethics. Aim and motive of action, free agency, problem of evil in the world. Schools of theory with reference to aim and motive. Hedonism, Rigorism, Rationalism. Christian ethics. Application of theory through the various institutions of life, friendship, home, marriage, civil society, state, and a consideration of man's ethical relation to the lower animals.

5. *Logic. First Semester.* 10:40. 3 h.

History of logic, nature, terms, propositions, deductive and inductive methods, logical analysis and criticism of fallacies.

### *Oratory and Elocution*

1. *Elementary Course. First Semester.* 1:30. 2 h.

Vocal interpretation; principles of conversation; short selections in narrative, descriptive and didactic styles; forms of voice; bodily development and control; principles of breathing.

2. *Elementary Course. Second Semester.* 1:30. 2 h.

Studies in varied vocal expression; oratorical reading; Shakespeare's "Merchant of Venice;"

principles and forms of emphasis; time, pitch, force, stress, slide, melody; qualities of voice; exercises for relaxation and poise of body; principles of gesture.

3. *Second Year Course. First Semester. 3:10. 2 h.*

Selected readings from English and American classics; dialect forms of speech; Shakespeare's "Hamlet;" scenes from modern dramas; gestural expression.

4. *Second Year Course. Second Semester. 3:10. 2h.*

Advanced characterization; dramatic reading; Shakespeare's "Macbeth;" original essays and orations; oral discussion and debate; artistic drills.

5. *Public Speaking. First Semester. 3:10. 1 h.*

Lectures on styles of address, construction of speeches and sources of eloquence. Class practice in extempore speaking and oral debate.

6. *Continuation of Course 5. Second Semester. 3:10. 1 h.*

### *Mathematics*

1. *University Algebra. First Semester. 9:50. 3 h.*

Theory of limits; ratio, proportion, variation; arithmetical, geometrical and harmonical progressions; binomial theorem; arrangements and groups; the theory of probability; convergence, divergence, and summation of series; undetermined coefficients; derivatives; logarithms; separation of roots and determinants.

2. *Plane and Spherical Trigonometry. First Semester. 9:50. 2 h.*

This course covers the elementary principles

of trigonometry and enables the student to solve any plane or spherical triangle.

3. *Plane Analytic Geometry. Second Semester.* 9:50. 2 h.

Prerequisite: Courses 1 and 2. The straight line, circle, parabola, ellipse, and hyperbola.

4. *Plane Analytic Geometry. First Semester.* 11:30. 2 h.

Prerequisite: Course 3. The general equation of the second degree and higher plane curves, with an introduction to geometry of three dimensions.

5. *Differential Calculus. Second Semester.* 9:50. 3 h.

Prerequisite: Courses 1, 2 and 3. Differentiation of algebraic and transcendental functions; expansion of functions; indeterminate forms; partial differentiation; and the application of calculus principles in finding tangents, normals, asymptotes, points of inflexion, radii of curvature, evolutes, involutes, the osculating circle, envelopes, singular points and the maxima and minima of curves.

6. *Integral Calculus. First Semester.* 11:30. 3 h.

An elementary course in simple and successive integration with applications of calculus principles for finding lengths of curves, surfaces, volumes and the moments of inertia.

7. *Advanced Differential Calculus. First Semester.* 2 h.

Continuation of Course 5.

8. *Advanced Integral Calculus. Second Semester.* 2 h.

Continuation of Course 6.

9. *Differential Equations. First Semester. 3 h.*  
Prerequisites: Courses 5 and 6.  
Ordinary and partial differential equations with geometric and mechanical applications. Murray's *Differential Equations* used as a text.
10. *Differential Equations. Second Semester. 3 h.*  
Continuation of Course 9.
11. *Analytic Geometry of Three Dimensions. First Semester. 3 h.*  
This course should be preceded by Course 7, or taken with it.

### *Physics*

1. *Mechanics, Sound and Light. First Semester. 3:10. 5 h.*  
Lectures, recitations and two hours' laboratory work per week.  
Prerequisite: Courses 1 and 2 in mathematics, solid geometry and preparatory physics.
2. *Heat, Electricity and Magnetism. Second Semester. 3:10. 5 h.*  
Lectures, recitations and two hours' laboratory work per week.  
Prerequisites: Same as for Course 1.  
May be taken without having had Course 1.
3. *Advanced Work in Light. First Semester. 1:30. 3 h.*  
Preston's *Theory of Light* is used as a text, and may be taken with or without the laboratory work.  
Prerequisite: Mathematics 4 and 6; Physics 1 and 2.



4. *Advanced Work in Light. First Semester.*  
1:30. 2 h.  
A laboratory course designed to accompany Course 3, but may be taken separately.  
Prerequisite: Mathematics 4 and 6; physics 1 and 2.
5. *Advanced Electricity and Magnetism. Second Semester.* 3 h.  
Prerequisite: Courses 4 and 6, in mathematics. A lecture course in advance of the general course, using calculus methods.
6. *Electrical Measurements. Second Semester.*  
2 h.  
A laboratory course, designed to accompany Course 5, but may be taken separately. Required of electrical engineers; elective for others.
7. *Analytical Mechanics. Second Semester.* 3 h.  
Treated especially with reference to the work of engineers. A review of the principles and equations of dynamics, with applications to the harmonic motion and balancing of machines.  
Prerequisite: Mathematics 4 and 6. Physics 1.
8. *Theoretical Mechanics. First Semester.* 3 h.  
Ziwet's Mechanics.  
Prerequisite: Mathematics 4 and 6. Physics 1.
9. *Theoretical Mechanics. Second Semester.* 3 h.  
Continuation of Course 8.
- 10 and 11. *Thesis Work. Two Semesters.* 5 h.  
Special attention is paid to students taking this work, which consists of a thorough investigation along a particular line, with research work directly under the charge of the instructor.

12. *Dynamo Electric Machinery. First Semester.*  
3 h.

Lectures and recitations, with special attention to requirements of engineers. Laboratory work, 1 h.

Prerequisite: Mathematics 4 and 5.

13. *Dynamo Electric Machinery. Second Semester.*  
3 h.

Continuation of Course 12, with special reference to the design of alternators. Laboratory work 1 h.

### *Surveying*

1. *Elementary Surveying. First Semester.* 10:40.  
2 h.

Johnson's Surveying and Smith's Field Manual. Class work covering adjustments and uses of the surveyor's compass, level and transit. One hour field work, half semester. Required of freshmen in civil and mining engineering.

2. *Elementary Surveying. Second Semester.* 10:40.  
2 h.

Continuation of Course 1. Class work covering solar attachments, plane table and sextant, and methods of U. S. Land Survey. Field work with compass, level and transit. One hour field work. Required of freshmen in civil and mining engineering.

3. *Advanced Surveying. First Semester.* 10:40.  
3 h.

Continuation of Course 2. Class work covers a study of higher instruments of precision. Field work a continuation of Course 2, with map work in draughting room. One hour field work.

Required of sophomores in civil and mining engineering.

Prerequisite: Courses 1 and 2.

4. *Topography. Second Semester. 10:40. 2 h.*

Pen and water color work, conventional signs, mapping. Required of sophomores in civil engineering.

Prerequisite: Courses 1, 2 and 3.

5. *Railway Engineering. First Semester. 5 h.*

Theoretical study of surveying and construction work in connection with railway surveying. Three hours field work. Required of juniors in civil engineering.

Prerequisite: Courses 1, 2 and 3.

6. *Railway Engineering. Second Semester. 3 h.*

Maintenance of way, improvement and reconstruction. Required of juniors in civil engineering.

7. *Geodesy. Second Semester. 2 h.*

Johnson's Surveying. Required of juniors in civil engineering.

Prerequisite: Courses 1, 2 and 3.

### *Mechanical Drawing*

1. *Elements of Drawing. First Semester. 4:00.*

3 h.

Tracy's Mechanical Drawing. Lettering, geometrical construction, isometric, cabinet and orthographic projection, and perspective. Required of all engineering students.

2. *Elements of Drawing. Second Semester. 4:00.*

2 h.

Working drawings, draughting room standards, sketching, tracing, blue printing. Required

of all engineering students.

Prerequisite: Course 1.

3. *Kinematics. First Semester. 3:10. 3 h.*  
Relative motion of parts of machinery, linkages, cams, gears, etc. Required of sophomores in mechanical engineering.  
Prerequisite: Course 1.
4. *Descriptive Geometry. Second Semester. 3:10. 3 h.*  
Generation and classification of lines, surfaces and solids, intersections, developments, etc.  
Prerequisite: Course 1.
5. *Machine Design. First Semester. 3 h.*  
The design of machine parts requiring simple calculations for strength. Required of juniors in mechanical engineering.  
Prerequisite: Courses 1 and 3.
6. *Machine Design. Second Semester. 4 h.*  
Continuation of Course 5. Application of principles of mechanics to the design of machine parts. Required of juniors in mechanical engineering.  
Prerequisite: Courses 1, 3 and 5.
7. *Direct Current Motor Design. Second Semester. 2 h.*  
The complete design of a D. C. motor, including specifications and drawings. Required of juniors in electrical engineering.  
Prerequisite: Course 1 in mechanical drawing, and Physics 1, 2 and 12.

### *Hydraulic Engineering*

1. *Hydraulics. Second Semester. 2 h.*  
The flow of water over weirs, through orifices

and pipes, water wheels, turbines, hydraulic power development. Required of all juniors in engineering.

Prerequisite: Courses 5 and 6 in Physics.

2. *Hydraulic Laboratory. Second Semester. 1 h.*

Elementary experiments in connection with Course 1. Required of juniors in civil engineering.

Not given except with Course 1.

### *Structural Engineering*

1. *Materials of Construction. First Semester. 2 h.*

Johnson's Materials of Construction. Strength of materials used in various construction, methods of making strength tests. Required of all juniors in engineering.

Prerequisite: Courses 5 and 6 in Physics.

2. *Masonry Construction. Second Semester. 2 h.*

Theoretical consideration of foundations and other masonry structures, such as arches, dams, etc. Required of juniors in civil, mechanical and mining engineering.

Prerequisite: Course 1.

3. *Bridge Stresses. Second Semester. 2 h.*

Theoretical consideration of stresses in simple bridge trusses, general consideration of various bridges. Required of juniors in civil engineering.

Prerequisite: Course 1.

4. *Bridge Design. Second Semester. 1 h.*

Draughting room work in connection with Course 3. Required of juniors in civil engineering.

Not given except with Course 3.

**Electrical Engineering**

(For courses in Dynamo Electric Machinery, see Physics).

1. *Electric Railways. First Semester. 2 h.*  
Construction, equipment and operation of electric railways, including construction, rolling stock, distributing system and power plants. Required of juniors in electrical engineering.  
Prerequisite: Physics 1, 2, 12 and 13.
2. *Telegraphy and Telephony. Second Semester. 3 h.*  
Theory of telephone, construction and testing of lines, commercial instruments, wireless telegraph. Required of juniors in electrical engineering.  
Prerequisite: Physics 1 and 2.

**Steam Engineering**

1. *Thermodynamics. First Semester. 3 h.*  
Principles of transformation of heat into mechanical energy, perfect, saturated and superheated vapors, refrigeration. Required of all juniors in engineering.  
Prerequisite: Physics 1 and 2.
2. *Steam Engines and Boilers. Second Semester. 3 h.*  
Construction, operation and testing of various types of engines and boilers. Required of juniors in mechanical engineering.  
Prerequisite: Course 1.

**Shop Work**

The courses in machine shop practice consist of graded exercises in various kinds of me-

chanical work, lectures on shop methods and processes, visits to shops, founderies, etc., installing of machinery, use, care and manufacture of tools. The following lines are taken up: Carpenter work, joining, wood turning, pattern making, molding, forging, bench work in iron, machine work in iron. Credit will be given according to the amount and character of the work done. In general, students will spend four hours per week in the shop, receiving two hours' credit. Credit for shop work done in manufacturing concerns will be given only when, in the opinion of the instructor, the work done shall be the full equivalent of that offered at the University.

### Chemistry

1. *General Chemistry. First Semester. 2:20.  
5 h.*

The chemistry of the non-metals and the fundamental laws and theories as illustrated by them are studied. Laboratory work, 2 h.

2. *Qualitative Analysis. Second Semester. 2:20.  
5 h.*

The chemistry of the metals is studied in connection with the qualitative determination of both bases and acids. Analyses of unknowns complete the course. Laboratory work, 2 h.

3. *Quantitative Analysis. First Semester. 10:40.  
5 h.*

Gravimetric determinations of the more important bases and acids. Some time is given to the preparation of inorganic compounds. Laboratory work, 4 h.

4. *Quantitative Analysis. Second Semester.* 10:40.  
5 h.  
Continuation of Course 5. Volumetric methods, including alkalimetry, acidimetry, oxidimetry, etc. Practical analyses are also made so far as the time may permit. Laboratory work, 4 h.
5. *Organic Chemistry. First Semester.* 5 h.  
Chemistry of the aliphatic compounds. Laboratory work, 2 h.
6. *Organic Chemistry. Second Semester.* 5 h.  
Continuation of Course 5. Chemistry of the aromatic compounds. Laboratory work, 3 h.
7. *Physical Chemistry. First Semester.* 5 h.  
Lectures and laboratory work in physico-chemical measurements.
8. *Physical Chemistry. Second Semester.* 5 h.  
Continuation of Course 7.
- 9 and 10. *Assaying and Blowpipe Analysis. First and Second Semesters.*  
Credit in proportion to work completed. The blowpipe work is planned to bear upon the assaying. In assaying, both the wet and the furnace methods are given. The time is devoted almost wholly to practical work. Laboratory, 4 h.  
Prerequisite: Courses 3 and 4.
11. *Water Analysis. Either Semester.* 5 h.  
Mineral and sanitary analysis are made. Laboratory, 4 h.  
Prerequisite: Courses 3 and 4.
12. *Urine Analysis. Either Semester.* 5 h.  
The analyses are made by the usual chemical methods, and also by the aid of the centrifuge. Microscopical examinations of the sediments are



included. Laboratory, 4 h.

Prerequisite: Courses 3 and 4, and preferably 5 and 6, also.

13. *Advanced Courses. Either Semester.*

Advanced work in the foregoing courses may be taken by students with suitable preparation, so far as the facilities of the laboratories permit.

*Biology*

1 and 2. *General Biology. First and Second Semesters. 9:50. 10 h.*

This is essentially a laboratory course in continuation of courses which are required for admission. A study of selected types of animals and plants will serve to illustrate the fundamental principles of biological science in connection with lectures on theoretical biology. Laboratory work, 3 h.

3. *Advanced Zoology. First Semester. 5 h.*

A study of the comparative anatomy of the vertebrates. Representative types of all the vertebrates are studied. Lectures two hours a week and laboratory work three hours a week.

4. *Cryptogamic Botany. Second Semester. 5 h.*

This course is a study of the representative types of the cryptogamous plants by the use of the compound microscope. The morphology and life history of the types are taken up with especial reference to bringing out the relations of the groups and the order and factors involved in the development of the plant kingdom. Laboratory work, 3 h.

5. *Bacteriology. First Semester. 5 h.*

The biology of bacteria, together with the

study of pure cultures in the laboratory.

6. *Bacteriology. Second Semester. 5 h.*

During the second semester the disease forms are studied, and the important questions of sanitation are considered from the bacteriological point of view.

7. *Advanced Physiology. First Semester. 4 h.*

A course intended for students who have had one or more years of college work. Adapted to those who are looking toward medicine.

8. *Histology. Second Semester. 5 h.*

The various classes of animal tissues and organs are studied under the microscope. Some time is given to methods for the preparation of histological material. Laboratory work, 3 h.

9. *Haematology. Second Semester. 5 h.*

Fresh and prepared specimens of the blood are studied, cell counts are made, and the colorless corpuscles classified. Specific gravity and haemoglobin determinations are also made and the volume of the cells is determined by the use of the centrifuge.

### Geology

1. *Meteorology. Second Semester. 5 h.*

The text-book used is Davis' *Meteorology*, with lectures and laboratory work. Special attention is given to the study of the meteorological conditions of this region with reference to the climate problems, under the investigation of the climatological laboratory in compliance with the original design of Mrs. W. C. Hadley, the founder of the laboratory. Laboratory work, 3 h.

- 2 and 3. *Dynamic, Structural and Historical Geology. First and Second Semesters. 11:30. 5 h.*

The subject as presented in Le Conte's textbook is supplemented by lectures, laboratory and field work. Laboratory work, 3 h.

4. *Petrography. First Semester. 5 h.*

After a brief study of the rock-forming materials and the principles of crystallography, the principal rocks of the Rocky Mountains are studied, microscopically. Field work is carried on in connection with the laboratory investigations. This subject may be taken only by students who have an adequate preparation in chemistry and physics. The technique of the petrographic microscope is acquired by practical work. Sections are made by the use of the lithological line. Laboratory work, 3 h.

5. *Paleontology. Second Semester. 8:10. 5 h.*

This course is devoted to a critical study of the fossils of certain geologic formations, with especial reference to the geology of New Mexico. Laboratory work, 3 h.

- 6 and 7. *Geological Research. First and Second Semesters. 5 h.*

Opportunities for research in the unworked field of the Territory are unlimited. Major for thesis.



## GENERAL SCHEDULE OF RECITATIONS

TIME	PROF. ESPINOSA	PROF. ANGELL	PROF. CRUM	PROF. RICHARDS	PROF. CADBY	MISS SISLER MISS HUGGETT	TIME
9:00	French 1, 2, T. W. Th. F.	Math. C	English A			Library Science, T. Th. German 1, 2, A	9:00
9:50	French 5, 6, T. Th. Italian 1, 2, M. W.	Math. A. Math. 1, 5, M. W. F. Math. 2, 3, T. Th.		Physical Geography and Physiology		Latin D	9:50
10:40		Physics A, T. W. F.	Rhetoricals, T. Th.	Logic, T. W. F.	Surveying 1, 2, 3, 4, T. Th. Shop, W. F.		10:40
11:30	Spanish 1, 2, A.	Math. 4, T. Th. Math. 6, M. W. F.	English D	Economics, M. W. F.	Shop, M. W.	Latin C	11:30
1:30	Spanish 7, 9, T. Th. French 3, 4, M. W. F.	Physics 3, 4, M. W. F. Physics 1, 2, Lab. T. Th.	Elocution and Oratory 1, 2, T. Th.	History 1, 2, B, 4 h	Math. B		1:30
2:20	Spanish 3, 4, E. M. W. F. Spanish 5, 6, T. Th.	Physics A, Lab. T. Th. Physics 1, 2, Lab. T. Th.		History 3, 4, M. W. Th. F.	Shop, T. Th.	German 3, 4, B, M. T. Th. F. German 5, W.	2:20
3:10	Spanish 10, 5 h	Physics A, Lab. T. Th. Physics 1, 2, M. W. F.	Elocution and Oratory 3, 4, T. Th. 5, 6, W.	History A	Mech. Drawing 3, 4, T. Th. Shop, M. W.		3:10
4:00					Mech. Drawing 1, 2, T. Th. Shop, M. W.		4:00

## The Preparatory School

The Preparatory School is conducted by the University for the purpose of providing a high standard of college preparatory education. Its course is four years in length and is designed to give a good general education as well as to prepare the student for college. Its special object is to meet the needs of pupils from localities in New Mexico which are not provided with good High Schools.

### *Requirements for Admission*

Pupils are admitted to the first year of the Preparatory School either by certificate or examination. When admitted by certificate, pupils from large towns are required to present a certificate, properly signed by teacher and superintendent, stating that the work of the primary and grammar grades, including the eighth, has been satisfactorily done. A student from a rural district should bring a certificate of graduation from the eighth grade, signed by the county superintendent. If this is not possible, a statement from the teacher of the school will be considered.

Applicants for admission who can not produce a certificate are required to pass a satisfactory examination in the following branches: Arithmetic, English grammar, United States history, geography, reading, spelling, composition, and penmanship. Candidates for admission to advanced standing are required to furnish satisfactory evidence that they have done the

work of the course preceding the class they wish to enter. Such evidence may be given either by certificate or by examination, as in case of a student applying for entrance to the first-year class.

### *Requirements for Graduation*

The Preparatory Course covers four years, with a standard requirement of four whole year subjects. Each student must carry four studies per day, each study involving an hour and a half of daily preparation. More than four subjects cannot be carried, except by special permission of the Faculty. Such permission is usually granted to students who show diligence and ability enough to complete the course in three years.

In order to graduate, a preparatory student must complete sixteen units, a unit being defined as a subject pursued through one year of thirty-six weeks, with daily recitations of fifty minutes each, or laboratory periods of two hours each.

The units necessary for graduation are described as follows:

English .....	3
Mathematics .....	2½
Language .....	2
History .....	2
Science .....	2
Elective .....	4½
<hr/>	
Total .....	16

The four and one-half elective units may be selected from the following:

English, 1, 2.	Psychology, $\frac{1}{2}$ , 1.
History, 1, 2, 3.	Physical Geography, $\frac{1}{2}$ , 1.
Latin, 2, 3, 4.	Zoology, $\frac{1}{2}$ , 1.
Greek, 1, 2.	Botany, $\frac{1}{2}$ , 1.
Spanish, 1, 2.	Chemistry, $\frac{1}{2}$ , 1.
French, 1, 2.	Physics, $\frac{1}{2}$ , 1.
German, 1, 2.	Stenography, 1, 2.
	Bookkeeping, 1, 2.

Students who are intending to take work in Latin and Greek in college should take at least three units of Latin.

Students electing a language must pursue that language two years.

Rhetorical work is required of all students and consists of one essay and one declamation each semester throughout the preparatory course. An equivalent amount of work done in the Literary societies or on the U. N. M. Weekly staff under the direction of the Professor of Oratory and Elocution, may be substituted for a part of this requirement. Essays written for English classes may be used in rhetorical work.



## Outline of Preparatory Courses

	REQUIRED.	ELECTIVE.
<i>First Year:</i>	English A. Mathematics A. History A.	Science A. Latin A. Spanish A. Stenography.
<i>Second Year:</i>	English B. Mathematics B.	Latin B. Spanish B. Stenography.
<i>Third Year:</i>	English C. Mathematics C.	German A. Science B. Latin C. Bookkeeping. Shop Work.
<i>Fourth Year:</i>	History B.	English D. Physics A. German B. Chemistry A. Latin D. Bookkeeping. Shop Work. Mechanical Drawing

## Description of Courses

In the following detailed statements of courses, each course is known by a letter and a name. The year in which it should be taken and the hour of recitation are also indicated. Recitations are usually daily and are marked 5 *h*, signifying five recitations a week. Two recitations a week are marked 2 *h*, and

for such a course pursued through the year the student receives two-fifths of a unit credit.

*English*

- A. *Composition and Rhetoric. First Year. 9:00.*  
5 h.

One composition each week, supplemented by class exercises in written and oral composition. Class reading: Merchant of Venice, Silas Marner, Gareth and Lynette, Lancelot and Elaine, and the Passing of Arthur. General reading: Ivanhoe, and whatever other classics the instructor may assign.

- B. *Composition and Rhetoric. Second Year. 9:50.*  
5 h.

One composition each week, supplemented by class exercises in written and oral composition. Class reading: Julius Caesar, Ancient Mariner, Life of Johnson. General reading: De Coverly Papers, and whatever other classics the instructor may assign.

- C. *Composition and Literature. Third Year. 1:30.*  
5 h.

Essays. First Semester: A brief course in outline of American literature, with reading of representative poems and prose selections. Second semester: A brief course in outline of English literature. Completion of college entrance requirements in reading: L'Allegro, Il Penseroso, Comus, Lycidas, Essay on Addison, Essay on Burns, Speech on Conciliation, The Princess, Life of Goldsmith, Lady of the Lake, and Macbeth.

- D. *English Literature. Fourth year. 11:30. 5 h.*

General history of English literature. Study

and practice of representative prose and poetry from the time of Chaucer. Optional to seniors.

### History

- A. (1). *Greek History. First Semester.* 3:10.  
5 h.

A detailed study is made of Greek civilization, including art, literature, and philosophy. This course includes a study of the peoples of Western Asia, with special reference to the elements of civilization originated by them and transmitted to the people of the West.

- (2). *Roman History. Second Semester.* 3:10.  
5 h.

A general survey, with special emphasis on the period of the later Republic and early Empire. Study of art, literature and philosophy included.

- B. (1). *Mediaeval History. First Semester.* 1:30.  
4 h.

A general survey of the history of continental Europe from the fall of Rome to the close of the Fifteenth Century.

- (2). *European History. Second Semester.*  
1:30. 4 h.

A general survey extending from the close of the Fifteenth Century to the present time.

### Latin

- A. *Beginner's Course. First Year.* 2:20. 5 h.

A study of forms and elementary syntax. A limited vocabulary must be mastered. Translations of easy Latin into English and of simple English sentences into Latin. The class will read short connected passages of Latin prose.

B. *Caesar. Second Year. 9:00. 5 h.*

The first semester will be devoted to a thorough review of forms, syntax and vocabulary and the reading of Caesar's Helvetian War. In the second semester the class will read Books II, III and IV of Caesar's Gallic Wars. Five English sentences to be translated into Latin daily. The times of Caesar, Roman methods of warfare and other subjects will be studied as supplementary work.

C. *Cicero. Third Year. 11:30. 5 h.*

Four orations of Cicero will be read carefully and others rapidly; also Sallust's Catalinarian War. Five sentences to be translated into Latin daily. Classical history and Roman life and customs will be studied in connection.

D. *Virgil. Fourth Year. 9:50. 5 h.*

Selections from Books I-VI; also selected passages from Ovid. Prose composition and review of forms and syntax, one period a week. Literature and mythology of Rome. Prosody and scansion of part of Book I of the Aeneid.

### Spanish

A. *Beginners' Course. First Year. 11:30. 5 h.*

Hill's and Ford's "Spanish Grammar;" Workman Spanish Readers; Echegaray's "El Poder de la Impotencia;" Essays and stories in Spanish, with practical drill in conversation. Special emphasis is laid on the acquisition of a correct pronunciation and a speaking knowledge of the language is one of the ends in view.

B. *Second Year Course. Second Year. 2:20. 5 h.*

Essays in Spanish, with bi-weekly exercises

in composition and conversation. Occasional debates in Spanish.

Spanish Literature of the XIX Century three days a week. Novels and plays from the works of Galdós, Alarcón, and José Echegaray.

### German

- A. *Beginners' Course. First Year. 9:00. 5 h.*  
Otis' "Elementary German Grammar;" reading of easy German stories. Elementary work in composition and conversation.
- B. *Second Year Course. Second Year. 2:20. 5 h.*  
Composition and conversation. Reading of modern German stories. During the second semester the historical drama of Schiller will be read.

### Mathematics

- A. *Elementary Algebra. First Year. 9:50. 5 h.*  
The four elementary processes of whole numbers and fractions, simple equations, involution, evolution, theory of exponents and radical quantities.
- B. *Geometry. Second Year. 1:30. 5 h.*  
An elementary course complete in one year. Wentworth's Plane and Solid Geometry (Revised.)
- C. (1). *Advanced Algebra. Third Year. First Semester. 9:00. 5 h.*  
A rapid review of simple equations, followed by a thorough course in quadratics, graphic representation of equations, theory of indices and logarithms.

*Physics*

- A. *Preparatory Physics. Fourth Year. 10:40.  
5 h.*

An elementary course in Mechanics, Sound, Light, Heat, Electricity and Magnetism. Recitations and laboratory work by the students, in connection with lectures by the instructor.

Prerequisites: Advanced algebra and solid geometry. Students can enter either semester. Laboratory work, 2 h.

*Shop Work*

- A. *Shop Work. Both Semesters. 3 h.*

Six hours per week of bench-work, lathe-work, forging and welding of iron and steel.

*Mechanical Drawing*

- A. *Mechanical Drawing. First Semester. 3 h.*

Six hours per week in the use of drawing instruments and lettering.

*Chemistry*

- A. *General Chemistry. Fourth Year. 2:20. 5 h.*

During the first semester the chemistry of the non-metals and the fundamental laws and theories as illustrated by them are studied. In the second semester the metals are studied in connection with qualitative analysis. Laboratory work is required throughout the course; 2 h. first semester, 3 h. second semester.

*Science*

- A. *Physiology and Hygiene. First Year, First Semester. 9:50. 5 h.*

A thorough course in physiology is recognized as furnishing a basis for all future work in the natural sciences. For this reason it precedes the work in botany and zoology. Especial emphasis is placed upon the laws of hygiene. The microscope is frequently used, and experiments in connection with the text form an important feature of the course.

- B. *Elementary Botany. Second Year, Second Semester. 9:50. 5 h.*

Special attention is given to the structure and morphology of phanerogamous plants. Complete written descriptions and the classification of a certain number of phanerogams are required. This work is supplemented by lectures and demonstrations on the histology of phanerogamous tissue and on the structure and embryology of typical cryptogams.

- C. *Elementary Zoology. Third Year, First Semester. 9:50. 5 h.*

In the laboratory, dissections are made of the representative forms of the main groups of the animal kingdom. In this work written descriptions and drawings are required. In the use of the text and by means of lectures the evidence of a gradual development of animal forms is reviewed. The principles and methods of classification are illustrated by reference to collections.

- D. *Physical Geography. Third Year, Second Semester. 9:50. 5 h.*

A detailed study of the atmosphere, the ocean

and the land forms with special reference to their influence on the distribution of life. The course involves the use of a text-book and regular laboratory work. It is designed to be a second course following the elementary Physical Geography usually given in the grammar grades.



# The Commercial School

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## Entrance Requirements

*English.* A knowledge of English grammar and the Elements of English composition.

*History.* United States, standard text.

*Geography.* Standard text.

*Arithmetic.* Completed.

## Outline of Course

### FIRST YEAR.

English A; Algebra A; Physiology A and Botany B; Stenography A.

### SECOND YEAR.

English B; Geometry B; History A; Stenography B (English or Spanish).

### THIRD YEAR.

English C; Algebra C and an elective; Spanish A, or German A; Bookkeeping C.

### FOURTH YEAR.

Physics A; Spanish B, or German B; Bookkeeping D; Elective.

## Description of Technical Courses

A. *Stenography, First Year.* 2:20. 5 h.

Principles, formation of outlines, vocalization, sound analysis of words, unvocalized outlines, sight reading of moderately difficult short-

hand (engraved extracts from writings of good English authors), business letters.

B. *Stenography. Second Year. 9:00. 5 h.*

(Open only to those who have satisfactorily completed Course A).

Sight reading of engraved extracts from works of standard English writers on law, science, history, etc. Rapid dictation of miscellaneous matter, accurate recording of evidence, verbatim reporting. Standard of speed 100 words per minute. Special stress laid upon the reading of notes. In both Courses A and B, a typewritten transcript of all dictated matter is required. This transcript must be accurate, and correctly spelled and punctuated.

C. *Bookkeeping. Third Year. 10:40. 5 h.*

Accounting. From the fact that all bookkeeping is based upon the same general principles and the requirements of different houses necessitate a different elaboration of the system, initiatory training is given on the following lines:

General Merchandise. Exemplifying the establishment and conduct of the ordinary store. Books of account, balances, etc.

Furniture.

Wholesale Grocery.

Commission.

Involving the use of bills of lading, notes, bills of exchange, leases, bonds, mortgages, articles of agreement, etc. Actual business papers are handled in the class room.

D. *Bookkeeping. Fourth Year. 11:30. 5 h.*

Money and Banking. Modern currencies. Nature and functions.

Banking (Machinery and Methods). Organization of National banks, privileges and restrictions, books used, business transactions by; operations of clearing houses, duties of cashier, assistant cashier, teller, bookkeeper, discount clerk, collection clerk, performed in turn by student.

Manufacturing. Corporations, joint stock companies, how formed, general powers of, terms used by, accounts kept for.

History of Commerce. Growth and development of commerce from earliest times to present day.

*E. Spanish Stenography. Second Year. 5 h.*

Open to those who have completed Course A (English) stenography, and who have a reading knowledge of Spanish.

The Commercial Course differs from the Academic Preparatory Course by the substitution of commercial branches for ancient languages and higher mathematics. Experience has proved that, for students in this school, thorough training in prescribed preparatory work is essential. A diploma is given to those who satisfactorily complete the four years of study as outlined, or who offer an equivalent amount of training.

Students whose preparation has been adequate will, on the recommendation of the instructor, be permitted to pursue the exclusively commercial branches and to complete them in as brief time as natural aptitude and application render possible. A certificate of proficiency in stenography or accounting is granted to special students whose qualifications have permitted them to pursue those subjects alone, and whose attainments justify such recognition.

## Students

### Graduate Department

Huggett, Lillian G., A. B.  
Parsons, Josephine S., A. B.  
Sisler, Della J., B. L. S.

### College Department

#### SENIOR CLASS.

Cunningham, Kate. Niven, Isobel Ogilvie.  
Harsch, Rose M. Preston, Wm. Knowlton.

#### JUNIOR CLASS.

Keller, Allan F. Smith, Fleda Emma.  
Murphy, Beatrice. Tascher, John Ralph.

#### SOPHOMORE CLASS.

Bryan, Hugh McClellan. Loucks, Flossie.  
Bryan, Kirk. Nash, Vera.  
Clancy, Albert H. Ross, Edmund.  
Hayden, Clifford. Spitz, Lillian E.

#### FRESHMAN CLASS.

Allen, Walter R. Nash, Nellie.  
Baldwin, Roy Alvin. Peavy, Julius Franklin.  
Bronson, Gilbert E. Pottner, Otilla M.  
Emmons, Grover. Pinney, Vida.  
Heald, Clarence E. Rosenwald, Regina.  
Hubbs, Jean Edna. Rogers, Clarence E.

Jasper, Anita Manila.	Saulsberry, Josh J.
Keleher, Margaret Mary.	Skinner, Bert.
Light, Frank Chellis.	Sturgess, Lloyd.
Luthy, Estella.	Walker, Edith.
Mordy, Jessie Laura.	Wroth, William B.
Mordy, Josephine G.	Zelner, Olive Maud.

## SPECIAL STUDENTS.

Garven, William S.	Hazeldine, May.
Purdy, Edith Mae.	

## Preparatory Department

## SENIOR CLASS.

Albright, Elwood Mills.	Keleher, Eugenia.
Allen, Tillie F.	Knowlton, Rosella.
Black, Yola Du Vale.	Lee, Lawrence Fred.
Crawford, Bernard H.	Marquette, Mildred Louise.
Ellsworth, Eliza Frances.	McMillan, William.
Franklin, Marion.	Murphy, Berenice.
Gonzales, James.	Palmer, Lulu M.
Harrison, Edith M.	Stowell, Lola.
Heald, Kenneth Conrad.	Van Cleave, Errett.
Hesselden, Lillian Marie.	Wagner, John George.
Holliday, Robert C.	Worth, Clarence E.
Huning, Dolores Frances.	

## JUNIOR CLASS.

Densler, Lewis Austin.	Knote, J. W.
De Tullio, Stella.	Lembke, Charles H.
Edie, Lucy La Verne.	McLaughlin, Gladys Grace.
Espinosa, Imelda.	Owens, Beuna May.
Franklin, Bell.	Sackett, Elsie Emily.
Goss, Ruth Evelyn.	Selva, Lawrence L.
Strayer, Margaret Janet.	

## SOPHOMORE CLASS.

Bearrup, Helen.	Harrison, Noel P.
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Brainard, Ethel.	Hart, Ida.
Brison, Janet.	Jones, Theta.
Cornish, Gillette.	Kelly, Clyde.
Emmons, John Jefferson.	Letarte, Alvina.
Emmons, Jesse Eugene.	McMillen, Eileen.
Espinosa, Gertrude.	Philips, William A.
Floyd, Hugh.	Philips, Susie.
Forbes, Frederick.	Snoeberger, Hilda.
Duncan, Gordon.	Thomas, George.
Giegoldt, Earle S.	Zirhut, Hazel A.

## FRESHMAN CLASS.

Abbott, Lyle Elmer.	Galles, Herbert.
Allen, Lura Edna.	Galles, Walter E.
Ament, Nina.	Jones, Frank F.
Andrus, Neva Roxy.	Kutzner, Edith Dale.
Anderson, Sigurd R.	Mayo, Norman William.
Boatright, Frank.	McCollum, Arthur.
Boldt, Ira Vance.	Menaul, Paul S.
Brill, Homes Clifton.	Mueller, Geo. C.
Clements, Josie Hansel.	Notley, Hattie Louise.
Coss, Harry G.	Reed, William.
Dickinson, Phoebe.	Shroeder, Erna.
Field, Carroll E.	Shutt, William G.
Frank, Harry M.	Swisher, Edwin Donald.
	White, Fred A.

## SPECIAL STUDENTS.

Dobson, Sue Patten.	Noyer, Carlos.
Goss, Chester A.	Noyer, Helen Nellie.
Grimmer, Kathryn.	Saint, Ethel Mildred.
Keller, David B.	Stacy, King.
Mugler, Myrtle Rose	Mary.Stone, Mabel Irene.

## Summary

COLLEGE DEP'T.		PREPARATORY DEP'T.	
Senior year.....	4	Senior year .....	23
Junior year.....	4	Junior year.....	13
Sophomore year....	8	Sophomore year....	22
Freshman year.....	24	Freshman year.....	27
Special students....	3	Special students....	10
<hr/>		<hr/>	
Total .....	43	Total .....	95
Graduate Department .....			3
Total number of Undergraduates .....			138
<hr/>		<hr/>	
Grand total .....			141

## Alumni Directory

The Alumni Association was organized in 1894 and has not failed since then to hold an annual meeting and banquet.

The officers for 1907 are:

President—Roy A. Stamm.

Vice-President—Anna Allen.

Secretary and Treasurer—J. Ralph Tascher.

Corresponding Secretary—Hugh M. Bryan.

Chairman Executive Committee—Lillian G. Huggett.

### Class of 1894.

Katherine Orbin Adams.....Los Angeles, Calif.

Mary (James) Scruggs.....Albuquerque, N. M.

Jessie (Keith) Ruth.....Pomona, Calif.

Elizabeth (Menaul) Nicholson....Bridgeport, Okla.

Frances (Nowlin) Wittwer (deceased).

C. E. Hodgin (Principal Normal School, University of New Mexico).....Albuquerque, N. M.

### Class of 1895.

Bessie (Buchanan) Nelson.....Winslow, Ariz.

Helen Booth (deceased).

Josephine (Hamm) Williamson.....Douglas, Ariz.

Etta (Vaughn) Oliver.....Blackrock, N. M.

### Class of 1896.

Henry Kempenich (business manager).....

.....Holbrook, Ariz.

Edmund Mills Clayton (physician).....

.....Albuquerque, N. M.



George Gilbert Kunz (physician)....Tacoma, Wash.  
 Carl Arno Muensterman (chemist).....Peoria, Ill.

Class of 1897.

Mabel (Alger) Kinney.....Salt Lake City, Utah.  
 Maynard Caldwell Harding (physician).....

.....Denver, Colo.

Blanche (Holden) Morgan.....Omaha, Neb.

Charles W. Ward (attorney).....Las Vegas, N. M.

Class of 1898.

John Weinzirl, M. S. (Director Hadley Climatological Laboratory, University of New Mexico).....Albuquerque, N. M.

Mabel (Wakefield) Moffit.....Tucson, Ariz.

Edyth L. Everitt (teacher, public schools).....

.....Albuquerque, N. M.

Hereford G. Fitch (attorney).....Oakland, Calif.

Lewis C. Brooks (secretary, treasurer and manager, American Oyster Co.).....Neosha, Wis.

Roy A. Stamm (merchant).....Albuquerque, N. M.

Class of 1899.

George Ellett Coghill, M. S. (Professor, Biology, Embryology and Histology, Willamette University).....Salem, Ore.

Frank S. Maltby (deceased).....

Maud E. Custers (teacher, public schools).....

.....Albuquerque, N. M.

Herbert O. Brooks (manager San Jose Market) ..

.....Albuquerque, N. M.

James G. Fitch (attorney).....Oakland, Calif.

Frances (Halloran) Marron.....Albuquerque, N. M.

Roderick Stover (electrical engineer).....

.....Albuquerque, N. M.

John Bascom Terry (University of California) ..

.....Berkeley, Calif.

Florence Vann (stenographer, Continental Oil Co.).....Albuquerque, N. M.  
 May (MacDonald) Goodrich.....Los Angeles, Calif.

## Class of 1900.

J. Franklin Messenger, M. S. (Professor of Pedagogy, State Normal School)....Farmerville, Va.  
 Rev. T. A. Bendradt, M. S. (minister).....  
 .....Constableville, N. Y.  
 Mabel (Anderson) Allen.....Flushing, N. Y.  
 Elizabeth (Hughes) French.....Ashtabula, Ohio.  
 Lucy Hazeldine (teacher, public schools).....  
 .....Albuquerque, N. M.  
 Edith Niles.....Chicago, Ills.  
 Frances Pole.....Palo Alto, Calif.  
 Deo McKnight Clayton.....Albuquerque, N. M.  
 Nellie C. Brewer (stenographer)..Albuquerque, N. M.  
 Harry N. Herrick (University of California, College of Mining Engineers).....Berkeley, Calif.

## Class of 1901.

Dr. Douglas W. Johnson (Assistant Professor of Physiography, Harvard University).....  
 .....Cambridge, Mass.  
 Eva W. Johnson, B. S. (trained nurse).....  
 .....Los Angeles, Calif.  
 J. G. Maxon (student Hahnemann Medical College).....Chicago, Ill.  
 S. Mabel Bliss.....Albuquerque, N. M.  
 Bertha Crocker.....California  
 Ruby Custers.....Albuquerque, N. M.  
 Jessie (McMillen) Stroup.....Albuquerque, N. M.  
 Elizabeth Powers (teacher of music).....  
 .....Albuquerque, N. M.  
 Mata E. Tway (teacher, public schools).....  
 .....Albuquerque, N. M.

- Freda (Barth) Tyroler.....Los Angeles, Calif.  
 Harvey P. Bittner (Stanford University)..California.  
 Bessie Bowden (University of Kansas)....Lawrence.  
 Frances (Butts) Stevenson.....Albuquerque, N. M.  
 Etta C. Halloran.....Berkeley, Calif.  
 Laura Krawinkle.....Los Angeles, Calif.  
 James S. Wroth (electrical engineer)..Tonopah, Nev.  
 Katie (Vann) Blair.....Albuquerque, N. M.  
 Olivia Everett (private stenographer for Dis-  
 trict Attorney).....Albuquerque, N. M.  
 Ida (Johnson) Shields....Jemes Hot Springs, N. M.  
 Mary (Turner) Ward.....Las Vegas, N. M.

Class of 1902.

- Bruno E. Dieckmann (musical study).....  
 .....Brussels, Belgium.  
 Ralph A. Halloran (University of California)...  
 .....Berkeley, Calif.  
 Lillian G. Huggett (instructor in Latin and Ger-  
 man, University of New Mexico).....  
 .....Albuquerque, N. M.  
 Thos. F. Keleher, Jr. (clerk, Bank of Commerce)  
 .....Albuquerque, N. M.  
 Irma Tascher.....Chicago, Ills.  
 Linus L. Shields (Sup't. San Diego Land Grant  
 for Jemes Land Co.)..Jemes Hot Springs, N. M.  
 Nellie C. Brewer (stenographer)..Albuquerque, N. M.  
 Minnie E. Craig( teacher, public schools).....  
 .....Albuquerque, N. M.  
 Oliver J. Van Wagnen (Theological Seminary)  
 .....Berkeley, Calif.  
 Mabel C. Hunt (teacher, public schools).....  
 .....Albuquerque, N. M.  
 Edna Manwarin.....Newkirk, Okla.  
 Lou Hughes (stenographer).....Albuquerque, N. M.

- Raymon Neilson.....South Africa  
 Norah Werner.....Albuquerque, N. M.  
 Norah Towner (teacher stenography, University  
 of Arizona).....Tucson, Ariz.

## Class of 1903.

- Gustav Alfred Magnusson, A. B. (Medical School,  
 University of Wisconsin).....Madison.  
 Lillian Gertrude Huggett (assistant in Latin and  
 German, University of New Mexico).....  
 .....Albuquerque, N. M.  
 Sarah Frances Irwin (teacher).....Elk City, Okla.  
 Harriet Kile Bieghler (teacher).....Rawlins, Wyo.  
 John Ralph Tascher (College Course, University  
 of New Mexico).....Albuquerque, N. M.  
 Louis Carl Becker (cashier First National Bank)  
 .....Belen, N. M.  
 Morris Ramsey Bowie (Medical College).....  
 .....Baltimore, Md.  
 Walter Rupert Atkeson (civil engineer).....  
 .....Visalia, Calif.  
 Gladys McCaw Childers.....Albuquerque, N. M.  
 Florence Leslie Fox (public stenographer).....  
 .....Albuquerque, N. M.  
 Lucile (Duckworth) McCrary.....Roswell, N. M.  
 Elizabeth Powers (teacher of music).....  
 .....Albuquerque, N. M.

## Class of 1904.

- Josephine S. Parsons, A. B. (Principal Commer-  
 cial School, University of New Mexico)....  
 .....Albuquerque, N. M.  
 Kate Cunningham (senior in College course, Uni-  
 versity of New Mexico)....Albuquerque, N. M.  
 May Hazeldine (College Dep't., University of  
 New Mexico).....Albuquerque, N. M.

- Rose Harsch (Senior in College course, University of New Mexico).....Albuquerque, N. M.  
 Fleda Smith (Junior in College course, University of New Mexico).....Albuquerque, N. M.  
 Ray Bean (Dental College, University of Southern California).....Los Angeles, Calif.  
 Gilbert Bronson (Engineering School, University of New Mexico).....Albuquerque, N. M.  
 Erna Fergusson (traveling in Germany).....  
 .....Albuquerque, N. M.  
 Stella Boatright (music teacher)..Albuquerque, N. M.  
 Rose (Huntzinger) Hughes...Albuquerque, N. M.  
 Helen Pratt (music teacher).....Los Angeles, Calif.

Class of 1905.

- Thomas Sidney Bell (Rhodes student, Oxford University) ..... England  
 Maud C. Graves (Supervisor of Manual Training).....San Bernardino, Calif.  
 Adah Vaughn (teacher, Albuquerque public schools).....Albuquerque, N. M.  
 Fleda E. Smith (College course; University of New Mexico).....Albuquerque, N. M.  
 Hugh M. Bryan (College course, University of New Mexico).....Albuquerque, N. M.  
 Maria Espinosa (teacher).....Barelas, N. M.  
 Clarence E. Heald (College course, University of New Mexico).....Albuquerque, N. M.  
 Elizabeth Heald (teacher).....San Rafael, N. M.  
 Lloyd Irwin (University of Oklahoma).....  
 .....Norman, Okla.  
 Lloyd Sturgess (College course, University of New Mexico).....Albuquerque, N. M.  
 Beatrice Sleight (teacher)..South Albuquerque, N. M.  
 Lena Faber (stenographer).....Albuquerque, N. M.



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