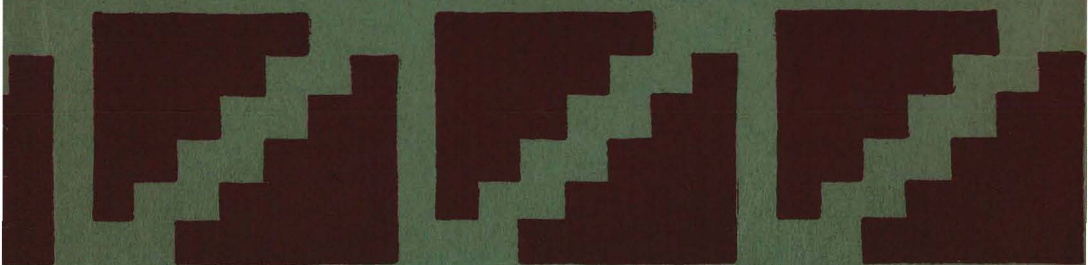


*The University of New Mexico*

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BULLETIN

1951-52 CATALOG ISSUE

## DIRECTIONS FOR CORRESPONDENCE

For further information on the University program, address inquiries as follows:

GENERAL INFORMATION, ADDITIONAL LITERATURE, ENTRANCE, CREDENTIALS (other than Graduate School), CALENDAR, REGISTRATION, TRANSCRIPTS, ACADEMIC MATTERS .....	Director of Admissions
ADMISSIONS (other than Graduate School) .....	Director of Admissions
GRADUATE SCHOOL (Admission and General Information) .....	Dean of the Graduate School
STUDENT AFFAIRS .....	Director of Student Affairs
STUDENT EMPLOYMENT AND PLACEMENT (Men) .....	General Placement Bureau
STUDENT EMPLOYMENT (Women) .....	Dean of Women
PERSONAL WELFARE .....	Dean of Women or Men
NAVAL RESERVE OFFICERS' TRAINING CORPS, Executive Officer, Naval R.O.T.C. Unit	
AIR FORCE RESERVE OFFICERS' TRAINING CORPS .....	Air Force R.O.T.C. Unit
VETERANS' INFORMATION .....	Veterans Affairs Officer
EXPENSES .....	Comptroller
VOCATIONAL ADVISEMENT, COUNSELING, TESTING .....	Counseling and Testing Services
CORRESPONDENCE AND EXTENSION COURSES .....	Extension Division
SUMMER SESSION .....	Director of the Summer Session
FIELD SESSIONS:	
Anthropology .....	Head of the Department of Anthropology
Art .....	Head of the Department of Art
APPLICATIONS FOR FIELD SESSIONS .....	Director of Admissions
SCHOOL OF LAW (other than Admissions) .....	Dean of the School of Law
INTER-AMERICAN AFFAIRS .....	Director of the School of Inter-American Affairs
HOUSING—WOMEN .....	Dean of Women
HOUSING—MEN AND MARRIED STUDENTS .....	Men's Housing Manager

The University of New Mexico

# BULLETIN



*Sixtieth Catalog Issue . . . 1951-1952*

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Whole Number 440

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July 16, 1894

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1951

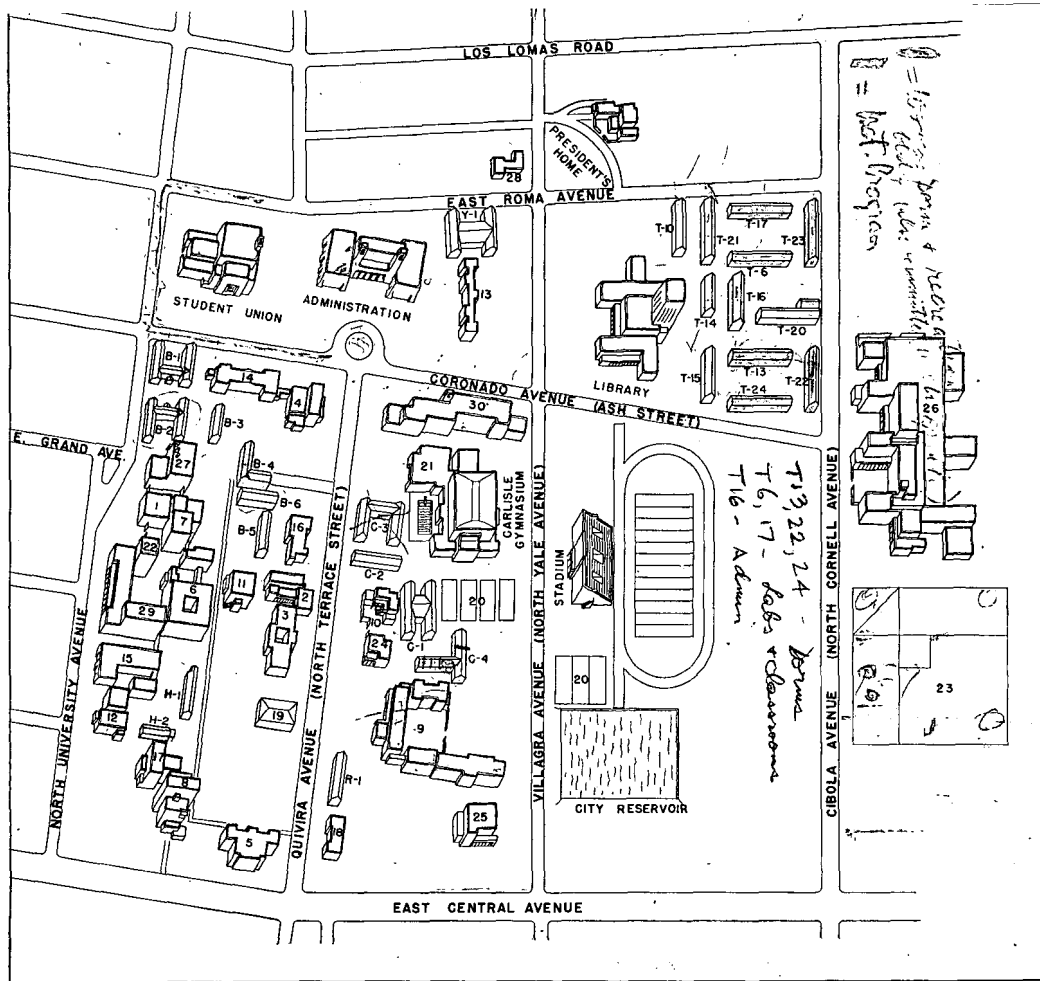


# CAMPUS OF THE UNIVERSITY OF NEW MEXICO



## KEY TO BUILDINGS

1. Aeronautical Laboratory
2. Parsons Hall (Biology)
3. Chemistry Building
4. Women's Dining Hall
5. Fine Arts Building
6. Hadley Hall (Engineering)
7. Engineering Building
8. Hodgkin Hall
9. Hokone-Marron Hall (Women's Dormitory)
10. Inter-American Affairs Building
11. Lecture Hall
12. Classrooms and Police Headquarters
13. Yatsko Hall
14. Bandelier Hall (Women's Dormitory)
15. Mechanical Engineering Shop
16. Public Health Laboratory
17. Rodey Hall
18. Sara Reynolds Hall
19. Music Building
20. Tennis Courts
21. Counseling and Testing Bureau
22. Chemical Engineering Building
23. Baseball Field
24. Pharmacy Building
25. Journalism Building
26. Men's Dormitory
27. Power Plant
28. Clark Hall (Business Research)
29. Industrial Arts Building
30. Classroom Building
- B-1. Classrooms, offices, Speech laboratories
- B-2. Classrooms, laboratories, offices
- B-3. Offices, Biology laboratories
- B-4. Classrooms
- B-5. Offices, Biology laboratories
- B-6. Biology
- C-1. Classrooms, Chemistry laboratories
- C-2. Classrooms, Music Rooms
- C-3. Post Office, Institute of Meteorology
- C-4. Classrooms, offices, laboratories, art education
- H-1. Classrooms, Engineering
- H-2. Dramatic Art
- R-1. Art, Home Economics
- T-4. to T-24. Women's Dormitories (Dorm D)
- T-10. Infirmary
- T-20. Women's Recreation Building and office
- T-21. Press editorial offices
- Y-1. Classrooms





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# CALENDAR OF THE UNIVERSITY

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## SUMMER SESSION, 1951

New Students, Tests and Instructions, Thursday-Friday, June 7-8  
 Registration, Saturday, June 9  
 Instruction Begins; Late Registration Fee Applies, Monday, June 11  
 Registration Closes; Last Day for Additions to Programs of Study; Change of Program Fee Applies, Saturday, June 16  
 End of Second Week; Last Day for Withdrawal from Course without Grade, Saturday, June 23  
 Independence Day, Holiday, Wednesday, July 4  
 Session Ends, Saturday, August 4, 10:00 p. m.

## FIELD SESSIONS, 1951

Anthropology:  
 General and Advanced Field Sessions, Saturday-Sunday, June 9-August 5  
 Art:  
 Taos Field School of the Arts, Thursday-Friday, June 7-July 20

## SEMESTER I, 1951-52

New Students, in and around Albuquerque, are urged to take tests on Wednesday, September 5, 8:30 a. m., Science Lecture Hall  
 Assembly for All New Students, Sunday, September 9, 7:30 p. m., Carlisle Gymnasium  
 New Students, Tests and Instructions, Monday-Tuesday-Wednesday, September 10-11-12  
 Registration, Thursday-Friday, September 13-14  
 Late Registration Fee Applies, Saturday, September 15  
 Instruction Begins, Monday, September 17  
 Registration Closes; Last Day for Additions to Programs of Study; Change of Program Fee Applies, Saturday, September 29  
 End of Fourth Week; Last Day for Withdrawal from Course without Grade, Saturday, October 13  
 Lettermen's Assembly, Friday, November 9  
 Mid-Semester, Saturday, November 10  
 Homecoming, Holiday, Saturday, November 17  
 Thanksgiving Recess Begins, Wednesday, November 21, 10:00 p. m.  
 Classes Resume, Monday, November 26, 7:00 a. m.  
 End of Twelfth Week; Last Day for Removal of Incomplete Grades, Saturday, December 8  
 Christmas Recess Begins, Saturday, December 22, 10:00 p. m.  
 Classes Resume, Monday, January 7, 1952, 7:00 a. m.  
 Closed Week (Pre-examination Week) Monday-Monday, January 14-21  
 Semester Final Examinations, Monday-Saturday, January 21-26  
 Semester Ends, Saturday, January 26, 10:00 p. m.

# CALENDAR OF THE UNIVERSITY

## SEMESTER II, 1951-52

Assembly of All New Students, Monday,  
January 28, 7:30 p. m., Carlisle Gymna-  
sium

New Students, Tests and Instructions,  
Tuesday-Wednesday, January 29-30

Registration, Thursday-Friday, January 31-  
February 1

Late Registration Fee Applies, Saturday,  
February 2

Instruction Begins, Monday, February 4

Registration Closes; Last Day for Additions  
to Programs of Study; Change of Pro-  
gram Fee Applies, Saturday, February 16

End of Fourth Week; Last Day for With-  
drawal from Course without Grade, Sat-  
urday, March 1

Mid-Semester, Saturday, March 29

Easter Recess Begins, Wednesday, April 9,  
10:00 p. m.

Classes Resume, Monday, April 14, 7:00  
a. m.

End of Twelfth Week; Last Day for Re-  
moval of Incomplete Grades, Saturday,  
April 26

Fiesta Day, Holiday, Saturday, May 3

Honors Assembly, Wednesday, May 7

Closed Week (Pre-examination Week),  
Monday-Monday, May 19-26

Semester Final Examinations, Monday-Sat-  
urday, May 26-31

Semester Ends, Saturday, May 31

Baccalaureate Service, Sunday, June 1, 8:00  
p. m.

Commencement Exercises, Monday, June 2,  
7:30 p. m.

## SUMMER SESSION, 1952

New Students, Tests and Instructions,  
Thursday-Friday, June 5-6

Registration, Saturday, June 7

Instruction Begins; Late Registration Fee  
Applies Monday, June 9

Registration Closes; Last Day for Additions  
to Programs of Study; Change of Pro-  
gram Fee Applies, Saturday, June 14

End of Second Week: Last Day for With-  
drawal from Course without Grade, Sat-  
urday, June 21

Independence Day, Holiday, Friday, July 4

Session Ends, Saturday, August 2, 10:00  
p. m.

1952

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## THE REGENTS OF THE UNIVERSITY

THE HONORABLE EDWIN L. MECHEM, *Governor of New Mexico*, ex officio..... Santa Fe

THOMAS M. WILEY, *State Superintendent of Public Instruction of New Mexico*, ex officio..... Santa Fe

PAUL LARRAZOLO, *President*..... Belen

MRS. FRANKLIN BOND, *Vice-President*..... Albuquerque

JACK KORBER, *Secretary-Treasurer*..... Albuquerque

WESLEY QUINN..... Clovis

JACK WALTON..... Raton

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France V. Scholes, Ph.D., Academic Vice-President

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Harold Orville Ried, Ph.D., Assistant Dean  
School of Inter-American Affairs  
Miguel Jorrín, Dr. Public and Civil Law, Director

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Vernon G. Sorrell, Ph.D., Dean

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George Walter White, B.A., Assistant Dean

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M. H. McMichael, M.A., Assistant Director

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Alfred LeRoy Gausewitz, LL.M., Dean

#### **College of Pharmacy**

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Naval R.O.T.C. Unit  
A. M. Granum, Captain, U.S.N., M.S., Commanding Officer  
H. J. Greene, Commander, U.S.N., B.S., Executive Officer

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Earl Bowdich, Superintendent

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### **Health Services**

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### **Inter-Collegiate Athletics**

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Howard L. Mathany, M.A., Dean of Men

Betty A. Braham, M.A., Acting Assistant Dean of Women

\*Mary Carmignani, M.A., Assistant Dean of Women

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### **Engineering Experiment Station**

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Jack Ellsworth Holmes, M.A., Director

### **Institute of Meteoritics**

Lincoln LaPaz, Ph.D., Director

### **University Press**

E. B. Mann, Director

Fred E. Harvey, Assistant Director

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Ralph Lemon Edgel, M.B.A., Director

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John Nicoll Durrie, B.A., Editor

\* On leave of absence, 1950-51.



## FACULTY

FOR THE ACADEMIC YEAR, 1950-1951

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FRANCE V. SCHOLES, B.A., M.A., Ph.D., Harvard University. Academic Vice-President of the University, Professor of History.

- 
- NO CHARLES ANTHONY BARNHART, B.A., M.A., University of Illinois. Professor Emeritus of Mathematics.
- YES KENNETH CHAPMAN, N.A.; Chicago Art Institute; Art Students' League of New York. Professor Emeritus of Indian Art.
- NO JOHN DUSTIN CLARK, B.S., M.S., New Hampshire College of Agriculture and Mechanical Arts; Ph.D., Stanford University. Professor Emeritus of Chemistry.
- NO JOHN HAZARD DORROH, B.E., C.E., Vanderbilt University. Professor Emeritus of Civil Engineering.
- NO BENJAMIN FRANKLIN HAUGHT, B.A., West Virginia University; M.A., Columbia University; Ph.D., George Peabody College. Professor Emeritus of Psychology.
- NO JAY CARROLL KNODE, B.A., M.A., University of Nebraska; Ph.D., Columbia University. Dean Emeritus of the College of Arts and Sciences and of the General College, Professor Emeritus of Philosophy.
- YES CLINTON H. S. KOCH, B.A., Hamline University; M.A., University of New Mexico. Assistant Professor Emeritus of Modern Languages.
- NO LYNN BOAL MITCHELL, B.A., Ohio State University; M.A., Ph.D., Cornell University. Professor Emeritus of Classics.
- YES ROBERT ARTHUR MOYERS, B.S., M.A., University of Missouri; Ph.D., George Peabody College. Professor Emeritus of Secondary Education.
- YES BESS CURRY REDMAN, B.A., University of New Mexico; B.Mus., Lamont School of Music. Assistant Professor Emeritus of Music.
- NO WILMA L. SHELTON, B.A., B.L.S., University of Illinois. Librarian Emeritus. Professor Emeritus of Library Science.

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JOHN E. ANDERSON, B.B.A., University of New Mexico; C.P.A. Instructor in Business Administration.

†GEORGE WARREN ARMS, B.A., Princeton University; Ph.D., New York University. Professor of English.

OWEN T. ARMSTRONG, B.A., University of Wisconsin; LL.B., LL.M., Harvard University. Instructor in Law.

† On sabbatical leave, Semester I, 1950-51.

- ARCHIE J. BAHM, B.A., Albion College; M.A., Ph.D., University of Michigan. Professor of Philosophy.
- ARTHUR PAUL BAILEY, B.S., James Millikin University; M.S., Iowa State College. Associate Professor of Industrial Arts.
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- RAYMOND N. CASTLE, B.S., University of Idaho; M.A., Ph.D., University of Colorado. Associate Professor of Pharmaceutical Chemistry.
- THOMAS T. CASTONGUAY, B.Met.Engr., University of Detroit; Ph.D., Iowa State College. Professor of Chemical Engineering, Head of the Department of Chemical Engineering.
- FRED MARTIN CHREIST, B.A., DePauw University; M.A., Northwestern University. Assistant Professor of Speech.
- ROBERT EMMET CLARK, B.A., University of New Mexico; LL.B., University of Arizona. Assistant Professor of Law.
- LENA CECILE CLAUVE, B.A., University of New Mexico; M.A., Teachers College, Columbia University. Dean of Women, Professor of Music Education.
- † On leave of absence, 1950-51.

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† RICHARD HUDSON CLOUGH, B.S., University of New Mexico; M.S., University of Colorado. Assistant Professor of Civil Engineering.

‡ RUBEN COBOS, B.A., M.A., University of New Mexico. Assistant Professor of Modern Languages.

FREDERIC GEORGE COMSTOCK, B.B.A., University of Texas; M.S., Denver University. Instructor in Business Administration.

EVERTON ELLSWORTH CONGER, B.A., Montana State University; M.A., Columbia University. Instructor in Journalism.

BONNER M. CRAWFORD, B.A., Central Michigan College of Education; M.A., Ph.D., University of Michigan. Associate Professor of Secondary Education.

MERVYN CROBAUGH, B.A., M.A., Ph.D., Stanford University. Associate Professor of Economics.

NORTON BARR CROWELL, B.S., M.A., Southern Methodist University; M.A., Ph.D., Harvard University. Assistant Professor of English.

— ROBERT EUGENE DAHNERT, B.Mus., Cincinnati College of Music; M.Mus., Northwestern University. Assistant Professor of Music.

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MARION DARGAN, B.A., Wofford College; M.A., Columbia University; Ph.D., University of Chicago. Professor of History.

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RANDALL DAVEY, N.A. Associate Professor of Art.

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✓ DUDLEY SARGENT DEGRÖOT, B.A., M.A., Ed.D., Stanford University. Professor of Physical Education, Head Football Coach.

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HOWARD J. DITTMER, B.A., M.A., University of New Mexico; Ph.D., State University of Iowa. Associate Professor of Biology.

JOHN P. DOLZADELLI, B.S., University of New Mexico. Instructor in Physical Education, Veterans Affairs Officer.

THOMAS C. DONNELLY, B.A., Marshall College; M.A., Ph.D., New York University. Dean of the College of Arts and Sciences and of the General College, Professor of Government and Citizenship.

RALPH WADDELL DOUGLASS, B.A., Monmouth College; Chicago Art Institute; Julian's Academy (Paris); Art Students' League of N. Y. Professor of Art.

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JOHN W. DUNBAR, B.S., Indiana State Teachers College; M.S., Detroit Institute of Technology; C.P.A. Associate Professor of Business Administration.

† On leave of absence, 1949-51.

‡ On leave of absence, 1950-51.

\* On military leave.



- JULIAN SMITH DUNCAN, B.A., M.A., University of Mississippi; B.D., Emory University; Ph.D., Columbia University. Professor of Economics, Head of the Department of Economics.
- ROBERT MANLY DUNCAN, B.A., M.A., Oberlin College; Ph.D., University of Wisconsin. Professor of Modern Languages.
- RALPH LEMON EDGEL, B.A., University of Utah; M.B.A., Northwestern University. Associate Professor of Business Administration, Director of Bureau of Business Research.
- FLORENCE HAWLEY ELLIS, B.A., M.A., University of Arizona; Ph.D., University of Chicago. Associate Professor of Anthropology.
- HELEN HEACOCK ELLIS, B.A., M.A., University of New Mexico; M.A., University of Chicago. Assistant Professor of Sociology.
- JAMES LAWTON ELLIS, B.S., M.S., Georgia School of Technology. Professor of Electrical Engineering.
- GRACE LONG ELSER, B.Ped., New Mexico Highlands University; B.S., Kansas State College; M.S., Cornell University. Assistant Professor of Home Economics.
- WAYNE C. EUBANK, B.S., West Texas State College; M.A., Ph.D., Louisiana State University. Professor of Speech, Head of the Department of Speech.
- ROBERT KRICK EVANS, B.A., Allegheny College; M.A., University of New Mexico. Associate Professor of Business Administration.
- MARSHALL ELMER FARRIS, B.S., Purdue University; M.S., University of Texas. Dean of the College of Engineering, Professor of Mechanical Engineering, Director of the Engineering Experiment Station.
- DONALD ROSS FELLOWS, B.A., M.A., University of Wisconsin. Professor of Business Administration.
- RICHARD L. FERM, B.S., M.S., Ph.D., University of Kansas. Instructor in Chemical Engineering.
- J. PAUL FITZSIMMONS, B.S., Ph.D., University of Washington. Assistant Professor of Geology.
- EVERETT HAYES FIXLEY, B.S., University of Kansas; Ed.M., Ed.D., Harvard University. Professor of School Administration, High School Visitor, Director of Teacher Placement Bureau.
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- ETHEL A. FLEMING, B.A., Nebraska University; M.A., Colorado Teachers College. Instructor in English.
- ALBERT DUANE FORD, B.S., M.S., Montana State College. Professor of Mechanical Engineering, Head of the Department of Mechanical Engineering.
- RAYMOND J. FOSS, B.S., South Dakota School of Mines and Technology. Professor of Civil Engineering.
- EDWIN BECTON FRAZIER, Major, U.S.A.F., B.A., East Texas State Teachers College. Assistant Professor of Air Science and Tactics.
- †KURT FRÉDERICK, Graduate of the State Academy of Music and State College of Music in Vienna; B.S., University of New Mexico. Associate Professor of Music.
- DAROL KENNETH FROMAN, B.Sc., M.Sc., University of Alberta; Ph.D., University of Chicago. Consulting Professor of Physics.
- ✕HARRY WOODSON GATES, B.S., M.S., University of New Mexico. Instructor in Electrical Engineering.
- ALFRED LEROY GAUSEWITZ, B.A., LL.B., University of Minnesota; LL.M., Stanford University. Dean of the College of Law, Professor of Law.
- LOUIS SAMUEL GERBER, B.S., M.B., M.D., University of Minnesota. University Physician, Assistant Professor of Health and Physical Education.
- ANNA VALLEVIK GIBSON, B.S., University of New Mexico; M.A., Mills College. Instructor in Chemistry.
- † On sabbatical leave, 1950-51.

†ROBERT S. GILLESPIE, B.S., University of Illinois; M.A., State University of Iowa. Instructor in Journalism.

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ALFRED M. GRANUM, Captain, U.S.N., B.S., United States Naval Academy; M.S., Harvard University. Professor of Naval Science; Commanding Officer, Naval R.O.T.C. Unit.

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X JAMES L. GUY, B.S., M.S., University of Tennessee. Assistant Professor of Civil Engineering.

LEZ LEWIS HAAS, B.A., M.A., University of California. Associate Professor of Art, Head of the Department of Art.

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†FRANK C. HIBBEN, B.A., Princeton University; M.S., University of New Mexico; Ph.D., Harvard University. Associate Professor of Anthropology, Curator of the Museum of Anthropology.

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GEORGE MACDONALD HOCKING, B.S., University of Washington; M.S., Ph.D., University of Florida. Professor of Pharmacognosy and Pharmacology.

\* Semester II, 1950-51.

§ On military leave, Semester II, 1950-51.

† Resigned February 1, 1951.

‡ On sabbatical leave, 1950-51.

CLARENCE CLAYTON HOFF, B.A., Bradley University; M.S., Ph.D., University of Illinois. Associate Professor of Biology.

ELSIE SUSAN HOFFMANN, B.S., Colorado State College; M.A., University of Denver. Assistant Professor of Speech.

JACK ELLSWORTH HOLMES, B.A., M.A., University of Wyoming. Assistant Professor of Government, Director of the Division of Government Research.

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\*HERBERT GILLETTE HOOVER, B.S., University of Kansas; M.S., Carnegie Institute of Technology; Assistant Professor of Chemical Engineering.

HARVEY SHEELEY HOSHOUR, A.B., LL.D., Gettysburg College; LL.B., University of Minnesota. Professor of Law.

✓RALPH OSKAR HUBBE, B.A., Hamilton College; M.A., Ph.D., Princeton University. Assistant Professor of Classics.

WILLIAM HENRY HUBER, JR., B.A., LL.B., Ohio State University. Assistant Professor of Business Administration.

DOUGLAS HUMM, B.S., Yale University; Ph.D., Stanford University. Assistant Professor of Biology.

MARTIN STORY HUNTING, Lieutenant, U.S.N.; B.S., Geneva College. Assistant Professor of Naval Science.

RICHARD GEORGE HUZARSKI, B.S., University of Wisconsin. Assistant Professor of Architectural Engineering.

FREDERICK CLARENCE IRION, B.J., B.A., University of Missouri; M.A., University of Wisconsin; Ph.D., Syracuse University. Assistant Professor of Government, Assistant Director of the Division of Government Research.

EVA MARGARETA ISRAEL, B.A., University of New Mexico; M.A., Syracuse University. Assistant Professor of Business Administration.

WILSON HOWARD IVINS, B.A., Western Michigan College of Education; M.A., University of Arizona; Ed.D., University of Colorado. Associate Professor of Secondary Education.

WILLIS DANA JACOBS, B.A., M.A., University of New Mexico; Ph.D., University of North Carolina. Associate Professor of English.

JOHN A. JACOBSON, B.S., University of New Mexico. Assistant Professor of Electrical Engineering.

HAROLD OTTO JESKE, B.S., M.S., Oklahoma Agricultural and Mechanical College. Instructor in Electrical Engineering.

GEORGE HAROLD JOHNSON, B.A., M.S., Syracuse University. Assistant Professor of Psychology.

✓LEIGHTON H. JOHNSON, B.A., M.A., Ph.D., University of California. Assistant Professor of School Administration.

RICHARD B. JOHNSON, B.S., North Central College; M.S., Utah State Agricultural College; Ph.D., Cornell University. Associate Professor of Biology.

ROY WILLIAM JOHNSON, B.A., University of Michigan; Certificate, Université de Poitiers, France. Professor of Physical Education, Head of the Department of Physical Education for Men.

WILLIAM HARRY JONES-BURDICK, B.A., University of Colorado; M.A., University of Michigan. Instructor in Biology.

RAYMOND JONSON, Chicago Academy of Fine Arts; Art Institute of Chicago; Portland, Oregon, Art School. Professor of Art.

MIGUEL JORRÍN, B.A., De La Salle College, Havana, Cuba; Dr. Public and Civil Law, Havana University. Professor of Government; Director, School of Inter-American Affairs.

CHARLES BURNET JUDAH, B.A., M.A., Ph.D., University of Illinois. Associate Professor of Government.

\* On military leave, Semester II, 1950-51.

† Semester II, 1950-51.



- MILTON KAHN, B.S., University of California; Ph.D., Washington University. Assistant Professor of Chemistry.
- \*ELIZABETH CALVIN KAYLOR, B.S., Margaret Morrison Carnegie College; M.A., University of Pittsburgh. Instructor in Home Economics.
- JULIA MARY KELEHER, B.A., M.A., University of New Mexico. Associate Professor of English.
- WALTER BURROUS KELLER, B.Mus., M.A., University of Indiana; Juilliard Graduate School. Associate Professor of Music.
- DAVID OTIS KELLEY, B.A., M.A., University of Southern California. Librarian, Professor of Library Science.
- §VINCENT COOPER KELLY, B.A., University of California at Los Angeles; M.S., Ph.D., California Institute of Technology. Professor of Geology.
- WILFRID DUDLEY KELLEY, B.Ed., Eastern Illinois State Teachers College; M.S., University of Michigan. Assistant Professor of Geography.
- †FRANCIS MONROE KERCHEVILLE, B.A., Abilene Christian College; M.A., Ph.D., University of Wisconsin; Certificate, University of Paris (Sorbonne). Professor of Modern Languages, Head of the Department of Modern Languages.
- MORTON J. KESTON, B.S., M.A., M.S., University of Chicago; Ph.D., University of Minnesota. Assistant Professor of Psychology.
- JANE KLUCKHOHN, B.A., University of Wisconsin; M.A., University of New Mexico. Instructor in English.
- ESTHER E. KNIGHT, B.S., Colorado State College; M.S., Iowa State College. Assistant Professor of Home Economics.
- WILLIAM JACOB KOSTER, B.S., Ph.D., Cornell University. Professor of Biology.
- DAVID GEORGE KROFT, B.A., Bowling Green State University; M.A., Washington University. Instructor in English.
- WILLIAM MARTIN KUNKEL, Kimball School of Music; formerly flute soloist with John Philip Sousa's Band. Assistant Professor of Music.
- JOSEPH MARSHALL KUNTZ, B.A., M.A., University of New Mexico. Assistant Professor of English.
- JUANITA SMITH KYTLE, B.A., M.A., University of Oklahoma. Instructor in English.
- HANS LANGE, Diploma, Conservatory of Music, Prague; Mus.D., Chicago Musical College. Visiting Professor of Music.
- WRIGHT H. LANGHAM, B.S., Panhandle Agricultural and Mechanical College; M.S., Oklahoma Agricultural and Mechanical College; Ph.D., University of Colorado. Consulting Professor of Biology.
- LINCOLN LAPAZ, B.A., Fairmont College; M.A., Harvard University; Ph.D., University of Chicago. Professor of Mathematics, Head of the Department of Mathematics and Astronomy, Director of the Institute of Meteoritics.
- STEPHANIE ORTH LOMBARDE, B.A., University of Kansas City; M.A.; University of California at Los Angeles; Ph.D., University of California. Instructor in Modern Languages.
- JOHN EDWARD LONGHURST, B.A., State College of Washington; M.A., Syracuse University; M.A., Ph.D., University of Michigan. Assistant Professor of History.
- ALBERT RICHARD LOPES, B.A., M.A., Ph.D., University of California. Professor of Modern Languages.
- EDWARD GEORGE LUEDERS, B.A., Hanover College; M.A., Northwestern University. Instructor in English.
- ✕JAMES H. MCBATH, B.S., M.A., Ph.D., Northwestern University. Assistant Professor of Speech.
- \*MARY K. MCBATH, B.S., M.A., Northwestern University. Instructor in Speech.
- BARBARA MCCAIN, B.S., State University of Iowa; M.A., New York University. Instructor in Physical Education.

\* Semester I, 1950-51.

§ On sabbatical leave, Semester II, 1950-51.

† On sabbatical leave, 1950-51.

- ✓ KATHLEEN McCANN, B.Ed., Southern Illinois Normal University; M.A., State University of Iowa; Ed.D., Teachers College, Columbia University. Assistant Professor of Elementary Education.
- JAMES ETHERIDGE McDAVID, B.S., M.S., Ph.D., University of California. Assistant Professor of Pharmacy.
- RAYMOND NEIL McDONALD, B.S., University of Colorado; M.S., University of Illinois. Associate Professor of Mechanical Engineering.
- FRANCES MCGILL, B.A., Mills College; M.S., University of Washington. Assistant Professor of Physical Education.
- DONALD ALEXANDER McKENZIE, B.A., University of New Mexico; Ph.D., Stanford University. Associate Professor of Modern Languages.
- HOWARD JOHNSTONE McMURRAY, B.A., M.A., Ph.D., University of Wisconsin. Professor of Government, Head of the Department of Government.
- DONALD CHRISTOPHER McRAE, B.F.A., M.A., University of New Mexico. Instructor in Music.
- RAYMOND RALPH MACCURDY, JR., B.A., M.A., Louisiana State University; Ph.D., University of North Carolina. Associate Professor of Modern Languages, Acting Head of the Department of Modern Languages.
- ERNEST LYNNE MARTIN, B.S., New Mexico Western College; M.A., Ph.D., Indiana University. Associate Professor of Chemistry.
- † THOMAS L. MARTIN, JR., B.E.E., M.E.E., Rensselaer Polytechnic Institute. Assistant Professor of Electrical Engineering.
- JOSÉ ELEASAR MARTÍNEZ, B.S., University of New Mexico; M.S., Iowa State College. Instructor in Civil Engineering.
- ALEXANDER SIMEON MASLEY, B.S., University of Minnesota; M.A., Ed.D., Columbia University. Associate Professor of Art Education, Head of the Department of Art Education.
- MELVIN JOHN MATEYKA, B.A., M.A., University of Illinois. Instructor in History.
- MARVIN CLARK MAY, B.S., University of New Mexico. Assistant Professor of Civil Engineering.
- § KEITH ELDON MEAD, B.S., Kansas State College. Instructor in Mechanical Engineering.
- JOSEPH WALTER MEEK, LL.B., B.S., University of Arizona. Associate Professor of Law.
- ✗ CLAYTON MAURICE MELBY, B.A., University of California. Instructor in Architectural Engineering.
- WILLIS JAMES MICHAEL, Captain, U.S.A.F. Assistant Professor of Air Science and Tactics.
- HUGH MILTON MILLER, B.A., University of Oregon; M.A., Ph.D., Harvard University. Professor of Music, Head of the Department of Music.
- JAMES HULL MILLER, B.A., Princeton University. Assistant Professor of Dramatic Art.
- MAMIE TANQUIST MILLER, B.A., Hamline University; M.A., University of Minnesota; Ph.D., University of Southern California. Associate Professor of Sociology.
- GLADYS ELIZABETH MILLIKEN, B.A., Bates College; M.A., New York University. Assistant Professor of Physical Education.
- MERLE MITCHELL, B.A., Southern Methodist University; M.A., University of New Mexico. Instructor in Mathematics.
- ENRIQUE MONTENEGRO, B.A., University of Florida. Instructor in Art.
- DEANE MOWRER, B.A., Louisiana State University; M.A., University of Denver. Instructor in English.
- SUE MITCHELL MURPHY, B.A., LL.B., University of Indiana. Supervisor of Legal Aid.

† On leave of absence, 1950-51.

§ Resigned February 1, 1951.

- SIMON PETER NANNINGA, B.S., Kansas State Teachers College; M.A., Stanford University; Ph.D., University of California. Dean of the College of Education, Professor of School Administration, Head of the Department of School Administration.
- MARSHALL RUTHERFORD NASON, B.A., M.A., Louisiana State University. Assistant Professor of Modern Languages.
- STANLEY NEWMAN, Ph.B., M.A., University of Chicago; Ph.D., Yale University. Associate Professor of Anthropology.
- \*MADALINE WALLIS NICHOLS, B.A., Mt. Holyoke College; M.A., Cornell University; Ph.D., University of California. Visiting Professor of History.
- EUGENE HOWARD NICKELL, B.S., University of Illinois. Instructor in Architectural Engineering.
- RALPH DAVID NORMAN, B.S., College of the City of New York; M.A., Teachers College, Columbia University; Ph.D., Ohio State University. Assistant Professor of Psychology.
- †STUART ALVORD NORTHROP, B.S., Ph.D., Yale University. Professor of Geology, Head of the Department of Geology, Curator of the Geology Museum.
- JOAQUÍN ORTEGA, M.A., University of Wisconsin; Litt.D., University of New Mexico. Professor of Modern Languages; Editor *New Mexico Quarterly*.
- WILLIAM JACKSON PARISH, Ph.B., Brown University; M.B.A., D.C.S., Harvard University. Associate Professor of Business Administration.
- JOHN LOWE PARKER, Colonel, U.S.A.F.; B.S., University of Illinois. Professor of Air Science and Tactics; Commanding Officer, Air Force R.O.T.C. Unit.
- THOMAS MATTHEWS PEARCE, B.A., University of Montana; M.A., Ph.D., University of Pittsburgh. Professor of English, Head of the Department of English.
- †GEORGE MAXWELL PETERSON, Ph.B., M.A., Ph.D., University of Chicago. Professor of Psychology, Head of the Department of Psychology.
- GEORGE THOMAS PETROL, B.S., Albright College; M.A., University of New Mexico. Assistant Professor of Physical Education.
- ARIE WILLIAM POLDERVAART, B.A., Coe College; M.A., State University of Iowa. Associate Professor of Law, Law Librarian.
- \*LOLITA H. POOLER, B.A., M.A., University of New Mexico. Instructor in Modern Languages.
- JOHN WESLEY POORE, B.S., M.S., University of Tennessee. Assistant Professor of Art.
- KEEN RAFFERTY, B.A., University of New Mexico. Associate Professor of Journalism, Head of the Department of Journalism.
- FRANK DRIVER REEVE, B.A., M.A., University of New Mexico; Ph.D., University of Texas. Professor of History; Editor, *New Mexico Historical Review*.
- VICTOR H. REGENER, Dr.-Ing., Stuttgart. Professor of Physics, Head of the Department of Physics.
- AUDRA WOOD REGER, B.S., West Virginia University. Assistant Professor of Mechanical Engineering.
- J. T. REID, B.A., Howard Payne College; M.A., Baylor University; Ed.D., Teachers College, Columbia University. Professor of Education, Director of the Division of Extension and Adult Education.
- JOHN CECIL REIFF, B.S., University of Oklahoma; M.S., Oklahoma Agricultural and Mechanical College. Instructor in Electrical Engineering.
- PAUL REITER, B.A., M.A., University of New Mexico; M.A., Ph.D., Harvard University. Associate Professor of Anthropology, Director of Anthropology Field Sessions.
- VIRGINIA REVA, B.A., St. Mary's College, Notre Dame; M.A., University of Michigan. Instructor in Business Administration.

\* Semester I, 1950-51.

† On sabbatical leave, Semester I, 1950-51.

† On leave of absence, Semester II, 1950-51.

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HAROLD ORVILLE RIED, B.A., Nebraska Wesleyan University; M.A., Ph.D., University of Nebraska. Assistant Dean of the College of Arts and Sciences and of the General College, Associate Professor of Speech.

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† GEORGE ROBERT, Student of Edward Steuermann and Anton von Webern. Associate Professor of Music.

HAROLD PITTMAN ROGERS, B.S., Illinois College; M.A., University of Illinois. Assistant Professor of Mathematics.

RICHARD JOHN RUNGE, B.S., University of Chicago. Instructor in Physics.

WILLIAM BARTON RUNGE, B.S., M.Ed., Colorado State College. Assistant Professor of Distributive Education.

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BENJAMIN SACKS, B.A., University of New Mexico; M.A., McGill University; Ph.D., Stanford University. Professor of History.

— LYLE SAUNDERS, B.A., M.A., University of New Mexico. Assistant Professor of Sociology.

\* HOWARD B. SCHLEETER, Visiting Painter in the Department of Art.

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FLORENCE HALL SENDER, B.A., Franklin College; M.A., Northwestern University. Instructor in Modern Languages.

RAMÓN JOSÉ SENDER, B.A., Instituto de Zaragoza; Licenciado en Filosofía y Letras, Universidad de Madrid. Professor of Spanish.

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DANE FARNSWORTH SMITH, B.A., Vanderbilt University; M.A., Ph.D., Harvard University. Professor of English.

† On leave of absence, 1950-51.

\* Semester I, 1950-51.

† Resigned February 1, 1951.

- DANIEL MURRAY SMITH, JR., B.S., M.S., Louisiana State University; C.P.A. Associate Professor of Business Administration.
- GEORGE WINSTON SMITH, B.A., M.A., University of Illinois; Ph.D., University of Wisconsin. Associate Professor of History.
- RALPH CARLISLE SMITH, Ch.E., Rensselaer Polytechnic Institute; J.D., George Washington University. Lecturer in Law.
- SHERMAN EVERETT SMITH, B.S., South Dakota School of Mines and Technology; Ph.D., Ohio State University. Director of Student Affairs, Professor of Chemistry.
- ROBERT EDWIN SNAPP, B.A., M.A., University of New Mexico; M.F.A., Yale University. Professor of Dramatic Art, Head of the Department of Dramatic Art.
- JANE SNOW, B.Mus., M.Mus., Cincinnati College of Music. Assistant Professor of Music.
- VERNON G. SORRELL, B.A., State University of Iowa; M.A., University of Illinois; Ph.D., University of California. Dean of the College of Business Administration, Professor of Business Administration.
- RODERICK SPENCE, B.A., Huron College; Ph.D., University of Illinois. Consulting Professor of Chemistry.
- LESLIE SPIER, B.S., College of the City of New York; Ph.D., Columbia University. Professor of Anthropology; Editor, *Southwestern Journal of Anthropology*.
- JAMES HARRISON SPROUSE, JR., B.S., University of New Mexico. Instructor in Civil Engineering.
- STANLEY LESLIE STANCZYK, Lieutenant Commander, U.S.N.; B.A., Columbia University. Assistant Professor of Naval Science.
- CARSTEN CONOVER STEFFENS, B.A., Syracuse University; Ph.D., California Institute of Technology. Associate Professor of Chemistry.
- CHARLES E. STONEKING, B.A., Denison University; M.Ed., University of Cincinnati; B.E., University of Toledo. Assistant Professor of Architectural Engineering.
- RICHARD EARL STRAHLEM, B.S., M.S., Indiana University; C.P.A. Professor of Business Administration, Comptroller of the University.
- EVELYN PHILLIPS STURGES, M.D., Medical College of Virginia. Assistant Professor of Physical Education and Health, University Physician.
- JOHN FRANCIS SUTTLE, B.A., University of Colorado; Ph.D., Western Reserve University. Assistant Professor of Chemistry.
- RALPH WILVER TAPY, B.S., E.E., Rose Polytechnic Institute; M.S., University of Michigan. Professor of Electrical Engineering, Head of the Department of Electrical Engineering.
- JOHN TATSCHL, Graduate of Austrian School of Arts and Design; Graduate of the Master School of Sculpture, Academy of Fine Arts, Vienna. Associate Professor of Art.
- ERNEST WARNOCK TEDLOCK, JR., B.A., M.A., University of Missouri; Ph.D., University of Southern California. Assistant Professor of English.
- ROY THOMAS, B.Sc., University of Alberta; Ph.D., University of California. Associate Professor of Physics.
- CHARLES BENJAMIN THOMPSON, B.S., University of New Mexico; M.S., State University of Iowa. Assistant Professor of Civil Engineering.
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- CHARLOTTE ANDERSON WARREN, Diploma, Augustana Conservatory; American Conservatory. Instructor in Music.
- ELIZABETH WATERS, Hanya Holm School, New York City; student of the dance with Ruth St. Denis. Instructor in Physical Education.
- HENRY P. WEIHOFFEN, Ph.B., J.D., J.S.D., University of Chicago. Professor of Law.
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- ††ALBERT C. F. WESTPHAL, B.A., Columbia College; M.A., Ph.D., Columbia University. Associate Professor of Government.
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- WILLETT EDWARD WHITE, Lieutenant, U.S.N.; B.S., U. S. Naval Academy. Assistant Professor of Naval Science.
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- THERESA W. GILLET, B.A., Rockford College; B.S. in L.S., M.A., University of Illinois. Chief Cataloger.
- † Resigned February 1, 1951.
- † On sabbatical leave, Semester II, 1950-51.
- †† On leave of absence, Semester I, 1950-51.
- †† On sabbatical leave, Semester II, 1949-50, Semester I, 1950-51.

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\* Semester I, 1950-51.

† Semester II, 1950-51.



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- † Semester II, 1950-51.
- \* Semester I, 1950-51.

- \*ROBERT E. WILLIAMS, B.A., DePauw University. Department of Chemistry.  
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\*ALFRED H. ZELTMANN, B.S., State College of Washington. Department of Chemistry.  
\*Semester I, 1950-51.

## GENERAL INFORMATION

**T**HE PURPOSE of higher education and of the University of New Mexico is the preparation of youth in body and mind for useful, intelligent, and noble living in a world which seeks as its ultimate goal the dignity and freedom of mankind. Through the media of instruction, research, and original investigation, the University endeavors to place the resources of higher education of the state at the disposal of its citizens.

### ACCREDITING

The University has been a member of the North Central Association of Colleges and Secondary Schools since 1922. Approval of the Association of American Universities was given to the University in 1933, and the American Association of University Women recognized the University in the same year. In 1937 the College of Engineering was approved by the Engineering Council for Professional Development; in 1948, the College of Pharmacy was accredited by the American Council on Pharmaceutical Education and in 1950, it was accredited as a Class A college by the Council. The College of Law was provisionally approved by the American Bar Association in February, 1948, and was admitted to membership in the Association of American Law Schools in December, 1948. In the same year, the College of Education was accredited by the American Association of Colleges for Teachers.

### SITUATION

The University is situated in Albuquerque, a metropolitan area of 100,000 inhabitants. The campus lies a mile above sea level on a plateau overlooking the Rio Grande, and about 12 miles from the lofty Sandia mountains. Albuquerque is noted for its dry and sunny climate. Although the weather undergoes the normal seasonal changes, temperatures are not extreme.

The city is on the main line of the A. T. & S. F. Railway and is served by transcontinental bus and air lines. U. S. Highways 66 (the Will Rogers Highway) and 85 intersect at Albuquerque.

Historic Santa Fe is approximately sixty miles to the north, and the picturesque Indian pueblos of Taos, Jemez, Isleta, and Acoma are within easy driving distance.

### HISTORY

The University of New Mexico was created by an act of the Territorial Legislature in 1889, opened as a summer normal school on June 15, 1892, and began full-term instruction on September 21 of the same year. Its development in the sixty years since its inception has been extraordinary. The 20 acres allotted by the Territorial Legislature for a campus have become more than 400; buildings have increased from a single structure to seventy-three. Enrollment

has grown from one college enrollee in 1895-96 to 4,643 registered in the fall of 1950.

The development of new colleges and divisions has kept pace with the physical growth of the institution. The College Department became the College of Literature and Arts in 1898, later changing to its present title of College of Arts and Sciences. The College of Engineering opened in 1906, and the Graduate School and Extension Division, in 1919. In 1928, the College of Education was created; in 1935, the General College; and in 1936, the College of Fine Arts. A unit of the United States Naval Reserve Officers Training Corps was established May 20, 1941. The School of Inter-American Affairs was instituted during the same year. In 1945, the following new divisions became an active part of the University program: the College of Pharmacy, the Division of Governmental Research, and the Bureau of Business Research. In 1946, the Division of Research and Development and the Institute of Meteoritics were added to the University's research program. The College of Business Administration and the College of Law were organized in the fall of 1947. An Air Force Reserve Officers Training Corps unit was established in 1949. The University has 40 instructional departments; work leading to the master's degree is offered in 28 departments, and toward the doctor's degree in eight.

University administrators have for many years realized that the situation of the University of New Mexico provides it with a wealth of source material in the historical and archaeological background of the nation, and that its proximity to the Indian, Spanish, and Mexican cultures makes it a natural place for the study and appreciation of those cultures. They have, therefore, encouraged the development of Southwestern and Latin-American studies and research. Some tangible evidences of this interest are found in the uniform architectural style (a modification of the Indian pueblo), which has been described as "the outstanding example of the effective use of regional architecture in the United States," the incorporation of the School of Inter-American Affairs, the maintenance of the Chaco Canyon site for anthropological research, the presence on the faculty of outstanding Latin-American artists and scholars, the awarding of honorary degrees to a group of distinguished Mexican educators, and the various examples of Indian, Mexican, and Spanish-American painting, carving, and weaving to be found throughout the campus buildings.

#### GOVERNMENT AND SUPPORT

The government of the University is vested in the Regents and the Faculty. Five Regents are appointed by the Governor of the

state for a term of ~~four~~<sup>five</sup> years; the Governor and the Superintendent of Public Instruction are ex-officio members of the Regents.

The University is supported chiefly by appropriations made by the State Legislature, by income from the rental of lands granted to it by the Federal Government, by the income from royalties on the oil taken from these lands, and by student fees.

#### CAMPUS AND BUILDINGS

The campus of the University of New Mexico is in the eastern section of the city of Albuquerque. It covers over 400 acres, landscaped with grass, giant cottonwoods, elms, and mountain evergreens. The 42 permanent buildings all follow the University's unusual architectural style—low spreading structures adapted from the Pueblo Indian adobe dwellings, featuring buttressed corners, patios, peeled log balconies, vigas, and flagstone walks. Within easy walking distance of the campus center of administrative and classroom buildings are the dormitories, an excellent ~~33~~<sup>37</sup>-hole golf course, swimming pool, tennis courts, campus theatre, faculty residences, and sorority and fraternity houses.

The buildings include: Hodgin Hall, housing the College of Education; Yatoka Hall (College of Business Administration); the old Maintenance Shop; residential halls: Hokona, Marron, Bandler, Mesa Vista, and the men's new dormitory; Rodey Hall (the campus theatre); Music Building; Chemistry Building; Hadley Hall (Engineering); Sara Raynolds Hall (home economics building); Counseling and Testing Bureau; Fine Arts Building; Parsons Hall (biology building); Lecture Hall; Carlisle Gymnasium; President's home; Dining Hall; Stadium Building (housing also the College of Law and the Naval ROTC); Administration Building; State Public Health Laboratory; Student Union Building; Mechanical Engineering Building; new Central Heating Plant; the Library; Inter-American Affairs Building; Aeronautical Laboratory; Pharmacy Building; Chemical Engineering Building; Civil Engineering Building; new Maintenance Warehouse; Clark Hall (Bureau of Business Research); faculty apartments; Journalism Building; and several temporary structures housing an infirmary, a U. S. Branch Post Office, classrooms, laboratories, and offices.

A new 40-room classroom building has just been completed and plans have been drawn for a science building in the near future.

#### THE LIBRARY

**BUILDING.** The University Library offers excellent facilities for students. It is housed in a pueblo-style building, completed in 1938, which has an ultimate book capacity of 250,000 volumes, and can provide reading and study facilities for 700 persons in five large

reading rooms, smaller special rooms, and individual study units. Also included in the building are seminar rooms, faculty offices, special collection rooms, a well-equipped photographic laboratory, and a vault for rare materials.

**RESOURCES.** Library collections include 181,077 cataloged and accessioned volumes, several thousand other cataloged serials and pamphlets, 3,000 filing boxes of manuscripts, documents and other archival material, 980 reels of microfilm, 43,000 maps, several thousand pamphlets and pictures, and 437 sound recordings. These resources provide adequate study and research facilities for undergraduate work and for the special fields in which graduate work is offered.

**LAW LIBRARY.** The College of Law Library, housed separately with the law school, received an auspicious start through donation of the Francis C. Wilson, Francis E. Wood and other private law library collections. It contains 24,372 volumes and is being augmented by approximately 250 volumes each month. The library includes comprehensive collections of British, Federal and state court reports, including special and annotated series, session laws, current state and Federal statutes, legal treatises, periodicals, encyclopedias and digests, administrative reports, and other classes of legal materials.

**SPECIAL COLLECTIONS.** The Coronado Room contains an extensive collection of books and other materials concerning the history and culture of the Southwest in general and New Mexico in particular. It contains state publications and books about New Mexico; several hundred bound volumes of photostats of the archives of Spain, Mexico, and New Mexico; letters, manuscripts, documents, and the state archival materials assembled by the U. S. Historical Records Survey.

The Van de Velde Collection of Mexican materials consisting of 8,686 bound volumes, 93 maps, and fifty linear feet of pamphlets was purchased in 1939 by a special appropriation of the State Legislature. It contains much rare and valuable material dealing with history, archaeology, ethnology, geology, folklore, literature, and art of Mexico.

The Catron Collection, of 9,574 volumes, is an extensive and valuable library begun by Thomas B. Catron and deposited with the University Library by his sons, C. C. Catron, T. B. Catron, F. A. Catron, and J. W. Catron. Outstanding items are several hundred Spanish and Mexican publications of the sixteenth to nineteenth centuries, and 375 filing cases and boxes of letters and documents dealing with territorial New Mexico events, particularly the land grant system of the state.

The Otero Collection, given by former Governor and Mrs. Miguel A. Otero in 1939, contains 465 volumes on the Southwest

and general fields, as well as a valuable manuscript and museum collection.

The Field Collection of old Spanish and Mexican art, which includes 96 pieces of silver and 69 other art objects, was given by the estate of Will B. and Mary Lester Field in 1939.

**USE OF THE LIBRARY.** The Library is open to all students in all departments of the University. In addition to serving the students and faculty, and subject to their needs, the Library is available for use by citizens of the state, by permission.

Books withdrawn for home use may be kept two weeks, with the privilege of renewal. Reserved books may be used only according to rules posted at the Reserve desk; reference books may not be taken from the Reference Room. Fines are charged for the late return of books.

**HOURS.** The Library is open from 8:00 a. m. to 6:00 p. m. and 7:00 to 10:00 p. m., Mondays through Fridays; from 8:00 a. m. to 5:00 p. m. Saturdays; and Sundays, from 1:30 to 5:30 p. m.

## MUSEUMS, COLLECTIONS, AND EXHIBITIONS

### ANTHROPOLOGY MUSEUM

Pending the erection of the new Science Building, the anthropological collections are temporarily on exhibit in the halls of the Administration Building. The prehistoric cultures of the American Southwest, Mexico, and Peru are well represented. Study collections of the European Paleolithic, Mesolithic, and Neolithic periods are on display. In the ethnologic field, type exhibits portray the material cultures of the Eskimo, North Pacific Coast, Plains, and Southwestern areas. Recent additions to the Museum collections include the Schweitzer Collection of Navaho Blankets, material on the palaeo-Indian, and varied collections from Texas.

### FINE ARTS GALLERY

There is a continuous schedule of exhibitions presented throughout the school year. These exhibitions cover a wide range consisting of one man shows, group shows and several annual exhibitions such as the Print Makers of New Mexico, the Faculty exhibition, and the various student exhibits.

New Mexico is outstanding among the states in the number of recognized artists resident within its borders. Their presence not only makes it possible for the University to maintain a high standard of excellence in its exhibitions but to invite these painters to augment its staff at regular intervals and make their experience and knowledge available to its more advanced students.

Many paintings by distinguished artists are to be seen in the various offices of the University as well as several larger works, such as those by Raymond Jonson and the late Willard Nash on view in

the Fine Arts Building; four panels by Kenneth M. Adams, A.N.A., in the University Library; in the Administration Building a large fresco by Jesus Guerrero Galván, at one time Latin-American artist in residence; and the bronze Lobo by John Tatschl in front of the Stadium.

#### **GEOLOGY MUSEUM**

(Administration Building) The Geology Museum has a double purpose: it is designed to serve the general public and to supplement the instructional program. Exhibits include a systematic series of minerals, a stratigraphic series of fossil animals and plants, a paleontologic series of fossil and modern invertebrates, and systematic series of igneous and sedimentary rocks. Other notable features are a type collection of New Mexico meteorites, an exhibit illustrating how fossils are preserved; displays of strategic minerals and of polished ores, and an unusually fine fluorescence-phosphorescence exhibit.

#### **JONSON GALLERY**

This new gallery on the campus at 1909 Las Lomas is open to the public on Wednesday, Friday, and Saturday afternoons. Here nine exhibitions are presented during the year in a gallery ideal for contemporary painting, shown either as group or one man exhibits.

#### **MUSIC RECORD COLLECTION**

The Department of Music houses an exceptionally fine collection of phonograph recordings consisting of well over 250 albums in addition to 1658 twelve-inch discs in the Carnegie and Columbia collections. Listening to records at specially designated times by faculty and students is encouraged. Handling of records is necessarily limited to music faculty and authorized attendants. At no time are records permitted to leave the building.

#### **RESEARCH ACTIVITIES**

##### **THE BUREAU OF BUSINESS RESEARCH**

Ralph L. Edgel, Associate Professor of Economics and Business Administration, Director; Alan D. Carey, Instructor in Business Administration, Statistician; Robert G. Conway, Research Associate; Edward L. Hauswald, Instructor in Business Administration, Research Associate.

The Bureau of Business Research, established July, 1945, is an integral part of the College of Business Administration. Its purpose is to promote the economic welfare of the state through investigation and study of economic and business problems and the dissemination of information. More specifically its objectives are to promote the development and intelligent utilization of the State's resources and



full employment for its people; to assist businesses in dealing with their problems of marketing, internal operations, and planning for the future; to encourage the pursuit of business and economic research on the part of students and faculty; and to provide a medium through which the skills and talents of the College of Business Administration and the University as a whole may be made of assistance to the community.

The basic activities of the Bureau consist of gathering, analyzing, and interpreting data concerning the economic life of the state—its population, natural resources, employment opportunities, income, business activities, and markets. Studies are initiated by the Bureau or are undertaken for business concerns or other interested organizations. In order that the results of these studies may be utilized, information is disseminated through Bureau publications, the press, and over the radio. So that businessmen and others may keep abreast of the current economic situation, the Bureau publishes *New Mexico Business*, a monthly bulletin which carries indexes of business activity and short articles concerning business conditions in New Mexico. The Bureau also acts in the capacity of consultant to those who want to avail themselves of its services, and sponsors conferences at which businessmen, civic leaders, and scholars may meet for the purpose of exchanging information and pooling their resources toward the solution of common problems.

#### THE DIVISION OF RESEARCH AND DEVELOPMENT

Members of the Board of the Division of Research and Development: Thomas T. Castonguay, Professor of Chemical Engineering, Chairman; Carl W. Beck, Associate Professor of Geology; Raymond N. Castle, Associate Professor of Pharmaceutical Chemistry; Richard F. Strahlem, Comptroller; W. C. Wagner, Professor of Civil Engineering.

Technical Director of the Division of Research and Development: Ralph L. Edgel, Director of the Bureau of Business Research.

The Division of Research and Development was chartered by the Regents of the University in April of 1946. The purpose of the Division, as set forth in its charter, is "to promote scientific, social, humanistic, and industrial research, to make available the results of such research and to acquaint the public with the facilities of the University, in the interest of a fuller development of the human and natural resources of the State."

Control of the Division is vested in a Board composed of five faculty members appointed annually by the President, to serve from October 1 to the following September 30. Activities of the Division are supervised by the Technical Director. The Division is the

University's agent in the negotiation of contracts for research or development with non-University agencies or individuals. It seeks also to provide financial support for worthy projects arising within the University and to coördinate research activities involving more than one department when such coördination is necessary.

#### THE DIVISION OF RESEARCH OF THE DEPARTMENT OF GOVERNMENT

Jack E. Holmes, Assistant Professor of Government, Director; Frederick C. Irion, Assistant Professor of Government and Citizenship, Assistant Director.

The Division of Research of the Department of Government, which was created by the University in July, 1945, has as its purpose the study of federal, state, and local problems of government in New Mexico.

The Division selects for study contemporary subjects of importance to the people of the state, publishes the completed studies, and makes them available to interested citizens and officials in New Mexico and elsewhere.

The personnel of the Division is composed of the members of the Government Department, but whenever possible members of other departments of the University and outside specialists are utilized as consultants and to make studies.

Care is taken in each study to gather pertinent facts with fullness and accuracy and to draw conclusions with impartiality. No conclusions concerning University policies or views are to be drawn from published studies. Opinions expressed in studies are those of the authors, who accept responsibility for them.

The Division has completed nearly thirty studies on subjects pertinent to education, finance, government and politics in New Mexico.

Other functions of the Division include the training in research of graduate students of the Department of Government, the providing of speakers to state and local organizations, advisory and consultant work, and the sponsoring of conferences on governmental problems.

#### ENGINEERING EXPERIMENT STATION

The Engineering Experiment Station was established for the purpose of studying engineering problems that will aid in the development, use, and conservation of the natural resources of New Mexico. It is also the purpose of the Station to coöperate with the industries and government agencies within the State in the study of projects that will improve the engineering work done by these organizations.

The results of studies or investigations undertaken by the Station are published as bulletins and circulars of the Engineering Experiment Station for the benefit of the people of the State.

THE INSTITUTE OF METEORITICS  
OF THE UNIVERSITY OF NEW MEXICO

*Resident Staff:*

Lincoln LaPaz, Professor of Mathematics and Astronomy, Director;  
Morris S. Hendrickson, Associate Professor of Mathematics and  
Astronomy, Mathematician; Douglas Mayo Gragg, Photographer.

*Research Associates:*

Dr. Frederick C. Leonard, Professor of Astronomy, University of  
California, Los Angeles, California.

Dr. Fletcher Watson, Harvard College Observatory, Cambridge,  
Massachusetts.

Dr. Helmut E. Landsberg, Research and Development Board, Penta-  
gon Building, Washington, D. C.

Dr. C. C. Wylie, Professor of Astronomy, State University of Iowa,  
Iowa City.

Dr. Charles E. Fenner, Director of Education, University of Ade-  
laide, Adelaide, Australia.

Dr. Henry Dunlap, Research Division, Atlantic Refining Company,  
Dallas, Texas.

Professor Mohd. A. R. Khan, President, Hyderabad Academy of  
Science, Begumpet, India.

Dr. Fred L. Whipple, Professor of Astronomy, Harvard University,  
Cambridge, Massachusetts.

Dr. Carl Wellington Beck, Associate Professor of Geology, University  
of New Mexico.

John Davis Buddhue, Jet Propulsion Laboratory, California Institute  
of Technology, Pasadena, California.

The Institute of Meteoritics of the University of New Mexico, apparently the first institute in the world devoted primarily to meteoritical research, had its inception in the discovery, made independently by many scientists working in the most diverse fields, of the fundamental importance not only of ascertaining the structure and composition of the cosmic masses that give rise to the luminous phenomena of meteors, but also of determining the place, mode, and time of origin of such masses; and, most important of all, the effects of their infall on the earth. However, development of the research program of the Institute can be justified not only on scientific grounds, but also on the basis of the superlative importance of meteoritics in studies of the battleground of the next war, namely, the upper atmosphere.

The objectives of the Institute may be formulated as follows: to promote the recognition and recovery of meteorites both by systematic use of instrumental surveys and by arousing in the general public critical interest in these bodies which fall so remote from one another in time and space that a necessary prerequisite for their recovery is a widely distributed multitude of interested and instructed voluntary observers; to provide means for the preservation, the public exhibition *without charge*; and the intensive scientific study of both meteorites and terrestrial materials, metamorphosed by meteoritic impact; to enable nuclear physicists, ballisticians, aerodynamisticians, and other investigators engaged in research of value to the development of meteoritics to secure *without cost* meteoritical specimens in such amounts as they may require for experimental purposes, thus enabling scientists to escape from a state of affairs which has led two prominent mineralogists to complain that "Meteorites are held at such an artificially high value by dealers and collectors as to make it difficult to secure any large quantity of any fall"; to advance not only such *pure* sciences as meteorics, but also to stimulate the use of meteoritical knowledge in such *practical* subjects as high altitude ballistics, rocketry, and other military sciences, ore detection, and the metallurgy of stainless steels and other alloys; and finally, to provide urgently needed publication facilities for research work done in any or all of the above fields.

Pending construction of permanent quarters, the Institute of Meteoritics has been assigned temporary quarters in the west wing of the remodeled Bruns Administration Building. In addition to offices for the staff of the Institute, these quarters provide space for the meteoritical library, the meteorite museum, a computing laboratory, housing a collection of Monroe, Marchant and A.A.F. electrical and mechanical computers, a photographic darkroom with complete Leica equipment for photo-micrography and a Pako photo-dryer and other automatic devices for speedily working up results obtained in air reconnaissance surveys of meteorite-strewn fields; a seventy-foot long hypervelocity laboratory and several smaller research laboratories; and a large machine shop with concrete floor on which are mounted Tinius Olsen and Rockwell hardness testing machines, Knapp and Stewart high temperature furnaces, meteorite sectioning and polishing machinery including an 800-pound Excelllo lapping machine, a Sheffield Precisionaire instrument, and motor-generators with auxiliary equipment used in testing meteorite detectors and in other experimental work.

Equipment available through the Institute for research and instructional purposes includes an automatic microdensitometer employing photo-multiplier tubes, two air-reconnaissance cameras mounting Aero-ektar f 2.5 lenses, several types of meteorite and

mine detectors, a 36-inch aluminum parabolic mirror and a large number of wide field telescopes and binoculars suitable for telescopic meteor work, for comet seeking, and for zodiacal light investigations, astro-compasses, stadimeters and sextants, radar and radio units, and a considerable amount of auxiliary electronic and optical equipment.

The Institute is ideally located for field work in meteoritics since the University of New Mexico is situated almost in the center of that sub-region of the United States in which the climate is most favorable for the long-continued existence of fallen meteorites in recognizable form; in which the conditions of terrain and rainfall are most propitious for the instrumental detection of buried meteorites; and in which, as a matter of fact, most of the meteorites and all of the meteorite craters thus far found in the United States have been located. Conditions for visual and photographic observation of meteors and the zodiacal light and gegenschein are equally favorable. A statistical survey of night sky conditions carried out at the request of the Director of the Harvard University Meteor Program indicates that few if any stations in the proverbially fair Southwest show as many hours of nocturnally clear skies as Albuquerque.

In addition to conducting research in meteoritics and cooperating with such military organizations as the Air Technical Service Command, the Operations Analysis Division and the Research and Development Board, and such scientific agencies as the Institute for Nuclear Studies of the University of Chicago and the Research Laboratory of the General Electric Company, the staff of the Institute is testing and installing instrumental equipment for use in teaching observational and navigational astronomy and is collaborating with the Department of Mathematics and Astronomy in the development of courses in astronomy and meteoritics.

As regards publications, the Institute sponsors a new series of meteoritical monographs, the *University of New Mexico Publications in Meteoritics*, and cooperates in publishing a mimeographed circular carrying meteoritical news of current interest which is mailed out monthly to a large and ever-growing circle of voluntary observers.

#### MILITARY TRAINING

##### AIR FORCE ROTC

In August 1949 an Air Force Reserve Officers' Training Corps Unit was established at the University of New Mexico. The purpose of Air Force ROTC is to select and train students who possess the character, intelligence, desire, and sense of duty to become Air Force officers and responsible citizens.

The course consists of four years. Veterans and students who have had previous ROTC training are exempt from a part of the course,

depending upon their previous training. Upon completion of the Air Force ROTC course, cadets are commissioned as second lieutenants in the Air Force Reserve. Students retain their civilian status during their training and while they are commissioned in the Air Force Reserve, unless they elect to go on active duty, or are called to active duty in the event of a national emergency. There is no flying training in the Air Force ROTC course. Qualified graduates may attend the flying school as second lieutenants.

Textbooks for the Air Force ROTC courses and uniforms are furnished by the Air Force. Junior and senior Air Force ROTC students are paid approximately \$27 per month. Cadets are required to attend one summer camp of six weeks' duration between their junior and senior years. Cadets receive \$75 per month and room and board while at camp. Transportation to and from summer camp is provided.

Freshmen and sophomores attend Air Force ROTC classes two hours per week, and juniors and seniors attend classes four hours per week. Credit for Air Force ROTC courses may be applied toward the academic degree.

(For further information refer to the section of this bulletin pertaining to the Department of Air Science and Tactics.)

#### NAVAL ROTC

A Naval Reserve Officers' Training Corps Unit, established by the Navy Department, is in operation at the University of New Mexico. The NROTC offers the opportunity for NROTC students to qualify for a commission in the U. S. Navy and Marine Corps and U. S. Naval Reserve and Marine Corps Reserve upon completion of the baccalaureate degree requirements.

Applicants for enrollment in the NROTC must first be accepted for enrollment by the University. Entering freshmen who have been selected by the Navy Department after nationwide competitive examinations are enrolled as Regular NROTC students. Regular NROTC students receive \$50 per month from the Navy, and have their tuition, books, and fees paid for by the Navy. A limited number of freshmen may be enrolled as Contract NROTC students, after passing a selection examination and the required physical examination. Contract students receive a commuted ration allowance of approximately \$27 per month during their junior and senior years.

Regular NROTC students are commissioned in the Regular Navy or Marine Corps while contract students are commissioned in the Naval or Marine Corps Reserve. Contract students may, however, be commissioned in the Regular Navy or Marine Corps, provided they so request and the Navy Department approves.

**RECREATIONAL FACILITIES**

A number of concerts and lectures are presented by distinguished artists in the University Program Series. The Series is financed by the Associated Students with funds from the activity fee and is open without charge to all students holding activity tickets. Rodey Theatre presents a series of plays produced by the Drama Department. In addition, students may purchase season tickets, in some instances at reduced rates, for the Community Concert series, the Albuquerque Civic Symphony concerts, and the productions of the Albuquerque Little Theatre.

Outdoor recreational facilities maintained by the University include an 18-hole golf course, a swimming pool, rifle range, tennis courts, and numerous playing fields. The City operates a public beach and a winter sports area, the latter in cooperation with the U. S. Forest Service.

## ADMISSION

### APPLICATION AND CREDENTIALS

**A**LL COMMUNICATIONS regarding entrance should be addressed to the Director of Admissions. The University requires that each new student file an application for admission (blank to be obtained from the Office of Admissions and Records). In addition, he must have his credentials sent directly to the Director of Admissions from the high school or college previously attended; transcripts in the possession of students are not acceptable for entrance purposes. A former student in the University who was not enrolled here for the previous regular semester is required to file an application for readmission. Transcripts of any college level studies taken since the last regular attendance at the University will be required. *In order to be assured of admission, the student must have his credentials on file in the Admissions office at least one month in advance of the beginning date for the session in which he plans to enroll. No student is assured of entrance until he has received an official notice of admission from the Director of Admissions.*

### FRESHMEN

Each freshman is required to present an application for admission (see above) and to have a transcript of his high school record sent to the Director of Admissions by the principal or superintendent.

Each freshman is also required to take a series of tests which are administered just prior to registration (see the Calendar). These tests are used for advisement purposes and sometimes reveal information which is used in recommending the college which the freshman should enter, the courses which he should undertake, and the amount of work which it appears advisable for him to attempt. If the tests reveal a marked weakness in preparation, the University authorities may recommend that the student take up a special program of work in the General College before he may enter upon a degree course in one of the four-year colleges, or he may be required to take certain non-credit courses designed to correct such weaknesses.

The University recommends that freshmen be at least 16 years of age.

### ADMISSION BY CERTIFICATE

High schools accredited by regional accrediting associations, state departments of education, or state universities are accredited by the University of New Mexico.

Graduates of accredited high schools may be admitted to the University upon presentation of transcripts showing graduation



from a four-year high school with 15 units (or graduation from a senior high school with 11 units), such units to be distributed as outlined in the following paragraphs. The term "unit" means the completion of a course of study consisting of recitation periods of at least 40 minutes each, held five times a week during 36 weeks.

**Section I. Basic Requirements—7 units:**

English—3 units

Social Studies—1 unit (must include credit in U. S. History)

Laboratory Science—1 unit (only Chemistry, Biology, Physics, are accepted as laboratory sciences)

Mathematics—2 units (Algebra must be one of the units offered). Students expecting to enter the College of Engineering must offer 3 units of Mathematics including second year Algebra and Plane Geometry. Solid Geometry and Trigonometry are recommended. Students expecting to enter the College of Pharmacy or majoring in Mathematics, Physics, Chemistry, Geology, Premedic or Predental courses must present  $2\frac{1}{2}$  units of mathematics which must include  $1\frac{1}{2}$  units of Algebra and 1 unit of Plane Geometry. (See Removal of Entrance Deficiencies, p. 40.)

**Section II. Restricted Electives—4 units must be elected from the groups A-E below with no more than 2 units accepted from Group F:**

Group A.—English, Public Speaking, Journalism, Speech

Group B.—French, Spanish, Latin, German and other foreign languages

Group C.—Algebra, Plane Geometry, Solid Geometry, Trigonometry, General Mathematics

Group D.—General Science, Biology, Chemistry, Physics, Physiology, Geology

Group E.—History, Geography, Sociology, Economics, Government

Group F.—Home Economics, Agriculture

**Section III. Free Electives—4 units:**

Any units accepted towards graduation from accredited high schools may be used as free electives.

NOTE: In the admission of graduates of senior high schools, no attention will be paid to work done in the junior high school except as that work is related to the requirements of Section I and Section II.

The case of any student applying for admission with less than a C average in his previous academic work may be subject to review by the Committee on Entrance and Credits.

If the applicant is not a high school graduate, but has completed

the 15 required units in an accredited high school, he may be admitted to the University upon the written recommendation of his principal or superintendent.

#### ADMISSION WITH ENTRANCE DEFICIENCIES

If a student has been graduated from an accredited high school but does not meet all the entrance requirements as outlined above, he may be admitted to the University upon specific agreement to remove his deficiencies within twelve months from the date of his first enrollment.

Graduates of unaccredited or partially accredited high schools are expected, prior to registration, to take the University high school level entrance examinations. The student who successfully passes these examinations will be considered to have validated the unaccredited high school record, except that any subject deficiencies must be removed according to the regulations outlined below under "Removal of Entrance Deficiencies."

#### REMOVAL OF ENTRANCE DEFICIENCIES

Students may make up deficiencies in entrance requirements: (1) by establishing high school credits in the courses concerned; (2) by counting part of the work done during their first year in college toward entrance requirements; (3) by meeting such equivalency requirements as the Committee on Entrance and Credits may designate in each individual case. If a deficiency is removed by college credit, such credit must be earned in the field in which the deficiency occurs. Three semester hours count as one unit for all entrance deficiencies except those in Laboratory Sciences in which 4 semester hours will be required for one unit. Course credit counted towards entrance requirements is not accepted towards a degree in the University.

#### TRANSFERRING STUDENTS

Each new student who has attended other colleges or universities and who is seeking admission to an undergraduate college or the College of Law is required to file with the Office of Admissions and Records an application for admission (form to be obtained from that office). In addition to the application, credentials of transferred credits are required according to the following schedule:

An applicant seeking admission to one of the undergraduate colleges of the University should request the authorities at each college level institution attended to send an official transcript of his record to the Director of Admissions of the University.

An undergraduate applicant for the College of Law should request the authorities at each college level institution attended

to send an official transcript of his record to the Director of Admissions of the University.

An applicant for the Collège of Law who has been awarded a bachelor's degree must have sent to the Director of Admissions a complete official transcript from the last institution attended showing graduation and grades for all academic courses leading to the degree. Students who have earned post-graduate degrees must provide official transcripts from the institution or institutions in which such degrees were earned.

An applicant for the College of Law who has attended another law college must have sent to the Director of Admissions of this University an official transcript of his prelegal course of study, an official transcript of his law study, and a letter from the Dean of the law school previously attended to the effect that he is presently eligible to re-register in that law school.

(Students seeking admission to the Graduate School of this University are referred for admission procedures to the section of this catalog entitled "Graduate School" or to the *Graduate Bulletin*.)

When the preparatory credits have not been accepted, and recorded on the transcript, by an accredited college level institution, or when the student has satisfactorily completed less than 24 semester hours in an accredited institution at the college level, a complete official transcript of the high school work will also be required.

An evaluation fee of \$5.00 is payable when the application is submitted. This fee is not charged to veterans; in the case of civilians, the fee is not refundable.

It is not possible to give any information in regard to standing until the required credentials are on file. After the application, transcripts, and evaluation fee have been received, a notice of acceptance or rejection will be sent to the student. An evaluation of the transferred credit will be made as soon thereafter as possible. If the student receives his evaluation prior to registration, he should retain it for use at that time.

*Every new student is required to take the psychological examination prior to registration (see the Calendar).*

A transferring student is required to meet the freshman entrance requirements (see p. 39) except that if he has completed 2 semesters (24 semester hours minimum) of work of C average in an accredited collegiate institution, which institution has granted him regular status, his preparatory record will be considered cleared even though the credits do not meet our requirements in full.

Students from fully accredited institutions ordinarily will be given full credit for work transferred, insofar as the courses taken

are the same as, or equivalent to, courses offered in the college in which the student enrolls in this institution.

Only an approximate evaluation can be made prior to registration, and all credit is tentative until the student has completed at least one semester of satisfactory work in residence.

Credits transferred from an accredited junior college will be accepted up to a maximum to be determined by the college in which the student is enrolled. In accepting junior college credits, no courses will be considered as above sophomore level.

Applicants from unaccredited institutions must have a 1.5 index in order to be eligible for admission by transfer. Credit earned in unaccredited institutions is usually accepted on the same basis as by the state university of the state in which the institution is situated. In most cases credit from unaccredited institutions must be validated by a minimum of 30 semester hours satisfactorily completed in residence at this University. Where it seems proper, examinations for the validation of credit may be required.

Correspondence and extension credit from institutions which are not members of the National University Extension Association must be established by examination at this institution.

The case of any student applying for admission with less than a C average in his previous academic work may be subject to review by the Committee on Entrance and Credits. A student under suspension from any other college or university will not be considered for admission during the period of his disqualification.

### **READMITTED STUDENTS**

A student who has previously enrolled in residence in the University but whose attendance has been interrupted by one or more regular semesters, or by a withdrawal from the preceding regular semester, is required to file an application for readmission. If, during his absence from the University, he has attended another collegiate institution, or has taken college level courses by correspondence or extension, complete official transcripts of such studies are required. No evaluation fee is required of students who have formerly attended the University in regular status.

Credit earned during suspension from this University will not be accepted for transfer.

### **SPECIAL STUDENTS**

Persons over twenty-one years of age who cannot meet the regular entrance requirements may be admitted as special students, provided they secure the permission of the instructors whose work they desire to take and the approval of the Dean of the college con-

cerned. Students over 21 who do not wish to work toward degrees at the University of New Mexico may also be admitted as special students under the same conditions, provided they are not under scholarship suspension from any other college or university. Applicants coming direct from high school will not be permitted to enter as special students. By virtue of his classification, the special student is not eligible for any degree, but may become a candidate ultimately by clearing his admission status to the satisfaction of the Committee on Entrance and Credits. (See Removal of Entrance Deficiencies.)

The student entering as a special should make application on the University's application for admission form. If he intends to establish regular status here, he should present official transcripts of any high school or college credit which he may have earned previously. *He may retain the classification of special student until he has accumulated 30 semester hours, after which he must declare himself, in writing, as a degree candidate, or a continuing special student. In the first case, he must attain regular status prior to his next registration; in the second, he will be allowed to register in courses as an auditor only, receiving no credit.*

#### UNCLASSIFIED STUDENTS

Students transferring from unaccredited or partially accredited institutions are unclassified until they have validated credit in accordance with the University regulations. Students who are temporarily absent during a regular semester from other institutions are also registered as unclassified. In such cases statements of honorable dismissal, including scholastic status and classification, are required from the last institutions attended.

#### AUDITORS

Mature students may attend classes as auditors, without credit, with the permission of the instructors concerned and of the Dean of the college in which most of the audited courses lie. Auditors are required to pay fees at the same rate as if enrolled for credit. They must, upon registration, declare themselves as auditors and may not change to a credit basis after the first two weeks of the semester. A student enrolled for credit in a course may not change to an auditing basis in the same course after the first two weeks of the semester.

#### VETERANS

A veteran is defined as any student who is eligible to attend school under the G. I. Bill of Rights. Credit for service training and experience is granted on the basis of measured educational achievement, in conformity with the procedures recommended by the North

Central Association of Colleges and Secondary Schools and the American Council on Education. Total semester hours of military credit to be allowed will be determined by the Dean of the college concerned. A maximum of 8 semester hours elective credit is allowed for basic or recruit training apportioned as follows: First Aid, two semester hours; Hygiene, two semester hours; Physical Education Activity, four semester hours. Eight semester hours, apportioned the same as credit granted for service in the U. S. Armed Forces will be granted to foreign students who have completed military training, provided they can show official credentials in support of their statements. Credit earned in specialized army and navy programs conducted by college and university staffs is allowed in accordance with the recommendations of the administering institution. Credit for work done in formal training programs is allowed in accordance with the recommendations of the American Council on Education or on the basis of examinations here. U. S. Armed Forces Institute correspondence courses may be established by examination in this University. The veteran has the opportunity to demonstrate his competence in any University subject, and to establish credit in that subject, by passing an examination as required by the Committee on Entrance and Credits. Military credits (other than those earned in accredited colleges or universities under military auspices) will not be entered on the student's record here until he has made formal application for such credit and has completed in residence one semester of a minimum of 12 hours' work.

#### **GRADUATE STUDENTS**

Refer to "Graduate School."

#### **LAW STUDENTS**

Refer to "College of Law."

#### **REGISTRATION**

##### **TIME OF REGISTRATION**

Students are urged to register on the days set aside for registration (see University Calendar). The late registration fee is charged to each student who does not complete his registration on the specified days. Registration contemplates completing the entire procedure, including payment of fees. Prompt registration is at all times encouraged. No student may enroll late in any course unless he has the permission of the instructor concerned and the Dean of the college in which he is enrolled. A student may not be admitted to the University more than two weeks after the opening of a semester.

## REGISTRATION PROCEDURE

Details of the registration procedure are contained in a special notice issued by the Admissions and Records office, and distributed to students on the days of registration.

## COMPLETION OF REGISTRATION

When the student has followed the prescribed registration procedure, and has paid his fees, his registration is complete. The University will hold the student responsible for completion of the courses for which he has been enrolled, unless he obtains approval for a change in his registration, or files an official withdrawal from the University.

## CHANGE IN REGISTRATION

See "General Academic Regulations."

## MEDICAL EXAMINATIONS

A physical examination, including a Wasserman test and a tuberculin skin test, is compulsory for all new students (both freshmen and transfers) and all former students returning after an absence of one year. These tests are given without charge by the University Physician, but students who, without valid reason, fail to keep their examination appointments may have their registration cancelled. Students will be reexamined by the University Physician when such examinations are indicated. Health-seeking students are accepted at the University if, in the judgment of the University Physician, their work does not endanger themselves or their associates. The University may refuse registration to, or cancel the registration of, any student who is physically unfit to carry on class work, or whose physical condition might be a menace to the health of other students.

## STUDENT EXPENSES

### TUITION AND FEES

**A**LL FEES are due at the time of registration. A fee of \$5.00 will be assessed if registration is not completed on the days specified.

Fees are charged according to the number of semester hours in the student's course. Auditors pay fees at the same rate as if enrolled for credit.

#### ADVANCE DEPOSIT

An advance deposit of \$10.00 is required of all students who desire University housing and who were not enrolled in the University of New Mexico during the semester immediately preceding the one to which they are applying for admission. The deposit will be held in deposit status so long as the student retains such housing; and it will be reduced by charges for any damage to his living quarters.

#### REGISTRATION FEES, GRADUATE AND UNDERGRADUATE STUDENTS, PER SEMESTER \*

	More than six hours	Four to six hours	Three hours or less
Tuition**	\$50.00\$	\$25.00\$	\$12.50\$
Contingency Fee†	10.00	5.00	5.00
Activities Fee‡	12.50	....	....
Bond Fee	5.00	5.00	3.00
Building Fee	10.00	10.00	5.00
Library Fee	5.00	5.00	3.00
	<hr/> \$92.50	<hr/> \$50.00	<hr/> \$28.50
** If a non-resident, add tuition	....\$100.00	50.00	25.00
	<hr/> \$192.50	<hr/> \$100.00	<hr/> \$53.50

Note: Graduate students enrolled only for thesis pay a \$10.00 tuition fee and a \$5.00 contingency fee.

#### OTHER FEES FOR SPECIAL SERVICES

Change in program after end of second week, except upon

written request of the instructor ..... \$ 1.00

Late registration fee ..... 5.00

Late physical examination fee ..... 1.00

\* Tuition, in the case of all new students, includes a \$5.00 matriculation fee, no part of which is refundable.

§ Increased from previous year by action of 1951 Session, New Mexico State Legislature.

† Covers normal breakage and, in the case of students taking more than 6 hours, a health fee. Health service is not provided for part-time students.

‡ Not required of graduate students. (Includes 80¢ of Federal Tax). The amount of this fee is determined by the students and is, therefore, subject to change (any change is usually minor).



Fee for removal of Incomplete grade .....	2.00
Examination for validation of credit, per course .....	2.00
Other special examinations .....	2.00
Examination for advanced standing, per credit hour .....	2.50
Transcript of credits (extra copies 25¢ each) .....	1.00
Penalty for dishonored checks .....	1.00
Diploma fee, bachelor's or master's degree .....	10.00
Binding master's thesis, per copy .....	3.00
Graduate Record Examination (graduate students only) .....	3.00
Evaluation of transcript (adv. standing) .....	5.00
Handling fee, Air Force ROTC .....	3.50

## ADDITIONAL FEES

Individual music instruction (except vocal coaching), per credit hour .....	\$11.25
(Offered for minimum of two hours credit for one half-hour lesson per week)	
†Vocal coaching, per credit hour .....	22.50
†Accompanying, per credit hour .....	22.50
Piano Ensemble: one half-hour lesson per week (1 credit hour):	
In group of two students, per student .....	11.25
Equitation, per semester .....	20.00
Organ rental, per semester .....	12.00
Use of practice rooms (other than pipe organ):	
1 hour per day, per semester .....	4.00
2 hours per day, per semester .....	6.00
3 hours per day, per semester .....	8.00
4 hours per day, per semester .....	10.00

For Master Classes in piano and other instruments (or private instruction by visiting instructors) the University reserves the privilege of charging special fees for instruction and practice rooms.

**NON-RESIDENT TUITION FEES.** A full-time non-resident student shall be charged not less than two hundred and eighty dollars (\$280.00) per year tuition, based on a nine month school year; providing that any student having graduated from a non-resident high school shall be considered a non-resident unless he or she shall have spent not less than twelve (12) months in residence in the state of New Mexico after becoming twenty-one (21) years of age while not attending school, or whose parents are legal residents of the state.

Upon request of the University authorities, students must furnish proof of their residence in the state of New Mexico. If a

† Any student taking vocal coaching may arrange with a student taking accompanying to take their lessons at the same hour (and vice versa), in which case the fee payable by each student will be reduced to \$11.25 per credit hour.

person other than the parent is named as guardian, the student will be required to furnish evidence of court appointment.

**CONTINGENCY FEE.** The University maintains a full-time physician with offices in the Infirmary. All students enrolled for seven or more semester hours are eligible to consult him in case of illness or injury. The Infirmary is well equipped, and services which can be performed there are covered by the contingency fee. Major and minor surgery and critical illness will be referred to local physicians at the student's expense. The contingency fee also provides for a nominal or "normal" amount of breakage in laboratory or other courses. Excessive breakage will be billed separately to the students responsible therefor.

**STUDENT ACTIVITIES FEE.** The assessment of this fee is a voluntary action of the student body, through its organization, the Associated Students of the University of New Mexico. At registration the University collects this fee as an accommodation to the Associated Students. The activities fee is distributed to the student organizations as shown in the Constitution of the Associated Students. Copies of the Constitution may be obtained from the Personnel office.

**STUDENT ACCOUNTS.** Students are required to pay all accounts due the University during one semester before registering for a new semester.

**WITHDRAWALS AND REFUNDS.** All fees, except \$5.00 (in the case of new students) for matriculation and the \$5.00 evaluation fee (in the case of transfer students), will be refunded to students voluntarily withdrawing from the University before the end of the second week of the session. Students voluntarily withdrawing later than the second week, but before the end of the eighth week of the semester will be entitled to a refund of one-half of the tuition only (less \$5.00 for matriculation in the case of new students). Students withdrawing after the eighth week and students withdrawing at any time under discipline or because of academic deficiencies, will be entitled to no refund.

**ESTIMATE OF TOTAL EXPENSE.** The minimum amount necessary for expenses while attending the University of New Mexico for a semester is estimated as follows:

Tuition and fees .....	\$ 95.00
Books and supplies .....	50.00
Board and room .....	300.00
Clothing, laundry, and miscellaneous .....	100.00

Non-resident students should add \$100.00 to the tuition costs. Students in residential halls are charged a recreational and social fee of \$1.50 per semester.

These estimates are based upon current rates; all charges are subject to change without notice.

### DINING AND RESIDENTIAL HALLS

For regulations governing residence in University halls, see p. 57.

#### NEW STUDENTS

The Director of Admissions will study each student's application for admission and his high school or college transcript. When these are found to be in order, and it has been determined that housing facilities are available, the procedure will be as follows:

1. The student will be informed of his acceptance and will be requested to forward a \$10.00 check or money order as an advance deposit, if he desires University housing. This remittance should be made to the Cashier, Business Office, University of New Mexico. It should be accompanied by a housing contract signed by the student (and by his parent or guardian if he is under 21 years of age). By the terms of this contract, the student agrees to reside in University housing for a full academic year. (All freshmen must live in University housing if their homes are not in Albuquerque.)

2. When the student's remittance is received at the University, the Office of the Dean of Women will advise the woman student of the residential hall to which she has been assigned and will provide a list of furnishings needed. The Men's Housing Manager will inform the man student of his general dormitory assignment and of furnishings needed. All questions relating to housing information should be addressed by men to the Men's Housing Manager, and by women to the Office of the Dean of Women. Upon arrival at the University, the man should report directly to the men's new dormitory. The receipt for his advance deposit should be presented at this time. The woman should report directly to the residential hall to which she has been assigned and should be prepared to present her advance payment receipt to the Head Resident and to the Manager of Women's Housing. Both men and women students should plan to arrive between 8:00 a. m. and 10:00 p. m.

#### STUDENTS REQUESTING READMISSION

A student who has previously attended the University, but who is not presently enrolled and is requesting readmission, should follow the procedure outlined for new students.

#### STUDENTS CONTINUING ATTENDANCE

Students in attendance are required to make housing reservations for the following year not less than three weeks before the ending of the spring term. Student occupancy in residential halls is on a school-year basis. Unless advance notice of intention to remain for

the following year is made in writing to the Office of the Dean of Women or to the Men's Housing Manager, living space may be assigned to another student. Specific information regarding exact dates and amount of advance deposits will be announced in time for the student to make necessary arrangements.

#### CHANGES IN STUDENT'S PLANS

Should an applicant for admission or readmission to the University find it impossible to keep an advance reservation, he should notify the Office of the Dean of Women or the Men's Housing Manager not later than two weeks before the first day of registration. One-half of the advance deposit is automatically forfeited if application is cancelled later than two weeks previous to the first day of registration in the period for which the deposit has been made. If no notice of cancellation is given and the student fails to matriculate, the whole deposit will be forfeited.

#### MEALS FOR STUDENTS LIVING IN RESIDENTIAL HALLS

All students occupying rooms in residential halls are required to take their meals at the University dining halls. Room and board are therefore considered as one charge, the amount varying slightly depending upon the type of residential assignment for each student. Room and board charges are payable in advance in three installments as described later.

#### RATES—ROOM AND BOARD

The following current rates for campus room and board are subject to change whenever necessary to defray operating costs:

**WOMEN'S RESIDENCE HALLS.** Charges for room and board per semester (payable in 3 installments):

##### Hokona Hall (North and South Halls)

Single rooms .....	\$312.00
Double rooms, per person .....	300.00
3 or 4 to a 3-room suite, per person .....	294.00

##### Hokona Hall (Center Hall)

Single rooms .....	\$297.00
3 or 4 to a 3-room suite, per person .....	285.00

##### Marron Hall

Single rooms .....	\$12.00
Double rooms, per person .....	300.00

##### Bandelier Hall

Double rooms, per person .....	300.00
3 or 4 to a room, per person .....	291.00

##### Dorm D

Single rooms .....	309.00
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**MEN'S RESIDENCE HALLS.** Rates per semester for room and board in the men's dormitory will be:

Double rooms, per person .....	306.00
3 or 4 to a room, per person .....	300.00

**Mesa Vista Hall**

Double rooms, per person .....	294.00
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All of the foregoing rates for University Housing (men or women) will provide for University-supplied bed linens and towels. All other personal linen must be provided by each student.

All freshmen, men and women, and all undergraduate women who are not residents of Albuquerque must live in University housing as long as it is available.

**UNIVERSITY APARTMENTS.** A small number of family dwelling units are maintained for married students. Rates for these units per month are (completely furnished except for linens):

1 bedroom, furnished .....	\$65.00
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**RATES—DINING HALL**

To the extent that facilities permit, students living off-campus are permitted to eat at the University dining hall. For such students the rates for board only are:

Per semester, per person .....	\$204.00
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**Single meals (cash):**

Breakfast .....	.45
Luncheon .....	.65
Dinner .....	.85
Dinner (noon Sundays and holidays) .....	1.25

**GUESTS**

With the consent of the Director or Chaperon, students may have overnight guests at the residence halls (for a maximum of seven nights). The guest will be charged 75¢ a night. When a guest is to have meals in the dormitory or dining hall, there must be advance notification and payment for the meals.

**PAYMENT OF ROOM AND BOARD CHARGES**

Semester charges for room and board (or for board only in the case of students living off-campus) are payable in three installments.

The first installment on room and board (or board only) is due and payable during the first week of the fall semester, when the student moves into the residence hall, and on the first day of the spring semester. The second and third installments are due and pay-

able on the first day of the sixth and eleventh weeks, respectively, of each semester.

All students who live in University residence halls must use the University dining facilities.\*

#### REFUNDS

Refunds of room and board will be calculated on the basis of 19 weeks per semester for room rent and four months per semester for board. (Rates for board do not provide for meals during the Thanksgiving, Christmas, and Spring Vacation periods. Students who remain on the campus at these times must pay cash for their meals.)

Whenever a room is occupied for less than two weeks, the student will be charged for a minimum of two weeks. Whenever the room is occupied for more than two weeks but less than four weeks, the student will be charged for a minimum of four weeks.

The \$10.00 advance deposit paid by all students who engage University housing will be refunded after the close of each school year (or when the student is obliged to withdraw from the University) after deduction for any damage caused by the student to his quarters, if the student does not expect to resume residence in University housing the following semester.

\* Students who sign contracts for University housing must reside in assigned quarters for the full academic year if they remain enrolled in the University.

## STUDENT PERSONNEL SERVICES

### ORIENTATION

**A**T THE OPENING of each semester a "Freshman Program" is conducted. (See the Calendar.) The purpose of this program is to acquaint the freshman with some of his fellows, to help him to feel more at home in new surroundings, to permit him to meet advisers and counselors, and to familiarize him somewhat with University methods and life. In addition to the preliminary registration and the various tests, numerous recreational and educational events are held.

Attendance of all freshmen with less than 10 semester hours credit is required during the entire Freshman Program period, but transferring students who have less than 60 hours of college credit are advised to attend all meetings except the tests. All new students, except enrollees in the Graduate School, are required to take the psychological test.

In order to make a comparison of the ability, training, and background of the different members of the freshman class, the University administers a series of intelligence, placement, and achievement tests. A medical examination is also required for each student. Deans and advisers consider these tests quite helpful to the consultation and guidance relationships with the new student. The tests are designed principally to reveal the student's aptitude for college work, and to assist in placing the student in courses of the proper level.

Every student registered in freshman English is examined as to his ability to use clear, correct, idiomatic English. No student can pass this test who shows serious weakness in spelling, punctuation; grammar, diction, or sentence structure. Students who do not pass the test are enrolled in English IW.

The Personnel office issues a *Freshman Handbook* which contains information on student organizations, library rules, campus regulations, suggestions for effective study, etc.

During his first registration, each new student is assigned by the Dean of his college to a faculty adviser who assists him in planning his academic program. The adviser keeps a permanent file on each of his advisees and is available for consultation at any time.

### COUNSELING AND TESTING SERVICES

The University of New Mexico recommends its Counseling and Testing Services to all University students. Counseling and vocational guidance are available to University students without cost. Counseling and guidance are provided for such student problems

as selection of an occupation or profession, appropriate majors and minors, and development of reading and study skills. Students with personal, social, and emotional, or any other problems in which professional psychological assistance can be of value may come for consultation. Standardized tests of occupational and scholastic aptitudes, interests, achievements, reading and study skills, and personality and personal adjustment inventories are utilized by the Services. Non-veteran students may arrange for these services by direct application to the Director of the University Counseling and Testing Services.

The Counseling and Testing Services coöperate with the English department by providing remedial reading assistance to the students enrolled in the workshop course. This coöperation includes the administration, scoring, and interpretation of reading and vision screening tests, in-service training for teaching assistants in charge of the classes, and individual assistance to those students who most need help in reading and establishment of effective study habits. Students not enrolled in the English workshop may also receive this help by applying directly to the Counseling and Testing Services office. In addition, free lectures on study skills are offered at night to all students who wish to attend.

Veterans should arrange for occupational counseling by the University Services through the Veterans Administration Guidance Center; veterans may, however, make direct application to the Director of the University Counseling and Testing Services for aid in other problems.

Veterans with service-incurred disability of 10% and greater who wish to obtain the benefits of Public Law 16 must go through the Veterans Administration Advisement Section, which utilizes the University Services, to determine their vocational objectives. Because Public Law 16 provides greater benefits to the veteran, all eligible disabled veterans are urged to consult with the Veterans Administration Guidance Center.

Other veterans who may be required to go through advisement are: (1) those who fail to make satisfactory progress in the course chosen, (2) those wishing to change from one school or college to another on the campus, (3) those wishing to change from an educational program to on-the-job training, (4) those wishing to transfer to another institution because of inability to adapt themselves or adjust to conditions in the University.

In addition to providing individual guidance, the University Counseling and Testing Services supervise the administration, scoring, and interpretation of testing programs including the entrance and placement examinations, the sophomore proficiency tests, some departmental examinations, the Graduate Record Examination for



graduate students and seniors, the state-wide testing of high school seniors and special placement tests for colleges in the University.

#### **DIVISION OF VETERANS AFFAIRS**

The Division of Veterans Affairs at the University of New Mexico was established to provide every possible service to veterans, and to aid in the solution of any and all problems that may arise in the student veteran's relationship with the University and the Veterans Administration. The veteran is given assistance in obtaining a certificate of eligibility from the Veterans Administration, help with registration and orientation in the University, certification of registration to the Veterans Administration so that subsistence payments may start, assistance in withdrawing from the University or interrupting educational programs, and information on any changes in procedures and regulations of the University and the Veterans Administration. In short, the Division of Veterans Affairs helps the veteran secure the greatest good from his G.I. benefits and protects his interest in these benefits.

#### **VETERANS ADMINISTRATION**

The Veterans Administration maintains on the campus a Guidance Center. The chief functions of this Center, as far as the University is concerned, are to assist the veterans in completing required Veterans Administration forms, to keep veterans informed on legal changes affecting educational training, to advise and counsel veterans not making satisfactory progress in their courses, to provide the guidance and testing services authorized by law, and to supervise the programs of veterans assigned to the University under Public Law 16, Rehabilitation Act.

The Division of Veterans Affairs and the Veterans Administration occupy joint offices in order to achieve maximum coordination and efficiency in the handling of all veterans' problems.

#### **GENERAL PLACEMENT BUREAU**

The General Placement Bureau is maintained to aid graduates and undergraduates in finding suitable and satisfactory employment in permanent and part-time positions respectively.

The Bureau acts as a general clearance house for registrants seeking employment, and for employers seeking college-trained personnel. Men students interested in obtaining part-time work on and off campus during semesters as well as seniors and alumni seeking permanent employment are urged to register with the Bureau, Room 116, Counseling and Testing Bldg.

Keeping on file a complete record of each registrant's scholarship, employment experience, activities, and personal qualifications,

the Bureau attempts proper placement commensurate with the registrant's training and background. The Bureau maintains constant contact with the conditions and trends of the Nation's job market; and industries are urged to send representatives to the campus from time to time to interview seniors for possible employment.

Any man student requiring part-time employment is requested to file an application with the Bureau. (Women applicants are referred to the Personnel office.) Applications for campus employment must be renewed each semester. The following principles are the basis of selection of candidates: (1) the establishment of the actual need of the student; (2) scholarship; (3) reemployment to be based on satisfactory service and scholarship.

No fee is charged for services rendered students seeking part-time work. In the field of placement, however, each registrant is charged an initial fee of \$1.00, with a renewal fee of \$1.00 yearly after the first year.

The Bureau does not force its services, does not guarantee that registrants will be placed, and cannot, except in rare instances, assign anyone to a position. The office can do no more than furnish aid, and the effectiveness of this assistance is dependent in a large measure, upon the applicant's attitude toward placement.

#### HEALTH SERVICE

The University Health Service, with a staff of three physicians and eight graduate nurses, operates a Dispensary and Infirmary. Each new student on admission receives a routine physical examination, including a blood test and a skin test for tuberculosis. The health status of the student is determined, and advice and curative measures are offered to permit him to receive the greatest possible benefit during his college years. Reexaminations of students are made when the staff feels that such reexaminations are indicated. Former students returning after an absence of one year or more are also required to report for reexamination. The college physicians may exclude from dormitories and classrooms students suffering from contagious or communicable diseases.

Students are encouraged to avail themselves of the services of the University Physician who maintains morning and afternoon office hours at the dispensary. Although the Medical Service is primarily for ambulatory students with minor ailments or injuries, the University physician makes calls on campus residents who are ill, when requested by the matrons of the various dormitories.

The Infirmary is open twenty-four hours a day. All students have the benefits of professional diagnosis of any illness. If needed, hospitalization and treatment for acute illness of relatively short duration may be provided. Students with illnesses requiring special-

ist services or those requiring major surgery are referred to the consultant staff of specialists.

The Health Service maintains a constant supervision over sanitary conditions in dormitories and classrooms, in the swimming pool, and in the food handling departments. There is also a constant supervision over water and milk supplies.

#### RESIDENTIAL HALLS—REGULATIONS

Living quarters in residential halls are available to undergraduate men and women students (see pp. 49-52). Occasionally, rooms are available to students in private homes in the city, but men and women students are not permitted to room at the same residence.

All undergraduate women whose homes are not in Albuquerque are required to live in the University residential halls or sorority houses. All freshmen whose homes are not in Albuquerque are required to live in University residential halls for one calendar year regardless of social affiliations.

Exceptions to this regulation include: special adult students; regularly enrolled students who are over twenty-one years of age, and registered for 6 hours or less; and students who are working for board and/or room in approved homes.

All students must register their correct addresses with the Personnel office, and notify that office of any change immediately.

No woman student may change her place of residence without the consent of the Dean of Women. The University reserves the right to determine where a student may reside.

All occupants of residential halls must vacate their rooms by 5:00 p. m. on the last day of the semester unless they expect to return for the following semester.

The University reserves the privilege of closing its residential halls during the holidays. When these units are closed, they must be vacated by 5:00 p. m. on the day the holiday begins.

Animals or other pets are not permitted in University buildings or on the University premises for sanitary and health reasons. Exceptions will be made for special individual cases such as seeing-eye dogs.

Both men and women students residing in housing facilities provided or controlled by the University are subject to University rules and regulations pertaining to those facilities.

#### STUDENT ORGANIZATIONS

**ASSOCIATED STUDENTS.** The students of the University constitute a general student body organization which is called "The Associated Students of the University of New Mexico," and which controls the other organizations of general interest.

**ASSOCIATED STUDENTS COUNCIL.** The Associated Students Council is the administrative agent of the Associated Students of the University. Representatives of the Council are elected from the student body.

**STUDENT SENATE.** The Student Senate is the other governing board of the student body. It is composed of a representative from each organization on the campus.

**ASSOCIATED WOMEN STUDENTS.** The Associated Women Students is composed of all regularly enrolled women students of the University. The purpose of the organization is to secure uniform and broad social interests among University women. It is governed by a council, the members of which are representatives of all women's organizations on the campus.

#### PROFESSIONAL, HONORARY, AND SERVICE ORGANIZATIONS

The following organizations are active: Alpha Kappa Delta, Alpha Kappa Psi, Alpha Phi Omega, Beta Alpha, Delta Sigma Pi, Kappa Mu Epsilon, Kappa Omicron Phi, Kappa Psi, Khatali, Mortar Board, Phi Alpha Theta, Phi Delta Kappa, Phi Gamma Nu, Phi Kappa Phi, Phi Sigma, Phi Sigma Iota, Pi Lambda Theta, Pi Sigma Alpha, Pi Tau Sigma, Sigma Alpha Iota, Sigma Delta Chi, Sigma Tau, Spurs, Tau Kappa Alpha, Vigilante.

#### SOCIAL GROUPS

Fraternities: Alpha Epsilon Pi, Delta Sigma Phi, Kappa Alpha, Kappa Sigma, Lambda Chi Alpha, Nu Sigma, Phi Delta Theta, Phi Kappa Tau, Pi Kappa Alpha, Sigma Chi, Sigma Phi Epsilon, Sigma Alpha Epsilon, Tau Kappa Epsilon

Sororities: Alpha Chi Omega, Alpha Delta Pi, Chi Omega, Delta Delta Delta, Kappa Alpha Theta, Kappa Kappa Gamma, Pi Beta Phi

Other social groups: Independent Men, Townsmen, Phrateres, and Town Club

Fraternity and sorority relations are controlled by the Interfraternity Council and the Panhellenic Council respectively. These organizations also take prominent places in student activities.

For information in regard to other student organizations and activities, see the *Handbook*.

#### RELIGIOUS ACTIVITIES

Practically all religious denominations are represented in the city of Albuquerque. The churches all welcome the University students and invite them to share in their religious life and services. The University maintains a policy of non-sectarianism, but encour-

ages its students to affiliate with the religious organizations of their choice and to attend services regularly.

The United Student Christian Fellowship group is an interdenominational organization of Protestant students on the University campus, meeting weekly in the Student Union Building. A full-time office of Director of Religious Work among the Protestant student groups of all denominations has been established on the campus. This office is sponsored and largely supported by the Protestant churches in the city.

The following religious organizations hold regular meetings on the campus, and information as to time and place of such meetings may be found in the *Lobo*, the University newspaper:

Baptist Student Union, Canterbury Club, Christian Science Organization, Hillel Counsellorship, Lobo Christian Fellowship, Lutheran Student Association, Newman Club, and United Student Christian Fellowship.

### ATHLETICS

All athletic activities are under the direction of the Athletic Council, and are subject to the approval of the faculty and the President of the University. The University also sponsors an intramural program, designed to supplement the prescribed courses in physical education.

Intercollegiate athletics are governed by regulations of the Mountain States Athletic Conference, of which the University is a member.

Varsity sports include football, basketball, track and field, baseball, tennis, golf, and swimming; the intramural program includes swimming, tennis, handball, golf, cross-country track and field, volleyball, touch football, bowling, baseball, LaCrosse and softball.

### STUDENT PUBLICATIONS

The *New Mexico Lobo*, the campus newspaper, is published four times each week, and *The Mirage* is the campus yearbook issued at the end of the spring semester each year.

*The Thunderbird* is a literary magazine issued twice during each semester and carries literary contributions submitted by the students on the campus.

All of the above publications are edited and managed by students under the supervision of the Student Publications Board comprised of both student and faculty members, the majority of the Board, however, being student members.

The student editors and managers of these publications are elected by the Publications Board for a period of two semesters.

### ALUMNI ASSOCIATION

The Association is maintained through the cooperative efforts of the University and the alumni and is governed primarily by an executive committee elected annually by alumni. All graduates and all former students with 60 hours or more of credit earned in the University of New Mexico, are eligible for membership in the Association.

The *Alumnus*, official organ of the Association, is published monthly except during July and August and is edited by the Managing Director of the Association and his staff. The magazine is distributed to 5000 alumni monthly.

All graduates, upon payment of diploma fees, are entitled to a three year membership in the Association. Dues are \$2 yearly or \$25 for a life membership.

The Association's program includes: coordinating and directing Homecoming activities, arranging class reunions each spring, organizing alumni clubs throughout the state and nation, providing for a reserved alumni section at all athletic events, assisting with alumni placement services, and in other ways promoting the interests of alumni in the University. Currently, the Association is engaged in a fund-raising project to erect an inter-faith War Memorial Chapel on the campus.

Alumni Association file records include information on more than 22,000 persons who have attended the University since its opening. Master, state, class, membership and military files are maintained.

The Association's offices are located in the Journalism Building, rooms 213 and 215.

### STUDENT AID EMPLOYMENT

The assignment of women to part-time employment is made by the Personnel office, Room 105, Administration Building. Men students are assigned to part-time jobs by the General Placement Bureau, Room 116, Counseling and Testing Building.

The following principles are used in the assignment of part-time jobs:

- (1) actual need of the student.
- (2) scholarship

Continued employment is based on satisfactory service and scholarship. All applications for part-time campus employment must be renewed each semester.

In addition to campus employment, the Personnel office also maintains a list of prospective employers of women in the city of

Albuquerque who desire students to work part-time. In a similar manner, lists for men are maintained in the General Placement office. Applications for these positions should be made to the respective offices.

#### LOAN FUNDS

The University administers, under the direction of the Student Loan Committee, its own Student Loan Fund and coöperates in the administration of several others. Applications and information concerning all loan funds are available in the Personnel office.

The maximum amount available from this fund is \$100.00. General rules applying to the University loan funds are:

1. Applicant must have been in residence at the University of New Mexico for at least one semester.
2. Applicant must be receiving grades of "C" or better in subjects carried at time of application.
3. Applicants desiring loans from the student loan fund may be requested to have the signature of one substantial local citizen on the bank note.
4. In order for a student to be eligible to apply for a student loan, it will be necessary for him to have paid in full any previous loans which he has obtained.

Two other loan funds are available for small, short-term loans: the Mortar Board Loan Fund and the Khatali-Vigilante Loan Fund. These two funds are administered through the Personnel office.

Other loan funds available to students at the University are: The American Association of University Women's Loan Fund; Revolving Loan Fund of the Ancient, Free, and Accepted Masons of New Mexico; Educational Loan Fund of the Grand Commandery of Knights Templar of New Mexico; The McGaffey Memorial Loan Fund of the Albuquerque Rotary Club; The Women's Club Loan Fund; The Altrusa Club Loan Fund; The G. Perry Steen Memorial Student Loan Fund; and Zonta Club of Albuquerque.

#### VOCATIONAL REHABILITATION

(For the Physically Handicapped Civilian)

Through the New Mexico Vocational Rehabilitation Service which operates under the supervision of the State Board for Vocational Education, the State and Federal Government offers financial assistance for payment of tuition to those civilian students who have a physical disability. Other assistance may also be given to students who are financially unable to provide the service for themselves.

The following are some of the requirements for acceptance for service by the Program:

- (1) Have a permanent physical disability, whether congenital or as a result of an accident or a disease.
- (2) Be capable of carrying

a full college course and maintaining at least a "C" average. (3) Training in the course chosen must offer an opportunity for employment for the individual without being injurious to his health and must be within his physical capacities.

Both men and women are eligible for the service. Those with military service who have since acquired a physical disability, will be accepted only after their training under the Veterans Administration has expired.

The Rehabilitation Service is a part of our system of public education as are our grammar schools, high schools, colleges and universities. Those who can qualify, should apply for this service.

**HOW TO APPLY.** Those students having a disability who wish to apply should do so by writing or calling one of the New Mexico Rehabilitation Offices at 200 North Tenth Street in Albuquerque, New Mexico, or Room 36, Sena Plaza, P. O. Box 881, in Santa Fe, New Mexico. A counselor will call at the University and discuss the program in detail with those who have applied. Application must be made and case accepted before obligation for tuition has been made.

## AWARDS

Announcement of awards for scholarships, prizes, medals, and certificates are made by the President of the University after recommendations have been made to him by the Committee on Awards.

## SCHOLARSHIPS

In the fall of each year the University sponsors a series of tests for New Mexico high school junior and senior students. A large majority of the high schools in the state of New Mexico coöperate in this testing program.

Those students who rank sufficiently high on these tests, who have maintained a superior academic average during their high school courses, and who are able to demonstrate financial need will be eligible to request tuition scholarships. These scholarships are equal to the amount normally charged for tuition to resident students of New Mexico.

The number of full-tuition scholarships that can be granted to New Mexico students during any one year is limited by an act of the New Mexico State Legislature to 2% of the previous year's enrollment.

Those students who are eligible for tuition scholarships will be notified of this fact prior to their high school graduation and will be sent an application blank for scholarship aid. Since the number of New Mexico students needing financial aid is so great, those stu-



dents who do not actually need such aid are asked to refrain from requesting it.

In addition to the full-tuition scholarships, the Regents of the University have made available a number of partial-tuition scholarships for both residents of New Mexico and non-residents who show promise of high academic achievement, who possess good character, and whose need for financial aid can be demonstrated. Students who have been granted the partial-tuition scholarships shall in all cases be required to pay a minimum tuition fee of \$10.00 if residents of New Mexico and \$25.00 if non-residents. Tuition scholarships to out-of-state students are not granted until the applicant has been on the campus for at least one semester.

All of the above scholarships are granted for one semester only and are renewable upon request providing the student maintains a satisfactory academic average.

There are many other scholarships and prizes available to University of New Mexico students. Some of these are open to all students, others are for upperclassmen only, and some are for students who show special aptitudes. Requirements for many of the special awards and scholarships are specified by the donors.

Information as to all scholarships and awards available may be received either at the Personnel office, room 103, Administration Building, or from the chairman of the faculty Prizes and Awards Committee.

The University provides a limited number of scholarships in applied music. Applications for these scholarships should be made to the Head of the Music department.

For information on scholarships in Inter-American Affairs and in Pharmacy, see those respective sections of this catalog.

Scholarships and Fellowships for graduate students are also available. Application for these may be made to the Dean of the Graduate School.

Scholarships of \$100 or more are paid in two installments: one at the beginning of the first semester, and the other at the beginning of the second semester.

**THE ALBUQUERQUE CLASSROOM TEACHERS ASSOCIATION SCHOLARSHIP.** A scholarship of \$50 is awarded annually by the Albuquerque Classroom Teachers Association to a junior or senior in the College of Education who is preparing to teach in the elementary schools of New Mexico.

**THE AMERICAN ASSOCIATION OF UNIVERSITY WOMEN SCHOLARSHIP.** A scholarship of \$50 is granted by the Albuquerque Branch of the A.A.U.W. to promote advanced college training for women. It is given to a student who has earned at least 90 semester hours in this institution and who will enroll for a regular course the following year as a senior or as a graduate student. Selection is made on the basis of scholarship, of financial need, and of general ability as indicated by recommendations from professors.

**THE PHILO S. BENNETT SCHOLARSHIP.** The income from a trust fund of \$1,200 is awarded annually to a woman student, at the beginning of the second semester of her freshman year, who is most worthy, who has resided in New Mexico for at least the preceding four years, and who will continue as a resident student in the University.

**THE CLARENCE MILTON BOTTS, JR., MEMORIAL SCHOLARSHIP.** The income from a trust fund of \$5,000, given by Dr. W. R. Lovelace as a memorial to Lieutenant Colonel C. M. Botts, Jr., who was killed in action near Manila, Philippine Islands, May 15, 1945, is awarded each year to a premedical student of junior or senior rank who is outstanding in scholarship and who gives promise of being a good medical student.

**THE CARLSBAD DAILY CURRENT-ARGUS SCHOLARSHIP.** A scholarship of \$100 is granted to a man or woman student who is a journalism major and who has completed the sophomore year. Selection is made on the basis of scholarship, ability in journalism, and financial need.

**DAUGHTERS OF PENELOPE MEMORIAL SCHOLARSHIP.** An annual scholarship in the amount of \$50 established in memory of Mrs. Alexandria Carrigan and Mrs. Anastasia Ipiotes, to be awarded to a sophomore woman in the College of Education, who is a resident of New Mexico and who plans to teach in elementary or secondary schools. Good scholarship and need are determining factors.

**THE JAMES M. DOOLITTLE MEMORIAL SCHOLARSHIP.** The interest from a trust fund of \$1000 established by Mrs. J. M. Doolittle in memory of her husband, Mr. James M. Doolittle, is awarded each year to a student who has made a high scholastic average in a New Mexico high school, who enters the University of New Mexico as a freshman, and who is in need of financial assistance.

**THE FACULTY WOMEN'S CLUB SCHOLARSHIP.** Fifty dollars is awarded to a senior or junior woman on the basis of need and scholarship. This award is given the second semester of each academic year.

**THE LT. JOHN D. GAMBLE MEMORIAL LAW SCHOLARSHIP.** A scholarship of \$100 is awarded annually on the basis of ability, social awareness, and need, to a first or second year law student selected by the faculty of the College of Law. This scholarship has been established by Mrs. John D. Gamble, Santa Fe, in honor of her late husband, Lieutenant John D. Gamble, a New Mexico lawyer.

**THE ALFRED GRUNSFELD MEMORIAL SCHOLARSHIPS.** The income from a trust fund of \$5,000 provides two scholarships for men. These are awarded at the same time as the Miriam N. Grunsfeld Scholarships and are governed by the same general conditions.

**THE MIRIAM N. GRUNSFELD SCHOLARSHIPS.** The income from a \$5,000 trust fund provides two scholarships for women. The conditions governing the Grunsfeld Scholarships are as follows: (1) recipients must be legal residents of the State of New Mexico; (2) recipients must have been in full-time attendance at the University during their sophomore year; (3) recipients shall not have completed more than 66 semester hours by the end of the semester in which they are awarded the scholarships; (4) at least three of the four scholarships shall be awarded to students who declare at the time of application their intention to major in the Department of History or the Department of Government and Citizenship. A subsequent change in the major from either of these two departments to another department may terminate the award; (5) in selecting the recipients, consideration shall be given to their general scholarship and to their financial need.

**THE IVES MEMORIAL SCHOLARSHIPS.** These scholarships were established in memory of Mrs. Julia Louise Ives and Mrs. Helen Andre Ives. The income from a \$15,000 fund provides three scholarships for women students. Candidates must be residents of New Mexico, preferably living in Albuquerque, in good health, of good moral character, of high scholastic standing, and they must intend to teach. The scholarships are awarded by the President of the University in July of each year.

**KAPPA KAPPA GAMMA MEMORIAL SCHOLARSHIP.** A scholarship of \$150 is given each year by Kappa Kappa Gamma Fraternity to a woman student who has

earned a minimum of 30 semester hours at the University of New Mexico, who has creditable scholarship, and who has need of financial assistance.

**FREDERICK HERBERT KENT AND CHRISTINA KENT SCHOLARSHIPS.** Three scholarships are awarded annually to the high school students, residents of the state, who are deemed most worthy by the superintendent of the Albuquerque schools and by the University. They will be paid in two installments upon registration in each of the two terms of the freshman year, contingent upon enrollment for a full course of study and successful scholastic work.

**KHATALI SCHOLARSHIP.** In 1950, Khatali, Senior Men's Honor Society, awarded a scholarship of \$300 to a male student above freshman rank on the basis of need, campus leadership, and scholastic achievement.

**ROBERT W. KORBER MEMORIAL SCHOLARSHIP.** The Robert W. Korber Memorial Scholarship, an award of \$270 (\$30 per month for nine months) to be given to a worthy freshman who is a graduate of a New Mexico high school and who plans to specialize in physical education at the University. The selection will be made by three members of the staff in the Department of Physical Education for Men and the award will be repeated each year for four years, if the student selected maintains a satisfactory scholastic record.

**THE LAURA MACARTHUR MEMORIAL SCHOLARSHIP.** An annual scholarship of \$200 has been established by Mrs. George W. Savage as a memorial to her mother, Mrs. Laura MacArthur. The scholarship is awarded to a student who is a resident of New Mexico on the basis of need.

**NEWMAN CLUB SCHOLARSHIP.** An annual scholarship of \$50 established in the memory of Mrs. Eva Boegen is awarded to a regularly enrolled student who renders outstanding service to the Newman Club of the University of New Mexico during the academic year.

**THE CLYDE ODEN MEMORIAL SCHOLARSHIP.** A cash award of \$800 established by Louis Ruffin in honor of Mr. Clyde Oden is awarded to a young man who is a graduate of a New Mexico high school and who is entering the University of New Mexico as a freshman. \$100 is paid each semester to the recipient provided he maintains creditable scholarship and satisfactory campus standing.

**THE PHRATERES CLUB TUITION SCHOLARSHIP.** A cash award of thirty dollars is given to a sophomore member of Phrateres by the Phrateres Mothers' Club on the basis of the highest scholastic average for the first one and one-half years of course work. She must have carried a minimum schedule of 15 hours of study.

**THE RATON RANGE JOURNALISM AWARD FOR WOMEN, 1951-52.** A \$100 award for a woman journalism major of exceptional ability who shall have completed her sophomore year. Gift of Mr. Frank Pfeiffer, Publisher, the *Raton Range*.

**THE RHODES SCHOLARSHIPS.** The trustees of the will of Cecil Rhodes have modified the manner of selection of the Rhodes scholars to provide for a maximum of thirty-two scholars each year, each scholar to receive an honorarium of \$2,000 per year and to study two or three years in Oxford University, England.

Early in the fall semester, a committee of the faculty of the University nominates candidates to the state committee for selection. This committee selects two men to represent the state of New Mexico before the district committee, which, in turn, selects no more than four scholars to represent the six states which compose a district.

**THE SOROPTOMIST SCHOLARSHIP AWARD.** The Soroptomist Club of Albuquerque has established an annual scholarship of \$200 to be awarded to a woman student in the College of Law.

**SPUR SOPHOMORE SCHOLARSHIP.** Fifty dollars provided by Spur, sophomore women's honorary organization, is given to a woman student in the second semester of her freshman year. Selection is made on the basis of scholarship, leadership, and participation in campus activities.

**THE SCHOLARSHIPS OF THE 20-30 CLUB OF ALBUQUERQUE.** From two to four \$125 annual scholarships are financed by the Club to be awarded men students, graduates of a public, private, or parochial high school of Bernalillo County, who have completed their freshman year at the University and have maintained a high scholastic record and evidenced constructive interest in public affairs in the com-

munity, state, and nation. The awards are made on the recommendation of the faculty of the Government department.

**THE THOMAS M. WILKERSON MEMORIAL SCHOLARSHIP.** The income from a trust fund of \$5,000, established by Dr. W. R. Lovelace in honor of Major Thomas M. Wilkerson, who was killed January 29, 1946, while in the service of his country, is awarded each year to a junior or senior premedical student who is outstanding in scholarship and who gives promise of being a good medical student.

**THE ZONTA CLUB SCHOLARSHIP IN BUSINESS ADMINISTRATION.** The Zonta Club of Albuquerque, a service organization of women executives, has established an annual scholarship of \$200 to be awarded to a junior or senior woman in the College of Business Administration who is a resident of New Mexico; the award is made upon recommendation of the faculty of the College of Business Administration.

## PRIZES

**THE ALPHA DELTA PI PRIZE.** Twenty-five dollars is given by the Albuquerque Alumnae Club of Alpha Delta Pi to a sophomore woman, majoring in art, on the basis of need and ability.

**THE DOVE ASCH PRIZE.** Ten dollars is given to an upperclasswoman, with a major or minor in physical education, on the basis of general excellence among the students in that department.

**THE GEORGE E. BREECE PRIZE IN ENGINEERING.** A cash prize consisting of the income from a \$600 trust fund is awarded to a graduating senior in engineering, who is enrolled for a full time course of instruction, upon the basis of character, general ability, and excellence of scholastic record as shown during the last two consecutive years of residence in the University.

**THE CHI OMEGA PRIZE IN ECONOMICS.** Fifteen dollars is awarded each year to the regularly enrolled woman student (Chi Omega members excepted) who has done the best work in economics during the academic year. Selection is made on the basis of scholarship.

**THE CHARLES FLORUS COAN PRIZE.** The income from a trust fund donated by faculty and friends as a memorial to Charles Florus Coan, Ph.D., Professor of History and Political Science, is awarded annually, for excellence in scholarship, to a worthy student whose major field of study is history.

**THE MARIAN COONS PRIZE.** A memorial prize consisting of the interest from a \$750 trust fund is given each year to the regularly enrolled senior in the Department of Home Economics who is voted the most kind by her classmates and teachers in that department.

**THE HARRY L. DOUGHERTY MEMORIAL PRIZE IN ENGINEERING.** A cash prize consisting of the income from a trust fund contributed by colleagues, students, and friends, as a memorial to Mr. Harry L. Dougherty, Assistant Professor of Civil Engineering, is awarded each year to the student in the College of Engineering who has made the highest scholastic average in residence during his freshman and sophomore years while carrying a normal course of study.

**ENGLISH FACULTY POETRY AWARD.** In 1947, the Department of English established annual prizes in poetry to the amount of \$50. Poetry for this contest is not limited to any one type, except that the sonnet is excluded.

**THE CHARLES LEROY GIBSON MEMORIAL PRIZE.** The interest from a trust fund created by students and colleagues of Charles LeRoy Gibson, Ph.D., Associate Professor of Chemistry, is given to the senior student, major or minor in chemistry, who is judged most outstanding by the faculty of that department.

**THE H. J. HAGERMAN PRIZE.** An annual \$50 cash prize was established by the New Mexico Taxpayers Association in 1938. This is awarded to the regularly enrolled undergraduate student who presents the best original study in the field of taxation and public finance in New Mexico. The study should be submitted by December 1st to the faculty of the Department of Economics.

**THE TELFAIR HENDON, JR., MEMORIAL PRIZE.** The interest from a trust fund of \$500 established by John F. Hendon in memory of his brother, Mr. Telfair Hen-

don, Jr., Instructor in English, is given to the graduating senior who has achieved the highest scholastic record as a major in the Department of English.

**THE H. E. HENRY AWARD IN PHARMACY.** A pocket watch appropriately engraved is presented annually to a male student in the graduating class of the College of Pharmacy on the basis of scholarship, ability, and promise in the field of pharmacy.

**THE WILLIAM A. MCCARTHY PRIZE.** Twenty dollars is given for the best research paper on the history of New Mexico. This award is made on the recommendation of the Department of History.

**THE MERCK AWARD FOR EXCELLENCE IN PHARMACEUTICAL CHEMISTRY and THE MERCK AWARD FOR EXCELLENCE IN PHARMACOLOGY.** Each of these awards consists of a certificate and copies of *The Merck Manual* and *The Merck Index*.

**THE MARCELLA REIDY MULCAHY MEMORIAL PRIZE.** The Kappa Kappa Gamma Alumnae Association grants \$10 to the student who, in the opinion of a special committee appointed by the Head of the Department of English, has excelled in the composition of poetry.

**THE PHI KAPPA PHI PRIZES.** Two cash prizes of \$10 are awarded to the man and woman who, while carrying a full time course of study, rank highest in general scholarship for the freshman year.

**THE PHI KAPPA PHI SENIOR PRIZE.** Twenty dollars is given each year by the local chapter of Phi Kappa Phi to the graduating senior of any of the six colleges of the University who makes the highest scholastic record of his class.

**THE ROSE RUDIN ROOSA PRIZE.** The income from a \$1,000 trust fund is awarded each year to the upperclassman or graduate student in the Department of Government and Citizenship who has indicated in the opinion of his professors, the most positive interest in the development of good citizenship. A paper is required.

**THE GEORGE ST. CLAIR MEMORIAL PRIZE.** The interest from a trust fund established by colleagues, students and friends of George St. Clair, Professor of English, Department Head and Dean of the College of Fine Arts, is granted to the student who has made the greatest contribution in acting, stage design, lighting, or production in the Department of Dramatic Art.

**THE SIGMA ALPHA IOTA ALUMNAE PRIZE IN MUSIC.** An annual prize of \$50 provided by the alumnae of Sigma Alpha Iota, national music fraternity, is awarded to the student selected by the faculty of the Music Department on the basis of need, scholarship, and cooperation in the various activities of that department.

**THE KATHERINE MATHER SIMMS MEMORIAL PRIZE.** A cash prize as a memorial award is made each year to a regularly enrolled undergraduate, who has been in residence at least one semester preceding the time of the contest, on the basis of excellence in prose composition and on the quality of a competitive essay.

**SUMMER CREATIVE WRITING CONTEST.** In 1948, a \$25 prize for creative writing was established in the Summer Session by an anonymous donor. The award is given for the best manuscript in either poetry or prose submitted by a regularly enrolled undergraduate.

**THE THUNDERBIRD AWARD.** A sum of \$10, made possible by the original Katherine Mather Simms Endowment, is awarded each year for the outstanding article or poem dealing with Southwestern material which has been printed in *The Thunderbird*, student literary magazine of the University.

**THE LENNA M. TODD MEMORIAL PRIZE.** The interest from a trust fund of approximately \$2,000 is available annually to be awarded to the student or students doing the best work in creative writing in the Department of English. This endowment was created by the will of Dana Paul Todd, as a memorial to his mother, Mrs. Lenna M. Todd. Dana Todd, Class of '33, served in the United States Army in the Philippines and died in a Japanese prison camp at Osaka, on or about August 15, 1943.

### MEDALS AND CERTIFICATES

**ALPHA KAPPA PSI KEY.** Professional Business Administration fraternity scholarship key for the graduating senior man enrolled in the College of Business Administration with the highest total scholarship index for the last three years in residence at the University of New Mexico.

**DELTA SIGMA PI SCHOLARSHIP KEY.** This key is awarded annually by Delta Sigma Pi, national professional fraternity in business administration, to that male senior who upon graduation ranks highest in scholarship for the entire course in commerce and business administration.

**THE C. T. FRENCH MEDAL.** The medal is awarded to a graduating senior of the College of Arts and Sciences who has obtained, during his last two years of continuous residence, the highest general average for scholarship in a program of not less than 14 credit hours a semester.

**THE KAPPA PSI AWARD IN PHARMACY.** A certificate is awarded annually to the male student who has the highest scholastic average in the senior class of the College of Pharmacy. If the student is a member of Kappa Psi, a key is awarded in addition to the certificate.

**THE NEW MEXICO SECTION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS AWARD.** A certificate of merit with entrance dues paid for junior membership in the American Society of Civil Engineers, together with a membership badge, is given to a graduating student in civil engineering who excels in scholarship, holds membership in the student section of the engineering society, is active in student engineering organizations, and who, in the opinion of his professors, shows promise of becoming a successful engineer.

**THE PHI GAMMA NU SCHOLARSHIP KEY.** This key is awarded annually to the senior woman student, not necessarily a member of the fraternity, who upon completion of seven semesters of college work ranks highest for the entire course in Business Administration or Commercial Education. The award is made by the Dean of the College of Business Administration and the Dean of the College of Education.

**THE PHI SIGMA CERTIFICATES IN BIOLOGY.** Each year the National Society of Phi Sigma awards a certificate to a regularly enrolled undergraduate student and another certificate to a graduate student in the University of New Mexico for excellence in biology and promise of future achievement.

## GENERAL ACADEMIC REGULATIONS

### CLASS HOURS AND CREDIT HOURS

A CLASS HOUR consists of fifty minutes. One class hour a week of recitation or lecture, throughout a semester, earns a maximum of one credit hour. One class hour a week of laboratory, orchestra, chorus, or physical training, throughout a semester, earns from one-third to one-half credit hour. One half-hour individual lesson a week in applied music, throughout a semester, earns two credit hours.

### GRADES

The grades awarded in all courses are indicative of the quality of work done. Their significance is as follows:

A, Excellent. 3 grade points per credit hour.

B, Good. 2 grade points per credit hour.

C, Average. 1 grade point per credit hour.

D, Barely Passed. No grade points.

F, Failed. F is also given in any course which the student drops after the fourth week of a semester or second week of a summer session, while doing failing work.

I, Incomplete. The grade of I is given only when circumstances beyond the student's control have prevented his completing the work of a course within the official dates of a session. (See grade of PR.) The I automatically becomes an F if not removed (1) within the first twelve weeks of the next semester of residence, (2) within the next four semesters, if the student does not re-enroll in residence. The student may change the I to a passing grade by satisfactorily performing the work prescribed by the instructor. The student obtains from the office of his Dean a permit to remove the I, pays the \$2.00 fee, and takes the card to the instructor, who completes it and returns it to the office of the Dean. The Dean forwards this permit to the Office of Admissions and Records where official entry on the student's record is made.

W, Dropped Without Discredit. W is given in any course which the student drops after the fourth week of the semester or second week of the summer session, while doing passing work.

CR, Credit. CR is used to report satisfactory completion of a master's thesis or doctor's dissertation.

NC, No Credit. NC is used to report unsatisfactory completion of master's thesis or doctor's dissertation.

PR, Progress. This grade is used to indicate that a thesis, dissertation, or a graduate problem, is in progress but not complete. When the problem is complete, a regular grade is reported. When the thesis or dissertation is complete, CR or NC is reported.

The mark of NR, No Report, is used only in official grade reports to students and parents, to indicate that the instructor has not reported a grade.

**CHANGE IN GRADE.** No grade except I can be raised by a special examination. A grade of I can be changed to a passing grade in a manner to be determined in each case by the instructor concerned, with the approval of the Dean of the college. (See I above.)

Any other change in grade, after the grade is on record in the Office of Admissions and Records, may be made only after reasons for such change have been submitted in writing by the instructor concerned, and approved by the Committee on Entrance and Credits.

#### REPETITION OF COURSE

A student who repeats a course will receive the last grade earned in the course. Permission to repeat a course in which the student has already made a *passing* grade must be obtained from the Dean of the college in which the student is enrolled and from the Head of the department in which the course is offered.

When a student has repeated a course in which he has previously obtained a passing grade, credit for the earlier grade on his record will be placed in parentheses, and hours attempted and grade points earned by the earlier grade will not be counted in computation of the scholastic index. All hours of F, however, will be counted.

#### SCHOLARSHIP INDEX

A student's academic standing is referred to in terms of a scholarship index obtained by dividing his total number of grade points by the total number of hours attempted.\* Hours given a mark of W or I will be excluded in this computation, but hours of F will be counted. All honors and prizes depending upon scholarship are determined by ranking students according to this index.

#### GRADE REPORTS

At the end of the eighth week of the semester (mid-semester), and at the end of the semester, grades are reported, for all courses, to the Admissions and Records office.

Copies of semester grades are mailed to parents of undergraduate students, with the exception of married students and students over 21 years of age.

#### TRANSCRIPTS OF CREDITS

A student is entitled to one official transcript without charge at undergraduate and graduate level prior to graduation. He is entitled to a second transcript without charge after graduation. A student who has not requested a free transcript before graduation is entitled

\* Exclusive of hours in non-theoretical physical education and ensemble music.



to two transcripts without charge after graduation. After a student has secured the transcripts to which he is entitled without charge, additional transcripts, when requested singly, are charged for at the rate of \$1.00 each. When more than one transcript for which charge is to be made are requested at the same time, a charge of \$1.00 will be made for the first copy and 25¢ for each additional copy. No charge will be made for transcripts submitted to the New Mexico State Department of Education for teacher certification purposes. Transcripts of credits cannot be issued until all accounts with the University are settled.

If the student requires special statements to be made concerning his record, or if special forms are to be filled out, the transcript fee of \$1.00 will be charged for such service.

**SCHOLASTIC STATUS.** An undergraduate student has the status: "in good standing," "on probation," "General College," or "under suspension." The student "under suspension" may, with the approval of the college Dean, re-enroll on probation at the expiration of the suspension period. Students under suspension from the General College may re-enter the University only through the General College. The status "General College" means that the student is not eligible for enrollment in a regular college without release from the General College by the Dean.

**HONORABLE DISMISSAL.** The status "in good standing," "on probation," or "General College," entitles the student to honorable dismissal, and on transcripts no separate statement of honorable dismissal is necessary. Whether he completes a semester, or withdraws with permission before the end of the semester, a student is entitled to honorable dismissal provided that he has the necessary scholastic status, and is in good standing regarding conduct and financial obligations. Honorable dismissal implies that the University will permit the student to re-register in the next session.

#### WITHDRAWAL FROM THE UNIVERSITY

When an undergraduate student wishes to cancel his registration and withdraw from the University during the semester, he should secure a withdrawal card from the Personnel office; the graduate student should secure the withdrawal card from the Dean of the Graduate School. Grades of W or F are shown on the student's record if he withdraws from the University after the first four weeks of the semester or first two weeks of a summer session. When a student leaves the University during a semester and does not carry out his withdrawal according to this regulation, he becomes liable for a grade of F in all of his classes, even though he is passing his courses up to the time of leaving.

**CHANGES IN REGISTRATION**

**CHANGE IN PROGRAM OF STUDIES.** The student who desires to add a course to, or drop a course from, his program of studies, should obtain from his Dean a petition for change of program of studies. The student obtains signatures called for on this form and returns it to the office of his Dean. The Dean sends the form to the Office of Admissions and Records where official entry is made on the student's record. When a student drops a course officially after the first four weeks of the semester or the second week of the summer session, he will receive a grade of W or F according to his standing in the course at the time of withdrawal.

A student is responsible for the completion of every course for which he has registered; if he drops a course at any time without filing the official change of program form, he will receive a grade of F in the course. A fee of \$1.00 is charged for any change made in the student's program of studies after the end of the second week of the semester or after the end of the first week of the summer session.

**CHANGE IN COLLEGE.** A student who desires to change his registration from one college to another shall petition the Dean of his college. This petition requires approval of the Deans of both colleges and is then filed in the Office of Admissions and Records.

**CHANGE IN ADDRESS.** Each student is expected to keep the University authorities informed as to his address. Any change in address should be immediately reported to the Admissions and Records, Dean's, and Personnel offices.

**ADDITION OF CORRESPONDENCE OR EXTENSION COURSES TO PROGRAM.** A resident student may enroll for correspondence and extension courses only when the addition of such course does not cause the student's program to be in excess of the maximum load allowed and only after permission has been given by the Dean of his college.

**SCHOLARSHIP REGULATIONS**

The standing of all students (including those who withdraw from the University during the session) with respect to scholarship is checked at the end of each semester and summer session (or at the time of withdrawal). At such times, all students who are deficient in scholarship are placed on probation, or suspended, in accordance with the following regulations. A student placed on probation at any time will remain on probation until the next final examination period.

**PROBATION.** A student is placed on probation at the end of any semester or summer session when his scholarship index falls below 1.0 (in General College, 0.66).

**SUSPENSION.** A student whose name has appeared on a probation list at the end of any semester or summer session is subject to suspension at the end of his next semester or summer session if he has not qualified for removal from probation status by that time. A student who has been suspended is not eligible to re-apply for admission for a period of one calendar year from the date of suspension. The re-admission of a suspended student to the University after the expiration of the suspension period is contingent upon the approval of the Dean of the college to which he is seeking admission or re-admission. A student suspended from a four-year college may (upon petition approved by both college Deans) enter the General College only in case the total number of his grade points equals or exceeds two-thirds the total number of hours attempted\* and provided he has not received credit for more than 60 semester hours, exclusive of physical education.

A student who is suspended for poor scholarship, or who, after having been placed on probation, fails to re-register for the following semester, shall be considered as on probation upon his return to the University. The same regulation applies to a student who withdraws from the University while on probation, unless his withdrawal grades make him subject to suspension.

A Dean may require a student who is on probation at the time of registration to enroll for the minimum number of hours, and he may at any time require a student on probation to drop as many hours as seem to be in excess of the student's ability.

**SUSPENSION BY SCHOLARSHIP COMMITTEES OR DEANS.** Regulations on probation and suspension as described above apply only at the end of a semester or summer session. However, during the progress of any semester or summer session the Dean of a college may refer the case of a delinquent student to a college committee on scholarship; and such committee may recommend to the Dean probation or suspension from the University for such student.

Attention is called also to the possibility of suspension as a result of excessive absence. See attendance regulations, p. 75.

**ADDITIONAL COLLEGE REGULATIONS.** College of Education: It is the opinion of the faculty of the College of Education that candidates for the teaching profession should maintain at least an average scholarship record. Therefore, beginning with the junior year, a student will be recommended for suspension from the College of Education at the end of any semester or summer session when his scholarship index falls below 1.0.

General College: A student with not more than 60 credit hours of academic work, suspended from one of the four-year colleges on

\* Exclusive of hours in non-theoretical physical education and ensemble music.

the basis of scholarship, is permitted to enter the General College provided he has earned at least two-thirds as many points as the total number of hours he has attempted.\*

A student in the General College is placed on probation at the end of any semester or summer session when his scholarship index falls below 0.66.

A student whose name has appeared on the General College probation list at the end of any semester or summer session is subject to suspension at the end of his next semester or summer session if he has not qualified for removal from probation status by that time. Students suspended from the General College may re-enter the University only through the General College.

College of Business Administration: See Catalog section "College of Business Administration."

#### EXAMINATIONS

**REGULAR EXAMINATIONS.** Examinations in each course are held at the close of each semester, and at intervals during the semester at the discretion of the instructor. All students, including graduating seniors, are required to take semester final examinations, which are held according to a notice issued by the Schedule Committee.

**GRADUATE RECORD EXAMINATION.** See p. 77.

**NATIONAL TEACHERS EXAMINATION.** See p. 77.

**SPECIAL EXAMINATIONS.** A special examination is one taken at a time other than regularly with the class. Classified as special examinations are: examinations given to make up missed regular course examinations, examinations to validate or to establish credit, examinations to remove a grade of I, examinations for the removal of entrance deficiencies.

Entrance examinations for students deficient in entrance units, or for graduates of unaccredited or partially accredited high schools who must validate their unaccredited work, are given at the beginning of each semester to each student who desires to take them. These entrance examinations in the various high school subjects are not to be confused with the entrance tests which are required of all freshmen.

A fee is charged for all special academic examinations administered by the faculty; there is no charge for certain examinations administered by the University's Counseling and Testing Service. The latter include the University's entrance examinations, required placement and aptitude tests and the A.C.E.

Before the student is admitted to a special examination, he must present to the instructor a permit signed by the Dean of his college. The Director of Admissions issues permits for entrance examina-

\* Exclusive of hours in non-theoretical physical education and ensemble music.

tions. For those examinations where a fee is required, the permit must show the Comptroller's receipt of the fee.

**EXAMINATION FOR ADVANCED STANDING.** A student in residence in an undergraduate college shall have the privilege of passing a course in the University by special examination without attendance upon the course, and receive undergraduate credit therefrom, such privilege to be subject to the following restrictions:

1. He shall not have been previously registered in the course in any division of any college or university.

2. The applicant shall have a scholarship index of two or more in a normal program of studies completed during the last semester (or last two summer sessions) in residence, and he shall be doing superior work at the time of taking the examination.

3. The examination shall have the approval of the Dean of the college, the Head of the department, and the instructor concerned.

4. The applicant shall obtain from the Dean of his college a permit for the examination, and shall pay in advance the required fee of \$2.50 per credit hour.

5. The student shall obtain in the examination a grade not lower than C, and shall show a mastery of the course acceptable to an examining committee of three, appointed by the Dean, including the instructor and the Head of the department concerned.

6. Credits earned through advanced standing examinations do not apply to residence requirements.

**DISHONESTY IN EXAMINATIONS.** A student found guilty of dishonest practices in a quiz, test, examination, or other work will be subjected to disciplinary measures. Dismissal from the University will result in cases where the offense is flagrant.

#### ATTENDANCE

Students are expected to attend all meetings of the classes in which they are enrolled. No extensions of the vacation periods are given to any students, regardless of the location of their homes. Non-attendance at classes due to late registration is considered the same as absence incurred after registration.

Instructors will keep a record of class attendance, and will report all absences to the Dean of the college concerned. A student with excessive absences may be dropped from a course with the grade of F, by the Dean of the college, upon recommendation of the instructor. The Dean may suspend a student from the University, on the grounds of neglected duty, when he has thus been dropped from two courses.

Absences due to illness, field trips, athletic trips, etc., are to be reported by the student to the instructor and to the Personnel office. Such report does not relieve the student of responsibility for lost

work. It is the duty of the student to take the initiative in arranging with his instructors to make up work missed.

Students who are absent and unexcused from final examinations, or other closing exercises of the classes in which they are enrolled shall be given the grade of F. A grade of I may be given when there is a valid reason for absence from the examination.

### DEGREE REQUIREMENTS

The student may graduate under the catalog requirements for the year in which he registered in the University of New Mexico for the first time, provided he completes graduation requirements within a continuous six-year period. If a student interrupts his attendance, he must graduate under the catalog in effect at the time of his readmission.

For information concerning the various degrees offered, and for course and scholastic requirements leading to these degrees, students should refer to those sections of the catalog devoted to the colleges.

The student is solely responsible for knowing the rules and regulations concerning graduation requirements and for registering in the courses necessary to meet specifications for the degree.

**TWO UNDERGRADUATE DEGREES.** Two undergraduate degrees may not be granted a student until he has earned the equivalent of five years' college work (as represented by a minimum of 30 semester hours above the requirements for the first degree) and has fulfilled all requirements for both degrees. A transferring graduate should notify the Director of Admissions when applying for admission if he plans to work for a second undergraduate degree.

**SPECIFIC COURSES REQUIRED.** Four semester hours of required physical education shall be completed by all students in the University. Veterans, NROTC and Air ROTC students, and students over thirty years of age are exempted from the physical education requirement.

For specific requirements leading to degrees in the various curricula, students should refer to the courses of study outlined in the listings of the different colleges.

**DIVIDENDS AND PENALTIES.** For every 15 semester hours of A, or for every 30 semester hours of B, the hours required for graduation are reduced by one. The maximum of such dividends allowed is four. For every 15 semester hours of D, the hours required for graduation are increased by one. No dividends or penalties are given in the Colleges of Engineering and Pharmacy. Dividends and penalties are assessed only on work done in residence at the University of New Mexico.

**SENIOR RESIDENCE REQUIREMENTS.** Residence credit is defined as credit earned by attendance in regular classes on the University of New Mexico campus or in one of its field sessions. Credits earned through the Extension Division or by examination are not counted toward the residence requirement.

Students who have done less than 60 semester hours in residence previous to senior status (see "Classification of Students") shall earn 30 semester hours in residence in the senior year.

Students who have done 60 semester hours, but less than 90, in residence previous to senior status, shall earn 24 semester hours in residence in the senior year.

Students who have done 90 or more semester hours in residence previous to senior status shall earn 18 semester hours in residence in the senior year.

In no case is the number of hours specified to be earned in the senior year to be interpreted as necessarily the last hours.

Students may fulfill part or the whole of this residence requirement by summer session attendance.

**RESIDENCE REQUIREMENTS IN MAJOR AND MINOR.** At least one-half of the minimum number of credit hours required for major study and one-fourth of the minimum number of credit hours required for minor study must be class or laboratory work earned in residence in the University. When a senior transfer student plans to complete a major by presenting credit hours earned in residence at another institution, the departmental adviser may modify this ruling, not, however, below one-fourth of the total minimum hours required for the major.

**GRADUATE RECORD EXAMINATION.** All seniors (except those enrolled in the College of Education) are required to take the Graduate Record Examination during the last term of residence.

**NATIONAL TEACHERS EXAMINATION.** All seniors enrolled in the College of Education are required to take this examination during the last term of residence. The examination is given three times each year, once each semester and once during the summer session.

**EXTENSION AND CORRESPONDENCE HOURS ALLOWED TOWARD DEGREE.** As many as 40 semester hours in University extension and correspondence courses will be allowed toward the bachelor's degree provided that at least 10 of the 40 have been earned in extension courses taught by regular resident instructors of the University.

Credit will be allowed for extension and correspondence courses completed in institutions which are on the approved list of the National University Extension Association, of which the University is a member. Credit for extension and correspondence courses com-

pleted in institutions which are not on the approved list of the N. U. E. A. will not be allowed until the student has successfully passed a validating examination covering each course.

#### COMMENCEMENT

Normally, commencement exercises are held at the end of Semester II. Students who complete their requirements in an off-session receive their diplomas at the next regular commencement.

Students must participate in the commencement exercises at the time of receiving diplomas, unless excused by the Dean of the college concerned.

#### GRADUATION WITH HONORS

**THE DEGREE WITH DISTINCTION.** All senior students having scholarship indexes which rank them in the upper five percent of the graduating class of the University will be graduated "With Distinction." Ranking will be based upon all college and university work taken by the student. Transferred students must present a minimum of 45 credit hours earned at this institution in order to be eligible for this honor.

**THE DEGREE WITH HONORS (HONORS WORK).** The University faculty has created a Division of Honors Work under which the baccalaureate degree with honors may be earned. For details of the plan see "Division of Honors Work."

#### DIVISION OF HONORS WORK

The purpose of the Division of Honors is to afford abler and more ambitious students opportunity to pursue with a certain degree of independence a program of studies which will extend and intensify their knowledge of the field of their major or minor studies, develop their initiative and self-guidance, and further their critical and creative ability. This program may lead to the baccalaureate degree with honors.

**ELIGIBILITY.** Juniors and seniors in all undergraduate colleges will be permitted to undertake and to continue Honors work, when, upon the basis of their previous records, entrance tests, and university records, they show, in the judgment of the Committee on Honors Work, promise of fine scholarly achievement. There must be other promise than that indicated by an average of B or better.

**TYPES OF HONORS PROJECTS.** (HA), Reading for Honors. Projects which will extend Honors students' knowledge of their major, or minor or related fields, especially by filling up the interstices between their regular courses. Each semester's work should be terminated with an examination covering such work.

(HB), Research for Honors. Projects of the nature of intensive study designed to develop critical and creative ability, or in other



words, an undergraduate grade of research, extending through one semester or a whole academic year and terminating in a thesis.

PROCEDURE. Juniors should preferably undertake honors work projects of type HA, and seniors should preferably undertake honors projects of type HB. Projects should be organized to earn, normally, 1 to 3 credit hours per semester.

PRIVILEGES. (1) Seniors who are graduated with 9 semester hours of work in the Honors program will be designated as graduated "With Honors."

(2) Honors students will receive consideration if they find it necessary to make application to University agencies for financial aid.

(3) All students carrying Honors work are eligible for auditing privileges and may obtain Honors Audit Cards from the Dean's office.

(4) Students carrying Honors work are eligible for stack privileges at the Library.

*For further information on regulations and requirements for Degrees with Honors, consult the Chairman of the Committee on Honors Work.*

## COLLEGE OF ARTS AND SCIENCES

**T**HE COLLEGE of Arts and Sciences attempts to supply the cultural training which should underlie the more specialized work of the graduate, professional, or vocational school. The materials for this training are provided by the interests and achievements of man as they appear in his cultural records, his social institutions, and his investigation of natural laws.

### DEGREES

Upon the recommendation of the faculty and the President of the University, the degree of Bachelor of Arts is conferred by the Regents upon those candidates who have completed all specified requirements. Candidates who complete the requirements with majors in dietetics, mathematics, or the sciences will receive the degree of Bachelor of Science, unless special request is made for the Bachelor of Arts degree. For information on the degree of Bachelor of Science in Naval Science, consult the Dean of the College.

### RELATION TO PROFESSIONAL AND VOCATIONAL COURSES

The Bachelor of Arts and the Bachelor of Science degrees of the College of Arts and Sciences are based upon cultural, rather than professional or vocational courses. The courses preparatory to law, medicine, and the other professions are planned and taught as cultural subjects and do not infringe upon the work of the professional school. Concerning the limited acceptance of work in business administration, education, engineering, law, medicine, pharmacy, and fine arts, see Electives and Special Curricula.

### GRADUATION REQUIREMENTS

Candidates for the degree of Bachelor of Arts or Bachelor of Science are required to complete a total of 124 semester hours in academic subjects, and 4 semester hours in physical education. In the first two years, or Lower Division, the student is expected to acquire certain basic essentials and to explore several different fields to determine where his interests lie. In the last two years, or Upper Division, the student devotes himself to his major and minor, and to such other subjects as he may wish to take. *The student is solely responsible for completing all requirements for graduation.*

### LOWER DIVISION REQUIREMENTS

1. At least 60 semester hours in courses acceptable toward graduation, in addition to 4 semester hours in physical education.
2. A one-point index for the total number of hours which the student has attempted.\*

\* Exclusive of hours of non-theoretical physical education and ensemble music.

3. The completion of group requirements as described below.  
4. Successful conclusion of a proficiency examination in English. (Failure to pass this test requires the student to report to the English Workshop for English remedial help.)

5. In all subjects except foreign language, students in the Lower Division are restricted to courses numbered below 100 with the provision that a student may be admitted to Upper Division courses at the discretion of the Dean of the College: (1) if he has completed within 7 hours of the group requirements; of which not more than one hour shall be in physical education, nor more than 6 hours in foreign language; (2) if he has completed not less than 45 credit hours, exclusive of physical education, earning at least a one-point index for all hours which he has attempted; and (3) if the remaining requirements appear upon his program.

6. Students in the Lower Division may not carry more than 8 hours in one department during one semester. (Exceptions may be made in the case of premedical students.)

7. Not more than 50 hours in courses open to freshmen may be taken without a penalty of 1 hour for every 3 excessive hours.

8. Exceptions to any of these rules may be made only upon recommendation of the Dean.

#### UPPER DIVISION REQUIREMENTS

1. Completion of at least 40 hours in courses numbered above 100 with at least a one-point average in all such hours carried.

2. Completion of at least one major and one minor, or two majors.

3. Grade-points equal to the total number of hours which the student has attempted.\*

#### GROUP REQUIREMENTS

In keeping with the exploratory aim of the Lower Division, the student distributes part of the work of his first two years among the four following groups of subjects. The acceptability of transferred work toward fulfilling the group requirements lies in the judgment of the Director of Admissions and the Dean of the College.

I. **ENGLISH.** Six semester hours must be earned in English 1, 2, (unless English 1 has been waived), and 3 additional credit hours must be earned in a course in literature numbered above 50. Failure to pass the sophomore English proficiency test at first trial will result in the student's being required to report to the English Workshop for English remedial help.

II. **FOREIGN LANGUAGE.** A student who has been admitted with no credit in a foreign language, or who begins a language in which he has done no work in high school is required to complete four semesters or twelve credit hours in one foreign language.

\* Exclusive of hours of non-theoretical physical education and ensemble music.

Students presenting high school language credits and wishing to enter courses above the elementary level should consult the Head of the department.

III. SOCIAL SCIENCES. Nine semester hours (not more than 6 from one department) must be completed in approved† courses in the departments of Anthropology, Economics, History, Government, Philosophy, Sociology, or Geography.

IV. MATHEMATICS AND SCIENCES. Eleven semester hours (not more than 8 from one department, and including 2 semesters in courses that require laboratory work) must be completed in approved† courses in the Departments of Biology, Chemistry, Geology, Home Economics, Mathematics, Physics, Psychology, or Geography.

#### MAJOR AND MINOR STUDIES

A student admitted to the Upper Division shall declare a major and a minor subject, and his program of studies thereafter shall meet with the approval of the head of the major department.

Only work of at least C quality is accepted toward the major and the minor; courses in which grades of D are earned may be accepted as electives toward graduation.

#### ELECTIVES

A student who has fulfilled all other requirements for graduation may use electives to complete his total of 124 hours for graduation, subject to the following restrictions:

A maximum of 24 hours in any combination, earned in courses offered in the Colleges of Business Administration, Engineering, Education,\* Fine Arts,\*\* and Pharmacy, or in Naval Science is acceptable as electives in the College of Arts and Sciences, with the following exceptions:

- (1) All theory and method courses in physical education.
- (2) All courses in education in methods, supervision, and practice teaching, exclusive of high school methods (3 hours) and high school practice teaching.
- (3) In excess of 4 hours in ensemble music.
- (4) In excess of 3 hours of shop work.

A major in dietetics leading to the degree of Bachelor of Science may be given in special cases upon approval of the Dean of the College.

The normal program for a student intending to graduate in

† For approved courses, see Departments of Instruction.

\* Except in the case of a Home Economics major, when a maximum of 34 hours will be accepted.

\*\* Except in the case of an Art major, when a maximum of 32 hours will be accepted.

four years is 16 hours a semester. Seventeen hours, plus one semester hour of physical education is the maximum, except by petition to the Dean, who may, at his discretion, grant up to 19 hours (including non-credit courses). Ordinarily, a petition for excessive hours will not be considered unless the student has in the preceding semester made a grade of B in more than half of his hours, and no grade below C.

#### NORMAL FRESHMAN PROGRAM

Following is the standard freshman program; necessary deviations from it should be made only after consultation with a faculty adviser.

First Semester		Second Semester	
†English 1	3	English 2	3
Foreign Language	3	Foreign Language	3
Social Science	2-3	Social Science	2-3
Natural Science or Mathematics	4-3 <sup>1</sup>	Natural Science or Mathematics	4-3
Physical Education	1	Physical Education	1
Additional group requirements	4	Additional group requirements	4
<sup>a</sup> Naval Science	3	<sup>a</sup> Naval Science	3

† If the student fails to pass the placement test, English 1W is required.

<sup>a</sup> Naval Science may be substituted for one subject as prescribed by the Dean.

#### PRE-PROFESSIONAL AND OTHER CURRICULA

Students are cautioned against assuming that four-year college courses always prepare for professional work. At least one year of specialized graduate work is advisable, even if not actually required.

**COMBINED CURRICULUM IN ENGINEERING AND ARTS AND SCIENCES.** Degrees in both the College of Arts and Sciences and the College of Engineering may be obtained by following a five-year curriculum, to be outlined in each case, jointly, by the Deans of the two colleges. Any student interested in this curriculum should confer with the Deans before the end of the sophomore year. For students interested in careers in countries to the south of the United States, attention is called to a major in Inter-American Affairs along with engineering.

**SENIOR YEAR IN MEDICINE OR LAW.** A candidate for the bachelor's degree may offer, in lieu of the last thirty hours at the University of New Mexico, the full first year's work (satisfactorily passed and properly certified) in an approved school of law or medicine requiring three years for entrance; provided: (1) that the first three years of work (94 semester hours and 4 P. E.) shall have been taken in residence at the University of New Mexico unless the student attends the Law College of the University of New Mexico in which case the 94 hours of residence is reduced to the last 30 hours of Arts and Sciences work (exclusive of P.E.) before entering the Law College; (2) that, before entrance into the professional school, the candidate shall have completed all specific and group requirements, and major and minor requirements, in accordance with University regulations;

(3) that at least 75 per cent of the hours completed before entrance into the professional school shall have been of C grade or better, and that the total of grade-points shall at least equal the total number of hours which the student has attempted.

**CURRICULUM PREPARATORY TO FORESTRY.** Openings in the field of forestry have greatly diminished in recent years. Only students with special talents and high scholastic average should undertake such preparation. Information regarding it may be obtained from the Department of Biology.

**FOR CURRICULA RELATING TO INTER-AMERICAN AFFAIRS** see p. 88.

**FOR STUDENTS WHO PLAN TO STUDY LAW.** See "College of Law."

**CURRICULUM PREPARATORY TO MEDICAL TECHNOLOGY.** Besides regular requirements and prerequisites, a three-year curriculum has been arranged. Candidates are urged to complete a major in either biology or chemistry. A year's work in more technical subjects and a year of practical hospital experience are also required for the professional degree. For more detailed information, students should consult the Department of Biology.

**CURRICULUM PREPARATORY TO MEDICINE.** Because of the variable requirements it is not possible to formulate for the student a program extending much beyond the first two years. However, the student normally should major in Biology, Chemistry, or Physics. Beyond the two-year program outlined below, the student is required to take a year of Organic Chemistry and either or both Embryology and Comparative Anatomy.

The *minimum* of college hours required for admission to medical schools approved by the Association of American Medical Colleges and by the Council on Education of the American Medical Association is 60 semester hours in a college of arts and sciences. However, due to the very large number of applications for admission to medical schools in recent years, it is now almost impossible for a student to be admitted without having a bachelor's degree.

Since admission requirements vary, the premedical student should familiarize himself with the requirements of the particular schools to which he is making application.

At the University of New Mexico the curriculum for the first two years for these students is as follows:

First Year	Second Year	
English 1, 2	3-3 English, and Psychology 51	3-3
French or German	3-3 French or German	3-3
Chemistry 1L, 2L	4-4 Social Science, Chemistry 53L	3-5
Biology 1L, 2L	4-4 Biology 71L and 121L	4-5
Math. 15, 16	3-2 Physics 11L, 12L	4-4
Physical Education	1-1 Physical Education	1-1

## N.R.O.T.C. CURRICULUM

First Year		Second Year	
English	3-3	English	3
Foreign Language	3-3	Physics	4-4
Social Science	3-3	Foreign Language	3-3
Mathematics 15, 16	3-2	Naval Science *	3-3
Naval Science *	3-3	Social Science	3
Elective	2-3	Electives	6

\* Laboratory periods at 11 o'clock Tuesday and Thursday must also be reserved on student's schedule.

**PREPROFESSIONAL CURRICULUM FOR SOCIAL WORK**

The undergraduate program in social work at the University of New Mexico is planned to meet two needs: (1) to recruit personnel which could be immediately useful to a social work agency after a planned undergraduate curriculum; (2) to provide a reservoir of potentially able students who will enroll in graduate schools of social work as a progression from their undergraduate curriculum or as students returning later from practice to complete their professional training.

**REQUIREMENTS FOR DEGREE**

Candidates for the Bachelor of Arts degree must fulfill lower division requirements of the College of Arts and Sciences. The basic curriculum is designed to provide a broad background in the social, economic, and governmental fields. The student should consult the Director of the Program in order that his individual needs may be met. Those who plan to work in New Mexico, for example, should have Spanish as a foreign language. In the natural sciences, biology has a special contribution to make to the field.

In addition to Introduction to Social Science, the combined major and minor includes the following:

**I. SOCIAL WORK:**

Government 170	Social Welfare: Org. and Adm.	(3)
Sociology 151, 152	Introduction to Social Service	(3, 3)
Sociology 197	Field Observation and Participation	(3)

**II. 24 HOURS ELECTED from the following courses in Sociology and one or more additional fields:**

Government 51, 52	American Govt. & Pol.: Nat'l & State	(3, 3)
Government 121	Public Administration	(3)
Economics 51	Introduction to Economics	(3)
Economics 103	Consumer Economics	(3)
Economics 140	Economic Security	(3)
Economics 141	Labor Problems	(3)
Psychology 51	General Psychology	(3)
Psychology 60	Personality and Adjustment	(3)
Psychology 101	Social Psychology	(3)
Psychology 103	Abnormal Psychology	(3)
Psychology 131	Psychological and Educational Tests	(3)
Psychology 187	Child Psychology	(3)
Sociology 51	The Family	(3)
Sociology 72	Social Pathology	(3)
Sociology 82	Urban and Rural Sociology	(3)

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Sociology 110	Juvenile Delinquency	(2)
Sociology 154	Race and Culture Relations	(3)
Sociology 195	Population Problems	(3)

- III. **ELECTIVES:** Electives may be chosen to round out a student's interest. Courses in English, history, anthropology, biology, child development or foods courses in home economics, statistics or accounting are recommended.

### SCHOOL OF INTER-AMERICAN AFFAIRS

The University of New Mexico enjoys an exceptionally favorable position for the study of inter-American and regional economic and cultural problems. Nowhere else does one find the three chief ethnic elements of the Americas—Indian, Hispanic, and Anglo-Saxon—living together in large numbers with a common national allegiance, and maintaining their traditional cultures. About half the population of the state speak Spanish as a native language, and a good many of the problems presented by our Southwestern region are closely integrated with those of inter-American relations. Because of geographic proximity and common human and scientific interests, New Mexico has maintained close bonds with our good neighbor, Mexico, who has provided us with a solid introduction to Latin America.

For these reasons, the University of New Mexico has, for a number of years, devoted particular attention to Latin-American and Southwestern studies. A special appropriation of the State Legislature made possible the expansion of this work and the establishment of the School of Inter-American Affairs in the fall of 1941.\*

The School is a coördinating administrating unit operating under the College of Arts and Sciences and the Graduate School.

The offerings in the field of Inter-American Affairs have been coördinated and developed into the degree of B.A. in Inter-American Affairs, with emphasis on three aspects: Historical and Cultural; Business Administration; and Social, Economic, and Political. The choice of one of these directions should be made in the sophomore year, so that in consultation with the Director of the School the electives may be applied according to the plans of the student. (For Master of Arts in Inter-American Affairs, see p. 92.)

Though Portuguese is not made a required study in the various curricula in Inter-American Affairs, the School urges its students to elect it and to equip themselves with at least a reading knowledge of the language. The School also strongly recommends that students aiming at a preparation for a business career intensify their studies in Economics and Business Administration.

\* A *Brochure on Inter-American Affairs* adequately explaining the nature and scope of this field of study, its importance, and the opportunities opened to its graduates, etc., will be sent free of charge upon request to the Director of the School.



## SCHOLARSHIPS

**ALL UNIVERSITY LATIN-AMERICAN SCHOLARSHIPS.** In the academic year 1951-52, the University of New Mexico is offering two scholarships covering tuition and room and board, and four covering tuition only, to qualified graduate and undergraduate students from any Latin-American countries who are planning to pursue studies in any of the departments of the University. These scholarships have been established by the Regents and are administered jointly by the University and the Institute of International Education. Information may be obtained from the Director of the School of Inter-American Affairs. *All applications must be received not later than June first.*

**SCHOLARSHIPS IN INTER-AMERICAN AFFAIRS.** The School of Inter-American Affairs is offering in the academic year of 1951-52 six tuition scholarships in the general course leading to a B.A. in Inter-American Affairs. These scholarships are open to well-qualified graduates of high schools of the state of New Mexico who deserve financial assistance and who are planning to enter the University as freshmen. It also offers three tuition scholarships to undergraduates above the freshman level or graduate students from New Mexico or outside the state. For application forms and further information address the Director of the School. *All applications must be received not later than June first.*

## GENERAL CURRICULUM IN INTER-AMERICAN AFFAIRS

The curriculum leading to a B.A. with a major field of concentration in Inter-American Affairs has been designed to provide a general basic training in fundamental subjects and at the same time a wide choice of supplementary courses to meet individual needs and preferences.

The emphasis of this major field of concentration is on language study and on the social sciences with particular attention to the Hispanic countries. Proficiency in Spanish will be a basic requirement since students are expected to use the language as a tool in the various courses of Hispanic content given in other departments.

Attention is also called to the fact that this is not a departmental major, but a *major regional field of concentration*, integrating the studies of Hispanic content and allied subjects offered by the various departments.

Because of its comprehensive and integrated concentration in the field of Inter-American Affairs, this major permits no minors in the departmental sense, nor can a minor be taken in Inter-American Affairs. However, credits equivalent to minors and even majors can be earned through electives in instructional departments. For

this purpose students may choose in their sophomore year fields of interest. Thus, besides the general preparation in Inter-American Affairs, they may obtain added proficiency in other lines of study.

### INTER-AMERICAN CURRICULA

#### 1. College of Arts and Sciences Group Requirements:

A. NATURAL SCIENCE AND MATHEMATICS. 11 hours, no more than 8 in one department, and must include two courses with laboratory. SEE RECOMMENDED COURSES (below).

B. HUMANITIES AND SOCIAL SCIENCES. 9 hours English (1, 2 and 3 credits in literature course numbered above 50), and 9 hours (no more than 6 from one department) in Anthropology, Economics, Government, Sociology, and History or Philosophy courses. This part of the requirement is met by I-AA Gateway Courses. (Below.)

C. FOREIGN LANGUAGE. Maximum of 12 credits, met by Inter-American Language Requirement. (Below.)

#### 2. Gateway Courses\* in Inter-American Affairs

Prerequisite to the Basic Upper Division Courses and to be taken in the freshman and sophomore years.

	<i>Hours</i>
History 1, 2. <i>Western Civilization</i> .....	6
or	
Social Science 1, 2. <i>Introduction</i> .....	6
and	
History 11, 12: <i>The Americas</i> .....	6
† <i>Introduction to Latin America</i> . (Anthropology, Economics, Government, or Sociology 73) .....	3
Total .....	15

#### 3. Recommended Freshman, Sophomore Year Elective Courses

According to individual needs and interests the student should elect from the following courses: (A minimum of 15 hours will be available for electives in the first two years.)

##### A. SOCIAL SCIENCES.

Anthropology 1, 2. *General* .....

\* For fuller description of the courses see Departments of Instruction.

† The land and the people: geographic background and cultural landscape. An intensive survey of the social, political, and economic institutions of the Latin-American States. An understanding of the differences between Latin and Anglo-Saxon America, and a basis for a satisfactory relationship are sought through the study of the principal factors which contribute to the development of Latin America's social, economic, and political life and of the basic issues of today, such as land distribution, public health, popular education, formation of the middle class, economic nationalism, standard of living, labor conditions, the chances of democracy, and the problems of foreign influences. Emphasis will be given to the relations between the United States and Latin America. Bibliography and sources of information.

	<i>Hours</i>
Anthropology 71. <i>Survey</i> .....	2
Economics 51, 52. <i>Introduction</i> .....	6
Economics 63. <i>Resources</i> .....	3
Government 51. <i>American Government and Politics</i> .....	3
Sociology 82. <i>Urban and Rural</i> .....	3

## B. HUMANITIES.

English 77. <i>Southwestern Literature</i> . (Meets the College's requirement for 3 hours of literature.).....	3
History 51, 52. <i>United States</i> .....	6
Philosophy 1, 2. <i>Humanities</i> .....	3, 3
Philosophy 56. <i>Logic</i> .....	3
Portuguese 1, 2. <i>Elementary</i> .....	6
Portuguese 51, 52. <i>Intermediate</i> .....	6

## C. NATURAL SCIENCES AND MATHEMATICS.

Biology 48. <i>Heredity</i> .....	2
Mathematics 14. <i>Introduction</i> .....	3
Psychology 1, 2. <i>General</i> .....	6

or

Psychology 51. <i>General</i> .....	3
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## D. FINE ARTS.

Art 57. <i>Crafts</i> (Southwestern and Latin-American Emphasis) ...	2
Music 93. <i>Folk Music of the Southwest</i> .....	2

## 4. Basic Upper Division Courses

Of the following listed courses, Geography 101, 102, and History 161, 162 are required, while 12 hours additional will be elected, according to need and interest, from the other courses noted. This makes a total requirement of 24 hours from this group of courses.

## A. SOCIAL SCIENCES.

Anthropology 105. <i>American Indian: North America</i> .....	3
Anthropology 106. <i>American Indian: South America</i> .....	3
Anthropology 150. <i>Methods in Cultural Anthropology</i> .....	3
Anthropology 182. <i>Ethnology of Middle America and the Caribbean</i> .....	3
Anthropology 184. <i>Archaeology of Mexico, Central America and the West Indies</i> .....	3
Anthropology 186. <i>American Archaeology: South America</i> .....	3
Economics 119. <i>Principles of Foreign Trade</i> .....	3
Economics 121. <i>Economics and Trade of Latin America</i> .....	3
Economics 154. <i>Comparative Economic Systems</i> .....	3
Economics 160. <i>Economic Theory</i> .....	3

	<i>Hours</i>
Economics 161. <i>History of Economic Thought</i> .....	3
Geography 101. <i>South America. General Physical and Cultural Geography of South America</i> .....	3
Geography 102. <i>Middle America: Mexico, Central America, and the Caribbean</i> .....	3
Government 141. <i>International Relations</i> .....	3
Government 151. <i>American Diplomacy</i> .....	3
Government 155. <i>Governments of Latin America</i> .....	3
Sociology 107. <i>Man and Society in Latin America</i> .....	3
Sociology 111. <i>Social Problems of Latin America</i> .....	3
Sociology 154. <i>Race and Culture Relations</i> .....	3
Sociology 166. <i>Methods</i> .....	3
Sociology 167F. <i>Field Session</i> .....	4

#### B. HUMANITIES.

History 141. <i>International Relations</i> . (same as Government 141)	3
History 151. <i>American Diplomacy</i> . (same as Government 151) ..	3
History 161, 162. <i>Latin America</i> .....	6
History 163. <i>The A. B. C. Powers in Recent Times</i> .....	3
History 165, 166. <i>Spain</i> .....	4
History 167. <i>History and Civilization of Portugal</i> .....	3
History 168. <i>Mexico and the Caribbean</i> .....	3
History 191, 192. <i>The Southwest</i> .....	6
Philosophy 123. <i>Hispanic Thought</i> .....	2
Portuguese 157. <i>Survey of Brazilian Literature</i> .....	3
Spanish 145. <i>Hispanic Civilization</i> .....	2
Spanish 146. <i>Ibero-American Civilization</i> .....	2

#### C. NATURAL SCIENCE.

Biology 105. <i>*Ethnobiology of the New World</i> .....	3
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#### D. FINE ARTS.

Art 131. <i>Pre-Cortesian Art</i> .....	2
Art 142. <i>Spanish Colonial Art</i> .....	2
Art 192. <i>Contemporary Mexican Painters</i> .....	2

#### E. SPANISH.

The required courses in third and fourth year Spanish are:

Spanish 91, 92. <i>Introduction to Spanish Literature</i> .....	6
Spanish 101, 102. <i>Advanced Composition and Conversation</i> ....	6

The following courses are recommended for study in the junior and senior years:

\* The prerequisite of 4 hours of Biology is waived for majors in Inter-American Affairs. This course can be applied toward the College's Group IV requirements in Mathematics and Science.

	Hours
Spanish 157, 158. <i>Survey of Spanish-American Literature</i> .....	6
Spanish 95. <i>Spanish Business Letter Writing</i> .....	2
Spanish 96. <i>Commercial and Industrial Language Practice in Hispanic Countries</i> .....	2
Spanish 163. <i>Mexican Literature</i> .....	2
Spanish 164. <i>The Literatures of Argentina, Uruguay, and Chile</i>	2

## COMPUTATION OF CREDITS (124 plus 4 P.E. required for graduation)

1. COLLEGE OF ARTS AND SCIENCES GROUP REQUIREMENTS	
Group I: English	9 hrs.
Group II. Foreign Language	12 hrs.
Group III. "Social Sciences" (including Humanities) met by Gateway Course Requirements	9 hrs.
Group IV. Mathematics and Natural Science	11 hrs.
Total	41 hrs.
2. GATEWAY COURSES BEYOND GROUP III (requirements above).	6 hrs.
3. BASIC UPPER DIVISION REQUIRED COURSES.	12 hrs.
4. MINIMUM ELECTIVES: LOWER (15 HRS.) AND UPPER (32 HRS.) DIVISIONS.	47 hrs.
5. SPANISH REQUIREMENTS (MAXIMUM ADDITIONAL TO A & S COLLEGE GROUP II REQUIREMENTS [ABOVE])	*18 hrs.
Total	124 hrs.

## SAMPLE CURRICULUM

FRESHMAN YEAR	
First Semester	Second Semester
English 1	English 2
Mathematics—Natural Science	Mathematics—Natural Science
Spanish I	Spanish 2
Social Science I	Social Science 2
History 11	History 12
Physical Education	Physical Education
16-17	16-17
SOPHOMORE YEAR	
Introduction to Latin America	Spanish 52
Science	Science
Spanish 51	Electives
English Literature	Physical Education
Electives	
Physical Education	
17-18	17-18

\*The School's requirement is 30 hours of Spanish for students with no background in Spanish on entering. Passing qualifying examinations will enable students to take more advanced Spanish courses or to increase the number of elective courses.

JUNIOR YEAR			
Spanish 91	3	Spanish 92	3
History 161	3	History 162	3
Geography 101	3	Geography 102	3
Basic Upper Division Electives	4	Basic Upper Division Electives	4
Free Electives	3-4	Free Electives	3-4
<hr/>		<hr/>	
16-17		16-17	
SENIOR YEAR			
Spanish 157	3	Spanish 158	3
Spanish 101	3	Spanish 102	3
Government 155	3	Basic Upper Division Electives	
Basic Upper Division Electives		(See pp. 89-91)	3
(See pp. 89-91)	3	Free Electives	7-8
Free Electives	4-5		
<hr/>		<hr/>	
16-17		16-17	

NOTES: (1) This program is flexible on account of the imponderable element of the previous preparation in Spanish the student may bring. In cases where the students have had Spanish in high school, the number of available electives will thereby increase. (2) The sequence outlined need not necessarily be followed literally. (3) In the case of transfer students from other institutions offering advanced standing, reasonable allowance is made for substitutions of some of the lower division courses, either required or recommended.

#### SUMMER SESSION

For other courses which may be credited to the Gateway, Basic, or Supplementary Groups in this major, and which are offered occasionally in the summer, please consult the Summer Session Bulletin under the section "School of Inter-American Affairs."

For advanced standing admission to this major, sample program of electives, Spanish in relation to electives, and other information consult the Director of the School.

#### MASTER'S DEGREE IN INTER-AMERICAN AFFAIRS

Facilities for graduate work in the field of Inter-American Affairs leading to the degree of Master of Arts have been provided through inter-departmental committees within the Graduate School which will approve and supervise programs of study correlating the various subjects offered by the departments. The individual needs of students and preferences for certain lines of specialization will be taken into consideration.

Students will be admitted to graduate study in Inter-American Affairs with (a) the degree of Bachelor of Arts with a major in Inter-American Affairs from the University of New Mexico, or its equivalent from another institution; or (b) the degree of Bachelor of Arts with a minimum of 12 semester hours of advanced work in Latin-American studies. A reading and oral knowledge of Spanish must be accredited before receiving the degree.

For further information see the Graduate School Bulletin.

**EXTRA-CURRICULAR ACTIVITIES OF THE SCHOOL**

The School operates a research Bureau on Latin America and Cultural Relations in the Southwest in coöperation with the Department of Sociology; organizes a series of public lectures on Hispanic Affairs in which members of the faculty and outside speakers participate; sponsors conferences and exhibits; maintains close relationship with the Spanish-speaking groups in the state; coöperates in various projects with other University units and organizations outside the University; and directs a program of publications under the title *Inter-Americana Series*.

**COLLEGE OF ARTS AND SCIENCES  
DEPARTMENTS OF INSTRUCTION**

Courses numbering: from 1-49, lower division, normally open to freshmen; from 50-99, lower division, normally open to sophomores; from 100-199, upper division, normally open to juniors, seniors, and graduates; 200-400, open to graduates only. Graduate credit for courses listed is allowed at the discretion of the Graduate Committee.

Symbols used in course descriptions: L—part of the course is laboratory work; F—course is given during field session; SS—course offered in eight weeks' summer session only; Yr—course offered throughout two semesters and credit for a single semester's work is suspended until the entire course is completed; ( )—Semester hours' credit; credit hours separated by a dash (1-3) indicates variable credit in the course; [ ]—former course number or title.

A schedule of course offerings, including hours of meeting, is issued at the opening of each session. The University reserves the right to cancel any listed course or to make a substitution in instructors when necessary.

**ANTHROPOLOGY**

Professors Hill (Head), Spier; Associate Professors Ellis, Hibben, Newman, Reiter; Graduate Assistants Enger, Luebben, Naylor, Sloane.

**GROUP REQUIREMENTS**

Courses in this Department count toward Social Sciences (Group III).

**MAJOR STUDY**

Anthropology 1, 2, 193 and 28 more semester hours in courses numbered from 100 through 199 within the Department. Recommended preparatory courses: Biology 1L and 2L, History 1 and 2, Geology 1 and 2, Psychology 1L and 2L. Anthropology courses offered are divided into five major divisions: archaeology, ethnology, linguistics, topical and technical. A student must concentrate in one of the first three, and must take a minimum of 12 hours in that division. Six hours must be taken in each of the two other major divisions, and 3 hours in each of the remaining two divisions. Three

semester hours of field courses may be applied toward the fulfillment of the appropriate division of concentration. Upper division courses from other departments, chosen with the approval of the Head of this Department, are acceptable as electives toward a major in Anthropology.

#### MINOR STUDY

14 hours in addition to Anthropology 1 and 2, at least six hours to be taken in courses numbered above 100.

1. GENERAL ANTHROPOLOGY: ORIGIN AND ANTIQUITY OF MAN. (3)  
Hibben, Reiter
2. GENERAL ANTHROPOLOGY: DEVELOPMENT OF CULTURE. (3)  
Hill, Newman, Reiter
8. SURVEY OF SOUTHWESTERN ANTHROPOLOGY. (3)  
A non-technical course not credited toward the major or minor in Anthropology. Ellis
71. SURVEY OF ANTHROPOLOGY. (2)  
The sub-divisions of anthropology. Not open to students who have credit in Anthropology 1 and 2. Reiter
73. INTRODUCTION TO LATIN AMERICA. (3)  
(Same as Economics 73, Government 73, and Sociology 73.) For description see p. 88.
97. INTRODUCTION TO CLASSICAL ARCHAEOLOGY. (3)  
The cultural beginnings of Greece and Rome with special reference to the importance of classical backgrounds in modern culture. Hibben
99. COMPARATIVE SOCIAL STRUCTURE. (3)  
Newman

General prerequisite (except for 102): Anthropology 1 and 2 or equivalent.

#### *Archaeology:*

112. EUROPEAN PREHISTORY. (3)  
Early European cultures. Human development as shown in physical and cultural remains. Hibben
155. SOUTHWESTERN ARCHAEOLOGY: MOGOLLON AND HOHOKAM. (3) Ellis
156. SOUTHWESTERN ARCHAEOLOGY: PUEBLO AREA. (3)  
Prerequisite: 155. Ellis
162. ARCHAEOLOGY OF THE OLD WORLD. (3)  
Prehistory of Africa, Asia, Oceania. Hibben
184. ARCHAEOLOGY OF MEXICO, CENTRAL AMERICA, AND THE WEST INDIES. (3)  
Hibben
185. AMERICAN ARCHAEOLOGY: NORTH AMERICA. (3)  
This course excludes the Southwest and Mexico from consideration. Hibben
186. AMERICAN ARCHAEOLOGY: SOUTH AMERICA. (3)  
Reiter

#### *Ethnology:*

105. THE AMERICAN INDIAN: NORTH AMERICA. (3) Hill
106. THE AMERICAN INDIAN: SOUTH AMERICA. (3) Newman
119. RACES AND CULTURES OF EUROPE AND ASIA. (3) Reiter
136. ETHNOGRAPHY OF AFRICA. (3) Spier
140. ANALYSIS OF CULTURE AREAS: WESTERN NORTH AMERICA. (3)  
Restricted to California, Basin and Plateau culture areas. Spier
142. ANALYSIS OF CULTURE AREAS: PLAINS. (3) Spier
147. OCEANIA. (3) Hill



157. SOUTHWESTERN ETHNOLOGY: NON-PUEBLO PEOPLES. (3) Ellis  
 158. SOUTHWESTERN ETHNOLOGY: PUEBLO PEOPLES. (3) Ellis  
 182. ETHNOLOGY OF MIDDLE AMERICA AND THE CARIBBEAN. (3) Newman

*Linguistics:*

113. LINGUISTIC FIELD METHODS. (3) No prerequisites. Newman  
 117. PHONETICS AND PHONEMICS. (3) No prerequisites. Newman  
 118. STRUCTURAL ANALYSIS. (3)  
 A continuation of 117. The course deals with grammatical structures in the same way that 117 concerns itself with phonemic systems. Prerequisite: 113 or 117. Newman  
 146. NATIVE LANGUAGES OF AMERICA. (3)  
 Prerequisite: 113 or 117. Newman  
 154. THE NATURE OF LANGUAGE. (3) Newman

*Technical:*

- 103L. DENDROCHRONOLOGY. (3)  
 The science of tree ring studies applied to archaeological problems. Prerequisite: permission of the instructor. 1 lecture, 4 hrs. lab. Hawley  
 107L. PHYSICAL ANTHROPOLOGY: OSTEOLOGY. (3)  
 2 lectures, 2 hrs. lab. Reiter  
 108L. PHYSICAL ANTHROPOLOGY: SOMATOLOGY. (3)  
 Racial variation and constitution: 2 lectures, 2 hrs. lab. Reiter  
 109. SOUTHWESTERN POTTERY. (2)  
 Prehistoric development of ceramic art. Prerequisite: 155 or 156. Ellis  
 144L. MATERIAL CULTURE ANALYSIS. (3)  
 Methods of analyzing archaeological, non-ceramic material traits. 1 lecture, 4 hrs. lab. Reiter  
 174L. PROBLEMS IN ADVANCED DENDROCHRONOLOGY. (2)  
 Prerequisite: 103L. 1 lecture, 2 hrs. lab. Ellis

*Topical:*

101. THE INDIVIDUAL IN HIS SOCIETY. (3)  
 A comparative study of the cultures (form and process) and their relationship to the individual culture carrier. The possibility of application of anthropological principles to problems of foreign peoples, minority groups, and primitive tribes. Hawley  
 102. PERSPECTIVES OF ANTHROPOLOGY. (3)  
 Essential concepts of the nature of culture and of racial relationship. No prerequisites. Spier  
 150. METHODS IN CULTURAL ANTHROPOLOGY. (3)  
 Methods used in the collection and ordering of anthropological data for historical, scientific, and administrative problems. Ellis  
 152. PRIMITIVE LITERATURE. (3) Newman  
 193. HISTORY OF ANTHROPOLOGY. (2) Hill, Reiter  
 198. PRIMITIVE RELIGION. (3) Hill

*Field Courses:*

- 75F. GENERAL FIELD SESSION. (2-6)  
 Introductory summer field course in archaeology or ethnology. Staff  
 76F. SECONDARY FIELD SESSION. (2-6)  
 Field course in archaeology or ethnology. Prerequisite: 75F. Staff  
 175F. ADVANCED SUMMER FIELD SESSION. (2-6)  
 For upper division and graduate students. Staff  
 199F. FIELD RESEARCH. (2-6)  
 Field Course. Prerequisite: permission of staff. Staff

*Graduate Courses:*

205. PRO-SEMINAR: INTRODUCTION TO RESEARCH. (2)  
Required of all graduate students. Hill
208. PROCESSES OF CULTURE CHANGE. (2) Spier
209. PRESENTATION OF FIELD RESEARCH. (2) Reiter
212. SEMINAR: ETHNOLOGY. (2) Hill
- 251-252. PROBLEMS. (2, 2)  
No more than 4 hours may be taken towards the M.A., nor more than 8 hours towards the Ph.D. degree.  
Ellis, Hibben, Hill, Newman, Reiter, Spier
257. SEMINAR: EARLY MAN IN THE NEW WORLD. (2) Hibben
260. METHODS OF COMPARATIVE LINGUISTICS. (2) Newman
261. TYPES OF LINGUISTIC STRUCTURE. (2) Newman
282. SEMINAR: AMERICAN ARCHAEOLOGY. (2) Reiter
294. SEMINAR: SOUTHWESTERN ARCHAEOLOGY AND ETHNOLOGY. (2) Ellis
300. THESIS. (6) Ellis, Hibben, Hill, Newman, Reiter, Spier
400. DISSERTATION. (Credit arranged.) Ellis, Hibben, Hill, Newman, Reiter, Spier

**ART**

(A department of the College of Fine Arts.)

**MAJOR STUDY IN ARTS AND SCIENCES**

The 32 hour Art major may be taken in one of three fields of specialization:

Group I (Painting and Design), Group II (Crafts), Group III (Art History).

Of these 32 hours at least 12 must be in courses numbered over 100. Those specializing in Group I or II take the following:

- 8 hours chosen from Art 3, 4, 5, 6, 7, or 8.
- 8 hours Group III including Art 81 or 82.
- 16 hours additional in the field of specialization.

Those specializing in Group III take the following:

- 8 hours consisting of Art 3, 4, 5, 6.
- 6 hours of Group I or II.
- 18 hours additional of Group III courses including Art 81 and 82.

(For description of Art course offerings, see College of Fine Arts.)

If a student majors in Art in the College of Arts and Sciences, he may not count toward graduation any other hours taken outside this college.

**MINOR STUDY IN ARTS AND SCIENCES**

20 hours in a field of particular interest, such as Commercial Art, Sculpture, Painting, Photography, etc. The student shall satisfy the following requirements: (1) prerequisite courses shall be taken; (2) the advice of an Art adviser, to be appointed by the Art department, shall be obtained and the advised program approved by the

major department Head; (3) at least 6 hours to be taken in courses numbered above 100.

### BIOLOGY

Professors Castetter (Head), Koster; Consulting Professor Langham; Associate Professors Dittmer, Hoff, Johnson; Assistant Professors Fleck, Humm; Instructor Jones-Burdick; Teaching Assistants Coburn, Parrino; Graduate Assistants Armstrong, Donohoe, McKinley, Roeder, Rominger, Viquesney.

### GROUP REQUIREMENTS

Courses in this Department count toward Science and Mathematics (Group IV).

### MAJOR STUDY

Biology 1L, 2L, 71L, 72L, 109, 109L, 130L, and 8 additional hours, 4 of which must be in courses numbered above 100. Courses 6, 36, 39L, 41, 48, and 126L are not accepted toward a major. One year of chemistry is required of biology majors.

Students desiring to concentrate in some special field of biology such as bacteriology, ecology, or physiology, should consult the Head of the Department early in their college careers.

### MINOR STUDY

Biology 1L and 2L and 12 additional hours. 6 and 126L are not acceptable toward the minor.

### NOTE

Credit will not be allowed for both 36-39L and 130L; or for both 48 and 109.

### CURRICULA PREPARATORY TO FORESTRY, MEDICAL TECHNOLOGY; OR MEDICINE

See "College of Arts and Sciences."

#### 1L. GENERAL BIOLOGY. (4) Yr.

An introduction to the fundamental structures, functions, and principles of higher plants and animals with emphasis on the unity, rather than on the diversity, of phenomena. Credit suspended until 2L is completed. 3 lectures, 3 hrs. lab. Koster, Dittmer, Fleck

#### 2L. GENERAL BIOLOGY. (4)

A continuation of 1L. Survey of the plant and animal kingdoms; heredity, environmental relations, and evolution. Prerequisite: 1L. 3 lectures, 3 hrs. lab. Koster, Dittmer, Fleck

#### 6. INTRODUCTION TO THE BIOLOGICAL SCIENCES. (3)

An elementary survey of the world of living things. Includes brief studies of both plant and animal life, digestion, respiration, circulation, excretion, reproduction, communicable and functional diseases, heredity and evolution. Emphasis on the human body. (Not offered 1951-52). Fleck

#### 12L. GENERAL ZOOLOGY. (4)

The fundamental structures and functions of the vertebrates, and a review of the animal kingdom. Open to majors in P. E. and Home Economics only. 3 lectures, 3 hrs. lab. Jones-Burdick

#### 36. HUMAN ANATOMY AND PHYSIOLOGY. (3)

The structure and functions of the human body. Lectures emphasize physiology. May be taken with, or independently of, 39L. Fleck

- 39L. HUMAN ANATOMY AND PHYSIOLOGY LABORATORY. (2)  
Laboratory work in elementary anatomy and physiology with emphasis on anatomy. Cannot be taken independently of Biology 36. Staff
41. SURVEY OF NEW MEXICO PLANT LIFE. (2) SS  
Lectures, demonstrations and field trips. Dittmer
48. HUMAN HEREDITY. [Heredity] (2)  
A cultural survey of the field of inheritance. Dittmer
- 71L. INVERTEBRATE ZOOLOGY. (4)  
A comparative study of the structure, habits, and classification of the invertebrates. Prerequisites: 1L and 2L. 2 lectures, 4 hrs. lab. Hoff, Jones-Burdick
- 72L. COMPARATIVE PLANT MORPHOLOGY. (4)  
A comparative study of the four great groups of the plant kingdom. Prerequisites: 1L and 2L. 2 lectures, 4 hrs. lab. Dittmer and Assistant
- 93L. GENERAL BACTERIOLOGY. (4)  
Biology and significance of bacteria and other microorganisms. Fundamental principles governing the bacteriology of water, sewage, milk, food, and sanitation. Prerequisites: 1L and 2L, Chemistry 1L and 2L. 2 lectures, 4 hrs. lab. Johnson and Assistant
- 96L. ORNITHOLOGY. (4)  
Identification and habits of birds. Early morning field trips required. 3 lectures, 3 hrs. lab. (Offered in alternate years.) Koster
105. ETHNOBIOLOGY OF THE NEW WORLD. (3)  
The aboriginal picture of the utilization of plants and animals of the New World. Emphasis on the Southwest. Prerequisite: 4 hrs. of biology. Castetter
109. GENETICS. (3)  
The scientific, cultural, and philosophical aspects of inheritance. Prerequisites: 1L and 2L. Fleck
- 109L. GENETICS LABORATORY. (1)  
Cannot be taken independently of 109. Optional for other than biology majors. 2 hrs. lab. Fleck
110. EVOLUTION. (3)  
History of the principle and theories of evolution. Prerequisite: 109. Koster
- 112L. COMPARATIVE EMBRYOLOGY OF THE VERTEBRATES. (4)  
Prerequisites: 1L, 2L, and 71L. 2 lectures, 6 hrs. lab. Koster
- 114L. GENERAL ENTOMOLOGY. (4)  
Structures, habits, and classification of the insects. Prerequisites: 1L and 2L. 2 lectures, 4 hrs. lab. Hoff
- 121L. COMPARATIVE VERTEBRATE ANATOMY. (5)  
Prerequisites: 1L, 2L, and 71L. 2 lectures, 6 hrs. lab. Hoff, Jones-Burdick
- 123L. BIOLOGICAL CHEMISTRY. [Biochemistry] (4)  
[Chem.121L]An introductory course dealing with the chemistry of biological compounds and their transformation in plants and animals. Prerequisite: Chemistry 102L or 104L. 3 lectures, 3 hrs. lab. Johnson
- 126L. PHYSIOLOGY OF EXERCISE. (3)  
A study of physiological processes and their relation to exercise. Prerequisite: 12L. Open to P. E. majors only. 2 lectures, 3 hrs. lab. Fleck
- 130L. GENERAL ANIMAL PHYSIOLOGY AND ANATOMY. (4)  
The functions and structures of the animal body with emphasis on the mammals. Prerequisites: 1L and 2L, Chemistry 1L and 2L. 3 lectures, 3 hrs. lab. Fleck and Assistants
- 143L. GENERAL CELLULAR PHYSIOLOGY. (4)  
A study of the more important fundamental concepts leading to an understanding of cellular metabolism and synthesis. Prerequisites: 130L and Chemistry 42L or 102L. 2 lectures, 4 hrs. lab. Humm

- 144L. GENERAL PHYSIOLOGY OF ORGANS. (4)  
The role of animal and plant organs on a comparative basis, with especial reference to muscular contraction, excretion, secretion, nervous transmission and digestion. Prerequisites: 130L and Chemistry 42L or 102L. 2 lectures, 4 hrs. lab. Humm
- 153L. SANITARY BACTERIOLOGY. (4)  
Microorganisms of milk, dairy products, and other foods, and their relation to spoilage and sanitation. Techniques and significance of the standard methods of bacteriological procedures for water and sewage. Prerequisite: 93L. 2 lectures, 4 hrs. lab. (Offered in alternate years; alternates with 155L.) Johnson
- 154L. PATHOGENIC BACTERIOLOGY. (4)  
The properties and characteristics of disease-producing bacteria and their relationship to disease. Prerequisite: 93L. 2 lectures, 4 hrs. lab. (Offered in alternate years; alternates with 156L.) Johnson
- 155L. SYSTEMATIC AND DETERMINATIVE BACTERIOLOGY. (3)  
A history of bacterial classification and rules of nomenclature. The laboratory isolation, identification, and classification of bacteria. Prerequisite: 93L. 1 lecture, 4 hrs. lab. (Offered in alternate years; alternates with 153L.) Johnson
- 156L. IMMUNITY AND SEROLOGICAL METHODS. (4)  
The use of antigen-antibody reactions in disease diagnosis and in the identification of bacteria. Prerequisites: 93L and Chemistry 42L or 102L. 2 lectures, 4 hrs. lab. (Offered in alternate years; alternates with 154L.) Johnson
158. DYNAMICS OF BIOCHEMISTRY. (3)  
Selected topics in physiological biochemistry including considerations of the quantitative enzymatic interconversion and synthesis of organic matter in the cell. Prerequisites: 123L and 130L. Johnson, Humm
- 163L. FLORA OF NEW MEXICO. (4)  
Prerequisites: 1L and 2L. 2 lectures, 4 hrs. lab. Dittmer
- 171L. TERRESTRIAL ECOLOGY AND GEOGRAPHY. (4)  
Animals and plants in relation to the environment; a study of biotic communities; problems of plant and animal distribution. Field trips. Prerequisites: 1L and 2L. 3 lectures, 3 hrs. lab. Hoff
- 174L. PLANT ANATOMY. (4)  
Structure of vascular plants. Prerequisites: 1L, 2L, and 72L. 2 lectures, 4 hrs. lab. (Offered in alternate years; alternates with 176L.) Dittmer
- 176L. MYCOLOGY AND PLANT PATHOLOGY. (4)  
A taxonomic study of the fungi, with some consideration of the causative factors and economic aspects of plant diseases. Prerequisites: 1L, 2L, and 72L. 2 lectures, 4 hrs. lab. (Offered in alternate years; alternates with 174L.) Dittmer
- 183L. ANIMAL PARASITOLOGY. (3)  
A consideration of animal parasites with special reference to life cycles and classification; some attention given to the preparation of parasites for study. Prerequisite: 71L. 2 lectures, 3 hrs. lab. Hoff
- 184L. LIMNOLOGY. (3)  
A study of fresh-water habitats; aquatic invertebrates with special reference to problems of productivity. Field trips. Prerequisite: 71L. 2 lectures, 3 hrs. lab. (Offered in alternate years.) Hoff, Koster
- 185L. GENERAL VERTEBRATE ZOOLOGY. (4)  
Natural history, classification, behavior, ecology, and speciation of the vertebrates exclusive of the birds. Prerequisites: 1L and 2L. 3 lectures, 3 hrs. lab. Koster
- 187L. ICTHYOLOGY. (4)  
Classification, phylogeny, natural history and literature of fishes. All-

- day field trips required. Prerequisite: 185L. 3 lectures, 3 hrs. lab.  
(Offered in alternate years.) Koster
- 189L. MAMMALOGY. (4)  
Classification, phylogeny, natural history and literature of mammals.  
All-day field trips and one or more over-night field trips required.  
Prerequisite: 185L. 3 lectures, 3 hrs. lab. (Offered in alternate years.)  
Koster
- 190L. HISTOLOGY AND MICROTECHNIQUE. (3)  
The preparation for microscopic examination of plant and animal  
structures, tissues; and cells. Additional emphasis on topics of special  
interest to individual students. Prerequisites: 1L and 2L and consent  
of head of department. 1 lecture, 4 hrs. lab. Hoff, Jones-Burdick
201. SEMINAR: CURRENT TOPICS IN BIOLOGY. (2) Graduate Staff
203. RESEARCH TECHNIQUES. (2)  
Intended to acquaint the student with the basic techniques used in  
exploring biological literature, in planning experiments, and in  
making and recording observations. (Offered in alternate years.)  
Koster
- 204L. INDUSTRIAL MICROBIOLOGY. (3)  
The role of microorganisms in industrial fermentations. Prerequisites:  
8 hrs. of bacteriology, and Biology 123L. 1 lecture, 6 hrs. lab. (Offered  
in alternate years.) Johnson
- 205L. EXPERIMENTAL EMBRYOLOGY. (4)  
A consideration of the recent advances in embryology from the point  
of view of the experimental alteration of normal development. Pre-  
requisites: 112L and 130L. 2 lectures, 6 hrs. lab. (Offered in alternate  
years.) Humm
225. FUNDAMENTAL CONCEPTS OF BIOLOGY. (3)  
Trend of scientific thought and method from earliest times to the  
present. Origin and history of important biological principles.  
Castetter
251. PROBLEMS. (2-3) Graduate Staff
252. PHYLOGENY OF THE PLANT KINGDOM. (2)  
Evolutionary trends with emphasis on the vascular plants. Dittmer
254. PRINCIPLES OF ECONOMIC VERTEBRATE ZOOLOGY. (3)  
The biotic effect of human settlement upon the vertebrates. Principles  
underlying management and control. (Offered in alternate years.)  
Koster
300. THESIS. (6) Graduate Staff
400. DISSERTATION. (Credit arranged) Graduate Staff

## BUSINESS ADMINISTRATION

Not a department. (See College of Business Administration.)  
No major offered in the College of Arts and Sciences.

### MINOR STUDY

Majors in Economics must have the permission of the Economics  
department Head to minor in Business Administration.

Economics 52 and 111, Mathematics 42, Business Administration  
5, and 6 additional hours chosen from the following Business  
Administration courses: 6, 106, 108, 110, 131, 134, and 143. (For  
Business Administration course offerings, see College of Business  
Administration.)

**CHEMISTRY**

Professors Riebsomer (Head), Smith; Consulting Professor Spence; Associate Professors Castle, Martin, Steffens; Assistant Professors Daub, Kahn, Suttle; Instructors Gibson, Searcy; Graduate Assistants Bentley, Bronaugh, Drumhiller, Purlee, Spano, Strickland, Williams, Zeltmann.

The program of the Department of Chemistry conforms to the standards prescribed by the American Chemical Society.

**GROUP REQUIREMENTS**

Courses in this Department count toward Science and Mathematics (Group IV).

**MAJOR STUDY**

For the degree of Bachelor of Arts: Chemistry 1L, 2L, 53L, 101L, 102L, and at least 8 additional hours selected from courses numbered above 100.

For the degree of Bachelor of Science: Chemistry 1L, 4L, 53L, 103L, 104L, 111L, 112L, 152L, 181, 182, and at least 6 additional hours selected from courses numbered above 100. The program must also include 12 hours of German.

**MINOR STUDY**

21 hours in Chemistry, including Chemistry 1L, 2L, 53L, and either 101L-102L or 111L-112L. Chemistry 41L does not count toward the minor.

**1L. GENERAL CHEMISTRY. (4) Yr.**

Introduction to the chemical and physical behavior of matter. Credit suspended until 2L or 4L is completed. 3 lectures, 3 hrs. lab. Staff

**2L. GENERAL CHEMISTRY. (4)**

Continuation of 1L and including qualitative analysis. 3 lectures, 3 hrs. lab. Staff

**4L. GENERAL CHEMISTRY AND QUALITATIVE ANALYSIS. (5)**

Continuation of 1L, with special emphasis on qualitative analysis. 3 lectures, 6 hrs. lab. Staff

**41L. ELEMENTS OF GENERAL CHEMISTRY. (5)**

A one-semester course in general chemistry. The lectures of this course and Chemistry 42L may be elected separately by those wishing a restricted course in chemistry. 4 lectures, 3 hrs. lab. Searcy

**42L. ELEMENTS OF ORGANIC CHEMISTRY. (5)**

A brief course in organic chemistry. Prerequisite: 41L or 2L. 4 lectures, 3 hrs. lab. Searcy

**53L. QUANTITATIVE ANALYSIS. (5)**

Theory and techniques of volumetric and gravimetric analysis. Prerequisites: 1L and either 2L or 4L. 2 lectures, 9 hrs. lab. Martin

**64L. ELEMENTS OF PHYSIOLOGICAL CHEMISTRY. (4)**

An introduction to the chemistry of food, nutrition and animal metabolism. Prerequisites: 41L and 42L or their equivalents. 3 lectures, 3 hrs. lab. Searcy

**70. GLASSBLOWING. (2)**

Laboratory practice in glass manipulation and in the construction and

- repair of laboratory apparatus. Prerequisite: sophomore or higher standing. 6 hrs. lab. Steffens
- 101L-102L. ORGANIC CHEMISTRY. (4, 4)  
The chemistry of the compounds of carbon. Prerequisites: 1L and either 2L or 4L. 3 lectures, 3 hrs. lab. Daub, Riebsomer
- 103L-104L. ORGANIC CHEMISTRY. (5, 5)  
A more extensive course than the above. Prerequisites: 1L and either 2L or 4L. 3 lectures, 6 hrs. lab. Daub, Riebsomer
- 105L. QUALITATIVE ORGANIC ANALYSIS. (3)  
Identification of carbon compounds through the characteristic reactions of functional groups. Prerequisite: 102L or 104L. 1 lecture, 6 hrs. lab. Daub
- 106L. ORGANIC PREPARATIONS. (2-4)  
The synthesis of organic compounds utilizing the usual preparative reactions such as Grignard, Friedel-Crafts, etc. Prerequisites: 102L or 104L, and permission of the instructor. 6 to 12 hrs. lab. Castle, Daub
107. THE CHEMISTRY OF THE ALKALOIDS. (2)  
A study of the chemistry involved in the isolation, proof of structure, and synthesis of typical representatives of the different classes of alkaloids. Prerequisite: 102L or 104L. Castle
- 108L. PHYSICAL CHEMISTRY. (3)  
A short descriptive course in physical chemistry, primarily for pre-medical students. Includes the behavior of gases and solutions, the use of indicators and pH, colloids, etc. Not acceptable for chemistry majors or minors. Prerequisites: 53L and Physics 12L or 52L. 2 lectures, 3 hrs. lab. Kahn, Steffens
110. THE CHEMISTRY OF HETEROCYCLIC COMPOUNDS. (3)  
A study of the chemical properties and synthesis of representative members of the various classes of heterocyclic compounds. Prerequisite: 102L or 104L. Castle
- 111L-112L. PHYSICAL CHEMISTRY. (4, 4)  
Chemical theory; the gaseous, liquid, and solid states; theory of solutions; chemical and physical equilibria; chemical thermodynamics; electromotive force. Prerequisites for 111L: 53L, and Mathematics 53, Physics 51L; pre- or corequisites: Physics 52L, Mathematics 54. Prerequisite for Chemistry, 112L: 111L; pre- or corequisite, Mathematics 55. Kahn, Steffens
115. STRUCTURE OF MATTER. (3)  
Molecular structure and the fine structure of solids. The nature of chemical bonding. Chemical consequences of structure. Prerequisites: 53L, and 102L or 104L. Smith
116. COLLOID CHEMISTRY. (3)  
Theoretical and descriptive treatment of the principal types of colloids. Prerequisites: 102L or 104L, 111L. Steffens
131. INORGANIC CHEMISTRY. (3)  
A systematic survey of the chemical behaviors of the elements and their inorganic compounds. Prerequisite: 102L or 104L. Suttle
- 136L. INORGANIC PREPARATIONS. (2)  
Synthesis and purification of typical inorganic compounds. Prerequisite: 102L or 104L. 6 hrs. lab. Suttle
- 152L. SPECIAL METHODS IN QUANTITATIVE ANALYSIS. (4)  
Theory and practice in electrolytic, electrometric, and colorimetric analytical methods. Prerequisites: 53L, 111L. 2 lectures, 6 hrs. lab. Martin
- 153L. QUANTITATIVE ORGANIC ANALYSIS. (3)  
Quantitative determination of carbon and hydrogen; Dumas nitrogen; exceptional cases of Kjeldahl nitrogen; Carius halogen; and sulfur.



- Some semimicro techniques will be used. Prerequisite: 53L or equivalent. 1 lecture, 6 hrs. lab. Martin
- 154L. INSTRUMENTAL ANALYSIS. (3)  
Application of instrumental methods to chemical analysis, including colorimetry, spectrophotometry, polarography, and electrometric measurement. Prerequisites: 53L, 111L, and 112L. 1 lecture, 6 hrs. lab. Martin
- 171-172. ADVANCED PHYSICAL CHEMISTRY. (3, 3)  
An advanced course in physical chemistry, including the thermodynamics and kinetics of chemical reactions and their relationships to the structure of chemical substances. Prerequisites: 111L and 112L with grades of C or better. Kahn, Steffens
- 181-182. SEMINAR. (1, 1)  
Exposition and discussion of current topics in chemistry. Staff
- 197-198. UNDERGRADUATE PROBLEMS. (2-5 each semester) Staff
204. THEORETICAL ORGANIC CHEMISTRY. (3) ✓  
The more important theories of organic chemistry. Prerequisites: 105L, 111L, and 112L. Daub
208. ADVANCED TOPICS IN ORGANIC CHEMISTRY. (3) ✓  
Prerequisite: 102L or 104L. Riebsomer
211. CHEMICAL THERMODYNAMICS. (3) *Phyp*  
Prerequisites: 111L and 112L. Kahn, Steffens
213. RADIOCHEMISTRY. (3) "  
Elementary nuclear theory. Radiations and their interactions with matter. Detection of radiation. Prerequisites: 112L and 115. Kahn
- 214L. RADIOCHEMICAL TECHNIQUES. (4) "  
The preparation of radioactive samples. The construction and use of detecting devices. Tracer techniques and their applications. 2 lectures, 6 hrs. lab. Kahn
232. ADVANCED TOPICS IN INORGANIC CHEMISTRY. (3) ✓  
Prerequisites: 111L and 131. Suttle
234. ADVANCED TOPICS IN ANALYTICAL CHEMISTRY. (3) Martin
300. THESIS. (6) Graduate Staff
400. DISSERTATION. (Credit arranged) Graduate Staff

## CLASSICS

See Modern and Classical Languages.

## ECONOMICS

Professor Duncan (Head); Associate Professors Crobaugh, Wollman; Assistant Professors Hamilton, Sloan; Instructor Harrison; Graduate Assistants Wallerstein, Ximenes.

## GROUP REQUIREMENTS

Courses in this Department count toward Social Science (Group III).

## MAJOR STUDY

30 hours including Economics 51, 52, Mathematics 42, Business Administration 5, Economics 80, 111, 161, and 9 additional hours from upper division courses. Majors in Economics must have the permission of the Head of the Department of Economics to minor in Business Administration.

## MINOR STUDY

Economics 51, 52, Business Administration 5, and 9 hours in upper division courses. It is recommended that Mathematics 42 be taken by students minoring in Economics.

- 1-2. INTRODUCTION TO SOCIAL SCIENCE. (3, 3) Yr.  
(Same as Government 1, 2 and Sociology 1, 2.) Credit suspended until both semesters are completed. Staff
51. INTRODUCTION TO ECONOMICS. (3)  
Basic economic concepts and the nature of the economic organization, the analysis of market price determination, national income, money and banking, international trade. Prerequisite: sophomore standing. Staff
52. INTRODUCTION TO ECONOMICS. (3)  
Application of economic principles to problems of modern society. Staff
63. ECONOMIC RESOURCES. (3) (Same as Geography 63.) Kelley
73. INTRODUCTION TO LATIN AMERICA. (3)  
(Same as Anthropology 73, Government 73, and Sociology 73.) For description see p. 88. Prerequisite: Economics 51.
80. ECONOMIC HISTORY. (3)  
Analysis of the factors underlying the development of the modern industrial society. Prerequisite: 51. Sloan
- HB. RESEARCH FOR HONORS. (1-3 each semester) Staff
103. CONSUMER ECONOMICS. (3)  
This is a non-technical course in economics intended primarily for non-majors and non-minors in Economics. The course is designed for those whose chief contact with the economic system will be as consumers. It is especially recommended for students in education and home economics and others who expect to take only one course in Economics. There is no prerequisite. Sloan
110. CORPORATION FINANCE. (3)  
(Same as Business Administration 110.) Evans
111. MONEY AND BANKING. (3)  
Principles of money, credit, and banking. Organization and operation of the banking system. Prerequisite: 51. Parish
119. PRINCIPLES OF FOREIGN TRADE. (3)  
Principles and problems of international trade. Prerequisite: 51. Duncan
121. ECONOMICS AND TRADE OF LATIN AMERICA. (3)  
Survey of economic life and foreign trade, investments, economic planning. Prerequisite: 73. Duncan
140. ECONOMIC SECURITY. (3)  
The meaning and extent of poverty and insecurity, and methods of dealing with these problems. Sloan
141. LABOR PROBLEMS. (3)  
Problems pertaining to the labor force, unions, labor-management relations, protective legislation, wage theory, and level of employment. Prerequisite: 51. Wollman
143. TRANSPORTATION. (3)  
(Same as Business Administration 143.) Prerequisite: Economics 51. Duncan
152. PUBLIC FINANCE. (3)  
Theory and practice of taxation, governmental borrowing, financial administration and public expenditures. Prerequisite: 51. Wollman
154. COMPARATIVE ECONOMIC SYSTEMS. (3)  
A critical analysis of the proposed major reforms of the existing economic system. Prerequisite: 51. Crobaugh

160. **ECONOMIC THEORY.** (3)  
Advanced economic analysis, with particular attention to problems of monopolistic competition, distribution of incomes, employment, and national income. Prerequisites: 51, 52. Crobaugh
161. **HISTORY OF ECONOMIC THOUGHT.** (3)  
Development of the principal economic doctrines and schools of economic thought from the Physiocrats to Keynes. Prerequisite: 51. Crobaugh
162. **BUSINESS CYCLES.** (3)  
Theories of the causes of business fluctuations, remedies proposed, and the possibility of economic stability. Hamilton
165. **PUBLIC UTILITIES.** (3)  
(Same as Business Administration 165.) Parish
180. **GOVERNMENT CONTROL OF BUSINESS.** (3)  
Governmental and social controls over business enterprise. Prerequisite: 51. Duncan
185. **ECONOMIC HISTORY OF THE UNITED STATES.** (3)  
(Same as History 185.) Accepted toward major only. Smith
237. **INSTITUTIONAL ECONOMICS.** (3)  
A study of the "American contribution" to economic thought as found in the work of Veblen, Mitchell, Commons, and other institutional economists. Hamilton
238. **THEORY OF SOCIALISM, WELFARE ECONOMICS, AND LIBERAL PROGRAMS OF REFORM.** (3) Crobaugh
251. **MONOPOLISTIC COMPETITION, GENERAL EQUILIBRIUM, AND ECONOMIC DYNAMICS.** (3) Crobaugh
252. **MONETARY THEORY AND NATIONAL INCOME ANALYSIS.** (3) Wollman
300. **THESIS.** (6) Duncan

### ENGLISH

Professors Pearce (Head), Arms, Smith, Wicker; Visiting Professor Grabo; Associate Professors Albrecht, Jacobs, Keleher; Assistant Professors Crowell, Hazard, Kuntz, Simons, Tedlock; Instructors Baughman, Fleming, Kluckhohn, Kroft, Kytte, Lueders, Mowrer; Teaching Assistants Adams, Anderson, Darbee, Fuquay, Pober; Graduate Assistants Dickinson, McQueen, Smart, Wykes.

### GROUP REQUIREMENTS

English 1 is a required course for all students except those who are exempted upon the basis of a placement test. English 2 is required of all students, except transfers who may offer an equivalent course toward the satisfaction of the group requirements. Students in the low percentiles of the Placement Test will take English 1W, Introduction to Rhetoric (Workshop), a 3-credit course with 2 hours of non-credit tutoring in reading, grammar, punctuation, and vocabulary. Additional group requirements are as follows:

College of Arts and Sciences: 3 credit hours in a course in literature numbered above 50.

College of Business Administration: 3 credit hours in a course in literature numbered above 50, and Speech 55.

College of Engineering: English 64.

College of Education: 6 credit hours in courses numbered above 50. (In the Elementary Curriculum, these additional hours must be in literature.)

#### COURSES IN GENERAL LITERATURE FOR GROUP REQUIREMENTS IN ALL COLLEGES

There are two curricula in the Departmental offerings: one for the major, the other for the student of general literary interests. Neither excludes necessarily the offerings of the other, but each serves to indicate the general channel of study. The following courses in the lower division are recommended for students selecting hours for the group requirements or for general reading: 57, 58, 75, 76, 77, 82; not accepted as literature are 55, 91. In the upper division, for students with general literary interests, the following courses without prerequisites are recommended: 135, 141, 142, 168, 185, and 186.

#### MAJOR STUDY

A minimum of 36 hours is required for the major study in English. The courses taken must include 53, 54; 3 hours in American Literature; 3 hours in World Literature; 91; 141 or 142; 151 or 154; two courses chosen from 143, 146, 148, 157, 177, 178, 181, 182; and 198. Twelve hours must be taken in courses numbered above 100. It is strongly recommended that English majors take History of England, 71, 72—if possible concurrently with English 53, 54. Students with special interest in the theater may elect Drama 89, 90 toward a major study in English. Majors and minors who are planning to teach English should enroll in Education 155c, The Teaching of English in High Schools. A comprehensive examination in English literature and language (see English 198) is required of majors. Six hours in either Journalism or Speech may count toward the major in English.

#### MINOR STUDY

College of Arts and Sciences: English 1, or English 1W, (unless exempted), 2, and 15 hours in courses numbered above 50. A maximum of 6 hours may be selected from the Department of Speech or from the Department of Journalism. College of Education and College of Fine Arts: English 1, or English 1W (unless exempted), 2, and 18 hours in courses numbered above 50.

##### 1W. INTRODUCTION TO RHETORIC (WORKSHOP). (3)

Remedial work in reading, grammar, punctuation, and vocabulary, plus expository writing. 2 lectures, 3 hrs. of tutoring. Staff

##### 1. INTRODUCTION TO RHETORIC. (3)

Forms of discourse, expository planning, paragraph methods, the investigative paper, reading reports. Staff

##### 2. INTRODUCTION TO LITERATURE. (3)

The types of literature with readings and reports. Staff

3. **ENGLISH FOR FOREIGN STUDENTS.** (3)  
A course in writing and understanding English, designed for students to whom English is a foreign tongue. Credit may be withheld until the course is repeated in the succeeding term. No credit allowed if credit is earned in English I. 5 hours of classroom work. Staff
- SOPHOMORE PROFICIENCY IN ENGLISH.** (0)  
A non-credit tutoring course for referral students who failed the Sophomore Proficiency examination in English. (See graduation requirements in the several Colleges.)
53. **SURVEY OF EARLY ENGLISH LITERATURE.** (3)  
From the Old English writings through Neo-classicism. Keleher, Kuntz, Crowell
54. **SURVEY OF LATER ENGLISH LITERATURE.** (3)  
From Pre-romanticism to the contemporary period. Wicker, Hazard, Jacobs
55. **VOCABULARY BUILDING.** (3)  
Study of basic word roots and drill designed to increase vocabulary. Hazard, Kluckhohn
57. **SURVEY OF MODERN FICTION AND DRAMA.** (3)  
Readings in British and American writers from 1890 to the present. Simons, Tedlock, Albrecht, and Staff
58. **SURVEY OF MODERN POETRY AND NON-FICTIONAL PROSE.** (3)  
Readings in British and American writers from 1890 to present. Arms, Simons, Mowrer
63. **CREATIVE WRITING.** (3)  
Keleher, Mowrer
64. **INFORMATIVE WRITING.** (3)  
Professional expository composition and the preparation of elementary reports. Albrecht, Fleming, Kroft
75. **WORLD LITERATURE FROM HOMER TO DANTE.** (3)  
Masterpieces of European and Asiatic literature, including the Bible. Jacobs, Smith
76. **WORLD LITERATURE FROM RABELAIS TO IBSEN.** (3)  
Masterpieces of European literature, including the great Russian writers. Smith, Jacobs
77. **SOUTHWESTERN LITERATURE.** (3)  
Myth, legend, and song of the Indians; literary values in the Spanish colonial narratives; literature of the Santa Fe trail and the cattle country; contemporary writing. Pearce, Keleher
82. **AMERICAN LITERATURE.** (3)  
A general survey to 1900, with more extensive study of the great writers of the nineteenth century. Smith, Arms, Tedlock
91. **HISTORY OF THE ENGLISH LANGUAGE.** (2)  
The etymology, morphology, phonetics, and semantics of English; the relation between linguistic and cultural change. Pearce, Albrecht
- HA. READING FOR HONORS.** (1-3 each semester) Staff
- HB. RESEARCH FOR HONORS.** (1-3 each semester) Staff
101. **PHONETICS.** (3)  
(Same as Speech 101.)
121. **ADVANCED CREATIVE WRITING.** (3)  
A study of modern literary forms and expression with practice in writing prose and verse. Keleher
132. **CONTEMPORARY POETRY.** (3)  
A study of the leading figures in contemporary poetry with analysis of style and critical theory. Prerequisite: 3 credit hours in literature. Arms, Jacobs
135. **CONTEMPORARY FICTION.** (3)  
British, American, and European novelists since 1912. Tedlock

137. CONTEMPORARY DRAMA. (3)  
European and American playwrights from Ibsen to the present.  
Smith, Jacobs
141. SHAKESPEARE: HISTORIES AND COMEDIES. (3)  
A detailed study of the comedies and historical plays. Simons, Pearce
142. SHAKESPEARE: TRAGEDIES. (3)  
A detailed study of the problem comedies and tragedies. Simons, Pearce
143. DRAMA OF THE RESTORATION AND EIGHTEENTH CENTURY. (3)  
The best plays from D'Avenant to Sheridan. Prerequisite: 3 credit hours in literature. Smith
146. AGE OF MILTON. (3)  
Non-dramatic poetry and prose from 1600 to 1674, with special emphasis on the masterpieces of Milton. Prerequisite: 3 credit hours in literature. Smith
148. ELIZABETHAN DRAMA EXCLUSIVE OF SHAKESPEARE. (3)  
Special attention to the plays of Marlowe and Jonson. Prerequisite: 3 credit hours in literature. Pearce or Simons
151. CHAUCER. (3)  
A reading of Chaucer's chief literary works with an examination of his philosophy. Prerequisite: 6 credit hours in literature. Albrecht
154. MIDDLE ENGLISH. (3)  
A general survey of the types of thirteenth and fourteenth century literature. Prerequisite: 6 credit hours in literature. Albrecht
- 155c. THE TEACHING OF ENGLISH IN HIGH SCHOOL. (3)  
(Same as Education 155c.) Kuntz
157. ELIZABETHAN NON-DRAMATIC LITERATURE. (3)  
Development of humanism, new poetry, literature of courtesy. Prerequisite: 3 credit hours in literature. Pearce, Simons
161. THE FOLK TALE IN ENGLISH. (3)  
The tradition of folk motifs and themes in the development of the tale as a form of story-telling in English and American literature. Baughman
166. LITERARY CRITICISM. (3)  
Major critical attitudes toward literature. Prerequisite: 6 credit hours in literature. Arms, Grabo
168. THE ROMANTIC PERIOD IN AMERICAN LITERATURE. (3)  
Among authors read are Irving, Cooper, Emerson, Longstreet, Kennedy, Simms, Poe, Lincoln, Longfellow, Holmes, Whittier, Thoreau, Melville, Lowell, Hawthorne. Arms, Hazard
169. THE PERIOD OF REALISM IN AMERICAN LITERATURE. (3)  
Among authors read are Whitman, Harte, Clemens, Howells, James, Lanier, Dickinson, Tabb, Harris, Cable, Jewett, Freeman, Bierce, Garland, Adams, Norris, Crane, Dreiser, Moody. Arms
177. THE CLASSICAL PERIOD IN ENGLISH LITERATURE. (3)  
The chief writers in England from the Restoration to the decline of Neo-classicism. Prerequisite: 3 credit hours in literature. Smith, Crowell
178. THE ROMANTIC PERIOD. (3)  
The eighteenth century background of Romanticism and the major poets, Blake to Keats. Prerequisite: 3 credit hours in literature. Grabo, Wicker
181. VICTORIAN POETS. (3)  
The representative poets from 1830 to 1890. Prerequisite: 3 credit hours in literature. Wicker, Jacobs, Crowell
182. NINETEENTH CENTURY PROSE. (3)  
The representative prose writers from 1830 to 1890. Prerequisite: 3 credit hours in literature. Wicker, Albrecht
185. EARLY ENGLISH NOVEL. (3)  
From the beginnings through Jane Austen. Grabo, Wicker

186. LATER ENGLISH NOVEL. (3)  
From Scott to 1910. Grabo, Wicker
198. REVIEW SEMINAR. (1)  
Senior English majors are advised to take this course in preparation for the comprehensive examination. Staff
- 203-204. STUDIES IN THE LITERATURE OF COLONIAL AND REVOLUTIONARY AMERICA (1600-1800). (3, 3)  
The Connecticut Wits; early influences of the Frontier in literature, to 1840; or other subjects. Hazard
- 206-207. STUDIES IN EARLY NINETEENTH CENTURY AMERICAN LITERATURE (1800-1855). (3, 3)  
Emerson and Thoreau; Hawthorne, Melville, and Poe; or others. Arms
- 209-210. STUDIES IN LATE NINETEENTH CENTURY LITERATURE (1855-1912). (3, 3)  
Whitman, Lanier, and Dickinson; Howells, James, and Clemens; or others. Arms
215. OLD ENGLISH. (3)  
Readings in Old English prose and poetry, exclusive of Beowulf. (Offered alternately with English 216.) Albrecht
216. BEOWULF. (3)  
Readings of the Old English epic, Beowulf. (Offered alternately with English 215.) Albrecht
223. STUDIES IN THE ENGLISH RENAISSANCE (1500-1616). (3)  
Specific problems of the Shakespearean canon and relationships of Shakespeare with writers and currents of his age. Pearce
225. STUDIES IN THE SEVENTEENTH CENTURY (1600-1660). (3)  
Prose writers, metaphysical poets, or Milton. Crowell
230. STUDIES IN THE RESTORATION AND EIGHTEENTH CENTURY (1660-1780). (3)  
Dryden, Pope, or Johnson. Smith
233. STUDIES IN THE RESTORATION AND EIGHTEENTH CENTURY (1660-1780). (3)  
Fielding and other novelists or the playwrights. Crowell, Smith
240. STUDIES IN THE ROMANTIC PERIOD: POETRY (1780-1832). (3)  
Shelley, Keats, Wordsworth, or other poets. Grabo, Wicker
243. STUDIES IN THE ROMANTIC PERIOD: PROSE (1780-1832). (3)  
The novel, Coleridge, Hazlitt, or other prose writers. Albrecht, Wicker
251. LITERARY PROBLEMS FOR THE MASTER'S DEGREE. (1-2 each semester)  
Studies in literature and philology. Graduate Staff
253. STUDIES IN THE VICTORIAN PERIOD: POETRY (1832-1900). (3)  
Tennyson, Browning, or other poets. Crowell, Wicker
255. STUDIES IN THE VICTORIAN PERIOD: PROSE (1832-1900). (3)  
Dickens, Pater, Ruskin, Carlyle, Arnold, or other prose writers. Jacobs
270. LANGUAGE SEMINAR. (3)  
Phonology of English speech, linguistic structure, elements of vocabulary. Pearce
273. LANGUAGE SEMINAR. (3)  
American dialect and regional vocabulary. Pearce
300. THESIS. (6) Graduate Staff
351. SEMINAR PROBLEMS FOR THE DOCTOR'S DEGREE. (1-2 each semester) Graduate Staff
400. DISSERTATION. (Credit arranged) Graduate Staff

## FRENCH

See Modern and Classical Languages.

**GEOGRAPHY**

Not a department.

Assistant Professor Kelley.

**GROUP REQUIREMENTS**

Geography 1 counts toward Science and Mathematics (Group IV)—non-laboratory; all other Geography courses count toward Social Science (Group III).

1. GENERAL GEOGRAPHY. (3)  
Introduction to systematic geography. World patterns of surface features, population, and land use. Map reading. 2 lectures, 2 hrs. map study.
2. GENERAL GEOGRAPHY. (3)  
Survey of the lands and peoples of the world, with special attention to selected areas. Prerequisite: 1, or permission of the instructor.
54. NORTH AMERICA. (3)  
Physical, cultural, and economic geography of Alaska, Canada, and the United States; regional variations within the United States. (Offered 1951-52 and alternate years.)
63. ECONOMIC RESOURCES. (3)  
Survey of the basic economic resources of the world; manufacturing regions; trade routes.
101. SOUTH AMERICA. (3)  
General physical and cultural geography of South America.
102. MIDDLE AMERICA. (3)  
Mexico, Central America, and the Caribbean. Prerequisite: 101 or permission of the instructor.
111. LAND UTILIZATION. (3)  
Analysis of rural and urban land use and conservation in selected areas. Field mapping of land use in Albuquerque and vicinity. (Offered 1952-53 and alternate years.)
188. CULTURAL GEOGRAPHY: OLD WORLD. (3)  
(Not offered 1951-52.)
189. CULTURAL GEOGRAPHY OF LATIN AMERICA. (3)  
(Not offered 1951-52.)

**GEOLOGY**

Professors Northrop (Head), Kelley; Associate Professor Beck; Assistant Professors Fitzsimmons, Wengerd; Instructor Zeller; Graduate Assistants Baltz, Bogart, Brunton, Givens, Maxwell.

**GROUP REQUIREMENTS**

Courses in this Department count toward Science and Mathematics (Group IV).

**MAJOR STUDY**

For the degree of Bachelor of Arts: Geology 1, 2, 5L, 6L, 73L, 74L, and 16 additional upper division hours. Chemistry 1L and 2L are required.

For the degree of Bachelor of Science: Geology 1, 2, 5L, 6L, 73L, 74L, 103L, 106L, 108L; either 109L and 110L or 111L and 112L; and 6 additional upper division hours. Architectural Engineering 1L, Chemistry 1L, 2L, Civil Engineering 4L, Mathematics 15, 16, and either Biology 1L and 2L or Physics 11L and 12L are required.



The candidate must minor in biology, chemistry, engineering, mathematics, or physics. *Minor in Engineering*: 20 hours, as approved by the Geology department, from among the following: Architectural Engineering 1L, 2L, 11L; Civil Engineering 4L, 54L, 60, 102, 104L, 109L, 110L, 120, 184; Mechanical Engineering 53, 101, 105, 175, 181, 182. Observe prerequisites.

## MINOR STUDY

Geology 1, 2, 5L, 6L, and 12 additional hours.

1. PHYSICAL GEOLOGY. (3)  
Materials composing the earth, and work of agencies, both external and internal, modifying its surface. Staff
2. HISTORICAL GEOLOGY. (3)  
History of the earth; rise and succession of the various forms of life. Prerequisite: 1. Northrop, Wengerd
4. ENGINEERING GEOLOGY. (3)  
Introductory geology with emphasis on engineering aspects. (Open to engineers only.) Kelley
- 5L. PHYSICAL GEOLOGY LABORATORY. (1)  
Minerals, rocks, and topographic maps. Credit suspended when credit in Geology 1 is not earned. Corequisite: 1. 2 hrs. lab. Staff
- 6L. HISTORICAL GEOLOGY LABORATORY. (1)  
Fossils and paleogeographic maps; emphasis on the historical geology of New Mexico. Credit suspended when credit in Geology 2 is not earned. Corequisite: 2. 2 hrs. lab. Staff
- 73L-74L. MINERALOGY. (4, 4)  
Crystallography; chemical, physical, and descriptive mineralogy; geologic occurrences, associations, and uses. Prerequisite: Geology 5L; prerequisite or corequisite: Chemistry 1L, 2L. Course 73L may be taken separately, but 73L is prerequisite to 74L. 2 lectures, 6 hrs. lab. Beck
101. NONMETALLIFEROUS DEPOSITS. (3)  
Origin, properties, utilization, and classification of industrial minerals, rocks, and coal. Prerequisites: 6L and 74L. Kelley
102. ORE DEPOSITS. (3)  
Metalliferous deposits with respect to their origin, distribution, structure, and alteration; mining and utilization problems. Prerequisites: 6L, 74L, and 103L. Kelley
- 103L. PETROLOGY. (3)  
Classification, occurrence, origin, and hand-specimen recognition of common rocks. Prerequisites: 6L and 74L. 2 lectures, 3 hrs. lab. Fitzsimmons
105. NEW MEXICO GEOLOGY. (2)  
Prerequisites: 6L and 74L; 103L and 108L are strongly recommended. Northrop
- 106L. FIELD GEOLOGY. (3)  
Geologic mapping; principles and techniques; preparation of a report. Prerequisites: Geology 6L and C. E. 4L; prerequisite or corequisite: Geology 103L. 1 full day in field each week. Fitzsimmons, Kelley
- 108L. STRUCTURAL GEOLOGY. (3)  
Rock structures and their origins; problems. Prerequisite: 6L; mechanical drawing or descriptive geometry or both are strongly recommended. 2 lectures, 3 hrs. lab. Kelley
- 109L-110L. STRATIGRAPHY. (4, 4) Yr.  
Principles, followed by a survey of the stratified rocks of North America, their correlation, stratigraphic relations, and guide fossils. Prerequisite: 6L; some biology is strongly recommended. Credit suspended for 109L until 110L is completed. 2 lectures, 6 hrs. lab. Northrop

- 111L-112L. PALEONTOLOGY. (4, 4) Yr.  
Fossil plants, invertebrates, and vertebrates, with emphasis on the invertebrates; structure, classification, life habits, evolution, and geologic history. Prerequisite: 6L; some biology is strongly recommended. Credit suspended for 111L until 112L is completed. 2 lectures, 6 hrs. lab. Northrop
- 115L. GEOLOGIC INTERPRETATION OF AERIAL PHOTOGRAPHS. (2)  
Characteristics, photogrammetric computations, and stereoscopy. Preparation of planimetric and contour maps. Interpretation of geology and construction of photo-geologic maps. Prerequisites: Mathematics 16, Civil Engineering 4L, Geology 74L. Geology 108L and 181 are strongly recommended. 1 lecture, 3 hrs. lab. Wengerd
- 121L-122L. OPTICAL MINERALOGY AND PETROGRAPHY. (4, 4)  
Optical mineralogy; the polarizing microscope; systematic study of rocks with respect to their mineralogy, texture, and genesis. Prerequisite: 74L. Course 121L may be taken separately, but 121L is prerequisite to 122L. 2 lectures, 6 hrs. lab. Beck
- 133L. ADVANCED FIELD GEOLOGY. (3)  
Prerequisite: 106L. Kelley and Staff
- 141L. SEDIMENTOLOGY. (3)  
The sedimentary cycle and its products; rock-weathering and soils; transport; depositional environments; sedimentary petrology. Prerequisite: 74L. 2 lectures, 3 hrs. lab. Wengerd
142. PETROLEUM GEOLOGY. (3)  
An inductive approach to the principles of oil origin, migration, and accumulation. Characteristics of oil and gas reservoirs; techniques of petroleum exploration. Prerequisite: 141L. Wengerd
- 151-152. PROBLEMS. (2, 2) Staff
161. GROUND WATER. (2)  
Occurrence and development of ground water with special emphasis on Southwestern conditions. Prerequisite: 141L. Wengerd
181. GEOMORPHOLOGY. (3)  
Origin, development, and classification of land forms, with detailed consideration of gradational processes. Prerequisite: 108L. Wengerd
- 182L. GEOMORPHOLOGY OF THE UNITED STATES. (3)  
Detailed study of the physiographic provinces and sections of the United States; emphasis on western United States. Prerequisite: 181. 2 lectures, 3 hrs. lab. Fitzsimmons
- 201L. SUBSURFACE GEOLOGY. (3)  
Well-logging and correlation techniques. Study of cuttings, drilling-time logs, electric logs, radioactivity logs, and insoluble-residue logs. Construction of subsurface-contour, isopach, and isopleth maps, and of detailed cross sections. Prerequisites: 110L and 142. 1 lecture, 6 hrs. lab. Wengerd
- 203L. ADVANCED CRYSTALLOGRAPHY. (3)  
Morphological crystallography and differential thermal analysis. 1 lecture, 6 hrs. lab. Beck
208. REGIONAL TECTONICS. (2) Kelley
- 241-242. SEMINAR. (2, 2) Beck, Fitzsimmons, Kelley, Northrop, Wengerd
- 251-252. PROBLEMS. (2-3 each semester) Beck, Fitzsimmons, Kelley, Northrop, Wengerd
300. THESIS. (6) Beck, Fitzsimmons, Kelley, Northrop, Wengerd

## GERMAN

See Modern and Classical Languages.

**GOVERNMENT AND CITIZENSHIP**

Professors McMurray (Head), Donnelly, Jorrin; Associate Professors Judah, Westphal; Assistant Professors Holmes, Irion; Instructor Cline; Teaching Assistant Ramsey; Graduate Assistants Granick, Sanchez, Uihlein.

**GROUP REQUIREMENTS**

Courses in this Department count toward Social Science (Group III.)

**MAJOR STUDY**

In addition to Government 1 and 2, 27 hours including 51, 52, 121, 141, 175, 197 or 198.

**MINOR STUDY**

In addition to Government 1 and 2, 15 hours including 51, 52, 121, 141, 175.

**CURRICULUM FOR STUDENTS WHO PLAN TO STUDY LAW**

See College of Law.

- 1-2. INTRODUCTION TO SOCIAL SCIENCE. (3, 3) Yr.  
(Same as Economics 1, 2 and Sociology 1, 2.) Credit suspended until both semesters are completed. Staff
- 51. AMERICAN NATIONAL GOVERNMENT AND POLITICS. (3) Staff
- 52. AMERICAN STATE GOVERNMENT AND POLITICS. (3) Staff
- 73. INTRODUCTION TO LATIN AMERICA. (3)  
(Same as Anthropology 73, Economics 73, and Sociology 73.) For detailed description see p. 88. Jorrin
- HA. READING FOR HONORS. (1-3 each semester) Staff
- HB. RESEARCH FOR HONORS. (1-3 each semester) Staff
- 101. MUNICIPAL GOVERNMENT AND ADMINISTRATION. (2)  
Special consideration of the organization, administration, and problems of counties, municipalities, metropolitan areas, and administrative districts. Cline
- 103. PROBLEMS OF DEMOCRACY. (3)  
Government-problems of special contemporary importance. Holmes, Judah
- 105. PUBLIC OPINION AND PROPAGANDA. (3)  
Public opinion as it affects party alignments and governmental programs. The methods used by special interests in influencing public opinion. Prerequisites: 1, 2. Irion
- 106. POLITICAL PARTIES. (3)  
The American party system, national, state, and local. Prerequisites: 1, 2. Donnelly, Judah, McMurray
- 111. LEGISLATION. (3)  
The process of law-making in the United States, national, state, and local. Legislative drafting, statute law-making, legislative procedure, executive ordinances, popular law-making, judicial review. Prerequisites: 51, 52. McMurray
- 121. PUBLIC ADMINISTRATION. (3)  
Introduction to the general problems of public administration in the modern state. Prerequisites: 51, 52. Donnelly, McMurray
- 141. INTERNATIONAL RELATIONS. (3)  
The origin and nature of the problems involved in international relations. Recommended: 51, 52. Jorrin, Judah, Westphal

143. INTERNATIONAL LAW. (3)  
The origin, nature, and application of the rules of international law.  
Prerequisites: 1, 2 and 51, 52. Jorrín, Westphal
151. AMERICAN DIPLOMACY. (3) (Same as History 151.)
155. THE GOVERNMENTS OF LATIN AMERICA. (3)  
A consideration of the governments of a number of Latin-American states including a study of their domestic problems and diplomatic policies. Prerequisites: 51, 52, or 1, 2; and 73. Jorrín
167. POLITICAL THEORY. (3)  
Political thought from the Greek period through modern times. Prerequisites: 51, 52. Jorrín
168. AMERICAN POLITICAL THEORY. (3)  
The origin and development of political ideas in the U. S. from colonial times to the present. Judah
169. COMPARATIVE GOVERNMENT. (3)  
A survey and comparison of the leading governments of Europe. Prerequisites: 51, 52. Judah, Westphal
170. ORGANIZATION AND ADMINISTRATION OF SOCIAL WELFARE. (3)  
The special application of the principles of public administration to the fields of social welfare. Prerequisite: 51. Ellis, Holmes
175. CONSTITUTIONAL LAW. (3)  
The Constitution of the United States as it has been interpreted by the courts. Prerequisites: 51, 52. Irion
- 197-198. SEMINAR. (2, 2)  
Open to advanced students with approved qualifications. Graduate Staff
206. SEMINAR IN POLITICAL PARTIES. (3) ✓ Donnelly, Judah, McMurray
221. SEMINAR IN PUBLIC ADMINISTRATION. (3) ✓ Donnelly, McMurray
241. SEMINAR IN INTERNATIONAL ORGANIZATION. (3) ✓  
Background of international organization; special organizations for economic and scientific purposes, their methods of operation, their administrative problems; the United Nations. Westphal
242. CURRENT PROBLEMS IN AMERICAN FOREIGN POLICY. (3) ✓  
A study of the mechanics of policy formulation; congressional and public attitudes; attitudes of foreign governments; the interrelation of foreign policies toward different areas and through international agencies. Westphal
- 251-252. PROBLEMS. (1-3 each semester) Graduate Staff
260. SEMINAR IN INTER-AMERICAN AFFAIRS. (2) Jorrín
300. THESIS. (6) Graduate Staff

## HISTORY

Professors Russell (Head), Dargan, Reeve, Sacks, Scholes; Visiting Professor Nichols; Associate Professors Smith, Woodward; Assistant Professors Hubbe, Longhurst; Instructor Mateyka; Teaching Assistants Kelley, Kenyon; Graduate Assistants Garza, Riley.

## GROUP REQUIREMENTS

Courses in this Department count toward Social Science (Group III).

## MAJOR STUDY

Students entered before June, 1948, may choose either of the following programs: those entered in June, 1948, or later must follow

program (a): (a) 33 hours in History including 12 hours from courses 1, 2, and 11, 12 or 51, 52, and at least 15 hours numbered above 100; (b) 30 hours in History including 12 hours from courses 1, 2, and 11, 12 or 51, 52, and at least 18 hours numbered above 100. All students who intend to take upper division courses in history are urged to acquire a reading knowledge of at least one foreign language, preferably Spanish, before reaching the junior year.

## MINOR STUDY

18 hours in History including 1, 2 or 11, 12, and not less than 6 hours numbered above 100.

- 1-2. WESTERN CIVILIZATION. (3, 3)  
European developments from the decline of Rome to the present.  
Sacks, Russell, Longhurst, and Assistants
- 11-12. HISTORY OF THE AMERICAS. (3, 3)  
Woodward, Kenyon
31. HISTORY OF NEW MEXICO. (2)  
Reeve
- 51-52. HISTORY OF THE UNITED STATES. (3, 3)  
Smith, Kelley, Mateyka
- 71-72. HISTORY OF ENGLAND. (3, 3)  
Russell, Sacks
- 81-82. HISTORY AND POLITICAL INSTITUTIONS OF GREECE AND ROME. (3, 3)  
Hubbe
85. HISTORY OF MODERN RUSSIA. (2)  
Staff
- HA. READING FOR HONORS. (1-3 each semester)  
Staff
- HB. RESEARCH FOR HONORS. (1-3 each semester)  
Staff
115. GREEK POLITICAL INSTITUTIONS. (3)  
A study of urban, federal, and imperial institutions of Classical and Hellenistic Greece with emphasis upon The Athenian Constitutions.  
Hubbe
121. POLITICAL AND ECONOMIC HISTORY OF THE MIDDLE AGES. (3)  
Russell
122. SOCIAL AND INTELLECTUAL HISTORY OF THE MIDDLE AGES. (3)  
Russell
123. THE RENAISSANCE. (3)  
Longhurst
124. THE REFORMATION. (3)  
Longhurst
131. ENGLISH CONSTITUTIONAL HISTORY. (3)  
Russell
132. STUART ENGLAND. (2)  
Russell
135. THE BRITISH EMPIRE. (3)  
Sacks
141. INTERNATIONAL RELATIONS. (3) (Same as Government 141.)  
Westphal
142. EUROPE, 1648-1774. (3)  
Longhurst, Sacks
143. FRENCH REVOLUTION AND NAPOLEON. (3)  
Longhurst, Sacks
145. MODERN EUROPE, 1815-1914. (3)  
Sacks
146. DICTATORSHIPS AND DEMOCRACY IN EUROPE SINCE 1914. (3)  
Sacks
151. AMERICAN DIPLOMACY. (3)  
Smith
- 161-162. HISTORY OF LATIN AMERICA. (3, 3)  
Scholes, Woodward
- 163- THE A. B. C. POWERS IN RECENT TIMES. (3)  
Woodward
- 165-166. HISTORY OF SPAIN. (2, 2)  
Russell, Longhurst
167. HISTORY AND CIVILIZATION OF PORTUGAL. (3)  
Woodward
168. MEXICO AND THE CARIBBEAN. (3)  
Woodward
171. THE AMERICAN COLONIES. (3)  
Smith
- 173-174. AMERICAN BIOGRAPHY. (2, 2)  
Staff
175. THE SOUTH IN AMERICAN HISTORY, 1763-1865. (3)  
Staff
176. CIVIL WAR AND RECONSTRUCTION. (3)  
Smith
178. RECENT HISTORY OF THE UNITED STATES. (3)  
Reeve

179. CONSTITUTIONAL HISTORY OF THE UNITED STATES. (3)	Reeve
181. HISTORY OF THE AMERICAN FRONTIER. (3)	Staff
183-184. INTELLECTUAL AND SOCIAL HISTORY OF THE UNITED STATES. (2, 2)	Smith
185. ECONOMIC HISTORY OF THE UNITED STATES. (3)	Smith
191-192. HISTORY OF THE SOUTHWEST. (3, 3)	Reeve, Scholes, Woodward
202. INTRODUCTION TO HISTORICAL RESEARCH. (3)	Woodward
251-252. PROBLEMS. (1-3 each semester.)	Graduate Staff
256. SEMINAR IN MEDIEVAL HISTORY. (2-3)	Russell
257. SEMINAR IN THE RENAISSANCE. (2-3)	Longhurst
258. SEMINAR IN MODERN BRITISH HISTORY. (2-3) ✓	Sacks
261-262. RESEARCH IN SOUTHWEST HISTORY. (2-3 each semester.)	Graduate Staff
266-267. SEMINAR IN LATIN-AMERICAN HISTORY. (2-3 each semester.)	Scholes, Woodward
271-272. SEMINAR IN AMERICAN HISTORY. (2-3 each semester.)	Reeve, Smith
300. THESIS. (6)	Graduate Staff
400. DISSERTATION. (Credit arranged)	Graduate Staff

### HOME ECONOMICS

(A department of the College of Education.)

#### GROUP REQUIREMENTS

Home Economics 53L and 54L count toward Science and Mathematics (Group IV).

#### MAJOR STUDY IN ARTS AND SCIENCES

Home Economics 1, 2L, 53L, 54L, 104, 107L, 109, 128, 132, 138L and two of the following courses: 12L, 60L, 63L. Chemistry 41L and 42L and Biology 12L, 36, and 93L are also required.

(For Home Economics course offerings, see College of Education.)

If a student majors in Home Economics in the College of Arts and Sciences, he may not have any other hours outside of the College.

For requirements for a major in dietetics consult the Dean of the College and the Home Economics Department Head.

#### MINOR STUDY IN ARTS AND SCIENCES

Home Economics 1, 2L, 53L, 54L and at least eight additional hours approved by the Head of the Department. At least three hours must be taken in a course numbered above 100.

(For Home Economics course offerings, see College of Education.)

### ITALIAN

See Modern and Classical Languages.

### JOURNALISM

Associate Professor Rafferty (Head); Instructors Conger, Hall.

## MAJOR STUDY

Editorial Sequence—30 hours including 51, 52, 101, 111, 112, and 122. Six hours may be chosen from the following: English 55, 91, 166; Speech 192; Government 105.

Community Newspaper Sequence—30 hours including 51, 52, 111, 122, 123, 130, and 190. Six hours may be chosen from the following: English 55, 91; Government 105.

Journalism 1 and Journalism 2 count toward the major but are not required. Journalism 1 is prerequisite to Journalism 2.

## MINOR STUDY

18 hours including Journalism 51 and 52. Six hours may be chosen from the list given above under Major Study.

1. INTRODUCTION TO JOURNALISM. (1)  
Freshmen only. Lecture one hour a week on the meaning, history, and practices of American journalism, together with some practice in news writing and a study by each student of a daily paper. Rafferty.
2. INTRODUCTION TO JOURNALISM. (1)  
Same as above, but including an introduction to copy-editing. Prerequisite: 1. Conger, Hall
51. NEWS WRITING AND REPORTING. (3)  
2 lectures, 2 hrs. lab. Conger, Hall
52. NEWS WRITING AND REPORTING. (3)  
Prerequisite: 51. 2 lectures, 2 hrs. lab. Conger, Hall, Rafferty
61. NEWS PHOTOGRAPHY. [News Photography and Picture Editing.] (3)  
[187] Training in the use of the standard news camera, and in the taking, developing, and printing of pictures for newspaper use, together with some study of desk preparation of photographs for the photoengraving process. Conger
- HA. READING FOR HONORS. (1-3 each semester) Staff
- HB. RESEARCH FOR HONORS. (1-3 each semester) Staff
101. HISTORY OF JOURNALISM IN THE UNITED STATES. (3)  
A study of American newspaper and magazine history from the early Colonial periodicals through the present-day streamlined mass-production newspaper. Conger
102. EDITORIAL AND SPECIAL WRITING. (3)  
Practice and criticism in the writing of the editorial essay and the information editorial, and in the writing of the column, and of other interpretive matter. Rafferty
111. NEWSPAPER DESK WORK. (3)  
Practice in the assembling and editing of news copy, in dummying of newspaper pages, in headline writing, and in page make-up. Prerequisites: 51, 52. 2 lectures, 2 hrs. lab. Rafferty
112. NEWSPAPER DESK WORK. (3)  
Continuation of 111, with emphasis on wire copy and problems of typography. Prerequisite: 111. 2 lectures, 2 hrs. lab. Rafferty
122. LAW OF THE PRESS. (3)  
Lectures, discussions, and case histories in the law of libel and the Constitutional guarantees, and in laws relating to contempt and injunction proceedings and other checks of law upon the press. Conger
123. THE COMMUNITY NEWSPAPER. (3)  
Lectures, studies, and problems relating to operation of the rural newspaper, particularly the country weekly, including general weekly newspaper management as distinguished from problems of the large dailies, and community editorial responsibilities. Hall

130. ADVERTISING WRITING, COPY AND LAYOUT. (4)  
The writing and laying-out of display advertisements. 3 lectures, 3 hrs. lab. Hall
132. WRITING THE MAGAZINE ARTICLE [General Magazine Writing] (3)  
Writing for professional magazine publication. Rafferty, Conger, Hall
165. MANAGEMENT OF HIGH SCHOOL PUBLICATIONS. (3).  
A survey of the problems in production of high school newspapers and yearbooks, as well as some incidental publications, including approaches to design, advertising content, the news and editorials, circulation and printing, and over-all business administration and staff management. Not open to Journalism majors. (2 hrs. credit in Summer Session.) Rafferty, Conger, Hall
175. ADVANCED REPORTING. (3)  
Two two-hour sessions each week for discussions of and work in news and interpretive coverage of matters and events of public concern. Visits to, and investigations into, community areas, city councils, state legislative sessions, meetings of civic boards, etc., during two-hour arranged session each week; production of a series of newspaper or magazine-type articles by each student, each eventually during the semester to work upon a specific problem, situation, or crusade, of public significance. Instructor's permission required. Rafferty, Hall
190. PROBLEMS IN LOCAL AND NATIONAL ADVERTISING. (2)  
Lectures in, and discussions of, local retail and national-agency advertising problems and programs. Hall
194. SEMINAR IN PROBLEMS OF THE PRESS. (2)  
Lectures in and discussions of the concept of a free press and the responsibilities and restraints laid upon the press within that concept. Rafferty

## LIBRARY SCIENCE

Not a department.

Professor Kelley; Instructor Heimerdinger.

## MAJOR STUDY

Not offered.

## MINOR STUDY

Library Science 125; 126 or 128; 127; and 129.

120. CHILDREN'S LITERATURE. (2)  
(Same as Education 120.) McCann
125. REFERENCE AND BIBLIOGRAPHY. (3)  
[21] Training in the use of standard works of reference. Heimerdinger
126. PUBLIC LIBRARY ADMINISTRATION. (3)  
[22] The place of the library in the community; its organization, financing, and administration. Kelley
127. CLASSIFICATION AND CATALOGING. (3)  
[23] Principles of classification and the techniques of cataloging for libraries. Heimerdinger
128. SCHOOL LIBRARY ADMINISTRATION. (3)  
[24] Practical study of the management of the school library, including the organization of the book collection, housing, equipment and maintenance. Kelley
129. BOOK SELECTION FOR YOUNG PEOPLE. (3)  
[25] A survey course covering tools and principles of selection of books for young people. Heimerdinger



**MATHEMATICS AND ASTRONOMY**

Professor LaPaz (Head); Associate Professors Buell, Hendrickson, Hildner; Assistant Professors Beach, Rogers, Warden; Instructors Gragg, Mitchell, Schrandt; Teaching Assistant Barnett.

**GROUP REQUIREMENTS**

Courses in this Department count toward Science and Mathematics (Group IV).

**MAJOR STUDY**

College of Arts and Sciences and College of Education: 24 hours in courses in Mathematics or Astronomy numbered above 50 (majors in Education are required to take Education 155e).

**MINOR STUDY**

Mathematics 15, 16, and 22 or equivalent, 53, 54, and at least 3 more hours in courses in Mathematics or Astronomy numbered above 50.

**NOTE TO BEGINNING STUDENTS**

Students electing any freshman mathematics courses will take a placement test in Mathematics in order to insure assignment to the proper type of section.

Courses for students who are not planning to take Mathematics 53-54: Mathematics 1, 2, 12, 14, 15, 16, 22.

Courses for students of Engineering, Physics majors, Chemistry majors (B.S.), Mathematics majors and other eligible students who plan to take Mathematics 53-54: the sequence Mathematics 15-16-22, or equivalent.

Other courses open to all freshmen: Astronomy 1; Mathematics 41, 42.

**ASTRONOMY****1. INTRODUCTION TO ASTRONOMY AND PHYSICS. (2)**

(Same as Physics 1.) A non-technical introduction, including demonstrations; the first half devoted to Astronomy, the second half to Physics. LaPaz, Regener

**61-62. DESCRIPTIVE ASTRONOMY AND METEORITICS, I, II. (3, 3)**

[Math. 52] An introductory course not requiring extensive knowledge of science or mathematics. Prerequisites: high school algebra, 1 unit; plane geometry, 1 unit. LaPaz

**63-64. SPHERICAL TRIGONOMETRY AND PRACTICAL ASTRONOMY, I, II. (3, 3)**

[Math. 61-62] Especially concerned with the mathematical foundation of navigation, aviation, and related subjects. Prerequisite: Mathematics 16, or equivalent. LaPaz

**MATHEMATICS****1. COLLEGE ARITHMETIC. (2)**

The intuitive and the logical background of arithmetic, drill in fundamental operations, critical study of methods of presentation, topics in college arithmetic. (No credit allowed in the Colleges of Engineering and Pharmacy.) Rogers

**2. INTERMEDIATE ALGEBRA. (3)**

[X] Prerequisite: 1 unit of high school algebra.

Staff

12. ELEMENTS OF COLLEGE ALGEBRA. (3)  
Primarily for students of Business Administration. Staff
14. AN INTRODUCTION TO MATHEMATICS. (3)  
A one-semester cultural course for students who plan to take no technical courses in mathematics, students of Education, or Fine Arts. Staff
15. COLLEGE ALGEBRA. (3)  
For Premedics, Pharmacy, Chemistry (B.A.), NROTC students. Students with credit in Mathematics 12 get no additional credit for this course. Staff
16. PLANE TRIGONOMETRY. (2) Staff
19. ALGEBRA. (5)  
Prerequisite: a satisfactory grade on placement test. Students making an unsatisfactory grade are required to take an additional course without credit before enrolling for Mathematics 19. Staff
20. PLANE TRIGONOMETRY AND PLANE AND SOLID ANALYTIC GEOMETRY. (5)  
Prerequisites: Mathematics 19 or 15 and 16. (Mathematics 15, 16, and 20 to give a total of 9 hrs. credit.) Staff
22. PLANE AND SOLID ANALYTIC GEOMETRY. (4) Staff
41. MATHEMATICS OF INVESTMENT. (3)  
Accepted for specific credit by the Department of Economics and the College of Business Administration. Prerequisite: Mathematics 12 or equivalent. Rogers, Gragg
42. INTRODUCTION TO STATISTICAL METHODS. (3)  
A basic course especially for students specializing in the social sciences. Required for an Economics major. Some laboratory work required. Prerequisite: Mathematics 12 or equivalent. Rogers
- 53-54. AN INTRODUCTION TO THE CALCULUS. (4, 4)  
The elements of the calculus correlated with courses in physics, chemistry, mechanics, and engineering. Prerequisites: Mathematics 15, 16, and 22 or equivalent. Staff

The courses which follow, except 131, are open only to students who have completed Mathematics 54 and who have the instructor's permission.

- HA. READING FOR HONORS. (1-3 each semester) Staff
- HB. RESEARCH FOR HONORS. (1-3 each semester) Staff
115. THEORY OF EQUATIONS. (3)  
Solution of quadratic, cubic, and quartic equations; geometric constructibility of roots; theory of determinants; resultants and discriminants; symmetric functions; approximate methods. Hildner
120. PROJECTIVE GEOMETRY. (3)  
An elementary and essentially synthetic treatment of the fundamentals of projective geometry covering projectivity and perspectivity, duality, Desargue's Theorem, conics, Pascal's and Brianchon's Theorems, poles and polars, and related topics. Beach, Buell
131. MATHEMATICS OF STATISTICS. (3)  
Algebra of probabilities; mathematical expectations; binomial, Poisson, normal, chi-square and other distributions; correlation and regression; the theory of sampling; statistical tests; theory of least squares. Prerequisites: Mathematics 42 and 53. Beach
132. MATHEMATICAL PROBABILITY. (3)  
The basic assumptions; the addition and multiplication of probabilities; permutations and combinations; theorems of Bayes, Tchebysheff, Bernoulli, and LaPlace; binomial coefficients; Stirling's formula for the gamma function; the probability integral; geometrical probability; the normal law of error; inverse probability; applications in geometry, physics, and statistics. LaPaz

140. NUMERICAL MATHEMATICAL ANALYSIS. (3)  
The fundamentals of graphical and numerical calculation including modern machine methods; numerical differentiation and integration; interpolation; numerical solution of algebraic, transcendental, and differential equations; nomography; empirical equations; graduation of data; periodicities. Buell, Hendrickson
- 141-142. ADVANCED CALCULUS. (3, 3)  
Partial differentiation and implicit functions; systematic integration: line, surface, and volume integrals; gamma and beta functions; elliptic integrals; Fourier series; selected chapters on complex variables, vectors and differential equations; geometrical and physical applications. Beach, LaPaz
143. ORDINARY DIFFERENTIAL EQUATIONS. (3)  
Methods of finding solutions of first order equations; singular solutions; solutions of  $n$ th order linear equations with constant coefficients; operational methods; second order linear equations with variable coefficients; series solutions; the fundamental existence theorem for the equation  $y' = f(x, y)$ ; applications to physical, chemical, mechanical, and electrical problems. Hendrickson
144. PARTIAL DIFFERENTIAL EQUATIONS AND ORTHOGONAL SYSTEMS. (3)  
Classical partial differential equations of physics; orthogonal functions; Fourier series; Fourier integrals; boundary value problems; Bessel functions; Legendre polynomials. Hendrickson
145. VECTOR ANALYSIS. (3)  
The algebra and calculus of vectors; the integral theorems of Gauss, Green, and Stokes; partial differential operators; applications in mechanics, hydrodynamics, and electrostatics. Buell, Hendrickson
150. DIFFERENTIAL GEOMETRY. (3)  
The classical theory of the metric differential geometry of curves and surfaces in three-space; introductory treatment of the theory of  $n$ -dimensional metrics by use of the tensor calculus. LaPaz
161. HISTORY OF MATHEMATICS. (3)  
The historical development of mathematics; analysis of the content and interrelation of selected topics in elementary and intermediate mathematics. (Recommended for those who plan to teach mathematics in secondary schools.) Hildner, Beach
170. THEORY OF NUMBERS. (3)  
Elementary properties of integers; Euclid's algorithm; prime numbers; theory and application of congruences; the theorems of Wilson, Euler and Fermat and their consequences; quadratic reciprocity law; primitive roots; universal quadratic forms; Waring's theorem. LaPaz
171. MODERN ALGEBRAIC THEORIES. (3)  
Matrices, determinants, systems of equations, quadratic and Hermitian forms; linear dependence and independence; elementary divisors; introduction to matrix equations. Buell, Hildner
181. THEORY OF FUNCTIONS OF A REAL VARIABLE. (3)  
Definition and properties of real numbers; properties of real functions and their derivatives; infinite series; interchange of order in limiting processes; implicit functions; introduction to the theory of point sets; measure; Riemann and Lebesgue integrals. Hendrickson
182. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE. (3)  
Complex algebra and calculus of analytic functions; singularities and power series expansions; geometric theory and conformal mapping; contour integration and residues; harmonic and subharmonic functions; applications in physics and engineering. Buell, LaPaz
184. CALCULUS OF VARIATIONS. (3)  
Formulation of variation problems; derivation of necessary conditions and of sets of sufficient conditions; development of the Hamilton-Jacobi Theory; applications of the calculus of variations in dynamics, physics, and celestial mechanics. LaPaz

The seminars which follow are open only to qualified students and permission to register requires the consent of the Department Head.

194-195. PRO-SEMINAR. (2-3 hrs. each semester)	
Advanced study and independent reading.	Graduate Staff
204-205,	
206-207. SEMINAR. (2-3 each semester)	
Advanced reading and research.	Graduate Staff
300. THESIS. (6)	Graduate Staff

### MODERN AND CLASSICAL LANGUAGES

Professors DeJongh, Duncan, Jorrín, Kercheville, Lopes, Ortega, Sr. Sender; Associate Professors MacCurdy (Acting Head), McKenzie; Assistant Professors Cobos, Hubbe, Nason; Instructors Adams, Biondi, Bramlage, Lombardi, Pooler, Sra. Sender, Ullbarri; Teaching Assistants Bowen, Lunardini, Moseley, Powers, Scone; Graduate Assistants Becchetti, Fernández, Huerta, Matlack.

### GROUP REQUIREMENTS

Courses in this Department count toward Foreign Language (Group II) with the exception of Spanish 145, 146, and courses in the Folklore Division.

### PHONETICS LABORATORY

The Department operates a Phonetics Laboratory where students in conversation and composition classes go for weekly exercises in pronunciation. Any student having special difficulties may be assigned work in the Laboratory. No extra credit is allowed for this work which is done only in connection with regular courses.

The Laboratory functions also as a clinic in English pronunciation for students whose imperfect diction is the result of a non-English background. This phase of the work is carried on in cooperation with the Department of Speech.

### NOTE TO FRESHMEN

Students presenting high school language credits and wishing to enter courses above the elementary level should consult the Head of the Department. Spanish-speaking students should enroll in Spanish 55.

### MODERN LANGUAGES

HA. READING FOR HONORS. (1-3 each semester)	Staff
HB. RESEARCH FOR HONORS. (1-3 each semester)	Staff
101-102. LATIN FOR LANGUAGE STUDENTS. (3, 3)	
A comparative study of Latin and its relationship to modern languages for upper division and graduate students. The reading of selected classical and medieval texts.	
	McKenzie

**CLASSICS**

Students who are contemplating attending a school of theology requiring an undergraduate degree should plan to take Greek 51 and 52 in the junior year and Greek 101 and 102 in the senior year. Consult the Classics professor.

**MAJOR STUDY**

Not offered.

**MINOR STUDY**

A minor may possibly be worked out if sufficient demand arises.

**GREEK**

- 51-52. **ELEMENTARY GREEK OF THE NEW TESTAMENT.** (3, 3) Yr.  
Credit suspended for 51 until 52 is completed. Hubbe
- 101-102. **THE GREEK NEW TESTAMENT.** (3, 3)  
Close scrutiny into meanings of words. Hubbe

**LATIN**

- 51-52. **INTERMEDIATE LATIN.** (3, 3) Yr.  
Credit suspended for 51 until 52 is completed. Accepted in fulfillment of lower division foreign language requirement. Hubbe
- 101-102. **LATIN FOR LANGUAGE STUDENTS.**  
(Same as Modern Languages 101-102 for Language Students.)

**CLASSICS**

151. **COMPLETE GREEK DRAMA IN TRANSLATION.** (3) Hubbe
152. **LATIN LITERATURE IN TRANSLATION.** (3) Hubbe

**FRENCH****MAJOR STUDY**

24 hours in French in courses numbered above 50. All French majors are urged to take a minor in Spanish or another modern language; or in Latin.

**MINOR STUDY**

12 hours in French in courses numbered above 50.

- 1-2. **ELEMENTARY FRENCH.** (3, 3) Yr.  
Credit for 1 suspended until 2 (or more advanced course) is completed. DeJongh and Staff
- 51-52. **INTERMEDIATE FRENCH.** (3, 3)  
Grammar, reading, and translation. Prerequisites: 1, 2 or the equivalent. DeJongh and Staff

General prerequisites for the following courses: French 51, 52 or the equivalent.

- 101-102. **ADVANCED COMPOSITION AND CONVERSATION.** (2, 2)  
Composition based on a thorough review of French grammar, and conversation based on modern French plays. DeJongh
- 105-106. **FRENCH LITERATURE OF THE NINETEENTH CENTURY.** (2, 2)  
Representative works in poetry, drama, and fiction. DeJongh
- 121-122. **THE COMEDY OF MOLIÈRE.** (2, 2) DeJongh
- 151-152. **SURVEY OF FRENCH LITERATURE FROM THE ELEVENTH CENTURY TO THE REVOLUTION.** (3, 3) DeJongh

197-198. UNDERGRADUATE PROBLEMS. (2, 2)

DeJongh

251-252. GRADUATE PROBLEMS IN FRENCH LITERATURE. (2, 2)

DeJongh

**GERMAN****MAJOR STUDY**

Not offered.

**MINOR STUDY**

12 hours in German in courses numbered above 50.

1-2. ELEMENTARY GERMAN. (3, 3) Yr.

Credit for 1 suspended until 2 (or more advanced course) is completed. McKenzie and Staff

51-52. INTERMEDIATE GERMAN. (3, 3)

Prerequisites: 1, 2, or the equivalent.

McKenzie and Staff

53-54. GERMAN CONVERSATION AND COMPOSITION. (2, 2)

A course designed to give students of 51, 52 extra practice in the writing and speaking of German. May be taken concurrently with 51 and 52. Lombardi, McKenzie

62. SCIENTIFIC GERMAN. (3)

Readings in psychology, chemistry, mathematics, biology, and anthropology. Prerequisite: 51 or equivalent. McKenzie

105-106. CONTEMPORARY GERMAN LITERATURE. (2, 2)

McKenzie

151-152. SURVEY OF GERMAN LITERATURE. (3, 3)

McKenzie

**ITALIAN**

No major or minor study offered.

75-76. ELEMENTARY ITALIAN. (3, 3)

Although this is an elementary course, the work is done under heavier pressure and more is achieved in reading and conversation than in the elementary language courses numbered 1, 2. It is open only to students who possess a good knowledge of the grammar of another Romance language and to graduate students, or to those who otherwise satisfy the instructor of their fitness to do the work. Bióndi

**PORTUGUESE****MAJOR STUDY**

Not offered.

**MINOR STUDY**

12 hours in Portuguese in courses numbered above 50.

1-2. ELEMENTARY PORTUGUESE. (3, 3) Yr.

Credit for 1 suspended until 2 (or more advanced course) is completed. Lopes, Adams, and Staff

51-52. INTERMEDIATE PORTUGUESE. (3, 3)

Prerequisites: 1 and 2 or equivalent.

Lopes and Staff

101-102. ADVANCED COMPOSITION AND CONVERSATION. (3, 3)

Lopes

151. SURVEY OF PORTUGUESE LITERATURE. (3)

Lopes

157. SURVEY OF BRAZILIAN LITERATURE. (3)

Lopes

165. CAMÕES. (3)

Lopes

166. GIL VICENTE. (3)

Lopes

197-198. UNDERGRADUATE PROBLEMS. (2, 2)

Lopes

251-252. GRADUATE PROBLEMS. (2, 2)

Lopes

351-352. GRADUATE PROBLEMS. (2, 2)

Lopes

**SPANISH****MAJOR STUDY**

30 hours in Spanish in courses numbered above 50, including 101-102, 151, 152, and 153; and two years of college work in another modern language or Latin. (It is recommended that students who do not speak Spanish natively take 53-54 concurrently with 51-52.)

**MINOR STUDY**

18 hours in Spanish in courses numbered above 50.

1-2. ELEMENTARY SPANISH. (3, 3) Yr.

Credit suspended for 1 until 2 (or more advanced course) is completed. Students are required to prepare a weekly assignment in the Phonetics Laboratory.

Lopes and Staff

51-52. INTERMEDIATE SPANISH. (3, 3)

51 and 52 offered every semester.

Duncan and Staff

53-54. ELEMENTARY SPANISH CONVERSATION. (2, 2)

This is a course designed primarily to give qualified students of 51-52 extra practice in the oral use of the language; therefore it is recommended that it be taken concurrently with 51-52. Enrollment limited to 15 students.

Nason and Staff

55-56. PRIMER CURSO PARA ESTUDIANTES DE HABLA ESPAÑOLA. (3, 3)

All students who speak Spanish natively should enroll in this course. (Those in doubt about their proficiency should consult the Department Head.) The work consists of exercises in grammar, speech correction, and vocabulary building.

Cobos or Ulibarri

91-92. INTRODUCTION TO SPANISH LITERATURE. (3, 3)

Assignments of advanced reading material and discussion of principal Spanish literary figures and movements. Prerequisites: 51, 52 or the equivalent.

Duncan, Nason, and Adams

95. SPANISH BUSINESS LETTER WRITING. (2)

Prerequisite: two years of college Spanish or equivalent.

Cobos or Ulibarri

96. COMMERCIAL AND INDUSTRIAL LANGUAGE PRACTICE IN HISPANIC COUNTRIES. (2)

Prerequisite: two years of college Spanish or equivalent.

Cobos or Ulibarri

101-102. ADVANCED COMPOSITION AND CONVERSATION. (3, 3)

[131-132] Prerequisite: 54 or 56 or the equivalent.

Ortega and Staff

Spanish 91, 92 or the equivalent are prerequisite for all literature courses listed below.

105-106. CONTEMPORARY SPANISH LITERATURE. (2, 2)

Sender

107. EARLY SPANISH NOVEL. (2)

Origins, development of the realistic and other types of prose fiction to the end of the seventeenth century.

Sender

108. MODERN SPANISH NOVEL. (2)

The Spanish novel from 1700 to 1900.

Sender

121-122. MODERN SPANISH DRAMA. (2, 2)

Sender

145. HISPANIC CIVILIZATION. (2)

Sender

146. IBERO-AMERICAN CIVILIZATION. (2)

Jorrin

- 151-152. SURVEY OF SPANISH LITERATURE. (3, 3)  
Required of Spanish majors. MacCurdy
153. PHONETICS. (2)  
Required of all majors. Prerequisites: three years of college Spanish or equivalent. Duncan
- 157-158. SURVEY OF SPANISH-AMERICAN LITERATURE. (3, 3) Nason, Ulibarri
163. MEXICAN LITERATURE. (2)  
Prerequisites: 157, 158 or the equivalent. Lopes
164. THE LITERATURES OF ARGENTINA, URUGUAY, AND CHILE. (2)  
Prerequisites: 157, 158 or the equivalent. Lopes
165. CERVANTES AND THE PROSE OF THE GOLDEN AGE. (3) MacCurdy
166. SPANISH DRAMA FROM THE BEGINNING THROUGH THE 17TH CENTURY. (3)  
MacCurdy
- 197-198. UNDERGRADUATE PROBLEMS. (2, 2) Staff
- 201-202. HISTORY OF THE SPANISH LANGUAGE. (2, 2)  
A study of the phonological, morphological, and semantic evolution of Spanish from Latin. Intensive reading of selected texts to acquaint the student with the language of the period. Required of all candidates for a graduate degree. Duncan
203. SEMINAR: MEDIEVAL SPANISH LITERATURE. (2)  
A study of works in all the different genres from the earliest monuments of Spanish literature to the Renaissance. Duncan
205. RESEARCH METHODS. (2)  
Required of candidates for a graduate degree. Duncan
- 207-208. SEMINAR: SPANISH NOVEL TO 1868. (2, 2) Kercheville
241. SEMINAR: AMERICAN SPANISH. (2)  
A study of the diffusion of the Spanish language in the Americas, with emphasis on phonological, lexical, and other dialectal peculiarities. Duncan
- 251-252. GRADUATE PROBLEMS. (2, 2)  
For candidates for Master of Arts degree. Graduate Staff
- 263-264. SEMINAR: SPANISH-AMERICAN LITERATURE. (2, 2)  
Prerequisites: 157, 158 or the equivalent. Lopes
266. SEMINAR: GOLDEN AGE DRAMA. (2) MacCurdy
- 271-272. SPANISH POETRY. (2, 2) Lopes, Sender
278. SEMINAR: THE SPANISH PICAESQUE NOVEL. (2) MacCurdy
281. SEMINAR: REALISM THROUGH THE 15TH CENTURY. (2) Ortega
282. SEMINAR: REALISM IN THE 16TH AND 17TH CENTURIES. (2) Ortega
283. SEMINAR: REALISM IN THE 18TH AND 19TH CENTURIES. (2) Ortega
- 291-292. SEMINAR: PÉREZ GALDÓS AND THE MODERN SPANISH NOVEL. (2, 2) Kercheville
300. THESIS. (6) Graduate Staff
- 351-352. GRADUATE PROBLEMS. (2, 2)  
For candidates for the degree of Doctor of Philosophy. Graduate Staff
400. DISSERTATION. (Credit arranged) Graduate Staff

## FOLKLORE

- 97-98. SOUTHWESTERN HISPANIC FOLKLORE. (1, 1) Cobos
161. HISPANIC FOLKTALES. (2) Staff
162. HISPANIC FOLK BALLADS AND SONGS. (2) Staff

## PHILOSOPHY

Professors Alexander (Head), Bahm; Graduate Assistant Rebourgiere.



## GROUP REQUIREMENTS

Courses in this Department count toward Social Science ( Group III).

## MAJOR STUDY

Philosophy 1 or 2, 45, 56, 141, 142 and additional hours to a total of 30 including 10 numbered above 100.

## MINOR STUDY

Philosophy 1 or 2, 45 or 56, 141, 142 and additional hours to a total of 18.

- 1-2. HUMANITIES. [Introduction to Philosophy] (3, 3)  
 [2] Perspectives of world cultures with particular reference to their religious, intellectual, ethical, and artistic developments. Alexander, Bahm
45. THOUGHT AND EXPRESSION. (3)  
 The processes of logical thought as reflected in linguistic structure. Alexander
51. INTRODUCTION TO PHILOSOPHY. (3)  
 [1] Main philosophical problems and major types of solutions. (Offered in 1952-53 and alternate years.) Bahm
53. ETHICS. (3)  
 What makes acts right? What are the basic reasons for our choices? How far do these determine our decisions in business, politics, religion, and marriage? Bahm
56. LOGIC. (3)  
 Rules and fallacies of deductive and inductive reasoning. Prerequisite: 45 or permission of instructor. Alexander
64. PHILOSOPHY OF RELIGION. (3)  
 A study of the major religions, the nature of religion, and some problems of religion. (Offered 1951-52 and alternate years.) Bahm
- HA. READING FOR HONORS. (1-3 each semester) Staff
- HB. RESEARCH FOR HONORS. (1-3 each semester) Staff
102. AESTHETICS. (3)  
 An introduction to the philosophy of art and beauty. Alexander
115. PHILOSOPHY OF SCIENCE. (3)  
 Scientific attitudes, methods, problems, fundamental concepts, and social consequences. Prerequisite: 3 hours of philosophy or permission of instructor. (Offered 1952-53 and alternate years.) Bahm
123. HISPANIC THOUGHT. (2)  
 Major philosophical influences in Spanish culture. (Offered 1951-52 and alternate years.) Alexander
132. AMERICAN THOUGHT. (3)  
 The development of philosophical and religious concepts inherent in the American way of life. Bahm
- 141-142. HISTORY OF IDEAS. (3, 3)  
 Introduction to the history of Western philosophy. 141: Ancient and medieval philosophy; 142: Renaissance and modern philosophy. Alexander
167. POLITICAL THEORY. (3)  
 (Same as Government 167.) Jorrin
176. CONTEMPORARY PHILOSOPHY. (3)  
 Present-day philosophic thought exemplified by several outstanding thinkers. Prerequisite: 3 hours of philosophy. Bahm
185. ORIENTAL PHILOSOPHY. (2)  
 Introduction to major philosophical concepts and movements in Oriental cultures. Bahm

## 187. METAPHYSICS. (2)

Study of time, space, change, cause, relations, purpose, plurality, continuity, quality, novelty, and value. Prerequisite: 3 hours of philosophy. (Offered 1951-52 and alternate years.) Bahm

## 191. PHILOSOPHY OF LANGUAGE. (2)

The study of theories of semantics and symbolism (Offered 1952-53 and alternate years.) Alexander

## 241-242. PERIODS OF SPECIAL PHILOSOPHICAL SIGNIFICANCE. (2 hrs. each semester)

243-244 Plato, Aristotle; Descartes, Spinoza, Leibniz; Locke, Berkeley, Hume; or others to be chosen by the group. Prerequisites: 141, 142.

## 251-252. PROBLEMS. (1-3 each semester)

Alexander, Bahm

## 300. THESIS. (6)

Graduate Staff

Graduate Staff

**PHYSICS**

Professor Regener (Head); Consulting Professor Froman; Associate Professor Thomas; Assistant Professors Breiland, Green; Research Associate Bowen; Instructor Runge; Graduate Assistants Beck, Chanin, Hall, McCrory, Pack, Rogers.

**GROUP REQUIREMENTS**

Courses in this Department count toward Science and Mathematics (Group IV). Special attention is drawn to Physics 1 and Physics 3.

**MAJOR STUDY**

Required courses: Physics 51L, 52L, 101, 102, 103, 104, 105, 106, 101L, 102L, 106L, 107L; Mathematics 53, 54, and two of the four courses 141, 142, 143, 144; Astronomy 63; Chemistry 1L and 4L (or 2L); Architectural Engineering 1L; Industrial Arts 10L and 20L, or other drawing and shop experience approved by the Department Head; at least six additional hours taken from the following list of recommended courses: Physics 121, 131, 161, 166, 191, 192; Mathematics 141, 142, 143, 144; Chemistry 53L, 103L, 104L.

**MINOR STUDY**

Physics 51, 52, 101, 102, 103, 105, and one of the laboratory courses numbered above 100; Mathematics 53, 54, 141.

**COMBINED MAJOR STUDY IN PHYSICS AND METEOROLOGY**

Required courses: Physics 51L, 52L, 101, 101L, 103, 104, 121, 131, 125L, 126L, 127, 128; Mathematics 53, 54, and two of the four courses 141, 142, 143, 144; all other requirements are identical with those listed under major study in Physics, except for the following list of recommended courses from which the required six additional hours may be chosen: Physics 102, 102L, 105, 106L, 107L, 161; Astronomy 63; Mathematics 141, 142, 143, 144.

**GRADUATE STUDY**

Physics 101 through 107L do not carry graduate credit for students working toward an M.S. or a Ph.D. degree in Physics. Pre-

requisite for all courses numbered 200 and above: an undergraduate major in Physics equivalent to that outlined on p. 128.

1. INTRODUCTION TO ASTRONOMY AND PHYSICS. (2)  
(Same as Astronomy 1.) A non-technical introduction, including demonstrations; the first half devoted to Astronomy, the second half to Physics. LaPaz, Regener
3. INTRODUCTION TO WEATHER AND CLIMATE. (3)  
A non-technical introductory course dealing with the fundamental principles and methods of the study of weather and climate. Open to all students; no prerequisites. Breiland
- 11L. GENERAL PHYSICS. (4)  
Mechanics, heat, sound. Required of premedical, pre dental, and pre-optometry students, also of NROTC students in A & S, of pharmacy students, and of students majoring in Industrial Arts in the Engineering College. Prerequisites: Mathematics 15 and 16. (For students majoring in Industrial Arts this Mathematics prerequisite is fulfilled by Industrial Arts 1 and 2.) 3 lectures, 3 hrs. lab. Breiland
- 12L. GENERAL PHYSICS. (4)  
Electricity and magnetism, optics. Required of premedical, pre dental and preoptometry students, also of NROTC students in A & S, of pharmacy students, and of students majoring in Industrial Arts in the Engineering College. Prerequisites: Physics 11L, Mathematics 15 and 16. 3 lectures, 3 hrs. lab. Breiland
- 51L. GENERAL PHYSICS. (4)  
Mechanics, heat, sound. Required of students planning to major in certain sciences and in engineering. Pre- or corequisite: Mathematics 53. 3 lectures, 3 hrs. lab. Regener
- 52L. GENERAL PHYSICS. (4)  
Electricity and magnetism, optics. Required of students planning to major in certain sciences and in engineering. Prerequisites: Physics 51L and Mathematics 53. Pre- or corequisite: Mathematics 54. 3 lectures, 3 hrs. lab. Regener
101. HEAT AND THERMODYNAMICS. (3)  
Kinetic theory; specific heats; conduction, convection, radiation; change of state; classical thermodynamics. (Offered 1951-52 (I) and alternate years.) Thomas
- 101L. HEAT LABORATORY. (2)  
Measurement of temperature; heat transfer; radiation; specific heat; vacuum technique; viscosity; molecular motion and Avogadro's number; change of state. 1 lecture, 3 hrs. lab. (Offered 1951-52 (II) and alternate years.) Green
102. PHYSICAL OPTICS. (3)  
Wave theory of light; Fresnel and Fraunhofer diffraction; polarization; dispersion; absorption and scattering; black-body radiation. (Offered 1952-53 (I) and alternate years.) Green
- 102L. OPTICS LABORATORY AND GEOMETRICAL OPTICS. (2)  
Interference and diffraction phenomena; spectroscopic and spectrographic methods with visible and ultra-violet light; scientific photography; photoelectric densitometry. 1 lecture, 3 hrs. lab. (Offered 1951-52 (I) and alternate years.) Green
- 103-104. ANALYTICAL MECHANICS. (3, 3)  
Statics and dynamics of particles and rigid bodies; Lagrange's and Hamilton's equations; theory of vibration and sound; hydrodynamics. Pre- or corequisites: Mathematics 141, 142. (Offered 1952-53 and alternate years.) Thomas, Green
- 105-106. ELECTRICITY AND MAGNETISM. (3, 3)  
Electrostatic and electro-magnetic field theory. Direct and alternating

- current circuit theory. Pre- or corequisites: Mathematics 141, 142.  
(Offered 1951-52 and alternate years.) Regener, Thomas
- 106L. ELECTRICITY LABORATORY. (2)  
Measurement of d.c. and a.c. circuit constants; charge; magnetic fields;  
power; resonance. 1 lecture, 3 hrs. lab. (Offered 1952-53 (I) and  
alternate years.) Green
- 107L. ELECTRONICS LABORATORY AND ELECTRON PHYSICS. (3)  
Characteristics of vacuum tubes; amplifiers; oscillators; oscilloscopes;  
rectifiers; photoelectric cells; pulsing and scaling circuits. 2 lectures;  
3 hrs. lab. (Offered 1952-53 (II) and alternate years.) Green
121. GENERAL METEOROLOGY. (3)  
Instruments and observations; thermodynamics and statics; precipita-  
tion; radiation; wind; air masses; fronts and cyclones; forecasting  
techniques. Breiland
- 125L-126L. SYNOPSIS METEOROLOGY. (3, 3)  
Weather analysis and forecasting from surface and upper air data.  
Pre- or corequisite: 121. 2 lectures, 3 hrs. lab. (Offered in alternate  
years; alternates with Physics 127, 128.) Breiland
- 127-128. DYNAMIC METEOROLOGY. (3, 3)  
Thermodynamics of dry and moist air; stability of hydrostatic equi-  
librium; atmospheric kinematics and dynamics. Pre- or corequisite:  
121. (Offered in alternate years; alternates with Physics 125L, 126L.)  
Breiland
131. ATMOSPHERIC PHYSICS. (3)  
Distribution of gases in the atmosphere; the ozone problem; distribu-  
tion and variation of temperature; the ionosphere; aurora and the  
light from the night sky; atmospheric electricity. (Offered 1951-52 (II)  
and alternate years.) Breiland, Regener
- 161-162. EXPERIMENTAL RESEARCH METHODS. (2 hrs. each semester.)  
163-164. Advanced laboratory work. Prerequisite: approval of instructor.  
Green, Regener
166. METHODS OF THEORETICAL PHYSICS. (3)  
Problems in diffusion, heat conduction, wave motion and potential  
theory. Prerequisite: approval of instructor. (Offered in semester II  
every year.) Thomas
190. INTRODUCTION TO CONTEMPORARY PHYSICS. (3)  
Occasionally offered during the summer session. Staff
191. CONTEMPORARY PHYSICS. (3)  
The theory of special relativity; early quantum theory with applica-  
tions to specific heats and to atomic and molecular spectra.  
Regener, Thomas
192. CONTEMPORARY PHYSICS. (3)  
An introduction to wave mechanics, to nuclear physics and to cosmic  
radiation. Regener, Thomas
199. SEMINAR. (1 hr. each semester) Breiland, Green, Regener, Thomas
201. STATISTICAL MECHANICS AND THERMODYNAMICS. (3)  
Classical and quantum statistics with applications to molecules and  
elementary particles. (Offered 1951-52 (I) and alternate years.) Thomas
- 211-212. ELECTRODYNAMICS. (3, 3)  
Maxwell's equations applied to radiation, scattering, micro-waves;  
Lorentz invariance. (Offered 1952-53 and alternate years.) Thomas
- 221-222. QUANTUM MECHANICS. (3, 3)  
Uncertainty principle; potential wells and barriers; perturbation  
theory; relativistic wave equation; quantization of the radiation field.  
Thomas
231. ATOMIC STRUCTURE. (3)  
Relativistic corrections; Zeeman and Stark effects; calculations for  
many-electron systems. Prerequisite: 221. (Offered 1951-52 (II) and  
alternate years.) Regener

241. NUCLEAR PHYSICS. (3)  
Binding energies; scattering; photo-disintegration; compound nuclei; beta-decay; alpha-decay; nuclear forces. Prerequisite: 221. (Offered 1952-53 (II) and alternate years.) Thomas
- 251-252. PROBLEMS. (2-4 each semester.) Green, Regener, Thomas
299. ADVANCED SEMINAR. (1-3 each semester.) Green, Regener, Thomas
300. THESIS. (6) Green, Regener, Thomas
350. RESEARCH. (6-12) Regener, Thomas
400. DISSERTATION. (Credit arranged) Froman, Regener, Thomas

## PORTUGUESE

See Modern and Classical Languages.

## PSYCHOLOGY

Professor Peterson (Head); Assistant Professors Johnson, Keston, Norman, Utter; Instructors Benedetti, Rigney; Graduate Assistants Benedict, Doehring, Kleinfeld, Liverant, Wierman.

## GROUP REQUIREMENTS

Courses in this Department count toward Science and Mathematics (Group IV).

## MAJOR STUDY

For the degree of Bachelor of Arts: 30 hours in Psychology, including 198.

For the degree of Bachelor of Science: 30 hours in Psychology, including 180, and 196. Of these 30 hours, 4 hours must be taken in *either* 121L and 122L *or* in 193L and 196L. The minor must be selected from one of the following departments: Biology, Chemistry, Mathematics, or Physics.

## MINOR STUDY

18 hours in Psychology, of which at least 6 hours must be in courses numbered above 100.

## 1L-2L. GENERAL PSYCHOLOGY. (3, 3) Yr.

Credit suspended for 1L until 2L is completed. 1L is prerequisite to 2L. 2 lectures, 2 hrs. lab. Staff

## 51. GENERAL PSYCHOLOGY. (3)

An introductory course. Not open to those who have credit for Psychology 2L. Staff

## 54. EDUCATIONAL PSYCHOLOGY. (3)

An introductory course, primarily for sophomores. Prerequisite: 2L or 51. Keston, Johnson

## 58. INDUSTRIAL PSYCHOLOGY. (3)

Applications of psychology to industry and business. Prerequisite: 2L or 51. Utter

## 60. PERSONALITY AND ADJUSTMENT. (3)

Introduction to personality theory; principles of adjustment and mental hygiene. Prerequisite: 2L or 51. Benedetti

## HA. READING FOR HONORS. (1-3 each semester)

Staff

## HB. RESEARCH FOR HONORS. (1-3 each semester)

Staff

## 101. SOCIAL PSYCHOLOGY. (3)

The behavior of individuals as influenced by other human beings. Prerequisite: 2L or 51. Keston

102. **PSYCHOLOGY OF PERSONALITY. (3)**  
An advanced course in theories, genetic development, and measurement of personality. Keston, Norman
103. **ABNORMAL PSYCHOLOGY. (3)**  
Prerequisite: 60 or consent of instructor. Benedetti, Norman
- 121L. **EXPERIMENTAL PSYCHOLOGY. (3)**  
Lectures and experiments on sensory processes. Prerequisite: 2L or 51. 1 lecture, 6 hrs. lab. Utter
- 122L. **EXPERIMENTAL PSYCHOLOGY. (3)**  
Lectures and experiments on motor processes, learning, reasoning and imagination. Prerequisite: 2L or 51. 1 lecture, 6 hrs. lab. Utter
131. **PSYCHOLOGICAL AND EDUCATIONAL TESTS. (3)**  
Problems related to mental measurement; review of various types of tests and their practical applications. Norman
- 132L. **INDIVIDUAL MENTAL TESTING (3)**  
Practical laboratory study and discussion of Binet, Arthur and Wechsler tests. Norman
180. **ADVANCED STATISTICAL METHODS IN PSYCHOLOGY. (3)**  
Prerequisites: a course in statistics or consent of instructor; 2L or 51. Utter
183. **EDUCATIONAL PSYCHOLOGY. (3)**  
Advanced course. Not open to those who have credit for 54. Prerequisite: 2L or 51. Keston, Johnson
187. **CHILD PSYCHOLOGY. (3)**  
The principles of human behavior in infancy, childhood, and adolescence. Prerequisite: 2L or 51. Keston, Johnson
193. **ANIMAL PSYCHOLOGY. (3)**  
A comparative study of heredity, maturation, learning, and the higher mental processes as revealed in various animals. Prerequisite: 2L or 51. Peterson
- 193L. **ANIMAL PSYCHOLOGY LABORATORY. (2) 6 hrs. lab.** Peterson
196. **PHYSIOLOGICAL PSYCHOLOGY. (3)**  
Correlation of behavior and structure, with emphasis on the nervous system. Prerequisite: 2L or 51. Peterson
- 196L. **PHYSIOLOGICAL PSYCHOLOGY LABORATORY. (2) 6 hrs. lab.** Peterson
197. **READINGS IN PSYCHOLOGY. (1-2 per semester to a maximum of 6.)**  
Independent reading in a particular field of psychology, accompanied by conferences and followed by an integrated report covering material read. Prerequisite: 2L or 51. Staff
198. **HISTORY OF PSYCHOLOGY. (3)** Prerequisite: 2L or 51. Peterson
199. **UNDERGRADUATE PROBLEMS. (1-3)** Prerequisite: 2L or 51. Staff
- 221-222. **GRADUATE SEMINAR. (1-3 each semester)** Peterson, Keston
240. **CLINICAL PSYCHOLOGY. (3)**  
Theory and problems in clinical psychology. Norman
- 251-252. **PROBLEMS. (2-3 each semester)** Graduate Staff
300. **THESIS. (6)** Graduate Staff

## SOCIOLOGY

Professor Walter (Head); Associate Professor Miller; Assistant Professors Ellis, Saunders; Graduate Assistants DeGroot, Murray.

## GROUP REQUIREMENTS

Courses in this Department count toward Social Science (Group III).

## MAJOR STUDY

Sociology: 24 hours in Sociology courses numbered above 50, including 18 above 100.

Social Work: Combined major and minor; see Social Work Curriculum.

## MINOR STUDY

12 hours in Sociology courses numbered above 100.

- 1-2. INTRODUCTION TO SOCIAL SCIENCE. (3, 3) Yr.  
(Same as Economics 1, 2 and Government 1, 2.) Credit suspended until both semesters are completed. Staff
51. THE FAMILY. (3) Ellis
55. PRINCIPLES OF SOCIOLOGY. (3)  
Prerequisite to most advanced courses in the Department. Staff
66. SOCIAL CHANGE. (3) Miller
71. SOCIAL CONTROL. (3)  
Agencies and processes by which groups regulate their members. Prerequisite: 55 or equivalent. Miller
72. SOCIAL PATHOLOGY. (3)  
Social problems as they impinge upon individual welfare. Prerequisite: 55 or equivalent. Miller
73. INTRODUCTION TO LATIN AMERICA. (3)  
(Same as Anthropology 73, Economics 73, and Government 73.) Does not give credit toward a Sociology major or minor.
82. URBAN AND RURAL SOCIOLOGY. (3) Staff
- HA. READING FOR HONORS. (1-3 each semester) Staff
- HB. RESEARCH FOR HONORS. (1-3 each semester) Staff
101. SOCIAL PSYCHOLOGY. (3)  
(Same as Psychology 101.)
102. COLLECTIVE BEHAVIOR. (3)  
Sociological approach to the analysis of human behavior. Prerequisite: 55 or equivalent. Walter
107. MAN AND SOCIETY IN LATIN AMERICA. (3)  
Does not give credit toward a Sociology major or minor. Prerequisite: 73 or equivalent. Jorrin
109. CRIMINOLOGY. (3)  
Crime as a social phenomenon. Prerequisite: 71 or equivalent. Walter
110. JUVENILE DELINQUENCY. (2)  
Prerequisite: 55 or equivalent. Miller
111. SOCIAL PROBLEMS OF LATIN AMERICA. (3)  
Does not give credit toward a Sociology major or minor. Prerequisite: 73 or equivalent. Jorrin
117. SOCIAL PROBLEMS OF NEW MEXICO. (3) Walter
140. ECONOMIC SECURITY. (3)  
(Same as Economics 140.)
- 151-152. INTRODUCTION TO SOCIAL SERVICE. (3, 3)  
Survey of the fields of social welfare. Problems of individual and family relationships as affected by socio-economic and psycho-cultural forces. Prerequisite: 72 or equivalent. Ellis
154. RACE AND CULTURE RELATIONS. (3) Walter
160. SOCIOLOGY OF INDUSTRIAL RELATIONS (3)  
The influence of progressive industrialization on traditional institutional arrangements. Prerequisite: 82 or equivalent. Walter
163. HISTORY OF SOCIAL THOUGHT. (3)  
Prerequisite: 55 or equivalent. Miller

166. METHODS IN SOCIOLOGY. (3)	
Prerequisite: 55 or equivalent.	Staff
167F. FIELD SESSION. (4)	
Field training in use of research techniques. Prerequisite: 166 or equivalent.	Staff
170. ORGANIZATION AND ADMINISTRATION OF SOCIAL WELFARE. (3)	
(Same as Government 170.)	Ellis
195. POPULATION PROBLEMS. (3)	
Prerequisite: 82 or equivalent.	Walter
197. FIELD OBSERVATION AND PARTICIPATION. (3)	
Prerequisites: 151, 152.	Ellis
241. SEMINAR: SOCIAL ORGANIZATION. (3)	Graduate Staff
242. SEMINAR: SOCIAL PROCESSES. (3)	Graduate Staff
300. THESIS. (6)	Graduate Staff

## SPANISH

See Modern and Classical Languages.

## SPEECH

Professor Eubank (Head); Associate Professors Allen, Keleher, Ried;  
Assistant Professors Chreist, Hoffman, MacBath.

### SPEECH LABORATORY

Every freshman and transfer student entering the University is required to take speech, voice, and hearing tests in the Speech Laboratory. If these tests show significant defects, the student may be required to take work in the Speech Laboratory. In case of severe stuttering, stammering, lisping, speech blockage, lack of rhythm, etc., the student may be required to take Speech 3, and to do additional work in the Speech Laboratory, under faculty direction. Students who speak with a foreign accent may be required to take Speech 5.

### FORENSICS

The Forensics Society, an extra-curricular organization, sponsors work in debate, extempore and impromptu speaking, oratory, radio production, and other forensic activities. Students interested in these activities should join the Forensics Society. Sophomores and juniors should take Speech 77, Argumentation and Debate.

The Speech Department sponsors a chapter of Tau Kappa Alpha, National Honorary Forensic Fraternity. Qualified students who have distinguished themselves in intercollegiate forensic participation are eligible for membership.

### MAJOR STUDY

35 hours including 1 and 2 (or equivalent), 51, 60, 91, 101, 120, 170, 195 and 198.

All students majoring or minoring in Speech must take a Speech



Placement Test and must make a speech and voice recording. Students who have speech and/or voice defects must take Speech 3 and possibly further work, without credit, in the Speech Laboratory.

## MINOR STUDY

20 hours completed in the Department of Speech, including 1, 2, 57, 60, 120 and 170.

## 1-2. FUNDAMENTALS OF SPEECH. (3, 3)

The preparation and delivery of original and practical extempore speeches, including a study of rhetorical principles, audience psychology, methods of presentation, and the basic principles of the physiology of speech and voice. Staff

## 3. REMEDIAL SPEECH. (3)

Primarily for students needing speech correction. Emphasis upon the speech process and its daily use. The more common types of speech disorders, their causes, and theories of treatment are discussed as they relate to the needs of the students in the class. 2 lectures, 2 hrs. lab. Chreist

## 5. SPEECH FOR FOREIGN LANGUAGE STUDENTS. (3)

A course designed for the student who speaks English with a foreign accent or who lacks English speech patterns and rhythms. Considerable work will be given in International Phonetics. Duncan

## 50. PARLIAMENTARY PROCEDURE. (1)

Study and practice of the rules governing the proceedings of groups and deliberate assemblies. Allen

## 51. INTRODUCTION TO RADIO. (2)

A study of the history of the field of broadcasting, requirements and opportunities in the various phases of the profession. Study and practice of vocal considerations in using the microphone. Prerequisite: 1 or 55. Allen

## 55. SPEECH FOR BUSINESS AND PROFESSIONS. (3)

Speech for public occasions, the business conference, and the professions. Speech majors and minors should take 1 and 2, not 55. Students having received credit in 55 will not be allowed credit in 1. Students having completed 55 may take 2, although 57 is recommended as a follow-up course. Staff

## 57. TECHNIQUES OF PUBLIC DISCUSSION. (3)

Methods and practice in organizing and directing socially integrated speech programs in the community. Book reports, symposiums, forums, and panels will be considered. Prerequisites: 1, 2. Allen

## 60. ORAL INTERPRETATION. (3)

Voice training with emphasis upon the developing of voice and body in oral communication. Oral reading of poetry and prose excerpts. Prerequisite: 1 or 55. Eubank

## 61. ORAL INTERPRETATION. (3)

Advanced training in the oral interpretation of poetry, dialect readings, plays, novels and short stories. The student will be required to arrange and present a public program. Prerequisite: 60. Eubank

## 77. ARGUMENTATION AND DEBATE. (3)

A course for students interested in debate and intercollegiate forensics. Prerequisite: consent of instructor. McBath

## 78. ARGUMENTATION AND DEBATE. (3)

A continuation of 77. This course stresses the practical problems of debate. Prerequisite: 77. McBath

## 90. RADIO PRODUCTION. (3)

A beginning course in the nature and production of radio speech, techniques, direction, and production (excluding radio drama). Allen

91. HISTORY OF THE ENGLISH LANGUAGE. (2)  
(Same as English 91.) Pearce
101. PHONETICS. (3)  
English phonetics as applied to the problems of articulation, pronunciation, rhythm, dialects, and to the teaching of speech and to speech correction. Hoffman
120. SCIENTIFIC BASES OF SPEECH. (3)  
A study of the bases of the speech process as presented in the scientific materials of such related fields as physics, physiology, psychology, and linguistics. Consideration of these principles of science as they influence normal and deviate speech patterns. Prerequisite: 101 or consent of instructor. Chreist
121. PATHOLOGIES OF SPEECH AND HEARING. (3)  
A survey of pathological problems in the areas of speech and hearing and the resulting adjustment problems which develop. Scientific investigations conducted in each of the various fields are studied in order to assemble a group of principles for diagnosis and rehabilitation. Prerequisite: 120 or consent of instructor. Chreist
135. ARTICULATORY PROBLEMS IN SPEECH CORRECTION. (3)  
Sound substitutions, distortions, omissions, delayed speech, and problems of the deaf will be considered. Laboratory work using subjects from the University student body and from the public schools will be required. Prerequisites: 1, 2 and permission of instructor. Chreist
136. STUTTERING PROBLEMS IN SPEECH CORRECTION. (3)  
The various theories of stuttering and other rhythmic disorders as well as corrective therapies will be studied. Prerequisites: 1, 2 and permission of instructor. Chreist
170. SPEECH ACTIVITIES IN THE PUBLIC SCHOOL. (3)  
A course designed for secondary school teachers. The place of speech education in the school; discussion of specific problems in conjunction with the teaching of debate, public speaking, oral reading, dramatics, speech improvements and auditorium programs. Prerequisite: consent of instructor. Eubank
190. ADVANCED RADIO PRODUCTION. (3)  
An advanced lecture and workshop course using radio as a resource for modern living or classroom teaching. Utilization of network and station programs, transcriptions, recordings, and equipment maintenance. The writing, directing, and production of various programs will be required of each student. Prerequisites: 1 and 2 or 6 hours of Journalism. Allen
192. RADIO WRITING. (3)  
Literature of radio, with considerable practice in writing scripts and radio journalism. Prerequisites: 1 and/or 2 and 9 hours of English composition or 6 hours of Journalism. Allen
195. AMERICAN PUBLIC ADDRESS. (3)  
Speeches of great American speakers studied against the background of their lives and the issues of the times. Prerequisites: 1, 2, 77 or 57 or consent of instructor. Eubank, McBath
196. BRITISH PUBLIC ADDRESS. (3)  
Speeches of great British speakers studied against the background of their lives and the issues of the times. Prerequisites: 1, 2, 77 or 57 or consent of instructor. Eubank, McBath
198. PERSUASION. (3)  
An advanced course open to students with senior classification or graduate standing. Consideration will be given such topics as arresting and holding attention, audience and crowd behavior, leadership, propaganda devices, barriers to motivation, social consciousness, suggestion, primary drives and motivation. Prerequisite: consent of instructor. Eubank and McBath

200. INTRODUCTION TO GRADUATE STUDY. (3)  
A study of the various areas within the field of speech with emphasis on research problems, techniques and bibliography. Each student will submit a seminar paper demonstrating research ability. Required of all graduate students. Eubank
220. SEMINAR IN RADIO. (3)  
An advanced course in radio broadcasting and production, with research emphases on the educational and cultural aspects of the field. A research paper is required. Allen
230. ADVANCED SPEECH PATHOLOGY. (3)  
A course of study in the less common types of speech and hearing problems which require clinical treatment. Aphasia, esophageal speech problems, speech for the hard of hearing and deaf, and lip reading are discussed. The work of the speech pathologist in the clinic is emphasized. Chreist
240. CLASSICAL RHETORIC. (3)  
Emphasis on rhetorical criticism. A study of the works of the ancients that have influenced rhetorical thought, criticism and speaking (Attic and Roman orators and rhetoricians). Eubank
- 251-52. PROBLEMS. (2-3 each semester) Allen, Chreist, Eubank, McBath
300. THESIS. (6) Eubank, Allen, Chreist, McBath

## COLLEGE OF ENGINEERING

**T**HE DUTIES of the engineer are so varied and far-reaching that no single definition adequately portrays his services to the human race. He should, however, be able to apply the laws of nature to the benefit of mankind, to manage and to control technical works and industries, and to apply his scientific training and experience to the political and social problems of his day. Such a variety of work requires men of good character who are well grounded in the fundamentals of the profession of engineering.

It is the purpose of the College of Engineering to train the student in the elements of his branch of engineering, and to develop honesty, loyalty, industry, and thoroughness, so that he may enter the profession of his choice with profit to mankind as well as to himself.

### ADMISSION

A detailed statement of entrance requirements will be found under "Admission."

### SCHOLASTIC REGULATIONS

Students in the College of Engineering will be governed by the scholastic regulations given under "General Academic Regulations."

### COURSES OF STUDY

The College of Engineering offers four-year programs of study leading respectively to the degrees of Bachelor of Science in Architectural Engineering, Bachelor of Science in Civil Engineering, Bachelor of Science in Electrical Engineering, Bachelor of Science in Mechanical Engineering, Bachelor of Science in Chemical Engineering, and Bachelor of Science in Industrial Arts. It is also possible to arrange a program of study so that the Bachelor of Arts degree can be obtained in one additional year.

**AERONAUTICAL ENGINEERING, PETROLEUM ENGINEERING.** Students in Mechanical Engineering may elect courses so that an option in either of the above fields can be obtained.

**AIR SCIENCE, NAVAL SCIENCE.** Students enrolled in Air Force ROTC or Navy ROTC may complete any curriculum in the College of Engineering in the required time by the proper substitution of courses. The department Head concerned should be consulted before the student makes out a program.

### GRADUATE STUDY

A program of graduate work is offered in the College of Engineering leading to the Master of Science degree in the department in which the student desires to major. For complete details regard-

## REQUIREMENTS FOR GRADUATION

Electives, where permitted, are to be chosen with the consent of the Head of the department concerned.

The course of study for the first year is uniform for all departments except Industrial Arts. Near the end of the freshman year, the student must elect the course which he intends to follow, and report his choice to the Dean's office. Students may elect the course in Industrial Arts after the first year without loss of time.

## FRESHMAN YEAR

First Semester			Second Semester		
	Gr.	Hrs. Lect.-Lab.		Gr.	Hrs. Lect.-Lab.
Math 15	3	(3-0)	Math 22	4	(4-0)
Math 16	2	(2-0)	Engl 2	3	(3-0)
Engl 1	3	(3-0)	Chem 2L	4	(3-3)
Chem 1L	4	(3-3)	AE 2L	3	(2-4)
AE 1L	3	(1-6)	*AE 4L	2	(0-4)
*AE 3	1	(1-0)		—	—
	16	(13-9)	*PE	1	(12-11)
*PE	1				

\* Students enrolled in Air ROTC or Navy ROTC may substitute ROTC courses for the above.

## NOTES:

- a. Students deficient in mathematics will be required to take a preparatory course in this subject before taking Mathematics 15 or 16.
- b. Students deficient in English will be required to take English 1W.
- c. For a description of the freshman courses refer to page 120 for Mathematics; to page 106 for English; to page 101 for Chemistry; and to page 141 for Architectural Engineering (A.E.).

COLLEGE OF ENGINEERING  
DEPARTMENTS OF INSTRUCTION

Courses numbering: from 1-49, normally open to freshmen; from 50-99, normally open to sophomores; from 100-199, normally open to juniors, seniors and graduates; 200-400 open to graduates only.

Graduate credit for courses listed is allowed at the discretion of the Graduate Committee.

Symbols used in course descriptions: L—part of the course is laboratory work; F—course is given during field session; SS—course offered in eight weeks' summer session only; Yr.—course offered throughout two semesters and credit for a single semester's work is suspended until the entire course is completed; ( )—semester hours credit; credit hours separated by a dash (1-3) indicate variable credit in the course; [ ]—former course number or title.

A schedule of course offerings, including hours of meeting, is issued at the opening of each session. The University reserves the right to cancel any listed course or to make a substitution in instructors when necessary.

### ARCHITECTURAL ENGINEERING

Associate Professor Heimerich (Head), Assistant Professors Huzarski, Stoneking; Instructors Melby, Nickell.

The curriculum in Architectural Engineering not only emphasizes the structural and mechanical phases of architecture, but also the architectural design of buildings, both public and private.

After graduation, opportunities for employment would be in the fields of drafting, architectural or structural designing, superintending building construction, estimating cost of construction, general contracting, and in the many service organizations in the building field.

All work, drawings and designs made by the student and presented for credit will become the property of the department; their return will be at the discretion of the faculty.

**ARCHITECTURAL ENGINEERING LABORATORY.** The drafting and design rooms for engineering drawing and architecture are housed in a temporary building, B-2, near the main engineering buildings. Four well-equipped drafting rooms are provided for the work of this department, in addition to offices, a store room, and a blueprint room.

### CURRICULUM IN ARCHITECTURAL ENGINEERING

First Semester		SOPHOMORE YEAR		Second Semester	
	Hrs.				Hrs.
	Cr. Lect.-Lab.				Cr. Lect.-Lab.
Math 53	4 (4-0)	Math 54	4 (4-0)		
Physics 51L	4 (3-3)	Physics 52L	4 (3-3)		
AE 51L	3 (0-9)	CE 60	3 (3-0)		
Art 42	2 (2-0)	AE 52L	3 (0-9)		
Art 5	2 (0-6)	Art 61	2 (2-0)		
*Econ 51	3 (3-0)	*Art 3 or 6	2 (0-6)		
	18 (12-18)		18 (12-18)		
*PE	1	*PE	1		

JUNIOR YEAR					
AE 101L	3	(0-9)	AE 102L	3	(0-9)
CE 102	3	(3-0)	CE 124	2	(2-0)
ME 108	3	(3-0)	CE 122L	2	(1-3)
EE 108L	4	(3-3)	CE 115L	3	(2-3)
Art 62	2	(2-0)	CE 103L	1	(0-3)
*CE 53L	3	(1-6)	ME 109	3	(2-3)
			*English 64	3	(3-0)
	18	(12-18)		17	(10-21)
SENIOR YEAR					
AE 151L	5	(0-15)	AE 152L	5	(0-15)
AE 161	3	(3-0)	AE 162	3	(3-0)
AE 171	1	(1-0)	AE 168	2	(2-0)
CE 156L	3	(1-6)	AE 172	1	(1-0)
CE 158	2	(2-0)	AE 198	0	(0-0)
*Elective	3	(3-0)	CE 159L	3	(1-6)
			*Elective	2	(2-0)
	17	(10-21)		16	(9-21)

\* Students enrolled in Air ROTC or Navy ROTC may substitute ROTC courses for the above.

#### DESCRIPTION OF COURSES

When a prerequisite course number is not preceded by a department designation, "A.E." is implied.

#### A. E.

- 1L. ENGINEERING DRAWING. (3)  
The essentials of drafting, including the use of instruments, lettering, orthographic projection, dimensioning, auxiliary views, sections, pictorials, engineering symbols, and theory and science of engineering drawing.
- 2L. DESCRIPTIVE GEOMETRY. (3)  
Problems involving the point, line and plane, and practical problems involving the above principles with emphasis on developing the student's ability to visualize objects in space. Approved drawing equipment required. Prerequisite: 1L.
3. ORIENTATION. (1)  
Orienting beginning engineering students in the various phases of engineering.
- 4L. ENGINEERING PROBLEMS. (2)  
Use of the slide rule and presentation of various engineering problems.
- 12L. MACHINE DRAWING. (3)  
A continuation of 1L, with emphasis on advanced dimensioning, detail and assembly drawings, exploded views, etc. Prerequisite: 1L. Primarily for Industrial Arts students.
- 51L. SHADES, SHADOWS AND PERSPECTIVE. (3)  
A fundamental course involving the principles of shades, shadows and perspective. Prerequisite: 2L.
- 52L. ARCHITECTURAL DRAFTING. (3)  
Preparation of complete small-scale working drawings for small buildings. Prerequisite: 2L.
- 62L. CONSTRUCTION DRAWING. (3)  
Small house plans, with emphasis on construction details. Prerequisite: 2L. Primarily for Industrial Arts students.
- 101L. ELEMENTS OF ARCHITECTURE I. (3)  
A beginning study of architectural planning and designing, including plans, elevations and sections of small buildings, proceeding to more difficult problems in architectural compositions. Prerequisites: A.E. 51L, Art 5, 6, 42, 61.

- 102L. ELEMENTS OF ARCHITECTURE II. (3)  
A continuation of A.E. 101L. Prerequisites: A.E. 101L, Art 62.
111. CARTOGRAPHY. (3)  
Map projection and use of maps to show areal distribution and graphic representation of statistical data. Prerequisite: 1L and consent of instructor.
- 151L. WORKING DRAWINGS I. (5)  
A continuation of A.E. 102L, and the working drawings of buildings, including structural and mechanical details. Prerequisite: A.E. 102L; corequisite: C.E. 156L.
- 152L. WORKING DRAWINGS II. (5)  
A continuation of A.E. 151L. Prerequisite: 151L; corequisite: C.E. 159L.
161. ARCHITECTURAL PRACTICES AND BUILDING MATERIALS I. [Building Materials and Construction I]. (3)  
The use of materials and type of construction as applied to the architectural features of a building. The duties of the architect; relationship of the architect-contractor-client; frequent visits to buildings under construction. Prerequisite: senior standing.
162. ARCHITECTURAL PRACTICES AND BUILDING MATERIALS II. [Building Materials and Construction II] (3)  
A continuation of A.E. 161. Prerequisite: senior standing.
168. SPECIFICATION WRITING. (2)  
Writing specifications for various types of building construction. Prerequisite: senior standing.
- 171-172. SEMINAR. (1, 1)  
Oral and written reports on, and the discussion of architectural topics. Prerequisite: senior standing.
198. INSPECTION TRIP. (0)  
Required of all seniors.

## CHEMICAL ENGINEERING

Professor Castonguay (Head); Assistant Professor Hoover; Instructor Fern.

Chemical engineering is that branch of engineering concerned with the development and application of manufacturing processes in which chemical or certain physical changes of material are involved.

The course in Chemical Engineering is designed to afford the student broad training in the fundamentals of mathematics, physics, chemistry, and engineering to meet the needs of the chemical or related industries where men competent to design, develop, and operate new processes and to improve existing processes, are required. The chemical engineer is not specifically trained for only one industry. The distinctly professional courses of Unit Operations and Unit Processes enable him to apply his knowledge to any chemical or process industry with relatively little difficulty.

The graduate chemical engineer will find many avenues of opportunities in research and development; production, operation, and maintenance; management and administration; design, construction, and installation; technical service and sales; consulting;



teaching, and technical writing, etc., in such industries as industrial chemicals, petroleum, explosives, plastics, rubber products, paper and allied products, synthetic rubber, food products, drugs, insecticides, glass, cement, clay, iron and steel, paints and varnishes, oils, soaps, rayon and synthetics.

**CHEMICAL ENGINEERING LABORATORY.** The new Chemical Engineering building has a floor space of over 8,000 sq. ft. and contains a laboratory adequately equipped with pilot plant equipment for use in the study of Unit Operations of Chemical Engineering such as fluid flow, heat flow, evaporation, distillation, air conditioning, absorption, filtration, crystallization, etc., and Unit Processes such as nitration, sulfonation, hydrogenation, etc.

The process development laboratory is well equipped for the study of small scale manufacture of chemical products. Smaller laboratories are provided for the testing of fuels, gases, water, etc.

Adequate classroom space and design laboratory are available. Shop facilities are in conjunction with the well-equipped Industrial Arts Shop.

#### CURRICULUM IN CHEMICAL ENGINEERING SOPHOMORE YEAR

First Semester			Second Semester		
	Hrs.			Hrs.	
	Cr.	Lect.-Lab.		Cr.	Lect.-Lab.
Math 53	4	(4-0)	Math 54	4	(4-0)
Physics 51L	4	(3-3)	Physics 52L	4	(3-3)
Chem 53L	5	(2-9)	Chem 101L	4	(3-3)
Ch E 51	2	(3-0)	Ch E 52	3	(3-0)
*Econ 51	3	(3-0)	C E 60	3	(3-0)
	18	(15-12)		18	(16-6)
*PE	1		*PE	1	

#### JUNIOR YEAR

	Cr.	Lect.-Lab.		Cr.	Lect.-Lab.
Ch E 111	4	(4-0)	Ch E 112	4	(4-0)
Ch E 113L	2	(0-6)	Ch E 114L	2	(0-6)
Chem 111L	4	(3-3)	Chem 112L	4	(3-3)
Chem 102L	4	(3-3)	*M E 104L	3	(3-0)
M E 105	2	(2-0)	C E 102	3	(3-0)
	16	(12-12)	C E 103L	1	(0-3)
				17	(13-12)

#### SENIOR YEAR

	Cr.	Lect.-Lab.		Cr.	Lect.-Lab.
Ch E 191	3	(3-0)	Ch E 192	3	(3-0)
Ch E 181L	2	(0-6)	Ch E 182L	2	(0-6)
E E 105L	3	(2-3)	Ch E 194L	2	(1-3)
Ch E 171	2	(2-0)	Ch E 196L	3	(2-3)
Ch E 161	3	(3-0)	E E 106L	3	(2-3)
*Elective (non-tech)	3	(3-0)	Ch E 162	2	(2-0)
Ch E 151	1/2	(1-0)	*Elective (non-tech)	2	(2-0)
Elective (tech) or			Ch E 152	1/2	(1-0)
Ch E 153	2	(2-0)	Ch E 198	0	(0-0)
	18 1/2	(16-9)		17 1/2	(13-15)

\* Students enrolled in Air ROTC or Navy ROTC may substitute ROTC courses for the above.

## DESCRIPTION OF COURSES:

When a prerequisite course number is not preceded by a department designation, "Ch.E." is implied.

## Ch. E.

51. CHEMICAL CALCULATIONS. (2)  
More extensive problem work in the stoichiometric principles of chemistry, including composition changes; the material balance; units and dimensions. Prerequisite: Chemistry 2L or 4L or the equivalent.
52. INDUSTRIAL STOICHIOMETRY. (3)  
The application of the fundamental laws of chemistry, physics, and mathematics to industrial chemical calculations. Prerequisites: Ch. E. 51 or the equivalent, Physics 51L, and Mathematics 53.
111. PRINCIPLES OF CHEMICAL ENGINEERING. (4)  
A study of the unit operations and their application to the chemical industry. Problems in the flow of fluids, heat transfer, evaporation, filtration, crushing and grinding, mechanical separation, and related topics. Prerequisites: Ch.E. 52 or the equivalent, Mathematics 54.
112. PRINCIPLES OF CHEMICAL ENGINEERING. (4)  
A continued lecture and recitation study of the unit operations and their applications to the chemical industries. Problems in air conditioning, drying, distillation, gas absorption, extraction, crystallization, and similar topics. Prerequisite: 113L.
- 113L. UNIT OPERATIONS, LABORATORY I. (2)  
Laboratory practice and experimental study of unit operations covered in Ch.E. 111. Corequisite: 111.
- 114L. UNIT OPERATIONS, LABORATORY II. (2)  
Experimental laboratory study of the unit operations covered by Ch.E. 112. Prerequisite: 113L; corequisite: 112.
- 151-152. SEMINAR. ( $\frac{1}{2}$ ,  $\frac{1}{2}$ )  
Senior year. Reports on selected topics and surveys. Presentation and discussion of papers from current technical journals, and topics of interest to the chemical engineer.
153. ADVANCED CHEMICAL ENGINEERING CALCULATIONS. (2)  
A continuation of Ch.E. 52. Prerequisite: 112. (To be taught as a technical elective in the senior year.)
161. ORGANIC UNIT PROCESSES. (3)  
A study of the theoretical basis and application of unit processes to the organic chemical industries. Studies involving nitration, halogenation, sulfonation, oxidation, alkylation, hydrolysis, polymerization, and similar topics. Prerequisites: Chemistry 101L, 102L, and Ch.E. 112.
162. INORGANIC UNIT PROCESSES. (2)  
A study of the processes and manufacturing methods used in more important industries based on inorganic chemistry. Prerequisites: Chemistry 111L, and Ch.E. 112.
171. CHEMICAL ENGINEERING ECONOMICS. (2)  
Discussion of factors other than engineering and chemical which determine the feasibility of putting a chemical on the market. Particular reference to control of raw materials, markets, competition, patent situation, and related topics. Prerequisites: Economics 51 or the equivalent, Ch.E. 111 and 112.
- 181L. CHEMICAL ENGINEERING PROCESS LABORATORY I. (2)  
Experimental laboratory studies employing a series of unit operations and unit processes to produce small quantities of chemicals by pilot plant methods. Emphasis on literature review, laboratory notebook, and reports. Prerequisite: Chemistry 111L; corequisite: Ch.E. 161 or 162.

- 182L. CHEMICAL ENGINEERING PROCESS LABORATORY II. (2)  
Continuation of Ch.E. 181L; but may be taken as an independent unit. Prerequisite: Chemistry 111L; corequisite: Ch.E. 161 or 162.
191. PRINCIPLES OF CHEMICAL PROCESSES AND THERMODYNAMICS I. (3)  
A study of the energy relations in chemical processes. Application of thermodynamics, chemical kinetics to operations involved in the chemical industry. Prerequisites: M.E. 104L, Chemistry 111L, and Ch.E. 112.
192. PRINCIPLES OF CHEMICAL PROCESSES AND THERMODYNAMICS II. (3)  
Continuation of Ch.E. 191. Prerequisite: 191.
- 194L. CHEMICAL ENGINEERING DESIGN. (2)  
Selection and design of process equipment, layout of building and cost estimates. Prerequisites: 112, 191.
- 196L. LUBRICANTS, FUELS, AND COMBUSTIONS. (3)  
Laboratory examinations, analysis and testing of water, fuels, and lubricants, and the evaluation of their properties as applied in the chemical industry. Prerequisites: Chemistry 53L and Ch.E. 191.
198. FIELD TRIP. (0)  
Required for graduation. Annual inspection tour to leading chemical plants in different sections of the country. Approximately one week is spent on these visits. Prerequisite: senior standing.
201. CHEMICAL ENGINEERING SEMINAR. (1-2)  
Offered each semester. Individual study on advanced phases of chemical engineering and industrial chemistry. Research, reports, and conferences.
221. ADVANCED CHEMICAL ENGINEERING I. (3)  
An advanced study of the unit operations of chemical engineering. Problems of heat transmission, fluid flow, air conditioning, and drying.
222. ADVANCED CHEMICAL ENGINEERING II. (3)  
Continuation of Ch.E. 221, but may be taken as an independent unit. Problems of distillation, absorption, and extraction.
231. REFINERY PROCESS ENGINEERING. (3)  
Studies in the design of equipment for processing petroleum, with emphasis on the unit operation and thermodynamics of chemical engineering as applied to these processes.
232. GAS PROCESS ENGINEERING. (3)  
A study of the fundamentals applied to the processing of natural gas with emphasis placed on the unit operation and thermodynamics involved in the design.
241. CATALYSIS AND HIGH PRESSURE. (3)  
Principles involved in the use of catalysis and high pressure in the chemical industry.
242. ADVANCED CHEMICAL ENGINEERING THERMODYNAMICS. (3)  
Advanced thermodynamics with reference to its application in chemical engineering.
251. CHEMICAL ENGINEERING CALCULATIONS AND KINETICS. (3)  
Application of kinetics to industrial problems in Chemical Engineering.
300. THESIS. (6)

#### CIVIL ENGINEERING

Professors Wagner (Head), Foss; Assistant Professors Clough, Guy, May, Thompson; Instructors Martinez, Sprouse, Zwoyer; Graduate Assistants Barriga, Black, Radosevich.

The aim of the Civil Engineering Department is to give capable students a sound technical training in a professional atmosphere

where they study under the guidance of registered professional engineers.

The rapidly expanding economy of the Southwest promises to continue to provide increasing opportunities for competent civil engineers in the fields of irrigation; flood control; sanitary, highway, municipal, construction, and safety engineering; and in the many fields of the parent branch of the engineering profession.

**CIVIL ENGINEERING LABORATORIES.** The Civil Engineering laboratories have been designed to supplement theoretical analysis with practical, on-the-job applications.

The new Civil Engineering Building, constructed in 1949, comprises 13,000 sq. ft. of floor space, and is representative of the most modern type of construction. This building was especially designed to house thoroughly modern equipment in a number of separate laboratories.

The Strength of Materials laboratory is equipped to make all customary tests in torsion, bearing, compression, tension, shear, flexure, hardness, etc.

The combined Concrete and Soils laboratory with its new 300,000 lb. testing machine and other equipment affords facilities for customary tests of soils, concrete, masonry, timber and all conventional building materials.

The Bituminous laboratory contains equipment for making standard tests on road oils and asphalts, and for designing and testing bituminous mixes for highways, airports, and other pavements.

A separate Cement laboratory is completely equipped for making the standard physical tests on Portland cement. Equipment includes the most advanced type of temperature control mechanisms for maintaining constant temperatures during tests.

A completely equipped Sanitary laboratory affords the student the opportunity of gaining practical experience in performing customary tests and experiments with municipal and industrial wastes.

The Hydraulics laboratory, housed in a separate building, is equipped to make possible the study of pipe, orifice, weir, and open channel flow, so that the student may gain practical knowledge in the fields of water supply, sewerage, irrigation, drainage, etc.

The Civil Engineering department's new building also includes a separate research laboratory for use in graduate study and in engineering research problems.

Field equipment for classes in Surveying includes a large number of transits, levels, alidades, plane tables, computing machines, and similar items. Precision theodolites of both American and foreign manufacture, including an optical theodolite of latest design, constitute the most modern equipment procurable.

## CURRICULUM IN CIVIL ENGINEERING

## SOPHOMORE YEAR

First Semester			Second Semester		
	Hrs.			Hrs.	
	Cr.	Lect.-Lab.		Cr.	Lect.-Lab.
Math 53	4	(4-0)	Math 54	4	(4-0)
Physics 51L	4	(3-3)	Physics 52L	4	(3-3)
CE 53L	3	(1-6)	CE 54L	4	(2-6)
*Econ-51	3	(3-0)	CE 60	3	(3-0)
Geology 4	3	(3-0)	*English 64	3	(3-0)
	17	(14-9)		18	(15-9)
*PE	1		*PE	1	

## JUNIOR YEAR

CE 102	3	(3-0)	ME 101	3	(3-0)
CE 103L	1	(0-3)	ME 103L	1	(0-3)
CE 110L	4	(3-3)	CE 115L	3	(2-3)
CE 104L	3	(2-3)	CE 122L	2	(1-3)
CE 109L	3	(2-3)	CE 124	2	(2-0)
*Elective	3	(3-0)	CE 120	3	(3-0)
	17	(13-12)	*Elective	2	(2-0)
			ME 105	2	(2-0)
				18	(15-9)

## SENIOR YEAR

CE 154L	4	(3-3)	CE 159L	3	(1-6)
CE 155L	3	(1-6)	CE 162	2	(2-0)
CE 158	2	(2-0)	CE 164L	2	(0-6)
CE 161	2	(2-0)	*Elective	2	(2-0)
EE 108L	4	(3-3)	CE 152	2	(2-0)
*CE Elective	3	(2-3)	†CE Elective	6	(5-3)
	18	(13-15)	CE 165L	1	(1-0)
				18	(13-15)

Electives in the junior year for regular students will be selected with the advice of advisers.

\* Students enrolled in Air ROTC or Navy ROTC may substitute ROTC courses for the above.

† CE electives may be chosen from the following courses: CE 160L, 170L, 171L, 172, 173, 183, 184, 186, 187L, 188, 190L, 191, 192 and 195L.

## DESCRIPTION OF COURSES:

When a prerequisite course number is not preceded by a department designation, "C.E." is implied.

## C. E.

## 4L. SURVEYING. (2)

Lectures and field practice in plane surveying with emphasis on the use of the plane table for topographic mapping. For non-engineering students only.

## 53L. ELEMENTARY SURVEYING. (3)

Lectures and field practice in leveling, traversing, determination of areas, stadia measurements, and care and adjustment of instruments. Prerequisite: Mathematics 16.

## 54L. ADVANCED SURVEYING. (4)

Lectures and field practice in precise leveling, base line measurements, triangulation, rural and urban land surveying, construction layout, probable errors, solar observations, elementary photogrammetry, and office computations. Prerequisite: 53L or 4L.

60. **APPLIED MECHANICS (STATICS). (3)**  
Principles of statics, friction, centroids and moment of inertia of areas. Corequisite: Mathematics 54; prerequisite: Physics 51L.
102. **STRENGTH OF MATERIALS. (3)**  
Stresses and strains in elastic materials. Topics considered include axial stress, riveted joints, thin-walled cylinders, torsion of circular bars, beams, columns, and simple combined stresses. Prerequisite: 60.
- 103L. **STRENGTH OF MATERIALS LABORATORY. (1)**  
A series of laboratory experiments in which the student examines and verifies the fundamental principles of the theories as taught in C.E. 102. Corequisite: 102.
- 104L. **CURVES AND EARTHWORK. (3)**  
The theory of the geometric design of highways and railroads, and the economic distribution of earthwork quantities. Supplemented by practice in the field. Simple curves, vertical curves, spiral easements, mass diagrams, super-elevation, widening on curves, sight distance, right-of-way problems, special applications. Prerequisite: 53L or 4L.
- 109L. **ENGINEERING PROPERTIES OF SOILS. (3)**  
Origin, characteristics, and classification of soils for engineering purposes; sampling; compaction of embankments; frost action; and laboratory practice in testing of soils. Prerequisite: junior standing.
- 110L. **FLUID MECHANICS. (4)**  
Fundamental principles of hydrostatics, hydrokinetics and hydrokinematics with particular emphasis on application to practical hydraulic engineering problems. Laboratory and field experiments illustrating the elementary principles of fluid motion. Prerequisites: C.E. 60, Mathematics 54.
- 115L. **PLAIN CONCRETE I. (3)**  
The manufacture and properties of lime, clay products, and cement; occurrence and properties of stone, sand and gravel; design and tests of concrete and mortars. Prerequisite: junior standing.
120. **HYDROLOGY. (3)**  
Occurrence, movement, and distribution of water by natural processes. Analysis of climatological and stream flow data. Studies of storm frequency, intensity and duration.
- 122L. **STRUCTURAL ANALYSIS. (2)**  
Analytical and graphical methods of stress analysis in framed buildings, roof trusses, girders and bridges. A study of moving loads and influence lines. Prerequisite: 102.
124. **STRUCTURAL DESIGN I. (2)**  
The study of the methods of design of tension, compression and flexure members of metals and wood; riveted and welded connections; study of current design specifications. Prerequisite: 102.
152. **ENGINEERING RELATIONS, SPECIFICATIONS AND ESTIMATES. (2)**  
Ethical and professional considerations of the engineer's relationship to society and to the construction industry. The fundamental requirements of good specifications and sound cost estimates. Preparation of engineering specifications, quantity surveys, cost estimates. A study of construction contract documents and procedures. Prerequisite: senior standing.
- 154L. **HIGHWAY ENGINEERING. (4)**  
Theory and practice in design, construction and maintenance of low cost, intermediate and high type road surfaces. Financing, operation and comparative study of road types. Prerequisite: senior standing.
- 155L. **STRUCTURAL DESIGN II. (3)**  
A continuation of C.E. 124. The design of complete structures of steel and wood. The laboratory work consists of drafting room practice in

- actual design problems of framed structures consistent with the lecture work and current modern practice. Prerequisites: 122L and 124.
- 156L. **STRUCTURAL DESIGN II.** (3)  
A continuation of C.E. 124. The design of complete structures of steel and wood. The laboratory work consists of drafting room practice in actual design problems of framed structures consistent with the lecture work and current modern practice. Primarily for Architectural Engineering students. Prerequisites: 122L and 124.
158. **REINFORCED CONCRETE DESIGN I.** (2)  
The theory of reinforced concrete, the design of elementary members, including the study of current design specifications. Prerequisite: 122L.
- 159L. **REINFORCED CONCRETE DESIGN II.** (3)  
The analysis and design of complete reinforced concrete structures and masonry structures consistent with the current modern practice. Prerequisite: 158.
- 160L. **INDETERMINATE STRUCTURES.** (3)  
An introduction to statically indeterminate structures; a thorough training of slope and deflection and moment distribution in continuous beams, and rigid frames. A study of the deformation of trussed structures by angle changes and virtual work. Prerequisite: 122L.
161. **WATER SUPPLY.** (2)  
A study of works for collection, storage, purification and distribution of municipal water supplies; sources of supply—streams, lakes, impounding reservoirs, wells. Prerequisite: 110L.
162. **SEWAGE TREATMENT.** (2)  
A study of the principles of sewage and industrial waste treatment and the design and construction of sewage treatment works. Prerequisite: 110L.
- 164L. **SANITARY ENGINEERING LABORATORY.** (2)  
Physical and chemical tests used in water and sewage analysis and the application of these tests to water supply and sewage disposal. Procedures for estimating sewage quantities and storm water runoff, and principles of sewerage design and construction. Prerequisite: 161; co-requisite: 162.
- 165L. **SEMINAR.** (1)  
Prerequisite: senior standing.
- 170L. **ADVANCED STRENGTH OF MATERIALS.** (3)  
Analysis of stress and strain, state of stress at a point, Mohr's circle; deflections of beams of variable cross sections; unsymmetrical bending; stress concentrations; and deformations beyond elastic limit. Prerequisite: 102.
- 171L. **BUILDING CONSTRUCTION.** (3)  
A résumé of various types of buildings and appurtenances; construction methods and details. Preparation of quantity surveys and estimates of cost. Planning of cost control during construction. Prerequisite: senior standing, 2 lectures, 2 hrs. lab.
172. **SANITATION.** (2-3)  
Health aspects of water supply, of sewage and refuse disposal, of heating and ventilation, of housing and food supplies. Swimming-pool sanitation, industrial hygiene, insects and rodents in relation to health.
173. **SANITARY ENGINEERING AND THE PUBLIC HEALTH.** (2-3)  
The sanitary engineer's responsibility in public health work. Study of organization, jurisdictions, and activities of public health agencies.
183. **INTERMEDIATE FLUID MECHANICS.** (3)  
A comprehensive study of fluid behavior with emphasis upon physical properties. Prerequisite: 110L.
184. **WATER POWER.** (3)  
Hydraulics problems of water power development, dams, spillways,

- crest controls and power plants. Economics of water power developments. Prerequisites: 110L and 120.
186. FLOOD CONTROL. (3)  
Flood runoff, retarding basin, reservoir, levee and floodway design. Channel improvement, flood forecasting, damage surveys and flood routing problems. Prerequisites: 110L and 120.
- 187L. IRRIGATION ENGINEERING. (3)  
Review of the field of irrigation from the engineering viewpoint, with frequent field trips to major irrigation structures and projects. Prerequisites: 110L and 120.
188. HYDRAULIC MEASUREMENTS. (3)  
An intensive study of the measurement of flowing liquids by means of weirs; orifices; venturi meters; pitot tubes; current meters; bends; hydrochemical, color-velocity and salt-velocity methods; and pressure measurements. Prerequisite: 110L.
189. PUMPS. (3)  
Study of pump classification, theory, selection, installation, operation, maintenance, testing, and materials for pumping various liquids. Special topics such as cavitation, affinity laws, etc. Prerequisite: 110L.
- 190L. MUNICIPAL ENGINEERING. (3)  
City planning; street systems; subdivisions; housing; zoning; building codes and design of municipal details. Prerequisite: senior standing.
191. HIGHWAY PLANNING AND ADMINISTRATION [Highway Economics and Finance] (3)  
The broader aspects of planning modern highway transportation systems. Planning surveys; traffic engineering; economics of highway transportation; methods of financing; motor vehicle characteristics and trends. Corequisite: 154L.
192. WATER AND SEWAGE TREATMENT PROCESSES. (2-3)  
Critical review of recent researches in the field of water and sewage treatment. Prerequisite: 161.
- 195L. PLAIN CONCRETE II. (3)  
Use of admixtures in concrete and critical review of research in the field of concrete mixes. Prerequisite: 115L.
205. SOIL MECHANICS. (3)  
Soil exploration; stability of slopes; drainage, compaction, and settlement of foundations; pressure distributions and bearing capacity of spread footings, pile and pier foundations; earth pressures against retaining walls and bracing in open cuts. Prerequisite: 109L.
206. OPEN CHANNEL FLOW. (3)  
Study of the hydraulic jump and backwater curves. Slowly varied flow involving storage. Special topics of unsteady flow. Prerequisite: 110L.
- 207L. HYDRAULIC DESIGN. (3)  
Design of various features of water power, irrigation, flood control, and navigation systems largely from the viewpoint of the application of the science of hydraulics. Prerequisite: 110L.
- 208L. HYDRAULIC STRUCTURES. (2)  
Analysis and design of structures representative of hydraulic and sanitary engineering construction, such as: dams, locks, gates, reservoirs, and conduits, with particular emphasis on the functions and hazards involved. Prerequisite: 110L.
- 209L. INDETERMINATE STRUCTURES. (3)  
A continuation of 160L.
- 210L. STRUCTURAL DESIGN III. (3)  
A continuation of 155L and 156L.
- 211L-212L. RESEARCH AND TESTING OF BUILDING MATERIALS. (3, 3)  
Special research studies of non-metallic constructional materials for strength, effect of moisture, and comparative costs.



- 213L-214L. **RESEARCH AND TESTING OF HIGHWAY MATERIALS.** (3, 3)  
Special research studies of highway materials. Design of rigid and non-rigid pavements, bituminous mixes, and load distribution on subgrades.
- 215L. **REINFORCED CONCRETE DESIGN III.** (3)  
A continuation of 159L.
- 216L. **FOUNDATIONS.** (3)  
Design of substructures to meet various soil conditions. Prerequisite: 109L.
- 217L. **TRANSPORTATION AND DEPOSITION OF SEDIMENT.** (3)  
Hydraulic engineering aspects of sediment transportation and deposition including physical properties of sediments and their measurements, measurements of sediment discharge, laws governing sediment movement and their application to engineering problems. Prerequisite: 110L.
218. **HYDRAULIC TURBINES.** (2)  
Theory, design and selection of hydraulic turbines and related equipment. Prerequisites: 110L and 184.
- 220L. **PRE-STRESSED CONCRETE.** (3)  
A treatment of the design principles of pre-stressed concrete. A comparison of the European methods to the American methods. Also a comparison of pre-stressed concrete to conventional reinforced concrete with a particular view to the savings of materials and construction costs. Prerequisite: 159L.
- 251-252. **PROBLEMS.** (3,3)  
Advanced reading, design or research.
300. **THESIS.** (6)

### ELECTRICAL ENGINEERING

Professors Tapy (Head), Ellis; Assistant Professors Jacobson, Martin; Instructors Gates, Jeske, Reiff, Slater, Wooten; Graduate Assistant Buckingham.

The Electrical Engineering course is designed to educate the student in the basic sciences of mathematics, physics, chemistry and engineering so that he can apply these basic principles to the practical problems of industry. These problems are usually varied and broad in nature. Therefore the curriculum is designed so that the student may obtain a maximum of related courses by using the technical electives in the senior year. Thus the research type of student can take work in mathematics and the sciences, or he might combine electronics and power courses for a better background in both power and electronics, or he might combine some business administration courses with his basic electrical engineering.

**ELECTRICAL ENGINEERING LABORATORIES.** The power for all laboratories is supplied at 2300 volts and then stepped down to 115 and 230 volts. Special transformers supply 440 volt service to the distribution panel. Direct current is supplied by four motor generator sets.

The power laboratory is equipped with the common types of D.C. and A.C. motors and generators and the necessary manual and automatic starters and controllers for performing all the standard tests on this equipment.

The transformer section includes a number of standard transformers of various capacities and voltage ratings, and a special testing transformer, auto transformers, voltage regulators, etc.

The industrial electronics laboratory recently acquired material which will complete its integration and correlation with the theoretical presentation of the subject. Equipment in use includes 25 Kw ignitron converter, Thyatron motor control, speed regulators, voltage regulators, electronically controlled resistance welder, industrial X-ray unit, induction and dielectric heaters, precipitron, and so on. Facilities are available for demonstrating most of the circuits and techniques associated with industrial electronic control.

The electronics and communications laboratory comprises a series of more than sixty comprehensive experiments that are closely integrated with the courses in electronics, communications, and ultra-high frequency techniques. The tests performed, test equipment employed, and circuits tested are all insofar as is possible standard. This has been done in order to familiarize the student with accepted practices in this field and with the capabilities and limitations of the test equipment ordinarily available to him. Some special facilities are available for advanced study by graduate students and exceptional undergraduates, particularly in the U.H.F. field and materials testing by electronics.

The experiments include the determination of tube characteristics, ranging from vacuum diodes to klystrons and magnetrons; network analysis with precision laboratory measuring equipment; behavior of standard circuits found in AM and FM radio, radar, television, sound on film recordings, carrier telephony, etc.

#### CURRICULUM IN ELECTRICAL ENGINEERING

SOPHOMORE YEAR					
First Semester			Second Semester		
	Cr.	Hrs. Lect.-Lab.		Cr.	Hrs. Lect.-Lab.
Math 53	4	(4-0)	Math 54	4	(4-0)
Physics 51L	4	(3-3)	Physics 52L	4	(3-3)
EE 51L	3	(2-3)	EE 54L	4	(3-3)
Engl 64	3	(3-0)	CE 60	3	(3-0)
*Econ 51	3	(3-0)	*Elective	3	(3-0)
	17	(15-6)		18	(16-6)
*PE	1		*PE	1	
JUNIOR YEAR					
EE 101L	4	(3-3)	EE 115	3	(3-0)
EE 113L	4	(3-3)	EE 132L	4	(3-3)
EE 131L	4	(3-3)	EE 142L	4	(3-3)
ME 105	2	(2-0)	CE 102	3	(3-0)
*Elective	3	(3-0)	*Elective	3	(3-0)
	17	(14-9)		17	(15-6)

SENIOR YEAR					
EE 151L	4	(3-3)	EE152L	4	(3-3)
EE 155L	1	(0-3)	EE 186	3	(3-0)
ME 101 or	3	(3-0)	*EE 172	1	(1-0)
ME 55L	3	(2-3)	Elective	8	(8-0)
*Elective	3	(3-0)			
EE 171	1	(1-0)		16	(15-3)
Elective	6	(6-0)			
	18	(16-6)			

Electives senior year, 14 hours. May be chosen in fields of Business Administration, Science, Mathematics, as well as in any Engineering field. These courses must be numbered 100 or higher.

\* Students enrolled in Air ROTC or Navy ROTC may substitute ROTC courses for the above.

#### DESCRIPTION OF COURSES

When a prerequisite course number is not preceded by a department designation, "E. E." is implied.

E. E.

- 51L. ELECTRICAL ENGINEERING COMPUTATIONS. (3)  
Problems in electrical engineering involving the use of determinants, series, complex numbers, hyperbolic functions. Prerequisite: Mathematics 20.
- 54L. DIRECT CURRENT CIRCUITS. (4)  
Direct current electric and magnetic circuits under steady state and transient conditions. Corequisite: Mathematics 53.
- 101L. DIRECT CURRENT MACHINES. (4)  
Theory and application of D.C. motors and generators and their control equipment. Prerequisite: 54L.
- 105L. ELECTRICAL APPLICATIONS. (3)  
Theory and application of D.C. motors and generators. Prerequisites: Mathematics 54 and Physics 52L.
- 106L. ELECTRICAL APPLICATIONS. (3)  
Theory and applications of A.C. circuits and machines to industrial problems. Prerequisite: 105L.
- 108L. ELECTRIC CIRCUITS AND WIRING. (4)  
Simple D.C. and A.C. circuits and transformers. Illumination problems. Prerequisites: Physics 52L, Mathematics 54.
- 109L-110L. APPLIED ELECTRICITY. (3, 3)  
Direct and alternating current circuits and machines and their practical application to the machines in small shops.
- 113L. ALTERNATING CURRENT CIRCUITS. (4)  
Single and polyphase circuits, wave analysis, coupled circuits, and symmetrical components. Prerequisites: Mathematics 54 and E.E. 54L.
- 115. ELECTRIC AND MAGNETIC FIELDS. (3)  
Study of fields associated with electric and magnetic circuits. Corequisite: 113L.
- 131L. ELECTRON TUBES. (4)  
Electron ballistics, optics and emission. Electronic conduction through vacuum, gases and vapors. Construction and characteristics of vacuum and gas tubes. Corequisite: 113L.
- 132L. ELECTRONICS. (4)  
Basic applications of electron tubes; rectification; class A voltage and power amplifiers; push-pull amplifiers; class AB, B, and C amplifiers, oscillators; modulators; detectors. Prerequisite: 131L.
- 142L. CIRCUIT ANALYSIS. (4)  
Network theorems and functions; basic transmission line theory;

bridges; transient, filters and impedance transformations. Prerequisite: 113L.

151L-152L. ALTERNATING CURRENT MACHINERY. (4, 4)

Prerequisites: 106L, 113L.

153L. ELECTRONICS AND CONTROL. (3)

Application of electro-magnetic and electronic control to industrial problems. Prerequisites: 105L, 106L.

155L. ELECTRONICS LABORATORY. (1)

Laboratory course for E.E. 132L. Prerequisite: 132L.

162L. ELECTRICAL ENGINEERING DESIGN LABORATORY. (3)

Design and testing of electrical circuits and machines. Prerequisite: senior standing; corequisite: 152L.

171-172. SEMINAR. (1-1)

Prerequisite: senior standing.

174L. INDUSTRIAL APPLICATIONS. (4)

Application and control of direct and alternating current machines. Prerequisite: 106L; corequisite: 151L.

183. ILLUMINATION. (2)

A study of light sources and their application to practical problems. Prerequisite: 113L or equivalent.

186. GENERATING STATIONS. (3)

The engineering and economic considerations governing the location, design, and operation of electric power plants, and the elementary principles of corporate finance and rate-making. Prerequisites: Economics 51; corequisite: E.E. 151L.

193L. COMMUNICATION ELECTRONICS. (4)

Electronic circuits fundamental to communication systems; amplitude, frequency, and phase modulation and demodulation; R.F. amplifiers, oscillators coupling to free space. Prerequisites: 132L and 142L.

194L. ULTRA HIGH FREQUENCY ENGINEERING. (4)

Transmission lines, wave guides, cavity resonators, antennas, horns, parabolas, timing circuits; video amplifiers, vacuum tubes at U.H.F., Klystron, magnetrons, radio propagation. Prerequisite: 193L.

195L. INDUSTRIAL ELECTRONICS. (4)

Electronics as applied to industrial problems. Rectifiers, speed and voltage regulators, automatic synchronizers, industrial X-ray, high frequency heating, etc. Prerequisite: 132L; corequisite: 151L.

196L. POWER TRANSMISSION AND DISTRIBUTION. (4)

Electrical and mechanical characteristics; economics of transmission and distribution systems. Prerequisites: 115 and 151L.

202. HEAVISIDE OPERATORS. (3)

The application of the Heaviside operational method to the solution of linear circuits.

204L. ELECTRODYNAMICS. (4)

A course dealing with the derivation and application of the basic ideas and laws relating to electrostatic and magnetic phenomena.

212L. ELECTRIC AND MAGNETIC FIELDS. (4)

Advanced electric and magnetic fields. Prerequisite: permission of instructor.

215L. TRANSIENTS IN LINEAR CIRCUITS. (4)

An advanced study of transient phenomena in linear electrical, mechanical, and electro-mechanical systems through application of the Laplace Transformation.

217. SYMMETRICAL COMPONENTS. (3)

The application of symmetrical components to the solution of short circuit problems. Prerequisite: 196L.

88  
43  
131

- 220L. **ADVANCED ELECTRICAL MACHINERY.** (4)  
Advanced topics in synchronous and induction machinery including a study of synchronous reactions, transients and harmonics. Prerequisite: 152L.
- 222L. **ADVANCED INDUSTRIAL ELECTRONICS.** (4)  
Theory and application of electronic devices to industrial problems. Prerequisite: 195L.
- 223L. **SERVO-MECHANISMS.** (4)  
Theory, design and operation of automatic control devices.
231. **MICROWAVE TECHNIQUES.** (3)  
The behavior of circuit elements, circuits, and vacuum tubes at microwave frequencies.
- 232L. **ELECTRONIC SYSTEMS.** (4)  
A study of the theory and techniques associated with electronic systems such as radio (AM and FM), television, radar, computing systems, telemetering, and guided missiles.
233. **RADIATION AND ANTENNAS.** (3)  
Propagation and radiation in wave guides and antennas.
235. **ADVANCED COMMUNICATIONS NETWORKS.** (3)  
A study of transmission phenomena in networks and in a succession of cascaded circuits.
- 251-252. **PROBLEMS.** (3, 3)  
Advanced reading, design, or research.
300. **THESIS.** (6)

### MECHANICAL ENGINEERING

Professors Ford (Head), Farris, Grace; Associate Professor McDonald; Assistant Professors Reger, Rightley; Instructors Dove, Mead; Graduate Assistant Lemmon.

Mechanical Engineering is divided into three main fields: design, power, and production. The courses in Mechanical Engineering present the theory and practice of the generation and utilization of power and of the design, construction, and operation of mechanical equipment of all kinds. In the laboratories, emphasis is placed on basic engineering principles, standard test procedures, and the economics of various types of equipment. In the mechanical engineering laboratory will be found representative examples of commercial machines and instruments used in the fields of heat power, heating, air conditioning, fluid flow, refrigeration, aerodynamics, and fuel analysis and testing.

### OPPORTUNITIES FOR GRADUATES

The graduate mechanical engineer will find many openings in a great variety of fields which fall within the three main classifications: power, design, and production. A short list of possible opportunities might include: test engineering; production control; tool design; machine design; heating and air conditioning design, production, installation and operation; power plant design, construction, and operation; refrigeration engineering; research; sales and purchasing engineering; product design and development; consulting engineering; transportation; safety engineering; aeronautical engineering; petroleum production.

## CURRICULUM IN MECHANICAL ENGINEERING

## SOPHOMORE YEAR

First Semester			Second Semester		
	Cr.	Hrs. Lect.-Lab.		Cr.	Hrs. Lect.-Lab.
Math 53	4	(4-0)	Math 54	4	(4-0)
Physics 51L	4	(3-3)	Physics 52L	4	(3-3)
*Econ 51	3	(3-0)	*Engl 64	3	(3-0)
ME 53	3	(3-0)	CE 60	3	(3-0)
*IA 64L	2	(0-6)	*IA 70L	2	(0-6)
*IA 75L	1	(0-3)	ME 54L	1	(0-3)
	17	(13-12)		17	(13-12)
*PE	1		*PE	1	

## JUNIOR YEAR

ME 101	3	(3-0)	ME 102	4	(4-0)
ME 103L	2	(0-6)	ME 117L	4	(3-3)
ME 106	3	(3-0)	ME 114L	3	(1-6)
ME 113L	3	(1-6)	EE 105L	3	(2-3)
CE 102	3	(3-0)	*Electives (non tech)	3	(3-0)
CE 103L	1	(0-3)			
*Elective (non tech)	2	(2-0)		17	(13-12)
	17	(12-15)			

## SENIOR YEAR

ME 151L	1	(0-3)	ME 152L	2	(0-6)
ME 150L	4	(3-3)	ME 153L	3	(0-9)
EE 106L	3	(2-3)	ME 160	3	(3-0)
ME 175	2	(2-0)	EE 153L	3	(2-3)
ME 172	1	(1-0)	ME 173	1	(1-0)
*†Tech Electives	6	(6-0)	*†Tech Electives	5	(5-0)
	17	(20-9)	ME 198 (Inspection Trips)	0	
				17	(14-18)

\* Students enrolled in Air ROTC or Navy ROTC may substitute ROTC courses for the above, to the extent of 2 or 3 hours each semester.

† Technical electives may be chosen from the following courses: M.E. 155, 162, 156, 165, 167, 168, 181, 182; ROTC courses. Others may be selected with advice of the Department Head. Those students interested in Aeronautical engineering should elect M.E. 167, 168; and C.E. 122L. Those interested in Petroleum should elect M.E. 181, 182 and as much geology and chemistry as possible.

## DESCRIPTION OF COURSES

When a prerequisite course number is not preceded by a department designation, "M.E." is implied.

## M. E.

## 53. ENGINEERING MATERIALS. (3)

Characteristics of metals, alloys, wood, and concrete, and of the manufacture and heat treatment of iron and steel. Prerequisite or co-requisite: Chemistry 2L.

## 54L. ENGINEERING MATERIALS LABORATORY. (1)

A study of the basic principles of metallography, the heat treatment and microstructure of metals. Prerequisite: 53.

## 55L. MECHANISMS. (3)

Displacements, velocities, and accelerations of such machine elements as links, cams, gears, chains, and belts. Prerequisites: A.E. 1L, 2L. Not for Mechanical Engineers.

60. **MECHANICS. (2)**  
For Industrial Arts students. Fundamental principles of statics and dynamics. Prerequisites: Mathematics 16 or I.A. 2.
101. **HEAT POWER ENGINEERING. (3)**  
Theory and characteristics of heat engines and heat power equipment. Prerequisites: Physics 51L and 52L, Mathematics 54 and Chemistry 2L.
102. **THERMODYNAMICS. (4)** Prerequisite: 101.
- 103L. **HEAT POWER LABORATORY. (1-2)**  
Corequisite: 101. (Mechanical Engineers will take 2-credit course.)
- 104L. **ELEMENTS OF THERMODYNAMICS. (3-4)**  
Principles of heat engines and thermodynamics. Not for mechanical engineers. Prerequisites: Physics 52L, Mathematics 54. Course may be taken for 3 hrs. credit without lab.
105. **DYNAMICS. (2)**  
Principles of dynamics. Prerequisites: C.E. 60 and Mathematics 54.
106. **DYNAMICS. [Mechanics] (3)**  
Required for mechanical engineers. Principles of dynamics. Prerequisites: C.E. 60 and Mathematics 54.
- 107L. **STRENGTH OF MATERIALS. (2)**  
For Industrial Arts students. The mechanics of materials; theory of beams, columns and shafts. Prerequisite: 60.
- 108-109. **MECHANICAL EQUIPMENT OF BUILDINGS. (3, 3)**  
Primarily for Architectural Engineering students. Theory and practice of heating equipment, heat loss of buildings, heating layouts, plumbing and heating codes. Prerequisites: Physics 52, Mathematics 54.
- 113L. **KINEMATICS. (3)**  
Displacement and velocity study of machine elements such as linkages, cams, gears, belts and chains. Special emphasis on kinematic study of gearing of all kinds. Prerequisites: A.E. 1L, 2L; corequisite: Mathematics 54.
- 114L. **DYNAMICS OF MACHINERY. (3)**  
Velocity, acceleration, and force analysis of machines with special emphasis on high-speed machinery, balancing of rotating and reciprocating machine elements. Prerequisites: A.E. 1L, 2L; M.E. 106, 113L.
- 117L. **FLUID MECHANICS. (4)**  
Kinematics of fluid motion; elements of hydrodynamics, effects of viscosity, compressibility and drag. Prerequisites: 106 and 101; corequisite: 102.
- 150L. **PRINCIPLES OF MACHINE DESIGN. (4)**  
Introduction to transmission of power by gears, belting, and shafting; proportioning for strength of fastenings, couplings, shafts, and frames; design of gears for strength and wear; specification of fits and tolerances; principles of lubrication and bearing design. Prerequisites: M.E. 113L, 114L and C.E. 102.
- 151L. **MECHANICAL ENGINEERING LABORATORY. (1)**  
Tests of steam boilers, engines, turbines, pumps and compressors. Prerequisite: 102; senior standing.
- 152L. **MECHANICAL ENGINEERING LABORATORY. (2)**  
Tests of internal combustion engines, their fuels and lubricants. Prerequisite: 102; corequisite: 160.
- 153L-154L. **MECHANICAL ENGINEERING DESIGN. (3, 2)**  
Analysis and design of some piece of equipment selected from the field of mechanical, aeronautical, or petroleum engineering. Prerequisites: M.E. 113L, 114L; C.E. 102 and M.E. 150L.
155. **POWER PLANTS. (3)**  
Types and equipment. Prerequisite: 102.

156. INDUSTRIAL ENGINEERING. (3)  
The principles of management applied to the general operation of engineering projects and manufacturing plants. Prerequisite: senior standing.
160. INTERNAL COMBUSTION ENGINES. (3)  
Theories of Otto and Diesel type engines. Prerequisite: 102.
162. REFRIGERATION. (3)  
The theory of refrigeration and the testing of refrigeration equipment. Prerequisite: 102.
165. AIR-CONDITIONING. (3)  
Methods used to heat, cool, humidify, clean, and distribute air in buildings. Prerequisite: 102.
- 167-168. AERODYNAMICS. (3, 3)  
Application of the fundamental principles of mechanics and hydrodynamics to the study of airplane design and performance. Prerequisites: 102, 167; corequisite: 117L.
171. AIRPLANE STRUCTURES. (2)  
Application of fundamental principles of structural theory to practical airplane design. Prerequisites: 102, 167.
- 172-173. SEMINAR. (1, 1)  
Preparation, presentation, and discussion of papers and reports from current technical magazines and journals. Prerequisite: senior standing.
175. METALS AND ALLOYS. (2)  
A study of the properties of the common metals and alloys as affected by mechanical working, heat treatment and composition. Prerequisite: senior standing.
- 181-182. PETROLEUM PRODUCTION. (3, 3)  
Oil field development, methods of drilling and oil recovery; preliminary refining, storage, and transportation. Prerequisite: senior standing.
- 93 192. DESIGN ANALYSIS. (3)  
Special problems in design involving combined stresses, stress concentration, and cases beyond the limitations of conventional tensile, flexure, and torsion formulas. Study of theories of failure, an introduction to methods of experimental stress analysis and their application to design. Prerequisite: 150L; corequisite: 153L.
198. INSPECTION TRIP. (0)
202. SPECIAL TOPICS IN ADVANCED DYNAMICS. (3)
204. MECHANICAL VIBRATION. (3)  
Topics of study include: kinematics of vibration; the single degree of freedom; two degrees of freedom; many degrees of freedom; natural frequency; forced vibration; effect of dry and viscous damping; torsional vibrations of crankshafts and geared systems; suppression and elimination of vibration.
206. ADVANCED THERMODYNAMICS. (3)
211. ADVANCED HEATING AND AIR-CONDITIONING. (3)
- 221L. ADVANCED MACHINE DESIGN. (3)  
Analysis of machine elements, design of elements subjected to combined loading, designing for repeated loading, development of basic equations used in machine design, theories of lubrication, and an intensive study of gearing. Prerequisites: 150L, 153L.
- 222L. CREATIVE DESIGN. (3)  
The development of an idea for a new product or a different design and/or application of an existing product. Study will include a survey of field of application, formulation of requirements of product, design including consideration of materials to be utilized, methods of production, design of special jigs and fixtures, sales appeal, and packaging (if required). Prerequisites: 221L and consent of instructor.
- 14



251-252. PROBLEMS. (3, 3)

Advanced reading, design, or research.

300. THESIS. (6)

### DIVISION OF INDUSTRIAL ARTS

Associate Professor Bailey; Assistant Professors Brown, Davis; Instructor Blankley.

The general objectives for the Industrial Arts program are:

- (1) to prepare students for teaching Industrial Education;
- (2) to prepare students for positions in industry;
- (3) to offer service courses which are required in the engineering curricula;
- (4) to offer elective courses for students from other colleges.

The program is divided into two curricula. The curriculum in Industrial Arts is listed under the College of Engineering. The curriculum in Industrial Arts Education is listed under the College of Education.

Industrial Arts emphasizes knowledge and appreciation of industry in specific fields and teaches basic manipulative skills. For this purpose comprehensive courses are offered in machine shop, patternmaking, carpentry, cabinet making, forging, sheet metal, foundry, and welding. It is the aim of this curriculum to familiarize the student with production and management methods used in industry in order to prepare him for supervisory service in industry or to enable him to establish his own business. This curriculum leads to the degree of Bachelor of Science in Industrial Arts.

Industrial Arts Education increases the student's knowledge and skill in the major industrial arts areas, and develops a fair degree of competency in woodwork, metalwork, and engineering drawing. Teaching methods and activities in planning, construction, and designing are provided in the various shop courses, so that prospective teachers will meet the necessary requirements as teachers or supervisors of Industrial Education. This curriculum leads to the degree of Bachelor of Science in Industrial Arts Education.

Service courses provide opportunities for the engineering students to gain experience with industrial materials, tools, and processes.

Elective courses give avocational training for students planning to utilize Industrial Arts experience as a foundation for leisure time activities.

R.O.T.C. students can substitute air or naval science courses in the Industrial Arts curriculum so that the requirements for a degree can be met in four years.

**INDUSTRIAL ARTS LABORATORIES.** The machine shop is equipped with lathes, shapers, drill presses, vertical and horizontal milling machines, and surface and universal grinders for working metal.

The sheet metal shop has a very good assortment of tools and equipment. The wood-working equipment includes band, circular, and jig saws; jointer, planer, lathes, hand tools and benches for pattern making, carpentry, and cabinet work.

The welding shop contains A.C. and D.C. welding machines and oxyacetylene welding and cutting equipment. The foundry has molding benches and molding tools, and a furnace for melting non-ferrous metals.

### CURRICULUM IN INDUSTRIAL ARTS

FRESHMAN YEAR					
First Semester			Second Semester		
	Hrs.			Hrs.	
	Cr.	Lect.-Lab.		Cr.	Lect.-Lab.
Engl 1	3	(3-0)	Engl 2	3	(3-0)
AE 1L	3	(1-6)	AE 12L	3	(0-9)
IA 1	3	(3-0)	IA 2	3	(3-0)
IA 10L	3	(1-6)	IA 20L	3	(1-6)
*Elective	3	(3-0)	*Elective	3	(3-0)
	15	(10-12)		15	(10-15)
*PE	1		*PE	1	
SOPHOMORE YEAR					
Math 12	3	(3-0)	Math 16	3	(3-0)
IA 53	3	(3-0)	Econ 51	3	(3-0)
AE 2L	3	(2-4)	AE 62L	3	(0-9)
IA 63L	3	(2-6)	IA 65L	3	(1-6)
*Elective	3	(3-0)	*Elective	3	(3-0)
	15	(12-10)		15	(10-15)
*PE	1		*PE	1	
JUNIOR YEAR					
Physics 11L	4	(3-3)	Physics 12L	4	(3-3)
ME 55L or			Speech 55	3	(3-0)
CE 53L	3	(1-6)	IA 105L	3	(1-6)
IA 157L	3	(1-6)	IA 60L	3	(1-6)
IA 62L	3	(1-6)	*Psych 58	3	(3-0)
*Psych 51	3	(3-0)			
	16	(9-21)		16	(11-15)
SENIOR YEAR					
EE 109L	3	(2-3)	EE 110L	3	(2-3)
ME 60	2	(2-0)	ME 107L	2	(2-0)
IA 104L	3	(1-6)	IA 110L	3	(1-6)
*Econ Elective	3	(3-0)	*ME 156	3	(3-0)
IA 153	3	(3-0)	IA 154	3	(3-0)
IA 159L	3	(1-6)	IA 111L	3	(1-6)
	17	(12-15)		17	(12-15)

\* Students enrolled in Air ROTC or Navy ROTC may substitute ROTC courses for the above.

### DESCRIPTION OF COURSES

When a prerequisite course number is not preceded by a department designation, "I. A." is implied.

## I. A.

1. SHOP COMPUTATIONS. (3)  
Review of algebra and geometry as used in various shops. Use of the various measuring instruments.
2. SHOP COMPUTATIONS. (3)  
The study of the slide rule and its use in the various shops. Trigonometry as applied to shop problems.
- 10L. WOODWORK. (3)  
Instruction in proper use and care of woodworking tools. Basic instruction for woodworking power machinery. Construction of units in woodworking procedures. Study of woods and finishes.
- 14L. GENERAL SHOP I. (3)  
Leather work, and book binding. Tooling and carving leather, lacing, sewing, dyeing, and the basic book binding procedures.
- 15L. GENERAL SHOP II. (3)  
Jewelry, lapidary and art metal. Designing and construction of jewelry and art metal projects.
- 20L. MACHINE SHOP. (3)  
Bench work such as filing, tapping, and simple layouts, and the operation of engine lathes, drill presses, shapers, grinders, and milling machines.
53. CONSTRUCTION MATERIALS. (3)  
Characteristics and production of wood, silicate cements, glass and clay products. Manufacture and heat treatment of ferrous and non-ferrous metals. Prerequisites: 10L and 20L.
- 60L. CABINET WORK. (3)  
Advanced instruction in the use of power woodworking machinery for cabinet and furniture construction. Related information concerning woods, tools, finishes and types of furniture. Construction of projects designed and planned by the student. Prerequisite: 10L.
- 61L. WOOD TURNING. (3)  
The proper use and care of wood-turning tools and equipment. Spindle, faceplate, and special turning processes; kinds of woods used and their finishing. Prerequisite: 10L.
- 62L. CARPENTRY. (3)  
Fundamentals in plot layouts, foundations, floor and wall framing, roof construction, and inside and outside finishing. Use of the steel square in house construction. Prerequisite: 10L.
- 63L. PATTERN MAKING. (3)  
Construction of patterns such as one-piece, two-piece, straight and irregular parting; core box design and construction; and the methods of marking and storage. Prerequisite: 10L.
- 64L. PATTERN MAKING AND FOUNDRY. (2)  
Not for Industrial Arts students. Construction of wood and metal patterns and core boxes used in industry. Fundamentals of foundry practice and study of production casting.
- 65L. MACHINE SHOP. (3)  
Advanced machine shop processes on all machines, and the machining and assembling of some machine such as wood lathe, permanent mold, sub press, wood vise. Prerequisite: 20L.
- 70L. MACHINE SHOP. (2)  
Not for Industrial Arts students. Bench work, operation of engine lathes, shapers, grinders, drill presses, milling machines, simple dies and punches.
- 75L-76L. HEAT TREATING AND WELDING. (1, 1)  
Use of arc and oxyacetylene in welding, brazing, and cutting of metals. For mechanical engineers only.

- 102L. FORGING AND ORNAMENTAL IRON WORK. (3)  
Instruction in building forge fire. Hand forging operations in drawing, upsetting, bending, welding. Construction of wrought iron work. Prerequisite: 20L.
- 104L. ADVANCED PATTERN MAKING. (3)  
Construction of master patterns, plaster models, metal patterns and core boxes, gated patterns, plated patterns for both wood and metal. Prerequisites: 10L, 63L.
- 105L. SHEET METAL. (3)  
Fundamental machine and hand tool operations, care and use of sheet metal equipment. Development of patterns and layouts for sheet metal construction. Prerequisites: A.E. 2L and I.A. 20L.
- 110L. CABINET WORK. (3)  
Advanced designing, construction and finishing of the various styles of furniture. Further development of skills in the use and care of wood-working tools and equipment. Prerequisites: 10L, 60L.
- 111L. MACHINE SHOP. (3)  
Tool and die work. A course for advanced machine shop students with emphasis on tool design and construction, and the study of construction of dies and punches for piercing, blanking, drawing, forming, and stamping. Prerequisites: 20L, 65L.
153. SHOP EQUIPMENT. (3)  
A study of shop layouts and the use of tools and equipment for more efficient production. Prerequisite: senior standing.
154. SHOP MANAGEMENT. (3)  
Personnel and supervisory training, techniques in use of job analysis, job planning, shop records, time and motion study, etc. Prerequisite: senior standing.
- 157L. FOUNDRY PRACTICE. (3)  
Bench molding, core making, and sand tempering; the melting and casting of ferrous and non-ferrous metals; and the cleaning of castings. Prerequisite: 63L.
- 159L. ARC AND ACETYLENE WELDING. (3)  
Use of arc and oxyacetylene welding, the brazing of ferrous and non-ferrous metals and torch cutting. Prerequisite: 20L.
- 160L. ADVANCED CARPENTRY. (3)  
Advanced work on building construction and inside finishing. To develop further knowledge and skills in carpentry. Prerequisites: 10L, 62L.

## COLLEGE OF EDUCATION

**T**HE PURPOSE of the College of Education is to correlate the forces of the University in order to meet the needs of the state in the preparation and certification of teachers; supervisors, and administrators. The college sets for itself these tasks: the thorough training of elementary and high school teachers and of supervisory and administrative officers; the provision of courses in the various fields of education; and opportunities for research.

The curricula are based upon the assumption that the teacher or supervisory officer should have a broad and liberal education; that he should be master of the subject or group of subjects that he expects to teach; and that his training should be supplemented by professional education designed to give a knowledge of the pupils to be taught, the problems to be met in teaching, and the new meaning of the subjects of instruction. For the prospective teacher this policy has the effect of placing the emphasis upon the subjects he intends to teach.

### STANDARDS

Graduation from the College of Education meets the requirements of the New Mexico State Board of Education for certification of high school and elementary teachers, and the recommendations of the North Central Association of Colleges and Secondary Schools as to professional subjects in education and the proper subject matter courses for purposes of high school teaching. Because of the tendency in various states to increase the number of credit hours in education for certification, students are advised to secure credit in not less than twenty-four semester hours in education, including general psychology.

### PRINCIPLES GOVERNING THE COLLEGE OF EDUCATION IN ITS TEACHER EDUCATION PROGRAM

1. The direction of the programs of all students expecting to receive a Bachelor's degree in Education should be under the supervision of the College of Education.

2. Although it shall be the general policy of the College of Education to accept the recommendation of the department concerned, the College of Education reserves the right of final approval of the specific courses within fields as suitable majors or minors for students enrolled in the College of Education.

3. All courses in education methods are to be taught by persons approved by the Dean of the College of Education.

4. For those students who desire to prepare themselves to teach music or art in the elementary, junior high, and senior high schools, majors in Music Education and Art Education are offered.

5. Instructors teaching courses in both methods and subject

matter courses are considered members of the faculty of the College of Education as well as of the college in which the subject matter courses are represented.

#### ADMISSION

For the quantitative requirements for admission to the College of Education, see "Admission."

In the admission of applicants to the College of Education, the following points will be considered: (1) good moral character, (2) physical and intellectual fitness, and (3) personal qualities necessary for success in some field of education.

A student intending to prepare for teaching should register in the College of Education, in order that he may be educationally guided and be enabled to make the necessary professional adjustments.

#### MAXIMUM NUMBER OF HOURS

No student in this College may enroll for more than 17 semester hours, plus one hour of physical education (or military drill in the case of NROTC students), unless his standing for the previous semester was at least B in two-thirds of his studies, with no grade below C; and then only by presenting a written petition to the Committee on Scholarship, which may, in its discretion, grant permission to enroll for extra work up to a maximum of 19 hours.

#### EXTRA-CURRICULAR ACTIVITIES FOR TEACHERS

In choosing teachers, principals and superintendents are always eager to find candidates who are able to handle extra-curricular activities or who have developed some particular ability which will contribute to the life of the school. From the point of view of getting a position and becoming indispensable after the position has been secured, such specialized abilities as those which enable teachers to direct glee clubs, coach athletics and debating teams, manage student publications, and sponsor school clubs of various kinds are extremely important. There are many opportunities at the University for securing training and experience in these fields. It is strongly recommended that prospective teachers take advantage of them.

#### PRACTICE TEACHING FACILITIES

The College of Education has made arrangements with the Albuquerque public school authorities whereby student teaching is carried on under the personal direction of selected teachers, who act as critic teachers under the general direction of a professor of education in the College of Education.

The facilities of the city school system furnish an excellent op-

portunity for students to work in a practical laboratory where the principles and best practice in teaching can be exemplified and applied. The practice teaching is correlated with the subjects taught in the University.

#### LABORATORIES

**LABORATORY FOR THE DEPARTMENT OF SECONDARY EDUCATION.** The facilities of the Department of Secondary Education have been materially increased by the equipment of a workroom, or laboratory, in which will center all work connected with the professional training of high school teachers. The major publishing houses are keeping this room supplied with textbooks and other materials of secondary education with which students will wish to become familiar. Here, too, will be found various types of research materials for students in this department.

**LABORATORY AND MATERIALS FOR THE DEPARTMENT OF ELEMENTARY EDUCATION.** A large workroom is available for students. It is equipped with apparatus and materials to assist in constructing units of work for practice teaching and classwork.

**LABORATORY IN BUSINESS EDUCATION.** A laboratory in business education is now available for those who are preparing to teach in that field. This laboratory has been added to meet a recognized need in the public schools.

**LONGFELLOW SCHOOL.** Through a coöperative arrangement with the Albuquerque Public Schools, the University is enabled to use the Longfellow School for demonstration and practice teaching. Here in typical situations the beginning teacher is assisted in solving her problems by experienced critic teachers. The work is under the direction of the school principal and the director of practice teaching in the College of Education.

#### EDUCATION PLACEMENT BUREAU

A placement bureau, one function of which is to assist students and graduates of the University in obtaining positions in the teaching profession, is maintained by the University. The bureau aims to keep on file a complete record of the scholarship, experience, and personal qualifications of each candidate for a position. Copies of these records will be mailed to school officials at their request. The University reserves the right to refuse to extend its coöperation to students who apply for positions for which they are manifestly unfit.

Blanks for registration may be obtained from the Placement Bureau. A fee of \$2 is charged each registrant, which covers permanent registration. No commission is charged by the Bureau. Communications should be addressed to the Education Placement Bureau.

## SCHOLARSHIP REGULATIONS

See pp. 72, 73.

**REQUIREMENTS FOR GRADUATION**

Upon the completion of all specified requirements, candidates for degrees in the College of Education who major in business education, educational administration, home economics, mathematics, or a science, receive the degree of Bachelor of Science in Education; those who major in physical education receive the degree of Bachelor of Science in Health and Physical Education; those who major in industrial arts receive the degree of Bachelor of Science in Industrial Arts Education; and those who major in other subjects receive the degree of Bachelor of Arts in Education.

Candidates for degrees in the College of Education are required to comply with the following regulations:

1. Students who plan to be high school teachers should complete a major and a minor in subjects usually taught in high schools.

2. A major is the principal subject which the student desires to teach in high school. It must be chosen with the advice of the dean.

A minor should be selected in a subject which the student plans to teach, and whenever possible, the student should secure a second minor. The specific requirements for majors and minors are listed under the several departments; the work in these fields must be of at least C quality, and courses in which the grade of D is earned are accepted only as electives.

3. It is often necessary for the teacher of science to teach classes in more than one field. The same is true of teachers of social science. This makes it impossible for students to make adequate preparation for teaching in these fields by completing a major in any one department of the University.

Therefore, students preparing to teach in one of these fields will be permitted to complete either a general Major in Science or a general Major in Social Studies as follows:

A. MAJOR IN SCIENCE IN SECONDARY EDUCATION. The major in science shall consist of 48 hours, including freshman courses, in the Departments of Biology, Chemistry, Geology, Physics, and Naval Science. The student shall offer a minimum of 12 hours in each of three of these departments. No minor is required, but one is strongly recommended. Survey courses will not be accepted toward the major. Necessary deviation from the rule requiring 40 hours above 100 will be approved in individual cases.

B. MAJOR IN SOCIAL STUDIES IN SECONDARY EDUCATION. Students preparing to teach the social studies in secondary schools may be permitted to offer a major in general social studies. Such general



social studies major shall consist of at least 48 hours, including freshman courses, of which 18 hours must be in the Department of History, 9 hours in the Departments of Government and Citizenship and Economics, 9 hours in the Departments of Sociology, Anthropology, and in Geography courses, 12 hours in electives from social studies departments. No minor is required with the general social studies major, but one is strongly recommended.

4. The demand for teachers of business subjects has steadily increased in recent years. Students preparing to teach in high schools may now offer a major or minor in this field. Upon graduation, they will receive the degree of Bachelor of Science in Education.

5. Students preparing to teach should follow the curriculum as outlined. A minimum of 124 semester hours, plus physical education (or equivalent NROTC credits), is required for graduation. This amount is based upon an average quality of work done. Ninety hours of the total must be C grade or better, and, in addition, students transferred from other institutions must make a grade of C or better in three-fourths of the hours earned in the University of New Mexico.

6. In addition to the required work, in majors and minors, professional courses in education are required as outlined in the various curricula. All candidates for degrees are required to take a course in observation and practice teaching.

7. Students who desire to prepare for administrative or supervisory positions should major in the curriculum for administrators and supervisors, and should minor in some subject which has bearing upon their chosen field of work.

8. Students who plan to teach in the elementary schools are not required to have a major or a minor, nor meet the group requirements listed below. They will be expected to follow the curriculum as outlined on p. 173.

9. Each candidate for a degree must complete at least 40 semester hours in courses numbered above 100.

10. All students in the College of Education are required to pass the Sophomore Proficiency Examination in English. No student shall be recommended for graduation unless he shows ability to write and speak clear and correct English.

11. Every candidate for graduation must take the National Teachers examination, see p. 77.

12. For minimum residence requirements, see p. 77.

#### GROUP REQUIREMENTS

Students must complete the following requirements in the various groups. As much of this work as possible should be done in the freshman and sophomore years, and professional work and

major and minor requirements should be completed in the junior and senior years. For required courses in physical education, see p. 76.

I. **ENGLISH.** As evidence of proficiency in oral and written English a student must earn 12 semester hours and must pass the Sophomore Proficiency Examination. Six hours must be earned in English 1, 2, and 6 additional hours must be earned in courses numbered above 50. (See special curricula for modifications of this ruling.) Students who fail to pass the Sophomore Proficiency Examination may be required to report for additional workshop training.

II. **FOREIGN LANGUAGE.** A student who has been admitted with no credit in a foreign language, or who begins a language in which he has done no work in high school is required to complete four semesters, or twelve hours credit in one foreign language.

Other students continuing a language begun in high school will be tested and assigned to courses according to ability shown. Such students will then complete the remainder of the twelve hours required. Substitutions may be made as follows:

(1) Administrators and supervisors may substitute an equal number of hours of professional subjects.

(2) Students preparing to teach in high school may substitute an equal number of hours in courses approved by the adviser in addition to the regular requirements. This additional work must be of C grade or better.

(3) Students preparing to teach in the elementary schools are advised to take Spanish, but no foreign language is required.

III. **SOCIAL STUDIES.** Nine semester hours (not more than 6 from one department) must be completed in approved\* courses in the Departments of Anthropology, Economics, Geography, History, Government and Citizenship, Philosophy, or Sociology.

IV. **MATHEMATICS AND SCIENCES.** Eleven semester hours (not more than 8 from one department, and including 6 hours in courses that require laboratory work) must be completed in courses in the Departments of Biology, Chemistry, Geology, Mathematics, or Physics. Home Economics 53L and 54L may be applied toward this requirement.

## **CURRICULA**

Curricula have been outlined under the respective departments for the purpose of directing students in their chosen fields of work. There are curricula for students preparing to teach in high schools and for students who wish to teach in the elementary schools.

Special curricula are provided for students preparing to teach

\* For approved courses, see departments of instruction.

art, music, physical education, home economics, business subjects or industrial arts in public schools.

NROTC students may substitute required Naval Science courses during each semester of each school year for courses in required Physical Education. The course in Naval Science may also be substituted for courses in each of the curricula as prescribed by the Dean.

#### COLLEGE OF EDUCATION

##### DEPARTMENTS OF INSTRUCTION

Courses numbering: from 1-49, lower division, normally open to freshmen; from 50-99, lower division, normally open to sophomores; from 100-199, upper division, normally open to juniors, seniors, and graduates; 200-400, open to graduates only. Graduate credit for courses listed is allowed at the discretion of the Graduate Committee.

Symbols used in course descriptions: L—part of the course is laboratory work; F—course is given during field session; SS—course offered in eight weeks' summer session only; Yr—course offered throughout two semesters and credit for a single semester's work is suspended until the entire course is completed; ( ) semester hours' credit; credit hours separated by a dash (1-3) indicate variable credit in the course; [ ]—former course number or title.

A schedule of course offerings, including hours of meeting, is issued at the opening of each session. The University reserves the right to cancel any listed course or to make a substitution in instructors when necessary.

##### GENERAL EDUCATION

Professors Nanninga (Dean), Clauve, Diefendorf, Fixley, Reid, Tireman, White; Associate Professors Crawford, Ivins, Masley; Assistant Professors Israel, Johnson, Runge.

72. HEALTH EDUCATION. (2)	
Health instruction in elementary schools.	White
95. SOCIAL ARTS. (2) SS	
Standards of social behavior.	Staff
HA. READING FOR HONORS. (1-3 each semester)	Staff
HB. RESEARCH FOR HONORS. (1-3 each semester)	Staff
101. HISTORY OF EDUCATION IN EUROPE. (3)	Tireman
102. HISTORY AND PHILOSOPHY OF AMERICAN EDUCATION. (3)	Johnson
105-106. ADULT EDUCATION. (3, 3)	
Origin, development, philosophy, objectives, methods, and materials.	Reid
109. EDUCATIONAL SOCIOLOGY. (3)	
Sociological aspects of school problems.	Reid
110. THE USE OF AUDIO-VISUAL AIDS IN TEACHING. (3)	
Chief attention will be given to the aims and techniques of audio-visual aids in the classroom; illustrative use of films; types of aids explored.	Ivins

112. CURRENT EDUCATIONAL PROBLEMS. (2) Staff
116. PROFESSIONAL ADJUNCTS. (1)  
Attention to personality traits, the interview and written application, effective speech, personal budget, community relationships. For juniors and seniors only. Fixley
129. WORKSHOP.  
All specific workshop courses are listed under the general number, Education 129, with the designating subscripts as indicated. A student may earn as many hours in workshop as he may wish but not more than five semester hours will be counted toward a degree.
- a. Art Education
  - b. Music Education
  - c. Elementary Education
  - d. Secondary Education
  - e. School Administration
  - f. Health and Physical Education
  - g. Distributive Education
  - h. Home Economics
  - i. Adult Education
  - j. Industrial Arts Education
151. PROBLEMS. (1-3) Staff
170. SPEECH ACTIVITIES IN THE PUBLIC SCHOOL. (3)  
(Same as Speech 170.) Staff
- 174C. PHILOSOPHY OF EDUCATION. (2)  
Credit not allowed for both 174 and 102. (Offered by correspondence only.)
188. PERSONNEL PROBLEMS IN THE SCHOOLS. (3)  
Aims to help classroom teachers, supervisors, principals, deans, and advisers of students and guidance workers to understand the personal problems affecting success and failure of pupils. Crawford
202. RESEARCH SEMINAR IN EDUCATION. (2)  
Application of research techniques to a current educational problem. Required of all candidates for a graduate degree in education under plan II, except that candidates in School Administration may substitute 206. Prerequisite: 201. Crawford
251. PROBLEMS. (1-3) Graduate Staff
300. THESIS. (6) Graduate Staff

## ART EDUCATION

Associate Professor Masley (Head); Teaching Assistant, Levine;  
Graduate Assistant Harper.

### CURRICULUM FOR ART TEACHERS AND ART SUPERVISORS

(Leading to the degree of Bachelor of Arts in Education and meeting the requirements for elementary and secondary teacher's certificate in New Mexico.)

FRESHMAN YEAR			
First Semester		Second Semester	
English 1	3	English 2	3
Math. or Science	3-4	Math. or Science	3-4
Social Studies	3	Social Studies	3
Art 1	2	Art 2	2
Art 3	2	Art 4	2
Art 5	2	Art 6	2
Physical Education	1	Physical Education	1

## SOPHOMORE YEAR

English	3	English	3
Psychology 51	3	Psychology 54	3
Math or Science	3	General Electives	4-6
Art Education 48	3	Art Education 49	3
Art 7 (or 37)	2	Art 53 (or 8)	2
Art 27 (or 28)	2	Physical Education	1
Physical Education	1		

## JUNIOR YEAR

Education Electives	6*	Education Electives	6*
Art Education 124	3	Art Education 125	3
Philosophy	3	Art 79 (or 89)	2
Drama 28 (or 29)	3	Art Electives	2-3
Art 63 (or 64)	2	General Electives	3

## SENIOR YEAR

Art Education Electives	3	Art Education Electives	3
Art Electives	3	Art Electives	6-9
General Electives	9-11	Practice Teaching	5

\* Students planning to meet the requirement for a Master Teacher's Elementary Certificate (Regular) Five-Year, will choose the following courses for the Education Electives: Education 72, 102, 121, 122, 123, 135, and 136.

Students planning to meet the requirement for a Regular High School Five-Year Certificate will choose the following courses in Education for the Education Electives: Education 141, 153, 156, plus one course from the designated electives for secondary education.

## DESCRIPTION OF COURSES

- 17-18. CREATIVE ARTS AND CRAFTS IN CHILDHOOD EDUCATION. (3, 3)  
An experimental approach to the art needs and interests of the child from pre-school through the primary grades. Masley
- 30-31. TECHNIQUES OF DESIGN EDUCATION. (3, 3)  
An introductory investigation of design in everyday life and the formulating of effective techniques for teaching design. Staff
- 48-49. CREATIVE ARTS IN SECONDARY EDUCATION. (3, 3)  
An introduction to art education through creative art activities. Masley
124. ART EDUCATION AND ART NEEDS. (3)  
An advanced study of creative art education. Prerequisite: 49. Masley
125. PHILOSOPHY OF ART EDUCATION. (3)  
An introduction to the philosophy of art education. Prerequisite: 124. Masley
150. CREATIVE APPROACH TO SCHOOL AND COMMUNITY ART PROBLEMS. (3)  
The art teacher in the school and the community. Masley
151. PROBLEMS IN ART EDUCATION. (1-3) Masley
- 155a. TEACHING ART IN HIGH SCHOOL. (3)  
Planning, testing and evaluating objectives and classroom procedures in art education today. Masley
251. PROBLEMS IN ART EDUCATION. (1-3) Graduate Staff
- 298-299. SEMINAR IN ART EDUCATION. (2, 2) Masley
300. THESIS. (6) Masley

## BUSINESS EDUCATION

Assistant Professor Israel.

CURRICULUM FOR STUDENTS PREPARING TO  
TEACH BUSINESS SUBJECTS

(Leading to the degree of Bachelor of Science in Education.)

FRESHMAN YEAR			
First Semester		Second Semester	
English 1	3	English 2	3
Lab. Science	4	Lab. Science	4
Social Studies	3	Social Studies	3
Physical Education	1	Physical Education	1
†Foreign Language	3	Math. 1	2
Business Administration 5	3	†Foreign Language	3
		Business Administration 6	3
SOPHOMORE YEAR			
Psychology 51	3	English 55	3
Social Studies	3	Education 54 (Psych.)	3
Physical Education	1	Physical Education	1
Business Administration 11#	2	Business Administration 12#	2
Business Administration 13#	3	Business Administration 14#	3
†Foreign Language	3	†Foreign Language	3
		Business Administration 65	3
JUNIOR YEAR			
Business Administration 53	3	Business Administration 54	3
Education 141	3	*Education Elective	3
Education 143	3	Education 153	3
Business Administration 61	2	Business Administration 62	2
Minor and Electives	6	Minor and Electives	6
SENIOR YEAR			
Teachers' Course (Educ. 155g)	3	Business Administration 157	4
Business Administration 106	3	Education 156	5
Minor and Electives	6-8	Business Administration 107	3
		Minor and Electives	7-9

† Substitutions for Foreign Language may be deferred to the junior year and should be approved by the major department Head.

# Certain elementary courses may be waived on the basis of a placement test if the student has had shorthand or typewriting in high school, but six hours of credit must be earned in shorthand and six in typewriting.

\* One course from: 110, 115, 147, 159.

## EDUCATIONAL PSYCHOLOGY

Faculty: See Department of Psychology.

### 54. EDUCATIONAL PSYCHOLOGY. (3)

An introductory course. Limited to sophomores. Prerequisite: Psychology 1L, 2L, or 51. Keston, Johnson

### 60. PERSONALITY AND ADJUSTMENT. (3)

Introduction to personality theory; principles of adjustment and mental hygiene. Prerequisite: 2L or 51. Benedetti

### 131. PSYCHOLOGICAL AND EDUCATIONAL TESTS. (3)

Problems related to mental measurement; review of various types of tests and their practical applications. Norman

### 132L. INDIVIDUAL MENTAL TESTING. (3)

Practical laboratory study and discussion of Binet, Arthur and Wechsler tests. Norman

### 183. EDUCATIONAL PSYCHOLOGY. (3)

Advanced course. Not open to those who have credit for 54. Prerequisite: 2L or 51. Keston, Johnson

### 187. CHILD PSYCHOLOGY. (3)

The principles of human behavior in infancy, childhood, and adolescence. Prerequisite: 2L or 51. Keston, Johnson

240. CLINICAL PSYCHOLOGY. (3)	
Theory and problems in clinical psychology.	Norman
251-252. PROBLEMS. (2-3 each semester)	Graduate Staff
300. THESIS. (6)	Graduate Staff

**ELEMENTARY EDUCATION**

Professor Tireman (Head); Assistant Professor McCann; Graduate Assistant Lion.

**CURRICULUM FOR STUDENTS PREPARING TO TEACH  
IN ELEMENTARY GRADES**

(Leading to the degree of Bachelor of Science in Education.)

FRESHMAN YEAR			
First Semester		Second Semester	
English 1	3	English 2	3
Biology 1L	4	Biology 2L	4
History 1 or 1L	3	History 2 or 12	3
Art Education 17	3	Art Education 18	3
Physical Education	1	Physical Education	1
Elective: Language or Anthro. or Geography	3	Elective: Language or Anthro. or Geography	3
SOPHOMORE YEAR			
English 53	3	English 54	3
Geology 1	3	Geology 2	3
History 51	3	History 52	3
Language or H. E. 138L	3-4	Lang. or Mathematics 1	3-2
Psychology 51	3	Education 72	2
Music Education 93	2	Music Education 94	2
Physical Education (Rec. W81)	1	Physical Education (Rec. W80)	1
JUNIOR YEAR			
Education 121	3	Education 124	3
Physical Education 119	2	Education 135	2
Education 122	2	Education 183 (Psych.)	3
Sociology 110	2	Sociology 82	3
†Elective	7	†Elective	6
SENIOR YEAR			
Education 107	2	Education 102	3
Education 123	2	Education 120	2
English 82	3	Education 136	5
Government 103	3	†Electives	4
†Electives	6		

All programs must be approved by Head of Department.

† It is recommended but not mandatory that part of the electives be selected from the following:

Dramatic Art	Sociology 71, 117	Psychology 101
Corrective Speech	Library Science	Education 126, 132
Geography 54	Art	Astronomy 52
Anthropology	Music	Education 105, 106
College Arithmetic	Psychology 187	Education 110

**DESCRIPTION OF COURSES:**

52. TEACHING ENGLISH TO NON-ENGLISH SPEAKING CHILDREN. (2) SS  
For pre-first and first grade teachers. Tireman
61. TEACHING READING IN THE PRIMARY GRADES. (3)  
Methods and materials in pre-first to the fourth grades. McCann

62. TEACHING OF LANGUAGE AND SOCIAL STUDIES. (3) SS  
Materials and methods in grades one to four. Tireman
64. PRACTICE TEACHING IN ELEMENTARY GRADES. (4) SS  
Prerequisites: an observation course and 61. Corequisite: 62. Staff
- 93-94. MUSIC EDUCATION. (2, 2)  
Music fundamentals for elementary teachers; methods and materials for elementary grades. Clauve
119. TEACHING OF PHYSICAL EDUCATION IN ELEMENTARY GRADES. (2)  
Gugisberg
120. CHILDREN'S LITERATURE. (2)  
Materials and techniques of teaching. McCann
121. SUPERVISION OF PRE-FIRST AND PRIMARY READING. (3) McCann
122. SUPERVISION OF SOCIAL STUDIES. (2) McCann
123. SUPERVISION OF INTERMEDIATE READING. (2)  
Supervision of reading in the fourth, fifth, and sixth grades. Diagnosis and remedial work. Prerequisite: 121. Tireman
124. SUPERVISION OF ELEMENTARY SCIENCE. (3) Tireman
125. TEACHING KINDERGARTEN AND PRE-FIRST. (2) SS McCann
126. TEACHING ORAL AND WRITTEN ENGLISH. (2) McCann
- 129c. ELEMENTARY EDUCATION WORKSHOP. (3)
132. CLASSROOM ORGANIZATION AND MANAGEMENT. (3) McCann
135. SUPERVISION OF ARITHMETIC. (2) Tireman
136. PRACTICE TEACHING IN ELEMENTARY GRADES. (5)  
Prerequisites: an observation course, 121, 122, 123. 90 clock hours minimum of practice teaching. Staff
139. REMEDIAL READING PROBLEMS. (2)  
Actual remedial cases. Prerequisite: 121. Tireman
221. INVESTIGATIONS IN PRIMARY LANGUAGE ARTS. (2) Graduate Staff
222. INVESTIGATIONS IN INTERMEDIATE LANGUAGE ARTS. (2) Graduate Staff
232. INVESTIGATIONS IN SOCIAL STUDIES. (2) Graduate Staff
233. PHILOSOPHY OF THE ACTIVITY PROGRAM. (2) Graduate Staff
235. INVESTIGATIONS IN ARITHMETIC. (2) Graduate Staff
237. THE ELEMENTARY SCHOOL CURRICULUM. (2) Graduate Staff
238. SUPERVISION OF THE ELEMENTARY SCHOOL. (3)  
No credit allowed if credit has been earned in Secondary Education 258. Tireman
- 251-252. PROBLEMS. (1-3 each semester) Graduate Staff
253. BILINGUAL EDUCATION. (2) Tireman
274. STUDY OF EDUCATION CLASSICS. (2) Graduate Staff
300. THESIS. (6) Graduate Staff

## HOME ECONOMICS

Professor Simpson (Head); Associate Professor Schroeder; Assistant Professors Elser, Knight.

## GROUP REQUIREMENTS

Home Economics 53L and 54L count toward Science and Mathematics (Group IV).

## MAJOR STUDY

See curriculum below. For requirements for a major in dietetics in the College of Arts and Sciences, see p. 116.



## MINOR STUDY

Home Economics 1, 2L, 12L, and 12 hours in courses numbered above 50, or 20 hours specified by the Head of the Department.

NOTE: The College of Education curriculum for students preparing to teach home economics is approved by the State Department of Vocational Education for the training of teachers of home-making who desire to teach in the federally-aided schools of the state.

CURRICULUM FOR STUDENTS PREPARING TO TEACH  
HOME ECONOMICS

(Leading to the degree of Bachelor of Science in Education.)

FRESHMAN YEAR			
First Semester		Second Semester	
English 1	3	English 2	3
Biology 12L	4	Biology 36	3
Art Education 30	3	Art Education 31	3
Home Economics 1	3	Intro. to Social Science 1	3
Home Economics 2L	2	Home Economics 12L	2
Physical Education	1	Home Economics 53L	3
		Physical Education	1
SOPHOMORE YEAR			
Intro. to Social Science 2	3	English	3
Chemistry 41L	5	Chemistry 42L	5
Psychology 51	3	Psychology 54	3
Home Economics 54L	3	Home Economics 60L	3
Home Economics 63L	3	Home Economics 64L	3
Physical Education	1	Physical Education	1
JUNIOR YEAR			
Education 141	3	Education 153	3
Home Economics 102	2	English	3
Home Economics 108	2	Economics 103	3
Home Economics 107L	3	Home Economics 109	2
Electives	6	Home Economics 132	3
		Electives	3
SENIOR YEAR			
Home Economics 127L	4	Home Economics 128	3
Home Economics 138L	4	Home Economics 133L	3
Electives	9	Home Economics 196	1-2
		Education 155d	3
		Education 156	5

## DESCRIPTION OF COURSES:

1. CLOTHING SELECTION. (3)  
Clothing selection from the standpoint of artistic, economic, and hygienic standards. Knight
- 2L. CHILD DEVELOPMENT. (2)  
Child care and development; the infant. 2 lectures, 2 hrs. lab. Schroeder
- 12L. CLOTHING CONSTRUCTION. (2)  
Basic construction problems of clothing for the individual. Prerequisite: 1. 4 hrs. lab. Knight
- 53L-54L. FOOD FOR THE FAMILY GROUP. (3, 3)  
Selection, preparation, and service of family meals. 1 lecture, 4 hrs. lab. Elser

- 60L. TEXTILES. (3)  
Construction, identification, use and care of clothing and household textiles. 2 lectures, 2 hrs. lab. Knight
- 63L-64L. ADVANCED CLOTHING CONSTRUCTION. (3, 3)  
63L: Pattern study; construction of clothing emphasizing fitting and techniques of finishing. 64L: Adaptation of patterns; problems in designing. Prerequisite: 1, and 12L, or permission of instructor. 1 lecture, 4 hrs. lab.
102. HOME NURSING. (2)  
Fundamentals of home care of the sick; sanitation; prevention and control of communicable diseases. Staff
104. NUTRITION. (2)  
Primarily for physical education majors. The relation of nutrition to the health program; normal nutrition. Simpson
- 107L. ADVANCED FOODS. (3)  
Food economics; household marketing; food laws; food preservation. Prerequisites: Home Economics 54L and Chemistry 41L, 42L. 1 lecture, 4 hrs. lab. Simpson
108. HOUSE PLANNING. (2)  
Use of space within the house planned for comfort, economy and beauty. Historic styles and their relation to modern design. Knight
109. HOME FURNISHINGS. (2)  
Selection, use and care of home furnishings with emphasis on individual use. Knight
- 127L. NUTRITION AND DIETETICS. (4)  
Prerequisite: 107L. 3 lectures, 2 hrs. lab. Simpson
128. FAMILY RELATIONSHIPS. (3) Schroeder
132. HOUSEHOLD MANAGEMENT. (3) Schroeder
- 133L. HOME MANAGEMENT HOUSE. (3)  
Six weeks' residence required. Prerequisite: 132. Schroeder
- 138L. CHILD CARE AND DEVELOPMENT. (4)  
Pre-school through adolescence. Observation and assistance in the nursery school. 3 lectures, 2 hrs. lab. Schroeder
- 140L. NURSERY SCHOOL METHODS AND ADMINISTRATION. (3)  
Observation and practical experience in guidance of children in nursery school, including an investigation of play materials, literature; music, equipment, records, housing, and budget. 1 lecture, 4 hrs. lab. Schroeder
196. HOME ECONOMICS SEMINAR. (1-2) Simpson

The following courses are primarily for students who wish to become dietitians.

- 150L. LARGE QUANTITY COOKERY. (3)  
Standard methods of food production in quantity; cost accounting; standardization of formulas; menu planning and table service. Prerequisites: 107L, 127L. 1 lecture, 4 hrs. lab. Dining Hall Staff
151. DIET IN DISEASE. (3)  
A study of the adaptation of diet in the treatment of impaired digestive and metabolic conditions. Prerequisites: 107L, 127L. Simpson
- 157L. QUANTITY PURCHASING. (3)  
Factors influencing quality; grade; and cost of food products. Current procedures in large quantity purchasing. Prerequisites: 107L, 127L, 150L. 1 lecture, 4 hrs. lab. Dining Hall Staff
159. INSTITUTIONAL MANAGEMENT. (3)  
Principles of scientific management applied to institutional administration. Experience in the food service and housing facilities on the campus. Prerequisites: 107L, 132, 157L. Dining Hall Staff

**INDUSTRIAL ARTS****CURRICULUM FOR STUDENTS PREPARING TO TEACH  
INDUSTRIAL ARTS**

(Leading to the degree of Bachelor of Science in Industrial Arts Education.)

**FRESHMAN YEAR**

First Semester		Second Semester	
English 1 Intro to Rhet.	3	English 2 Intro to Lit.	3
IA 1 Shop Computations	3	IA 2 Shop Computations	3
AE 11L Engr. Drawing	3	AE 12L Mach. Drawing	3
IA 20L Machine Shop	3	IA 10L Woodwork	3
Elective Science	3-4	Social Studies	3
Physical Education	1	Physical Education	1

**SOPHOMORE YEAR**

English 64 Informative Writing	3	Speech 55 Bus. and Prof.	3
Psychology 51 General	3	Psychology 54 Educational	3
AE 2L Descriptive Geometry	3	AE 62L Constr. Drawing	3
Social Studies	3	IA 60L Cabinet Work	3
IA 63L Pattern Making	3	IA 65L Machine Shop	3
Physical Education	1	Physical Education	1

**JUNIOR YEAR**

Physics 11L General	4	Physics 12L General	4
Educ 141 Princ. of Sec. Ed.	3	Educ 153 High School Methods	3
IA 157L Foundry	3	IA 105L Sheet Metal	3
IA 62L Carpentry	3	IA 102L Forging	3
IA 159L Arc and Acet Weld	3	IA 61L Wood Turning	3

**SENIOR YEAR**

EE 109L Applied Electricity	3	EE 110L Applied Electricity	3
Educ 155i Teaching I. A. in H. S.	3	Educ 156 Prac. Tchg. in H. S.	5
IA 104L Adv Patt Mkg	3	Elective	3-4
Educ 115 Educ. & Voc. Guid.	3	Social Studies	3
Elective	3-5		

**DESCRIPTION OF COURSES:**

See College of Engineering, pp. 161-162.

**MUSIC EDUCATION**

Professor Clauve.

**NASM MEMBERSHIP**

The Department of Music Education is accredited by the National Association of Schools of Music for the degree of Bachelor of Arts in Education.

**CURRICULA FOR STUDENTS PREPARING TO TEACH  
MUSIC EDUCATION**

(Leading to the degree of Bachelor of Arts in Education.) The following courses will satisfy the requirements for a major study in Music Education. Candidates must complete a minor study in some other teaching subject, and follow the curriculum for Elementary or Secondary Education. Applied music must include voice and piano study, the number of hours in each to be determined upon consultation with the Head of the Department of Music Education.

If electives are selected in the Music department, the following

courses are recommended: Music 95, 96, 61, 62, 157, 158, 109, 110, Dramatic Art 89, 90, or applied music.

**CURRICULUM FOR STUDENTS PREPARING TO TEACH MUSIC IN THE ELEMENTARY GRADES.** (Students preparing to teach music in the elementary schools should follow the elementary curriculum as outlined on p. 173, and should take the required number of hours and courses to complete their music education major in lieu of the electives provided in the elementary curriculum.)

Music 5, 6	10	*Music 45, 46	2
Music 55, 56	4	Applied Music	6
*Music 39, 40	4	Ensemble Music	2

\* Music 39, 40 and 45, 46 are to be taken concurrently.

**CURRICULUM FOR STUDENTS PREPARING TO TEACH MUSIC IN THE SECONDARY SCHOOLS:**

Music 5, 6	10	Music 153, 154	4
Music 61, 62	6	Music Education 94, 155f	5
*Music 39, 40	4	Ensemble Music	4
*Music 45, 46	2	Applied Music	24
Music 55, 56	4	Dramatic Art 89	3
Music 157, 158	4		

\* Music 39, 40 and 45, 46 are to be taken concurrently.

#### MINOR IN MUSIC EDUCATION

The following music courses will satisfy the requirements for a minor study in Music Education. Students who minor in Music Education must pass a satisfactory examination in piano and voice, or take at least one semester each in voice and piano class instruction.

Music 5, 6	10	Music Education 94 or 155f	2-3
Music 55, 56	4	Ensemble Music	2
Music 39, 40	4		

#### DESCRIPTION OF COURSES:

93-94. MUSIC EDUCATION. (2, 2)

Music fundamentals for elementary teachers; methods and materials for elementary grades. Clauve

155f. THE TEACHING OF MUSIC IN HIGH SCHOOL. (3)

Clauve

#### SCHOOL ADMINISTRATION

Professors Nanninga (Head), Fixley, Johnson; Graduate Assistant Walker.

#### CURRICULUM FOR ADMINISTRATORS AND SUPERVISORS

(Leading to the degree of Bachelor of Science in Education.) Teaching experience is required before a student may be admitted to this major. Twenty-four semester hours of work in courses numbered above 50 are necessary for a major. The following courses are acceptable toward meeting the requirements for a major study in administration and supervision. Candidates must also complete a minor in some field other than education.

Educational Psychology	3	City School Administration	3
History of Education	3	Problems of Education in N. M.	2
Educational and Psychological Tests	3	Elementary Education	3
Child Psychology	3	Educational and Vocational Guid.	3
		The Principal and His School	3

## DESCRIPTION OF COURSES:

107. PROBLEMS OF EDUCATION IN NEW MEXICO. (2)  
New Mexico school system. Nanninga
115. EDUCATIONAL AND VOCATIONAL GUIDANCE. (3)  
Principles and methods. Fixley
164. CITY SCHOOL ADMINISTRATION. (3)  
Required of all administrative majors. Educational, financial, and administrative principles. Fixley
166. THE PRINCIPAL AND HIS SCHOOL. (3)  
Organization and administration, and supervision of a single school. Fixley
171. PROBLEMS OF THE TEACHING PROFESSION. (3)  
The principles of educational administration and organization as applied to the duties and responsibilities of the classroom teacher. Nanninga
201. RESEARCH METHODS IN EDUCATION. (2)  
Required of all candidates for a graduate degree in education. Crawford, Fixley
206. SEMINAR IN EDUCATIONAL ADMINISTRATION. (2)  
Advanced reading and problems in educational administration. Johnson
- 251-252. PROBLEMS. (1-2 each semester) Graduate Staff
261. SCHOOL LAW. (3)  
Legislation and court decisions, with special reference to New Mexico school law. Fixley
263. STATE SCHOOL ADMINISTRATION. (3)  
State school systems. Federal and state policy, and forms of control. Nanninga
268. PUBLIC SCHOOL FINANCE. (3)  
Special attention to New Mexico. Johnson
277. SCHOOL BUILDINGS AND EQUIPMENT. (3)  
Problems, standards, committee reports, field trips. Johnson
300. THESIS. (6) Graduate Staff

## SECONDARY EDUCATION

Professor Diefendorf (Head); Associate Professors Crawford, Ivins;  
Assistant Professor Runge; Graduate Assistant Hawes.

CURRICULUM FOR STUDENTS PREPARING TO TEACH  
IN HIGH SCHOOL

(Leading to the degree of Bachelor of Arts in Education or  
Bachelor of Science in Education.)

FRESHMAN YEAR			
First Semester		Second Semester	
English 1	3	English 2	3
Mathematics or Science	3-4	Mathematics or Science	3-4
Social Studies	3	Social Studies	3
*Foreign Language	3	*Foreign Language	3
Physical Education	1	Physical Education	1
Electives	3	Electives	3

## SOPHOMORE YEAR

English	3	English	3
Psychology 51	3	†Education 54 (Psychology)	3
Social Studies	3	*Foreign Language	3
*Foreign Language	3	Physical Education	1
Physical Education	1	Electives or Science	6-7
Electives	3		

## JUNIOR YEAR

Education 141	3	†Education (Elective)	3
¶Majors and Minors	8-9	Education 153	3
Elective	3	§Teachers Course	3
		¶Majors and Minors	10-11

## SENIOR YEAR

§Teachers Course	3	Education 156	5
¶Majors and Minors	13	¶Majors and Minors	11

\* For substitution see Group Requirements for Graduation.

† If not taken during the sophomore year, the advanced course Psychology 183 must be substituted.

‡ Approved by Head of Department of Secondary Education.

¶ For required courses see departments of instruction.

§ One teacher's course, according to the advice of the Head of the Department of Secondary Education.

## DESCRIPTION OF COURSES:

141. PRINCIPLES OF SECONDARY EDUCATION. (3) Diefendorf, Crawford

143. PRINCIPLES AND PRACTICES OF DISTRIBUTIVE EDUCATION. (3)

Traces the development of vocational business distributive education under the federal George-Deen and Smith-Hughes Acts. Shows how to organize, set up and carry on secondary coöperative part-time retail selling classes, pre-employment sales courses and adult programs for workers employed in distributive occupations. Runge

147. EXTRA-CURRICULAR ACTIVITIES IN THE SECONDARY SCHOOL. (3)

The guiding principles of pupil participation in the extra-curricular life of the junior and senior high school. Ivins, Fixley

148. SOURCE MATERIALS IN DISTRIBUTIVE EDUCATION. (3)

Examination made of texts, workbooks, pamphlets, sales manuals, outlines, government publications, trade journals, and all types of instructional materials available for use in distributive education classes. Runge

149. CURRICULUM CONSTRUCTION IN DISTRIBUTIVE EDUCATION. (3)

Construction of teaching outlines and daily lesson plans for coöperative retailing class units and adult extension courses. Runge

153. HIGH SCHOOL METHODS. (3)

Prerequisite: Educational Psychology 54 or 183.

Diefendorf, Crawford, Ivins

155. THE TEACHING OF HIGH SCHOOL SUBJECTS.

All specific methods courses are listed under the general number, Education 155, with the designating subscripts as indicated. These courses carry credit in education only, not in the subject matter departments. Required of students following secondary curricula. Prerequisite: 153.

a. SEE ART EDUCATION

b. THE TEACHING OF BIOLOGY IN HIGH SCHOOL. (3)

c. THE TEACHING OF ENGLISH IN HIGH SCHOOL. (3)

Prerequisite: English 2.

Kuntz

d. THE TEACHING OF HOME ECONOMICS IN HIGH SCHOOL. (3)

- e. THE TEACHING OF MATHEMATICS IN HIGH SCHOOL. (3)
- f. THE TEACHING OF MUSIC IN HIGH SCHOOL. (3)  
Prerequisite: 94. (Offered only on demand.) Clauve
- g. THE TEACHING OF BUSINESS SUBJECTS IN HIGH SCHOOL. (3)
- h. THE TEACHING OF SCIENCES IN HIGH SCHOOL. (3)
- i. THE TEACHING OF INDUSTRIAL ARTS IN HIGH SCHOOL. (3) Bailey
- k. THE TEACHING OF SOCIAL STUDIES IN HIGH SCHOOL. (3) Staff
- m. THE TEACHING OF SPANISH IN HIGH SCHOOL. (2)  
(Offered in alternate years.) Kercheville
- n. THE TEACHING OF READING IN THE JUNIOR HIGH SCHOOL. (2)
- o. THE TEACHING OF DISTRIBUTIVE EDUCATION IN HIGH SCHOOL. (3)  
Runge
- p. THE TEACHING OF PHYSICAL EDUCATION IN HIGH SCHOOL. (3)
- 156. PRACTICE TEACHING IN HIGH SCHOOL. (5)  
Observation and teaching in Albuquerque High School. Prerequisite:  
153. 1 lecture, 5 hrs. practice teaching a week. Crawford, Diefendorf
- 159. DIRECTED STUDY. (3)  
Theory and practice of directing pupil study. Diefendorf
- 170. SPEECH ACTIVITIES IN THE PUBLIC SCHOOL. (3)  
(Same as Speech 170.)
- 202. RESEARCH SEMINAR IN EDUCATION. (2) Crawford
- 241. SEMINAR IN SECONDARY EDUCATION. (2) Diefendorf
- 242. HIGH SCHOOL CURRICULUM. (3)  
Trends and practical programs. Ivins, Diefendorf
- 244. THE JUNIOR HIGH SCHOOL. (2)  
History of the junior high school movement and some of the problems  
arising from its organization and administration. Ivins, Diefendorf
- 251-252. PROBLEMS. (1-2 each semester) Graduate Staff
- 258. HIGH SCHOOL SUPERVISION. (3)  
No credit allowed if credit has been earned in Elementary Educa-  
tion 238. Graduate Staff
- 300. THESIS. (6) Graduate Staff

#### DIVISION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

Professor White (Head); Associate Professor Burley (Graduate Studies), Harris, M.D., (Director, University Health Service); Assistant Professors Gerber, M.D., Sturges, M.D. (University Physicians).

Department of Health and Physical Education for Men: Professor Johnson (Head); Assistant Professors Barnes, Clements, Petrol; Instructors Dear, Dolzadelli.

Department of Health and Physical Education for Women: Associate Professor Gugisberg (Head); Assistant Professors McGill, Milliken; Instructors McCain, Waters.

#### ALL UNIVERSITY REQUIREMENTS

Four semester hours of required physical education shall be completed by all undergraduate students at the University. Veterans, Air and Navy ROTC students, and students over thirty years of age are exempted from the physical education requirement. Not

more than one hour may be earned in a semester except by physical education majors and minors. Not more than four semester hours of required physical education may count toward a degree. Men may substitute participation in major sports for required physical education for that part of the semester during which they are actively engaged in a sport, provided that they are enrolled in the section designated by the Department Head. Physical education majors and minors may not substitute their participation in sports for the required physical education classes.

The instructor in each course should be consulted concerning proper clothing or uniform.

There is a special fee of \$20.00 per semester for each course in riding.

#### PHYSICAL EDUCATION ACTIVITY COURSES

M indicates that the course is for men only.

W indicates that the course is for women only.

M & W indicates that the course is coeducational.

##### M1. ACTIVITY COURSE. (1) (8 Sections)

This course is designed to get the men into the best possible physical condition through such activities as conditioning and coordination exercises, swimming, tumbling, gymnastics, apparatus, touch football, speedball, basketball, combatives, seasonal recreational sports and games. Sections as required.

Johnson and Staff

##### W1. ORIENTATION. (1)

Staff

##### M2. ACTIVITY COURSE. (1) (8 Sections)

This course is designed to get the men into the best possible physical condition through such activities as basketball, combatives, volleyball, tennis, track and field, swimming, softball, seasonal recreational sports and games. Sections as required.

Staff

##### W2. ORIENTATION. (1)

Staff

##### W51. BEGINNING TENNIS. (1)

Milliken

##### W52. INTERMEDIATE TENNIS. (1)

Milliken

##### W53. ADVANCED TENNIS. (1)

McGill

##### M & W55. BEGINNING RIDING. (1)

Staff

##### M & W56. INTERMEDIATE RIDING. (1)

Staff

##### M & W57. ADVANCED RIDING. (1)

Staff

##### M & W58. HIGH ADVANCED RIDING. (1)

Staff

##### M & W59. RIDING (RODEO). (1)

Staff

##### M & W61. BEGINNING GOLF. (1) (3 Sections)

Dear

##### M & W62. INTERMEDIATE GOLF. (1) (2 Sections)

Dear

##### M & W63. ADVANCED GOLF. (1)

Dear

##### W66. BEGINNING SWIMMING. (1)

Staff

##### W67. INTERMEDIATE SWIMMING. (1)

Staff

##### W68. ADVANCED SWIMMING. (1)

McGill

##### M & W69. LIFE SAVING. (1)

Prerequisite: advanced swimming course or equivalent. American Red Cross Senior Life Saving Certificate awarded upon satisfactory completion of course.

McGill



M & W70. WATER FRONT SAFETY. (1)	
Technique of teaching swimming and life saving, organization of swimming programs, pool operation. Prerequisite: current Senior Life Saving Certificate, American Red Cross Water Safety Instructor's Certificate awarded for satisfactory completion of course.	
	McGill
W71. BEGINNING SWIMMING, INDIVIDUAL AND TEAM SPORTS. (1)	Staff
W72. INTERMEDIATE SWIMMING, INDIVIDUAL AND TEAM SPORTS. (1)	Staff
W73. ADVANCED SWIMMING, INDIVIDUAL AND TEAM SPORTS. (1)	McGill
W79. FENCING. (1)	Staff
W80. INDIVIDUAL AND TEAM SPORTS. (1)	Staff
W81. TEAM SPORTS. (1)	Milliken
M & W90. RECREATIONAL GAMES (1)	McCain
M & W91. BALLROOM DANCING. (1)	McCain
M & W92. MEXICAN AND NEW MEXICAN DANCING. (1)	McCain
M & W93. AMERICAN COUNTRY DANCE. (1)	McCain
M & W94. CONTEMPORARY DANCE. (1)	
Modern dance, beginning level.	Waters
M & W95. INTERMEDIATE CONTEMPORARY DANCE. (1)	
Modern dance, intermediate level.	Waters

### MAJOR STUDY IN HEALTH AND PHYSICAL EDUCATION FOR MEN

Outlined for men preparing to teach physical education. This curriculum leads to the degree of Bachelor of Science in Health and Physical Education.

#### FRESHMAN YEAR

First Semester		Second Semester	
English 1	3	English 2	3
Biology 12L	4	Biology 36 and 39L	5
Fine Arts	2-3	Social Studies	3
Social Studies	3	Business Administration 5	3
Physical Education M1	1	Physical Education M2	1
Electives	3-2		

#### SOPHOMORE YEAR

Speech 55	3	English	3
Social Studies	3	Education 54	3
Psychology 51	3	Physical Education 62L	4
Physical Education 40L	2	Physical Education 41L	2
Physical Education M1	1	Physical Education M2	1
Physical Education 72	2	Physical Education 64	2
Electives	3		

#### JUNIOR YEAR

Biology 126L	3	Home Economics 104	2
Education (Elective)	3	Education 141	3
Physical Education 121	2	Physical Education 122	2
Physical Education 138	3	Physical Education 104L	4
Physical Education 164	3	Physical Education 136	2
Electives	2	Electives	3

#### SENIOR YEAR

Education 164	3	Education 156	5
Education 153	3	Physical Education 172	3
Physical Education 167	3	Physical Education 186	2
Physical Education 183L	3	Physical Education 183L	2
Physical Education 171	3	Physical Education 185	3
Electives	2	Electives	1-3

**MAJOR STUDY IN HEALTH AND PHYSICAL EDUCATION FOR WOMEN**

This curriculum leading to a degree of Bachelor of Science in Health and Physical Education is designed to prepare the student to teach health and physical education in the schools, to supervise physical education in the elementary schools, to serve as the health coördinator in a school system.

FRESHMAN YEAR			
First Semester		Second Semester	
English 1	3	English 2	3
Social Studies	3	Social Studies	3
Fine Arts	4	Biology 36 and 39L	5
Biology 12L	4	Fine Arts	2
PE 49 Prof Activity	1	PE 72	2
PE W1	1	PE W2	1
SOPHOMORE YEAR			
Speech 55	3	English	3
Social Studies	3	Education 54	3
Psychology 51	3	Physical Education 64	2
Physical Education 96	1	Physical Education 98	1
Physical Education 97	1	P E Elective Activity	1
P E Elective Activity	1	Electives	6
Electives	4		
JUNIOR YEAR			
Biology 126L	3	Education 141	3
Education (Elective)	3	Physical Education 109	2
Physical Education 107	2	Physical Education 104L	4
Physical Education 108	2	Physical Education 145	1
Physical Education 119	2	Physical Education 148	1
Physical Education 138	3	Home Economics 104	2
Physical Education 146	1	Electives	3
SENIOR YEAR			
Education 153	3	Education 156	5
Physical Education 171	3	Physical Education 172	3
Physical Education 154	2	Physical Education 185	3
Physical Education 164	3	Physical Education 156	2
Physical Education 147	1	Electives or Educ. 155p	3
Electives	4		

**MINOR STUDY IN HEALTH EDUCATION FOR MEN OR WOMEN**

This minor in Health Education is designed to prepare the student to teach health education and to serve as a health coördinator.

Physical Education 72	2	Physical Education 64	2
Physical Education 138	3	Physical Education 185	3
Home Economics 104	2	Biology 36	3
Physical Education 164	3		

**MINOR STUDY IN RECREATION LEADERSHIP FOR MEN OR WOMEN**

The recreation minor is designed to prepare students to serve as coördinators of recreation in the school; to lead recreation activities on the playground, in community centers, and in youth centers; to plan and direct recreation programs in service organizations, church groups and youth organizations such as Scouts, YMCA, YWCA, etc.;

to serve as counselors in summer camps and to encourage further specialization in the field of recreation.

Physical Education 105	3	Drama 1, 29, 30	
Physical Education 175	3	Music 3, 39, 40	
Specialty in one area (in addition to major field)	8	Physical Education 64, 69, 80, 81, 90, 108, 109, 119, 121, 122, 125, 171, 172	
Courses advised for Specialty:			
Art 3, 4, 7, 8; Art Ed. 17, 18		Electives	4

#### MINOR STUDY IN ATHLETIC COACHING FOR MEN

This minor of 24 semester hours is offered to qualify men to meet the demands of high schools and colleges for coaches and athletic supervisors who are also prepared to teach some academic subject. Practical work which is required, but given no academic credit, is to be arranged at the discretion of the Department according to the student's needs. Physical Education 40L and 41L are recommended for all minors although not required.

Home Economics 104	2	Physical Education 172	3
Physical Education 62L	4	Biology 12L	4
Physical Education 136	2	Biology 36 and 39L	5
Physical Education 104L	4		

#### MINOR STUDY IN PHYSICAL EDUCATION FOR MEN

This minor of 26 semester hours is intended to meet the needs of those students who wish to combine the teaching of physical education with their major subjects.

Physical Education 72	2	Physical Education 172	3
Home Economics 104	2	Biology 12L	4
Physical Education 64	2	Biology 36 and 39L	5
Physical Education 40L	2	Physical Education 104L	4
Physical Education 41L	2		

#### MINOR STUDY IN PHYSICAL EDUCATION FOR WOMEN

This minor is designed to prepare students to teach physical education in the elementary or secondary schools.

Physical Education 171	3	Physical Education 64	2
Physical Education 172 or 119	2 or 3	PE 96, 98, 146, or 148	1
Physical Education 109	2	PE 49, 97, 145, or 147	1
Physical Education 108	2	Electives	3 or 2
Physical Education 107 or 156	2		

#### THEORY COURSES IN HEALTH, PHYSICAL EDUCATION AND RECREATION

- 40L. GYMNASIc TECHNIQUE AND PRACTICE. (Men) (2)  
Fundamental techniques of gymnastics and athletic activities, fieldball, games, aquatics, apparatus, gymnastics, tumbling. 2 lectures, 2 hrs. lab. Petrol
- 41L. SPORTS TECHNIQUE AND PRACTICE. (Men) (2)  
Fundamental techniques of additional gymnastics and athletic activities, diamond and courtball games, individual sports, gymnastic drill, games, combatives. Prerequisite: 40L. 2 lectures, 2 hrs. lab. Petrol
49. PROFESSIONAL ACTIVITIES. (Women) (1)  
Proficiency in stunts, tumbling, pyramid building, and certain self-testing activities. Staff

- 62L. THEORY AND PRACTICE IN MAJOR SPORTS. (Men) (4)  
Fundamental techniques of football, basketball, track and field, baseball and tennis. 4 lectures, 4 hrs. lab. Johnson, Petrol, Clements
- ✓ 64. FIRST AID. (2)  
American Red Cross Standard Certificate will be granted upon satisfactory completion of the course. Gerber
- ✓ 72. HEALTH EDUCATION. (2)  
(Same as Education 72.) White
96. PROFESSIONAL ACTIVITIES. (Women) (1)  
Directed observation and practice in group-work through one dual and one team sport. Staff
97. PROFESSIONAL ACTIVITIES. (Women) (1)  
Proficiency in soccer and speedball. Staff
98. PROFESSIONAL ACTIVITIES. (Women) (1)  
Directed observation and practice in group-work through one individual sport and Mexican and New Mexican dances. Staff
104. NUTRITION. (2)  
(Same as Home Economics 104.) Simpson
- 104L. KINESIOLOGY. (4)  
Prerequisites: Biology 12L, 36, 39L. Burley
105. COMMUNITY RECREATION THROUGH THE SCHOOL. (3)  
Basic course in planning school-community recreation. Discussion of objectives, facilities, activities, program planning, and leadership techniques. Prerequisite: proficiency in one area of recreation. McGill
- \*107. TEACHING OF FOLK DANCE. (2)  
Prerequisites: W92, W93, 145. McCain
108. TEACHING OF TEAM SPORTS. (Women) (2)  
Discussion of game techniques, strategy, rules, equipment, and teaching progression in softball, basketball, soccer, speedball, volleyball, and field hockey. Prerequisite: course in each sport. Milliken
109. TEACHING OF INDIVIDUAL AND DUAL SPORTS. (Women) (2)  
Discussion of game techniques, strategy, rules, equipment, teaching progression and unit planning in archery, tennis, badminton, bowling, and recreational games. Prerequisite: course in each sport. McGill
119. TEACHING OF PHYSICAL EDUCATION IN THE ELEMENTARY GRADES. (2)  
(Same as Education 119.) Gugisberg
121. OFFICIATING IN SPORTS. (2)  
Discussion and practice in officiating techniques in soccer, speedball or field hockey, football and basketball, etc. Prerequisite: permission of instructor. Johnson, McGill
122. OFFICIATING IN SPORTS. (2)  
Discussion and practice in officiating techniques in volleyball, softball, track and field, and tennis, etc. Prerequisite: permission of instructor. Johnson, McGill
125. ORGANIZATION AND ADMINISTRATION OF INTRAMURAL PROGRAMS FOR GIRLS. (Women) (1-3)  
Theory and practice in organizing and directing intramural programs. Prerequisite: permission of instructor. McGill
- 126L. PHYSIOLOGY OF EXERCISE. (3)  
(Same as Biology 126L.) Fleck
136. THEORY OF COACHING, STRATEGY, AND TACTICS. (Men) (2)  
Prerequisites: P. E. 62L and Home Economics 104. Johnson
- ✓ 138. TEACHING OF HEALTH EDUCATION IN THE SCHOOLS. (3)  
Responsibilities of the teacher in providing certain health services, desirable environmental conditions, and health instruction in elementary and secondary grades. Also discussions on basic health principles, unit planning, methods and use of community resources. Prerequisite: 72. Gugisberg

145. PROFESSIONAL ACTIVITIES. (Women) (1)  
Proficiency in European folk dancing. Staff
146. PROFESSIONAL ACTIVITIES. (Women) (1)  
Directed observation and practice in group work through swimming and American country dancing. Staff
147. PROFESSIONAL ACTIVITIES. (Women) (1)  
Proficiency in field hockey. Staff
148. PROFESSIONAL ACTIVITIES. (Women) (1)  
Directed practice and observation in group work through contemporary dance. Staff
154. TEACHING OF SELF-TESTING ACTIVITIES. (Women) (2)  
Discussions on selection of content, unit planning, progression, safety measures, class organization and methods. Milliken
- 155p. TEACHING OF PHYSICAL EDUCATION IN HIGH SCHOOL. (3)  
(Same as Education 155p.) Guginsberg
156. TEACHING OF CONTEMPORARY DANCE. (Women) (2)  
Selection of methods and materials for teaching modern dance. Waters
- ✓ 164. GENERAL SAFETY EDUCATION. (3)  
Safety in the home, on the farm, in industry, in play, in the school will be discussed. Stress on community organization, school responsibility and safety problems in New Mexico. Clements
- ✓ 165. TRAFFIC SAFETY EDUCATION IN SECONDARY SCHOOLS. (3) SS  
Open to high school teachers, principals, supervisors, and those who are interested in the field. Those enrolling must be licensed drivers. Discussion includes improving traffic conditions, the school's part in the safety program, the need for high school courses, methods and equipment for skill tests, insurance, costs and records for behind-the-wheel training, classroom teaching methods, physical tests for drivers. Standard methods of road instruction in a dual-controlled car will be required. A complete library of tests, teaching aids, and courses of study will be available. Martin
167. PHYSICAL DIAGNOSIS, TESTS AND MEASUREMENTS. (3)  
Techniques to determine abilities, needs, and placement in the physical education program. Johnson
171. PRINCIPLES OF PHYSICAL EDUCATION. (3)  
Approach to course of study construction through a study of aims and objectives, psychological, sociological, and physiological principles; the inter-relationships between health, physical education; and recreation; a brief review of historical backgrounds of modern physical education. Prerequisite: permission of the instructor. Guginsberg, Johnson
172. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION. (3)  
A study of program building including criteria for the selection of activities and progression, and a study of other factors affecting course of study construction such as facilities, equipment, budget, laws, policies, professional responsibilities, intramurals, and extramurals. Prerequisite: permission of instructor. Guginsberg, Johnson
175. FIELD WORK IN RECREATION. (3)  
Theory and practice in recreation leadership in centers, playgrounds, etc. Prerequisite: 105. McGill
- 183L. PRACTICE COACHING. (Men) (2)  
2 lectures, 2 hrs. lab. Clements
- ✓ 185. ADMINISTRATION OF A SCHOOL HEALTH PROGRAM. (3)  
Prerequisite: 138. Guginsberg
186. PROBLEM METHODS IN PHYSICAL EDUCATION. (1-3) White and Staff
- ✓ 190. SUPERVISION OF HEALTH AND PHYSICAL EDUCATION PROGRAMS. (1-3)  
Supervisory techniques stressing cooperative planning will be applied to city and county programs in New Mexico. Each student will be

- required to develop a problem in terms of his particular needs and situation. Prerequisite: permission of instructor. Gugisberg
201. RESEARCH METHODS IN EDUCATION. (2)  
(Same as Education 201.) Required of all graduate majors in Physical Education. Burley
205. FOUNDATIONS FOR A PHILOSOPHY OF PHYSICAL EDUCATION. (3)  
Prerequisite: At least 3 hrs. in history, principles, or methods of Physical Education. Burley
207. FOUNDATIONS FOR A PHILOSOPHY OF RECREATION. (3) Burley
209. TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION. (3) Burley
210. CURRICULUM CONSTRUCTION IN PHYSICAL EDUCATION. (3) Burley
214. THE REMEDIAL PROGRAM IN PHYSICAL EDUCATION. (3) Burley
216. SEMINAR IN HEALTH, PHYSICAL EDUCATION AND RECREATION. (2) Staff
251. PROBLEMS IN PHYSICAL EDUCATION. (1-3) Burley, Gugisberg
- ✓ 271-272. ADMINISTRATION OF HEALTH EDUCATION. (3, 3) Harris
300. THESIS. (6) White, Burley, Gugisberg, Harris

## COLLEGE OF FINE ARTS

**T**HE COLLEGE of Fine Arts is established for the following purposes: (1) to stimulate a greater interest in and understanding of the arts as a part of a liberal education; (2) to offer those who wish to specialize in any of the fields of art an opportunity to do so; (3) to coördinate more efficiently the work of the College in dramatics, music, and painting and design; (4) to promote scholarship in the fields of learning embraced by the arts; and (5) to make use of the unique facilities afforded by the state of New Mexico for the study, practice and teaching of the arts.

### DEPARTMENTS AND DEGREES OFFERED

The departments of this college are: Art, Dramatic Art, and Music.

Courses leading to the degree of Bachelor of Fine Arts in Dramatic Art, Music, and Art respectively, are offered; in the combined curriculum, successful candidates will receive the degree of Bachelor of Fine Arts.

### TAOS FIELD SCHOOL

The University of New Mexico, also maintains the Harwood Foundation in Taos, New Mexico, and the College of Fine Arts avails itself of the facilities of the Foundation to offer each summer a field school in art. Information regarding the field school may be obtained by writing to the Director of Admissions of the University of New Mexico.

### GRADUATION REQUIREMENTS

Candidates for degrees must complete all requirements outlined in the respective curricula, and must receive a grade of C or better in all required courses in their major fields in order to receive credit for such courses toward graduation. Students must maintain a C average to remain in the College of Fine Arts. Students must also pass the Sophomore English Proficiency Examination. Failure to pass this test requires the student to report to the English Workshop for English remedial help.

Courses in Naval Science may be substituted in each curriculum with approval of the Dean.

### COMBINED CURRICULUM

(Leading to the degree of Bachelor of Fine Arts.) Hours required for graduation, 132, including:

- (a) Group requirements as listed under College of Arts and Sciences, or under the College of Education.
- (b) Four semester hours of physical education.
- (c) Major study or its equivalent in Art, Dramatic Art, or Music; and

(d) Minor study or its equivalent in Art, Dramatic Art, or Music (other than major field).

## PRE-OCCUPATIONAL THERAPY CURRICULUM

### PRE-PROFESSIONAL

The Pre-Occupational Therapy course at the University of New Mexico covers a period of two years. The University offers the following curriculum to equip the student with the basic academic and laboratory courses which will provide him with those prerequisites required of students applying to accredited schools of Occupational Therapy. He will normally transfer to an accredited school of Occupational Therapy at the sophomore or junior level. It is possible, however, to enter these schools as an advanced standing student already possessing a B.F.A. degree.

### CURRICULUM

The following curriculum for freshmen in Pre-Occupational Therapy is suggested:

First Semester		Second Semester	
Art 3	2	Art 4	2
Art 7	2	Art 8	2
Biology 1L	4	Biology 2L	4
English 1	3	English 2	3
Psychology	3	Psychology	3
P.E.	1	Elective (as advised)	2
	15	P.E.	1
			17

The following courses relating to Pre-Occupational Therapy are also offered:

Art 27, 28—Lettering	2, 2	P.E. MW93—American Country Dance	1
Art 55—Drawing	2	Psychology 60—Personality and Adjustment	3
Art 57—Crafts	2	Psychology 101—Social Psychology	3
Art 87, 88—Photography	2, 2	Psychology 103—Abnormal Psychology	3
Art 127, 128—Crafts	3, 3	Psychology 187—Child Psychology	3
Biology 36—Human Anatomy and Physiology	3	Psychology 196—Physiological Psychology	3
Biology 93L—General Bacteriology	4	Sociology 72—Social Pathology	3
Education 115—Educational and Vocational Guidance	3		
Home Economics 104—Nutrition	2		
P.E. MW90—Recreational Games	1		

## DEPARTMENTS OF INSTRUCTION

Courses numbering from 1-49, lower division, normally open to freshmen; from 50-99, lower division, normally open to sophomores; from 100-199, upper division, normally open to juniors, seniors, and graduates; 200-300, open to graduates only. Graduate credit for courses listed is allowed at the discretion of the Graduate Committee.

Symbols used in course descriptions: L—part of the course is



laboratory work; F—course is given during field session; SS—course offered in eight weeks' summer session only; Yr—course offered throughout two semesters and credit for single semester's work is suspended until the entire course is completed; ()—semester hours' credit; credit hours separated by a dash (1-3) indicate variable credit in the course; []—former course number or title; ‡—may be repeated without duplication of credit to the limit of 8 hours' credit for students of the College of Fine Arts, 4 hours for others.

A schedule of courses offered, including hours of meeting, is issued at the opening of each session. The University reserves the right to cancel any listed course or to make a substitution in instructors when necessary.

#### ART

Professors Adams, Douglass, Jonson; Associate Professors Davey, Haas (Head), Tatschl; Assistant Professors Bunting, Poore, Todd; Instructors Hook, Montenegro; Graduate Assistants Elliott, Harris.

#### MAJOR STUDY

1. For the student enrolled in the College of Fine Arts a 65 hour major is offered leading to the degree of B.F.A. in Art. (See curriculum p. 192)

2. For the student enrolled in the College of Arts and Sciences a 32 hour art major is offered. (See p. 96)

3. For the student enrolled in the College of Fine Arts and pursuing the Combined Curriculum (see p. 189) a 41-hour art major is offered. This consists of: Art 1, 2, 3, 4, 5, 6, 7, 8. Group I, 6 hours; Group II, 5 hours; Group III, 4 hours. A total of 12 hours must be in courses numbered over 100.

#### MINOR STUDY

20 hours in a field of particular interest, such as Commercial Art, Sculpture, Painting, Photography, etc. The student shall satisfy the following requirements: (1) prerequisite courses shall be taken; (2) the advice of an Art adviser, to be appointed by the Art Department, shall be obtained, and the advised program approved by the Minor Department Head; (3) at least 6 hours to be taken in courses numbered above 100.

#### FIELD SESSION

Each summer a field session in art is conducted at the Harwood Foundation, a division of the University, at Taos at which advanced courses are offered.

#### PRE-OCCUPATIONAL THERAPY

See curriculum on p. 190.

#### MATERIALS and STUDENT WORK

Students enrolling in Art courses furnish their own materials except certain studio equipment provided by the University.

*All work* when completed is under the control of the Department until after the exhibitions of student work. Each student may be required to leave with the Department one or several pieces of original work to be added to the permanent collection.

#### UPPER DIVISION REQUIREMENTS

The candidate for the B.F.A. must complete at least 38 hours of upper division work (courses numbered above 100) in which he has maintained at least a one-point average; of this requirement at least 28 hours must be in art courses.

#### MAXIMUM NUMBER OF HOURS

No student in the Art department may enroll in more than eighteen semester hours without permission from the Head of the Department.

#### CREDIT

For one semester hour of credit it is expected that the student do approximately 48 clock hours of work (three clock hours per week through the semester), which includes time spent in recitation, preparation, and studio. If full studio hours are not assigned in the schedule, they will be arranged by the instructor.

#### CURRICULA-IN ART

Leading to the degree of Bachelor of Fine Arts in Art. Hours required for graduation, 132. (For Art Education see College of Education.)

##### FRESHMAN YEAR

(The course for all Art Majors is the same in the Freshman year.)

First Semester		Second Semester	
Art 1	2	Art 2	2
Art 3	2	Art 4	2
Art 5	2	Art 6	2
Art 7	2	Art 8	2
English 1	3	English 2	3
*Foreign Language	3	*Foreign Language	3
Physical Education	1	Physical Education	1
	—	Gen. Univ. Elective	2
	15		—
			17

\* The student who has had two years of foreign language in high school and is able to pass the qualifying examination for an intermediate course in that language may be excused from the language requirement. The art faculty, however, strongly advises the student to take at least a year of foreign language at the college level.

Three possible courses of study are offered by the Art Department, and the student at the end of his freshman year will select one of these fields in which to specialize (or Major). They are:

GROUP I—Painting, Sculpture and Drawing

GROUP II—Crafts and Commercial Art

GROUP III—Art History

## CURRICULUM FOR GROUP I OR GROUP II MAJORS

SOPHOMORE YEAR			
First Semester		Second Semester	
Art (Major Group)	4	Art (Major Group)	4
Art Group III	3	Art (Other than Major)	2
Art (Other than Major)	2	Social Science	3
Social Science	3	Physical Education	1
Physical Education	1	Gen. Univ. Elective	6
Gen. Univ. Elective	3		—
	16		16
JUNIOR YEAR			
Art (Major Group)	6	Art (Major Group)	6
Art Group III	2	Art Group III	2
Natural Science	3	Natural Science	3
Gen. Univ. Elective	6	Gen. Univ. Elective	6
	—		—
	17		17
SENIOR YEAR			
Art (Major Group)	4	Art (Major Group)	4
Art Group III	2	Art Group III	2
Art (Any Group)	3	Art (Any Group)	3
Literature	3	Literature	3
Gen. Univ. Elective	5	Gen. Univ. Elective	5
	—		—
	17		17

For Group II Majors only, 18 hours of Sculpture may be substituted for Group II courses.

For Majors in Commercial Art, 8 hours of credit in painting or drawing courses may be substituted for Group II courses.

## CURRICULUM FOR GROUP III MAJORS

SOPHOMORE YEAR			
First Semester		Second Semester	
Art (Major Group III)	3	Art (Major Group III)	3
Art (Other than Major)	2	Art (Other than Major)	2
Anthropology 1	3	Anthropology 2	3
History 1	3	History 2	3
Physical Education	1	Physical Education	1
Gen. Univ. Elective	4	Gen. Univ. Elective	4
	—		—
	16		16
JUNIOR YEAR			
Art (Major Group)	4	Art (Major Group)	4
Art (Other than Major)	4	Art (Other than Major)	2
Natural Science	3	Natural Science	3
Gen. Univ. Elective	6	Philosophy 102	3
	—	Gen. Univ. Elective	5
	17		—
			17
SENIOR YEAR			
Art (Major Group)	4	Art (Major Group)	4
Art (Any Group)	3	Art (Any Group)	3
Literature	3	Literature	3
Gen. Univ. Elective	7	Gen. Univ. Elective	7
	—		—
	17		17

## PUBLIC SCHOOL CERTIFICATION

It is possible for the student majoring in Art and enrolled in the College of Fine Arts to take those courses in Education required for a teacher's certificate in New Mexico and other states as well. For students desiring to meet public school certification requirements, the following curriculum is suggested:

## FRESHMAN YEAR

(Same for all art students.)

## SOPHOMORE YEAR

First Semester		Second Semester	
Art (Major Group)	4	Art (Major Group)	4
Art (Other than Major)	2	Art (Other than Major)	2
Art Group III	3	*Psychology 54	3
Psychology 51	3	Physical Education	1
Physical Education	1	Art Education 49	3
Art Education 48	3	Literature	3
	16		16

## JUNIOR YEAR

Art (Major Group)	6	Art (Major Group)	6
Art Group III	2	Art Group III	2
Social Science	3	Social Science	3
Gen. Univ. Electives	6	*Education 141	3
	17	*Education 153	3
			17

## SENIOR YEAR

Art (Major Group)	4	Art (Major Group)	4
Art (Any Group)	3	Art (Any Group)	3
Art Group III	2	Art Group III	2
Literature	3	Literature	3
Gen. Univ. Electives	5	*Education 156	5
	17		17

\* Certification requirements for New Mexico:

Psychology 54	3
Education 141	3
Education 153	3
Education 156	5
Education electives	6
(Art Education 48 and 49 are suggested.)	

Total 20 hours

## DESCRIPTION OF COURSES:

## (GROUP I) PAINTING, SCULPTURE, AND DRAWING

## 3-4. CREATIVE DESIGN. (2, 2)

Introduction to line, color, form, and composition.

Staff

## 5-6. BEGINNING DRAWING. (2, 2)

Introduction to the methods and theories of drawing and painting.  
Bunting, Douglass, Montenegro

## 45-46. SKETCH. (2, 2)

Life sketching in choice of media. No prerequisite.

Staff

53. **BEGINNING PAINTING AND DESIGN. (2)**  
Introductory study of the painter's craft. Various media. Prerequisites:  
3, 4, 5, 6. Jonson, Haas, Montenegro, Todd
55. **DRAWING. (2)**  
Craftsmanship in drawing of life, casts and still life in various media.  
Prerequisites: 5, 6. Douglass, Montenegro
56. **DRAWING. (2)**  
Continuation of Art 55 including artistic anatomy. Prerequisites:  
5, 6. Douglass, Montenegro
- 63-64. **PAINTING AND DESIGN. (2, 2)**  
Figure, portrait and still life. Prerequisites: 3, 4, 5, 6. Adams, Davey, Montenegro
- 65-66. **LIFE DRAWING. (2, 2)**  
Drawing from the human figure. Prerequisites: 5, 6. Adams, Davey, Montenegro
79. **SCULPTURE. (2)**  
Technique, executed in various media of sculpture. Prerequisites:  
3, 4, 5, 6. Tatschl
89. **SCULPTURE. (2)**  
Technique, executed in various media of sculpture. Prerequisites:  
3, 4, 5, 6; 79 not a prerequisite. Tatschl
- 95-96. **SKETCH CLASS. (2, 2)**  
Life sketching in choice of media. No prerequisite. Staff
- HA. READING FOR HONORS. (1-3 each semester)** Staff
- HB. RESEARCH FOR HONORS. (1-3 each semester)** Staff
- 103-104. **LANDSCAPE PAINTING. (2, 2)**  
Landscape painting in water-color, gouache, or oils. Prerequisites:  
53 and 63 or 64. Adams, Douglass, Haas
- 113-114. **LANDSCAPE PAINTING. (2, 2)**  
Landscape painting in water-color, gouache, or oils. Prerequisites:  
53 and 63 or 64. Adams, Douglass, Haas
154. **MATERIALS AND MEDIA. (3)**  
Experimentation in the various media of painting including tempera,  
mixed technique, gouache, etc. Prerequisites: 53 and 63 or 64. Haas
- 155-156. **ADVANCED LIFE DRAWING. (3, 3)**  
Prerequisites: 56 and 65 or 66. Adams, Davey
159. **ADVANCED SCULPTURE. (3)**  
Prerequisite: 79 or 89. Tatschl
- 163-164. **ADVANCED PAINTING AND DESIGN. (3, 3) \***  
Prerequisites: 53 and 63 or 64. Jonson
- 165-166. **ADVANCED LIFE DRAWING. (3, 3)**  
Prerequisites: 56 and 65 or 66. Adams, Davey
169. **ADVANCED SCULPTURE. (3)**  
Prerequisite: 79 or 89. Tatschl
- 173-174. **ADVANCED PAINTING AND DESIGN. (3, 3) \***  
Prerequisites: 53 and 63 or 64. Davey
179. **ADVANCED SCULPTURE. (3)**  
Prerequisite: 79 or 89. Tatschl
- 183-184. **ADVANCED PAINTING AND DESIGN. (3, 3) \***  
Objective painting: portrait, figure, and still life. Prerequisites: 53  
and 63 or 64. Adams
189. **ADVANCED SCULPTURE. (3)**  
Prerequisite: 79 or 89. Tatschl
- 193-194. **ADVANCED PAINTING AND DESIGN. (3, 3) \***  
Prerequisites: 53 and 63 or 64. Visiting Painter

\* No student may take more than 18 hours in courses listed as Advanced Painting and Design.

## 199. SPECIAL PROBLEMS. (2)

Advanced work in projects or fields not covered in the regular catalog courses. Maximum two hours per semester with a total of eight hours toward graduation. Open to juniors, seniors, and graduates having a B average in their art courses.

## 251-252. SPECIAL PROBLEMS. (3, 3)

Graduate work in projects or fields not covered in the regular catalog courses. Three hours per semester with a total of six hours.

## 300. THESIS. (6)

The thesis should be taken over two semesters.

Graduate Staff

**(GROUP II) CRAFTS AND COMMERCIAL ART**

## 7-8. GENERAL CRAFTS. (2, 2)

Introduction to the processes involved in crafts. Art 3 and 4 prerequisites or to be taken concurrently.

Poore, Todd

## 27. MANUSCRIPT LETTERING. (2)

The essential form of the Roman alphabet and its derivatives as applied to calligraphy. No prerequisite.

Douglass

## 28. COMMERCIAL LETTERING. (2)

Creative lettering with the brush and pen as used in advertising. No prerequisite.

Douglass

## 37. BEGINNING CERAMICS. (2)

Study of ceramics, including practice in casting, shaping, wheel throwing, firing and glazing. No prerequisite.

Poore, Todd

## 57. CRAFTS. (2)

General crafts including jewelry, art woodwork, metal work, leather work and stencilling. Research in Spanish design and Latin-American methods. Of interest to teachers. Prerequisites: 3, 4, 7, 8.

Poore, Todd

## 67. GRAPHIC ARTS. (2)

Techniques and methods in lithography, etching, and woodcuts. Prerequisites: 3, 4, 5, 6, and 55 or 56.

Tatschl

## 77-78. GENERAL COMMERCIAL ART. (2, 2)

Art and layout in advertising, various techniques and methods of reproduction. Optional work in cartooning. Prerequisites: 3, 4, 5, 6, and 27 or 28.

Douglass

## 87-88. PHOTOGRAPHY. (2, 2)

Elementary photography including shooting, dark room procedure and photographic composition. (A camera is necessary for this course.) It is recommended that 87 be taken prior to 88.

Haas

## HA. READING FOR HONORS. (1-3 each semester)

Staff

## HB. RESEARCH FOR HONORS. (1-3 each semester)

Staff

## 127-128. CRAFTS. (3, 3)

Jewelry design in various media with emphasis upon the inherent qualities of the materials used. Prerequisite: 57.

Poore, Todd

## 137. CERAMICS. (3) Continuation of Art 37.

Todd

## 147-148. CRAFTS. (3, 3)

An experimental approach to weaving and textile design with emphasis upon the combination of materials and the use of new materials. Prerequisite: 57.

Poore

## 157-158. CRAFTS. (3, 3)

Crafts with an emphasis on those typical of the Southwest. Tinwork, jewelry, small woodwork or weaving. Prerequisite: 57.

## 167. GRAPHIC ARTS. (2)

Techniques and methods of etching, lithography and wood cut. Prerequisite: 67.

Tatschl

## 177-178. COMMERCIAL ART PROBLEMS. (3, 3)

Second year commercial art. Prerequisites: 77, 78.

Douglass

199. SPECIAL PROBLEMS. (2)  
Advanced work in projects or fields not covered in the regular catalog courses. Maximum two hours per semester with a total of eight hours toward graduation. Open to juniors, seniors, and graduates having a B average in their art courses.
- 251-252. SPECIAL PROBLEMS: (3, 3)  
Graduate work in projects or fields not covered in the regular catalog courses. Two hours per semester with a total of four hours. Open to graduate students only.

## (GROUP III) ART HISTORY

1. GENERAL ART HISTORY. (2)  
Introductory study of the architecture, painting, sculpture and crafts of the prehistoric, ancient, and medieval periods. Todd
2. GENERAL ART HISTORY. (2)  
Continuation of Art 1. Art of the periods from the Renaissance up to date. Todd
42. HISTORY OF ARCHITECTURE: ANCIENT AND MEDIEVAL. (2)  
A survey of architectural forms and structural design from early Egyptian times through the Middle Ages. Bunting
61. HISTORY OF ARCHITECTURE: RENAISSANCE AND BAROQUE. (2)  
A survey of architectural design from the Renaissance to 1800. Bunting
62. HISTORY OF MODERN ARCHITECTURE AND CITY PLANNING. (2)  
A survey of architectural forms and structural design from 1800 to the present. Bunting
81. ART OF THE RENAISSANCE AND BAROQUE PERIODS. (3)  
History of the painting, sculpture and architecture of Italy and Northern Europe from the fifteenth century to the French Revolution. No prerequisite. Bunting
82. HISTORY OF MODERN ART. (3)  
History of painting and sculpture from the Napoleonic era up to and including contemporary movements. Prerequisites: 1, 2. Bunting
- HA. READING FOR HONORS. (1-3 each semester) Staff
- HB. RESEARCH FOR HONORS. (1-3 each semester) Staff
121. HISTORY OF ANCIENT ART. (2)  
A study of the art of the peoples of Europe and the Mediterranean area from prehistoric to Christian times. Prerequisites: 1, 2. Todd
122. HISTORY OF MEDIEVAL ART. (2)  
A survey of architecture, painting, and sculpture from the dissolution of the Roman empire to the sixteenth century with emphasis on the religious art forms of the twelfth and thirteenth centuries. No prerequisite. Bunting
131. PRE-CORTESIAN ART. (2)  
A study of the arts of the Americas prior to the conquests of the Spanish in the fifteenth century. Todd
132. HISTORY OF AMERICAN INDIAN ART. (2)  
Prehistoric and historic art forms of the Indians of North America. No prerequisites. Haas
141. ART OF THE UNITED STATES. (2)  
A survey of painting, sculpture and architecture from Colonial times to the First World War. No prerequisite. Bunting
142. SPANISH COLONIAL ART. (2)  
History of the architecture, sculpture, and painting in the period of Spanish colonization and the relation of these art forms to both the Spanish and the native Indian traditions. No prerequisite. Bunting

151. **RENAISSANCE PAINTERS.** (2)  
An analytical study of the painters of the Renaissance. Prerequisites: 1, 2. Haas
152. **HISTORY OF MODERN PAINTING.** [History of Modern European Art] (2)  
The history of European painting from 1900 to the present day. No prerequisite. Haas
161. **HISTORY OF ORIENTAL ART.** (2)  
History of Indian, Chinese and Japanese art from its inception to the present time. No prerequisite. Bunting
171. **PRIMITIVE ART.** (2)  
The art forms of present day primitive peoples, with main emphasis on those of the Oceanic and African areas but with discussion on the art forms of North, Central and South America. No prerequisite.
192. **CONTEMPORARY MEXICAN PAINTERS.** (2)  
Survey of the main figures of the art movement in Mexico. No prerequisite. Haas  
Todd
199. **SPECIAL PROBLEMS.** (2)  
Advanced work in projects or fields not covered in the regular catalog courses. Maximum two hours per semester with a total of eight hours toward graduation. Open to juniors and seniors having a B average in their art courses. Staff
- 251-252. **SPECIAL PROBLEMS.** (3, 3)
- 281-282. **SEMINAR IN THE HISTORY OF CONTEMPORARY ART.** [History of Art] (2, 2)  
Haas
- 291-292. **SEMINAR IN THE HISTORY OF THE ART OF THE RENAISSANCE AND COUNTER-REFORMATION.** [Seminar] (2, 2)  
Bunting
300. **THESIS.** (6)  
Should be taken over two semesters. Graduate Staff

## DRAMATIC ART

Professor Snapp (Head); Assistant Professors Blackburn, Miller, Yell.

### MAJOR STUDY

College of Fine Arts: see Curriculum below.

For the purpose of combined curriculum in Fine Arts: 48 hours including Drama 1, 2, 10, 11, 29, 30, 75, 76, 85, 86, 89, 90, plus 12 hours to be chosen from Drama 135, 136, 175, 176, 185 and 186. See also group requirements of College of Arts and Sciences and College of Education.

College of Education: 1, 2, 10, 11, 29, 30, 75, 76, 89, 90, 161, and English 141. Total 36 hours.

### MINOR STUDY

1, 2, 10, 11, 29, 30, 89, 90, English 141. Total 27 hrs.

### CURRICULA IN DRAMATIC ART

(Leading to the degree of Bachelor of Fine Arts in Dramatic Art. Hours required for graduation, 132.)

#### FRESHMAN YEAR

First Semester		Second Semester	
English 1	3	English 2	3
Elective in Social Science	3	Elective in Social Science	3



Drama 10	3	Drama 11	3
Drama 1	3	Drama 2	3
Drama 29	3	Drama 30	3
Physical Education	1	Physical Education	1

## SOPHOMORE YEAR

Beginning Drawing	2	Beginning Drawing	2
Foreign Language	3	Foreign Language	3
Drama 75	3	Drama 76	3
Drama 85	3	Drama 86	3
Drama 89	3	Drama 90	3
Physical Education	1	Physical Education	1

## JUNIOR YEAR

English 57	3	Psychology 51	3
Drama 135	3	Drama 136	3
Drama 175	3	Drama 176	3
Drama 161	3	Drama 162	3
Philosophy Elective	2-3	English Elective	3
Other Electives	3-2	Other Electives	2

## SENIOR YEAR

Drama 185	3	Drama 186	3
Drama 197	3	Drama 198	3
English 141 or 142	3	English Elective	3
Electives	8	Other Electives	8

(Leading to the degree of Bachelor of Fine Arts in Dramatic Art with courses required for public school certification. Hours required for graduation, 132.)

## FRESHMAN YEAR

(Same as freshman year outlined above.)

## SOPHOMORE YEAR

Beginning Drawing	2	Beginning Drawing	2
Foreign Language	3	Foreign Language	3
Drama 75	3	Drama 76	3
Drama 85	3	Drama 86	3
Psychology 51	3	*Education 54	3
Physical Education	1	Physical Education	1

## JUNIOR YEAR

English 57	3	Philosophy Elective	3
Drama 135	3	Drama 136	3
*Education 141	3	*Education 153	3
Drama 89	3	Drama 90	3
Drama 175	3	Drama 176	3
English Elective	3	Other Electives	2

## SENIOR YEAR

Drama 161	3	Drama 162	3
*Education 156	5	*Education Electives	6
English 141 or 142	3	English Elective	3
Drama 185	3	Drama 198	3
Other Elective	3	Other Electives	3

\* Required for certification.

It is strongly urged that the student broaden his field of study by choosing electives from the curricula of other colleges of the

University, especially courses in the social sciences, so as to gain better insight into the problems of contemporary society.

In addition to the planned course of study, students of the Department participate in all phases of production of three-act and one-act plays. So far as is possible, this work is correlated to class work.

In lieu of courses not offered during certain terms, substitution made with the advice of the Head of the Department will be accepted.

#### DESCRIPTION OF COURSES

- 1-2. FUNDAMENTALS OF SPEECH AND READING. (3, 3)  
The preparation and delivery of original and practical extempore speeches, including a study of rhetorical principles, audience psychology, methods of presentation, and the basic principles of the physiology of speech and voice. Yell
- 10-11. THEATRE HISTORY. (3, 3)  
The development of dramatic art from the Greeks to the present day, with a study of historical backgrounds of dramatic thought and with special emphasis on production techniques. Miller
- 29-30. STAGE CRAFT. (3, 3)  
Methods, materials, and techniques of stage carpentry. Students construct scenery for season's productions. 3 lectures, 3 hrs. lab. Miller
40. MAKE-UP. (3)  
A practical course on the art of make-up for the stage, covering both basic principles and specific techniques. Blackburn
- 51-52. RADIO DRAMA PRODUCTION. (3, 3)  
Adapting, editing, and producing dramatic radio programs; directing and production techniques. Radio workshop. Yell
- 60-61. PLAY WRITING. (2, 2)  
Writing, reading and analysis of student plays is supplemented by a critical examination of their playing qualities as revealed in laboratory performance before invited groups. Snapp
- 75-76. TECHNICAL PRODUCTION. (3, 3)  
Analysis, planning, and construction of stage scenery and properties. Study of the theatre plant. Prerequisite: minimum of one semester of stage craft. Miller
- 85-86. ACTING TECHNIQUE. (3, 3)  
Methods of interpretation for both modern and historical productions. Snapp
- 89-90. REHEARSAL AND PERFORMANCE. (3, 3)  
Elementary techniques of both actor and director. Analysis of plays for methods of interpretation in production. Yell
- 135-136. STAGE LIGHTING. (3, 3)  
Theory and practice of present-day methods of lighting the stage. Blackburn
140. ADVANCED TECHNICAL PRODUCTION. (3)  
Theatre architecture and theatre planning, sight lines, acoustics, equipment, and installations. Advanced problems of the scene technician. Miller
150. THEATRE ORGANIZATION AND MANAGEMENT. (3)  
A practical and correlated study of the University theatre, the civic and community, and the professional theatre. Principles of production, organization, programming, house management, budgets, advertising and box office. Miller
- 161-162. ADVANCED REHEARSAL AND PERFORMANCE. (3, 3)  
Detailed study of directing techniques. Analysis of scripts. Rehearsal

by students, under supervision, of one-act plays for class presentation.  
Prerequisites: 89, 90. Snapp

175-176. SCENE DESIGN. (3, 3)

Materials, techniques, and methods of scene design and scene painting.  
Student designs compete for season's productions. Yell

185-186. COSTUME DESIGN. (3, 3)

Historic, modern, and stylized costume and how to design it for the stage. Students execute costumes for season's productions. Blackburn

197-198. PROBLEMS. (3, 3)

Advanced work in any of the following fields: directing, lighting, or scene design. Prerequisites: the student must have completed, or give concrete evidence of mastery of all preliminary courses offered in his chosen field. Staff

## MUSIC

Professors Miller (Head), Robb. Associate Professors Frederick, Keller, Robert; Assistant Professors Ancona, Dahnert, Kunkel, Schoenfeld, Snow; Instructors Dawson, Warren.

### NASM MEMBERSHIP

The Department of Music is accredited by the National Association of Schools of Music for the degree of Bachelor of Fine Arts in Applied Music.

### MAJOR STUDY

For purposes of combined curriculum in Fine Arts: 42 hours including 5, 6, 39, 40; 16 hours of applied music and 4 hours of ensemble music. See also curricula under College of Fine Arts below.

### MINOR STUDY

College of Arts and Sciences: 16 hours of theoretical courses (including 5, 6) and 4 hours of applied music. Combined curriculum in Fine Arts: 24 hours including 39, 40, 5 and 6, and 4 hours of applied music and 2 hours of ensemble music.

### RECITALS AND PUBLIC PERFORMANCE

Music majors are required to attend all student and faculty recitals, and to participate in certain specified recitals and public performances. Loss of credit will result from failure to observe either of these requirements.

Students are not to perform in public without the consent of the Department.

### ENSEMBLE

One credit hour represents from 2 to 4 hours a week of rehearsal, plus necessary preparation.

All music majors must have at least two semesters of mixed chorus; all voice majors must have at least four semesters of mixed chorus (43, 44, 143, 144).

## CURRICULA IN MUSIC

Leading to the degree of Bachelor of Fine Arts in Music. (See also curriculum in General College.)

Five fields of concentration are offered: Theory; Applied Music (Instrumental); Applied Music (Vocal); Music Literature; and Public School Certification. Hours required for graduation, 132.

## FIELD OF CONCENTRATION—THEORY

FRESHMAN YEAR			
First Semester		Second Semester	
Music 5 Harmony	5	Music 6 Harmony	5
Music 55 Orchestral Instruments	2	Music 56 Orchestral Instruments	2
Music 19 Applied	2	Music 20 Applied	2
English 1 Intro to Rhet	3	English 2 Intro to Lit	3
Social Science	3	Social Science	3
Physical Education	1	Physical Education	1
	16		16
SOPHOMORE YEAR			
Music 69 Applied	2	Music 70 Applied	2
Music 61 Music History	3	Music 62 Music History	3
Music 95 Counterpoint	3	Music 96 Counterpoint	3
*Ensemble	1	*Ensemble	1
Mathematics or Science	3	Mathematics or Science	3
Modern Language Elective	3	Modern Language Elective	3
Physical Education	1	Physical Education	1
	16		16
JUNIOR YEAR			
Music 119 Applied	2	Music 120 Applied	2
Music 109 Form and Analysis	2	Music 110 Form and Analysis	2
Music 153 Orchestration	2	Music 154 Orchestration	2
Historical Music Literature	2	Historical Music Literature	2
*Ensemble	1	*Ensemble	1
Modern Language Electives	3	Modern Language Elective	3
Other Electives	5	Other Electives	5
	17		17
SENIOR YEAR			
Music 169 Applied	2	Music 170 Applied	2
Music 157 Choral Conducting	2	Music 158 Orchestral Conducting	2
Music 191 Composition	2	Music 192 Composition	2
Music 197 Style Criticism	2	Music 198 Style Criticism	2
Historical Music Literature	2	Historical Music Literature	2
*Ensemble	1	*Ensemble	1
English Elective	3	English Elective	3
Other Electives	3	Other Electives	3
	17		17

\* Approval of adviser and Department Head.

## FIELD OF CONCENTRATION—APPLIED MUSIC (INSTRUMENTAL)

FRESHMAN YEAR			
First Semester		Second Semester	
Music 1 Applied	4	Music 2 Applied	4
Music 5 Harmony	5	Music 6 Harmony	5

Music 55 Orchestral Instruments	2	Music 56 Orchestral Instruments	2
*Ensemble	1	*Ensemble	1
English 1 Intro to Rhet	3	English 2 Intro to Lit	3
Physical Education	1	Physical Education	1
	16		16

## SOPHOMORE YEAR

Music 51 Applied	2	Music 52 Applied	2
Music 61 History of Music	3	Music 62 History of Music	3
Music 95 Counterpoint	3	Music 96 Counterpoint	3
†Music 49 Piano Repertory	0	†Music 50 Piano Repertory	0
*Ensemble	1	*Ensemble	1
Modern Language Elective	3	Modern Language Elective	3
Social Science	3	Social Science	3
Physical Education	1	Physical Education	1
	16		16

## JUNIOR YEAR

Music 101 Major Instrument	4	Music 102 Major Instrument	4
Music 109 Form and Analysis	2	Music 110 Form and Analysis	2
Music 119 Minor Instrument or Voice	2	Music 120 Minor Instrument or Voice	2
*Ensemble	1	*Ensemble	1
Modern Language Elective	3	Modern Language Elective	3
Mathematics or Science	3	Mathematics or Science	3
Other Electives	2	Other Electives	2
	17		17

## SENIOR YEAR

Music 151 Applied	4	Music 152 Applied	4
Music 157 Choral Conducting	2	Music 158 Orchestral Conducting	2
Music 197 Style Criticism	2	Music 198 Style Criticism	2
Historical Music Literature	2	Historical Music Literature	2
*Ensemble	1	*Ensemble	1
English Elective	3	English Elective	3
Other Electives	3	Other Electives	3
	17		17

† Required of piano majors only.

\* Approval of adviser and Department Head.

## FIELD OF CONCENTRATION—APPLIED MUSIC (VOCAL)

## FRESHMAN YEAR

First Semester		Second Semester	
Music 1 Voice	2	Music 2 Voice	2
Music 5 Harmony	5	Music 6 Harmony	5
Music 19 Piano	2	Music 20 Piano	2
English 1 Intro to Rhet	3	English 2 Intro to Lit	3
Mathematics or Science	3	Mathematics or Science	3
Physical Education	1	Physical Education	1
	16		16

## SOPHOMORE YEAR

Music 51 Voice	4	Music 52 Voice	4
Music 61 History of Music	3	Music 62 History of Music	3
Music 69 Piano	2	Music 70 Piano	2
Music 95 Counterpoint	3	Music 96 Counterpoint	3
*Ensemble	1	*Ensemble	1

\* Approval of adviser and Department Head.

French or German	3	French or German	3
Physical Education	1	Physical Education	1
	<u>—</u>		<u>—</u>
	17		17

## JUNIOR YEAR

Music 101 Voice	4	Music 102 Voice	4
Historical Music Literature	2	Historical Music Literature	2
Music 147 Vocal Repertory (1)	0	Music 148 Vocal Repertory (1)	0
*Ensemble	1	*Ensemble	1
English Elective	3	English Elective	3
French or German	3	French or German	3
Social Science	3	Social Science	3
	<u>—</u>		<u>—</u>
	16		16

## SENIOR YEAR

Music 151 Voice	4	Music 152 Voice	4
Music 109 Form and Analysis	2	Music 110 Form and Analysis	2
Music 157 Choral Conducting	2	Music 158 Orchestral Conducting	2
Music 129 Opera Workshop	2	Music 130 Opera Workshop	2
Music 187 Vocal Coaching	1	Music 188 Vocal Coaching	1
Music 197 Style Criticism	2	Music 198 Style Criticism	2
*Ensemble	1	*Ensemble	1
Other Electives	3	Other Electives	3
	<u>—</u>		<u>—</u>
	17		17

\* Approval of adviser and Department Head.

## FIELD OF CONCENTRATION—PUBLIC SCHOOL CERTIFICATION

## FRESHMAN YEAR

First Semester		Second Semester	
Music 19 Applied	2	Music 20 Applied	2
Music 5 Harmony	5	Music 6 Harmony	5
*Ensemble	1	*Ensemble	1
English 1 Intro to Rhet	3	English 2 Intro to Lit	3
Social Science	3	Social Science	3
Physical Education	1	Physical Education	1
	<u>—</u>		<u>—</u>
	15		15

## SOPHOMORE YEAR

Music 69 Applied	2	Music 70 Applied	2
Music 55 Orchestral Instruments	2	Music 56 Orchestral Instruments	2
Music 61 History of Music	3	Music 62 History of Music	3
Music 95 Counterpoint	3	Music 96 Counterpoint	3
Psychology 51 General	3	Psychology 54 Educational	3
Modern Language Elective	3	Modern Language Elective	3
Physical Education	1	Physical Education	1
	<u>—</u>		<u>—</u>
	17		17

## JUNIOR YEAR

Music 119 Applied	4	Music 120 Applied	4
Music 109 Form and Analysis	2	Music 110 Form and Analysis	2
*Ensemble	1	*Ensemble	1
Education 141 Princ. of Sec. Ed.	3	Education 153 High Sch. Meth.	3

\* Approval of adviser and Department Head.

†Teaching Minor or Other Elective	4	†Teaching Minor or Other Elective	4
Science or Math Elective	3	Education 155f	3
	17		17

## SENIOR YEAR

Music 169 Applied	2	Music 170 Applied	2
Music 157 Choral Conducting	2	Music 158 Orchestral Conducting	2
Music 197 Style Criticism	2	Music 198 Style Criticism	2
*Ensemble	1	*Ensemble	1
English Elective	3	English Elective	3
Education 156 Practice Teaching	5	Education Elective	3
Other Electives	2	Other Electives	4
	17		17

Total hours for graduation: 132.

† Teaching minor (total of 15 hours in English, Social Science, Modern Language, Natural Science, or Mathematics); consult adviser.

\* Approval of adviser and Department Head.

## FIELD OF CONCENTRATION—MUSIC LITERATURE

## FRESHMAN YEAR

First Semester		Second Semester	
Music 19 Applied	2	Music 20 Applied	2
Music 5 Harmony	5	Music 6 Harmony	5
*Ensemble	1	*Ensemble	1
English 1 Intro to Rhet	3	English 2 Intro to Lit	3
Social Science	3	Social Science	3
Physical Education	1	Physical Education	1
	15		15

## SOPHOMORE YEAR

Music 69 Applied	2	Music 70 Applied	2
Music 55 Orchestral Instruments	2	Music 56 Orchestral Instruments	2
Music 61 History of Music	3	Music 62 History of Music	3
Music 95 Counterpoint	3	Music 96 Counterpoint	3
Mathematics or Science	3	Mathematics or Science	3
Modern Language Elective	3	Modern Language Elective	3
Physical Education	1	Physical Education	1
	17		17

## JUNIOR YEAR

Music 119 Applied	2	Music 120 Applied	2
Music 109 Form and Analysis	2	Music 110 Form and Analysis	2
Historical Music Literature	2	Historical Music Literature	2
*Ensemble	1	*Ensemble	1
Modern Language Elective	3	Modern Language Elective	3
Other Electives	7	Other Electives	7
	17		17

## SENIOR YEAR

Music 169 Applied	2	Music 170 Applied	2
Music 157 Choral Conducting	2	Music 158 Orchestral Conducting	2
Music 197 Style Criticism	2	Music 198 Style Criticism	2
Historical Music Literature	2	Historical Music Literature	2
*Ensemble	1	*Ensemble	1

\* Approval of adviser and Department Head.

English Elective	3	English Elective	3
Other Electives	5	Other Electives	5
	<hr/> 17		<hr/> 17

Students are advised to choose a part of their electives from fields such as English or foreign language literature, social science, mathematics, science, and art, to the end of obtaining a more liberal education.

Before graduation every candidate for the Bachelor's degree must demonstrate proficiency at the piano by successfully passing a barrier examination of which the minimum requirements include the following:

1. All major and minor scales in moderate tempo.
2. One two-part invention by Bach.
3. One composition corresponding in difficulty to:
  - Mozart. Sonata in C Major (K. 545), first movement.
  - Beethoven. Sonata in G major, Op. 49, No. 2, any movement.
  - Bartok. Mikrokosmos, Book III.
  - Diller-Quaile. Third Solo Book.
4. Sight reading of a simple composition.

This examination may be taken at the end of any semester before graduation, upon written application to the Department Head.

## DESCRIPTION OF COURSES

### INSTRUMENTAL ENSEMBLE

- †27-28. WIND ENSEMBLE. (1, 1)  
Various ensembles of solo wind instruments will be formed. Enrollment limited. Dahnert, Kunkel
- †33-34. SYMPHONY ORCHESTRA. (1, 1)  
Study and public performance of symphonic literature. Staff
- †37-38. PIANO ENSEMBLE. (1, 1)  
Study and performance of literature for two pianos; selected from all periods including the contemporary. Open to qualified piano students with consent of instructor. Special fee.
- †41-42. UNIVERSITY BAND. (1, 1)  
Study and performance of marches and concert band literature. Appearance and performance in uniform at football games, Commencement, and other similar University functions. Dahnert, Kunkel
- †127-128. WIND ENSEMBLE. (1, 1) See description of 27, 28. Dahnert, Kunkel
- †131-132. CHAMBER MUSIC. (1, 1)  
The practice, performance, and study of chamber music in various ensemble groups. Frederick
- †133-134. SYMPHONY ORCHESTRA. (1, 1)  
See description of 33, 34.
- †137-138. ADVANCED PIANO ENSEMBLE. (1, 1)  
See description of 37, 38. Robert, Schoenfeld, Keller
- †141-142. UNIVERSITY BAND. (1, 1)  
See description of 41, 42. Prerequisite: two years in 41, 42. Dahnert, Kunkel



## VOCAL ENSEMBLE

The various vocal ensemble groups listed below take up the study and performance of sacred and secular compositions covering a wide variety of styles. Concert and radio appearances required; participation in public functions encouraged as a community service.

- |  |           |
|--|-----------|
| †21-22. MEN'S GLEE CLUB. (1, 1)  | Frederick |
| †23-24. WOMEN'S GLEE CLUB. (1, 1)  | Frederick |
| †25-26. VOCAL QUARTET. (1, 1)  |           |
| Ensembles of solo voices, such as men's women's, and mixed quartets and trios, will be formed. Enrollment limited. |           |
|  | Snow      |
| †43-44. UNIVERSITY MIXED CHORUS. (1, 1)  | Frederick |
| †121-122. MEN'S GLEE CLUB. (1, 1)  |           |
| Prerequisite: two years in 21, 22.   |           |
|  | Frederick |
| †123-124. WOMEN'S GLEE CLUB. (1, 1)  |           |
| Prerequisite: two years in 23, 24.   |           |
|  | Frederick |
| †125-126. VOCAL QUARTET. (1, 1)  |           |
| See description of 25, 26.   |           |
|  | Snow      |
| †143-144. UNIVERSITY MIXED CHORUS. (1, 1)  |           |
| Prerequisite: two years in 43, 44.   |           |
|  | Frederick |

## WORKSHOP

## 129-130. OPERA WORKSHOP. (2, 2)

Designed to give singers the fundamentals in practical operatic experience. Works to be presented will be portions of or entire operas chosen from the standard literature. Students will be required to participate in performances. Instructor may limit enrollment to qualified students.

Snow

## THEORY

## 5-6. HARMONY. (5, 5)

An applied study of traditional harmony in advanced sight singing, ear training, dictation, written and keyboard harmony, and harmonic analysis. Includes the study of chord construction, chord progression, nonharmonic tones, chromatic harmony, and modulation.

Robert, Frederick, Schoenfeld

## 95-96. COUNTERPOINT. (3, 3)

95 deals with the analysis and techniques of writing in the contrapuntal forms and styles of the sixteenth century. 96 deals with the analysis and techniques of writing in the contrapuntal forms and styles of the period of Bach. Some attention is also given to the study of the twentieth century contrapuntal idioms. Prerequisites: 5, 6 or equivalent.

Frederick

## 109-110. FORM AND ANALYSIS. (2, 2)

Analysis of the structural, harmonic and contrapuntal elements of music from the primary forms through the symphony and concerto. Study of phonograph recordings and scores. Prerequisites: 95, 96.

Keller

## 153-154. ORCHESTRATION. (2, 2)

Properties and limitations of orchestral instruments; the orchestral score; detailed score study of orchestral techniques from the past and present. Scoring of complete works; carrying through to completion of projects for actual performance. Prerequisites: 55, 56, 95, 96.

Kunkel

## 163-164. BAND ARRANGING. (2, 2)

Arranging for concert and football bands; techniques and management of football shows. Students will make band arrangements for various ensembles from piano, organ, chamber music, and symphonic

scores and learn the techniques of adapting commercial arrangements for a specific band ensemble. Dahnert

- 191-192. COMPOSITION. (2, 2)  
Creative work in original composition, primarily in the smaller homophonic forms, but also including some contrapuntal writing. Prerequisites: 109, 110. Robb
- 205-206. ADVANCED COMPOSITION. (2, 2)  
Individual guidance in composing for various instrumental and vocal ensembles; survey of techniques in appropriate fields. Completion of one or more major works for public performance. Prerequisites: 191, 192. Robb
- 207-208. ADVANCED COUNTERPOINT. (2, 2)  
Advanced studies in applied counterpoint, canon and fugue. Prerequisites: 95, 96. Frederick
- 209-210. ADVANCED ORCHESTRATION. (2, 2)  
Applied study of the resources of the modern orchestra. Prerequisites: 153, 154. Frederick

### CONDUCTING

157. CHORAL CONDUCTING. (2)  
The technique of organizing and conducting choral groups for church and school. Prerequisites: 109, 110, or approval of instructor. Frederick
158. ORCHESTRAL CONDUCTING AND SCORE READING. (2)  
The technique of conducting orchestras and studying orchestral scores. Prerequisites: 109, 110, or approval of instructor. Frederick

### HISTORY AND APPRECIATION

- 39-40. MUSIC APPRECIATION. (2, 2)  
Designed for the general student who wishes to supplement his academic training with an introduction to music literature. Listening periods are provided. Ancona
- 61-62. SURVEY OF MUSIC HISTORY. (3, 3)  
The history of music from ancient Greece to the present. Emphasis is placed upon the development of forms, styles, schools, and principal composers, and upon the study of musical scores and phonograph records. 61: from antiquity through the Baroque; 62: from the Classical period through the contemporary scene. Students are required to attend each week three listening periods of approximately one hour each. Miller

### HISTORICAL MUSIC LITERATURE

Prerequisites: 61, 62 (except for 82, 83, and 84).

Students may be required to attend listening periods of one to three hours each week at the option of the instructor.

### COMPOSERS

82. LUDWIG VAN BEETHOVEN. (2)  
A comprehensive study of the forms, styles, and historical significance of Beethoven's music. No prerequisite. Staff
181. JOHANN SEBASTIAN BACH. (2)  
A comprehensive study of the forms, styles, and historical significance of Bach's music. Schoenfeld

### PERIODS

84. THE ROMANTIC PERIOD. (2)  
A comprehensive study of the musical forms, styles, principal composers, and general historical and cultural background of the nineteenth century. No prerequisite. Staff

161. **THE BAROQUE.** (2)  
A comprehensive study of the musical forms, styles, schools, principal composers, and general historical background of the period roughly from 1600 to 1750. (Not offered 1951-52.) Keller
172. **CONTEMPORARY MUSIC LITERATURE.** (2)  
Stylistic tendencies of the twentieth century and the study of representative works of the most important composers. Miller
180. **THE RENAISSANCE.** (2)  
A comprehensive study of the musical forms, styles, schools, principal composers, and general historical and cultural background of the period roughly from 1450 to 1600. Keller

## SCHOOLS, NATIONALITIES, REGIONS

93. **FOLK MUSIC OF THE SOUTHWEST.** (2)  
A detailed study of examples of the indigenous Anglo-American, Spanish-American, and Indian folk music of the Southwest. (Not offered 1951-52.) Robb
193. **COMPOSERS OF THE UNITED STATES.** (2)  
A study of the creative trends in the art music of the United States from the eighteenth century to the present. Special emphasis upon the style and contributions of the most important composers. Robb

## MEDIA

83. **EIGHTEENTH AND NINETEENTH-CENTURY OPERA.** (2)  
A survey of operatic developments in style and form in Italy, France, Germany and Russia. Scores and recordings are provided for special detailed study of certain operas. No prerequisite. (Not offered 1951-52.) Robb
175. **SYMPHONIC LITERATURE.** (2)  
A survey of the developments in orchestral music from Bach to the present. Certain important and representative works will be studied in detail. Trends of form and style are observed. Assignments in listening and score study will be made. Miller
178. **THE HISTORY OF THE STRING QUARTET.** (2)  
A survey of the field of string quartet music from Haydn to the present. Attention will be paid to formal and stylistic developments. Assignments in listening and score study will be made. (Not offered 1951-52.) Miller
- HA. **READING FOR HONORS.** (1-3 each semester)  
Upon the recommendation of the Head of the Department. Staff
- HB. **RESEARCH FOR HONORS.** (1-3 each semester)  
May include projects in composition. Upon the recommendation of the Head of the Department. Staff

## MUSICOLOGY

171. **INTRODUCTION TO MUSICOLOGY.** (2)  
A survey of the fields of musical research. Attention given to bibliographical methods, examination of important reference works in music, periodical literature, important musicological works, editions and collections. Emphasis upon historical musicology. Miller
- 197-198. **SYSTEMATIC STYLE CRITICISM.** (2, 2)  
The technical approach to the analysis of musical elements; application of technique to representative music of historical periods, schools, media, and individual composers. Miller
- 203-204. **SEMINAR IN MUSICOLOGY.** (2, 2)  
Individual problems in research and documentary examination of the entire field. Miller
- 251-252. **PROBLEMS IN MUSIC HISTORY.** (2, 2)  
One or more special problems in music history, selected by the student

and approved by the instructor. Culmination of work represented by full-length written report by student. Miller

300. THESIS. (6)

Robb, Miller, Keller

### COACHING AND ACCOMPANYING

187-188. VOCAL COACHING. (1 hr. each semester.)

189-190. One half-hour of private instruction per week carries one hour of credit. Required of all senior voice students and open to juniors with consent of instructor. Credit will not be allowed for more than two semesters' work except by special written approval of the Head of the Department on recommendation of the instructor. Special fee. Robert

195-196. ACCOMPANYING. (1, 1)

One half-hour of private instruction per week carries one hour of credit. Students accompany other students in practice and at recitals as part of the requirement for receiving credit. Special fee. Robert

### PEDAGOGY

45-46. METHODS IN MUSIC APPRECIATION. (1, 1)

Appropriate literature and its presentation to elementary school pupils; to junior and senior high school pupils. May be taken concurrently with 39 and 40 or subsequently. Ancona

### APPLIED MUSIC (Private Instruction)

One half-hour lesson per week earns two hours' credit per semester. Additional fee. A student whose field of concentration is applied music is required to give a public recital in the junior year and another in the senior year. Students should consult the appropriate advisers before enrolling for applied music.

In applied music, the Department offers degree courses, and also secondary courses for students desiring a cultural background in music. The student may continue these courses through four years.

Students electing applied music as a field of concentration who have had no previous training in piano will be required to enroll in the secondary course in piano.

Students who have had previous training in piano elsewhere will take a placement examination.

### REPERTORY COURSES

49-50. PIANO REPERTORY. (0)

One hour a week each semester; required of all piano majors. A survey of important and representative literature for piano. Staff

147-148. VOCAL REPERTORY. (0)

One hour a week each semester; required of all voice majors. A survey of important and representative literature for solo voice. Staff

### DEGREE COURSES

1-2. FRESHMAN COURSE. (2-4 each semester)

51-52. SOPHOMORE COURSE. (2-4 each semester)

101-102. JUNIOR COURSE. (2-4 each semester)

151-152. SENIOR COURSE. (2-4 each semester)

201-202. GRADUATE COURSE. (2-4 each semester)

291-292. GRADUATE RECITAL. (2, 2)

For the degree of Master of Music in Applied Music the student is required to perform a full-length graduate recital (a) which he has

selected and prepared subject to the approval of a committee comparable to a graduate thesis committee and (b) for which he has written comprehensive program annotations (also subject to the approval of the same committee) and which will be printed on the program of the graduate recital. Work in 291, 292 is to be in addition to that done in Music 201, 202.

Robert, Keller, Schoenfeld, Frederick, Snow

## SECONDARY COURSES

- 19-20. FRESHMAN COURSE. (2 each semester)  
 69-70. SOPHOMORE COURSE. (2 each semester)  
 119-120. JUNIOR COURSE. (2 each semester)  
 169-170. SENIOR COURSE. (2 each semester)

PIANO	Ancona, Dawson, Keller, Robert, Schoenfeld
ORGAN (Students enrolling for organ are required to have a foundation in piano)	Ancona
VIOLIN AND VIOLA	Frederick
CELLO AND GUITAR	Staff
WIND INSTRUMENTS	Dahnert, Kunkel
VOICE	Snow, Warren

## REQUIREMENTS IN THE FIELDS OF APPLIED MUSIC

*Piano.* Entrance requirements for Piano majors: an ability to play major and minor scales correctly in moderately rapid tempo, also broken chords in octave position in all keys; studies such as Czerny's School of Velocity; Bach, Little Preludes; a few Bach Two-Part Inventions; and compositions corresponding in difficulty to Mozart, Sonata C major (K.545), Beethoven, Sonata Op. 49, No. 2, Schubert, Impromptu, Op. 142, No. 2, Scherzo, in B flat.

At the end of the second year (Music 1, 2 and 51, 52) the student should have acquired a technique sufficient to play scales in parallel and contrary motion and in thirds, sixths, and tenths, and arpeggi and octaves in rapid tempo. He should have studied compositions of at least the following grades of difficulty; Bach, at least one complete French Suite; Beethoven, Sonatas or movements from Sonatas such as Op. 2, No. 1, Op. 10, No. 1, Op. 10, No. 2, Op. 14, No. 2; Haydn, Sonata E flat, No. 3; Mozart, Sonata F Major (K.332); Fantasia in D minor; Mendelssohn, Song Without Words; Chopin, Polonaise C sharp minor, Valse in A minor; Schumann, Novelette, Op. 21, No. 1; and some compositions by standard modern composers. The student should demonstrate his ability to read at sight accompaniments and compositions of moderate difficulty.

At the end of the fourth year (Music 101, 102 and 151, 152), the candidate must have acquired the principles of tone production and velocity and their application to scales, arpeggi, chords, octaves, and double notes. He must have a repertory comprising the principal classics and romantic and modern compositions, such works, for example, as: Bach, several preludes and fugues from the Well-Tempered Clavichord, Italian Concerto, Chromatic Fantasia and

Fugue, and English Suite or Partita; Mozart, Sonata A major (K.331), a concerto; Scarlatti, Sonatas; Beethoven, Sonatas such as Op. 31, No. 3, Op. 53, Op. 57; Schumann, Carnival; and the more difficult compositions of Brahms, Chopin, and Liszt; compositions by standard modern composers such as Debussy, Ravel, Rachmaninoff, Scriabin, Hindemith, Bartok, etc.

Candidates are required to give a junior and senior recital and they must have considerable experience in ensemble and as accompanists.

*Violin.* Entrance requirements for Violin students: an ability to play etudes of the difficulty of the Kreutzer Etudes, up to 32, and the Spohr concerti. An elementary knowledge of the piano is desirable.

By the end of the second year the student should be able to play at least works corresponding in difficulty to the Bruch Concerto in G minor and the Mozart Concerti.

By the end of the fourth year the student should be able to perform works such as the Mendelssohn E Minor Concerto, the Wieniawski Concerto in D minor, or the Beethoven Concerto.

*Voice.* To enter the four-year degree course in voice, a student must be able to sing standard songs in English, displaying good phrasing and musical intelligence.

1-2.

- 8 Early Italian songs.
- 4 Art songs in original language if qualified to do so.
- 4 Old English songs.
- 2 Contemporary English songs.
- 2 Sacred songs.
- Total—20 songs

51-52.

- 4 Early Italian songs.
- 1 Operatic Aria.
- 1 Recitative and aria from an Oratorio.
- 8 Songs by German or French composers in the original language.
- 4 Contemporary English songs.
- 2 Sacred songs.
- Total—20 songs

101-102.

- 2 Operatic arias.
- 2 Recitatives and 2 arias from Oratorios, suited to the individual voice.
- 6 French songs from the 19th and 20th centuries.
- 6 German songs from the 19th and 20th centuries.
- 4 Songs by modern composers in English.
- Junior recital (all songs and arias to be done in original language).
- Total—20 songs

151-152.

- 2 additional arias from Oratorios.
- 2 Operatic arias in Italian, German, French, or English.
- 1 Bach aria from a cantata or oratorio.
- 6 French songs from the 19th and 20th centuries.
- 4 German songs from the 19th and 20th centuries.
- 4 Contemporary English songs.
- 4 additional songs.
- Senior recital (all songs and arias to be done in original language).
- Total—21 songs

A total repertoire of 81 songs must be completed by the end of the four years of voice study. A list of such repertoire must be compiled each semester and a copy submitted to the Head of the Music department. Each student concentrating in voice is required to appear before a faculty committee at the end of each semester during his freshman and sophomore years to show completion of requirements. Correct diction in English, Italian, French, and German should be mastered during the study of the above repertoire. A poised stage manner and a pleasing personality should be thoroughly acquired. Voice pupils are called upon to sing in music assemblies beginning with the freshman year.

*Other Fields of Applied Music.* Instruction in Applied Music is offered also in the following fields of instruments: Bassoon, Cello, Flute, Horn, Oboe, Organ, Percussion, Trombone, Trumpet, and Tuba. For requirements in these fields, see the instructor.

#### GROUP INSTRUCTION

‡55-56. ORCHESTRAL INSTRUMENTS. (2, 2)

Group instruction in the playing of woodwind, brass, and stringed instruments. Of special importance to the prospective instrumental teacher and conductor.

Dahnert, Kunkel

‡155-156. ORCHESTRAL INSTRUMENTS. (2, 2)

Prerequisites: 55, 56.

Dahnert, Kunkel

## COLLEGE OF PHARMACY

**P**HARMACY is the science which treats of medicinal substances. It embraces not only a knowledge of medicines and the art of preparing and dispensing them, but also their selection, identification, analysis, purification, combination, standardization, preservation, and usage.

The purpose of the College of Pharmacy is to provide a thoroughly scientific foundation for the pursuit of the profession of pharmacy in all its branches; to prepare students not only to operate drug stores but to fit them as well for other phases of pharmaceutical activities—to become hospital pharmacists, pharmacists in the Army or Navy, state or federal service, to take up pharmaceutical manufacturing in its many phases, to engage in pharmaceutical research or teaching. The elements of the fundamental natural sciences, biology, chemistry, mathematics, and physics, must be studied and their principles understood before their applications to pharmacy can be considered. For this reason students in pharmacy are required to pursue such courses in these physical and biological sciences, where they have the advantage of close association with students in other departments of the University.

A School of Pharmacy was established in the University in 1894, but it functioned for only two years. Three students were granted the standard pharmacy degree of the time, Graduate in Pharmacy. The present College of Pharmacy was organized in the summer of 1945, and instruction in pharmacy was initiated in the fall term of the same year.

The College of Pharmacy is an integral part of the University and is governed by the same general policy that characterizes that institution.

### STANDARDS

Graduation from the College of Pharmacy meets the college requirements for pharmacist licensure of all State Boards of Pharmacy in the United States because the College and its curriculum are accredited as a Class A college by the American Council on Pharmaceutical Education, the official national accrediting agency in pharmaceutical education.

### ADMISSION

The requirements for admission to the College of Pharmacy for both freshmen and transfer students are outlined on p. 39 of this Catalog. It is particularly desirable that the preliminary preparation include physics, chemistry, biology, physiology, Latin, modern languages, and such applied courses as typing, bookkeeping, accounting, and commercial arithmetic.



## MAXIMUM NUMBER OF HOURS

Students in the College of Pharmacy may enroll for not more than nineteen hours per semester including physical education (or military drill in the case of NROTC and Air ROTC students).

## SCHOLASTIC REGULATIONS

Students in the College of Pharmacy will be governed by the scholastic regulations given under "General Academic Regulations," (p. 72).

## ADVANCED STANDING

The general requirements for advanced standing are those listed in this Catalog on p. 40 under the heading "Transferring Students." In addition, any student entering the College of Pharmacy with advanced standing is required to complete not less than six full semesters of resident study for the degree of Bachelor of Science in Pharmacy unless such advanced standing was earned in a school or college of pharmacy. This is in accordance with a ruling adopted by the American Association of Colleges of Pharmacy at the Dallas, Texas, meeting in 1937.

## PHARMACIST REGISTRATION

Since the College of Pharmacy is included in the approved list of colleges of the American Council on Pharmaceutical Education, the degrees it grants are recognized as meeting the college requirements for pharmacist licensure in all of the states in the nation. Persons registered as Pharmacists in New Mexico are entitled to reciprocity privileges with 44 states, the District of Columbia, Alaska, and Puerto Rico.

## SCHOLARSHIPS AND LOANS

The College of Pharmacy annually grants tuition scholarships to ten deserving New Mexico high school graduates for both semesters of the academic year. Other scholarships and loans are available to those who qualify. For information apply to the Dean, College of Pharmacy.

## ALL UNIVERSITY REQUIREMENT

Four semester hours of required physical education (or equivalent NROTC and Air ROTC credits) shall be completed by all undergraduate students at the University. Veterans and students over thirty years of age are exempted from the physical education requirements.

## REQUIREMENTS FOR GRADUATION

The degree of Bachelor of Science in Pharmacy is granted upon the completion of all of the specified requirements. The candidate for graduation must have completed a total of not less than 134 credit hours plus 4 hours of physical education or its equivalent, and must have completed all the work outlined in the pharmacy cur-

riculum. The total number of grade-points in the hours offered for graduation must equal or exceed the total number of hours.

### CURRICULUM

The following is a standard college curriculum leading to the degree of Bachelor of Science in Pharmacy. Electives, where permitted, are to be chosen with the advice and consent of the student's adviser.

Students who are required to take Mathematics 2 (Intermediate Algebra) must do so in addition to the regularly prescribed courses in mathematics. No credit will be granted for this course.

### CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN PHARMACY

#### COURSES OF STUDY—Recommended Sequence

First Semester		FRESHMAN YEAR	Second Semester	
English 1 Intro to Rhet	3	English 2 Intro to Lit	3	
Pharm 1L Pharm Orientation	3	Pharm 2 Pharm Calculations	2	
Chem 1L General	4	Chem 2L General	4	
Biol 1L General	4	or		
Math 15 College Algebra	3	Chem 4 L General	(5)	
Physical Education	1	Biol 2L General	4	
	—	Math 16 Plane Trig	2	
	18	Physical Education	1	
			—	16-17
SOPHOMORE YEAR				
Pharm Chem 132L Inorg Med	3	Pharmacognosy 72L General	4	
Physics 11L General	4	Physics 12L General	4	
Chem 101L Organic	4	Chem 102L Organic	4	
or		or		
Chem 103L Organic	(5)	Chem 104L Organic	(5)	
Pharm 61 Hist of Pharmacy	1	Bus Ad 5 Prin of Acctg	3	
Option of:		Option of:		
Soc Sci 1 Intro	3	Soc Sci 2 Intro	3	
German	(3)	German	(3)	
French	(3)	French	(3)	
Spanish	(3)	Spanish	(3)	
History	(3)	History	(3)	
Physical Education	1	Physical Education	1	
	—		—	19-20
	16-17			
JUNIOR YEAR				
Pharm 151L Pharm Preps I	4	Pharm 152L Pharm Preps II	4	
Biol 93L Bacteriology	4	Biol 130L Animal Physiol	4	
Chem 53L Quant Analysis	5	Psych 51 General	3	
Speech 55 Speech for Bus & Prof	3	Econ 52 Intro	3	
Electives	2-3	Pharm 142 First Aid	1	
	—	Pharm 155 Drugstore Mgt	2	
	18-19		—	17
SENIOR YEAR				
Pharm 181L Disp Pharm I	4	Pharm 182L Disp Pharm II	4	
Pharm Chem 163L Organic Med I	5	Pharm Chem 164L Organic Med II	4	
Pharmacology 195L Pharmacol I	3	Pharmacology 196L Pharmacol II	3	

Pharm. 122 Pharmacy Law	2	Pharmacog 172 Biol Therapy	3
Electives	1-5	Pharm 160L New Med	2
	—	Electives	1-3
	15-19		—
			17-19

## COLLEGE OF PHARMACY

## DEPARTMENTS OF INSTRUCTION

Courses numbering: from 1-49, lower division, normally open to freshmen; from 50-99, lower division, normally open to sophomores; from 100-199, upper division, normally open to juniors, seniors, and graduates.

Symbols used in course descriptions: L—part of the course is laboratory work; SS—course offered in eight weeks' summer session only; Yr—course offered throughout two semesters and credit for a single semester's work is suspended until the entire course is completed; ( )—semester hours' credit; [ ]—former course number or title.

A schedule of course offerings, including hours of meeting, is issued at the opening of each session. The University reserves the right to cancel any listed course or to make a substitution in instructors when necessary.

## FACULTY

Professors Bowers (Dean), Hocking; Associate Professor Castle; Assistant Professors Clark, McDavid; Instructor Blair.

## PHARMACY

## 1L. PHARMACEUTICAL ORIENTATION. (3)

A beginning course in the fundamental principles and processes of pharmacy, including background material in pharmaceutical history, literature, and terminology, and the practical application of mathematics to pharmacy. 2 lectures, 3 hrs. lab. McDavid

## 2. PHARMACEUTICAL CALCULATIONS. (2)

Metrology: a study of the systems of measurements and various calculations used in the practice of pharmacy. Prerequisite: 1L or concurrent registration. McDavid

## 61. HISTORY, LITERATURE, AND ETHICS OF PHARMACY. (1)

[121] A study of the historical development of the science and profession and a survey of its past and present literature. Prerequisite: Pharmacy 1L. Hocking

## 122. PHARMACEUTICAL LAW. (2)

A study of the laws and regulations relating to the practice of pharmacy, together with a consideration of the principles of constitutional law, statutory law, and common law which bear upon the work and responsibilities of the pharmacist. Prerequisite: senior standing. Clark

## 142. FIRST AID, PUBLIC HEALTH AND HYGIENE. (1)

This course combines the standard Red Cross First Aid course with the principles of prevention and control of diseases, and the application of the pharmacist's knowledge and facilities to the promotion of public health and welfare in cooperation with public and private health agencies, and includes a survey of municipal, state, and federal health regulations. Prerequisite: junior or senior standing. Blair

**151L. PHARMACEUTICAL PREPARATIONS I. (4) Yr.**

[151L] A course devoted to a study of the various classes of pharmaceutical preparations (official and non-official) including the preparation of typical examples of each. Included also are the fundamentals of Latin as used in pharmacy and medicine. Prerequisite: Pharmacy 1 and 2; Pharmacognosy 72L; Pharm. Chem. 132L; Chemistry 102L or 104L. Credit suspended until 152L is completed. 2 lectures, 6 hrs. lab.

McDavid, Blair

**152L. PHARMACEUTICAL PREPARATIONS II. (4)**

A continuation of Pharmacy 151L. 2 lectures, 6 hrs. lab. McDavid, Blair

**155. DRUG STORE MANAGEMENT. (2)**

Management of retail pharmacies including a description and analysis of the operating problems encountered in the successful conduct of a retail store, professional shop and hospital pharmacy. Prerequisites: Business Administration 5, Economics 52 or concurrent registration; junior or senior standing.

Bowers

**158. VETERINARY PHARMACY. (2)**

A study of medicinal substances used in the treatment of diseases in animals. Prerequisite: 152L.

Staff

**160L. NEW MEDICINALS. (2)**

A study of the more important new medicinals currently found in modern prescription practice. Prerequisite: senior standing. 1 lecture, 3 hrs. lab.

McDavid

**176. INSECTICIDES, FUNGICIDES, PARASITICIDES, RODENTICIDES. (1)**

This course is designed to familiarize the pharmacist with the problems and methods of control of insects, fungi, animal parasites, rodents, etc. Prerequisite: Pharmacognosy 72L.

Hocking

**181L. DISPENSING PHARMACY I. (4)**

Dispensing pharmacy is broadly defined as the translation of the sciences underlying pharmacy into the art of pharmacy. More specifically it is the application of the scientific and practical knowledge upon which the practice of pharmacy is based to the extemporaneous compounding of drugs and medicines and making these available under proper control. Prerequisite: senior standing. 2 lectures, 6 hrs. lab.

Bowers, Blair

**182L. DISPENSING PHARMACY II. (4)**

A continuation of 181L. A study of the compounding and dispensing of prescriptions, including incompatibilities. 2 lectures, 6 hrs. lab.

Bowers, Blair

**197-198. PROBLEMS IN PHARMACY. (1-3 each semester)**

Experimental and library problems in some phases of pharmacy. Prerequisite: permission of the instructor.

Staff

**PHARMACEUTICAL CHEMISTRY****106L. ORGANIC PREPARATIONS. (2-4)**

(Same as Chemistry 106L.) The synthesis of organic medicinal compounds, utilizing the usual preparative reactions such as Grignard, Friedel-Crafts, etc. Prerequisites: Chemistry 102L or 104L and permission of the instructor. 6 to 12 hrs. lab.

Castle

**107. THE CHEMISTRY OF THE ALKALOIDS. (2)**

(Same as Chemistry 107.) A study of the chemistry involved in the isolation, proof of structure, and synthesis of typical representatives of the different classes of alkaloids. Prerequisite: Chemistry 102L or 104L.

Castle

**110. THE CHEMISTRY OF HETEROCYCLIC COMPOUNDS. (3)**

(Same as Chemistry 110.) A study of the chemical properties and synthesis of representative members of the various classes of heterocyclic compounds. Prerequisites: Chemistry 102L or 104L.

Castle

- 132L. INORGANIC MEDICINALS. (3)  
A study of the chemical and pharmaceutical properties of the official and non-official inorganic substances used in medicine or in the preparation of medicinals. Prerequisite: Chemistry 2L. 2 lectures, 3 hrs. lab. Castle
- 163L. ORGANIC MEDICINALS I. (5)  
[103L] A study from the chemical viewpoint of the official and non-official substances used in medicine or in the preparation of medicinals. These substances include those of both synthetic and natural origin. The various chemical classes of organic medicinals are subdivided upon a pharmacological basis. The laboratory includes work both in the synthesis of organic medicinals and their isolation from natural sources. This is combined with quantitative and qualitative analytical operations. Prerequisites: Chemistry 53L, and 102L or 104L; Pharmaceutical Chemistry 132L; and senior standing. 3 lectures, 6 hrs. lab. Castle
- 164L. ORGANIC MEDICINALS II. [Drug Analysis] (4)  
[154L] A continuation of Pharmaceutical Chemistry 163L. 2 lectures, 6 hrs. lab. Castle
- 197-198. PROBLEMS IN PHARMACEUTICAL CHEMISTRY. (1-3 each semester)  
Experimental and library problems in some phases of pharmaceutical chemistry. Prerequisite: permission of the instructor. Castle

### PHARMACOGNOSY AND PHARMACOLOGY

- 72L. GENERAL PHARMACOGNOSY. [Pharmacognosy] (4)  
A study of the history, sources, cultivation, collection, preparation, geographical distribution, commerce, identification, composition, morphology and histology, purity, usage, and preservation of phanerogam drugs. Prerequisites: Biology 2L, Chemistry 101L or 103L, and concurrent registration in Chemistry 102L or 104L. 2 lectures, 6 hrs. lab. Hocking
- 153L. HISTOLOGY AND MICROSCOPY OF PLANT DRUGS. (2)  
A microscopical and microchemical study of sectioned and powdered crude drug materials. Prerequisites: 72L, Chemistry 53L. 2 labs. Hocking
172. BIOLOGICAL THERAPY. (3)  
A study of medicinals obtained from animals, and prepared from cryptogams. These include sera, vaccines, antitoxins, antibiotics, etc. Included are such topics as allergens, venoms, and glandular products. Prerequisite: senior standing. Hocking
- 191-192. PHARMACOGNOSY PROBLEMS. (1-3 each semester)  
Experimental and library problems in some phases of pharmacognosy. Prerequisite: permission of instructor. Hocking
- 195L. PHARMACOLOGY I. (3)  
A study of the effects produced by drugs on the healthy organism (pharmacodynamics) and the mechanisms whereby these effects are produced. The course includes the subdivisions of pharmacology, therapy, posology, toxicology, and bioassays (bioassaying). The actions of the more important drugs are demonstrated upon living animals. Prerequisite: senior standing. 2 lectures, 3 hrs. lab. Hocking
- 196L. PHARMACOLOGY II. (3)  
A continuation of 195L. 2 lectures, 3 hrs. lab. Hocking
- 197-198. PHARMACOLOGY PROBLEMS. (1-3 each semester)  
Experimental and library problems in some phases of pharmacology. Prerequisite: permission of instructor. Hocking

## COLLEGE OF BUSINESS ADMINISTRATION

**I**N TRAINING young people for prospective business careers, the College of Business Administration has two primary objectives: first to teach the fundamentals of business principles and sound business practices, with a considerable degree of specialization during the last two years; second, to give the student the broad cultural training which is expected of any university graduate. The program of studies has been devised to fulfill these objectives.

The College of Business Administration maintains a Bureau of Business Research. For details of the Bureau's purposes and activities see p. 30.

### ADMISSION

Freshmen seeking admission to the College of Business Administration must satisfy the general requirements for admission to the University. Similarly the general requirements of the University will govern the admission to the College of Business Administration of special and unclassified students and those seeking admission with advanced standing.

Prospective graduate students in the College of Business Administration must satisfy the requirements of the Graduate School of the University.

### DEGREES OFFERED

For the degree of Bachelor of Business Administration, the student is required to complete satisfactorily a four-year course including a chosen field of concentration and to maintain a 1.0 scholarship index. To receive the degree, the student must have completed satisfactorily at least 128 semester hours, and to have met all the requirements of the University and of the College of Business Administration.

For the degree of Master of Business Administration, the student should consult the Graduate Catalog.

### DEGREES IN COMBINATION WITH OTHER PROFESSIONAL COLLEGES

If a student has met all other requirements for the B.B.A. degree, he may count as his free electives sufficient hours taken in the College of Law to make up the total of 124 (plus P.E.). For such students Business Law (B.A. 106, 107) may be waived. This rule applies whether the work is taken in law at the University of New Mexico or elsewhere.

The same rule will apply to other professional colleges (Education; Fine Arts, Engineering, Pharmacy), except that Business Law (B.A. 106, 107) will not be waived.

If a student wishes to secure a degree in another professional college, he is strongly advised to seek advice early in his college career from the Deans of the colleges concerned. With care in selecting his program of studies, it is possible for a student to secure two professional degrees in one to two extra years, depending on the degrees he seeks.

#### SCHOLARSHIP REGULATIONS

The student should become familiar with the general academic and scholarship rules which apply to all students enrolled in the University (see pp. 72-73). Special attention is called to the rules on probation and suspension. Special rules for the College of Business Administration are as follows:

1. To graduate with the B.B.A. degree a student must have an over-all "C" average (scholarship index of 1.0) except that for specified courses as indicated in the course descriptions a certain minimum grade may be required in a prerequisite course.

2. The maximum load for beginning freshmen shall be 17 hours (not counting P.E.). Other students may petition to carry more than 17 hours.

3. The following will count as laboratory science: Physics, Chemistry, Biology, Geology, Psychology, and Home Economics courses 53L, 54L.

4. The successful conclusion of the sophomore proficiency examination in English.

5. To receive the B.B.A. degree, transfer students must take a minimum of 18 hours in Economics and Business Administration subjects while enrolled in the College of Business Administration.

6. The College of Business Administration will accept as free electives credits earned in other professional Colleges of the University with the following exceptions:

- A. All theory and methods courses in Physical Education.
- B. All courses in Education in methods and supervision. (Practice Teaching will be accepted.)
- C. More than 4 hours in ensemble music.
- D. More than 3 hours of shop work.

#### NAVAL ROTC

Students enrolled in the Naval ROTC may receive the degree of Bachelor of Business Administration and their commissions at the end of four years. To do this the student must use his required Naval courses as his "free electives." Thus, such students enrolled in the College of Business Administration must be sure they are taking the required courses for the degree. Naval students are not required to take Physical Education.

#### DEGREE REQUIREMENTS

Requirements for the degree of Bachelor of Business Administration:

##### A. General Requirements—

	Credit
1. English 1 and 2 (6 hrs.) Literature (3 hrs.) and Speech 55 (3 hrs.)	12
2. Social Science (other than Economics): American Government (6 hrs.)	
Additional 6 hours	12
3. Laboratory Science (1 yr.)	6-8

4. Option: Either a single foreign language (12 hrs.) , or additional mathematics or science (9 hrs.) plus additional social science (3 hrs.)	12
5. College Algebra	3
6. Physical Education	4
7. Philosophy	2-3
Total	51-54

**B. Specific requirements in economics and business courses, common to all concentrations—**

B A 5, 6, Principles of Accounting	3-3
B A 65, Business Writing	3
B A 106, 107, Business Law	3-3
B A 108, Marketing	3
B A 109, Statistics	3
B A 110, Corporation Finance	3
B A 130, Business Organization and Management	3
Econ 51, 52, Intro to Economics	3-3
Econ 111, Money and Banking	3
Additional business administration or economics courses	14
Total	50

**C. Free Electives—** 24-27

Total hours of credit for degree 128

**SUGGESTED FRESHMAN PROGRAM**

(Be sure to read explanations)

First Semester		Second Semester	
English 1	3	English 2	3
BA 5 Accounting	3	BA 6 Accounting	3
Laboratory Science	3-4	Laboratory Science	3-4
Mathematics 2 or 12	3	Social Science	3
Option or Foreign Lang	3	Option or Foreign Lang	3
Physical Education	1	Physical Education	1

**EXPLANATIONS**

*English.* The beginning freshman will take either English 1W, English 1, or English 2, depending on the scores made on the entrance examination in English.

*Laboratory Science.* Laboratory science means Psychology, Chemistry, Physics, Geology, Biology and certain courses in Home Economics.

*Social Science.* Anthropology 1 and 2, History 1, 2, 11, 31, and Introduction to Social Science 1 and 2 are acceptable for the social science requirement.

*Option.* The option means either a foreign language, or courses which will count as substitutes. (See statement of general requirements.) If a student chooses a foreign language instead of the option and is admitted with high school language credits and wishes to enter courses above the elementary level, he should consult the Head of the Modern and Classical Languages Department (in the College of Arts and Sciences). Mathematics 2 will not count on the option.

*Mathematics.* During the freshman year the student should take Mathematics 2 (review Mathematics) or Mathematics 12, depending on the score made on the entrance examination in Mathematics.

*Naval students* probably will have to defer to a later semester, or to a later year, one of the above courses each semester in order to take the required Naval Science course. Physical Education is not required for Naval students.

*Secretarial-Office Training* students may find it necessary to defer certain requirements to a later year, in order to take courses in typing and shorthand.



## SUGGESTED SOPHOMORE PROGRAM

(Be sure to read explanations)

First Semester		Second Semester	
Literature (numbered above 50)	3	Speech 55	3
Economics 51	3	Economics 52	3
Government 51	3	Government 52	3
Option or Foreign Lang	3	Option or Foreign Lang	3
Social Science	3	Philosophy, or Business Writing	3
Physical Education	1	Physical Education	1

## EXPLANATIONS

*Accounting students* in the sophomore year should take B.A. 63 and 64, deferring, if necessary, one of the regular courses listed above.

*Secretarial-Office Training students* may find it necessary to defer one of the above each semester in order to take certain courses in their fields of concentration.

*Naval students* may find it necessary to defer one of the above each semester in order to take the required courses in Naval Science.

## JUNIOR AND SENIOR YEARS

Not later than the beginning of the junior year students should choose a field of concentration. During the junior and senior years students must take any of the General Requirements, as listed on pp. 221-222, which were not taken in the first two years. A general prerequisite to all upper division courses is Economics 51 and 52, but any course may have a specific prerequisite which will be stated in its description. At the end of the sophomore year or near the beginning of the junior year, the student should file in the Dean's office an application for the B.B.A. degree; a graduation summary sheet will then be made out, and a copy will be supplied the student.

## CONCENTRATIONS

## 1. GENERAL BUSINESS. Adviser: Mr. Huber.

Specific requirements common to all concentrations, see page 222

Concentration requirements (in addition to specific requirements):

Transportation (B.A. 143)

Labor Problems (Econ. 141)

Eight hours of recommended electives.

*Recommended electives:* B.A. 113, 115, 114, 127, 128, 134; Econ. 63, 119, 152, 160, 154.

## 2. ACCOUNTING. Advisers: Mr. Dunbar, Mr. Smith.

Specific requirements common to all concentrations, see page 222

Concentration requirements (in addition to specific requirements):

Intermediate Accounting (B.A. 63, 64)

Cost Accounting (B.A. 104)

Auditing (B.A. 119)

Tax Accounting (B.A. 117)

Advanced Accounting (B.A. 121)

*Recommended electives:* B.A. 102, 120, 118, 127, 128.

## 3. FINANCE. Advisers: Mr. Parish, Mr. Evans.

Specific requirements common to all concentrations, see page 222

Concentration requirements (in addition to specific requirements):

Life Insurance (B.A. 127)

Credits and Collections (B.A. 113)

Investments (B.A. 115)

Public Finance (Econ. 152)

Three hours recommended electives.

*Recommended electives:* B.A. 128, 143; Econ. 141, 162.

4. **SECRETARIAL-OFFICE TRAINING.** Advisers: Miss Israel, Mrs. Réva.

Specific requirements common to all concentrations, see page 222

Concentration requirements (in addition to specific requirements):

- Beginning Typewriting (B.A. 11) or high school credit
- Intermediate Typewriting (B.A. 12) or high school credit
- Advanced Typewriting (B.A. 61, 62)
- Shorthand Theory (B.A. 13) or high school credit
- Beginning Dictation (B.A. 14) or high school credit
- Transcription; Speed Dictation (B.A. 53, 54)
- Personnel Management (B.A. 131)
- Secretarial Office Practice (B.A. 157)
- Office Management (B.A. 158)

*Recommended electives:* B.A. 113, 114; Econ. 63; and English.

5. **MARKETING.** Adviser: Mr. Fellows.

Specific requirements common to all concentrations, see page 222

Concentration requirements (in addition to specific requirements):

- Advertising (B.A. 114)
- Transportation (B.A. 143)
- Retail Merchandising (B.A. 182)
- Problems in Market Analysis (B. A. 183)
- Marketing Management (B.A. 185)
- Selling and Sales Supervision (B.A. 134)
- Credits and Collections (B.A. 113)

*Recommended Electives:* B.A. 127, 128, 165; Econ. 63, 152.

6. **INDUSTRIAL ADMINISTRATION.** Adviser: Mr. Damgaard.

Specific requirements common to all concentrations, see page 222

Concentration requirements (in addition to specific requirements):

- Cost Accounting (B.A. 104)
- Personnel Management (B.A. 131)
- Industrial Psychology (Psych. 58)
- Salary and Wage Administration (B.A. 132)
- Labor Problems (Econ. 141)
- Collective Bargaining (B.A. 133)
- Industrial Relations (B.A. 135)
- Public Administration (Govt. 121)

*Recommended electives:* B.A. 63, Econ. 143, 152, 180, 140.

## COLLEGE OF BUSINESS ADMINISTRATION

### DEPARTMENT OF INSTRUCTION

Courses numbering: from 1-49, lower division, normally open to freshmen; from 50-99, lower division, normally open to sophomores; from 100-199, upper division, normally open to juniors, seniors, and graduates; 200-400, open to graduates only. Graduate credit for courses listed is allowed at the discretion of the Graduate Committee.

Symbols used in course descriptions: L—part of the course is laboratory work; SS—course offered in eight weeks' summer session only; Yr—course offered throughout two semesters and credit for a single semester's work is suspended until the entire course is completed; ( )—semester hours' credit; credit hours separated by a dash (1-3) indicate variable credit in the course; [ ]—former course number or title.

A schedule of course offerings, including hours of meeting, is

issued at the opening of each session. The University reserves the right to cancel any listed course or to make a substitution in instructors when necessary.

### BUSINESS ADMINISTRATION

Professors Sorrell (Dean), Fellows; Associate Professors Dunbar, Edgel, Evans, Parish, Smith; Assistant Professors Damgaard, Harmeyer, Huber, Israel; Instructors Anderson, Carey, Comstock, Hafen, Reva.

✓ 5-6. PRINCIPLES OF ACCOUNTING. (3, 3)

Introductory accounting; statements, accounts, journals, adjusting and closing entries, the worksheet; the voucher system, payroll accounting, departmentalization, accounting for proprietorship, partnership, and corporation capital; manufacturing accounts, budgets, valuation, statement analysis. Both semesters are required for a degree in Business Administration. The course is elective for Law, Engineering, Pharmacy, Home Economics, and other students. Credit in 5 can be obtained without continuing in 6. Staff

✓ \*7. OFFICE MACHINES AND FILING. (2)

Laboratory work in filing, transcription from recorded dictation, mimeograph, direct process and gelatine duplicators, listing and non-listing calculators. Class meets four hours a week. Prerequisite: 11 or equivalent. Israel

✓ †11. BEGINNING TYPEWRITING. (2)

The learning of the keyboard by the touch system; reconstruction of basic skills. Students who have had typewriting in high school or business school should take 61 or 62. Israel, Reva

✓ †12. INTERMEDIATE TYPEWRITING. (2)

Some business forms including letter writing are studied. A speed of 40 words per minute is achieved. Students who have had typewriting in high school or business school should take 61 or 62. Israel, Reva

✓ \*\*13-14. SHORTHAND THEORY; BEGINNING DICTATION. (3, 3)

Gregg theory and essentials of writing. Speed goal: 60 wpm. 14: Review of theory; introduction of transcription. Speed goal: 80 wpm. Students who have had shorthand in high school or business school should enroll in 14 or a more advanced class, as they will not receive credit in 13. Prerequisites for 14: 11 and 13 or equivalent. 4 one-hour classes per week. Israel, Reva

✓ 41. MATHEMATICS OF INVESTMENT. (3) (Same as Mathematics 41.)

✓ 51-52. INTRODUCTION TO ECONOMICS. (3, 3) (Same as Economics 51, 52.)

✓ \*\*53-54. TRANSCRIPTION; SPEED DICTATION. (3, 3)

Review of theory. Dictation and transcription from shorthand notes correctly and speedily. Mailable letters are required. Prerequisite: 13 or equivalent. Speed goal for 53: 100 wpm.; for 54: 120 wpm. Israel

✓ †61-62. ADVANCED TYPEWRITING. (2, 2)

Emphasis on speed, technique, and corrective drills. Business letters, reports, manuscripts, tabulation, rough drafts, billing, corporation reports, legal documents, filling in forms. Opportunities for achieving individual speed goals. Speed goal for 51: 50 wpm.; for 52: 60 wpm. Prerequisite: 12 or equivalent. Hafen

\* Credit in General College only.

† No credit allowed toward degrees in Colleges of Arts and Sciences and Business Administration.

\*\* A maximum of 6 hours of credit allowed in shorthand in the College of Arts and Sciences.

‡ No credit allowed toward degree in College of Arts and Sciences.

- ✓ 63-64. **INTERMEDIATE ACCOUNTING.** (3, 3)  
Review of fundamentals; detailed consideration of partnerships and corporation net worth; basic accounting theory; problems of control of, and accounting for, cash; receivables, inventories, fixed assets, intangibles, investments, liabilities, funds and reserve, comparative statements, analytical ratios; statement of application of funds. Credit can be obtained in 63 without continuing in 64. Prerequisites: 5 and 6 with a minimum grade of "C" in 6. Staff
65. **BUSINESS WRITING.** (3)  
A study of psychology of tone, structure, and form of business letters. Includes the writing of order, adjustment, credit, collection, sales application, and recommendation letters. Reva
- ✓ 80. **ECONOMIC HISTORY.** (Same as Economics 80) Sloan
- ✓ 102. **GOVERNMENTAL ACCOUNTING.** (2)  
Essential principles of governmental accounting; account classification, budgets, statements, revenues and expenditures; general fund, bond and sinking funds, working capital and special assessment funds; utility accounts; cost accounting. Prerequisite: 63. Harmeyer
- ✓ 104. **COST ACCOUNTING.** (3)  
Principles of industrial and distribution cost accounting; job order and process cost systems; standard costs; cost reports. 63 and 64 recommended for accounting students before taking 104. Smith
- ✓ 106-107. **BUSINESS LAW.** (3, 3)  
This course attempts to give an understanding of the basic legal institutions and a working knowledge of essential legal concepts. Attention is given to the following subjects: contracts, agency, and negotiable instruments. 107 is continued from 106 considering business organizations, real and personal property, security transactions and trade regulations. Prerequisite: upper division standing. Huber
- ✓ 108. **PRINCIPLES OF MARKETING.** (3)  
Principles of marketing; economic significance, functions, middlemen and channels of trade, competition, price policies, marketing management; market planning, budgets and cost, market research; consumer problems. Fellows
109. **BUSINESS STATISTICS.** (3)  
Collection, arrangement, and interpretation of statistical material relating to business operations. Prerequisite: upper division standing. Carey
- ✓ 110. **CORPORATION FINANCE.** (3)  
A survey of the organization and development of the modern profit-seeking corporation with emphasis on financial aspects. Problems of promotion, normal operation and reorganization are considered. Evans
- ✓ 111. **MONEY AND BANKING.** (Same as Economics 111) Parish
113. **CREDITS AND COLLECTION.** (2)  
Principles and practices of credit management. Taught primarily from the point of view of the credit man. Sorrell
- ✓ 114. **ADVERTISING.** (3)  
Basic advertising principles and practice. How the modern executive evaluates, buys, criticizes and controls advertising. Characteristics of effective advertising, selection of media, planning and executing of campaigns are surveyed. Fellows
115. **INVESTMENTS.** (3)  
A detailed consideration of most types of investment media from the investor's standpoint. Considerable attention given to psychological aspects of investment and speculation, and to building realistic individual investment programs. Prerequisite: 110 or the equivalent. Evans
- ✓ 117-118. **INCOME TAX ACCOUNTING.** (3, 3)  
Study of federal and state income tax laws and regulations; history and background; sources of tax law; tax services; organization and

procedures of the Bureau of Internal Revenue; tax returns, rates, and credits; deductions and exclusions; withholding provisions; capital gains and losses; community property clauses. Prerequisite: 64. Credit may be obtained in 117 without continuing in 118. Dunbar

✓ 119. AUDITING. (3)

Auditing principles and procedure; preliminary considerations, planning the audit program, classes of audits, audit reports, professional ethics and legal responsibility; case problems. Prerequisite: 64. Dunbar

✓ 120. AUDITING. (2)

Audit practice case: complete audit of a corporation, including examination and verification of original vouchers, journal and ledger entries; preparation of working papers, adjusting entries, financial statements and report of examination; illustrative audit work papers. Prerequisite: 119. Dunbar

✓ 121-122. ADVANCED ACCOUNTING. (3, 3)

Problems, partnership dissolution and liquidation, consignments, installment sales, insurance, correction of errors, the statement of affairs, realization and liquidation statement, estates and trusts, budgets; branch accounting, consolidated statements, foreign exchange. Prerequisite: 64. Credit can be obtained in 121 without continuing in 122. Harmeyer

✓ 125-126. C.P.A. REVIEW. (3, 3)

Coaching for the C.P.A. examination, with emphasis upon solution of past problems in the examinations of the American Institute of Accountants; partnership, corporation, financial statements, auditing, cost accounting, insolvencies, receiverships, and governmental accounting. Prerequisites: 102, 104, 117, 119, and 122. Credit in 125 is not dependent upon completing 126. Smith

127. LIFE INSURANCE. (3)

The economic aspects of risk as exemplified by life insurance; basic actuarial considerations; detailed investigation of provisions and costs of policies and their suitability for various types of buyers; organization of the business. Evans

128. PROPERTY AND CASUALTY INSURANCE. (3)

Basic principles and theories of insurance will be treated generally, followed by a special study of fire, liability, marine, automobile and aviation insurance. Fidelity and surety bonds will also be included in the study of property insurance. Huber

✓ 130. PRINCIPLES OF ORGANIZATION AND MANAGEMENT. (3)

Development of modern management; plant location and layout; materials handling; physical factors in factory operation; product and process planning; production control; motion and time study; personnel organization, procurement and maintenance; employee health, safety, morale, and training; cost and budgetary control. Damgaard

✓ 131. PERSONNEL MANAGEMENT. (3)

The field of personnel administration; functions of a personnel department, employment methods, physical working conditions, employee training, transfers and promotions, grievances discharge; job analysis and specifications, production standards, labor turnover, employee rewards, profit-sharing; employee representation, collective bargaining; industrial government. Prerequisite: 130. Damgaard

✓ 132. SALARY AND WAGE ADMINISTRATION. (2)

Determination of wage rates and pay practices, evaluation of jobs, the wage structure, employer-employee cooperation and control. Prerequisite: 131. Damgaard

✓ 133. COLLECTIVE BARGAINING. [Management-Union Relations]. (3)

Management characteristics and functions; labor union policy and operation; collective bargaining procedure; labor contract provisions, settlement of grievances, conciliation, mediation, arbitration. Prerequisite: 131. Damgaard

- ✓ 134. SELLING AND SALES SUPERVISION. (3)  
The role of selling in our economy, its functions, costs and the magnitude of the selling task; the various techniques of salesmanship which should prove valuable to those planning to enter the selling field. Also consideration is given to the principles of sales management, covering sales research, management of salesmen, sales policies and similar problems. Evans
- ✓ 135. INDUSTRIAL RELATIONS. (3)  
Analysis of industrial relations situations as found in industry today. Treatment of space-time relationships. Damgaard
- ✓ 141. LABOR PROBLEMS. (3) (Same as Economics 141) Wollman
- ✓ 143. TRANSPORTATION. (3)  
Principles and problems of transportation. Duncan
- ✓ 152. PUBLIC FINANCE. (3) (Same as Economics 152) Wollman
- ✓ 155g. THE TEACHING OF BUSINESS SUBJECTS IN HIGH SCHOOL. (3)  
(Same as Education 155g) Israel
- ✓ 157. SECRETARIAL OFFICE PRACTICE. (4)  
Development of the ability to apply secretarial skills to office duties and to handle efficiently the responsibilities of a secretarial position. Includes laboratory work in filing and modern office machines. Prerequisites: 12 and 14 or equivalent. 3 lectures, 4 hrs. lab. Israel
- ✓ 158. OFFICE MANAGEMENT. (3)  
Principles of efficient office organization and management; methods analysis and work simplification; training and supervision of office personnel; forms and form design; work flow, content and evaluation of clerical jobs, standardization and measurement of office work. Israel
- ✓ 162. BUSINESS CYCLES. (3) (Same Economics 162)
165. PUBLIC UTILITIES. (3)  
Government control of public service industries with emphasis on the public utility concept, economics of rate making and monopoly, and problems of public utility management. Parish
180. GOVERNMENT CONTROL OF BUSINESS. (3) (Same as Economics 180)
- ✓ 182. RETAIL MERCHANDISING. (3)  
Principles and problems emphasizing position of the retailer; organization; and administration. Buying, planning, control; expense distribution; promotion; personnel administration; operating efficiency; expense reduction. Prerequisite: 108. Fellows
- ✓ 183. PROBLEMS IN MARKET ANALYSIS. (3)  
The various types of market analysis used by advertising media, manufacturers and distributors. Data is gathered in the market, analyzed, interpreted and conclusions are presented. Prerequisites: 108, 182. Fellows
- ✓ 185. MARKETING MANAGEMENT. (3)  
Coordination of all factors in distributive enterprise; consumer preferences in marketing methods; modern problems in public relations and consumer contact; social responsibility and self-discipline in distributive enterprise. Prerequisites: 114 or 182. Fellows
- ✓ 196. ADVANCED COST ACCOUNTING. (3)  
[206] Advanced theory and problems in standard and process costs; analysis and control of costs; costing practices of specific industries; distribution costs; representative cost problems from C.P.A. examinations; cost practice case. Prerequisites: 15 hours in accounting plus 104. Dunbar
- ✓ 201. FISCAL POLICY AND BUSINESS. (3)  
An integration of the fields of monetary theory and public finance applied to the problems of fluctuations in production and employment. (Required of all graduate students working toward the degree of Master of Business Administration.) Parish

203. **RESEARCH IN BUSINESS.** (3)  
This course is designed to provide experience in assembling, analyzing and interpreting information for business use and in presenting results of such studies. Prerequisite: a degree in Business Administration or a major in Economics including statistics. Edgel
- ✓ 204. **SEMINAR IN MARKETING.** (3)  
An evaluation of marketing theories and their application to current marketing procedure. The student is required to initiate an original project in the field of marketing a manufactured product, conduct the necessary research and present a report on the complete marketing program. Fellows
- ✓ 205. **ACCOUNTING SYSTEMS.** (3)  
Design and installation of accounting records; basic problems of system designed as related to business functions; independent research evidenced by a comprehensive system report. Prerequisite: 21 hours in accounting. Harmeyer
- ✓ 207. **SEMINAR IN ADVANCED TAX ACCOUNTING.** (3)  
Case studies in advanced federal income tax problems; federal estate and gift taxes; a study of those New Mexico state taxes which concern the public accountant. Dunbar
208. **SECURITY ANALYSIS.** (3)  
Comparative ratio analysis; study and evaluation of theories of forecasting and related advanced security market techniques. Evans
- ✓ 209. **LEGAL PROBLEMS OF BUSINESS ADMINISTRATION.** (3)  
A treatment of legal principles concerning corporate and partnership business organizations generally, with special problems allied with the above such as security law, trusts, bankruptcy, real and personal property, and trade regulations. Independent student research will be emphasized. Huber
- 251-252. **PROBLEMS.** (1-2 each semester)  
Special permission of the adviser and the Dean of the College of Business Administration required. Graduate Staff
300. **THESIS.** (6) Graduate Staff

## GENERAL COLLEGE

**T**HE GENERAL COLLEGE has been planned in terms of two-year programs. It makes provision for rather large numbers of students who, for one reason or another, do not find the four-year course advisable. Some of these groups are:

1. Those who are interested in general, instead of specialized types of knowledge. Students of this sort prefer an overview of a field with emphasis upon general principles rather than upon techniques and details, and are to be taken care of to a large extent by general education courses.

2. Those who wish to "explore." Interest in one or more of the fields of knowledge is a prime factor in college success; and this interest, together with greater efficiency in mental habits, can often be fostered through exploration.

3. Those who desire distinctly vocational courses of the semi-professional nature. Many capable young people want courses that lead to definite vocational techniques, even though they are not interested in general academic training.

4. Adults who have no interest in degrees or in technical courses, but who desire information and guidance in general or practical fields.

5. Young people who know from the beginning that either for financial or other reasons they must place a time limit upon their higher education. They may prefer either the general or the vocational type of training, but they are forced to look for that from which they can derive the most nearly finished and comprehensive results in less than four years.

6. Those who desire to complete a two-year preparatory course leading to entrance into a professional or specialized college.

### ADMISSION REQUIREMENTS

For admission requirements to the General College, see "Admission." Applicants for admission are held to the regulations as set down in the general admission section, except that the Dean of the General College may accept an individual who has at least a two-thirds grade point average.

A student with more than 60 semester hours, exclusive of activity credits in physical education, is not permitted to enter the General College.

### SCHOLARSHIP REGULATIONS

See pp. 72-74.

### TRANSFER

A student may be recommended by the Dean of the college concerned for transfer from the General College to one of the other



colleges of the University at the end of any semester or summer session.

#### COMPLETION OF COURSE

Sixty-four hours of passing work with at least a 0.66 scholarship-index exclusive of non-theoretical courses in physical education, must be completed in order to fulfill the requirements for the General College diploma. Normally, this work will be divided into four semesters as indicated below.

Students registering in the General College may pursue courses in the Department of Naval Science only with the permission of the Dean of the General College and the Head of the Department of Naval Science.

#### CURRICULA\*

##### ACADEMIC COURSE

FRESHMAN YEAR			
First Semester		Second Semester	
English 1	3	English 2	3
Intro to Soc Sci	3	Intro to Soc Sci	3
Mathematics, Lang, or Science	3-4	Physical Education	1
Physical Education	1	Mathematics, Lang, or Science	3-4
Electives	6	Electives	6
	16		16

##### ART

FRESHMAN YEAR			
First Semester		Second Semester	
English 1	3	English 2	3
Intro to Soc Sci	3	Intro to Soc Sci	3
Art 1	2	Art 2	2
Art 3	2	Art 4	2
Art 5 or 7	2	Art 6 or 8	2
Electives	4	Electives	4
Physical Education	1	Physical Education	1
SOPHOMORE YEAR			
Art Electives Group II	4	Art Electives Group II	4
Art Electives Group I	6	Art Electives Group I	6
Electives	6	Electives	6

##### CLERICAL

FRESHMAN YEAR			
First Semester		Second Semester	
English 1	3	English 2	3
Intro to Soc Sci	3	Intro to Soc Sci	3
†Bus Adm 11	2	†Bus Adm 12	2
Psych 1L	3	Psych 2L	3
Math 1	2	Elective	3
Physical Education	1	Physical Education	1
Bus Adm 5	3	Bus Adm 6	3

\* Students in the General College are limited to lower division courses without special permission of the General College Dean.

† Certain elementary courses may be waived on the basis of a placement test if the student has had shorthand or typewriting in high school.

## SOPHOMORE YEAR

English 55	3	Speech 55	3
Econ 63	3	Bus Adm 65	3
Bus Adm 61	2	Bus Adm 62	2
Bus Adm 7	2	Physical Education	1
Physical Education	1	Electives	8
Electives	6		

## HOME MAKING

## FRESHMAN YEAR

First Semester		Second Semester	
English 1	3	English 2	3
Intro to Soc Sci	3	Intro to Soc Sci	3
Home Ec 1	3	Physical Education	1
Psychology 1L	3	Psychology 2L	3
Physical Education	1	Biology 36	3
Home Ec 2L	2	Electives	4

## SOPHOMORE YEAR

Home Ec 53L	3	Sociology 51	3
Home Ec 63L	3	Home Ec 54L	3
Physical Education 64	2	Home Ec 64L	3
Electives	5	Electives	10

## INDUSTRIAL ARTS

See first two years Industrial Arts Curriculum, College of Engineering. Some adjustments to fit individual needs may be arranged.

## MUSIC

## FRESHMAN YEAR

First Semester		Second Semester	
English 1	3	English 2	3
Intro to Soc Sci	3	Intro to Soc Sci	3
Music 5	3	Applied Music	2
Applied Music	2	Ensemble Music	1
Ensemble Music	1	Music 40	2
Music 39	2	Electives	5
Electives	2	Physical Education	1
Physical Education	1		

## SOPHOMORE YEAR

Dram Art 1	3	Dram Art 2	3
Music 61	3	Music 62	3
Ensemble Music	1	Ensemble Music	1
Music 6	3	Music 65	3
Electives	6	Electives	6

## PRÉDENTISTRY\*

## FRESHMAN YEAR

First Semester		Second Semester	
English 1	3	English 2	3
Chemistry 1L	4	Chemistry 2L	4
Mathematics 15	3	Mathematics 16	2
Mod Lang	3	Mod Lang	3

\* The student should be mindful of the fact that the requirements vary considerably with different institutions. Therefore, it is always well for the student to obtain a catalog from the institution which he wishes to attend so that a schedule of classes can be arranged to meet specific requirements.

Psychology 1L	3	Psychology 2L	3
Physical Education	1	Physical Education	1

## SOPHOMORE YEAR

Economics 51	3	Economics 52	3
Biology 1L	4	Biology 2L	4
Physics 11L	4	Physics 12L	4
Philosophy 1	3	Chemistry 42L	5
Soc Sci Elective	3	Physical Education	1
Physical Education	1		

## PREFORESTRY\*

## FRESHMAN YEAR

First Semester		Second Semester	
English 1	3	English 2	3
Geology 1	3	Mathematics 16	2
Geology 5L	1	Chemistry 2L	4
Mathematics 15	3	Physical Education	1
AE 1L	3	Electives	7
Chemistry 1L	4		
Physical Education	1		

## SOPHOMORE YEAR

Economics 51	3	Economics 52	3
Biology 1L	4	Biology 2L	4
Physics 11L	4	Physics 12L	4
C E 4L	2	Chem 42L	5
Elective	2	Physical Education	1
Physical Education	1		

## PRELAW COURSE†

*For Veterans Only*

## FRESHMAN YEAR

First Semester		Second Semester	
Intro to Social Science 1	3	Intro to Social Science 2	3
English 1	3	English 2	3
Psych 1L	3	Psych 2L	3
Phil 1	2	Speech 2	3
Speech 1	3	History 2	3
Hist 1	3	Elective	2

## SOPHOMORE YEAR

English Lit	3	Govt 52	3
Govt 51	3	Econ 52	3
Econ 51	3	Hist 52	3
Hist 51	3	B A 6	3
B A 5	3	Govt 175	3
Electives	2	Electives	2

† This kind of course is only suggestive and is subject to student changes. It is recommended that you plan on a three- or four-year prelaw program. If planning to attend the University of New Mexico Law School, you must be a veteran to take a two-year prelaw course.

## PREOPTOMETRY\*

## FRESHMAN YEAR

First Semester		Second Semester	
Mathematics 15	3	Mathematics 16	2
English 1	3	English 2	3

\* The student should be mindful of the fact that the requirements vary considerably with different institutions. Therefore, it is always well for the student to obtain a catalog from the institution which he wishes to attend so that a schedule of classes can be arranged to meet specific requirements.

Biology 1L	4	Biology 2L	4
Chemistry 1L	4	Chemistry 2L	4
Elective	3	Philosophy 2	3
Physical Education	1	Physical Education	1

## SOPHOMORE YEAR

Biology 36	3	Biology 93L	4
Biology 39L	2	Mathematics 22	4
Physics 11L	4	Physics 12L	4
Economics 51	3	Economics 52	3
Psychology 1L	3	Psychology 2L	3
Elective	2	Physical Education	1
Physical Education	1		

## SECRETARIAL

## FRESHMAN YEAR

First Semester		Second Semester	
English 1	3	English 2	3
Intro to Soc Sci	3	Intro to Soc Sci	3
**Bus Adm 11	2	**Bus Adm 12	2
**Bus Adm 13	3	**Bus Adm 14	3
Psych 1L	3	Psych 2L	3
Physical Education	1	Physical Education	1
Elective	2	Elective	2

## SOPHOMORE YEAR

Bus Adm 61	2	Bus Adm 65	3
Bus Adm 53	3	Bus Adm 62	2
English Lit	3	Bus Adm 54	3
Mathematics 1	2	Econ 63	3
Psych 58	3	Physical Education	1
†Bus Adm 7	3	Elective	5-6
Physical Education	1		

\*\* Certain elementary courses may be waived on the basis of a placement test if the student has had shorthand or typewriting in high school.

† Credit allowed in General College only.

## COLLEGE OF LAW

**T**HE STATE BAR of New Mexico having previously adopted a resolution to that end, and the Legislature of New Mexico having made financial provision, the Regents of the University of New Mexico, on March 31, 1947, as expressly authorized by Laws 1889, Ch. 138, S15, approved the establishment of a College of Law. The College admitted its first class in September, 1947.

### AIMS AND METHODS

It is the democratic ideal, of which the Christian ethic of sympathy is a religious expression, that the human personality always be respected and that each individual be left as free to develop and express himself spiritually, politically, socially, and materially, as is compatible with the general principle. For the law, this means that every individual shall be treated on his merits, on the basis of what he is and is capable of becoming, his past life being significant only as evidence of his character and potentialities. This also means that those who seek to make and administer the law must be properly motivated, well aware of social objectives and values, and sensitive to human needs and aspirations.

The aim of the College of Law will be to insure, without efforts at indoctrinating the students with particular views, that its graduates understand the democratic ideal and the role of law and of the lawyer in our striving to attain it. To this end, it will be urged that students enter the law school with as broad a cultural and educational background as it is possible for them to have. At present, the minimum requirement is, as stated below, three years of college work. In the College of Law, the students will not only study the ideas, ideals and ways of life expressed in the substantive law and in legal literature, and the procedures provided for their application, but will also have kept before them the obligations of their profession.

The right of the lawyer to just compensation for his services will be recognized, but the duties of a lawyer as adviser, draftsman, negotiator, advocate, judge, legislator, teacher, official, and citizen, and the personal satisfaction to be gained from work well done, will continually be stressed as paramount to personal gain, especially to financial reward obtained for position and influence and not earned by professional services rendered.

The aim of the College of Law is to furnish its graduating students with a sound base for a program of self-education which will be continued by them throughout their lives. The law is deemed to be a flexible, living, and dynamic system of organizations, processes and procedures serving the purpose of (1) resolving particular con-

licts of interests (adjudication) and (2) providing guides to obviate future conflicts of interests (legislation). This system is based upon a solid, although not rigid or mechanically applicable, foundation of substantive and procedural law which no official should depart from or seek to modify except in accordance with the methods of the appropriate process and after adequate notice and hearing. Therefore, the method of the College consists in the study of the organization, processes and procedures of the law as revealed in past adjudications and in legislation—legislation by private contract as well as by judicial and legislative processes—and in the study of contemporary problems in areas in which conflicting interests and opinions have not yet been resolved. The materials for such study will be selected and systematized so as to give as broad and readily grasped a coverage of legal information as possible, while at the same time providing exercise in the development of skills and encouraging an attitude of truth-seeking in research, synthesis, criticism and expression. It is expected that faculty time will permit substantially more of the course of study to consist of the study of problems by the students, individually, under the guidance and criticism of the faculty than has usually been possible in law schools; that there will be less than twenty students per faculty member. A persistent effort will be made to bring to the surface, and thereby to challenge the students with, ultimate ideals and aims and moral problems; this to the end that they will not proceed unconsciously on the basis of untested assumptions, or on the basis of their individual ideas, humanitarian or otherwise (note the difficulties suggested by the following from the declaration of trust of A. P. Giannini: "Administer this trust generously and nobly, remembering always human suffering. Let no legal technicality, ancient precedent or outmoded legal philosophy defeat the purpose of this trust."), but will realize the difficulties of human understanding and progress, and will develop in themselves the respect for, and the understanding of, government under law, the balance of boldness and humility, and the unselfish devotion to duty that are required of citizens who are members of the legal profession.

STANDARDS OF AMERICAN BAR ASSOCIATION AND OF  
THE ASSOCIATION OF AMERICAN LAW SCHOOLS

The standards of the American Bar Association include the following:

*The American Bar Association is of the opinion that every candidate for admission to the bar should give evidence of graduation from a law school complying with the following standards:*

*It shall require as a condition of admission at least 3 years of study in a college.*

*It shall require its students to pursue a course of 3 years' duration, if they devote substantially all of their working time to their studies, and a longer course equivalent in the number of working hours, if they devote only part of their working time to their studies.*

*It shall provide an adequate library available for the use of the students.*

*It shall have among its teachers a sufficient number giving their entire time to the school to insure personal acquaintance and influence with the whole student body.*

The College has met these standards and was approved by the American Bar Association on February 24, 1948. This approval was "provisional." The meaning and significance of "provisional" appears from the following excerpts from publications of the Section of Legal Education and Admissions to the Bar: "The approval first given is called 'provisional approval.' This means that the school fully meets the standards of the American Bar Association, but is subject to reinspection after the lapse of a period which is usually about two years." (1944 *Review of Legal Education*, p. 23.) "No school will be given provisional approval unless in the judgment of the Council it is found to be meeting the minimum standards of the American Bar Association. The graduates of provisionally approved schools are entitled, therefore, to the full recognition of their credits by bar examiners." (Factors Bearing on the Approval, etc., May 15, 1947, p. 2.)

The standards of the Association of American Law Schools are set forth in Article Sixth of its Articles of Association. Its requirements relating to student work will be found in the Admission Requirements and Requirements for Degree set forth below, except that New Mexico will require more than the minimum amount of prelegal education required. Membership in the Association of American Law Schools was granted to the College in December, 1948.

#### BAR EXAMINATIONS

The degree in law from this University will not confer the privilege of practicing law in New Mexico or elsewhere. The degree will satisfy the requirement of graduation from a law school approved by the American Bar Association as a prerequisite for bar admission.

Bar examinations in New Mexico are given in the Supreme Court Building in Santa Fe commencing on the fourth Monday in February and the second Monday in August of each year, unless otherwise announced. The fee for recent graduates is \$35. If a six months' residence has not been established at the time of taking the examination, a license to practise law in New Mexico will be issued only if a bona fide residence be established within one year, and a six months' residence be completed within 18 months, from the date of examina-

tion. Residence may be established while attending this College of Law. Additional information can be obtained from Secretary, State Board of Bar Examiners, Supreme Court Building, Santa Fe, New Mexico.

### **LAW BUILDING**

On November 22, 1950, the Regents of the University authorized the University architect to prepare plans for the construction of a law building. Work will proceed as rapidly as possible to complete the plans, take bids, and construct an adequate, attractive, and modern building.

### **THE LIBRARY**

The College of Law Library, housed separately with the law school, received an auspicious start through donation of the Francis C. Wilson, Francis E. Wood, and other private law library collections. It contains nearly 30,000 volumes and is being augmented by approximately 250 volumes each month. The Library includes comprehensive collections of British, Federal and state court reports, including special and annotated series, session laws, state and Federal statutes, legal treatises, periodicals, encyclopedias and digests, administrative reports, and other classes of legal materials.

### **ADMISSION REQUIREMENTS**

A candidate for the degree of Bachelor of Laws must have completed, in residence, before admission to the College of Law, at least three (two, in the case of veterans of World War II who register by the fall of 1952) years of study in a college or university, in which he has earned at least ninety (sixty in the case of veterans of World War II) semester hours of credit acceptable towards the Bachelor of Arts, Bachelor of Business Administration, or other degree at the University of New Mexico, exclusive of non-theory courses in military science, hygiene, home economics, physical education, vocal or instrumental music, or courses without intellectual content of substantial value. Such prelegal work must have been completed with an average of "C" or better on all prelegal work, exclusive of non-theory courses (see above), undertaken (failed courses must be included) in all institutions attended. Credit earned through correspondence, or by examination, is not acceptable.

Applicants are required to take the Law School Admission Test (see below).

All correspondence regarding law work and entrance, all applications for admission, and all transcripts should be addressed to the Director of Admissions, University of New Mexico, Albuquerque.



New Mexico. An application for admission may be obtained from the Office of Admissions and Records.

Applications from College of Law applicants who have been graduated with a B.A. degree or its equivalent will be processed upon the receipt of a complete official transcript from the last institution attended, showing graduation and grades for all academic courses leading to the degree. Students who have earned postgraduate degrees must provide official transcripts from the institution or institutions in which such degrees were earned.

No person will be considered for admission until he has filed formal application and required transcripts, nor is he assured of entrance or rejection until he has received official notice from the Director of Admissions.

Applications and transcripts should be filed not later than August 15 for first semester registration, in order to afford time for evaluation and, if necessary, supplementation and correction. Transcripts must come directly from the registrar of the institution.

#### LAW SCHOOL ADMISSION TEST AND OTHER TESTS AND INQUIRIES

All applicants for admission are required to take the Law School Admission Test given by the Educational Testing Service, P. O. Box 592, Princeton, New Jersey. Tests will be given at various places throughout the United States. Information and application forms can be obtained by writing to the Educational Testing Service. These should be obtained well in advance of the examination dates, so that the application and \$10 fee can be returned ten days or more before the date of the test. Applicants who have taken this test on or after February 28, 1948, need not repeat it but must have a report of the test sent to this College, if they have not already done so. Applicants will not be excluded on the basis of the test. Residents of New Mexico may, for cause shown, be permitted to postpone the test until after they have entered the College.

Students may be required to take, without charge, speech, hearing, interest, and additional aptitude or other tests after their entrance into the College, to have their pictures taken, and to answer questionnaires or oral questions as to their past and present activities relevant to their legal study.

#### SELECTION OF PRELAW PROGRAMS

Certain fields might be listed and recommended in which a lawyer should have at least an elementary knowledge, such as accounting, economics, English composition, speech and literature, government, history, philosophy, psychology, sociology, and anthropology. Specific subjects might be collected as required or elective subjects into a "prelaw" program. It is believed, however, that the

student's interest should be the dominant guide. It was chiefly because of the importance of student interest that a survey of recommendations by leaders of the profession to the prospective law student led to the following conclusion: "Next to be observed is a unanimous *opposition to required courses* in prelegal training." Vanderbilt, *Studying Law* (1945) 650. Also, a course may vary as to content and method at different times and places. Again, while it is well to have a central interest and an aim, too early specialization is not desirable, and a student should not think of himself as primarily a "prelaw" student. Moreover, a student may not decide to study law until it is too late to meet specific requirements, or may change his mind and decide not to study law after he has taken subjects in a "prelaw" program in which he had no genuine interest. And many who finish a law course and are admitted to practice, eventually go into business, public office, or other fields in which a broad background is of great value.

For these reasons, no more specific recommendation is made at present than the broad cultural background that is afforded by the program of the College of Arts and Sciences or the cultural and business education of the College of Business Administration or a degree in any other field. There is no "Prelaw Curriculum."

One subject that is of special value to a lawyer not only because of the training in precision and clarity of thinking that it, like mathematics and the natural sciences, gives, but as a "tool," is accounting. Business Administration 5 is therefore listed in the law curriculum, but students are urged to take it before entering the College of Law. Obviously, an ability to think clearly, to read carefully and understandingly, and to speak and write well is essential. These abilities are also tools, indispensable tools. To read understandingly, and critically, requires a stock of information. But information is not as important as skills in reading, speaking, and writing, a capacity for, and a habit of, intensive application and carefulness, and high personal standards of accomplishment. If possible a student should take an Honors course or at least one course in which a competent job of independent writing and research is required. In these ways one will provide himself with a capacity for future development. Law touches life at so many points that one man simply cannot acquire all of the information that he may need. He can, however, equip himself with a capacity for acquiring and valuing special knowledge.

While some courses, such as a natural science with laboratory work, or a language, are valuable for their informational content as well as for their disciplinary value, other courses are in their informational aspects more directly relevant to law—economics,

ethics, government, American and English constitutional history, psychology, cultural anthropology and sociology, and logic for thinking.

Not every subject can be taken. One's interest should be his chief guide. The college requirements insure against too much concentration or too great diffusion. Since the College of Law will have no summer sessions, students may make up deficiencies by attendance in summer session courses in other colleges. Elective law credit not to exceed nine credits (in addition to the recommended accounting course) will be allowed for such courses with the permission of the Dean in the case of a student who has a well-considered plan for specialization (see p. 244).

Typing: Certain exercises in the law school must be typed. An ability to type will be very helpful.

#### **SPECIAL STUDENTS**

A limited number of students with fewer than the academic credits required of candidates for the law degree may be admitted as special students. An applicant for admission as a special student must be at least 23 years of age, and his experience and educational training must have been such as, in the judgment of the Law Faculty, to have specially equipped him for the successful study of law. Application for admission as such a special student must be made to the Director of Admissions of the University well in advance of the beginning of the regular academic year for the purpose of submission to the Dean of the College of Law. Such applications will be considered and acted upon at the first meeting of the Law Faculty after September 1 of each year. Special students are not candidates for the law degree, and upon completion of their law study are not eligible for bar examinations in New Mexico nor in such other states as require graduation from a law school approved by the American Bar Association as a prerequisite for bar admission.

#### **ADMISSION TO ADVANCED STANDING**

A student transferring to the College of Law will not be given credit toward the law degree for credit earned at a school not a member of the Association of American Law schools or provisionally approved by the American Bar Association, except that credit earned within three calendar years of provisional approval by the American Bar Association may be accepted. Time during which a person was in active military service will be disregarded in computing the three-year limitation.

Credit earned at a law school located outside the continental limits of the United States may be accepted, if

- a. The courses taken and completed were substantially equivalent in content and credit to courses given in an approved law school in the United States, and
- b. The school at the time of admission of the student required standards for admission substantially equivalent to those of approved law schools in the United States,

but only to the extent of work successfully completed, and not in excess of

- a. two years if the curriculum was based primarily on Anglo-American common law,
- b. otherwise, not in excess of one year.

A transferring student must present:

1. An official transcript of his prelegal course of study.
2. An official transcript of his law study.
3. A letter from the dean of the law school from which he transfers to the effect that he is presently eligible to re-register in that law school.

Admission will not be granted to a student who has been disqualified on account of low scholarship in another law school unless there is reason to believe that the failure was occasioned by factors other than lack of capacity.

#### **REQUIREMENTS FOR BACHELOR OF LAWS DEGREE**

To secure the degree in law from the University of New Mexico, a candidate for such degree must:

1. Have met fully all prelegal requirements.
2. Have spent at least 3 full academic years in residence study of law in accredited law schools. The work of the third or last year, comprising not less than 24 semester hours of law credit, must be done in residence in this University. Residence study means "that a student has been enrolled in a schedule of work represented by a minimum of 10 class hours a week and has passed a minimum of 9 such class hours, but in case a student fails to pass work equal to 9 class hours a week, he shall not receive 'residence credit' in excess of the ratio that the hours passed bear to nine. A student enrolled in a schedule of less than 10 class hours a week shall receive 'residence credit' in the ratio that the hours passed bear to ten." Both subject credit and residence, or time, credit are required. A student cannot earn additional residence credit by earning excessive subject credit (see 4 below).
3. Have secured by and during such 3 or more years of residence study, not less than 83 semester hours of credit of satisfactory grade

in courses of law study (including "required" courses) with a scholarship index of 1 (a C average) on all work attempted for law credit.

4. In order that a student's final (sixth) semester of regular residence work may be accepted as a part of the required 3 full academic years of residence study of law, such student must register for not less than 10 hours and successfully complete during such semester not less than 9 semester hours of law study, even though a lesser number of hours would enable such student to meet the quantitative requirements for the law degree.

#### COMBINED COURSE OF STUDY LEADING TO TWO DEGREES

A candidate for a bachelor's degree in Arts and Sciences or in Business Administration may offer, in lieu of the last thirty hours at the University of New Mexico, the first full year's work (satisfactorily passed and properly certified) in the College of Law, provided that the requirements stated in the announcements of those colleges are met.

#### FACULTY AND STAFF

Professors Gausewitz (Dean), Hoshour, Seed, Weihofen; Associate Professors Meek, Poldervaart (Librarian); Assistant Professors Bauman, Clark; Lecturer in Law, Smith; Supervisor of Legal Aid, Murphy.

#### LEGAL AID

Seniors in the College of Law serve in the office of the Legal Aid Society of Albuquerque. Schedules are made up in advance, and two students report for Legal Aid work every afternoon. The Legal Aid Society, a Community Chest agency serving the city and county, was incorporated March 16, 1950, and opened its office in the County Courthouse on August 1, 1950. The office is under the supervision of Sue Mitchell Murphy, General Counsel of the Society, and Director of Legal Aid on the College of Law staff.

#### NATHAN BURKAN MEMORIAM COMPETITION

Prizes of \$150.00 and \$50.00 are awarded annually for the two best papers on the subject of Copyright Law submitted at this law school.

#### COURSE OF STUDY

The course of study will be determined by the faculty and may be changed at any time. Special lectures and services such as legal aid are not listed as courses. Brief and Argument, Office Practice, Legal Writing, and Constitutional Law are "required," and all first-year subjects must be taken. All other subjects are elective. The Faculty may require any course to be retaken if failed. All students may be required to attend special meetings called and are required

to do special exercises assigned including special examinations and such services as legal aid, even though no credit be given. Casebooks and other study materials listed are subject to change.

*Bar Examination Review.* No instruction designed as a review course for bar examinations is offered.

#### ALL YEARS

**ELECTIVES IN OTHER COLLEGES.** Business Administration 5 (Accounting) and not to exceed 9 credits in other courses in other colleges of this University or other fully accredited institutions of higher learning may be taken for elective law credit if permission of the Dean is secured before any such course is taken and the student has a well-considered plan for specialization, or other valid reason. Grades secured in such courses will not be considered on questions of probation or suspension or scholastic honors.

#### CURRICULUM

First Semester		FIRST YEAR	Second Semester	
103 Contracts	3	104 Contracts	3	
105 Personal Property	2	117 Estates and Covenants	3	
107 Torts	3	108 Torts	2	
109 Civil Procedure I	3	121 Equity	3	
111 Legal Bibliography and Method [Legal Bibliography]	1	114 Legislation I	1	
101 Criminal Law	3	115 Agency and Partnership	3	
	15		15	
SECOND YEAR				
119 Servitudes and Conveyancing	4	131 Trusts	3	
125 Corporations	4	112 Brief and Argument (Required)	1	
141 Legal Writing (Required)	3	135 Administrative Law	3	
	—	123 Constitutional Law (Required)	4	
	11	159 Evidence	4	
			15	
THIRD YEAR				
157 Legislation II	1	129 Office Practice (Required)	1	
167 Taxation	4	173 Conflict of Laws	3	
155 Unsecured Creditors' Rights	3	153 Security	3	
143 Law and Society	2	144 Law and Society	3	
151 Civil Procedure II	2	152 Civil Procedure II	2	
127 Family Law (Not offered 1951-52)	3		—	
	15		12	

Total 80 credits; 83 credits required for graduation.

#### ELECTIVES

The above are suggested minimum programs. The first-year program permits no electives. All second- and third-year courses are elective unless marked "Required." One elective may be substituted for another, but electives are intended primarily for those who desire

to take additional work. The third-year class and examination schedules will be so arranged that seniors can take Negotiable Instruments and Wills the first semester, and Trusts and Administrative Law the second semester of the senior year. Except for these courses, students should take courses during the year in which they are offered.

## SECOND-YEAR ELECTIVES

133 Wills and Administration of Estates	2	134 Probate Practice	1
145 Negotiable Instruments	3	122 Restitution	2
		165 Sales	2
	<u>5</u>		<u>5</u>

## THIRD-YEAR ELECTIVES

163 Water Law	2	139 Labor Law	3
		136 Case Studies in Admin. Proc.	2
		171 Law of Oil and Gas	2
			<u>7</u>

## SECOND- OR THIRD-YEAR ELECTIVE

175 Patent Law	2
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## DEPARTMENT OF INSTRUCTION

Symbols used in course descriptions: ( )—Semester hours' credit; [ ]—former course number or title.

A schedule of course offerings, including hours of meeting, is issued at the opening of each session. The University reserves the right to cancel any listed course or to make a substitution in instructor's when necessary.

## FIRST YEAR

## 101. CRIMINAL LAW. (3, -)

Michael & Wechsler, *Criminal Law and Its Administration, Cases, Statutes and Commentaries* (1940) and supplementary materials. The criminal law viewed as a means for the prevention of crime, the control of criminals, and the protection of individual liberty; the concepts used for the definition of criminal behavior and for prescribing the treatment of criminals; and judicial and administrative organization and procedures, all with particular attention to homicide, theft, harms to the person, potential harms, and criminal responsibility. Gausewitz

## 103-104. CONTRACTS. (3, 3)

Williston, *Cases on Contracts* (4th ed.). The basic principles of the law of contracts. Mutual assent; consideration; the rights of third parties; the Statute of Frauds (relating to agreements not to be performed within a year); the Parol Evidence rule; conditions (express and implied); impossibility; illegality; discharge of contracts. Hoshour

## 105. PERSONAL PROPERTY. (2, -)

Aigler, Bigelow & Powell, *Cases on Property, Vol. 1*. Introduction to the legal concept of property rights; possession and acquisition of ownership, finding, bailments, liens, accession and confusion, gift and fixtures. Clark

## 107-108. TORTS. (3, 2)

Schulman and James, *Cases on Torts*. A study of the different bases of tort liability, including intentional torts, negligence, and absolute

liability. During the second semester, the course includes misrepresentation, defamation, and the liability of owners and occupiers of land, manufacturers and vendors of chattels, and owners of motor vehicles. Bauman

109. CIVIL PROCEDURE I. (3, -)

Michael, *Elements of Legal Controversy*. An introduction to the study of procedural law, particularly pleading, including a study of the code cause of action, the complaint, and negative and affirmative defenses. Bauman

111. LEGAL BIBLIOGRAPHY AND METHOD. [Legal Bibliography] (1, -)

Beardsley & Orman, *Legal Bibliography and the Use of Law Books* (2nd ed.) 1947. A course in the use of law books, with emphasis upon the important classes of law books, actual use of the more important sets, and methods of search, for the purpose of developing facility in legal research. Poldervaart

114. LEGISLATION I. (-, 1)

Read & MacDonald, *Cases and Other Materials on Legislation* (1948). Introduction to the problems of legislative bodies, forms of legislation, and the construction and interpretation of statutes. Poldervaart

115. AGENCY AND PARTNERSHIP. (-, 3)

Mathews, *Cases and Materials on Agency and Partnership* (1940). Principal and agent, master and servant, and partnerships, with some attention to sub-partnerships, limited partnerships, joint stock companies, business trusts, and cooperatives. Meek

117. ESTATES AND COVENANTS. (-, 3)

Aigler, Bigelow & Powell, *Cases on Property*. Introduction to the law of real property, estates, natural rights, profits, licenses, easements, covenants, rents, waste. Seed

121. EQUITY. (-, 3)

Cook's *Cases on Equity* (4th ed.). A study of the jurisdiction, powers, and procedures of the equity court, injunctive relief against torts, and specific performance of contracts. Bauman

## SECOND YEAR

112. BRIEF AND ARGUMENT. (-, 1)

An introduction to appellate practice, preparation of briefs on appeal, and oral argument. (Required) Poldervaart

119. SERVITUDES & CONVEYANCING. (4, -)

Aigler, Bigelow & Powell, *Cases on Property*. Adverse possession, prescription, execution and delivery of deeds, boundaries, estoppel by deed, covenants for title, conveyances at common law, under the Statute of Uses, and under modern statutes. Seed

122. RESTITUTION. (-, 2)

Woodruff, *Cases on Quasi-Contract* (3rd ed.). Quasi-contractual remedies (both legal and equitable) available because of duress, fraud, innocent misrepresentation, mistake, illegality, and economic compulsion in the formation and discharge of contracts and other transactions. Seed

123. CONSTITUTIONAL LAW. (-, 4)

[123-124] Dodd, *Cases on Constitutional Law* (shorter selection) with Supp. The judicial interpretation and enforcement of written constitutions; separation and delegation of powers; the federal system; powers of the national government; the bill of rights, including due process and equal protection; retroactive laws. (Required) Weihofen

125. CORPORATIONS. (4, -)

Ballantine and Lattin, *Cases and Materials on the Law of Corporations*. The principles of the law relating to business corporations; corporations as compared with partnerships, joint stock companies, business trusts; formation of corporations; separate corporate capacity in



- entity; criminal and tort liability of corporations; directors and management; ultra vires; rights and powers of shareholders; issue, underwriting, and marketing of securities; stock structure and classes of shares; capital requirements and dividends; purchase by a corporation of its own shares; liability of shareholders, promoters, and directors in connection with the issue of and payment for shares; transfer of shares; fundamental changes in the corporate structure; shareholders' actions. Hoshour
131. TRUSTS. (-, 3)  
Bogert, *Cases on Trusts* (2nd ed.). A study of the nature and creation of express trusts for private persons, charitable trusts and resulting and constructive trusts; the relationship between trustee and beneficiary, the relationship between trustee and third persons, and problems of trust administration. Clark
133. WILLS AND ADMINISTRATION OF ESTATES. (2, -)  
Mechem & Atkinson, *Cases and Materials on Wills and Administration* (3rd ed.) 1947. Study of the law of descent and distribution and of the making, interpretation, and revocation of wills. Poldervaart
134. PROBATE PRACTICE. (-, 1)  
Poldervaart, *New Mexico Probate Practice and Forms*. Probate and administration of estates, with particular emphasis upon problems in probate of wills and administration of estates in New Mexico. Poldervaart
135. ADMINISTRATIVE LAW. (-, 3)  
Gellhorn, *Cases on Administrative Law*. The system of legal control, exercised by the law administering agencies other than the courts; definition and forms of administrative agencies; their functions; their constitutional limitations; their statutory powers and limitations; administrative procedures; agency hearings and decisions; judicial control of administrative agencies. Hoshour
141. LEGAL WRITING. (3, -)  
Exercises and drills in legal writing and methods to be done independently by each student. (Required) Weihofen
145. NEGOTIABLE INSTRUMENTS. (3, -)  
Britton, *Cases on Bills and Notes*. A study of the Negotiable Instruments Law and cases on the formal requisites of negotiable bills and notes, execution and transfer of negotiable paper and obligations arising therefrom; holder in due course, equities; defenses, discharge. Meek
159. EVIDENCE. (-, 4)  
McCormick, *Cases on Evidence* (2nd ed.) 1948. The nature of the trial of an issue of fact, of evidence, and of the legal rules of evidence; a critical study of the legal rules compared with the proposed Model Code of Evidence of the American Law Institute; the study of cases to ascertain the issues of each case under the substantive law and the law of pleading, to evaluate the evidence offered on such issues, and to understand the effect of legal rules; a particular study of judicial notice, burden of proof and presumptions, functions of the judge and jury, and of testimonial, circumstantial, and real evidence. Gausewitz
165. SALES. (-, 2)  
Bogert, *Cases on Sales*. Transfers of property in goods and documents of title. Meek

## THIRD YEAR

127. FAMILY LAW AND COMMUNITY PROPERTY. (3, -)  
Madden & Compton, *Cases on Domestic Relations* (1940). Marriage, separation and divorce; solidarity and economic relations as between husband and wife; solidarity and economic relations as between parent and child. (Not offered 1951-52) Clark

## 129. OFFICE PRACTICE. (-, 1)

Law office management, legal work handled from the attorney's office, practical exercises and lectures based on New Mexico practice, drafting of legal papers and examination of abstracts. (Required)

Poldervaart

## 136. CASE STUDIES IN ADMINISTRATIVE PROCEEDINGS. (-, 2)

The detailed study of one or more actual administrative proceedings, including an analysis and review of the record and briefs, both before the administrative agency or agencies involved and on appeal to the courts if an appeal was taken; a consideration of the business and regulatory problems involved; and a review of such business adjustments as may have been required as a result of the final decision. The course will include a study of a proceeding originally brought by a Federal Commission involving the accounting for accruals under an industrial pension plan in a very large industry, including the appeal of the industry from the Commission decision to the Federal Courts; also an arbitration proceeding involving the seniority provisions of a contract between a large union and the management of a plant having approximately 2500 employees; also, if time permits, a New Mexico commission proceeding to be decided upon.

Hoshour

## 139. LABOR LAW. (3, -)

Cox, *Cases on Labor Law*. Historical introduction; the negotiation and administration of the collective bargaining agreement; the establishment of the collective bargaining relationship; recourse to economic weapons; the individual and the union.

Weihofen

## 143-144. LAW AND SOCIETY. (2, 3)

Stone and Simpson, *Materials on Law and Society*. The evolution of legal institutions, with the interpolation of materials and cases, mostly from Public Utility Law and Trade Regulation Law, on government regulation of business.

Weihofen

## 151-152. CIVIL PROCEDURE II. (2, 2)

Hays, *Cases and Materials on Civil Procedure*. A study of code procedure, including the commencement of an action, parties and joinder of actions, pleading, provisional remedies, discovery, pretrial hearing, trial practice, appellate review, judgments, and extraordinary remedies.

Bauman

## 153. SECURITY. (-, 3)

Hanna, *Cases on Security*. Suretyship, guaranty, chattel and real estate mortgages, pledges, conditional sales contracts.

Seed

## 155. UNSECURED CREDITOR'S RIGHTS. (3, -)

Hanna & MacLachlan, *Cases on Creditor's Rights*, (4th ed.) Vol. 1. An examination of the principal remedies of unsecured creditors including enforcement of judgments, attachment and garnishment, fraudulent conveyances, general assignments, creditors, agreements, and bankruptcy; acts of bankruptcy, problems of the trustee, provable claims, exemption and discharge.

Clark

## 157. LEGISLATION II. (1, -)

Problems in legislative drafting, with practical exercises in drafting state and federal bills and resolutions.

Poldervaart

## 163. WATER LAW. (2, -)

Martz, *Selected Materials on Law of Natural Resources*; and other selected materials. Underground and surface waters, interstate streams, irrigation, and matters of particular interest in New Mexico.

Seed

## 167. TAXATION. (4, -)

Bruton, *Cases on Taxation* (1948); Prentice-Hall, *Students Tax Law Service and Federal Tax Handbook*. Income, death, gift and other excise taxes, with emphasis on Federal taxes.

Meek

## 171. LAW OF OIL AND GAS. (-, 2)

Kulp, *Cases on Oil and Gas* (3rd ed.). Nature of the property interests in oil and gas; legal interests created by oil and gas leases; validity

of leases; the habendum clause; the drilling and rental clauses; assignments of the interest of the lessor and lessee; rents and royalties. Seed

173. CONFLICT OF LAWS. (-, 3)

Cheatham, Dowling, Goodrich & Griswold, *Cases on Conflict of Laws*. A study of the concepts of domicile and jurisdiction of courts; the effect of foreign judgments; and the law applied to torts, contracts, and the administration of estates. Meek

175. PATENT LAW. (2, -)

Mimeographed materials to be supplied. The substantive law of patents; history, constitutional basis, congressional authority, invention, prerequisites of application, interferences, reissues, disclaimers, and patent as property. To be given in one two-hour session once a week. Smith

## THE GRADUATE SCHOOL

**G**RADUATE WORK leading to the master's degree is offered in the following fields: Anthropology, Art, Art Education, Biology, Business Administration, Chemical Engineering, Chemistry, Civil Engineering, Economics, Electrical Engineering, Elementary Education, English, Geology, Government and Citizenship, History, Inter-American Affairs, Mathematics, Mechanical Engineering, Modern Languages and Literatures, Music, Philosophy, Physical Education, Physics, Psychology, School Administration, Secondary Education, Sociology and Speech.

The degree of Doctor of Philosophy is offered in American Studies, Anthropology, Biology, Chemistry, English, History, Physics, and Spanish.

Candidates should consult the head of the department concerned and the Dean of the Graduate School before registering.

### ADMISSION

Graduates of any recognized college or university may apply for admission to the Graduate School. All communications regarding admission, as well as all inquiries concerning graduate study, should be addressed to the Dean of the Graduate School.

A formal application is required of all students, including graduates of the University of New Mexico, who seek admission to the Graduate School. Application blanks and the *Graduate Bulletin* may be obtained by writing the Dean of the Graduate School. Applicants from other institutions must have two transcripts of all undergraduate and graduate work sent directly to the Graduate Office from each institution previously attended. *Transcripts in the possession of students will not be accepted for entrance purposes. In order to be assured of consideration for admission, students must have their applications, transcripts, and the \$5.00 evaluation fee, if applicable,\* on file in the Graduate Office at least one month in advance of the beginning date of the session in which they plan to enroll. Failure to observe this requirement may result in indefinite delay in obtaining permission to register.* No student is assured of admission until he has received an official certificate of admission from the Director of Admissions.

Any student may be refused admission if his previous scholastic record indicates inability to pursue advanced work satisfactorily. The Graduate School also reserves the right to refuse admission to any student for other than scholastic reasons.

\* Not required of students under G. I. Bill 346 or Public Law 16, or of students with degrees from the University of New Mexico, or of students applying for Special Graduate status only.

## EXTENSION AND CORRESPONDENCE COURSES

The University accepts no graduate work by extension or correspondence from other institutions.

## SCHOLARSHIPS, FELLOWSHIPS, AND ASSISTANTSHIPS

A number of scholarships, fellowships, and assistantships are available for graduate students. Application blanks may be obtained from the Office of the Graduate School.

## INFORMATION

For further information regarding advanced work and the conditions under which higher degrees may be obtained, consult the *Graduate Bulletin* or the Graduate Office.

## NAVAL RESERVE OFFICERS' TRAINING CORPS

**T**HIS DEPARTMENT is administered by officers of the United States Navy and Marine Corps under rules promulgated by the Navy Department.

The mission of the NROTC is to provide, by a permanent system of training and instruction in essential naval subjects at the University of New Mexico, a source from which qualified officers may be obtained for the Navy and Marine Corps, and for the Naval Reserve and Marine Corps Reserve.

### DEPARTMENT OF NAVAL SCIENCE

Captain Granum, U.S.N. (Head), Professor; Commander Greene, U.S.N., Associate Professor; Lieutenant Commander Stanczyk, U.S.N., Assistant Professor; Lieutenant Hunting, U.S.N., Assistant Professor; Lieutenant White, U.S.N., Assistant Professor; Lieutenant Colonel Van Evera, U.S.M.C., Assistant Professor.

Students enrolled in the NROTC Unit may be enrolled in most colleges in the University. Completion of the Naval Science requirements will constitute completion of a minor study in the College of Arts and Sciences.

First Semester		FRESHMAN YEAR		Second Semester	
NS11. Naval Orientation	3	NS12. Naval Orientation	3		
		SOPHOMORE YEAR			
NS51. Naval Weapons	3	NS52. Naval Weapons	3		
		JUNIOR YEAR			
NS101. Navigation	✓3	NS102. Navigation	3	✓	
		SENIOR YEAR			
NS151. Naval Machinery & Diesel Engines	3	NS152. Ship Stability, Naval Justice, & Leadership	3		

Marine Corps subjects, given below, are substituted by Marine Corps applicants during junior and senior years.

		JUNIOR YEAR			
NS101. Navigation	✓3	NS102M. History of the Art of War	3		
		SENIOR YEAR			
NS151M. American Military History & Policy	3	NS152M. Amphibious Warfare	3		

NROTC students are required to attend 2 hours of Naval Science drill and laboratory per week.

## AIR FORCE RESERVE OFFICERS' TRAINING CORPS

**T**HIS DEPARTMENT is administered by officers of the United States Air Force under rules promulgated by the Department of the Air Force and the University of New Mexico.

The purpose and mission of the Air Force ROTC is to select and train students who possess the character, intelligence, desire, and sense of duty to become Air Force officers and responsible citizens.

### DEPARTMENT OF AIR SCIENCE AND TACTICS

John L. Parker, Colonel, U.S.A.F., Professor of Air Science & Tactics; Edwin B. Frazier, Major, U.S.A.F., Assistant Professor of Air Science & Tactics; Frank S. Blair, Capt., U.S.A.F., Assistant Professor of Air Science & Tactics; Willis James Michael, Capt., U.S.A.F., Assistant Professor of Air Science and Tactics; Richard F. Butterfield, M/Sgt., U.S.A.F., Administrative Supervisor and Air Force ROTC Instructor; Marion Raymond Franklin, T/Sgt., U.S.A.F., Air Force Instructor; Charles F. Knott, M/Sgt., U.S.A.F., Air Force ROTC Instructor; Warren F. Kemp, M/Sgt., U.S.A.F., Air Force ROTC Instructor.

#### FRESHMAN YEAR

First Semester	Second Semester
Air Science 11 General Air Subjects 2	Air Science 12 General Air Subjects 2

#### SOPHOMORE YEAR

Air Science 51 Intro. to Aeronautics 2	Air Science 52 Intro. to Aeronautics 2
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#### JUNIOR YEAR

Air Science 111 Specialized Training in Air Force Communications 4	Air Science 112 Air Operations and Logistics 4
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#### SENIOR YEAR

Air Science 151 Applied Fields of Officer Orientation 4	Air Science 152 Specialized Training in Air Force Communications 4
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All Air Force ROTC Cadets are required to attend 2 hours of Leadership, Drill, and Exercise of Command laboratory per week.

(For further information refer to the section on Military Training under General Information, p. 35, in this Bulletin.)

## **OTHER DIVISIONS OF THE UNIVERSITY**

### **SUMMER SESSION**

A summer-session of eight weeks is conducted each year on the campus. (For dates, see the Calendar.) Every attempt is made to meet specialized needs of the particular student group of the session. Emphasis is placed on advanced and graduate work. A special program is offered for teachers and school administrators. The summer climate is warm but delightful; nights are cool. The residential halls are regularly operated during the Summer Session. A separate bulletin on the Summer Session may be obtained by addressing the Director of the Summer Session, or the Director of Admissions.

### **FIELD SESSIONS**

Field sessions are usually conducted each summer by the Departments of Anthropology, Art, and Engineering. Work in Biology is sometimes offered in the field. (For dates, see the Calendar.) Separate bulletins are published on the field sessions, and may be obtained by addressing the Head of the department concerned.

### **EXTENSION DIVISION**

The Division of Extension and Adult Education of the University is a member of the National University Extension Association. A special extension bulletin is issued each year, giving regulations and information concerning courses and services rendered by the Extension Division.

For a copy of the extension bulletin and further information, address the Director of Extension, Division of Extension and Adult Education, University of New Mexico, Albuquerque.



## DEGREES AND AWARDS

### DEGREES CONFERRED

June Fifth, Nineteen Hundred Fifty

#### COLLEGE OF ARTS AND SCIENCES

##### BACHELOR OF ARTS

NAME:	MAJOR:	MINOR
Maria Celina Abeyta:	History;	Spanish
Neil Albert Addington:	Journalism;	English
Tony Jose Aguilar:	Chemistry;	Biology
Emanuel Alalouf:	Inter-American Affairs	
Bette Lou Albert:	Sociology;	Psychology
Robert Donald Albright:	Government;	History
James McKenzie Alexander III:	Anthropology;	Biology
Keith W. Algier:	Inter-American Affairs	
Dixie Lou Anderson:	Journalism;	English, Psychology
Dorothy Jean Anderson:	Psychology;	French
Betty Braxton Andrews:	History;	Anthropology
Frank William Andrews, Jr.:	Government;	History
John Archibeque:	Inter-American Affairs	
Margaret E. Arnot:	English, History;	---
William Charles Arntz:	History;	English
Charles M. Attmore, Jr.:	Geology;	Spanish
Leonard David Aulik:	Chemistry;	Mathematics
Urban Baca:	Inter-American Affairs	
Paul Humberto Baez:	History, English;	---
Joseph C. Bartholow:	Psychology;	English
Dorothy Isabelle Batey:	Anthropology;	Spanish
Richard Mayne Bayley:	Government;	History
William S. Beasley:	Psychology;	Sociology
B. Michael Beeler:	Geology;	History
Gene Leslie Benjamin:	History;	Government
Isaletta E. Bennett:	English;	German
Betty Ruth Bentley:	Journalism;	History
* William Rowland Blanc:	Government;	Spanish, Naval Science
Helen Patricia Blatter:	Government;	History
* Jack Jay Boies:	English;	Psychology
* Ira Vance Boldt, Jr.:	Mathematics;	Business Administration
†* Jeanne Bornstein:	Sociology, Psychology;	---
Albert N. Bove:	Geology;	English
* Gene Boyd:	Spanish;	Portuguese
George Edgar Brayton:	Geology;	English
Martha Randall Brown:	Psychology;	Sociology, Home Economics
* David Martin Brugge:	Anthropology;	Biology
Helen John Burson:	History;	Government
William Peter Burt:	Government;	Business Administration
Billy R. Busby:	Government;	History
†* Inez S. Bushner:	Government;	Spanish
Katherine M. Bussey:	Psychology;	English
E. Carter Butler:	Government;	Biology
Ernest Cafege:	Social Work;	Psychology
Thomas V. Calkins:	English;	Psychology
Mary Margaret Callaway:	Anthropology;	Biology
Carol Campbell:	Sociology;	English
Richard S. Carlton:	Journalism;	Business Administration

\* With Distinction

† With Honors

- Robert E. Carpenter: Anthropology; English  
 Hubert D. Caruthers: Social Work  
 Isidore M. Casaus: Geology; Spanish  
 Eugene J. Casella: Inter-American Affairs  
 Beverly Jean Casler: Inter-American Affairs  
 Francis E. Cassidy: Anthropology; History  
 \* Michael A. Charles: History; English  
 Richard C. Civerolo: Economics; Government  
 Allen Belden Clark, Jr.: History; English  
 †\* L. T. Cole: English; History  
 James William Corson: Anthropology; Biology  
 Clyde Wayne Cowan: Inter-American Affairs; ———  
 Marianne Crandall: History; Psychology  
 James T. Crow III: Geology; Anthropology  
 Joan Reilly Culver: Psychology; English  
 Charles R. Darbyshire: History; Government; ———  
 Marion Dargan, Jr.: Business Administration; Naval Science  
 Charles F. Davila: Inter-American Affairs; ———  
 Arthur M. Diaz: Chemistry; Biology  
 Martha Brown Dixon: History; Library Science  
 \* Donald C. Dorn: Psychology, Business Administration; ———  
 Ruth Berofsky Doyle: Inter-American Affairs; ———  
 Shirley Driggs: Psychology; Sociology  
 †\* Benjamin Dillard Duncan: English; Psychology  
 Paul M. Elizondo: Government; Spanish  
 Mary Alice Elkin: Speech; Journalism  
 Martin Feldstein: Economics; History; ———  
 Arthur Louis Ferguson: Spanish; English  
 Bonifacio D. Fernandez: Spanish; Government  
 Stanley Finley: Psychology; Sociology  
 Charles Newton Ford, Jr.: Government; History  
 \* Donald R. Fowler: Government; Economics  
 \* Arva M. Frazier: Psychology; Business Administration, English  
 Barbara Jeanne Gallagher: Inter-American Affairs; ———  
 Ester Gallegos y Chavez: Spanish; English  
 Joe I. A. Gallegos: Inter-American Affairs; ———  
 James Charles Garner: Anthropology; History  
 Florentino Garza: Government; History; ———  
 John P. Gavahan: Anthropology; Biology  
 Marguerite A. Gianettino: Journalism; Economics  
 Bernard Francis Gillespie, Jr.: Psychology; Speech  
 Edwin V. Glaser: Journalism; History  
 Lila M. Glass: French; History; German, English  
 Elizabeth A. Goehl: Government; Psychology  
 Theodore R. Gourd: Economics; Government  
 Robert E. Granick: English; Government; Psychology  
 Charlotte Patricia Grannis: Inter-American Affairs; ———  
 Peter S. Griggs: Economics; English  
 Charles C. Groffman: Anthropology; Biology  
 Peter Elwell Haen: History; Government  
 Hugh John Haferkamp: Economics; Biology  
 David Hagues: English; History  
 Martin Hardwick Hall: History; Spanish  
 Lyle M. Hansen: Government; English  
 Mrs. Gregory K. Hawk: Anthropology; History  
 Thomas Bernard Heaphy: English; Biology  
 Rupert L. Heinsch: Psychology; Business Administration  
 Eugene Lester Henriouille: Chemistry; History  
 A. F. Hewitt, Jr.: Geology; Anthropology

\* With Distinction

† With Honors

- Betty Joann Hillard: Journalism; English  
 Ernest M. Holcomb: Spanish; History  
 Harley D. Hoskins: Economics; History  
 John Paul Huber: Chemistry; History; ———  
 William G. Hudgins: Anthropology; Geology  
 Ramon Huerta: Inter-American Affairs; ———  
 Peggyann Hutchinson: Speech; Journalism  
 Jeanne Marie Illman: History; English  
 Richard Wallace Inglis: Sociology; Psychology  
 Robert Myers Inman: Psychology; English  
 Marilyn Ann Izzard: Journalism; Speech  
 Margaret E. Jillson: Government; English, French  
 Florenceruth Jones: Economics; English  
 Joseph Akin Kaye: Social Work; ———  
 Don McCleary Kendrick: Psychology; English  
 Dalton Kincheloe: Geology; Business Administration  
 Lowry G. Kinzer: Economics; Business Administration  
 Charles S. Kleinhein: English; Business Administration  
 Mike M. Kotar: Government; Economics  
 Eleanor Kuper: Government; German, Psychology  
 Ernest J. Lang: Chemistry; Mathematics  
 Lawrence Albert Lare: Sociology; Psychology  
 George A. Lasky: Chemistry; Economics  
 Carol Joan Lee: Psychology; History, Sociology  
 Seymour C. Lefton: Psychology; Sociology  
 George Sterling Leiby: English; History  
 Valeri Keers Leue: Anthropology; English  
 Jane Gardner Lillibridge: Anthropology; Spanish  
 John A. Lloyd, Jr.: History; Mathematics  
 Robert E. Lofgren: Social Work; ———  
 Johnny Edward Love: Government; Economics  
 \* Vera Marie Lubinetsky: Psychology; English  
 Ismael Joseph Lujan: Government; Spanish  
 Patricia Marion Lyons: Spanish; Portuguese  
 F. Jean McCann: Psychology; Sociology  
 Virginia M. McGiboney: English; Philosophy  
 Donald P. McKee: Journalism; Speech  
 Rafael Maestas: Inter-American Affairs; ———  
 \* John D. Mafit: History; German  
 Jack Malm: Journalism; French  
 William F. Manlove: Government; English  
 Rose Ellen Martin: Economics; English  
 Joe R. Martinez: Government; English  
 Charles O. Matesich: Geology; ———  
 Shirley A. Maurer: English; French  
 Marilyn Merchant: Journalism; History  
 Consuelo Eloise Meyer: Sociology; History  
 Marilyn Miller: Journalism; English  
 Suzanne Miller: Psychology; Spanish  
 Elizabeth Mohlenrich: History; Anthropology  
 Stephen J. Molnar: Inter-American Affairs; ———  
 Francis Jeremiah Monteverde: Government; English  
 John A. Monteverde: Geology; Government  
 Phyllis May Narmore: Psychology; Biology  
 Richard H. Ness: History; English  
 Phyllis Mae Nordin: Inter-American Affairs; ———  
 Ethel D. Nurge: Anthropology; English  
 Alan Odendahl: Economics; History  
 Marjorie Ann Odle: Psychology; Library Science  
 Chester G. Orem: Geology; Anthropology

\* With Distinction

- Guy Howard Owensby: Psychology; Sociology  
 Luis Parga: Spanish; Portuguese, English  
 Linda Annette Parrish: Psychology; Sociology  
 Frederick Rawlings Peck: Anthropology; History  
 William Peisker: Inter-American Affairs; —  
 Roberto Perez-Perez: Social Work; Psychology, History  
 Karyl M. Plaut: English, Journalism; —  
 Barbara Jane Powell: Psychology; Home Economics  
 Edgar Lay Powell: History; English  
 Leonard A. Prehn: Inter-American Affairs; —  
 Norberto Quintana: Inter-American Affairs; —  
 Jose Ramirez: Spanish; French  
 Suzanne Myra Ravel: Social Work; —  
 Jane Reese: Psychology; Sociology  
 Francis Warren Rempel: Psychology; Philosophy  
 Robert G. Reyes: Economics; Psychology  
 Eloise Richards: Anthropology; English  
 William H. Richardson: Journalism, English; —  
 Agustin C. Rodriguez: Inter-American Affairs; —  
 Glenn L. Ross, Jr.: Journalism; English  
 Georgia W. Rothgeb: Psychology; Biology  
 Jean Marie Rowley: Sociology; Psychology  
 Thomas D. Roybal: Inter-American Affairs; —  
 James C. Salsberry: English; Business Administration  
 Lorenzo B. Sanchez: Inter-American Affairs; —  
 James Joseph Santoro: Journalism; Government  
 Robert Arthur Savage: History; Economics  
 Dean R. Schmidt: Economics; Government  
 Donald Buckler Scobie: Anthropology; English  
 Betty Ann Sanders Sills: History; English  
 †\* Mary Silverman: Sociology, Psychology; —  
 † Morris Leon Simon: Inter-American Affairs; —  
 Nicholas Douglas Simon: Government; English  
 William Robert Simpson: Economics; Engineering  
 Daniel A. Skillin: Psychology; English  
 Thomas Vincent Sleeth: English; French  
 F. William Sohle: Inter-American Affairs; —  
 Paul E. Soister: Geology; English  
 Marjorie June Steele: English; History  
 George F. Stevens: Economics; History  
 Harry Edward Stowers, Jr.: Government; Economics  
 Antonio C. Suazo: Inter-American Affairs; —  
 Arthur Sugerman: Inter-American Affairs; —  
 Ruth Jeanne Suran: Journalism; English  
 Donald E. Swanson: History; English  
 Playford Vernon Thorson II: History; Philosophy  
 Pedro S. Torres: Inter-American Affairs; —  
 Peter J. Uihlein: Government; History, Economics  
 Franklin D. Van Wart: Anthropology; Art  
 Mary Yager Vcella: Psychology; Spanish  
 Rose Vocale: Inter-American Affairs; —  
 Alice Burdette von Maur: English; Spanish  
 Dana Patricia Walker: Spanish, Government; —  
 Leibert Benet Wallerstein: Economics, Sociology; —  
 Charles J. Ward III: Speech; English  
 Harold E. Wefald: Philosophy; Mathematics  
 Robert B. White: Anthropology, History; —  
 John Kneen Wichelns: English; Journalism  
 Ray H. Wilmore: Inter-American Affairs; —

† With Honors

\* With Distinction

Hilary Wittulski: History; English  
 John Alexander Simpson Wood: Sociology; History  
 Barbara Eleanor Wykes: English; French  
 Michael Lee Yaffee: Chemistry; Psychology  
 Thomas E. Zudick: Government; Economics

## BACHELOR OF SCIENCE

- Scott Adlér: Biology; Psychology; Chemistry  
 Elmer H. Baltz, Jr.: Geology; Biology  
 John Beeler III: Biology; Chemistry  
 Donald H. Blair: Geology; Engineering  
 Robert L. Borton: Geology; Biology  
 Stephen Francis Bratina: Geology; Chemistry  
 H. C. Cox: Biology; Chemistry  
 Robert A. Crawford: Geology; Engineering  
 George Harvey Dixon: Geology; Mathematics  
 Wallace Lyle Drumhiller: Chemistry; Mathematics  
 \* Dorothy A. Durick: Psychology; Biology  
 Walter Dzugan: Psychology; Biology  
 Margaret E. Emmel: Biology; Psychology  
 William J. Felter: Chemistry; Mathematics  
 Paul Henry Frischkorn: Psychology; Biology  
 John J. Gill: Geology; Engineering  
 \* David B. Givens: Geology; Chemistry  
 Jack Edward Goldstein: Biology; Psychology  
 Floyd B. Graham: Geology; Chemistry  
 Richard K. Granath: Geology; Mathematics  
 John Francis Haben: Physics; Mathematics  
 James Hastings: Biology; Chemistry  
 James Lawrence Hatchett: Chemistry; Mathematics  
 Clarence Rex Hewitt: Geology; Biology  
 Patsyjane Hutchinson: Dietetics; Psychology  
 Robert Earl Iden: Biology; Psychology  
 Carmina Jiminez: Psychology; Biology  
 Alton Allen Jones: Biology; Chemistry  
 Oscar Robert Lamsens, Jr.: Geology; Engineering  
 Robert J. Leonard: Geology; Engineering  
 Harold Irving Levine: Physics; Mathematics; ———  
 Edward Lawrence Liguori: Psychology; Biology  
 Shephard Liverant: Psychology; Biology  
 Patricia Darden Lloyd: Biology; Psychology  
 Robert Leslie Love: Biology; Chemistry  
 Reid I. Martin: Psychology; Biology  
 James Ralph Matthews: Biology; Philosophy  
 Charles Henry Maxwell: Geology; Biology  
 Hurald I. Miller: Geology; Mathematics  
 Steve Miller: Chemistry; Biology  
 \* Don Woodward Mitchell: Geology; Engineering  
 Thomas S. Mobley II: Biology; German  
 Mildred Loraine Moutray: Biology; Psychology  
 William O. Nobles: Physics; Mathematics  
 \* David Daniel Nolting: Chemistry; Biology  
 Lawrence E. Olsen: Biology; Psychology  
 Henry George Olkman, Jr.: Physics; Mathematics  
 \* John Lee Pack: Physics; Mathematics  
 Walter S. Pajalich: Geology; Chemistry  
 Michael Pasnak: Physics; Mathematics  
 Adrian Pelzner: Geology; Engineering  
 Willis Wendell Pickel: Biology; Chemistry  
 Fred M. Pivacek, Jr.: Physics; Mathematics  
 Keen A. Rafferty, Jr.: Biology; Chemistry; ———  
 \* With Distinction

- Norman William Riebe: Mathematics; Physics  
 William John Roberts: Biology; History  
 Harold George Scott: Biology; Chemistry  
 \* William A. Scott: Psychology; Mathematics  
 John William Scruggs: Geology; Biology  
 Duane L. Sewell: Biology; History  
 Raymond Shapira: Chemistry; Mathematics  
 Edward William Shepherd: Biology; History  
 John Harrison Simons: Geology; Mathematics  
 John Wesley Stebbins: Biology; Chemistry  
 \* John Harris Stewart: Geology; Anthropology, Mathematics  
 Samuel Robert Stubbs, Jr.: Biology; Chemistry  
 Ernest Szabo: Geology; Engineering  
 Charles G. Thomas: Mathematics; Economics  
 \* James E. Thompson: Mathematics; Physics  
 Robert James Throckmorton: Biology; Geology  
 Clement Frederick Toft: Psychology; Biology  
 Arthur C. Toncre: Chemistry; Spanish  
 George Utermohle: Geology; Engineering  
 Frank H. Viquesney, Jr.: Biology; Business Administration  
 Otto Mattice Vrooman: Geology; Engineering  
 Max Wagner: Biology; Chemistry  
 Rex Wagner: Biology; Chemistry  
 James E. Weir, Jr.: Geology; Engineering  
 Daniel Westreich: Psychology; Chemistry  
 John F. Weyer: Geology; Engineering  
 Paul Gene White: Biology; Naval Science  
 Eldon M. Wilmore: Mathematics; Philosophy  
 Edward C. Wilson: Biology; Chemistry  
 George A. Yourick, Jr.: Psychology; Chemistry  
 \* Donald L. Ziegler: Geology; Chemistry

#### COLLEGE OF ENGINEERING

##### BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

- |                            |                     |
|----------------------------|---------------------|
| Richard J. Baginski        | Leon L. Kimball     |
| * Albert Frederick Boeglin | Donald C. Klein     |
| * Paul J. Casabonne        | Oscar Henry Koski   |
| Charles William Ellis      | Samuel James Nuccio |
| Norbert C. Engst           | David A. Pitman     |
| Earl Franklin Fields       | Jack H. Riddle      |
| * Jack Hailer              | S. Von Roberts      |
| LeRoy Edwin Halsey         | George R. Stewart   |
| Alvin L. Hibbs             | Robert D. Stief     |

Billy Earl Willingham

##### BACHELOR OF SCIENCE IN CIVIL ENGINEERING

- |                          |                           |
|--------------------------|---------------------------|
| Dave A. Barela           | Robert W. DeLaRue         |
| Harry Bokow              | Alfonso Delgado           |
| William French Botwinis  | Robert William Downie     |
| Cecil LeRoy Brown        | Cedric P. Drake           |
| Roy P. Burns             | Thomas William Eglinton   |
| * Harlen Joseph Campbell | Harry C. Ellingston, Jr.  |
| Waymon D. Choate         | Arthur Clyde Ellis, Jr.   |
| William James Colby      | William E. Fields         |
| Albert Davis Corbin      | Stephen K. Freeman, Jr.   |
| Felix Garver Corle       | James Allen Frohlich      |
| Cecil P. Counts          | Florentino Gutierrez, Jr. |

\* With Distinction

John Nelson Hagan  
 Roy Arvie Hays  
 Woodrow Wilson Hoffman  
 Edward C. Hudson  
 Herbert Clyde Hyde  
 Pete Kuzmik  
 Lionel Glover Lancaster  
 Jorge Barriga Ledesma  
 Walter George Leffler  
 Albert Robert Lermusiaux  
 Benjamin M. Long  
 Carl Edmund Ludlow  
 Donald E. Mitcham  
 Owen Neil O'Leary  
 Patrick H. O'Malley  
 Carl Lee Pharis  
 John Richard Prevost  
 Lewis Thomas Putnam  
 John Radoslovich  
 Laurence A. Ramsey

James A. Rightley  
 Frederick Hastings Rindge III  
 Joe N. Robles  
 David F. Romero  
 Edmund Pitt Ross  
 Harold K. Russell  
 Jack D. Schneider  
 Lewis Burnham Seward, Jr.  
 Ralph Anthony Shubert  
 James A. Simpson  
 John Hill Simpson  
 A. Everett Smith  
 John H. Snelling  
 James H. Sprouse  
 Ralph L. Strother  
 John D. Thomson  
 Donald D. Van Skiver  
 Charles W. Wetterhus  
 James L. Whiteman  
 Dan J. Woodford

Thomas Paul Wootton

### BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Charles B. Afill  
 Orville M. Bercaw  
 \* Gideon Reed Brainerd  
 Billy M. Carney  
 James E. Culver  
 Victor Elizondo  
 Dale N. Evans  
 Edward John Finnegan, Jr.  
 \* Oscar M. Fligner  
 Paul William Franko  
 Bill Furry  
 Carmen M. Gabriel  
 Paul F. Hackmann  
 \* Elbert E. Harrison, Jr.  
 Stanley Hirsch  
 Thomas J. Hoban  
 E. Manning Hodges  
 \* David T. Kimball  
 Paul Anthony Kunz  
 George C. Lagomarsini  
 Gordon Davis Larson  
 Glenn H. Lawrence  
 Ignatius Wingfu Li  
 Seth Oliver Lewis  
 Clifford Marcus Long  
 Thomas D. Lusk  
 Alexander Macurak  
 Robert A. Miller  
 Bill J. Morton  
 C. E. Neat

Joe E. Pearce  
 Donald S. Pitts  
 Quinten T. Plikerd  
 Steven Politis  
 Floyd L. Sabin  
 Homer Irwin Sergeant  
 Arnold A. Segal  
 Elias J. Sinkew  
 Fred T. Sinnott  
 John Harrison Smelser  
 Knut Erling Sorbye  
 Don F. Sprengeler  
 John H. Sprengeler  
 Guy Don Stephens  
 Edward Daniel Stoeckert  
 Theodore Strasburger  
 Charles Tomljanovich  
 David Villers  
 Homer Loyd Wallace  
 Thomas C. Ward  
 David A. Watt  
 James A. Weede  
 Irwin West  
 Richard E. West  
 Curtis Westrum  
 Harry Allen Wilson, Jr.  
 Herman J. Wirth  
 \* Donald Henry Wolking  
 Harold A. Yeagley  
 Dean Kendall Yearout

### BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Douglas Wilson Ballard  
 John S. Bartlo  
 William A. Broome

Arthur Burton Cole  
 Robert Lewis Conner  
 Stewart Brown Crooks

\* With Distinction

Walter J. Dalby	John J. Miller
Harry Kenneth Dalton	Richard Clarke Miller
Walter Leonard Dauphinee	Edward W. Molzan
Robert George Dittmer	James R. Moran
Armen Michael Donian	John Kaoru Nakayama, Jr.
Lee Allan Drake	Clarence Victor O'Kon
William J. Dunlevy	James Chester O'Neal
Carl George Estler	Sidney S. Ostic
Stanley L. Feldhan	Charles J. Paddock
Charles M. Fenton	David U. Rakestraw, Jr.
Chester Harold Froelich	William V. Randall
Holt J. Gay	Theodore H. Reed
Howard James Gregory	Charles A. Sandoval
Willis G. Groth	John Joseph Scanlin
John Nicholas Hagen	* Ross D. Schmidt
* Norman Walter Hanson	Seledonio Sifuentes
Daniel Irving Harwood	Homer Smith, Jr.
William A. Harwood	Robert F. Sylvanus
Rodney Burton Higgins	Paul Syroid
Charles McKinley Jensen	John Martin Weil
Norman K. Kernodle	Chester Austin White
Leroy Dean Kimbrough	George Leroy Williams
Howard Joseph Kobusch	Harold K. Wimberley
Victor J. Layton	George James Wladika
Charles N. Lemon, Jr.	Michael Anthony Zatto
Albert J. Miller	Joseph Edward Zichwic

## BACHELOR OF SCIENCE IN INDUSTRIAL ARTS

Charles Benedict Archuleta	James Hosford Fretwell
William W. Brown	Thomas David Gay
Donald A. Brownell	James W. Graham
Russell M. Doetzel	Ernest D. Graves

## COLLEGE OF EDUCATION

## BACHELOR OF ARTS IN EDUCATION

NAME:	MAJOR;	MINOR;	CURRICULUM
Salomon Abeyta:	Spanish;	History;	High School
Matilda Agcaoli:	Music Education;	Music;	High School
Emma Anaya:	Spanish;	Health and Physical Education;	High School
Floy Clark Anderson:	Music Education;	Music;	High School
Thomas O. Ballinger:	Art Education;	Sociology;	Art Education
Harriet Morris Barnes:	Art Education;	-----;	Art Education
John Ellsworth Barrow:	History;	English, Psychology;	High School
John Martin Baum:	Music;	English;	High School
David H. Bearden:	Social Studies;	History, Economics;	High School
Mary Frances Blanchard:	Social Studies;	-----;	High School
Jeanne Ann Boyd:	Social Studies;	-----;	High School
Jo Ann Rudolph Brammer:	Social Studies;	-----;	High School
Adele Breech:	Social Studies;	-----;	High School
Dan Scott Brosier:	English;	Speech;	High School
* Walter F. Brunet:	English, Speech;	Sociology;	High School
Seldon E. Burks:	Social Studies;	History;	High School
Margot O. Candelaria:	Sociology;	English;	Elementary
Thomas H. Carson:	Social Studies;	History;	High School
Virginia Casados:	Art Education;	-----;	Art Education
Margaret D. Castillo:	Spanish;	History;	Elementary
Joseph D. Chavez:	Social Studies, History;	-----;	High School

\* With-Distinction



- Manuel Chavez: Government; Business Administration; High School  
 Jerome Cohen: Psychology; Sociology; High School  
 Melvin Cordova: Spanish; History; High School  
 Lillie Crespín Cowin: Social Studies; ———; Elementary  
 Dolores Bernece Cox: Art Education; ———; Art Education  
 Vernon Cox: Social Studies; ———; High School  
 Cecil W. Daniels: Social Studies; ———; High School  
 James E. Davidson: Social Studies; ———; High School  
 Frank Dazzo: Art Education; ———; Art Education  
 Hugh Spence Devitt, Jr.: Social Studies; ———; High School  
 Forest G. Eastman: Social Studies; Biology; High School  
 Robert Ruiz Esparza: History; Physical Education; High School  
 Marshall E. Farris, Jr.: Social Studies; History; High School  
 Elizabeth Fay: History; Art; High School  
 Yvonne Ann Fay: Spanish; English; High School  
 Robert J. Fielding: Social Studies; History; High School  
 Santiago Fierro: Spanish; History; High School  
 James R. Fitch: Social Studies; History; High School  
 Frances Fruehauf: Spanish; French; High School  
 Frank J. Gabel: Social Studies; History; Psychology; High School  
 Jose Narciso Garcia: Social Studies; History; High School  
 Victor Gonzales, Jr.: Social Studies; ———; High School  
 Barbara J. Harper: Art Education; ———; Art Education  
 Jessie F. Harris: English; Psychology; Elementary  
 Gerald A. Heade: Music Education; Sociology; High School  
 George Heideman: Art Education; ———; Art Education  
 Kenneth L. Higgins: Music Education; Psychology; High School  
 \* Carolyn Hill: Social Studies; Government; High School  
 Iris Louise Hoff: English; French; Psychology; High School  
 Ronald H. Hollander: Social Studies; ———; High School  
 Frances Reno Jones: Journalism; English; High School  
 Virginia Watson Kloepper: Psychology; Mathematics; High School  
 Donald R. Knorr: English; Spanish; Sociology; High School  
 Mary Adler Knorr: History; Library Science; High School  
 Richard G. Kurman: Art Education; Art; Art Education  
 Robert G. Lalicker: History; Naval Science; High School  
 Robert E. Lane: Music Education; English; High School  
 † Shepard Levine: Art Education; ———; Art Education  
 Aaron Lopez: Social Studies; Spanish; High School  
 Earl Raymond Loudon: Social Studies; ———; High School  
 William A. Marcum: Psychology; English; High School  
 Belisandro Mares: Spanish; English; High School  
 Shirlee Markell: Art Education; ———; Art Education  
 Jim Everett Mauzy: History; Government; High School  
 Bradley Mitchell: Social Studies; Psychology; High School  
 George McFarland Mitchell: Government; Psychology; High School  
 William E. Morris: History; Government; High School  
 Robert A. Murray: Social Studies; History; High School  
 Robert E. Nolen, Jr.: Social Studies; ———; High School  
 Ingrid Johanna Oppenheimer: Psychology; German; High School  
 Martina Diaz Padilla: Social Studies; ———; Elementary  
 Pat Paulantis: English; History; High School  
 Donna Val Peterson: English; Physical Education; High School  
 Lucille Margaret Petranovich: Art Education; English; Art Education  
 Peggy Ann Piper: History; English; High School  
 Earl E. Pyatt: Music Education; Mathematics; High School  
 Marjorie Richerson: Speech; Psychology; High School  
 Donald T. Rippey: Social Studies; ———; High School  
 Joseph Francis Robek: History; Spanish; High School

\* With Distinction

† With Honors

- Facundo R. Rodriquez: Government; Spanish; High School  
 Mina E. Ruggles: Art Education; Administration & Supervision; Art Education  
 David Salazar: History; Spanish; High School  
 Rudolph Sanchez: English; Spanish; High School  
 Harry E. Sandoval: Social Studies; History; High School  
 Patricia Lee Sauer: Social Studies; Physical Education; High School  
 Jean R. Schmechel: Social Studies, History; ———; High School.  
 John W. Sheffer: Government; Biology; High School  
 Betty Lee Singer: History; Art; High School  
 Alvin Ernest Sloan: Social Studies; History; High School  
 Peter Sterling: Government; History; High School  
 Rosemary Stockton: Music Education; English; High School  
 Dale O. Stout: Social Studies; ———; High School  
 James Irving Thornton: Music Education; Psychology; High School  
 Tony Torres: Sociology; History; High School  
 Thomas G. Trotter: Psychology; English; High School  
 \* John E. Trowbridge: Social Studies; English; High School  
 \* Gilbert F. Trujillo: Social Studies; History; High School  
 William T. Van Court: Psychology; Government; High School  
 Delfino Varela: Social Studies; Spanish; High School  
 Adolfo Velasquez: Spanish; Business Administration; High School  
 David L. Walker: Social Studies; ———; High School  
 Florence Wall: Art Education; Physical Education; High School  
 Martha Louise Weeks: Dramatic Art; English; High School  
 Carl D. White, Jr.: Social Studies, History; ———; High School  
 Emily Jane White: Music Education; Physical Education; High School  
 Virginia Tolle Williams: English; History; High School  
 Herbert B. Wilson : Social Studies; ———; High School  
 Martha Rose Wilson: Music Education; English; High School  
 Vicente T. Ximenes: Economics; Government; High School

#### BACHELOR OF SCIENCE IN EDUCATION

- Frank W. Ackerman: General Science; ———; High School  
 Jane Moses Albrecht: Home Economics; ———; Home Economics  
 Frank Angel, Jr.: Elementary Education; ———; Elementary  
 Ruth Poplin Baker: Elementary Education; ———; Elementary  
 Billye Brantley: Home Economics; ———; Home Economics  
 Thomas A. Bridges: Administration & Supervision; Industrial Arts; Adm. & Sup.  
 Eloy D. Chavez: Elementary Education; ———; Elementary  
 Mary Rose Chavez: Commercial Education; Spanish; High School  
 Betty Ruth Cox: Mathematics; English; High School  
 R. Alice Creecy: Home Economics; ———; Home Economics  
 F. Pauline Curry: Elementary Education; ———; Elementary  
 Joseph D'Angelo, Jr.: Elementary Education; ———; Elementary  
 Dorris L. Dannevik: Elementary Education; ———; Elementary  
 Edmund P. DiNello: Chemistry; Biology; High School  
 Bettie Lou Grogan: Home Economics; ———; Home Economics  
 Jackie Hixenbaugh: Elementary Education; ———; Elementary  
 Elwood John Hopf: Psychology; Biology; High School  
 Geneva Angell Hyde: Elementary Education; ———; Elementary  
 Ina Belle Jessup: Elementary Education; ———; Elementary  
 Charles Kerkeslager: Biology; History; ———; High School  
 Carolyn Cobb Koch: Commercial Education; Psychology; High School  
 \* Emily Ann Large: Commercial Education; Business Adm.; High School  
 Stella Lawrence: Biology; English; Elementary  
 Ethel Freed Leferink: Administration & Supervision; English; Adm. & Sup.  
 Guadalupe Lopez: Elementary Education; ———; Elementary  
 Cora Jeanne Loveall: Home Economics; ———; Home Economics  
 Edith Manfredi: Elementary Education; ———; Elementary

- \* With Distinction

- Joseph W. McKinley: Biology; Psychology; High School  
 Rosetta Crenshaw McReynolds: Elementary Education; ———; Elementary  
 Margaret E. Moutray: Biology; Psychology; High School  
 Norma Kirkpatrick Osborne: Administration & Superv.; English; Adm. & Sup.  
 Myrna Mayre Palmer: Home Economics; ———; Home Economics  
 George T. Peek: Administration & Supervision, Psychology; Adm. & Sup.  
 Charles Scarborough Peters: Geology; Biology; High School  
 Margaret Montgomery Raabe: Psychology; Mathematics; High School  
 Donald T. Reel: Administration & Supervision; Art Education; Adm. & Sup.  
 Marguerite Robertson Rowell: Elementary Education; ———; Elementary  
 \* Caroline Schmidt: Administration & Supervision; Psychology; Adm. & Sup.  
 Morris H. Scott: Biology; History; High School  
 Lily Townsend Smith: Home Economics; ———; Home Economics  
 Robert Stephen Smolich: Geology; Biology; High School  
 Charlotte Ruth Sneddon: Elementary Education; ———; Elementary  
 Margaret Jean Sweeney: Elementary Education; ———; Elementary  
 Andreita Tejada: History; Spanish; Elementary  
 Tomas S. Tenorio: Elementary Education; ———; Elementary  
 Helen Tinklepaugh: Administration & Supervision; History; Adm. & Sup.  
 Bennie Judy Valdez: Spanish; Home Economics; Elementary  
 Carl Vella: Science; ———; High School  
 Vida Vidal: Elementary Education; ———; Elementary  
 Myrtle Walmsley: Administration & Supervision; English; Adm. & Sup.  
 William Carroll White: Biology; Commercial Education; High School  
 Agnes Sloan Wilson: Elementary Education; ———; Elementary  
 Narcisa Zarate: Commercial Education; ———; High School

## BACHELOR OF SCIENCE IN HEALTH AND PHYSICAL EDUCATION

NAME: MAJOR: MINOR: CURRICULUM

- Louise Anderson: Health and Physical Education; Biology; P. E.  
 Bony G. Baca: Health & Physical Education; ———; P. E.  
 Richard Joseph Becker: Health & Physical Education; ———; P. E.  
 Vincent Cappelli: Health & Physical Education; Speech; P. E.  
 Delbert Dale Cooper: Health & Physical Education; ———; P. E.  
 Dick Fox: Health & Physical Education; ———; P. E.  
 Kenneth E. Hart: Health & Physical Education; ———; P. E.  
 Iona May Inmon: Health & Physical Education; Biology; P. E.  
 Henry L. Jacobs: Health & Physical Education; History; P. E.  
 Russell Knudson: Health & Physical Education; ———; P. E.  
 Merle Korte: Health & Physical Education; ———; P. E.  
 Sarah Krakow: Health & Physical Education; ———; P. E.  
 Nancy Lee Lipsett: Health & Physical Education; ———; P. E.  
 Robert J. Miller: Health & Physical Education; ———; P. E.  
 Lindalie Mock: Health & Physical Education; ———; P. E.  
 Remo J. Moffa: Health & Physical Education; ———; P. E.  
 William E. Morrison: Health & Physical Education; ———; P. E.  
 George M. Popelka: Health & Physical Education; ———; P. E.  
 John Joseph Sanchez: Health & Physical Education; ———; P. E.  
 Mary Alice Scott: Health & Physical Education; ———; P. E.  
 John Max Shirley: Health & Physical Education; ———; P. E.  
 \* Dorothy Mae Tracy: Health & Physical Education; Mathematics; P. E.  
 James H. Wilson: Health & Physical Education; ———; P. E.

## BACHELOR OF SCIENCE IN INDUSTRIAL ARTS EDUCATION

- Elio Cultreri: Industrial Arts; ———; High School  
 Worth Long: Industrial Arts; ———; High School  
 \* Joseph C. Merkel: Industrial Arts; ———; High School  
 Fred E. Prevost, Jr.: Industrial Arts; ———; High School

\* With Distinction

## COLLEGE OF FINE ARTS

## BACHELOR OF FINE ARTS IN ART

Jacqueline Anderson  
 Joann Atterberry  
 Martha Barber  
 Donald Burns Bauer  
 Albert Becchetti  
 Irene Marie Betzer  
 Albert William Bieffer  
 Dorothy Skousen Black  
 Malcolm Brown  
 Mary H. Burton  
 Carlos Martin Candelaria  
 Wava Dean  
 Leonard E. DeLeon  
 Robert Carroll Ellis  
 George B. Estes, Jr.  
 Yvonne Hatten  
 Victor Hernandez  
 William Vaughan Howard

Jo Hutten  
 \* Lenn Allen Kanenson  
 Robert Louis Klein  
 Daniel W. Knight  
 Rosemary Ligon  
 \* Robert Emmett McCoy  
 Jeanne Mellott  
 Roy H. Morton  
 Mary Louise Jones Nason  
 Rosemary Robinson  
 Louise Dorothy Schlotterbeck  
 Henry H. Schreiber, Jr.  
 Lois Jean Sorrell  
 Gilbert Sena Washburn  
 Albert Augustus Williams  
 Gene Varner Williams  
 Paul Morris Wright  
 Donna Lunetta Yelonek

## BACHELOR OF FINE ARTS IN DRAMATIC ART

Leonard Drum  
 William C. Greene  
 George C. Groskritz, Jr.  
 David Francis Hayes

Anne Kelsey  
 John A. Main  
 George A. Ramsey, Jr.  
 Abel A. Ruybalid

John Benny Tarver

## BACHELOR OF FINE ARTS IN MUSIC

Evadean L. Civerolo  
 William E. Mitchell  
 Berna Deen Parks

Maebeth Ridings  
 \* Evelyn True Watson  
 Carleton Keith Webb

James Lovic Whitlow

## COLLEGE OF PHARMACY

## BACHELOR OF SCIENCE IN PHARMACY

Theodore P. Ahr  
 Joseph S. Alexander  
 Edward J. Capper  
 Billy J. Carpenter  
 John E. Carrothers  
 M. Byrne Cates  
 Albert Conner Daily  
 Julius H. Darsey  
 Joseph Dean Duddleston  
 Harry Willard Lee  
 Roland W. Krug  
 William Browning Lafferty  
 James Sidney Logan  
 Ruric D. Mason

Alphonse George Matocha  
 Robert Lloyd Nance  
 Charles Stanard Nesting  
 John J. Pensiero  
 Charles Armand Pineau  
 Samuel Rosh  
 Thomas Edwin Shilton  
 Michael Albert Skender  
 Wayne L. Sowell  
 Frank A. Tegang  
 John J. Urbane  
 Kenneth C. Vansalous  
 Donald O. Walters  
 John B. Wise

\* With Distinction

## COLLEGE OF BUSINESS ADMINISTRATION

## BACHELOR OF BUSINESS ADMINISTRATION

NAME: CONCENTRATION

Harry Earl Allen: General Business  
Sherburne P. Anderson: General Business  
John F. Andrews: General Business  
Sam R. Angell, Jr.: General Business  
Louis E. Aragon: Accounting  
Iraqio Eric Baca: Accounting  
Earl L. Bacon: Industrial Administration  
Frederick William Balsam, Jr.: Accounting  
Robert Lacy Beckett: Finance  
Walter Scott Biddle: General Business  
Donald Edward Blasey: Accounting  
Robert Thomas Blizek: Industrial Administration  
\* Robert Jesse Blount: Accounting  
Lloyd Beiler Bolander: General Business  
Harry Dale Bolton: General Business  
John Granville Burton, Jr.: Marketing  
Roy Carson, Jr.: Accounting  
Jimmy L. Carter: Accounting  
Dorvell Harlon Chandler: Marketing  
Edward H. Chavez: Accounting  
Paul Frederick Corey: Accounting  
Philip Jay Daly: Accounting  
Robert W. Davis: Accounting  
Benjamin Dedmon: Accounting  
Lewis E. Denson: Marketing  
Joseph A. DiRosa: Marketing  
Herbert L. Duniven: General Business  
Ona Angeline Elliott: Accounting  
William Henry Ellis: General Business  
Joseph Farber: General Business  
Carl H. Feak, Jr.: General Business  
James M. Fisher: General Business  
Henry Ford Frazier: Marketing  
John Philip Freeman: Accounting  
Beverly Earl Frye: Marketing  
William Herman Fullriede: Accounting  
Manuel A. Gallegos: Accounting  
Nick Gallegos: Finance  
David H. Garver: Accounting  
Edward A. Gorey: Accounting  
James Clemens Gravlin: Marketing  
Henry Grossman: Accounting  
Frank Hilton Grubbs: Accounting  
Ray M. Gunderson: Industrial Administration  
Dale M. Gustafson: General Business  
Donald Miller Halsey: Marketing  
Carl F. Hart: Industrial Administration  
Stanley Ford Harvey, Sr.: General Business  
Miguel O. Herrera: Accounting  
Matthew G. Homer: Marketing  
John V. Horacek: Accounting  
Gene Dale Hornbeck: Accounting  
Benjamin Kennedy Horton: General Business  
James Paul Howard, Jr.: Accounting  
William Howard Hughes: General Business  
David Lee Irion: Finance

\* With Distinction

John R. Ittersagen: Marketing  
Norman D. Jacobs: Marketing  
Richard L. Johnson: General Business  
Grace Jones: Secretarial-Office Management  
Mary Elizabeth Kearns: General Business  
Sidney Kiwitt: Accounting  
Ivan J. Klatt: Industrial Administration  
Robert Koch: General Business  
Marvin W. Krieger, Jr.: Industrial Administration  
Paul Lacombe: General Business  
Edward E. Lopez: Finance  
David Becker Lucas: Finance  
Robert Saul Lyons: Industrial Administration  
Arthur T. McGinnis: Marketing  
James F. McGinnis: Marketing  
Arnold Mailman: Accounting  
Leo Martin: Marketing  
Harold G. Matthews: Industrial Administration  
Franklin E. Miles: Marketing  
James Herman Mitchell: Marketing  
Harry Mozian: Marketing  
J. W. Neal: General Business  
Glenn L. Nelson: Accounting  
Virginia Florence Nelson: Accounting  
Vicente Ruelas Ojinaga: Accounting  
Dean Marvin Osmundsen: Marketing  
Nicholas Pappas: Accounting  
Donald Earl Paulson: Marketing  
Joseph Picaro: Accounting  
Martin Allen Pierce: Finance  
Sidney G. Pike: Marketing  
James G. Protzer: Industrial Administration  
Alexander N. Raeburn: Accounting  
B. Robert Rafferty: General Business  
Harold M. Richart: Finance  
Lynn B. Riste: General Business  
James Carroll Ritchie: General Business  
Edward P. Robinson: Industrial Administration  
Eileen K. Rosh: Marketing  
\* Donald LaFayette Sasser, Jr.: General Business  
John Davis Sauters, Jr.: General Business  
Eugene P. Scanlon: Accounting  
Justus K. Schomp: General Business  
Martin Robert Shainen: Marketing  
Floyd Manning Slasor, Jr.: Marketing  
Joe Talley Spence: Finance  
Kenneth D. Spiller: Accounting  
Eugene B. Springer: Accounting  
William J. Stafford: Accounting  
Sidney S. Steele: Accounting  
Donald M. Stencil: Marketing  
Neal David Sternberg: Industrial Administration  
Wilbur K. Stilwell: General Business  
Glenn H. Stinnett: Accounting  
Robert Erdman Swanson: General Business  
Lyle Howard Talbot: General Business  
Clarence C. Timander: Marketing  
Irwin Troyky: Marketing  
Gloria Berry Turner: Accounting  
Domenico A. Tussio: Accounting

\* With Distinction

Joseph Ullmann: Accounting  
 Rudolf A. Valdez: Accounting  
 Fred C. Venable: Accounting  
 Robert Keith Vokes: Marketing  
 Robert W. Walker: Marketing  
 Adrian L. Wallen: Marketing  
 Juanita Rose Walters: General Business  
 Stuart Charles Weisberg: Marketing  
 John D. Wheeler: General Business  
 John L. Wheeler: General Business  
 Richard Lee Wickens: General Business  
 Lawrence L. Willcut: Industrial Administration  
 Harry W. Wright: Finance  
 Gregory Zaccaria: Industrial Administration

## COLLEGE OF LAW

## BACHELOR OF LAWS

James L. Brown  
 LaVor Burnham  
 Richard Carl Civerolo  
 John R. Connolly  
 James D. Cowper  
 Herbert Cushing  
 David E. Douglas  
 William S. Fulton, Jr.  
 Avelino V. Gutierrez  
 George T. Harris, Jr.  
 Silas G. Henry  
 William O. Jordan  
 Albert O. Lebeck, Jr.

Thomas J. Mabry, Jr.  
 Robert B. McKechnan  
 Richard A. Parsons  
 Paul W. Robinson  
 Monte G. Rowden, Jr.  
 Paul P. Schwartz  
 John W. Thompson  
 Benjamin T. Traub  
 George W. Walker  
 Leslie A. Williams  
 Thomas M. Wirsching  
 Joe W. Wood  
 Charles R. Zierke

George L. Zimmerman, Jr.

## GRADUATE SCHOOL

## MASTER OF ARTS

NAME: MAJOR

William H. Adamson: Spanish  
 George Allen Agogino: Sociology  
 Edwin Russell Ashbrook: Educational Administration  
 Mary Frances Baker: Spanish  
 Joy Louise Barrick: Secondary Education  
 Howard W. Brunell: Educational Administration  
 Pauline May Cheuvront: Educational Administration  
 Robert George Clingenpeel: Secondary Education  
 L. Wayne Corbin: Educational Administration  
 Alfred Gallegos Cordova: Government  
 William Joseph Cunningham: Government  
 Jack H. Curtis: Sociology  
 Robert William Delaney: Inter-American Affairs  
 Ralph Herbert Delzell: English  
 Maria Dorothy Donkle: Art Education  
 Elbert E. Earnest: Educational Administration  
 Thomas A. Erhard: English  
 Marianne Ain-el-Hayat Fink: Psychology  
 Marjorie Dyer Fox: Secondary Education  
 Mary Van Franklin: Sociology  
 Roscoe Frederick: Educational Administration  
 Eugene Thomas Frosio: Anthropology  
 Vincent Nicholas Garoffolo: Philosophy  
 C. E. Fillman: Educational Administration  
 Donald K. Gill: Educational Administration

Paul Giron: Inter-American Affairs  
Kay Reed Hafen: Educational Administration  
Ralph Owen Hall: Educational Administration  
John Albert Hamilton: Secondary Education  
Harlan Albert Harrison: Economics  
V. Ray Harrison: Economics  
Lois Bartlett Harpham: Spanish  
Doris Hartrick: History  
John Bernard Hodapp: Physical Education  
Marjorie L. Hodapp: Physical Education  
Milton George Holmen: Psychology  
Walter Hook: Painting and Design  
Owen Russell Hurst: Educational Administration  
Robert Padaric Jeffries: Educational Administration  
Harriet Jane Johns: English  
Frank Kachilla: History  
Raymond Coffey Kornegay: Educational Administration  
Allen Dale Krumm: Government  
Louis Hayner Kurrelmeyer: Economics  
Harold W. Lincoln: Government  
Donald R. McCaul: Anthropology  
M. H. McMichael: Educational Administration  
Clyde Bruce MacKenzie: French  
Everett Miller: Educational Administration  
Moses Franklin Miller: Educational Administration  
Richard Lawrence Milton: Physical Education  
Milton Vincent Mitchell: Educational Administration  
Fermin S. Montes: Educational Administration  
William Whatley Moseley: Spanish  
Harry Lee Naylor: Anthropology  
Richard Howard Ouder Kirk: Inter-American Affairs  
Vondolee S. Page: Educational Administration  
Clyde Kathleen Pearce: English  
Salvador Perez: Spanish  
Isabelle Pinto: Psychology  
Edward Michael Praisner: Government  
Jeannette Pruy n Reed: Psychology  
Fred Mabry Renfro: Educational Administration  
Anne Margaret Riley: History  
Manley Rex Roby: Educational Administration  
Sigfred Sandberg: Anthropology  
Arthur J. Schneider: Art Education  
Anne Elizabeth Shannon: Educational Administration  
Harry Peter Sheevers: Secondary Education  
Warren Ayres Smart: Government  
Edgar Warren Smith, Jr.: English  
Arthur Robert Steele: Inter-American Affairs  
Elizabeth S. Steele: Inter-American Affairs  
Fred Madison Strait: Government  
Edward Raymond Suess: Psychology  
Jewell Thompson: Elementary Education  
Robert G. Thompson: Government  
Playford Vernon Thorson II: History  
Miguel H. Trujillo: Educational Administration  
David Richardson Tweet: History  
Beulah Vandament: Elementary Education  
Josefina Abeyta Velasquez: Business Administration  
Francis E. Vieth: History  
William I. Waldrip: History  
John Weatherford: History  
George P. White: Educational Administration



William Karl Williams: Economics  
Eugene Warren Zylstra: Secondary Education

## MASTER OF SCIENCE

NAME: MAJOR:

Roy Lenard Anderson: Physical Education  
Thomas Gordon Brown: Civil Engineering  
Matthew E. Carlisle: Chemistry  
Johnnie Lee Caton: Physical Education  
Clifford C. Davis: Biology  
William L. Emerick: Geology  
Robert John Emmanuel: Geology  
Harry Woodson Gates: Electrical Engineering  
Louis Herman Goldsmith: Geology  
Allyn Burson Hazard: Mechanical Engineering  
George Hildebrandt: Mechanical Engineering  
Emerson Jones: Physics  
Thomas Kent Keenan: Chemistry  
Jean McClelland: Chemistry  
David R. McGiboney: Psychology  
Edwin A. Noble: Geology  
Ralph Albert Nobles: Physics  
Joseph M. Ralls: Mechanical Engineering  
Roger W. Sanftner: Chemistry  
Ralph Girard Stevenson, Jr.: Geology  
Shuh-Tuh Tsai: Electrical Engineering  
George Mylan Ugrinic: Geology  
Don Williams, Jr.: Mechanical Engineering  
Roger S. Wotkyns: Zoology  
Jacob Shapira: Chemistry

## MASTER OF BUSINESS ADMINISTRATION

John S. Perovich: Accounting  
Gerald Malcolm Washburn: Accounting

## MASTER OF MUSIC

Stanley Hugh Strassman: Music Composition

## DOCTOR OF PHILOSOPHY

Robert James Fern: Chemistry  
Clarissa Parsons Fuller: History  
Eugene Albert Henning: Spanish  
Ira Carlyle Ihde: History  
Harvey Cleaver Moore: Anthropology

## HONORARY DEGREE

NAME: DEGREE:

Harold Walter Stoke: Doctor of Laws

## GENERAL COLLEGE DIPLOMAS

(TWO-YEAR COURSE)

Lloyd Edward Abrams  
James Asher  
Marvin Baggett, Jr.  
William Frederick Baker  
Donald Bengé  
James E. Boyd  
Genita Brammer  
Tom Cotton  
Gilbert A. Cox  
Dan Davidson  
Perry A. Denton  
Terrance L. Dolan  
Mary F. Edmondson

Geraldine Finch  
John D. Folsom  
George W. Fossell  
Robert H. Frantz  
Maximinio Garcia  
William Paul Hayes  
John M. Heyler  
Lewis J. Hill  
Betty Leola Hitch  
Randolph E. Holt  
David Holzhauer  
Lawrence Joe Hopkins  
Dean Stanley House, Jr.

Eddie Irlanda  
 Victor Keith Jensen  
 Ferris L. Johnson  
 William G. Jordan  
 Richard M. Kelly  
 Joseph E. Kennedy  
 Dolores Kimbrell  
 Jeanne M. Lawler  
 Harriet Lee  
 Fred Lopez  
 Marcia McMullan  
 Roy F. Menning  
 John R. Miller  
 Ruth A. Miller  
 John Mohar  
 Philip W. Olson  
 Marquis Henry Oracion  
 Charles Wolcott Parker  
 Robert Petrillo

Augustine Pino  
 Donald J. Pomeroy  
 Redolfo Romero  
 Jerry George Russell  
 Leland Scheu  
 A. Morton Seymour  
 Joseph M. Surkis  
 W. E. Timmons  
 Gilbert C. Trujillo  
 John J. Vaughn  
 Alvin J. Viste  
 Robert James Walpole  
 Robert Lee Wells  
 Robert Louis Watson  
 James A. White  
 Charles A. Williams  
 Aaron Wolgin  
 James Arthur Woods  
 John Richard Zutavern

### AWARDS AND SCHOLARSHIPS, 1949-50

- \*The Albuquerque Classroom Teachers Association Scholarship—Dolores Giron
- The American Association of University Women Scholarship—Mary Emily Gray
- The Philo S. Bennett Scholarship—Georgina Radosevich
- The Clarence Milton Botts, Jr., Memorial Scholarship—Richard Robert Castillo
- The Carlsbad Daily *Current-Argus* Scholarship—Troy Kemper
- \*The Daughters of Penelope Scholarship—Lou Karen Barnes
- The James M. Doolittle Scholarship—Remigio Martinez
- The Faculty Women's Club Scholarship—Mary Rose Chavez
- The Alfred Grunsfeld Memorial Scholarships—Lalo Garza, Ben Zeff
- The Miriam N. Grunsfeld Memorial Scholarships—Florinda Barela, Sally Farnsworth
- The Ives Memorial Scholarships—Bettie Lou Grogan, Suzanne Hernandez, Mary Margaret Mitchell
- The Kappa Kappa Gamma Memorial Scholarship—Jeanine Stafford
- \*The Khatali Scholarship—Allen Fuhs
- The Frederick Herbert Kent and Christina Kent Scholarships—Mary Ethel Cousland, Frances Tafoya, Ermelinda Martinez
- The Robert W. Korber Memorial Scholarship—Charles Hill
- The Inter-American Affairs Scholarships—Juan José Castillo, Manuel Cortez, Richard Mahlon Frazer, Richard E. Greenleaf, Robert Franklin Ingersoll, Larry López, José Celestino Salazar, Barbara Ann Sarnquist, William Ignacio Velásquez, Pedro Araujo (Brazil), Amalia Cardos Fajardo (Mexico), Rodolfo Goicochea (Peru), Guillermo Gómez Alvarez (Mexico), Ricardo Gutiérrez Muñoz (El Salvador), Luz María Wong (Mexico)
- \*The Laura MacArthur Memorial Scholarship—Marion Cottrell
- The Newman Club Scholarship—Theresa Vigil
- The Clyde Oden Memorial Scholarship—John M. Willis
- The Phrateres Club Tuition Scholarship—Carol Spencer
- The Santa Fe *New Mexican* Journalism Scholarship—Jefferson Greer, Jack Gill
- The Spur Scholarship for Sophomores—Nancy Gass
- \*The Soroptimist Club Scholarship in Law—Florence Ruth Jones
- The Twenty-Thirty Club Scholarship—William Jones
- The Thomas M. Wilkerson Memorial Scholarship—Merrill C. Jones
- \*The Zonta Club Scholarship—Cecilia Altuna
- The Alpha Delta Pi Prize—Frances Selby
- The Dove Asch Prize—Margaret Montgomery Raabe
- The George E. Breece Prize in Engineering—Donald Henry Wolking
- The Chi Omega Prize in Economics—Florence Ruth Jones

\* New Award, 1949-50

- The Charles Florus Coan Prize in History—John Mafit  
The Marian Coons Kindness Prize—Bettie Lou Grogan  
The Harry L. Dougherty Memorial Prize in Engineering—Neal F. Current  
The English Faculty Poetry Prize—Daniel A. Skillin, Jack Rice  
The Charles LeRoy Gibson Prize—David Nolting  
The H. J. Hagerman Prize—Robert Beckett  
The Telfair Hendon, Jr., Memorial Prize—Benjamin Dillard Duncan  
The H. E. Henry Award in Pharmacy—William Browning Lafferty  
The William A. McCarthy Prize—Anton V. Long  
\*The Merck Award for Excellence in Pharmaceutical Chemistry—Charles A. Pineau  
\*The Merck Award for Excellence in Pharmacology—Julius H. Darsey  
The Marcella Reidy Mulcahy Memorial Prize—No award 1949-50  
The New Mexico Section of the American Society of Civil Engineers—Harlen Joseph Campbell  
The Phi Kappa Phi Prizes for Freshmen—Richard Greenleaf, Bobbie Dean Pue, Barbara Woody  
The Phi Kappa Phi Senior Prize—Donald Henry Wolking  
The Rose Rudin Roosa Prize—Allen D. Krumm  
The George St. Clair Memorial Prize—Anne Kelsey  
The Katherine Mather Simms Memorial Prize—J. F. D. Holcombe  
The Summer Creative Writing Contest—Douglas Woolf  
The *Thunderbird* Award—Benny Tarver  
The Lenna M. Todd Memorial Prize—Edward Abbey, Hilary Wittulski, Robert Lawrence, Frances Reno Jones, Jane Lillibridge  
The Alpha Kappa Psi Scholarship Key in Business Administration—Robert J. Blount  
\*The Delta Sigma Pi Key in Business Administration—Robert J. Blount  
The C. T. French Medal—Donald L. Ziegler  
The Kappa Psi Award in Chemistry—Thomas Edwin Shilton  
\*The Phi Gamma Nu Award in Business Administration—Emily Large  
The Phi Sigma Certificates of Merit in Biology—Joseph W. McKinley, Philip G. Crook, John E. Furchner  
\*New Award, 1949-50

## ENROLLMENT STATISTICS

### CLASSIFICATION OF STUDENTS

Classification of students in the various undergraduate colleges is based upon the following standards of credit hours earned toward a degree in the respective college:

	<i>Freshman</i>	<i>Sophomore</i>	<i>Junior</i>	<i>Senior</i>
Arts & Sciences	0-28	29-60	61- 94	95-
Business Adm.	0-28	29-60	61- 94	95-
Education	0-28	29-60	61- 94	95-
Engineering	0-32	33-65	66-102	103-
Fine Arts	0-32	33-64	65- 97	98-
Pharmacy	0-32	33-65	66-102	103-
General	0-28	29-64		

### STATISTICS FOR 1950-51

	<i>Men</i>	<i>Women</i>	<i>Total</i>
Semester I, 1950-51	3358	1285	4643
Semester II, 1950-51	2950	1128	4078
Summer Session, 1950	1248	583	1831
Field Sessions, 1950	33	14	47
*Correspondence courses	167	202	369
*Extension courses	112	109	221

\* For the period March 1, 1950, to February 28, 1951.

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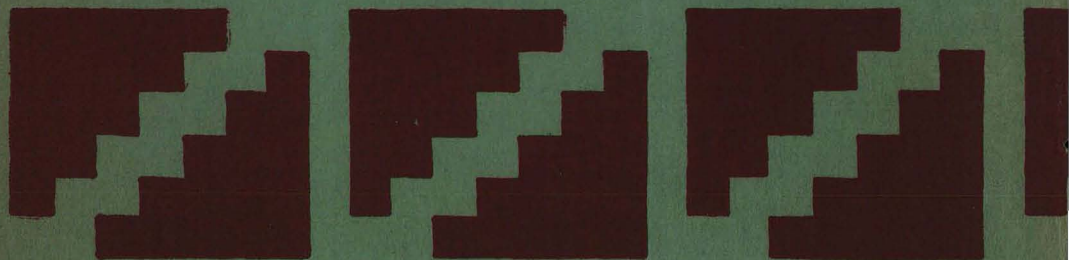
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