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# BULLETIN

OF THE

University of New Mexico

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MARCH, 1910

VOLUME 20

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## CATALOGUE

1909-1910

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ANNOUNCEMENTS FOR 1910-1911

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ALBUQUERQUE, NEW MEXICO

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# PUBLICATIONS

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OF THE

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## University of New Mexico

**A**LL 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:

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*Biological Series, Vols. I-III; whole numbers 15, 16, 19, 22, 29-39, 44, 47, 49.*

*Geological Series, Vols. I-III; whole numbers 17, 18, 20, 21, 23-28, 28a, 51.*

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CATALOGUE, 1909-1910

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ANNOUNCEMENTS

1910-1911

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ALBUQUERQUE, NEW MEXICO

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JOURNAL PUBLISHING COMPANY

ALBUQUERQUE, N. M.

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Founded February 28th, 1889

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## **General Information**

### *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 ever since 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 herein-after 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 sev-

eral 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 continued in office from the beginning are E. S. Stover and F. W. Clancy. Others whose names have appeared since are, W. B. Childers,

J. H. Wroth, J. C. Armijo, E. V. Chaves, H. L. Waldo, Fletcher Cook, A. M. Mandalari, W. D. McBee, and W. J. Johnson.

The first faculty elected consisted of: President, E. S. Stover; Principal, George S. Ramsay; Alcinda L. Morrow, Marshall R. Gaines, Albert 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. The third president, Dr. W. G. Tight, served from 1901 till 1909. Upon his resignation, Dr. E. D. McQueen Gray was elected by the Board of Regents.

After the passage of the act creating the University, the Board of Regents secured the stipulated amount of land, and the erection of a suitable building was begun as soon as the requisite funds were available. The structure was completed and accepted by the Board in May, 1892.

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

In 1896 a gymnasium was erected and equipped.

The Hadley Laboratory, largely the gift of Mrs. Walter C. Hadley, supplemented by donations from friends of the institution in Albuquerque and other parts of the Territory, was erected in 1899.

The administration of Dr. Tight was marked by definite advance in all departments of the University. In 1902, a start was made in providing accommodation for resident students, rooms for men being fitted

up in the Administration Building, and a cottage on the campus arranged as a girls' dormitory. In 1904, the men's quarters were moved to a separate building in the neighborhood of the campus. In 1906, two dormitories, constructed in the Pueblo Indian style of architecture, were erected along the eastern border of the campus. The cottage then became the Dining Hall, and by means of an addition in the summer of 1908 was rendered capable of meeting the requirements of the increasing number of students.

In 1908, the Administration Building was entirely remodeled, and another building added, to serve as a lecture, concert and assembly hall, to the north of the Administration Building. To this new building the name of Rodey Hall was given in recognition of the valuable services rendered by Delegate Rodey to the University.

With the beginning of the academic year 1909-10, several important changes in the administration and operation of the University came into effect. The College of Science and Engineering was separated from the College of Letters and Arts and placed under the direction of a Dean and College Faculty; and three new administrative positions, Dean of the College of Science and Engineering, Dean of Women, and Principal of the Preparatory School, were created; and the office of Proctor of the Men's Dormitory was placed upon a permanent basis. The distinction between the Preparatory School and the University proper was rendered definite, and separate study and assembly rooms were assigned to this branch of the Institution; the classes of the Preparatory School were reduced to three, and the completion of the ninth grade of an accredited High School (or the equivalent thereof)

was fixed as the minimum requirement for entrance to the School; some addition was made to the list of prescribed studies in the College; and a systematic effort was made to provide employment, by means of a Bureau of Student Appointments, for all needy students. In general, the object of the changes has been: (1) to raise the standard of entrance, both to the Preparatory School and to the University; (2) to distinguish more definitely than heretofore between the literary and scientific branches of academic training; and (3) to bring the University into more direct contact with the High Schools of the Territory.

### *Situation and Environment*

All writers who have treated the subject of the climatic conditions of the American continent in their relation to health and disease, are agreed in admitting that the south-eastern slopes and spurs of the Rocky Mountain range, with their elevated plateaus, upland valleys, and gently sloping stretches of open country, embrace within their boundaries the most salubrious region in the United States. In the very centre of this "health zone," as it may be termed, stands the city of Albuquerque, the most populous town in New Mexico, and the commercial capital of the Territory.

Albuquerque lies on the main line of the Atchison, Topeka and Santa Fe Railway System, at the junction of the lines to El Paso and Mexico on the south, Arizona and California to the west, the Pecos Valley and south-eastern Texas to the east, and through Colorado to Kansas City and Chicago to the north; so that it enjoys railroad facilities unequalled by any other town in this region.

The situation of the city is in every respect admira-

ble. It occupies the centre of a strip of highly fertile land on the left bank of the Rio Grande—the Rio Grande del Norte of the Spanish discoverers—at an elevation of five thousand feet above the level of the sea, in the valley formed by the river as it makes its way between the mountain ranges to the east and west; and the protected situation of the city has contributed not a little to the salubrity of its climate.

On the mesa, or elevated plateau east of the city, and about a mile distant from it, stands the University, overlooking with its seven buildings the wide valley of the Rio Grande. The free, pure air of the mesa, bracing and invigorating, surrounds the spot, and lassitude and depression are unknown in this buoyant and refreshing atmosphere. The walk to and from the city is a healthful exercise; and an omnibus plies twice daily between the University and the town for the convenience of those who choose to avail themselves of this means of conveyance.

Extremes of temperature, either of heat or cold, which not infrequently impede the progress of educational work in other localities, are unknown in this section of New Mexico. Owing to this fortunate circumstance, all the varied activities of college life, the work and play together, pursue the even tenor of their way throughout the academic year, unhindered by stress of weather. This boon of climate has proved an important factor in the growth of the institution; and while the University authorities wisely refuse to receive students suffering from pulmonary or other organic diseases, yet many of our less vigorous youths, for whom a continued course of study would be dangerous or even impossible in a less favored region,



have come from time to time from distant States to the University on the Rio Grande, and there gained health and strength while pursuing their studies and completing their education.

The New Town of Albuquerque—for there is also an Old Albuquerque, dating from the times of the first Spanish settlers, and still typically Spanish in appearance—is an essentially modern city, with well-graded streets, concrete sidewalks everywhere, electric lights, a system of tram-cars, important mercantile and manufacturing establishments, two daily newspapers, and other concomitants of modern civilization.

It is also an educational centre, possessing in addition to the University many schools of various kinds; while the public school system of the city may compare favorably with those of much larger eastern towns.

It is also a city of churches, all the leading religious denominations being efficiently represented; and the members of all the churches gladly welcome the University students to share in their religious and social life. The University's position in regard to religion is strictly non-sectarian, and the students are encouraged to attach themselves to the religious organization with which their families are connected; and a daily chapel service, to which all students are invited, is held in Rodey Hall every morning during the academic year.

A weekly General Assembly at which the attendance of the whole student body is required, is also held in Rodey Hall. At this Assembly addresses are delivered on various topics of interest by the members of the faculty and by visitors to the University and the city. Opportunity is thus afforded to the students to hear

many eminent speakers. Short lecture courses on special subjects are sometimes arranged in connection with the General Assembly period.

The advantageous position of the city on the main line of passenger traffic east and west, furnishes to the citizens many opportunities of seeing and listening to persons of distinction in almost every department of public effort; and concerts, lectures, plays, musical and literary gatherings follow in almost unbroken succession throughout the year. The advantage to the young student of association and environment of this kind, can hardly be over-estimated.

In general, the aim of the University is to develop true scholarship and to maintain a high standard of thought and conduct; and the authorities of the institution believe that by regarding these requisites as the prime essentials of a university education, towards the promotion of which all academic effort must contribute, they will best fulfill their duty to the institution and to the Territory.

### *Laboratories and Museums*

The Hadley Climatological Laboratory, on the south side of the campus, furnishes a home for the scientific departments. On the first floor are found the zoological, botanical and geological laboratories. 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. On the second floor are the physics and chemical laboratories. The assaying and electrical testing laboratories are placed in the basement.

The Hadley Laboratory was designed by its founder for the study of the effects of the various climatic fac-

tors of the Southwest. This study was intended to bear more especially upon the problem of the climatic cure of tuberculosis, and to this end all the scientific departments are laid under contribution.

Museums. In addition to the collections in the botanical and geological departments, the University possesses the nucleus of a museum representative of the region and the races that have inhabited it. In order to make this collection more worthy of the institution and the subject it represents, all friends of the University are requested to assist in procuring material for the collections. It is of special interest to secure specimens of the works of the early inhabitants of this region before it is too late. All donations will be permanently stored in the University and credited to the giver.

### *The Library*

The University library contains about 8,000 volumes, exclusive of unbound pamphlets and duplicates. This includes both the main library and the departmental libraries, which are shelved in rooms adjoining the 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 catalogue 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 9:00 a. m. to 5:00 p. m.

In addition to complimentary periodicals and exchanges, the following periodicals are subscribed for:

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*University Extension Work*

The University, as a territorial institution, desires to be of service to the general body of citizens and to develop its extension work as much as possible. Extension courses in connection with the University may be taken without registration on payment of a small fee. The courses already offered will be found in the lists of courses of the College of Science and Engineering.

The members of the University faculty hold themselves ready to respond to calls for lectures before institutes, clubs and assemblies, whenever such work does not interfere with the regular work of the institution. Several of the instructors who have had experience in the lecture field and in institute work are prepared to give instruction in connection with the educational organizations of the Territory. Calls for such work should be addressed to the Registrar.

*University Examinations for Students of High Schools and Preparatory Students*

Beginning with the year 1910-11, the University will offer yearly examinations to students of the High Schools and Preparatory Schools of the Territory.

Two classes of examinations will be offered, named Junior and Senior respectively. Students in the second year of the High School course will be eligible for the Junior Examination; but only those students who are in the fourth year of High School may enter for the Senior examination.

The examination for both the Senior and Junior examinations will be based upon the course of study for the year, as recommended by the University; and will

be held locally, either in the High School or some other suitable place, under the supervision of a duly appointed representative of the University. Candidates will be known by number only. After identification, the names of the successful candidates, arranged in order of merit, will be sent to the High School authorities and published in the leading newspapers of the Territory.

All successful candidates will receive certificates from the University. Those who acquit themselves with distinction in any subject will receive honours in that subject. Those who gain honours in not less than three subjects will receive an Honour Certificate. No candidate may enter for less than three or more than five subjects at the same examination.

Full particulars with respect to the conditions of entrance, courses of study, text-books, etc., will be found in the Syllabus of the Local Examinations for High Schools; which may be obtained on application from the Registrar of the University.

### *Degrees, Diplomas and Certificates*

*College of Letters and Arts.* Upon the recommendation of the President of the University and the Faculty of the College, the degree of Bachelor of Arts is conferred by the University upon those undergraduate students who have completed at this institution not less than the last year of a four years' college course in accordance with the requirements and regulations of the University.

*College of Science and Engineering.* Subject to similar conditions, the degree of Bachelor of Science is conferred by the University upon the recommendation of the President of the University and of the Faculty of the College of Science and Engineering.

*Educational Degree, Diploma, Etc.* The following are granted upon the recommendation of the President of the University and the Head of the School of Education:

I. The Degree of Bachelor of Pedagogy. Conferred upon those undergraduate students who hold a diploma for a complete course in the art and practice of teaching, entitling the holder to a professional certificate from a State or Territorial Board of Education, and who have completed at this institution not less than the last year of a three years' college course in accordance with the requirements and regulations of the University.

II. The Teacher's Diploma. Conferred upon students of the School of Education who have completed the curriculum of the School in accordance with the requirements and regulations of the University.

III. Collegiate Certificates. Granted to holders of Teachers' Diplomas who are taking regular college courses. The certificates are of two grades, first and second, and are granted after the completion of the freshman and sophomore years respectively.

*Commercial Department.* Upon the recommendation of the President of the University and the Principal of the Commercial Department, a diploma is granted to those students of the Commercial Department who have completed the course offered in accordance with the requirements and regulations of the University.

*Preparatory School.* Upon the recommendation of the President of the University and the Principal of the Preparatory School, a diploma of graduation will be conferred on those pupils of the School who complete

the sixteen units of work as prescribed in the curriculum of the school, in accordance with the requirements and regulations of the University.

### *Class Advisers and Committees*

In order to aid students more effectively, Class Advisers are assigned from the members of the faculty, one for each class in the institution. These advisers are appointed to aid their respective classes, or members of this class, when assistance is needed in personal matters or in University affairs.

The Student Standing Committee decides on all matters relating to the classification of students, value of credits presented from other institutions, and all requests for other than the regular amount of work must be approved by this committee.

The Schedule and Curriculum Committee has supervision of the schedule, considers and makes recommendations to the faculty concerning all changes in the curriculum.

The Discipline Committee, to whom all students are responsible for misconduct or neglect of their duty, whether in the class room or outside, may ask the withdrawal of any student, who does not appear to be benefitted by the advantages offered at the University, or manifests any unwillingness to assist in maintaining good order, or indulges in practices which are detrimental to others or to the reputation of the college.

The Publications Committee supervises all publications sent out under the name of the University, including bulletins, student publications and advertising material.

The Athletic Committee has supervision over all athletics in the University; one member acting as man-

ager and another as secretary and treasurer. All correspondence in relation to athletic contests should be addressed to this manager.

The Rhodes Scholarship Committee takes charge of the examinations open to candidates in this Territory for the Rhodes Scholarships at Oxford. All students desiring information should correspond with the chairman.

The Student Employment Committee has for its aim the aiding of needy students, who are seeking a living while attending college. Work is distributed among those students, to the full extent of University requirements and many positions are filled outside. Students wishing to benefit by this aid or persons desiring to have work done by them should correspond with the chairman of this committee.

The Campus Committee has supervision over all improvements or changes on the campus, and co-operates with the Student Employment Committee in furnishing labor to students.

The Student Functions Committee has charge of all social activities, engaged in under the auspices and in the name of the University. It authorizes dates, places and chaperons, and exercises a general supervision over banquets, picnics, dances, etc., held by the student body as a whole, or by classes.

The purpose of this committee is to prevent a too frequent indulgence in amusements to the detriment of scholastic standing, and to see that the character of student functions be in keeping with the standards and dignity of the institution.

### *Student Organizations*

Voluntary literary societies, the Khiva for men, and the Estrella for the women, have proved 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. There are also a fraternity and a sorority. The Tennis Club has two splendid courts and numbers forty members. The Editorial Boards of the U. N. M. Weekly and the Mirage offer the students opportunity for the practice of energy and enterprise. In Dramatics, a strong organization stages two plays annually. The students of the Engineering Department are organized in the University of New Mexico Society of Engineers. The Oratorical and Debating Association arranges for contests in public speaking and class and intercollegiate debates. All these societies are subordinate to a general Student Body Organization, which insures the careful management of each, acting with the Student Functions Committee of the Faculty. The Thursday Assembly period each week is devoted entirely to student enterprises.

### *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.

### *Prizes and Scholarships*

The Dr. Hope History Prize. Dr. W. G. Hope has established an annual prize of twenty-five dollars for the student recommended by the Instructor in History as having done the best work in that subject.

The "American Oratory" Declamation Contest. This contest, the object of which is to encourage an interest in the great American orations, was instituted by Dr. L. H. Chamberlin. He offers valuable book prizes in connection with the competition.

The E. S. Stover Prizes. The work in the shop and the manual training department has been stimulated through the interest of Hon. E. S. Stover, one of the Regents of the University, who offers prizes which aggregate \$20 for special merit in this department.

### *University Prizes*

Six English Essay Prizes are offered for competition among the students of the University. The prizes consist of valuable books.

The prizes for the year 1909-10 are:

I. The effect of the Roosevelt Idea upon American life and thought. Two prizes offered.

II. The trend of scientific thought during the last twenty years. Two prizes offered.

III. Julius Caesar in Shakespeare and history. Two prizes offered. Open to pupils of the Preparatory School only.

### *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 every three



years to the University of Oxford, England. The selection of scholars from those who have passed the qualifying examination is made in each State or Territory by a committee designated by the Rhodes Trustees. The scholars hitherto selected are: Thomas S. Bell, 1906; Frank C. Light, 1908, and Hugh M. Bryan, 1910.

### *Registration*

The student upon entering presents himself to the treasurer at the office, for the payment of matriculation, tuition, and other fees, and receives a matriculation card, after which he secures from the Registrar the necessary blanks for registration. He then goes to the instructors under whom he is to take work, for their signatures to his schedule card. This card he files with the Registrar, and so completes his registration. No student is considered a member of the University until his registration is fully completed, and unless this is done within five days after the opening of the semester an extra fee is charged.

### *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 in the preparatory department, unless excused by the Student Standing Committee, is required to attend four 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 him.

#### *Absences*

After registration, students are required to attend their classes regularly, and are responsible for absences to the instructor in charge, who may, if he see fit, report them to the Discipline Committee. Serious irregularity will render a student liable to dismissal. Absences amounting to twenty per cent from any class debars the student from receiving a passing grade in that class, except by special examination. For absence from Assembly and other general exercises, the student is accountable to the Discipline Committee.

#### *Change of Courses*

Students may not drop any study for which they are registered without permission from the Instructor and the Registrar.

### *Dismissal*

A student who leaves the University before the close of a semester without 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 examination. An accurate record is kept of their work and examinations are held at the end of each semester. Students making a grade of 90-100 are marked A; 80-90, B; 70-80, C; 60-70, D; below 60, E. The following restrictions apply to preparatory students making a grade lower than A. Students making a B grade are limited to two functions or enterprises per semester outside of class work and C students to one such function; those making a grade lower than C may not take part in any function such as athletics, dramatics, etc., until the work is brought up; preparatory students may not enter into more than three outside functions per semester. College students making B in fifteen hours of credit will have one hour added to the total required for graduation for each fifteen hours of such credit and C students will have one hour added for each seven hours of C work. In college no substitution may be made for failures or conditions towards graduation.

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 by the date indicated in the calendar. 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".

Special examinations, taken at other times than regularly with the class, and not entrance examinations or examinations for advanced standing, can be taken only by presenting to the examiner a permit card from the Registrar and by the payment of a special fee of \$2.00.

### *Class Standing*

To obtain class standing at entrance, or to maintain class standing during the prosecution of a course, the student's condition must not exceed one-third of the work required for that class. The Committee on Student Standing has charge of all matters pertaining to entrance, amount of work, class standing, and graduation credits.

### *Tuition, Fees, Boarding Expenses, Etc.*

#### *Registration Fee.*

An annual registration fee of Five Dollars; also a fee of One Dollar for the Library and Gymnasium. Payment of these fees admits residents of the Territory of New Mexico and their families to all the courses offered at the University; to non-residents a Tuition Fee of Ten Dollars per semester is charged.

#### *Special Fees.*

At the beginning of the academic year (or on registration) a deposit of Ten Dollars, to cover possible breakage or damage to University property, is required

from each student; said sum (or the remainder thereof after deduction) being returnable to the student at the end of the term.

All students presenting themselves for registration later than the fifth day of the semester pay a fee of One Dollar for late registration.

All students who take laboratory, field or shop courses pay a fee of One Dollar per "semester hour" of credit.

### *Board and Lodging.*

Quarters for resident students are provided in two two-story brick buildings, constructed in the Pueblo style, and named respectively the Kwataka (for men) and the Hokona (for women). The dormitories are divided into suites, each consisting of two bedrooms and a sitting room. Two students occupy a suite. The rooms are furnished, and electric light is provided, but the students supply their own bed-linen, towels, etc., and pay their own laundry bills. The Kwataka is in charge of the Proctor; the Hokona is supervised by the Dean of Women, who has the general oversight of all women students. Meals are taken in the Dining Hall, which is in a separate building.

The charge for board and lodging is Twenty Dollars per month, or Ninety Dollars per semester. Except in the case of Indigent Students appointed to Territorial Scholarships, the board bills must be settled monthly.

### *Meals for Non-Resident Students.*

Meals are furnished in the Dining Hall to non-resident students at the rate of Twenty-five Cents per

meal; and luncheon is also provided at the lunch-counter at the mid-day meal on the cafeteria plan, the charge being Five Cents per portion.

*Self-Supporting Students.*

The University recognizes a definite duty toward the needy student seeking to earn his living while attending college; and a Bureau of Appointments has been established for the purpose of distributing work among such students, to the full extent of the University requirements. All applications for student employment must be made to this Bureau. Hitherto, the Bureau of Appointments has been able to furnish sufficient work to all applicants.

## University Calendar

1910.

|                             |                         |
|-----------------------------|-------------------------|
| Jan. 17, Monday,            | Second Semester begins. |
|                             | Registration Day.       |
| Feb. 22, Tuesday,           | Washington's Birthday.  |
| Mch. 24, Thursday,          | Intercollegiate Debate. |
| By Governor's Proclamation, |                         |
| May 13, Friday,             | Arbor Day.              |
| May 15, Sunday,             | University Play.        |
| May 16-17,                  | Baccalaureate Address.  |
| May 18, Wednesday,          | Examinations.           |
| May 19, Thursday,           | Preparatory Graduation. |
| May 20, Friday,             | Senior Class Day.       |
|                             | Commencement Exercises. |

### *The Academic Year 1910-1911*

|                    |  |
|--------------------|--|
| Sept. 12, Monday,  | Registration Day.  |
| Sept. 16, Friday,  | Last date for removing<br>"conditions" of previous semester. |
| Nov. 24, Thursday, | Thanksgiving Day.  |
| Dec. 9, Friday,    | Declamation Contest.   |
| Dec. 17, Saturday, | Christmas Recess begins.                                     |

1911.

|                             |                         |
|-----------------------------|-------------------------|
| Jan. 2, Monday,             | Exercises Resumed.      |
| Jan. 27, Friday,            | First Semester closes.  |
| Jan. 30, Monday,            | Second Semester begins. |
| Feb. 22, Wednesday,         | Washington's Birthday.  |
| By Governor's Proclamation, | Arbor Day.              |

Mch. 31, Friday,

Last date for removing  
"conditions" of pre-  
vious semester.

May 26, Friday,

University Play.

May 28, Sunday,

Baccalaureate Address.

May 29-30,

Examinations.

May 31, Wednesday,

Preparatory Graduation.

June 1, Thursday,

Senior Class Day.

June 2, Friday,

Commencement Exercises.



## Departments

Within the University are comprised:

- I. THE COLLEGE OF LETTERS AND ARTS.
- II. THE COLLEGE OF SCIENCE AND ENGINEERING.
- III. THE SCHOOL OF EDUCATION.
- IV. THE COMMERCIAL DEPARTMENT.
- V. THE PREPARATORY SCHOOL.

### *The Choice of a College Course*

The student who enters college with the intention of deriving the utmost possible advantage from the opportunities offered at the institution of his choice, will approach the question of the selection of his studies with a more or less definite conception of the final purpose of his collegiate career. For, unless he chooses his subjects of study, even at the beginning of his freshman year, in accordance with a coherent plan which shall reach its full development only at the end of his undergraduate course, he is not merely liable to lose the immediate benefit accruing from those early studies when pursued as designed preparation for the work of the junior and senior years, but is exposed to the far more serious misfortune of acquiring during the formative years of adolescence, a habit of desultory and disconnected work which will in all likelihood hinder his advance in special study, and may even prove a serious impediment in the way of final success in life.

With the view of providing, as far as possible, against the commission of such an error, the work of the last two years of the Preparatory School has been

so arranged as to assist the pupil in the proper development of his mental powers in their natural direction; with the not unreasonable expectation that at the end of his preparatory course, he will have arrived at a fairly definite conclusion as to the career he proposes to adopt or the profession he desires to follow.

In order to encourage the college student in the pursuit of a definite plan, the College of Letters and Arts offers for selection several distinct courses, taken from the general list of subjects offered in the different years and combined for the purpose of furthering the prosecution of a coherent scheme of college work, leading to a conclusion indicated at the outset. At present four such courses are offered, leading to special degrees in Arts.

The courses leading to the special degrees in Arts are defined as follows:

*Course A.* Leading to the degree of B. A. in Classics and requiring, inter alia, the study of the Greek and Latin languages and literature throughout the course.

*Course B.* Leading to the degree of B. A. in Modern languages, and requiring, inter alia, the study of at least two modern languages together with the literature thereof, throughout the course.

*Course C.* Leading to the degree of B. A. in Modern History, and requiring the pursuit of the study of Modern History, with at least one modern language, throughout the course.

*Course D.* Leading to the degree of B. A. in Literature, and requiring the study of literature in general, together with special periods as defined, and at least one modern language, throughout the course.

The selection of a course of study thus systematically arranged, and leading to the acquisition of a specially connoted degree, achieves two valuable results; it secures for the student special training from the outset along his chosen line of study, and it attaches a distinctive value to the degree itself. A bachelor's degree in classics will stand for something more than a general knowledge of Greek and Latin; the degree in Modern History will mean that the holder thereof has made that subject his particular study throughout his college course; and so on with respect to the other special degrees. The additional value conferred upon the degrees by such a connotation is easily perceived.

Moreover, in none of these special courses is the central idea allowed to predominate to the extent of preventing the acquisition of that liberal culture in general which a college of liberal arts is expected to foster; it is conceded that in order to know one subject well, an acquaintance with many other subjects is requisite; and an examination of the manner in which the studies of the special courses are combined will show that the interdependence of the various branches of knowledge receives adequate recognition.

## College of Letters and Arts

### *Faculty*

E. D. McQUEEN GRAY, M. A., Ph. D., *President of the University and Acting Dean of the College.*

AURELIO M. ESPINOSA, M. A., Ph. D., *Professor of Romance Languages.*

WILLIAM W. BADEN, Ph. D., *Professor of Greek and Latin.*

ETHEL A. HICKEY, B. A., *Associate Professor of English.*

DAN M. RICHARDS, A. B., *Associate Professor of History.*

LEON B. STEPHAN, A. B., *Assistant Professor of German and Latin.*

MAY ROSS, *Instructor in Public Speaking and in English.*

### *Entrance Requirements*

The entrance requirements for the College of Letters and Arts are:

- i. Age. Not under sixteen years.
- ii. Character. Certificate of honorable dismissal from the institution previously attended.
- iii. Four years of High School work, covering fifteen "school units" as a minimum; or an equivalent qualification, to be tested by examination.

The term "school unit" signifies a course of five recitations per week, carried on during a school year of thirty-six weeks, each recitation covering not less than forty-five minutes. Of the fifteen units required for entrance, fourteen must correspond with the fourteen prescribed units of the Preparatory School. The fifteenth unit may be made up out of High School elective subjects, if so desired; but the recommendation of the University is that the Preparatory School curriculum be adhered to as far as possible. (For Preparatory School Curriculum, see page 106.)

Pupils intending to take Greek and Latin in college must present four units in Latin.

Pupils electing one foreign language only, must present two units in that language.

## College of Letters and Arts

### *Definition of the Undergraduate Course*

The undergraduate course in the College of Letters and Arts consists of eight semesters of eighteen weeks each, amounting to one hundred and twenty-four semester hours, and the required two units of Public Speaking as the minimum necessary for graduation.

The semester hours are distributed as follows: Freshman Year, two semesters of 16 hours each. Sophomore Year, two semesters of 16 hours each. Junior Year, two semesters of 15 hours each. Senior Year, two semesters of 15 hours each.

A "semester hour" is defined as consisting of one "period" or conventional "recitation hour" of not less than forty-five minutes, or its equivalent of three "hours" of laboratory, field or shop work, per week during one semester.

### *Prescribed and Elective Work*

The proportion of prescribed to elective work in the Freshman and Sophomore years is as follows:

*Freshman Year.* Prescribed, 22 hours; elective, 10 hours.

*Sophomore Year.* Prescribed, 12 hours; elective, 20 hours.

*Junior and Senior Years.* No general assignment of work is made. Candidates for special degrees are referred to the directions appended to the general lists of subjects. Students who do not take a special course will select their subjects in consultation with the head of the school or department in which the major is taken.

*Election of Science Subjects*

Students enrolled in the College of Letters and Arts are permitted to elect any of the subjects offered in the College of Science and Engineering, subject to the approval of the Schedule and Curriculum Committee.

*Baccalaureate Thesis*

All candidates for the bachelor's degree may be required to prepare a graduating thesis upon a subject chosen by the Head of the Department in which their major work is being taken. If approved by the head of the department it is submitted by the student as part of his qualifications for a degree. Theses must be typewritten on good paper and if accepted, become the property of the University and, with a fee for binding, must be deposited with the Librarian.

### General List of Subjects

*Freshman Year.* 16 hours per semester, of which 11 are taken in prescribed and 5 in elective subjects.

#### *Prescribed Subjects for the Freshman Year*

English Composition, 3 hours per semester.

Latin, 4 hours per semester.

Modern Language, 4 hours per semester.

Total of prescribed hours for the year, 22.

A student who does not intend to proceed to a special degree may, with the approval of the President and the Dean of his College, substitute another subject for Latin.

Candidates for any of the special degrees except for that in Course A (Classics), who present a four years' High School Course (or the equivalent thereof) in Latin, may substitute a modern language for Latin.

#### *Elective Subjects of the Freshman Year*

##### FULL COURSES

- |                      |        |
|----------------------|--------|
| 1. Greek (1 and 2)   | 4 hrs. |
| 2. Latin (1 and 2)   | 4 hrs. |
| 3. French (1 and 2)  | 4 hrs. |
| 4. German (1 and 2)  | 4 hrs. |
| 5. Spanish (1 and 2) | 4 hrs. |

##### HALF COURSES

###### *First Semester.*

- |   |        |
|---|--------|
| 6. History of the United States         | 4 hrs. |
| 7. General Course in English Literature | 2 hrs. |
| 8. Roman Life and Thought               | 2 hrs. |



*Second Semester.*

- |   |        |
|---|--------|
| 9. Historical Structure and Development of the English Language | 2 hrs. |
| 10. English History from Henry VII to Victoria                  | 4 hrs. |
| 11. Greek Life and Thought                                      | 2 hrs. |
| ter)  | 2 hrs. |

*Requirements for the Special Courses*

Course A (Classics). Subject 1 required.

Course B (Modern Languages). Subject 3 required.

Course C (Modern History). Subjects 6 and 10 required.

Course D (Literature). Subjects 7 and 9, and either 8 or 11 required.

*Sophomore Year.* 16 hours per semester, of which 6 are taken in "required" and 10 in "elective" subjects.

*Required Subjects of the Sophomore Year*

|                  |        |
|------------------|--------|
| Modern Language, | 4 hrs. |
| Logic,           | 2 hrs. |

*Elective Subjects of the Sophomore Year*

## FULL COURSES

- |                      |        |
|----------------------|--------|
| 1. Greek (3 and 4)   | 4 hrs. |
| 2. Latin (3 and 4)   | 4 hrs. |
| 3. French (3 and 4)  | 4 hrs. |
| 4. German (3 and 4)  | 4 hrs. |
| 5. Spanish (3 and 4) | 4 hrs. |

- |   |        |
|---|--------|
| 6. History of the 16th and 17th Centuries | 4 hrs. |
| 7. General Course in French Literature    | 2 hrs. |

## HALF COURSES

*First Semester.*

- |   |        |
|---|--------|
| 10. English Literature of the 16th and 17th Centuries | 4 hrs. |
| 12. Roman Poetry of the Augustan Age                  | 2 hrs. |

*Second Semester.*

- |   |        |
|---|--------|
| 11. Constitutional History of Modern Europe | 4 hrs. |
| 13. Greek Epic and Lyric Poetry             | 2 hrs. |
| 14. American Literature                     | 4 hrs. |

*Requirements for the Special Courses*

Course A (Classics). Subjects 1, 2, 12 and 13 required.

Course B (Modern Languages). Any two of subjects 3, 4, and 5, and any two of subjects 7, 8 and 9 required.

Course C (Modern History). Subjects 6 and 11 required.

Course D (Literature). Subjects 10, 12 and 13, and Course 7 required.

*Junior Year.* 15 hours per semester.

*General List of Subjects Offered in the Junior Year*

## FULL COURSES

- |                     |        |
|---------------------|--------|
| 1. Greek (5 and 6)  | 3 hrs. |
| 2. Latin (5 and 6)  | 3 hrs. |
| 3. French (5 and 6) | 3 hrs. |
| 4. German (5 and 6) | 3 hrs. |

- |   |        |
|---|--------|
| 5. Spanish (5 and 6)                      | 3 hrs. |
| 10. General Course in German Literature   | 2 hrs. |
| 11. General History of Spanish Literature | 2 hrs. |

#### HALF COURSES

##### *First Semester.*

- |   |        |
|---|--------|
| 6. History of the 18th Century            | 4 hrs. |
| 7. English Literature of the 16th Century | 4 hrs. |
| 9. French Drama of the 17th Century       | 2 hrs. |
| 12. Latin Satiric Poetry                  | 2 hrs. |
| 13. Latin Verse Composition               | 2 hrs. |

##### *Second Semester.*

- |  |        |
|--|--------|
| 14. English History of the 19th Century        | 2 hrs. |
| 15. Prose Literature of the 19th Century       | 2 hrs. |
| 16. History of the Protestant Reformation      | 2 hrs. |
| 17. History of Frederick the Great             | 2 hrs. |
| 19. History of the English Novel               | 2 hrs. |
| 20. Greek Tragic Drama                         | 2 hrs. |
| 21. Greek Verse Composition                    | 2 hrs. |
| 22. The Romantic Movement in French Literature | 2 hrs. |

Students may elect from any of the subjects contained in this list and also from those in the General List of the previous year and not already taken.

#### *Requirements for the Special Courses*

Crouse A (Classics). Subjects 1, 2, 12 and 20 required.

Course B (Modern Languages). Subjects 3 and either 4 or 5; also 9 and either 10 or 11 required.

Course C (Modern History). Subjects 6, 14, and either 16 or 17; also one at least of subjects 3, 4 or 5 required.

Course D (Literature). Subjects 7, 15 and one at least of subjects 10, 11 or 22 required.

*Senior Year.* 15 hours per semester.

*General List of Subjects Offered in the Senior Year.*

FULL COURSES

- |                      |        |
|----------------------|--------|
| 1. Greek (7 and 8)   | 2 hrs. |
| 2. Latin (7 and 8)   | 2 hrs. |
| 3. French (7 and 8)  | 2 hrs. |
| 4. German (7 and 8)  | 2 hrs. |
| 5. Spanish (7 and 8) | 2 hrs. |

HALF COURSES

*First Semester.*

- |  |        |
|--|--------|
| 6. European History from 1815 to the present day | 3 hrs. |
| 7. Constitutional Government                     | 2 hrs. |
| 8. English Poetry of the 19th Century            | 3 hrs. |
| 9. German Literature of the 18th Century         | 2 hrs. |
| 10. Greek Oratory and Philosophy                 | 2 hrs. |
| 11. Comparative Study of the Tragic Drama        | 2 hrs. |
| 12. Comparative Study of Epic Poetry             | 2 hrs. |

*Second Semester.*

- |   |        |
|---|--------|
| 13. History of France from 1775 to 1815   | 4 hrs. |
| 14. German Literature of the 19th Century | 2 hrs. |
| 15. Roman Oratory and Philosophy          | 2 hrs. |
| 16. Comparative Study of the Comic Drama  | 2 hrs. |

- |                                  |        |
|----------------------------------|--------|
| 17. Comparative Study of History | 2 hrs. |
| 18. English Lyric Poetry         | 2 hrs. |

Students may elect any of the above subjects and also from the general list of the previous year.

*Requirements for the Special Courses*

Course A (Classics). Subjects 1 and 2 required.

Course B (Modern Languages). Subjects 3 and either 4 or 5 required. Students taking 4 will also take 9 and 14.

Course C (Modern History). Subjects 6, 7, 13 and 17 required.

Course D (Literature). Subjects 8, 11, and one at least of 12, 16 and 18, required.

## College of Science and Engineering

### *Faculty*

E. D. McQueen Gray, M. A., Ph. D., President of the University.

M. F. Angell, M. A., Dean and Professor of Physics and Engineering.

J. D. Clark, M. S., Associate Professor of Chemistry.

J. R. Watson, M. A., Associate Professor of Biology.

\*—————, Associate Professor of Geology.

H. H. Conwell, B. S., Assistant Professor of Mathematics.

L. B. Stephan, B. A., Assistant Professor of German.

G. R. Roberts, C. E., Assistant Professor of Civil Engineering.

Student Assistant in Engineering.

Walter R. Allen.

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\*To be appointed.

### **College of Science and Engineering**

The College of Science and Engineering consists of two schools,

(a) SCHOOL OF SCIENCE.

(b) SCHOOL OF ENGINEERING.

The entrance requirements are the same as for the College of Letters and Arts, given on page 42. Students expecting to enter this college are advised, however, to present two units of German, as a reading knowledge of this subject is required in all courses and should be attained as early as possible.

**Physical Laboratories.**—The Physical laboratories are located in Hadley Hall, with the beginners on the first floor in a large, well-lighted room equipped to handle from forty to fifty students. The more advanced work is carried on either upon the second floor or in the basement, for which ample equipment is now available in mechanics, heat, light, electricity and magnetism. Special rooms are available for a few students doing research and much attention will be paid to this work.

The chemical department occupies the west half of the second floor of Hadley Hall. A lecture room, stock room, room for fume closets, instructor's office, and laboratory for qualitative and quantitative analysis and organic chemistry, are arranged for chemical work. The equipment of the department consists of a complete stock of chemicals, the usual lecture apparatus, apparatus for qualitative and for quantitative analysis in all the branches given in undergraduate work. Equipment for research is added as needed. The department possesses an excellent chemical library.

The mineralogy and assay laboratory is located in the basement of Hadley Hall. Desks, apparatus and reagents for courses in blowpipe analysis and determinative mineralogy are here provided. A large collection of minerals, both rock forming and of economic value, is possessed by the University. For assaying there is installed a coke furnace and a large gasoline furnace. Crushers, sampling apparatus, balances, etc., complete the equipment. In this laboratory is a large collection of ore from all parts of New Mexico.

Probably no university in the United States is more favorably located for field work in geology. Nature has on exhibition about Albuquerque an unusually large collection of evidence of her dynamic action, and because of the unsurpassed climate enjoyed here, outdoor work is possible during the entire year. Equipment for such work is to be found in the geology department located on the ground floor of Hadley Hall. Polarizing microscopes, rock sections and other necessary apparatus are possessed for the study of petrology.

### **School of Science**

The School of Science includes the various departments of natural, physical and mathematical science. It provides a liberal education with science as a leading element and allows specialization in Physics, Chemistry, Biology, Geology and Mathematics. The courses are arranged to give the student a wide selection provided they lead to a definite result; during the first year, however, all students are required to take the same course, which is made up of subjects which should form the basis of all scientific work. After the first year students will decide upon the subject they wish to



pursue as a major and this course will be made out under the direction of the instructor in charge.

All candidates for the degree of Bachelor of Science must present a graduating thesis, if required, on a subject to 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, with a fee for binding, 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.

In addition to Public Speaking 1 and 2, or its equivalent in Seminar Work, a minimum of 120 semester hours of A work, 128 hours of B work or 136 hours of C work are required for graduation; at least one-third and not over one-half of this work must be in the major subject selected. The degree of Bachelor of Science, with a specific designation of the course taken, is conferred upon a satisfactory completion of the course.

The requirements of the first year are: English 1 and 2, 3 hours; Mathematics 1 and 2, 3 hours; Chemistry 1 and 2, 5 hours; German 11 and 12, 5 hours.\*

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\*If the student does not present two units in German he will substitute German 9 and 10, and postpone German 11 and 12 until the Sophomore year.

Majors may be selected in Biology, Chemistry, Geology, Mathematics or Physics; but even after the selection is made, considerable latitude of choice is allowed the individual student.

Biology Course; Sophomore, Biology 1 and 2, 5 and 6 (or 3), Chemistry 7 or Geology 1 and 2. Electives 2 to 11 hours which must include second year German and French if not already taken.

Junior and Senior Biology 3 (or 5 and 6), 4, 15, 11. Electives 35 to 38 hours.

Pre-medical course must include Biology 1, 2, 5, 6, 8, 9, 10, 12, 14, 16; Chemistry 7, chemistry of food.

Electives will be chosen upon consultation. This course is not intended to be absolutely rigid, but can be modified to suit individual needs upon consultation.

Physics Course; for a Bachelor of Science degree in Physics the student must include courses 1, 2, 3, 4, 5, 6, 8, or 11, 13 and 14 in Physics, and the Mathematics required for these courses. French 1 and 2 will also be required.

Chemistry Course; for a Bachelor of Science degree in Chemistry includes courses 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 and thesis.

Geology Course; this course includes courses 1, 2, 3, 4, 5, 6, 7, 8 and 9 in Geology, Biology 1 and 2 and Physics 1 and 2.

Mathematics Course; for a Bachelor of Science degree courses 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, or 13 must be included.

A General Science course is offered, consisting of three years in the School of Science and one in the School of Education. This course is designed especially for the training of High School teachers and leads

to the degree of Bachelor of Pedagogy; for an outline of the course see School of Education.

Graduate courses are offered in Biology, Chemistry, Geology, and Physics, leading to the degree of Master of Science in the particular course.

### **School of Engineering**

The Engineering School 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 B. S. in engineering. The aim is always to make entrance requirements and requirements for graduation 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 they 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 applica-

tion 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 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-squares, 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.

*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*

Students, over 21 years of age, 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.

*Required Work*

All candidates for a degree in Engineering are required to present two units in Public Speaking or an equivalent and 140 hours of college work; of these the following 82 hours are required of all engineering students:

|                        |    |
|------------------------|----|
| German, 11 and 12..... | 10 |
| English .....          | 6  |
| Mathematics .....      | 16 |

|                              |    |
|------------------------------|----|
| Chemistry .....              | 10 |
| Physics .....                | 15 |
| Mechanical Drawing .....     | 7  |
| Structural Engineering ..... | 7  |
| Hydraulic Engineering .....  | 2  |
| Surveying .....              | 6  |
| Steam Engineering .....      | 3  |
| Total .....                  | 82 |

In addition to the above list, the following work is required in the different groups:

#### CIVIL ENGINEERING GROUP.

|                              |    |
|------------------------------|----|
| Mechanical Engineering ..... | 6  |
| Structural Engineering ..... | 1  |
| Hydraulic Engineering .....  | 1  |
| Surveying .....              | 15 |
| Electrical Engineering ..... | 5  |

#### ELECTRICAL ENGINEERING

|                              |    |
|------------------------------|----|
| Physics .....                | 7  |
| Mechanical Engineering ..... | 6  |
| Electrical Engineering ..... | 22 |
| Shop Work .....              | 4  |

#### MECHANICAL ENGINEERING GROUP

|                              |    |
|------------------------------|----|
| Mechanical Engineering ..... | 21 |
| Shop Work .....              | 10 |
| Structural Engineering ..... | 2  |
| Steam Engineering .....      | 3  |
| Electrical Engineering ..... | 10 |

## MINING ENGINEERING GROUP

|                              |    |
|------------------------------|----|
| Structural Engineering ..... | 2  |
| Surveying .....              | 7  |
| Geology .....                | 10 |
| Chemistry .....              | 18 |

*Thesis*

The conditions governing work on thesis will be found set forth under the Requirements for the Bachelor of Science degree in the School of Science.

## Description of Courses

Description of the courses offered in the College of Letters and Arts, and College of Science and Engineering.

### *Department of English*

#### FRESHMAN YEAR.

1. *English Composition*. Written and oral themes and exercises in the four forms of literary discourse, with a study of the general principles of rhetoric. Required of all Freshmen. *Full Course*. 3 hours.
- 7 (General List). *English Literature*. General history of English Literature, supplemented with close study of representative authors, and with required library reading. *First Semester*. 2 hours.
- 9 (General List). Historical Structure and development of the English Language. *Second Semester*. 2 hours.

#### SOPHOMORE YEAR.

##### *First Semester.*

- 10 (General List). *English Literature of the 16th and 17th Centuries*. A study of the period from 1558 to 1660, with class and literary reading of the representative authors, special attention being given to Shakespeare. 4 hours.

##### *Second Semester.*

- 14 (General List). *American Literature*. General history of American Literature with class and library



reading of representative authors, arranged chronologically so as to reflect the historic development of the literature. 4 hours.

#### JUNIOR YEAR

##### *First Semester.*

- 7 (General List). *English Literature of the 18th Century*. A study of the period 1660-1780, with class and library reading. 4 hours.

##### *Second Semester.*

- 15 (General List). *English Prose of the 19th Century*. A study of English prose, exclusive of the novel, from 1800 to the present day. 3 hours.
- 19 (General List). *History of the English Novel*. Historical and critical survey of the English novel from Defoe to Meredith. 2 hours.

#### SENIOR YEAR.

##### *First Semester.*

- 8 (General List). *English Poetry of the 19th Century*. Historical and critical survey of English Poetry from Wordsworth to Browning. 3 hours.

##### *Second Semester.*

- 18 (General List). *English Lyric Poetry*. A general review of English lyric poetry from the Elizabethan period to the present day. 2 hours.

*Department of History*

## FRESHMAN YEAR.

*First Semester.*

6. History of the United States. 4 hours.

*Second Semester.*

10. English History from Henry VII to Victoria. 4 hours.

## SOPHOMORE YEAR.

*First Semester.*

6. History of the 16th and 17th Centuries. 4 hours.

*Second Semester.*

11. Constitutional History of Modern Europe. 4 hrs.

## JUNIOR YEAR

*First Semester.*

6. History of the 18th Century. 4 hours.

*Second Semester.*

14. English History of the 19th Century. 2 hours.  
16. History of the Protestant Reformation. 2 hours.  
17. History of Frederick the Great. 2 hours.

## SENIOR YEAR.

*First Semester.*

6. European History from 1815 to the present day. 3 hours.

*Second Semester.*

13. History of France from 1775 to 1815. 2 hours.  
17. Comparative Study of History. 2 hours.

*Department of Latin*

## FRESHMAN YEAR.

*First Semester.*

1. Cicero De Senectute and Tusculan Disputations. Latin Prose Composition. 4 hours.
- 7 (General List). Roman Life and Thought. A General course, open to all college students. A knowledge of the Latin language advisable, but not essential. 2 hours.

*Second Semester.*

2. Livy: Book 1; Vergil, Aeneid, Books VII-IX. Assigned topics in Roman History. Latin Prose Composition. 4 hours.

## SOPHOMORE YEAR.

3. Cicero: Selected Letters and Orations (chiefly Philippics). Latin Prose Composition. 4 hours.
- 12 (General List). Roman Poetry of the Augustan Age. General course, open to all college students. A knowledge of Latin advisable, but not essential. 2 hours.

*Second Semester.*

4. Horace: Selected Odes, Satires and Epistles. Practical application of the various meters. The Latin Lyric Poets. 4 hours.

## JUNIOR YEAR

*First Semester.*

5. Suetonius, Pliny, Tacitus. Such portions of the authors will be read as will give a comprehensive

view of the condition of the Roman people during the first century of the Empire. 3 hours.

- 12 (General List). Latin Satiric Poetry. A general course, open to all college students. A knowledge of Latin desirable, but not essential. 2 hours.

*Second Semester.*

6. Plautus and Terence: two plays each. Study of the Roman theatre and development of Latin Comedy.
- 13 (General List). Latin Verse Composition. 2 hours.

SENIOR YEAR.

*First Semester.*

7. Lucretius: De Natura Rerum; study of the literary, scientific and religious aspects of the poem. Cicero: De Finibus, Academica, De Natura Deorum. 2 hours.
- 15 (General List). Roman Oratory and Philosophy. A general course, open to all college students. A knowledge of Latin desirable, but not essential. 2 hours.

*Second Semester.*

8. Topography and Monuments of Ancient Rome. Private life of the ancient Romans. 2 hours.

*Department of Greek*

FRESHMAN YEAR.

*First Semester.*

1. Andocides, De Mysteriis. Lysias, Select Orations. The cause of the revolutions of 411 B. C. and 404

B. C. will be carefully studied. Collateral reading from ancient and modern historians. 4 hours.

*Second Semester.*

2. Plato, Apology and Phaedo. Rapid reading and analysis of the Euthyphro and Crito. A study of the life and work of Socrates. General introduction to Greek Philosophy. 4 hours.
- 11 (General List). Greek Life and Thought. General course, open to all college students. A knowledge of Greek recommended, but not necessary. 2 hours.

SOPHOMORE YEAR.

*First Semester.*

3. Demosthenes: De Corona, or The Philippics. Selections from other Attic orators, illustrating the development of Greek oratory. Composition continued. 4 hours.

*Second Semester.*

4. Homer: 12 books, selected from the Iliad and Odyssey. Special papers and lectures on the Homeric literature and age. Composition continued. 4 hours.
- 13 (General List). Greek Epic and Lyric Poetry. 2 hours.

JUNIOR YEAR

*First Semester.*

5. Thucydides: Peloponnesian War. Rapid reading of the Greek, essays translations and discussions. Comparative study of historians. Composition continued. 3 hours.

*Second Semester.*

6. Aeschylus: Prometheus Bound. Sophocles: Oedipus Tyrannus. Reading of other selected dramas. 3 hours.
- 21 (General List). The Greek Tragic Drama. General course open to all college students. A knowledge of Greek recommended, but not essential. 2 hours.
22. Greek Verse Composition. 2 hours.

## SENIOR YEAR.

*First Semester.*

7. Plato: Republic, Books 1-10. Essays, reviews, and discussions by members of the class. 2 hours.
- 8 (General List). Greek Oratory and Philosophy. General course open to all college students. A knowledge of Greek advisable, but not essential. 2 hours.

*Second Semester.*

8. Topography and Monuments of Ancient Greece. Private life of the Ancient Greeks. 2 hours.

*Department of French*

## FRESHMAN YEAR.

*First Semester.*

1. Elementary French. Reading of easy passages and simple stories; the principles of grammar; conversation, composition. 4 hours.

*Second Semester.*

2. Reading of easy authors; "Paul et Virginie";

"Voyage de M. Perrichon". Memorizing of verse. Composition and conversation. - 4 hours.

SOPHOMORE YEAR.

*First Semester.*

3. Reading, translation and conversation. Daudet, George Sand, Labiche et Martin. Study of French Syntax. Composition. Conversation. 4 hours.
- 7 (General List). A. General Course in French Literature. Open to all College Students. A knowledge of the French language is desirable, but not essential. 2 hours.

*Second Semester.*

4. Reading of standard authors continued. Merimée, Anatole France, Edmond Rostand, etc. Composition, conversation. Study of accidence and syntax. 4 hours.
- 7 (General List). B. General Course in French Literature continued. Open to all college students. 2 hours.

JUNIOR YEAR

*First Semester.*

5. Drama of the 17th Century. Special Study of the works of Racine, Moliere and Corneille. Composition. Conversation. 3 hours.
- 9 (General List). The French Drama of the 17th Century. Open to all college students. A knowledge of the French language desirable, but not essential. 2 hours.

*Second Semester.*

6. Study of the writers of the Romantic School, with

special reference to Victor Hugo. Composition. Conversation, 3 hrs.

- 22 (General List). Victor Hugo and the Romantic Movement in France. Open to all college students. A knowledge of French desirable, but not essential. 2 hrs.

#### SENIOR YEAR.

##### *First Semester.*

7. Literature of the French Renaissance. The Pleiade. The beginning of Classicism. Rabelais to Malherbe. Critical essays in French submitted by students. 2 hrs.

##### *Second Semester.*

8. Fiction, poetry and the drama in the latter half of the 19th century. Critical essays required from the students. 2 hrs.

#### *Department of Spanish*

#### FRESHMAN YEAR.

##### *First Semester.*

1. Elementary Spanish. The elements of grammar, reading and conversation. 4 hrs.

##### *Second Semester.*

2. Elementary Spanish continued. Grammar and reading of easy stories. Essays and translation with drill in conversation. 4 hrs.

#### SOPHOMORE YEAR.

##### *First Semester.*

3. Intermediate Spanish. Reading of such works as Alarcon's "El Capitan Veneno," and Echegaray's



"El Poder de la Impotencia"; essays and stories in Spanish; conversation continued. 4 hours.

*Second Semester.*

4. Advanced Spanish. Prose Composition; Reading of such authors as Galdos and Avellaneda. Occasional debates and discussions in Spanish. 4 hours.

JUNIOR YEAR

*First Semester.*

5. Modern Spanish Drama. Study and interpretation of the masterpieces of modern Spanish dramatic literature. Works of Echegaray, Lopez de Ayala, Galdos, Tamayo y Baus, etc. 3 hours.
- 11 (General List). General Course in Spanish Literature, open to all students of the college. A knowledge of Spanish desirable, but not essential. 2 hours.

*Second Semester.*

6. Study of the Spanish Classics. Cervantes and the dramatists of the Golden Age are given in alternate years. For 1911, Cervantes. 3 hours.
- 11 (General List). General Course in Spanish literature continued. 2 hours.

SENIOR YEAR.

*First Semester.*

7. Spanish Ballad Poetry. Rise and development of Spanish Epic Poetry. Lectures on the origin of Spanish Ballad poetry and its significance in Spanish literature. Special study of certain groups.

For 1911, the Cid ballads. Wolf's Primavera y Flor de Romances. 2 hours.

*Second Semester.*

8. Old Spanish. Introduction to Spanish Philology. Lectures on Phonology and Morphology. 2 hours.
9. Spanish Seminar. Special work for advanced students in Spanish or comparative Romance, philology or literature. 1 hour.

*Department of German*

FRESHMAN YEAR.

*First Semester.*

1. Elementary grammar and translation. Conversation and simple composition begun. Memorizing of simple German verse. 4 hours.

*Second Semester.*

2. Grammar and conversation continued. Reading of about 150 pages of easy translation. Memorizing simple German ballads. Composition. 4 hours.

SOPHOMORE YEAR.

*First Semester.*

3. Translation of a prose author: 2 hours; reading Schiller's ballads and memorizing some of them, 1 hour; Composition, 1 hour. Conversation continued. 4 hours.

*Second Semester.*

4. One of Lessing's dramas, either "Nathan der Weise" or "Minna von Barnhelm", 2 hours; the

ballads of Schiller continued, 1 hour; Composition, 1 hour. (Conversation). 4 hours.

#### JUNIOR YEAR

##### *First Semester.*

5. Schiller's dramatic works, 2 hours; composition, 1 hour. 3 hours.
- 10 (General List). General Course in German Literature; open to all college students. Knowledge of the German language desirable, but not essential. 2 hours.

##### *Second Semester.*

6. Goethe's Life and Works, 2 hours; composition, 1 hour. 3 hours.
- 10 (General List). General Course in German Literature continued. 2 hours.

#### SENIOR YEAR.

##### *First Semester.*

7. Reading of modern German authors. Critical essays on subject-matter submitted by students. 2 hours.
- 9 (General List). German Literature of the 18th Century. Open to all college students. Knowledge of German desirable, but not essential. 2 hours.

##### *Second Semester.*

8. Continuation of Course 7. Special attention paid to the formation of a good literary style. 2 hours.
- 14 (General List). German Literature of the 19th Century. Open to all college students. 2 hours.

- 9-10. *Elementary course for deficient entrance requirements in German.* Daily, two semesters. Designed to cover two years of preparatory work for the reading of scientific German, and hence will require of the student earnest, intensive work.

*First Semester.*

11. Scientific German. All the chief divisions of science will be represented and the reading will be extensive. 5 hours.

*Second Semester.*

12. Scientific German. Reading of scientific magazines and periodicals. Assigned topics and individual reports. Students will, as far as possible, be allowed to read along lines of chosen or intended specialization. 5 hours.

*Mathematics*

*First Semester.*

1. University Algebra. Theory of limits; ratio and proportion; arithmetical, geometrical and harmonic progressions; binomial theorem; arrangements and groups; the theory of probability; convergence, divergence, and summation of series; undetermined coefficients; derivatives; logarithms; separation of roots and an introduction to the general theory of equations. 3 hours.

*Second Semester.*

2. Analytic Geometry. Rectangular and polar co-ordinates, straight line, circle, parabola, ellipse, hyperbola, and general equations of the second degree and higher plane curves. 3 hours.

*First Semester.*

3. Plane and Spherical Trigonometry. Advanced Course. 3 hours.

*First Semester.*

5. Differential and Integral Calculus. 5 hours.

*Second Semester.*

6. Differential and Integral Calculus. Continuation of Course 5. 5 hours.

*First Semester.*

7. Plane Analytic Geometry. Advanced Course. Prerequisite, course 2. 3 hours.

*Second Semester.*

8. Solid Analytic Geometry. Prerequisite, course 5. 3 hours.

*First Semester.*

9. Advanced Algebra. Prerequisite, course 5. 3 hours.

*Second Semester.*

10. Limits and Series. 3 hours.

*First Semester.*

11. Advanced Calculus. 3 hours.

*Second Semester.*

12. Differential Equations. Especially adapted to the needs of students in advanced Physics and Mechanics. 3 hours.

*First Semester.*

13. Advanced Calculus. 3 hours.

*Physics**First Semester.*

1. *Mechanics, Sound and Light.* Lectures, recitations and two hours' laboratory work per week. Prerequisite: Courses 1 and 2 in mathematics, solid geometry and preparatory physics. 5 hours.

*Second Semester.*

2. *Heat, Electricity and Magnetism.* Lectures, recitations and two hours' laboratory work per week. Prerequisites: Same as for course 1. May be taken without having had course 1. 5 hours.

*First Semester.*

3. *Advanced Electricity and Magnetism.* Prerequisite: Courses 2 and 6 in mathematics. A lecture course in advance of the general course, using calculus methods. 3 hours.

*First Semester.*

5. *Electrical Measurements.* A laboratory course, designed to accompany course 3, but may be taken separately. Required of electrical engineers; elective for others. Laboratory work, 2 hours.

*Second Semester.*

6. *Electrical Measurements.* A continuation of course 5. Required of electrical engineers. Laboratory work, 2 hours.

*First Semester.*

- 7.\* *Advanced Work in Light.* 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. 3 hours.

*First Semester.*

- 9.\* *Advanced Work in Light.* A laboratory course designed to accompany course 3, but may be taken separately. Prerequisite: Mathematics 4 and 6; Physics 1 and 2. 2 hours.

*Second Semester.*

8. *Analytic Mechanics.* The principles of dynamics and kinetics, for engineers. Harmonic motion; graphic statics; balance of machines. Prerequisite: Mathematics 4 and 6. Physics 1. 5 hours.

*First Semester.*

- 11.\* *Theoretical Mechanics.* Ziwet's Mechanics. Prerequisite: Mathematics 4 and 6. Physics 1. 3 hours.

*Two Semesters.*

- 13 and 14. *Thesis Work.* 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. 5 hours.

*Two Semesters.*

- 15 and 16. *Science Seminar.* A course designed for advanced students in science, with presentation

and discussion of current periodical literature. 1 hour.

*First Semester.*

17. *Elementary Electricity and Magnetism.* A ten weeks extension course for those who wish in a few weeks a working knowledge of the subject. No previous knowledge of the subject is required and the course of instruction will be made up to suit the ability of those taking the course.

*Second Semester.*

18. *Elementary Dynamo Electric Machinery.* An extension course similar to course 17, which will treat in an elementary manner the construction and management of electrical machinery.

*Chemistry*

*First Semester.*

1. *Inorganic Chemistry.* Lectures and recitations on general and theoretical chemistry, illustrated by experiments, charts, specimens, etc. Solution of chemical problems is required. 5 hours.

*Second Semester.*

2. *Qualitative Analysis.* This course consists of laboratory practice in the separation and detection of the common acids and bases. Occasional lectures and examinations will be given. A full set of notes is required. Laboratory work, 5 hours. Prerequisite: Course 1.



*Either Semester.*

3. *Quantitative Analysis.* This course consists wholly of laboratory work. Gravimetric methods are taken and volumetric work started. Laboratory work, 5 hours. Prerequisite: Course 2. 5 hours.

*Either Semester.*

4. *Quantitative Analysis.* A continuation of volumetric work. Laboratory work, 5 hours. 5 hours.

*Either Semester.*

5. *Quantitative Analysis.* This course gives practice in the greatest variety of manipulation. Types of the important methods are taken up. Analysis of ores, metals, slags, alloys, fuels, soils, fertilizers, dairy products, food stuffs, waters, urine, poisons, drugs, gases and oils will be taken. The needs of the individual student will be considered in this work. Laboratory work, 5 hours. Prerequisite: Courses 3 and 4. 5 hours.

*Either Semester.*

6. *Quantitative Analysis.* A continuation of course 5. Laboratory work, 5 hours. 5 hours.

*First Semester.*

7. *Organic Chemistry.* Lectures, laboratory work and recitations on the chemistry of the carbon compounds. Laboratory work, 2 hours. Given alternate years. Prerequisite: Courses 1 and 2. 5 hours.

*Second Semester.*

8. *Physical Chemistry.* This work consists of advanced study of chemistry theory. Practice experiments will be performed with the aid of the student in the determination of vapor density, molecular weights, specific heats, etc., and the study of isomorphisms, diffusion of gases, solutions, ionization, electrolysis, molecular and atomic volumes, thermo chemistry, equilibrium, the phase rule, etc., will take up much of the time. Given in alternate years. Prerequisite: Courses 1, 2, 3 and 4. 4 hours.

*First Semester.*

9. *Industrial Chemistry.* This course consists of lectures on chemical manufactures such as sugar, sodium carbonate, fertilizers, sulfuric acid, glass, matches, paints, dyes, illuminating gas, petroleum, etc. The lectures will be illustrated by lantern slides and charts. § Given in alternate years. Prerequisite: Courses 1 and 2. 2 hours.

*Second Semester.*

10. *Metallurgy.* This course consists of lectures describing the processes employed in the smelting of iron, lead, copper, zinc, silver, gold, etc., and upon methods used in the refining of these metals. The lectures will be illustrated by lantern slides. § Given in alternate years. Prerequisite: Courses 1, 2 and 9.

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§ Before a chemical student is graduated an opportunity is given him to spend some time in Denver, with an instructor, in inspection and study of the varied chemical industries of that city.

*Second Semester.*

12. *Chemistry of Food and Nutrition.* This subject includes the composition of foods and of the animal body, the assimilation of the former by the latter and the principles underlying a rational diet. Particularly a practical course for women students. 1 hour.
- 13\* and 14.\* Advanced work for individual students.

*Biology**First Semester.*

1. *Invertebrate Zoology.* A study of the comparative morphology, physiology and life history of invertebrate animals. Beginning with the Protozoa, the development of the animal types will be traced to the vertebrates. It is highly desirable that a student electing this course should have an elementary course in Zoology such as the one in our preparatory department. Laboratory work, 3 hours. 5 hours.

*Second Semester.*

2. *Vertebrate Zoology.* A continuation of course 1. The comparative morphology and the origin and development of vertebrates are studied. A tunicate, amphioxus, several types of fishes, an amphibian, a reptile, a bird and a mammal will be carefully dissected. Laboratory work, 3 hours. 5 hours.

*First Semester.*

3. *Cryptogamic Botany.* This course is a study of the representative types of cryptogams by the use

of the microscope. The morphology and life history of the types are taken up with special reference to bringing out the relations of the groups and the development of the plant kingdom. Laboratory work, 3 hours. Given alternate years, beginning with 1910-11. 5 hours.

*Second Semester.*

- 4.\* *Organic Evolution.* The course will consist of lectures, assigned reading, and a thesis on some topic connected with the course. The evolution of the evolution idea from the Greeks to Darwin and since. Method or Factors in Evolution. Natural Selection, Lamarckian Factors, Mutation. Late experiments. Laws of heredity. Mendel's Law, Weismannism, artificial fertilization, origin of death. Evidence for and against evolution. Lectures T. F. 2 hours.

*First Semester.*

- 5.\* *General Physiology.* A reading course in Verworn's General (Comparative) Physiology. It is the study of physiology in its broadest and most fundamental sense, the study of the physiology of the cell and its living substance. The history of the subject is taken up quite thoroughly. Invaluable for those intending to study medicine or to specialize in biology. Prerequisite: Chemistry 1; Elementary Physics, Elementary Physiology. Given alternate years, beginning with 1911-12. 3 hours.

*First Semester.*

6. *Human Physiology.* Intended primarily for those intending to study medicine or to specialize in

biology, or to teach physiology in the high schools. For normal students and others who wish to review the whole subject of "human physiology" including anatomy and hygiene and sanitation, but feel that they cannot spare the time to take all of courses 5, 6, 8, 9, arrangements will be made by which they can take this course in part and one additional hour per week and thus cover the ground. This is properly a continuation of course 5, which, however, is not a prerequisite as are Chemistry 1, and Elementary Physiology. 5 hours.

- 7.\* *Entomology.* The study of insects. Lectures, laboratory and field work on insects especially with reference to their economic and biological aspects. Smith's Economic Entomology will be used as a text. This is intended as an introduction to technical entomology. Laboratory work, 2 hours. Given in alternate years beginning with 1910-11.

*Second Semester.*

8. *Mammalian Anatomy and Histology.* A course primarily for students intending to take up the study of medicine or to teach "physiology" in high schools. Careful and thorough dissections are made of such mammals as the dog, cat, and rabbit, with drawings and notes. The work in histology will include the making of preparations, thus giving a student valuable practice in microscopical technique. All the tissues of the body will be studied microscopically. Either the Anatomy (2 hours) or histology (3 hours) may be taken separately, although it is better to take them at the

same time. Laboratory, 4 hours. Given in alternate years beginning with 1911-12. 5 hours.

*First Semester.*

9. *Bacteriology.* The biology of bacteria, together with the preparation of media and of pure cultures. Laboratory work, 2 hours. Given in alternate years beginning with 1910-11. 4 hours.

*Second Semester.*

10. *Bacteriology.* A continuation of course 9, which is required. The disease forms are studied and the important questions of sanitation are considered from the bacteriological point of view. Laboratory work, 2 hours. 4 hours.

*First Semester.*

11. *Field Zoology.* A field study of the habits and distribution and the succession of the animals about Albuquerque. A conference or lecture on Wednesday. Field trips on Saturday. Offered in alternate years beginning with 1910-11. 3 hours.

*Second Semester.*

12. *Ecology or Field Botany.* A study of the local flora, including the distribution of the species, their succession and the factors which determine the same. Largely field work on Saturdays. Offered in alternate years commencing with 1911-12. 2 hours.

*First Semester.*

- 13.\* *Elementary Forestry.* A study of the chief forest trees of the U. S., their identification, character,

uses, distribution, enemies of the forest, its management. Saturday field trips to the mountains will be a feature. Laboratory work, 2 hours. Prerequisite: Elementary Botany. Offered in alternate years, beginning with 1911-12. 5 hours.

*Second Semester.*

14. *Embryology.* A study of the development of the frog and the bird and man. The student will largely prepare his own material thus getting training in microscopical technique. Very valuable for one intending to study medicine as well as for the biologist. Laboratory work, 3 hours. Offered in alternate years beginning with 1911-12. 5 hours.
15. *Research Work.* For properly prepared students. Thesis work.

*Geology*

*First and Second Semesters.*

- 1 and 2. *Dynamic, Structural and Historical Geology.* The subject as presented in Le Conte's textbook is supplemented by lectures, laboratory and field work. Laboratory work, 3 hours. 5 hours.

*First Semester.*

3. *Mineralogy.* An introduction to crystallography, a short course in blowpipe analysis, followed by laboratory work in the determination and study of minerals with special reference to their economic value. Laboratory work, 4 hours. Given alternate years. Prerequisite: Courses Chemistry 1 and 2. 4 hours.

*Second Semester.*

4. *Assaying.* Practical work largely on New Mexico ores, by both wet and furnace methods. Laboratory work, 4 hours. Given alternate years. Prerequisite: Courses 3, 4, and 6. 4 hours.

*First Semester.*

5. *Petrography.* 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 investigation. 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 lathe. Laboratory work, 3 hours. 5 hours.

*Second Semester.*

6. *Meteorology.* The text-book used is Davis' Meteorology, with lectures and laboratory work. Special attention is given to the study of 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 hours. 5 hours.

*Second Semester.*

7. *Palaeontology.* 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 hours. 5 hours.

*First and Second Semesters.*

- 8 and 9. *Geological Research.* Opportunities for research in the unworked field of the Territory are unlimited. Major for thesis. 5 hours.

*Surveying*

*First Semester.*

1. *Elementary Surveying.* Class work covering adjustments and uses of the surveyor's compass, level and transit. Two hours' field work. Required of Freshmen in engineering. 3 hours.

*Second Semester.*

2. *Elementary Surveying.* Continuation of course 1. Class work covering solar attachments, and methods of U. S. Land Survey. Field work with compass, level and transit. Two hours' field work. Required of Freshmen in civil and mining engineering. 3 hours.

*First Semester.*

- 3.\* *Advanced Surveying.* 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. On hour field work. Required of Sophomores in civil and mining engineering. Prerequisite: Courses 1 and 2. 3 hours.

*Second Semester.*

- 4.\* *Topography.* Pen and water color work, conventional signs, mapping. Required of Sophomores in civil engineering. Prerequisite: Courses 1, 2 and 3. 2 hours.

*First Semester.*

- 5.\* *Railway Engineering.* Theoretical study of surveying and construction work in connection with railway surveying. Three hours' field work. Prerequisite: Courses 1, 2, and 3. 5 hours.

*Second Semester.*

- 6.\* *Railway Engineering.* Maintenance of way, improvement and reconstruction. 3 hours.

*First Semester.*

- 7.\* *Geodesy.* Johnson's Surveying. Prerequisite: Courses 1, 2 and 3. 3 hours.

*Mechanical Drawing**First Semester.*

1. *Elements of Mechanical Drawing.* Notes on Practical Mechanical Drawing, Wilson and McMaster. Lettering, geometrical drawing, isometric, cabinet, and orthographic projection. Conventions of working drawings, working drawings of machines from free hand sketches, tracing. Required of all engineering students. 4 hours.

*Second Semester.*

2. *Descriptive Geometry.* Generation and classification of lines and surfaces. Intersections and de-

velopments. Required of all engineering students.  
Prerequisite: Course 1. 4 hours.

### *Hydraulic Engineering*

#### *Second Semester.*

- 2.\* *Hydraulics.* The flow of water over weirs, through orifices and pipes, water wheels, turbines, hydraulic power development. Required of all Juniors in engineering. Prerequisite: Courses 1 and 2 in Physics and course 6 in Mathematics. 2 hours.

#### *Second Semester.*

- 4.\* *Hydraulic Laboratory.* Elementary experiments in connection with course 2. Required of all Juniors in engineering. (Not given except with course 2.) 1 hour.

### *Structural Engineering*

#### *First Semester.*

1. *Mechanics of Materials.* Merriman's *Mechanics of Materials*. Tension, compression, and shearing. Cantilevers and simple beams. Moment of inertia of plane figures. Strength and stiffness of beams, columns, and shafts. Combined stresses. Required of Juniors in engineering. 5 hours.

#### *Second Semester.*

2. *Materials of Construction.* Johnson's *Materials of Construction*. Strength of materials used in various construction, methods of making strength tests. Prerequisite: Courses 1 and 8 in Physics. 2 hours.

*First Semester.*

- 3.\* *Masonry Construction.* Theoretical consideration of foundations and other masonry structures, such as arches, dams, etc. 2 hours.

*Second Semester.*

- 4.\* *Bridge Stresses.* Theoretical consideration of stresses in simple bridge trusses, general consideration of various bridges. Prerequisite: Course 1. 2 hours.

*First Semester.*

- 5.\* *Bridge Design.* Draughting room work in connection with course 3. Not given except with course 3. 1 hour.

*Electrical Engineering**First Semester.*

1. *Direct Current Machinery and Systems.* Theory of the magnetic circuit. Fundamental principles of motors, generators, and other direct current apparatus and machinery. Systems of distribution, losses, efficiencies, lighting and storage batteries. Required of Juniors in electrical and mechanical engineering. 3 hours.

*Second Semester.*

2. *Direct Current Machinery and Systems.* Continuation of course 1 with special reference to the design of direct current dynamos. Required of Juniors in electrical and mechanical engineering. 3 hours.

*First Semester.*

3. *Direct Current Laboratory.* Measuring instruments. Operation of electric machinery. Characteristics of different types of direct current machines. Required of Juniors in electrical and mechanical engineering. Laboratory work, 2 hours. 2 hours.

*Second Semester.*

4. *Direct Current Laboratory.* Continuation of course 3, with special attention to losses, efficiencies, laboratory and shop tests of direct current machines. Required of Juniors in electrical and mechanical engineering. Laboratory work, 2 hours. 2 hours.

*First Semester.*

5. *Alternating Currents and Alternating Current Machinery.* The generation and utilization of alternating electric currents. The design, construction, and operation of single-phase alternating current generators and transformers. Methods of testing alternating current machinery. Required of Seniors in electrical engineering. 3 hours.

*Second Semester.*

6. *Alternating Currents and Alternating Current Machinery.* Characteristics and regulation of alternators. Losses and efficiencies. Polyphase apparatus and systems. Required of Seniors in electrical engineering. 3 hours.

*First Semester.*

7. *Testing Alternate Current Machinery and Apparatus.* The testing and operation of single-phase

alternating current generators, motors, transformers, and other appliances. Required of Seniors in electrical engineering. Laboratory work, 2 hours. 2 hours.

*Second Semester.*

8. *Testing Alternating Current Machinery and Apparatus.* Continuation of course 9. Determining of losses and efficiencies. Operation and testing of polyphase machinery. Required of Seniors in electrical engineering. Laboratory work, 2 hours. 2 hours.

*Both Semesters.*

- 11, 12. *Electrical Engineering Thesis.* 5 hours.

*Steam Engineering*

*First Semester.*

1. *Thermodynamics.* Principles of transformation of heat into mechanical energy, perfect, saturated and superheated vapors, refrigeration. Required of all Juniors in engineering. Prerequisites: Physics 1 and 2. 3 hours.

*Second Semester.*

2. *Steam Engines and Boilers.* Construction, operation and testing of various types of engines and boilers. Required of Juniors in mechanical and electrical engineering. Prerequisite: Course 1. 3 hours.

*Mechanical Engineering**First Semester.*

1. *Mechanism.* Kinematics of Machinery. Linkages, gears, cams, gear-trains, cone pulleys, etc. Must be accompanied by Math. 3. Required of Sophomores in Mechanical, Electrical and Civil Engineering. 3 hours.

*Second Semester.*

2. *Machine Design.* Fastenings, transmissive machinery. Required of Sophomores in Mechanical, Electrical Engineers. Prerequisite: Mechanical Engineering 1. 3 hours.

*First Semester.*

3. *Graphic Statics and Dynamics.* Required of Juniors in Mechanical Engineering. Prerequisite: Mechanical Engineering 1. 3 hours.

*Second Semester.*

4. *Machine Design.* The application of the principles of mechanics to calculations of machine parts. Adaptation of design to processes of manufacture. Required of Juniors in Mechanical Engineering. Prerequisite: Mechanical Engineering 2. 4 hours.

*First Semester.*

5. *Advanced Machine Design.* Design of hoisting machinery. Required of Seniors in Mechanical Engineering. Prerequisite: Mechanical Engineering 4. 4 hours.

*Second Semester.*

6. *Advanced Machine Design.* Design of machine tools, punching and shearing machines. Required of Seniors in Mechanical Engineering. Prerequisite: Mechanical Engineering 5. 4 hours.

*First Semester.*

7. *Heat Motors.* The principals of operation and design of internal combustion engines. Required of Seniors in Mechanical Engineering. Prerequisite: Steam Engineering 2. 3 hours.

*Second Semester.*

8. *Steam Turbines.* Required of Seniors in Mechanical Engineering. Prerequisite: Mechanical Engineering 7. 3 hours.

*First Semester.*

9. *Mechanics of Machinery.* Advanced study of the efficiency of machines, friction gears, etc. Required of Seniors in Mechanical Engineering. Prerequisite: Mechanical Engineering 3; Physics 8. 4 hours.

*Second Semester.*

10. *Mechanics of Machinery.* Continuation of course 9. 3 hours.



### *Shop Work*

Courses in shop work are given with a view of teaching the student in engineering, processes of manufacture.

#### *First Semester.*

1. *Elementary Shop Work.* One hour lecture. Laboratory work, 2 hours. 3 hours.

#### *Second Semester.*

2. *Elementary Shop Work.* One hour lecture. Laboratory work, 2 hours. 3 hours.

### *Department of Oratory.*

*Dramatic Art.* Study and interpretation of costumes and modern plays. For Sophomore, Junior and Senior Classes. 2 hours.

*Art of Speaking.* Required of all Freshmen. 1 hour.

*Debate.* For all College Students. 1 hour.

*Normal Course in Reading.* Offered to students of the School of Education only. 1 hour.

## School of Education

C. E. HODGIN, B. Pd., *Professor of Education and Head of the School.*

The purpose of the Course of 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 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 subjects 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 ideals, and the unfolding of his own originality and resourcefulness.

The students of this department have excellent opportunities for observing regular school work in the modern and progressive schools of the City of Albuquerque, where all grades are represented, including a well-equipped and up-to-date 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.

Graduates of the Preparatory School and students who have otherwise satisfied the College Entrance Requirements of the University, may be admitted to the Course in Education; and after satisfactorily completing the course will be granted a diploma entitling the holder to the three years' professional certificate issued by the Territorial Board of Education and renewable without examination.

Those students who take the course in Education subsequent to one or more years of the college course will receive in addition to the professional diploma, a certificate from the University testifying to their collegiate standing. If the course in Education is taken subsequently to the Junior college year, the degree of Bachelor of Pedagogy may be conferred upon the student on the recommendation of the Head of the School of Education.

Students entering the College of Letters and Arts with a view to a subsequent course in the School of Education, may take any of the courses outlined in the General List; or they may select, subject to the approval of the Head of the School of Education and the Schedule and Curriculum Committee, a combined course of study designed to prepare them for the profession they have chosen, subject to the requirements of the College.

General Science Course. The first year's course will be the same as the first year in the School of Science. The next two years must include Biology 1, 2, 3 and 5; Physics 1 and 2; Geology 1, 2, and 6; and a minimum of 17 hours selected with the approval of the Head of the School.

## **Description of Courses in the School of Education**

### *Education*

#### *First Semester.*

1. *History of Education.* 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. 5 hours.

#### *Second Semester.*

2. *Education in the United States.* Educational conditions in colonial, revolutionary, and reorganization periods. Study of leading educational institutions and state systems. Influence of the church on education. Dexter's History of Education in the United States, the special text. 4 hours.

#### *First Semester.*

3. *Orthoepy.* 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 diction-

ary markings; onomatopoey; theories of the origin of speech and language; difference between speaking and singing tones. Special reading work will involve a consideration of rhythm in human speech and animal utterances, the discovery and significance of inflection, and the employment of gesture. Text: Hodgkin's "A Study of Spoken Language." 3 hours.

*Second Semester.*

4. *School Management.* The fundamental laws of the school. The law evolving the organism. The organism executing the law. Influence of social combinations. School economy. Text: Seeley's *School Management*. 3 hours.

*First Semester.*

5. *General Method.* In the general view of the subject, consideration is given to the nature and principles of education; the teaching process; analysis and synthesis; induction and deduction; empirical and scientific method; concentration; the educational value of apperception; the doctrine of interest; correlation; theory of the culture epochs, etc. consideration is given to the use and abuse of text-books, and to the best literature on the subject of General Method. Reference texts: White's "Elements of Pedagogy", Thorndike's "Principles of Teaching", McMurray's "General Method." 5 hours.

*Second Semester.*

6. *Special Method.* In this course application of the general principles is made, and steps pointed out

in teaching the various school subjects. 5 hours.

*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. Psychical 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 chronogical 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 textbooks, 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. Historical

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*

#### *First Semester.*

1. *Psychology.* 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. Psychic Phenomena. Suggestion. 5 hours.

*Second Semester.*

2. *Psychology.* 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, assimilation, 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. 4 hours.

*First Semester.*

3. *Ethics.* Theoretical ethics. Aim and motive of action, free agency, problem of evil in the world. Schools of 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. 2 hours.

*First Semester.*

4. *Logic.* History of Logic, nature, terms, propositions, deductive and inductive methods, logical analysis and criticism of fallacies. 3 hours.



# The Commercial School

PRINCIPAL: Josephine S. Parsons.

The courses offered in the Commercial School are open, as electives, to Senior Preparatory students, and as technical work leading to a diploma, to graduates of accredited high schools, or of academic preparatory schools.

Experience has proved that for students in this department, thorough training in prescribed preparatory (high school) work is essential.

Immaturity has been found a serious obstacle to satisfactory progress, and for this reason the standard of requirements for entrance has been made more rigid than heretofore.

The regular courses offered are Stenography, Accounting (elementary and advanced), Commercial Spanish (correspondence and conversation) and the Elements of Business Law.

For those desiring more extended knowledge, the following courses will be given: Higher Accounting, Money and Banking, Financial History of the United States.

Under exceptional circumstances, special students are admitted to classes in this department.

A diploma is given to those fulfilling all requirements.

## *Description of Technical Courses.*

### *First Semester.*

- A. (1). *Stenography*. Principles; formation of outlines; sound analysis of words; unvocalized outlines; sight reading of moderately difficult

shorthand (engraved extracts from writings of good English authors); business letters. 5 hours.

*Second Semester.*

- A. (2). *Stenography*. Open only to those who have satisfactorily completed Course A. (1). Sight reading of engraved extracts from the 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(1) and A(2) a typewritten transcript is required which must be accurate and correctly spelled and punctuated. 5 hours.

*First Semester.*

- A. (1). *Accounting*. From the fact that all book-keeping is based upon the same general principles, and the requirements of different houses necessitates a different elaboration of the system, the following points are emphasized: Introduction of practical forms from the beginning; relation of accounts and their uses; practice work illustrated by continuous business; thorough drills in ledger closing, balance sheets, statements, etc.; introduction of cash, sales, invoice and bill books as books of original entry, in the early part of the work; special rulings; special drills, the receiving and giving of actual business papers. The work of the first semester embraces the keeping of records for wholesale and retail houses. 5 hours.

*Second Semester.*

- A. (2). *Accounting*. This is a continuation of Course A(1), and instruction is given in the keeping of records for commission houses, manufacturing plants (voucher system), and national banks. Books and papers used are such as are employed in modern business life. 5 hours.

*First Semester.*

- A. (1). *Commercial Spanish—Correspondence and Conversation*. All letter forms and business papers used in commercial intercourse between English and Spanish-speaking peoples are made the subject of thorough class-room drill, the object of the course being to give equal facility of expression—verbal or written—in either language.

*Second Semester.*

- A. (2). *Commercial Spanish—Correspondence and Conversation*. Continuation of Course A(1). Practice is given in the construction of every known type of letter. A general discussion of topics bearing on the text, conducted in Spanish, is a part of the daily work of the class.

Both of the above described courses are open to students who have had one full year's previous work in Spanish.

*First Semester.*

*Elements of Business Law*. To quote from the excellent text used in this course: "An effort is made to state as concisely and clearly as possible the

leading and fundamental principles of business law, and in place of extended, abstract explanation of them, to substitute simple concrete examples, showing them in their actual application to business transactions. In order that the conclusions drawn in these examples may be verified and not rest upon mere conjecture, the examples have, for the most part, been taken from cases decided in court."

## The Preparatory School

PRINCIPAL: Dan M. Richards.

With the beginning of the academic year 1909-10 the classes of the Preparatory School were reduced to three by the excision of the first or lowest class, corresponding to the ninth grade of a Public School; and the entrance requirements thenceforward presupposed a course of at least one year at a standard High School. The intention of the authorities is to further reduce the classes in the Preparatory School until the proper end of the University as a means for the provision of higher education has been attained; and the rate of progress in this direction will be commensurate with that of the High Schools themselves. In maintaining a Preparatory School, the University does not pretend to offer a substitute for the High Schools of the Territory, many of which are producing a grade of work equal to that maintained in the leading schools in the States, and in accordance with the entrance requirements of the State Universities, but rather aims at supplementing the work of those High Schools which have not yet brought their curriculum up to the standard of the rest, until the activities of the University are confined to the work of the Colleges and Schools. Although it has not been found possible, for the reason assigned above, to further reduce the preparatory classes for the coming year, yet it is hoped that another academic year will enable the University to remove a second class from the Preparatory School. Meanwhile, however, the three classes carried on during 1909-10 will be continued for the year 1910-11.

The course of study prescribed for the students of

the Preparatory School as a condition of entrance to the colleges or the School of Education, consists of sixteen "School Units", distributed over four years of school attendance; each school unit representing a course of five recitation periods per week during a school year of thirty-six weeks.

These units are distributed as follows:

- I. English, four years; including English History, to be taken during the fourth year and studied concurrently with the Literature of the period; 4 Units.
- II. History, two years; the first being applied to the study of Ancient and Mediaeval History, the second to that of Modern History and Civics; 2 Units.
- III. Language, three years; consisting of two years' study of some language other than English, and either a third year's work in the same or some other foreign language; 3 Units.
- IV. Mathematics, three years; consisting of one year and a half of Algebra, bringing the study of the subject up to the end of School Algebra; one year of Plane and Solid Geometry, and half a year of Elementary Trigonometry and Conic Sections; 3 Units.
- V. Science, two years; consisting of one year of Physics and one semester each of any two of the following subjects: Chemistry, Physiology, Botany, Zoology, Physical Geography; 2 Units.

Total of prescribed subjects, 14 Units.

*Fifteenth Unit.* For the fifteenth unit the pupil may elect either another year of language work or an additional year of Science, choosing the subjects from any included in the above list.

*Sixteenth Unit.* The sixteenth unit required for graduation from the Preparatory School may be chosen from any subject enumerated in the above list, and not previously selected; or the choice may be made from the following list, as follows:

A. Either, *One* of the following subjects;

- (1) Stenography.
- (2) Bookkeeping.
- (3) Mathematics.

B. Or, *Two* of the following subjects;

- (5) Manual Training.
- (6) Mechanical Drawing.
- (7) Applied Arithmetic.
- (8) Practical Geography.

### *Rhetoricals.*

In addition to the above subjects, a course in rhetoricals (including one public appearance yearly) is required of all pupils of the two lower classes of the Preparatory School; also one public appearance during the third year of the course.

High School students presenting themselves for admission to the Preparatory School will receive credit for the units carried on this list which they have already taken at their respective schools.

*English.**First Year.*

One composition each week, supplemented by written and oral class exercises; letters, stories, essays, study of the theme, plan and paragraph. 3 hours.

Reading of the classics, taken from the lists of College Entrance Requirements in English. The text-books for 1910-11 are: Merchant of Venice; Tale of Two Cities; Ancient Mariner; Sketch Book; Lays of Ancient Rome. 2 hours.

*Second Year.*

One composition each week, supplemented by written and oral class exercises. Description, narration, exposition, study of sentence structure, choice and use of words and study of paragraphs. 3 hours.

Reading of the classics continued. 2 hours.

*Third Year.*

One composition each week. Narration, description, argument. 2 hours.

Completion of the College Entrance Requirements in English and brief survey of English Literature, binding together all the classics read in the three years. Texts for the third year: Shakespeare's Macbeth; Burke's Speech on Conciliation with America; Milton's *l'Allegro* and *Il Penseroso*; Carlyle's Essay on Burns. 3 hours.

*Fourth Year.*

History of English Literature. 3 hours.

History of England, with particular reference to its relation to English Literature. 2 hours.



*Mathematics*

## FIRST YEAR.

*First Semester.*

*Elementary Algebra.* The four elementary processes of whole numbers and fractions; solutions of simple equations of one variable. Text: Slaught and Lennes, Elementary Course. 5 hours.

*Second Semester.*

*Elementary Algebra.* Simultaneous equations of two and three variables; graphic representation of linear equations; factoring; exponential theorems; square root; elementary problems in quadratics. Graphic solutions of assigned problems are required to be handed in, in notebooks containing co-ordinate paper. Text: Slaught and Lennes, Elementary Course. 5 hours.

## SECOND YEAR.

*First Semester.*

*Advanced Algebra.* A rapid review of equations of the first degree, followed by a thorough course in involution and evolution, and quadratic equations. Text: Slaught and Lennes, Advanced Course. 3 hours.

*Plane Geometry.* Lines and angles; rectilinear figures and the first fifteen propositions on the circle. 2 hours.

*Second Semester.*

*Advanced Algebra.* Complex fractions; ratio, variation and proportion; exponents and radicals; lo-

garithms; progressions; binomial theorem as used in the expansion of binomials having integral or fractional, positive or negative exponents. Text: Slaughter and Lennes, Advanced Course. 2 hours.

*Plane Geometry.* The circle; ratio and proportion; similar polygons and areas of polygons. 3 hours.

#### THIRD YEAR.

##### *First Semester.*

*Geometry.* The first four weeks is devoted to the completion of Plane Geometry which is followed by a complete course in Solid Geometry. 5 hours.

##### *Second Semester.*

*Plane Trigonometry.* Solutions of plane triangles; essentials of goniometry; applications to surveying and navigation. Text: Lyman and Goddard. 3 hours.

*Conic Sections.* This course is designed to give the pupil a thorough working knowledge of conic sections. Great stress is laid upon the solution of problems. 2 hours.

#### *History (Two-year Course).*

#### FIRST YEAR.

##### General History.

##### *First Semester.*

*Ancient History.* The story of the nations from the earliest times up to the era of Charlemagne, with emphasis on those peoples and institutions which have contributed most directly to modern civilization. 5 hours.

*Second Semester.*

From the Era of Charlemagne up to the present time. A general survey of the subject, with a somewhat closer study of European History during the last hundred and fifty years. 5 hours.

## SECOND YEAR.

English History and American Government.

*First Semester.*

A survey of English history from the earliest times to the present day, with special emphasis upon the development of the principles of popular government. The course will include a study of the social and political conditions of the leading nations of the world at the presnt day. 5 hours.

*Second Semester.*

American Civics. A course upon the constitution of the United States, with special emphasis upon the operation of the various forms of government; federal, state, territorial, county, municipal, etc. The course is intended to provide a simple and practical initiation into the duties, rights and privileges of the American citizen. 5 hours.

*Latin.*

## FIRST YEAR.

Study of the simpler forms of Latin Accidence; memorizing of paradigms; reading of easy Latin stories; easy Sight Translation (second semester);

Latin Composition. Texts: Bennett's First Latin Writer (Longmans); New Grædætim (Ginn). 5 hours.

#### SECOND YEAR.

Daily drill in accidence and syntax; Latin translation three times weekly; Latin composition twice weekly. 5 hours.

##### *First Semester.*

Caesar de Bello Gallico, Books I and II; accurate knowledge of the accidence of Public School Latin Primer; Latin composition (First Latin Writer) continued to end of Simple Sentence.

##### *Second Semester.*

Sallust, Bellum Catilinae or Bellum Jugurthinum; Latin Syntax; Latin Composition (Compound Sentence). Texts: Bennet's First Latin Writer; Public School Primer (Longman's); Caesar de Bello Gallico; Sallust, Bellum Catilinae or Bellum Jugurthinum.

#### THIRD YEAR.

Regular revision of Accidence and Syntax; Prose Translation, 2 hrs.; Verse Translation, 2 hrs.; Prose Composition, 1 hr. Total, 5 hours.

##### *First Semester.*

Cicero, in Catilinam. Vergil, Aeneid, I and II, or selections.

##### *Second Semester.*

Cicero, De Senectute and De Amicitia; or one of the private orations. Ovid, selected pieces.

Texts: Cicero, any standard text. Vergil, any standard Text, or Shuckburgh's Selections (Macmillan). Ovid, Shuckburgh's Selections (Macmillan) or Heatley's Selections (Longman's). Composition; Second Latin Writer (Longmans), or Sargent's Easy Passages for Translation (Clarendon Press).

### *Greek.*

#### FIRST YEAR.

Grammar and Composition. The common forms, idioms, and constructions, and the general grammatical principles of Attic Greek Prose. Translation into Greek of detached sentences and very easy continuous prose. 5 hours.

#### SECOND YEAR.

Grammar and Composition continued. Reading of Xenophon's Anabasis. 5 hours.

When Greek is not taken as a Preparatory subject, the studies described above will be included in the first two years of the College Course.

### *German.*

#### FIRST YEAR.

First Steps in German. Essentials of grammar. Reading of about 200 pages of easy German stories. Conversation begun. Simple verse memorized. 5 hours.

## SECOND YEAR.

Composition, conversation, and reading a prose author and one of Lessing's dramas. Reading and memorizing Schiller's ballads. 5 hours.

## THIRD YEAR.

Life and Works of Goethe and Schiller; composition; conversation. 5 hours.

## Spanish (2 Units).

## FIRST YEAR.

1. An elementary study of Spanish covering a year's work in the language. This should comprise: (1) Careful drill in pronunciations, 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. 5 hours.

## SECOND YEAR.

2. 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. 5 hours.

### French (2 Units).

#### FIRST YEAR.

1. 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 conjunctions, 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. 5 hours.

#### SECOND YEAR.

2. 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. 5 hours.

### 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 four hours per week in the laboratory throughout the school year. 5 hours.

### Chemistry ( $\frac{1}{2}$ Unit).

1. To secure one-half unit credit the student must have had a semester's work in descriptive Chemistry, covering both the metals and non-metallic elements, and their common compounds.  $2\frac{1}{2}$  hours.

### Physiology and Hygiene (1 Unit).

The nature of protoplasm, the cell and its contents, the tissues, the anatomy of the human body, the physiology and hygiene of digestive, circulatory, respiratory, muscular, and nervous systems. Bacteria, the conditions necessary for their growth, methods of fighting them, sanitation.

One period weekly, at least, should be devoted to dissection or the microscopic examination of tissues. Text-book recommended: Conn and Budington's Advanced Physiology and Hygiene. 5 hour course.

### Natural Science (3 Units).

1. *Botany*  $\frac{1}{2}$  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,  $\frac{1}{2}$  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,  $\frac{1}{2}$  or 1 Unit.* 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.

### *Shop Work.*

#### *Both Semesters.*

- A. *Shop Work.* Five hours per week of bench-work and work on the lathe in wood and iron. One hour lecture and four hours' work in the shop each week.  $2\frac{1}{2}$  hours.

### *Mechanical Drawing.*

#### *Both Semesters.*

- A. *Mechanical Drawing.* Five hours per week in the use of drawing instruments, lettering, geometrical and free-hand drawing. One hour lecture and four hours drawing each week.  $2\frac{1}{2}$  hours.

*Rhetoricals.*

## FIRST YEAR.

*Rhetoricals A.* Required of all students of this year  
1 hour.

## SECOND YEAR.

*Rhetoricals B.* Required of all students of this year.  
1 hour.

*Elementary Course in Dramatic Study.* Offered to all  
Preparatory Students. 1 hour.

# Students

## COLLEGE

### *Graduate Students.*

Ross, Edmund                      Shepard, Clyde Sheldon

### *Seniors.*

|                       |                       |
|-----------------------|-----------------------|
| Allen, Laura Chase    | Pride, Myrtle         |
| Allen, Walter Rowland | Saulsberry, Joshua J. |
| Bryan, Hugh McClellan | Walker, Edith         |
| Lee, Lawrence Fred    |                       |

### *Juniors.*

|                      |                     |
|----------------------|---------------------|
| Lovelace, Marie Lora | Otero, Manuel Basil |
| Lovelace, Mabel      | Seder, A. Raymond   |

### *Sophomores.*

|                         |                           |
|-------------------------|---------------------------|
| Allen, Matilda Florence | Parrish, Marie Louise     |
| Bacon, Lula Stevens     | Pickard, Florence Martha  |
| Karsten, Karl G.        | Porterfield, Blanche      |
| Lane, Elizabeth Menefee | Price, Harvey P.          |
| Lembke, Charles H.      | Schreiber, Alice Caroline |
| Marsh, Harold E.        | Sewall, Robert Tullis     |
| Miller, John Wickliffe  |                           |

### *Freshman.*

|                        |                      |
|------------------------|----------------------|
| Anspach, Eldred V.     | Espinosa, Imelda     |
| Arens, Egmont Hegel    | Everitt, Evelyn      |
| Cook, William Coburn   | Ferguson, Lynn       |
| Cornish, Percy G., Jr. | Forbes, Fred B.      |
| Emmons, John J.        | Gilbert, Francis C.  |
| Espinosa, Gertrude     | Gladding, Raymond D. |

|                      |                    |
|----------------------|--------------------|
| Kelly, Clyde         | Ramsay, Ellen Mary |
| Koon, Clarice E.     | Seder, E. Stanley  |
| Mudgett, Leon Howard | Sterling, Lena F.  |
| Otto, Chester L.     |                    |

*Special.*

Overton Jessie M.

*University Extension.*

|                      |                     |
|----------------------|---------------------|
| Shields, Mrs. Ida J. | Hayward, Mrs. W. M. |
|----------------------|---------------------|

## SCHOOL OF EDUCATION

|                        |                        |
|------------------------|------------------------|
| Adams, Bernice Brown   | Harrison, Genevieve B. |
| Armijo, Teresa         | McClelland, Eunice     |
| Creel, Nannie Fern     | Mordy, Grace M.        |
| De Tullio, Violetta C. | Thompson, Hazel Dell   |
| Fox, Anna Isabel       |                        |

Others did work in this department who are enrolled elsewhere.

## COMMERCIAL DEPARTMENT.

|                      |                     |
|----------------------|---------------------|
| Blake, Cecilia       | Kieke, Lillian      |
| Bonning, Lucy        | Kramer, Elmer       |
| De Vargas, Gumecindo | McConnell, Chalmers |
| Dry, Fred            | McFie, Jno. R., Jr. |
| Emmons, J. Eugene    | McLaughlin, Gladys  |
| Franklin, Margaret   | McMillin, Alice     |
| Gorman, William      | Myers, George       |
| Hall, Ray Elmer      | Nicklas, Sophia M.  |
| Hahn, James          | Olds, Earl          |
| Hubbard, Harry       | Saulsberry, H. C.   |
| Jamieson, H. B.      | Silva, Jose         |

Skinner, James  
 Smith, Roy C.  
 Snoeberger, Hilda

Ulibarri, Victor  
 Van Eaton, Maybelle.

In addition to the above list, 15 students, whose names appear elsewhere, attend some of the courses of the Commercial Department.

## PREPARATORY DEPARTMENT.

### *Fourth Year.*

|                          |                            |
|--------------------------|----------------------------|
| Abbott, Lyle E.          | Lindsey, Howard W.         |
| Arens, Ralph Waldo       | McVicker, Agnes            |
| Balfour, Isabel Margaret | Shroeder, Erna Louise      |
| Blankenship, Glen        | <i>Smith, Charles Roy*</i> |
| Boldt, Ira V.            | Spitz, Frank               |
| Cunningham, Margaret C.  | Wells, Elizabeth Helen     |
| Harkey, Corbett T.       |                            |

### *Third Year.*

|                        |                                 |
|------------------------|---------------------------------|
| Becker, Frieda C.      | <i>McMillin, Alice Lillian*</i> |
| Brown, Benjamin Oscar  | Marsh, Myrita Edith             |
| Davis, Cecil Clair     | Means, Florence                 |
| Galles, Herbert        | Selva, Lawrence L.              |
| <i>Hahn, James J.*</i> | Shaw, Robert Colwell            |
| McCollum, William A.   | <i>Van Eaton, Maybelle*</i>     |
| McCollum, Laura H.     | Yrisasari, Edward C.            |

### *Second Year.*

|                    |                       |
|--------------------|-----------------------|
| Allen, Jay K.      | Boldt, Irene          |
| Arens, Winfried B. | <i>Bonning, Lucy*</i> |

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\*Names marked thus (\*) are enrolled, and counted only in Commercial Department.

Chadwick, Margaret  
Cox, Hazel Bernice  
*DeVargas, Gumecindo\**  
*Dry, Fred\**  
Espinosa, Raymond J.  
*Franklin, Margaret\**  
Hamilton, James Guy  
Hunt, Albert S.  
Kelly, Iva Cleo  
Kelly, David  
*Kraemer, Elmer\**  
Lawrence, Edna Willetta  
Mandell, Gladys  
*Myers, George\**  
Nichols, J. Clifford

*Nicklas, Sophia M.\**  
*Olds, Earl\**  
Paris, Ernest  
Postel, Pauline  
Reiff, Mary  
Sellers, Constance  
*Silva, Jose\**  
*Skinner, James\**  
Smith, Mabel  
*Ulibarri, Victoriano\**  
Vincent, Velma  
Wagner, Mildred  
Walton, Joseph  
Weber, Charles  
Wells, Lorena L.

## SUMMARY.

*College.*

|                            |    |
|----------------------------|----|
| Graduate Students .....    | 2  |
| Seniors .....              | 7  |
| Juniors .....              | 4  |
| Sophomores .....           | 13 |
| Freshmen .....             | 19 |
| Special .....              | 1  |
| University Extension ..... | 2  |
| School of Education .....  | 9  |
| Commercial School .....    | 27 |

*Preparatory.*

|                   |     |
|-------------------|-----|
| Fourth Year ..... | 12  |
| Third Year .....  | 11  |
| Second Year ..... | 23  |
| Total .....       | 130 |

## Alumni Association

### OFFICERS FOR 1909-10.

President—Rose M. Harsch, '07.

Vice-President—Grover C. Emmons, '09.

Secretary and Treasurer—Eugenia Keleher, '08.

Corresponding Secretary—Hugh M. Bryan, '05.

Chairman Executive Committee—Fleda E. Smith, '05.

---

Adams, Katherine Orbin, '94 (Teacher Public  
Schools) ..... Los Angeles, Calif.

Alger, Mabel, '97 (Mrs. Bruce Kinney) .....  
..... Topeka, Kans.

Allen, Anna May, '06. .... Grand Junction, Colo.

Allen, Walter R., '06 (University of N. M.) .....  
..... Albuquerque, N. M.

Anderson, Mabel E., '00 (Mrs. H. B. Allen) .....  
..... Flushing, N. Y.

Atkeson, Walter R., '03 (Civil Engineer) .....  
..... Visalia, Calif.

Barth, Freda, '01 (Mrs. Taylor) .. Los Angeles, Calif.

Bean, Ray, '04 (Dentist) ..... San Francisco, Calif.

Becker, Louis Carl, '03 (Cashier First National  
Bank) ..... Belen, N. M.

Bell, Thomas Sidney, (Formerly Rhodes Student,  
Attorney) ..... Tacoma, Wash.

Bendradt, Rev. T. A., M. S., '00 (Minister) .....  
..... Constableville, N. Y.

Bieghler, Harriet Kyle, '03 (Teacher) . Rawlins, Wyo.



- Bittner, Harvey P., '01 (Newspaper Reporter) . . . .  
 . . . . . Seattle, Wash.  
 Bliss, S. Mabel, '01 . . . . . Albuquerque, N. M.  
 Boatright, Stella, '04 . . . . . Albuquerque, N. M.  
 Booth, Helen, '95 (Deceased).  
 Borradaile, Grace (Teacher) . . . . . Candelaria, N. M.  
 Bowden, Bessie, '01 (Music Teacher) . Lawrence, Kans.  
 Bowie, Morris Ramsey, '03 (Physician) . Paonia, Colo.  
 Brewer, Nellie C., '02 (Attorney) . Albuquerque, N. M.  
 Bronson, Gilbert, '04 (Railroad Service) . . . . .  
 . . . . . Los Angeles, Calif.  
 Brooks, Herbert, '99 (Manager San Jose Market) . .  
 . . . . . Albuquerque, N. M.  
 Brooks, Lewis C., '98 (Manager American Oyster  
 Co.) . . . . . Neosho, Wis.  
 Brown, Katherine D., '09 . . . . . Gallup, N. M.  
 Bryan, Hugh M., '10 (Rhodes Student to Oxford  
 1910-1913) . . . . . Albuquerque, N. M.  
 Bryan, Kirk, '09 (Graduate Student Yale Univer-  
 sity) . . . . . New Haven, Conn.  
 Buchanan, Bessie, '95 (Mrs. Nelson) . Winslow, Ariz.  
 Butts, Francis, '01 (Mrs. Stevenson) . . . . .  
 . . . . . Albuquerque, N. M.  
 Childers, Gladys McCaw, '03 (Stenographer For-  
 estry Service) . . . . . Albuquerque, N. M.  
 Clayton, Deo M., '00 . . . . . Albuquerque, N. M.  
 Clayton, Edmund Mills, '96 (Physician) . . . . .  
 . . . . . Albuquerque, N. M.  
 Coghill, George Ellett, '99 (Professor of Biology,  
 Denison University) . . . . . Granville, Ohio  
 Craig, Minnie E., '02 (Teacher Public Schools) . .  
 . . . . . Las Vegas, N. M.  
 Crocker, Bertha, '01 . . . . . California

- Cunningham, Kate Carthage, '07 (Mrs. H. L. Benham) ..... Williams, Ariz.  
 Custers, Maud E., '99 (Teacher) ..... St. Louis, Mo.  
 Custers, Ruby, '01 ..... Albuquerque, N. M.
- Davis, Harriet K., '09 (Teacher High School) ...  
 ..... Las Vegas, N. M.
- De Tullio, Stella D., '09 (Teacher) .. San Jose, N. M.
- Dieckmann, Bruno E., '02 (Violin Instructor) ....  
 ..... Kansas City, Mo.
- Dieckmann, Lisa C., '06 (Mrs. Thomas Danahy) ..  
 ..... Albuquerque, N. M.
- Duckworth, Lucile, '03 (Mrs. McCrary) .....  
 ..... Roswell, N. M.
- Edie, Lucy L., '09 (Teacher) ..... San Jose, N. M.
- Emmons, Grover C., '09 (Law Student Vanderbilt University) ..... Nashville, Tenn.
- Espinosa, Marie, '05 (Teacher) ..... Barelvas, N. M.
- Everitt, Edyth L., '98 ..... Los Angeles, Calif.
- Everitt, Olivia, '01 (Stenographer for Attorney F. W. Clancy) ..... Albuquerque, N. M.
- Faber, Lena, '05 (Mrs. William Cote) .....  
 ..... Albuquerque, N. M.
- Fergusson, Erna, '06 (Teacher Public Schools) ...  
 ..... Albuquerque, N. M.
- Fitch, Hereford, '98 ..... Hollywood, Calif.
- Fitch, James G., '99 ..... Hollywood, Calif.
- Fox, Florence L., '03 (Stenographer Pacific Mutual Insurance Co.) ..... Albuquerque, N. M.
- Graves, Maud C., '05 (Supervisor Manual Training)  
 ..... San Bernardino, Calif.
- Hall, Sarah M., '06 ..... Albuquerque, N. M.

- Halloran, Etta C., '01..... Berkeley, Calif.  
Halloran, Francis, '99 (Mrs. O. N. Marron).....  
..... Albuquerque, N. M.  
Halloran, Ralph A., '02 (Chemist) .. Richmond, Calif.  
Hamm, Josephine, '95 (Mrs. Williamson).....  
..... Douglas, Ariz.  
Harding, Maynard C., '97 (Physician).... Ault, Colo.  
Harsch, Rose M., '07 (Stenographer U. S. Forestry  
Service) ..... Albuquerque, N. M.  
Hazeldine, Lucy, '00 (Mrs. W. C. Dame).....  
..... City of Mexico  
Hazeldine, May, '04 (Mrs. J. W. Pettyjohn).....  
..... Long Beach, Calif.  
Heald, Clarence E., '05..... Albuquerque, N. M.  
Heald, Elizabeth, '05 (Pomona College) ... California  
Herrick, Harry N., '00 (Chemist, University of Cali-  
fornia) ..... Berkeley, Calif.  
Hodgin, C. E., '94 (Principal Normal Department)  
..... University of N. M., Albuquerque  
Hoffman, Dorothy L., '06 (Mrs. Apt) ... Belen, N. M.  
Holden, Blanche, '97 (Mrs. Morgan).....  
..... Omaha, Nebraska  
Huggett, Lillian G., '06..... El Paso, Texas  
Hughes, Elizabeth, '00 (Mrs. Clarence French)....  
..... Rock Creek, Ohio  
Hughes, Lou, '02 (Stenographer) . Albuquerque, N. M.  
Hunt, Mabel C., '02 (Mrs. M. Summers).....  
..... Albuquerque, N. M.  
Huntzinger, Rose, '04 (Mrs. Thos. Hughes, Jr.) ..  
..... Long Beach, Calif.  
Ilfeld, Lawrence A., '06 (Harvard University)....  
..... Cambridge, Mass.  
Irwin, Lloyd, '05 (University of Wisconsin).....  
..... Madison, Wis.

- Irwin, Sarah Frances, '03 (Teacher) . . Elk City, Okla.
- James, Mary, '94 (Mrs. Daniel Scruggs) . . S. America
- Jasper, Anita M., '07 . . . . . Pasadena, Calif.
- Johnson, Dr. Douglas W., '01 (Assistant Professor  
Physiography Harvard University) . . . . .  
Cambridge, Mass.
- Johnson, Eva W., '01 (Trained Nurse) . . . . .  
Los Angeles, Calif.
- Johnson, Ida, '01 (Mrs. Linus Shields) . . . . .  
James Hot Springs, N. M.
- Keleher, Eugenia, '08 (Teacher Public Schools) . . . . .  
Old Albuquerque, N. M.
- Keleher, Margaret M., '06 (Teacher Public Schools)  
Albuquerque, N. M.
- Keleher, Thomas F., '02 (Clerk Bank of Commerce)  
Albuquerque, N. M.
- Keller, Allan F., '08 (Postal Service) . . . . .  
Albuquerque, N. M.
- Kempenich, Henry, '96 (Merchant) . . Holbrook, Ariz.
- Kieth, Jessie, '94 (Mrs. Ruth) . . . . . Pomona, Calif.
- Krawinkle, Laura, '01 . . . . . Los Angeles, Calif.
- Kunz, George G., '96 (Physician) . . . . Tacoma, Wash.
- MacDonald, May, '99 (Mrs. R. S. Goodrich) . . . . .  
Los Angeles, Calif.
- Magnusson, Gustave A., '03 (University of Wisconsin)  
Madison, Wis.
- Maltby, Frank S., '99 (Deceased).
- Manwarin, Edna, '02 (Mrs. M. F. Mason) . . . . .  
Newkirk, Okla.
- Maxon, J. G., '01 (Hahneman Medical College) . . . . .  
Chicago, Ill.
- Mayo, Joseph G., '06 (Expert Miner) . . . Kelly, N. M.

- McCallum, Agnes C., '06 (Mrs. Paul Scott) .....  
 ..... Albuquerque, N. M.
- McGuinness, Michael J., '09 (Law Student) .....  
 ..... Albuquerque, N. M.
- McLaughlin, Gladys G., '09 (Commercial Department) .....  
 ..... University of N. M., Albuquerque
- McMillen, Jessie, '01 (Mrs. A. B. Stroup) .....  
 ..... Albuquerque, N. M.
- McMillin, Sadie M., '09 (Teacher) .. San Jose, N. M.
- Menaul, Elizabeth, '94 (Mrs. Nicholson) .....  
 ..... Bridgeport, Okla.
- Messenger, J. Franklin, '00 (Dean School of Education University of Vermont) .... Burlington, Vt.
- Muensterman, Carl A., '96 (Chemist) .... Peoria, Ill.
- Murphy, Beatrice, '07 (Teacher) .... Newlon, Mont.
- Nash, Nellie E., '07 (Teacher) .... Magdalena, N. M.
- Nelson, Raymond, '02 ..... South Africa
- Niles, Edith, '00 ..... Chicago, Ill.
- Niven, Isobel O., '07 (Teacher High School) .....  
 ..... Tulare, Calif.
- Nowlin, Frances, '94 (Mrs. Wittmer) (Deceased).
- Parrish, Marie L., '09 (University of N. M.) .....  
 ..... Albuquerque, N. M.
- Parsons, Josephine S., '04 (Principal Commercial School University of N. M.) ..... Albuquerque
- Pearce, Lenore, '06 ..... Albuquerque, N. M.
- Perkins, Blanche I., '06 (Teacher Public Schools) ..  
 ..... Albuquerque, N. M.
- Pinney, Vida, '07 (Teacher Public Schools) .....  
 ..... Las Cruces, N. M.
- Pole, Frances, '00 (Librarian) ..... Palo Alto, Calif.
- Powers, Elizabeth, '03 (Librarian A. T. & S. F. Reading Rooms) ..... Albuquerque, N. M.

- Pratt, Helen, '04 (Mrs. Frank Kerzman) .....  
 .....Albuquerque, N. M.
- Price, Robert C., '06 (Bookkeeper Albuquerque  
 Brick Co.) .....Albuquerque, N. M.
- Ridley, Furn, '05 .....Albuquerque, N. M.
- Rogers, Clarence E., '09 (Graduate Student Univer-  
 sity of California) .....Berkeley
- Ross, Edmund, '09 (Civil Engineer) .....  
 .....Albuquerque, N. M.
- Schreiber, Alice C., '09 (University of N. M.) .....  
 .....Albuquerque
- Self, Wm. Dennis, '08 .....Little Rock, Ark.
- Shields, Linus L., '02 (Superintendent San Diego  
 Land Grant) .....Jemez Hot Springs, N. M.
- Sleight, Beatrice I., '06 (Teacher Public Schools) ..  
 .....Albuquerque, N. M.
- Smith, Fleda E., '05 (Instructor Domestic Science  
 University of N. M.) .....Albuquerque
- Spicer, Eva M., '09 .....Monmouth, Ill.
- Spitz, Lillian, '09 (Teacher High School) .....  
 .....Artesia, N. M.
- Stamm, Roy A., '93 (Merchant) ..Albuquerque, N. M.
- Stover, Roderick, '99 (Electrical Engineer) .....  
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