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### Graduate Catalog, 1956-1958

Marshall University

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DEAN

# MARSHALL COLLEGE BULLETIN



**Graduate School**

**ANNOUNCEMENTS**

**1956 - 1958**



# WEST VIRGINIA BOARD OF EDUCATION

## CHARLESTON, WEST VIRGINIA

	<i>Term Expires</i>
PAIGE WOOLDRIDGE, <i>President</i> , Bluefield.....	1957
ELIZABETH V. HALLANAN, <i>Vice President</i> , Charleston.....	1956
LACY I. RICE, Martinsburg .....	1958
LAWRENCE R. LYNCH, Clarksburg .....	1959
JAMES E. ANSEL, Moorefield .....	1960
RAYMOND BREWSTER, Huntington .....	1961
JAMES H. ROWLAND, Beckley .....	1962
JAMES H. MURRY, Jenkinjones .....	1963
C. LEE SPILLERS, Wheeling .....	1964
W. W. TRENT, <i>State Superintendent</i> , Ex-Officio, Charleston	
H. K. BAER, <i>Secretary and Director of Teacher Training</i> , Charleston	

The West Virginia Board of Education has charge of the educational, administrative, financial and business affairs of Marshall College.



# MARSHALL COLLEGE

(FOUNDED 1837)

## BULLETIN



GRADUATE SCHOOL



ANNOUNCEMENTS FOR 1956-1957

ANNOUNCEMENTS FOR 1957-1958



A P R I L 1 , 1 9 5 6

## OFFICERS OF ADMINISTRATION

STEWART HAROLD SMITH, B. S., M. A., Ph. D., Litt. D.....	<i>President</i>
DANIEL BANKS WILBURN, A. B., M. A., Ed. D.....	<i>Dean, Teachers College</i>
JOHN FRANK BARTLETT, A. B., M. A., Ph. D.....	<i>Dean, College of Arts and Sciences</i>
ARVIL ERNEST HARRIS, A. B., M. A., Ph. D.....	<i>Dean, Graduate School</i>
LILLIAN HELMS BUSKIRK, A. B., M. A.....	<i>Dean of Women</i>
HAROLD LEE WILLEY, A. B., M. A.....	<i>Dean of Men</i>
LUTHER E. BLEDSOE, A. B., M. A.....	<i>Registrar and Director of Admissions</i>
VETA LEE SMITH, A. B., M. A.....	<i>College Secretary</i>
FRED R. SMITH, A. B.....	<i>Comptroller and Business Manager</i>
PAUL H. COLLINS, A. B., M. A.....	<i>Director of Adult Education</i>
HAROLD WILLIAM APEL, A. B., M. S. in L. S.....	<i>Librarian</i>



# COLLEGE CALENDAR

## 1956-1957

### FIRST SEMESTER

September 10-15 .....	Freshman Orientation and Registration
September 14-15 .....	Registration of Upperclassmen
September 14, Friday, 7:00-9:00 p. m. ....	Registration of Part Time and Evening Students
September 17, Monday, 8:00 a. m. ....	Classes Begin
September 22, Saturday, 12:00 noon .....	Last Day of Registration for Semester
October 20 .....	Homecoming
October 23 .....	Academic Progress Reports Due
November 21, Wednesday, 12:00 noon .....	Thanksgiving Recess
November 26, Monday, 8:00 a. m. ....	Class Work Resumed
December 4 .....	Academic Progress Reports Due
December 19, Wednesday, close of classes .....	Christmas Recess
January 3, Thursday, 8:00 a. m. ....	Class Work Resumed
January 7, Monday .....	Beginning of Advance Registration
January 21-26 .....	Semester Examination Period
January 26 .....	Semester Ends

### SECOND SEMESTER

January 28-29 .....	Freshman Orientation
January 30, Wednesday .....	Registration
January 31, Thursday .....	Classes Begin
February 1, Friday, 7:00—9:00 P. M. ....	Registration of Part Time and Evening Students
February 6, Wednesday, 4:00 p. m. ....	Last Day of Registration for Semester
March 12 .....	Academic Progress Reports Due
April 16 .....	Academic Progress Reports Due
April 18, Thursday 12:00 noon .....	Easter Recess
April 23, Tuesday, 8:00 a. m. ....	Class Work Resumed
April 29 .....	Beginning of Advance Registration
May 20-25 .....	Semester Examination Period
May 26 .....	Baccalaureate
May 27 .....	Commencement
May 27 .....	Semester Ends

### SUMMER SESSION 1957

#### FIRST TERM

June 3, Monday .....	First Term Begins
June 8, Saturday, 12:00 noon .....	Last Day of Registration
July 4, Thursday .....	Holiday
July 12, Friday .....	First Term Ends

#### SECOND TERM

July 15, Monday .....	Second Term Begins
July 20, Saturday, 12:00 noon .....	Last Day of Registration
August 23, Friday .....	Commencement
August 23, Friday .....	Second Term Ends



# COLLEGE CALENDAR

## 1957-1958

### FIRST SEMESTER

September 9-14 .....	Freshman Orientation and Registration
September 13-14 .....	Registration of Upperclassmen
September 13, Friday, 7:00-9:00 p. m. ....	Registration of Part Time and Evening Students
September 16, Monday, 8:00 a. m. ....	Classes Begin
September 21, Saturday, 12:00 noon .....	Last Day of Registration for Semester
October 22 .....	Academic Progress Reports Due
November 27, Wednesday, 12:00 noon .....	Thanksgiving Recess
December 2, Monday, 8:00 a. m. ....	Class Work Resumed
December 3 .....	Academic Progress Reports Due
December 21, Saturday, 12:00 noon .....	Christmas Recess
January 6, Monday, 8:00 a. m. ....	Class Work Resumed
January 6 .....	Beginning of Advance Registration
January 20-25 .....	Semester Examination Period
January 25 .....	Semester Ends

### SECOND SEMESTER

January 27-28 .....	Freshman Orientation
January 29 .....	Registration
January 30 .....	Classes Begin
January 31, Friday, 7:00-9:00 p. m. ....	Registration of Part Time and Evening Students
February 5, Wednesday, 4:00 p. m. ....	Last Day of Registration
March 11 .....	Academic Progress Reports Due
April 3, Thursday, 12:00 noon .....	Easter Recess
April 8, Tuesday, 8:00 a. m. ....	Class Work Resumed
April 15 .....	Academic Progress Reports Due
April 28 .....	Advance Registration
May 19-24 .....	Semester Examination Period
May 25 .....	Baccalaureate
May 26 .....	Commencement
May 26 .....	Semester Ends

### SUMMER SESSION 1958

#### FIRST TERM

June 2, Monday .....	First Term Begins
June 7, Saturday, 12:00 noon .....	Last Day of Registration
July 4, Friday .....	Holiday
July 11, Friday .....	First Term Ends

#### SECOND TERM

July 14 .....	Second Term Begins
July 19, Saturday, 12:00 noon .....	Last Day of Registration
August 22, Friday .....	Commencement
August 22 .....	Second Term Ends



## FEES AND EXPENSES

All registration and laboratory fees are due and payable at the cashier's office on the day of registration.

The cashier accepts cash, postal money orders, or approved personal checks written for the exact amount of the obligation. All checks must be made payable to Marshall College, and no check will be accepted until day of registration.

### REGISTRATION FEES

#### Full-time Students (twelve or more semester hours)

	Resident of West Virginia	Non- resident <sup>1</sup>
Tuition Fee .....	\$25.00	\$175.00
Student Activity Fee .....	15.25	15.25 <sup>2</sup>
Health Service Fee .....	2.25	2.25
Total Registration Fee .....	\$42.50	\$192.50

#### Part-time Students (less than twelve semester hours)

Fee per semester hour <sup>3</sup> :		
First hour .....	\$ 5.00	\$15.00
Second hour .....	3.00	15.00
Third hour .....	2.00	15.00
Each hour above three semester hours .....	3.00	15.00
Extension classes .....	7.50	15.00
Identification Card Fee (all students who are enrolled for one or more courses for residence credit) .....	.25	.25

### SPECIAL FEES

#### Late Registration Fee

\$1.00 per day cumulative to and including the fifth day of class sessions.

#### Graduation Fees

Associate Degree .....	\$ 5.00
Baccalaureate Degree .....	5.00
Graduate Degree .....	10.00

#### Cap and Gown Fee

Associate Degree .....	\$ 2.50
Baccalaureate Degree .....	2.50
Graduate Degree .....	5.40

<sup>1</sup>NON-RESIDENT FEES shall apply to those students who are legally domiciled in states or countries other than West Virginia. The official domicile of a minor is that of his or her parents or legal guardian.

<sup>2</sup>THE STUDENT ACTIVITY FEES are allocated as follows: Assemblies and Forums \$1.00; Athletics \$5.00; Artists Series \$2.50; *Chief Justice* \$1.50; College Theatre \$.50; *Parthenon* \$2.00; Student Council \$.50; Student Union \$2.00; Identification Card \$.25. Total for semester \$15.25.

<sup>3</sup>RESIDENT FEE PER CREDIT HOURS. This fee does not include a student activity book. Part-time students may purchase the book for \$15.25.

1 Semester Hour .....	\$ 5.00	7 Semester Hours .....	\$22.00
2 Semester Hours .....	8.00	8 Semester Hours .....	25.00
3 Semester Hours .....	10.00	9 Semester Hours .....	25.00
4 Semester Hours .....	13.00	10 Semester Hours .....	25.00
5 Semester Hours .....	16.00	11 Semester Hours .....	25.00
6 Semester Hours .....	19.00	Full time (12 or more hours) ..	25.00



Graduation fees will be due and payable on notification from the dean of the student's respective college.

### Music Fees

Piano practice, one hour per day .....\$3.00

### Laboratory Fees

Laboratory fees are stated in the description of the courses and are payable at the time of registration. (See Courses of Instruction.)

### Military Science Fee

A deposit of \$25.00, payable at the time of registration, is required of ROTC students to cover possible loss or damage of uniforms and equipment issued. This deposit is returned at the completion of each academic year or upon withdrawal of the student from ROTC.

## ROOM RENT

(Per Semester of 18 Weeks)

### Laidley Hall

Small doubles, each student .....	\$60.00
Large doubles, each student .....	60.00
Singles .....	65.00

### College Hall

Doubles. each student .....	\$60.00
Singles .....	65.00

### Freshman Women Dormitory

Doubles .....	\$65.00
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### Hodges Hall

Doubles and Multiples, each student .....	\$60.00
Singles .....	65.00

(Per Summer Term of 6 Weeks)

### All Dormitories

Singles and Doubles, each student .....	\$22.00
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(Per Day for Short Periods of Time)

For persons who are in residence for short periods the charge will be \$2.00 per day. An additional fee of \$1.00 will be charged if linens are furnished by the dormitory.



## BOARD

All students living in the dormitories must purchase meal books and take their meals in the College Dining Hall. Meals are available to students rooming off the campus at the same rate as resident students.

The cost of board is \$180.00 for each semester. This cost is based on prevailing prices and subject to change in the event of continued price increases in food cost. Board may be paid in full upon entrance or in two equal installments each semester. The first installment is due and payable on the day of registration; the second installment is due on the first day of the second half of the semester.

Meal books are not valid during vacation periods. If it is necessary for the student to remain on the campus during such periods, he can obtain meals at regular cafeteria prices if the cafeteria remains open.

Since freshmen are required to be on the campus prior to registration to participate in Freshman Orientation, those freshmen residing in the dormitories must purchase a meal book upon their arrival. This book identifies and entitles the freshman purchaser to meals in the cafeteria during the orientation periods at no additional charge.

The effective date for use of tickets in the meal book for all students (upperclassmen and freshmen) will be the first day of regular registration.

Two per cent (2%) consumers' tax will be added to the board and room charges. This tax must be paid in full each semester on the first room and board payment.

Effective date for refunds and reductions will be from the first day of regular registration for the semester or summer term.

NOTE: No deduction or refund will be made in board charges unless the student has been absent from the campus for *more* than a calendar week because of personal illness or a college-approved trip. No deduction or refund will be made in room charges for absences.

## ESTIMATE OF EXPENSES

Estimated semester expenses of a student at Marshall College are outlined in the following table. These estimates are made of both minimum and average expenses and cover the usual charges for board, room, tuition, and fees which are paid to the college. In addition, the costs of college supplies, personal and social expenses are calculated.

	Minimum	Average
TUITION .....	\$ 25.00	\$ 25.00
Student Activity Fee .....	15.25	15.25
Health Service .....	2.25	2.25
Board .....	180.00	180.00
Room .....	60.00	60.00
Books, Gym outfit .....	30.00	35.00
Supplies, laboratory fees, etc. ....	10.00	15.00
	\$322.50 plus tax	\$332.50 plus tax
Out-of-state students pay an additional fee of.....	\$150.00	\$150.00

The activity fee entitles students to admission to the Forum, Artists Series for the season, athletic events, College Theatre, copies of *The Parthenon* (college paper), *The Chief Justice* (college yearbook), use of the Student Union, Identification Card, and the advantage of hearing lectures brought to the Marshall College Auditorium.



## REFUND OF FEES

### I. Withdrawal from college

Students who withdraw regularly from the college may have a refund in accordance with the following schedule:

	Amount of Refunds
During the first and second weeks.....	90%
During the third and fourth weeks.....	70%
During the fifth and sixth weeks.....	50%
Beginning with the seventh week.....	No refunds allowed

Laboratory, activity and course fees are to be refunded in the same percentages as outlined above.

All refunds are to be estimated from the first day of registration of a given semester or term.

### II. Withdrawals due to administrative action

When it becomes necessary to cancel a class by administrative and/or faculty action, all students involved will be granted full refund for the class cancelled unless the students register in another course of like value in terms of semester hours. This section shall not apply to withdrawals due to disciplinary action.

### III. Fees for fractional hour courses

Tuition for one-half semester hour courses or other fractional hour credit shall be the same as that charged for one semester hour. The present rate of three dollars (\$3.00) per semester hour shall apply to each hour or fraction thereof for resident students and fifteen dollars (\$15.00) per semester hour for non-resident students.

### IV. Fees for auditing courses

a. Faculty members may audit courses without charge. All faculty members desiring to audit courses must secure the approval of their Dean as well as that of the instructor of the course or courses they desire to audit. It will, also, be necessary for them to enroll in the regular manner for such courses.

b. All persons other than faculty members who desire to audit classes shall enroll and pay fees in the same manner and at the same tuition rate as students enrolling for credit.

### V. ROTC Deposit

The \$25.00 ROTC deposit, payable at the time of registration to cover possible loss or damage of uniforms or equipment, is returned at the completion of each academic year or upon withdrawal of the student from ROTC.



## **DIVISION OF ADULT EDUCATION**

### **EVENING SCHOOL**

The method of meeting community needs is expressed primarily in the Evening School. Here, non-credit courses may be taken for personal, business, cultural, domestic, industrial and recreational improvement or as a refresher of other interests.

Evening classes will be provided for any group not interested in college credit which wishes to meet for one to twelve or more sessions to discuss some topic of vital interest to them in their daily work. A class of twelve or more students is required to organize a special interest group.

It is the desire of Marshall College through its Evening School to serve all who feel the need or have the desire to extend their education, therefore, adult education does not limit itself to non-credit courses. It is possible to earn college credit which will serve the needs of those working toward college degrees in the various fields of study.

For those who want college credit there are two lines of work:

1. Undergraduate work will appeal to all who are high school graduates and who wish to improve their employment status through education or those who want to extend their knowledge in some direction or wish to satisfy their intellectual curiosity by following a particular line of studies.

2. Graduate work for those who hold a baccalaureate degree and who wish to work for a master's degree. Work done in evening classes carries residence credit. By taking advantage of the evening program, the time needed to secure a master's degree may be shortened.

### **EXTENSION CLASSES**

Classes in extension are offered to meet the demands of teachers and others who cannot be in residence. Credit or non-credit courses in several fields are offered each semester.

The extension work is given on a semester basis. Not more than 28 semester hours are acceptable toward an undergraduate degree and 12 hours toward a master's degree. Not more than 6 semester hours may be earned during a semester nor more than 9 semester hours within one year. (This applies to public school teachers under contract in the state).

The fee for extension work is \$7.50 per semester hour, payable in advance.

The quality of instruction in extension is on the same high level as that of regularly taught classes on the campus, since all staff members doing extension are full time faculty members.

Admission requirements for those who desire credit in extension are set forth below:

#### **Undergraduates**

Undergraduates who wish to take extension courses and who have not been previously enrolled in Marshall College must furnish the Registrar's Office immediately with official transcripts of credit from other colleges or with transcripts of high school credit. Those who wish to earn credit to be transferred to other colleges or to renew certificates may satisfy this requirement by having letters of good standing written from their undergraduate colleges to the Registrar of Marshall College.



## Graduate Students

College graduates who wish to begin work for the master's degree in extension courses must do the following before credit can be earned to count toward a degree in Marshall College or to be transferred to another graduate school.

1. File application for admission to the Graduate School on a form furnished by the Graduate School Office.
2. Furnish two official transcripts of all previous college work. Those holding the bachelor's degree from Marshall College must have one copy of a transcript sent from the Registrar's Office to the Graduate School Office.
3. Receive a letter from the Dean of the Graduate School concerning eligibility for admission.

Extension students who are college graduates and who do not wish to work toward a degree may be excused from the transcript and application requirements by signing a form forfeiting graduate credit. However, these students must furnish the Registrar's Office with letters of good standing from their undergraduate colleges. Compliance with these regulations is a required part of the registration procedure for graduate students.

Students who fail to comply with these regulations within a reasonable time (dates to be announced each semester) may be withdrawn from courses by administrative action by the Dean of the Graduate School.

## COMMUNITY SERVICES

As a state-supported institution Marshall College recognizes its obligation to provide to the people of West Virginia certain community services in addition to the regular academic campus program. Some of the services available upon request are:

**Speakers and Programs**—The division will be glad to receive requests for speakers to appear before school, civic and community organizations, scientific societies, service clubs, etc.

A limited number of musical and dramatic programs are available for presentation during the year.

**School Surveys and Consultant Services**—The college will provide consultant services and assist in surveys in the field of education. Counties desiring assistance with such problems as transportation, building programs, curriculum development and other problems of similar nature should request such assistance. The Director should be informed of the needs and desires of a particular organization or county before the beginning of the semester whenever possible.

**Conferences and Workshops**—In so far as possible facilities of the College will be made available to industrial, educational and other groups for conducting special conferences and workshops.



## **GRADUATE SCHOOL**



**FACULTY**

**GENERAL INFORMATION**

**COURSES OF INSTRUCTION**

# COURSE OF INSTRUCTION

## GENERAL INFORMATION

### SYMBOLS

## STANDARD SCHOOL



## THE GRADUATE FACULTY

- JAMES J. BARRON, *Professor of Mathematics*, 1946\*.  
Ph.D. 1934, University of Wisconsin; post-doctorate study, Yale University, Brown University.
- JOHN FRANK BARTLETT, *Dean of the College of Arts and Sciences and Professor of Chemistry*, 1932.  
Ph.D. 1932, West Virginia University; post-doctorate study, University of Zurich, University of Edinburgh, and Technische Hochschule in Munich.
- ROBERT LLOYD BECK, *Professor of Philosophy*, 1934.  
Ph.D. 1931, Cornell University.
- ROBERT LEE VERN BRITTON, *Professor of Geography*, 1930.  
M. S. 1930, University of Chicago; graduate study, University of Chicago, The Ohio State University.
- JACK RICHARD BROWN, *Professor of English*, 1948.  
Ph.D. 1937, Northwestern University.
- ARTHUR SIDNER CARPENTER, *Associate Professor of Art*, 1951  
M.A. Ed. 1947 Pennsylvania State College; graduate study, Pennsylvania State College, Marshall College.
- SAM E. CLAGG, *Associate Professor of Geography*, 1948  
Ed.D. University of Kentucky, 1955.
- PAUL H. COLLINS, *Associate Professor of Education and Director Adult Education*, 1949  
M. A. 1943, West Virginia University; graduate study, Harvard University, University of Virginia.
- ELIZABETH COMETTI, *Professor of History*, 1948.  
Ph.D. 1939, University of Virginia; post-doctorate study, Columbia University.
- JOHN W. CREIGHTON, *Assistant Professor of Music*, 1945.  
M. A. 1942, Northwestern University; graduate study, St. Louis University, Juilliard School of Music.
- EDWIN A. CUBBY, *Associate Professor of Social Studies*, 1949.  
M. A. 1941, Syracuse University; graduate study, Syracuse University.
- HOLLIE CLAYTON DARLINGTON, *Professor of Biology*, 1930.  
Ph.D. 1942, University of Chicago.
- LESLIE MARTZ DAVIS, *Professor of Geography*, 1939.  
Ph.D. 1935, University of Chicago.
- CONLEY HALL DILLON, *Professor of Political Science*, 1934.  
Ph.D. 1936, Duke University.
- CAROLYN FORE DWIGHT, *Assistant Professor of Business Administration*, 1938.  
M. B. A. 1938, The Ohio State University; graduate study, University of Chicago.
- RALPH M. EDEBURN, *Professor of Zoology*, 1945  
Ph.D. 1938, Cornell University.
- IRENE CLARK EVANS, *Assistant Professor of Business Administration*, 1939.  
M. A. 1940, Columbia University; graduate study, University of Chicago.
- MADELEINE HOFFMAN FEIL, *Associate Professor of Psychology*, 1946.  
Ph.D. 1948, The Ohio State University.

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\* Date following name indicates first appointment to a staff position at Marshall College.



- WALTER C. FELTY, *Assistant Professor in Education and Social Studies and Director of Audio-Visual Aids*, 1950.  
M. A. 1950, Marshall College; graduate study, University of Kentucky, Indiana University.
- DOROTHY A. FISHER, *Associate Professor of Zoology*, 1946.  
Ph.D. 1942, Cornell University; post-doctorate study, University of North Carolina, Cornell University.
- FREDERICK A. FITCH, *Associate Professor of Physical Education*, 1930.  
M. A. 1932, New York University; graduate study, New York University, Florida State University.
- RUBY CALVERT FOOSE, *Associate Professor of Home Economics*, 1946.  
M. A. 1940, The Ohio State University; graduate study, University of Tennessee.
- RUTH ELIZABETH COFFMAN GARRETT, *Assistant Professor of Speech*, 1953.  
M.A. 1946, Ohio University; graduate study, Northwestern University.
- MIRIAM PEARL GELVIN, *Professor of Music*, 1940.  
Ph.D. 1956, Northwestern University.
- MARY ALICE GOINS, *Associate Professor of Mathematics*, 1946.  
M. A. 1933, University of Michigan; graduate study, University of Chicago University of Kentucky, Purdue University, University of Michigan.
- CLEO MARGARET GRAY, *Associate Professor of Home Economics*, 1947.  
M. S. 1927, University of Wisconsin; graduate study, University of Wisconsin, Iowa State College; Columbia University, University of Southern California.
- REX C. GRAY, *Assistant Professor of Education and Director of Student Teaching in Elementary Education and Principal of Elementary Laboratory School*, 1948.  
M. A. 1941, West Virginia University; graduate study, University of Minnesota.
- NORMAN BAYARD GREEN, *Professor of Zoology*, 1938.  
Ph.D. 1952, The Ohio State University.
- MARGARET THELMA HAMPEL, *Professor of Education*, 1953.  
Ed. D. 1938, Columbia University.
- GEORGE JAMES HARBOLD, *Associate Professor of Speech*, 1947.  
Ph.D., 1955, The Ohio State University.
- HUNTER S. HARDMAN, *Associate Professor of Mathematics*, 1946.  
M. S. 1940, University of Chicago; graduate study, The Ohio State University, University of Pittsburgh.
- CHARLES PRICE HARPER, *Professor of Political Science*, 1946.  
Ph.D. 1937, The Johns Hopkins University.
- ARVIL E. HARRIS, *Dean of the Graduate School and Professor of Political Science*, 1936.  
Ph.D. 1936, State University of Iowa.
- HAROLD M. HAYWARD, *Professor of Sociology*, 1938.  
Ph.D. 1937, Clark University.
- HERSCHEL HEATH, *Professor of History*, 1947.  
Ph.D. 1933, Clark University.
- CLARKE FREAS HESS, *Associate Professor of Education*, 1951.  
M. A. 1947, Clark University; graduate study, University of Pennsylvania.
- JOHN HOLLAND HOBACK, *Associate Professor of Chemistry*, 1945.  
Ph.D. 1945, West Virginia University.



- RAY WAYNE HUGOBOOM, *Associate Professor of Music*, 1950.  
M. A. 1941, University of Wisconsin; graduate study, Indiana University, Fontainebleau Conservatory, Conservatoire de Paris, France.
- JOSEPH S. JABLONSKI, *Professor of Art*, 1929.  
M. A. 1925, Harvard University; graduate study, University of Cincinnati.
- RAYMOND ELLSWORTH JANSSEN, *Professor of Geology*, 1942.  
Ph.D. 1939, University of Chicago.
- LOUIS B. JENNINGS, *Assistant Professor of Bible and Religion*, 1948.  
B. D. 1945, Crozer Theological Seminary; graduate study, University of Chicago, University of Pennsylvania.
- VERNON DAKE JOLLEY, *Professor of Business Administration*, 1949.  
M. B. A. 1935, University of Michigan; graduate study, University of Chicago.
- CHARLES LAWRENCE KINGSBURY, *Professor of Music*, 1950.  
Ed.D. 1945, Indiana University.
- COLONEL RUFUS L. LAND, *Assistant Professor of Economics*, 1946.  
M. A. 1948, Marshall College; graduate study, University of Virginia; The Ohio State University.
- ALFRED P. LANEGGER, *Assistant Professor of Music*, 1947.  
M. M. 1947, Syracuse University; diploma, State Academy of Music, Munich.
- CARL LEIDEN, *Associate Professor of Political Science*, 1949.  
Ph.D. 1949, State University of Iowa.
- KENNETH KARL LOEMKER, *Professor of Psychology*, 1930.  
Ph.D. 1941, University of Chicago.
- DONALD C. MARTIN, *Professor of Physics*, 1943.  
Ph.D. 1936, Cornell University.
- CARL BARTH MILLER, *Associate Professor of Business Administration*, 1946.  
M. A. 1942, Northwestern University; graduate study, University of Kentucky, University of Colorado.
- HOWARD LEONARD MILLS, *Associate Professor of Botany*, 1951.  
Ph.D. 1951, State University of Iowa.
- MARVIN O'NEILL MITCHELL, *Assistant Professor of English*, 1952.  
Ph.D. 1953, University of North Carolina.
- CHARLES HILL MOFFAT, *Professor of History*, 1946  
Ph.D. 1946, Vanderbilt University.
- WOODROW MORRIS, *Associate Professor of Education*, 1950.  
Ph.D. 1954, The Ohio State University.
- GEORGE EDWARD MUNN, *Associate Professor of Economics*, 1950.  
M. A. 1939, University of Wisconsin; graduate study, University of Wisconsin.
- PAUL N. MUSGRAVE, *Professor of Education and Director of Student Teaching in Secondary Education*, 1938.  
Ph.D. 1936, West Virginia University.
- REVA BELLE NEELY, *Assistant Professor of Home Economics*, 1946.  
M. E. 1946, Colorado Agricultural and Mechanical College.
- LAWRENCE HOWARD NUZUM, *Assistant Professor of Education, High School Mathematics, and Principal of Laboratory High School*, 1947.  
M. A. 1939, West Virginia University; graduate study, University of Tennessee.



- THOMAS S. O'CONNELL, *Assistant Professor of Music*, 1948.  
M. Mus. 1947, University of Michigan.
- CLAYTON R. PAGE, JR., *Associate Professor of Speech*, 1946.  
M. A. 1939, The Pennsylvania State College; M. A. 1940, Baylor University;  
graduate study, University of Southern California, State University of Iowa.
- GERALD R. PHILLIPS, *Assistant Professor of Social Studies*, 1948.  
M. A. 1947, University of Minnesota; graduate study, University of Minnesota.
- EDWARD LEWIS PLYMALE, *Professor of Botany*, 1946.  
Ph.D. 1942, State University of Iowa.
- RALPH DAVID PURDY, *Professor of Education*, 1950.  
Ph.D. 1949, The Ohio State University.
- WILBUR PURSLEY, JR., *Assistant Professor of Music*, 1950.  
M. Mus. 1950, Eastman School of Music.
- ALLEN OTIS RANSON, *Professor of Speech*, 1931.  
M. A. 1935, University of Wisconsin.
- JAMES TULL RICHARDSON, *Professor of Sociology*, 1949.  
Ph.D. 1943, University of Missouri.
- MYRTLE MACDANNALD ROUSE, *Professor of Home Economics*, 1936.  
M. A. 1934, Columbia University; graduate study, Columbia University.
- ORA E. RUMPLE, *Professor of Chemistry*, 1947.  
Ph.D. 1937, Indiana University.
- CHARLES S. RUNYAN, *Associate Professor of Education*, 1953.  
Ed. D. 1953, University of Missouri.
- ALLEN W. SCHOLL, *Professor of Chemistry*, 1948.  
Ph.D., 1934, The Pennsylvania State College.
- ROBERT PORTER SECHLER, *Professor of English*, 1946.  
Ph.D. 1931, University of Pennsylvania.
- RUSSELL B. SMITH, *Professor of Education*, 1949.  
Ph.D. 1939, The Ohio State University.
- DAVID PERRY STEWART, *Associate Professor of Geology*, 1949.  
Ph.D. 1954, Syracuse University.
- PAUL D. STEWART, *Associate Professor of Political Science*, 1948.  
Ph.D. 1948, Duke University.
- HORACE GRESHAM TOOLE, *Professor of History*, 1925.  
Ph.D. 1932, University of Pennsylvania.
- FLORENCE H. VANBIBBER, *Professor of Psychology*, 1937.  
Ph.D. 1935, University of Arizona; post-doctorate study, University of Chicago.
- FRANCES W. WHELPLEY, *Associate Professor of Chemistry*, 1946.  
Ph. D. 1931, Columbia University.
- DANIEL BANKS WILBURN, *Dean of the Teachers College and Professor of Education*, 1947.  
Ed.D. 1945, The George Washington University.
- JOHN DONALD WOLSZON, *Instructor in Chemistry*, 1955.  
Ph.D. 1955, Pennsylvania State University.
- ROY CLEO WOODS, *Professor of Education*, 1927.  
Ph.D. 1927, State University of Iowa.



## GENERAL INFORMATION

In October, 1938, The West Virginia Board of Education approved regulations under which Marshall College is authorized to conduct graduate instruction leading to the Master of Arts and the Master of Science degrees. Graduate work was first offered during the summer session of 1939. The first master's degrees were conferred at the spring commencement of 1940.

### Degrees

The degree of Master of Arts or Master of Science may be earned with a major in the following fields: biological sciences, chemistry, education, English, geography, history, political science, psychology, and sociology. Special programs for teachers leading to the Master of Arts degree are: elementary education, English-education, social studies-education, music-education, physical science-education, home economics-education, and business administration-education.

Fields that offer work for a minor only are art, Bible, economics, geology, mathematics, philosophy, and speech.

Ordinarily the Master of Arts degree will follow the Bachelor of Arts degree, and the Master of Science degree will follow the Bachelor of Science degree; however, in case a Bachelor of Arts degree has been received on qualifications which meet present requirements for the Bachelor of Science degree, either the Master of Arts or the Master of Science degree may follow at the option of the candidate.

### Objectives of Graduate Work

1. To meet a regional need for an opportunity for graduate study.
2. To aid in the development of a corps of master teachers, administrators, and counselors for the public schools of West Virginia.
3. To prepare students to use and evaluate the better known techniques of research and to appreciate their contribution to knowledge.

### Admission to Graduate Study

Admission to graduate courses is open to qualified graduates of Marshall College and of other accredited colleges and universities provided their undergraduate records are satisfactory. The holding of a college degree does not automatically make one eligible for admission to the Graduate School. Admission to graduate courses is based on official transcripts of college credits, the information provided on the application for admission form, and on whatever examinations and conditions the Graduate School may require in any given case. An average of 2.5 (C plus) is required for unconditional admission. Grades in certain non-academic activity courses outside the field in which the student wishes a graduate major may be ignored in computing the average for admission.

Seniors in Marshall College and all other persons planning to apply for admission to the Graduate School are urged to take the Graduate Record Examination which is given at regular intervals under the direction of the Director of Admissions. Information concerning the time of these examinations may be had through that office. Special preparation is not required for taking the Graduate Record Examination. The profile score on this examination is a valuable aid in planning the student's program and in determining his capacity to do a satisfactory quality of graduate work. Applicants for admission may be required to take the Graduate Record Examination or any other special or standard college ability or achievement test as a condition of admission. The major department may require the applicant to make a satisfactory showing on a special written or oral examination.



Application for admission should be filed in the Graduate School office at least one month prior to the opening of the semester or term in which the student plans to begin graduate work. Two official copies of the applicant's undergraduate transcript should be mailed directly from the student's undergraduate college to the Graduate School office at the time of filing the application. Students who hold undergraduate degrees from Marshall College must furnish a transcript for the Graduate School Office at the time that they submit the application for admission. All graduates of standard four-year colleges must register in the Graduate School.

Registrations for 500 series courses may be changed by administrative action to the 400 series course numbers if two transcripts of work for the baccalaureate degree and an application for admission to the Graduate School are not received within thirty days after registration.

Students who have not been admitted to the Graduate School and who wish to begin graduate work in extension courses must furnish transcripts and file application for admission as a part of the registration procedure. If these are not furnished immediately, it is the prerogative of the Dean of the Graduate School to withdraw the student from the course by administrative action, or, to direct that the student shall not receive credit that may be counted toward an advanced degree in any institution.

Seniors with outstanding academic records who, in their last term or semester, do not require full time to complete the requirements for the baccalaureate degree may be permitted to register for a limited amount of graduate work with the approval of the student's undergraduate dean, the Dean of the Graduate School, and the instructor with whom the work is taken. This practice is not encouraged.

### The Adviser

The Dean assigns the student to an adviser from his major department. The adviser will assist the student in planning his program for the master's degree. If the student writes a thesis, the adviser will direct the student in that work. The adviser serves as chairman of the committee to conduct the student's oral examination, assembles questions for the comprehensive written examination and reports the results of these examinations to the Graduate School Office. Admission to candidacy for the master's degree and admission to the comprehensive examination must carry the approval of the adviser. The student should keep in close touch with his adviser during the progress of his work.

### General Requirements for Master's Degree

**Requirements in Course.** A minimum of thirty-two hours of graduate credit shall be earned for the master's degree. Of this thirty-two hours, credit not to exceed six semester hours may be earned by writing a thesis or problem report. Those who do not write a thesis or problem report must complete thirty-six hours in course work for the degree.

A minimum of eighteen hours must be earned in one subject known as a major and a minimum of six hours in another subject known as a minor. Courses may be taken in a third closely related field if approved by the adviser. In special teacher-education curriculums courses may be scattered among several fields with the approval of the adviser.

In departments which offer specialized professional curricula, the requirement of a minor may be eliminated, thus permitting the student to concentrate or to diversify his graduate work toward the attainment of professional competence. Permission to eliminate the minor will be granted only in certain curricula previously approved by the dean and only when recommended by the adviser. This option will be granted sparingly.

As a general rule, at least twelve hours is the undergraduate prerequisite for a graduate major. Six hours is the prerequisite for the minor. A few departments require more than the minimum for admission to graduate courses.



The undergraduate prerequisite may be waived with the consent of the dean and department concerned.

At least one half of the work counted for the master's degree must be taken in courses numbered 600 to 699. These courses are open to graduate students only. Courses numbered 500 to 599 are the same courses that carry a 400 series number accompanied by the asterisk (400\*) for graduate students in earlier college announcements. Only persons wishing to work toward a master's degree may register for a 500 series course and they must register in the Graduate School to receive graduate credit.

Those who are not working toward a master's degree must use the 400 series numbers. Credit earned under a 400 series registration number after September 1, 1954, cannot be converted to graduate credit.

**Requirements in Scholarship and Personal Qualities.** At least one half of the work attempted for credit toward the master's degree shall carry a grade of B or above, and no work on which a grade lower than C is earned may be applied in meeting the requirements for the degree.

Graduate students are expected to be able to write simple, clear, correct composition with reasonable effectiveness. Deficiency in this skill may be regarded as sufficient grounds for delaying recommendation for admission to candidacy or recommendation for graduation until a reasonable standard of excellence is demonstrated by examination.

A clinic in English composition for graduate students is conducted by the English Department, and students needing formal instruction are strongly urged to make use of its facilities.

It must be understood that the mere meeting of minimum requirements in hours of credit earned may fall short of what is considered eligibility for the degree. The work taken must constitute a unified program in the field. It must be completed at a level of competence befitting graduate work. To correct obvious weaknesses in the student's program for the degree, additional courses or other work may be required beyond the minimum as a condition of being admitted to candidacy or recommended for the degree.

Persons possessing personal qualities which may render them unacceptable among those with whom they may work or which may reflect discredit on the profession, on the master's degree, and on Marshall College will not be recommended for the degree. The College has the final right to determine whether the candidate has such qualities.

### Thesis

**Regulations Governing Thesis Requirement.** A thesis or problem report of a research character on a subject in the major field of interest completed to the satisfaction of the major department may be submitted for credit not to exceed six semester hours. The amount of credit allowed will be determined by the quality and character of the paper submitted. Students who will profit more by doing additional course work in lieu of a thesis or problem report must earn thirty-six course hours. The adviser and student will be guided by the student's needs and interests in determining whether he is to write a thesis.

Students writing theses register for Thesis or Problem Report 680, 681 in the major field. Chemistry majors register for Research 682 to 691 inclusive. The student will continue to register and pay tuition until the thesis is accepted and a final grade submitted by the adviser to the Registrar's Office. The adviser will report a mark of Pr. (Progress) for satisfactory work at the end of each term or semester until the thesis is accepted, at which time a final grade will be reported. The adviser may report a final grade of F on a research course for thesis credit at the end of any semester or term when in his opinion because of irregular reports of progress or poor work the student should not be permitted to continue to register for research.

The thesis must be sufficiently advanced one month before the time of graduation to assure the adviser of its acceptability. Three unbound copies of the thesis or problem report must be filed with the Dean of the Graduate



School not later than two weeks before the date of graduation. The thesis or problem report must be prepared according to the form furnished by the Graduate School Office.

**Value and Nature of Thesis.** The experience of collecting, assembling, and interpreting a body of information for a thesis is essential in developing the capacity to do independent work. This is a primary difference between graduate and undergraduate work. For capable graduate students, preparation of the thesis may be of great value. To be urged to write a thesis is a compliment to one's ability.

The thesis may consist of a written interpretation of a body of facts and opinions gained through critical reading and independent study. It may be a report of the results of a research project which may or may not be a contribution to knowledge. For teachers, it may be a presentation of a directed learning activity showing the purpose, problems involved, procedure, and effectiveness of the project.

### Admission to Candidacy

It should be remembered that admission to graduate courses does not imply admission to candidacy for the master's degree. The student may be admitted to candidacy only after he has proved his ability and fitness to do graduate work in a chosen field. Immediately after the completion of twelve semester hours of work with satisfactory grades, the student should apply for admission to candidacy for the degree. The application, bearing a proposed program for the rest of the work for the degree and a record of the work already completed must be made on a form secured from the office of the Dean. Examinations may be required for admission to candidacy for the degree.

### Residence

A year's work in residence is required for the master's degree. At least thirty-six weeks must elapse between matriculation and graduation. This period may be shortened for those holding the bachelor's degree from Marshall College upon recommendation of the student's adviser.

All requirements for the master's degree must be met within five years from date of matriculation unless an extension in time is granted by the dean. A student whose time is extended for completion of the degree must meet the requirements carried in the catalogue in the year of the conferring of the degree. A student who does work in extension courses for graduate credit must be in residence one semester and one summer term, or four six-week summer terms.

### Part-Time Graduate Students

Teachers in service who are doing graduate work will be limited in the amount of credit that may be earned by the regulations of the State Board of Education of West Virginia, or of corresponding regulations of other states in which they may be employed.

Graduate students in other employment will be required to limit their schedules in proportion to the time available for graduate study. As a general practice, the maximum graduate load of a student in full-time employment shall not exceed six hours in a semester or three hours in a six-week summer term. This limit may be exceeded only by permission granted by the student's adviser and the dean after the student has given satisfactory evidence that he can do more than an average quality of work on his total schedule.

### Transfer of Credit and Extension Credit

The Dean may, upon the student's petition, grant to a student the privilege of transferring to Marshall College, for application on the master's degree, a maximum of six graduate hours earned in another institution when, in the judgment of the Dean and the major department, such credit is to the ad-



vantage of the student's program. Occasionally it may be recommended that a student earn six hours in another institution in work not offered by Marshall College.

Work done in extension and work transferred from another institution shall not total more than twelve semester hours. Graduate credits transferred from other institutions may be accepted so long as they are not superannuated for graduate credit toward meeting the requirements for a degree in the institution from which the transfer of credit is requested. The total credit that may be earned by extension and transferred from another institution shall not exceed nine semester hours in any one field.

### **Comprehensive Examinations**

A comprehensive examination covering the work of the major field must be taken under the direction of the Dean after it appears that the course work in progress will be successfully completed. The examination may be either oral or written, or both. The examination is not to rest primarily upon the specific courses pursued but is to test the student's maturity of thought in his field of specialization. The questions for the written examination will be prepared by the student's adviser in consultation with other instructors in the major field. The oral examination will be conducted by a committee of three appointed by the Dean so as to include the student's adviser and the head of the major department.

A candidate who fails on either the written or oral comprehensive examination may take a second examination at the discretion of the student's major department and the Dean of the Graduate School.



**COURSES OF INSTRUCTION BY DEPARTMENTS****ART**

Professor Jablonski

Associate Professor Carpenter

**501-502. History of Art.** 3-3 hrs. I II, S. (Formerly 401\*-402\*)

A survey of the development of architecture, sculpture, painting, and the minor arts to ca. 1400 A. D. and from 1400 A. D. to the present.

**601. Methods in Elementary Art Education.** 3 hrs. S. (Formerly 501)

For graduate students with limited experience in the arts and crafts, wishing to familiarize themselves with methods and materials used in art education in the elementary school. Laboratory fee: \$3.00

**603. Experiencing Art in Everyday Life.** 3 hrs. S. (Formerly 503)

Appreciation of architecture, painting, sculpture, community planning, home designs, furniture design, and use of color.

**650-653. Special Topics or Projects in Art.** 3; 3; 3; 3 hrs.

Special studies in art education or art history for those who wish to carry out selected creative projects in drawing and painting, ceramics, clay modeling, the graphic arts, or applied design.

**BIBLE AND RELIGION**

Assistant Professor Jennings

**518. Development of Religious Ideas.** 3 hrs. I, S.

A study of the sources of religious thought of western culture.

**BIOLOGICAL SCIENCES**

Professors Darlington, Edeburn, Green, Plymale

Associate Professors Fisher, Mills

A minimum of eighteen hours in graduate courses in the biological sciences must be completed. At least fifteen hours must be selected from the following courses: Biological Science 502, 601, 602, 604, 606, 607, 615 and 616. Candidates for the master's degree are expected to have a knowledge of both the plant and animal life sciences. Students who enter the graduate school with a concentration in one of these fields and with little work in the other will be expected to diversify their studies in the biological sciences.

Students who do not have all the twelve hours of undergraduate work required for admission to full graduate standing may be permitted to make up this work while taking graduate courses. Deficiencies in undergraduate preparation must be made up before admission to candidacy for the degree. For the master's degree in the biological sciences the combined graduate and undergraduate courses must total at least forty semester hours.

The courses offered for majors in this field are planned to meet the needs of teachers and of those who may wish to do further graduate and research work. Persons wishing to work as conservationists, game technicians, public park naturalists, geneticists or to do pest control work will find graduate courses in the biological sciences helpful.

The Seminar is intended to develop oral and written competency, to familiarize the student with current literature and its use in the mechanics of scientific writing and to review the basic principles in the field of the biological sciences. A graduate student is expected to include the seminar in his course of study each registration that he is enrolled as a student on the campus. A student is expected to present at least two hours credit in Seminar toward graduation requirements for the master's degree in Biological Science.



A comprehensive oral examination covering the work in the major field is required. It will test the student's knowledge of the fundamentals, as well as his maturity of thought, in his major field.

Laboratory courses require a laboratory fee of \$2.00 with the exception of Biological Science 611 which is \$4.00 and Biological Science 602 which is \$5.00.

**501. Laboratory Methods.** 2 hrs. (Formerly 401\*)

One hour lecture and two hours laboratory a week. Basic principles of collecting, culturing and preparation of laboratory specimens and materials.

**502. Vertebrate Natural History.** 3 hrs. (Formerly 402\*)

One hour lecture and four hours laboratory a week. The origin, classification, life histories, habits and distribution of fishes, amphibians, reptiles and mammals.

**508. Ornithology.** 3 hrs. II, S. (Formerly 408\*)

Two hours lecture and two hours laboratory a week. Identification, distribution, migration and breeding activities of birds.

**513. Principles of Organic Evolution.** 2 hrs. (Formerly 413\*)

The progress of animal life through time with a discussion of known causes. No laboratory.

**514. Wildlife Conservation.** 3 hrs. (Formerly 414\*)

The natural history, economic importance and control of wildlife. Lecture and field study.

**582. Conservation of Soil, Forests, and Wild Life.** 3 hrs. (Formerly 482\*)

Primarily for teachers in the biological sciences, general and applied sciences; field work, seminars, and demonstrations on phases of conservation.

**601. Vertebrate Embryology.** 4 hrs. I. (Formerly 501)

Two hours lecture and four hours laboratory a week. Vertebrate development based chiefly on frog, chick and pig embryos.

**602. Comparative Vertebrate Anatomy.** 4 hrs. II. (Formerly 502)

Two hours lecture and four hours laboratory a week. Principles of structure, function, and relationships of vertebrate systems with emphasis on the dogfish and cat.

**604. Plant Physiology.** 4 hrs. (Formerly 504)

Two hours lecture and four hours laboratory a week. Experimental study of growth, nutrition and correlative phenomena in plants. Emphasis on food synthesis, translocation, and physio-chemical changes in growth and development including correlative functions of plant growth substances. Laboratory experiments planned to develop technique and independence in investigation.

**605. Advanced Economic Botany.** 3 hrs. (Formerly 505)

A study of the origin and development of economic plants with special emphasis upon problems in relation to possible use of many plants not widely known.

**606. Problems in Ecology.** 4 hrs. (Formerly 506)

Problems dealing with environmental factors and their control of the development and distribution of animal and plant communities.

Prerequisite: Ten hours biological science or consent of instructor.

**607. Genetics.** 4 hrs. I, S. (Formerly 507)

Three hours lecture and two hours laboratory a week. The fundamental principles and mechanisms of inheritance including their human applications.



**610. History of Biological Science. 2 hrs. (Formerly 510)**

A study of the development of biology as a science, including biographies of the great scientists from Aristotle to the present.

**611. Bacteriology. 4 hrs. I, II, S. (Formerly 511)**

Two hours lecture and four hours laboratory a week. The more important techniques of culture, isolation and identification of microbes. Consideration of serological procedures, current concepts of immunology, fundamental aspects of physiological processes including chemistry and physiology of microbial cells, growth, effects of physical and chemical agents on bacteria, enzymes, nutrition and microbial fermentations.

**613-614. General Entomology. 2-2 hrs. (Formerly 513-514)**

Collection, identification, classification and mounting of insects.

**615. Advanced Plant Morphology. 4 hrs. (Formerly 515)**

Two hours lecture and four hours laboratory a week. Characteristics of the great plant groups. Discussion of the important steps in the development of plants.

**616. Plant Taxonomy. 4 hrs. (Formerly 516)**

Two hours lecture and four hours laboratory a week. Identification and classification of seed plants and ferns of eastern United States. Readings in history and principles of taxonomy, rules of nomenclature and related topics.

**625. Human Anatomy and Physiology. 4 hrs. II. (Formerly 525)**

Three hours lecture and two hours laboratory a week.

The structure and functions of the human body.

**642. Investigations in Conservation. 2 hrs. (Formerly 542.)**

Sponsored by cooperating colleges at Jackson's Mill. Individual work on problems of conservation under the direction of staff members. Evening seminars, operation and sources of audio-visual equipment in conservation.

**650-651-652. Special Problems. 1-3; 1-3; 1-3 hrs. (Formerly 550-551-552)**

By permission of adviser.

**660-661-662. Seminar. 1; 1; 1 hr. (Formerly 560, 561, 562)****680-681. Thesis or Problem Report. I and II. 1-3; 1-3 hrs. (Formerly 580-581)**

By permission of adviser.

**BUSINESS ADMINISTRATION**

Professor Jolley

Associate Professor C. B. Miller

Assistant Professors Dwight, Evans

**504. Secretarial Training. 3 hrs. I. (Formerly 404\*)**

Development of a knowledge of business procedures, techniques, and customs with which a secretary should be familiar. Secretarial skills integrated through problem-type assignments.

Prerequisite or corequisite: Business Administration 301 and 305.

**505. Office Practice. 3 hrs. II. (Formerly 405\*)**

Work in cooperating business offices for approximately fifteen hours per week and weekly conferences.

Prerequisite: Business Administration 404 or 504.

**507. Problems of Business Law. 3 hrs. I, S.**

Readings and case reports on current legal problems relating to business.

Prerequisites: Business Administration 307 and 308 or Business Administration 307 and graduate standing.



**511. Cost Accounting. 3 hrs. I. (Formerly 411\*)**

Principles of industrial cost accounting; job order, departmental, and process costs.

Prerequisite: Business Administration 311 or permission of instructor.

**512. Retail Accounting. 3 hrs. I. (Formerly 412\*)**

Principles and problems relating to sales transactions; purchases; inventory valuation and control; expense classification, distribution, and control; and the preparation and analysis of operating statements for retail establishments.

Prerequisite: Business Administration 216.

**513. Auditing. 3 hrs. II. (Formerly 413\*)**

Theory and procedures; legal and social responsibilities of the auditor.

Prerequisite: Business Administration 312 or permission of instructor.

**514. Advanced Accounting Problems. 3 hrs. S, II.**

Selected problems in advanced accounting principles and procedures.

Prerequisite: Business Administration 312 or permission of instructor.

**515. Federal Taxation. 3 hrs. I, II. (Formerly 415\*)**

Problems and procedures of income tax accounting.

Prerequisite: Business Administration 312 or permission of instructor.

**521. Office Management. 3 hrs. II.**

Principles and practices, approached from the viewpoint of the office manager, through oral and written problems.

**522. Retail Merchandising Problems. 3 hrs. I. (Formerly 445\* and 446\*)**

Managerial problems pertaining to sales inventory and purchases; retail method of inventory; sales expense and pricing; mark-up and mark-down planning; stock planning.

Prerequisite: Business Administration 340.

**524. Personnel Management. 3 hrs. II**

Principles and procedures involved in the recruitment, selection, training, placement, and maintenance of an effective working force.

**534. Investments. 3 hrs. II. (Formerly 434\*)**

Nature, forms and principles of investment; institutions for facilitating investment.

**542. Techniques of Market Research. 3 hrs. II.**

Scope and importance of marketing and distribution research; product, package, and brand analysis; consumer, industrial and institutional surveys; quantitative and qualitative analysis of market data, situation analysis, sampling; tabulation and presentation techniques.

Prerequisites: Business Administration 318, 330, and 340.

**640. American Markets and Marketing. 3 hrs. I, S.**

Specialization and integrations; buying and selling; policies pertaining to pricing; marketing within and between regions; marketing efficiency and control.

Not open to students who have had Business Administration 340 or its equivalent.



**CHEMISTRY**

Professors Scholl, Rumple  
Associate Professors Hoback, Whelpley  
Instructor Wolszon

**Prerequisites for Graduate Work in Chemistry**

Graduate students majoring in chemistry must present credits in the following one year courses:

1. General Chemistry
2. Analytical Chemistry
3. Organic Chemistry
4. Physical Chemistry
5. Physics
6. Calculus

Deficiencies must be removed by taking the appropriate undergraduate courses.

An entrance examination is required of all graduate students seeking graduate credits toward a degree in chemistry. This examination will cover the four major fields of chemistry and will be administered during the first week following registration. Results of these examinations are used to guide the student in his course of study.

**Requirements for a Master of Science degree in Chemistry**

In addition to the general requirements of the graduate college, candidates for the degree Master of Science in Chemistry must fulfill the following departmental requirements.

1. Satisfactory completion of twenty semester hours in the major field of chemistry which must include the following courses: Chemistry 567, 568, 600, 631, 632 and six to eight semester hours of research credit. Graduate courses in mathematics are recommended for physical chemistry majors.
2. Students must present seven copies of an acceptable thesis (three to be delivered to the graduate college office) three weeks before graduation and defend their work in an oral examination before the Chemistry Staff.
3. Students must exhibit a suitable comprehensive knowledge of the general fields of analytical, organic, inorganic, and physical chemistry and also a satisfactory reading knowledge of either French or German. This requirement may be met by exceptional scoring on the entrance examination or through satisfactory completion of other comprehensive examinations given at some later date. In extreme cases the student may be required by his committee to audit undergraduate courses.

The Chemistry Department considers a grade of B as the minimum satisfactory grade in graduate courses, however, an occasional grade of C would not bar the candidate from graduation.

All laboratory courses require a fee and deposit payable at the time of registration.

**503. Inorganic Chemistry. 2 hrs. I. (Formerly 403\*)**

Prerequisite: Chemistry 356.

**504. Colloid Chemistry. 3 hrs. I.**

Fee \$8.00, deposit \$5.00.

Prerequisite: Chemistry 318 or 356.

**566. Organic Qualitative. 4 hrs. II. (Formerly 466\*).**

Fee \$8.00; Deposit \$10.00.

Prerequisite: Chemistry 356.



- 567. Chemical Principles.** 3 hrs. I. (Formerly 467\*).  
Prerequisite: Chemistry 458.
- 568. Chemical Principles.** 3 hrs. II. (Formerly 468\*).  
Prerequisite: Chemistry 467 or 567.
- 600. Introduction to Research.** 1 hr. I, II. (Formerly 500).  
Required of the Master of Science candidates.
- 601. Organic.** 3 hrs. I. (Formerly 501).  
Prerequisite: Chemistry 356.
- 602. Organic Quantitative.** 3 hrs. (Formerly 502).  
Fee \$8.00; Deposit \$10.00.  
Elemental analysis by micro and semi-micro techniques.  
Prerequisite: Chemistry 356.
- 603. Theories of Analytical Chemistry.** 3 hrs. I. (Formerly 503).
- 605. Methods in Biological Assay.** 4 hrs. (Formerly 505).  
Fee \$8.00; Deposit \$10.00.  
Given on demand.  
Prerequisite: Chemistry 318.
- 613. Absorption Spectroscopy.** 3 hrs. II. (Formerly 513).  
Fee \$10.00; Deposit \$15.00.  
Prerequisite: Chemistry 458.
- 614. Emission Spectroscopy.** 3 hrs. I. (Formerly 514).  
Fee \$10.00; Deposit \$15.00.  
Prerequisite: Chemistry 458.
- 615. Polarography.** 2 hrs. I. (Formerly 515).  
Fee \$10.00; Deposit \$15.00.  
Prerequisite: Chemistry 458.
- 616. X-Ray Diffraction.** 2 hrs. II. (Formerly 516).  
Fee \$10.00; Deposit \$15.00.  
Prerequisite: Chemistry 458.
- 631-632. Seminar.** 1-1 hr. I-II. (Formerly 531-532).  
Required of all Master of Science candidates.
- 680-681. Research (Thesis or Problem Report), I and II.** 1-3; 1-3 hrs. I, II, S.  
Consists of a problem selected in library research on some phase of chemistry in lieu of a laboratory research problem.
- 682-683. Research (Biochemistry).** 1-4; 1-4 hrs. I, II, S. (Formerly 582-583)  
Fee \$2.50 per hour; Deposit \$10.00. (See note below).
- 684-685. Research (Inorganic, Analytical or Assay).** 1-4; 1-4 hrs. I, II, S. (Formerly 584-585).  
Fee \$2.50 per hour; Deposit \$10.00. (See note below).
- 686-687. Research (Organic).** 1-4; 1-4 hrs. I, II, S. (Formerly 586-587).  
Fee \$2.50 per hour; Deposit \$10.00. (See note below).
- 688-689. Research (Physical Measurements).** 1-4; 1-4 hrs. I, II, S. (Formerly 588-589).  
Fee \$2.50 per hour; Deposit \$10.00. (See note below).
- 690-691. Research (Physical).** 1-4; 1-4 hrs. I, II, S. (Formerly 590-591).  
Fee \$2.50 per hour; Deposit \$10.00. (See note below).

Note: A student may receive credit for Chemistry 680-681 or 682-683 or 684-685 or 686-687 or 688-689 or 690-691, but not in combination of the above.



**ECONOMICS**

Associate Professor Munn

Assistant Professor Land

Courses may be taken with approval of the student's adviser and instructor in the course.

**502. Business Cycles. 3 hrs. II (Formerly 402\*)**

Theories of cause, and proposed solutions of the problem of economic fluctuations (inflation and depression).

Prerequisite: Economics 310 or consent of instructor.

No credit if Economics 308 has been taken.

**508. Contemporary Economic Systems. 3 hrs. I. (Formerly 408\*)**

The theories and policies of capitalism, socialism, and fascism.

Prerequisite: Economics 242 or 340.

No credit if Economics 350 has been taken.

**512. American Economic Thought. 3 hrs. II. (Formerly 412\*)**

Deals with the theory of value, welfare, and progress—largely the product of American scholars.

Prerequisite: Six hours of advanced economics.

**520. International Economics. 3 hrs. I.**

Economic problems connected with world resources, world trade and economic reconstruction of under-developed countries.

Prerequisite: Economics 241 or 255 or 340.

**525. The Economy of West Virginia. 3 hrs. II.**

Resources, labor, industry, agriculture, transportation of the West Virginia and regional area. The economics of the coal industry receives special attention.

Prerequisite: Economics 242 or 255 or 340.

**540. Classical Economics. 3 hrs. I. (Formerly 440\*)**

Classical economic theory from the Physiocrats to John Stuart Mill.

Prerequisite: Economics 242 or 340.

**544. Contemporary Economic Theory. 3 hrs. I. (Formerly 444\*)**

Economic thought from Marshall to Keynes.

Prerequisite: Economics 242 or 340.

**561. Economic Education Workshop. 3 hrs. S. (Formerly 461\*)**

Intensive review of content and methods of teaching economics designed for elementary and high school teachers who teach in economics or related field.

Prerequisite: Consent of instructor or grant of scholarship.

**562-565. Seminar in Special Topics. 2-4 hrs. I, II. (Formerly 462\*-465\*)**

To teach, as the occasion arises, any standard economics topic not listed among the usual course offerings.

Prerequisite: Economics 242 or 340 and consent of instructor.

**591-595. Research Problems. 2-4 hrs. I, II. (Formerly 491\*-495\*)**

A particular problem or problems may be assigned a student who needs work beyond the courses scheduled if such student is judged competent to carry on supervised research.

Prerequisite: Six hours of advanced work in economics and consent of instructor, head of department of economics, and dean of the college in which the student is taking his major.



### EDUCATION

Professors Wilburn, Hampel, Musgrave, Purdy, Smith, Woods

Associate Professors Cubby, Hess, Morris, Runyan

Assistant Professors Felty, R. Gray, Nuzum, Phillips

The undergraduate prerequisites for a major in education are fifteen semester hours in the field. Students who are not graduates of undergraduate programs in teacher education, but who hold a Bachelor's degree, may earn credit in graduate courses in education provided they have earned fifteen semester hours in the field at the undergraduate level including at least three semester hours in student teaching.

Students earning a master's degree in education should show competence in the following areas: Audio-visual aids, Curriculum, Guidance, History or Philosophy of Education, Human Growth and Development or Psychology of Learning, Research in Education, School Administration or Supervision, Teaching Methods, and Testing and Evaluation. It is the responsibility of the student to work out with the adviser at the beginning of his graduate work a program of studies which will provide a broad professional background.

The student's adviser may require that specific courses be completed to satisfy the requirement of competence in the above areas or to correct weaknesses that may become apparent during his progress toward the master's degree.

Students working toward an administrative certificate, the teacher-counselor certificate and the counselor certificate should plan their programs so as to include from six to twelve hours in courses not listed as education.

Elementary school teachers must follow Option A or B or work for a principal's certificate unless special exception is granted by the Dean of Teachers College.

Students admitted to administrative, counseling, or teacher-education programs must before being admitted to candidacy for the Master's Degree fulfill the following requirements:

1. Complete fifteen semester hours of graduate courses with satisfactory grades.
  - a. At least six semester hours must be completed in residence.
  - b. Education 621, Educational Research and Writing, must be completed as a part of the first fifteen hours.
2. Submit to a test of scholastic aptitude.
3. Hold a first class teaching certificate valid in West Virginia or the equivalent thereof.

The test mentioned above, will be administered early in every semester and term. It is the responsibility of the student to inform himself concerning the time and place of the administration of the test.

When these requirements have been met, a committee composed of the student's adviser, the Dean of the Teachers College, and the Dean of the Graduate School will, upon consideration of the student's graduate record and the results from tests, decide whether or not the student shall be admitted to candidacy.

At any time either in the process of admitting a student to the Graduate School or in admitting a student to candidacy for the Master's degree the Dean of the Teachers College and/or the Dean of the Graduate School may require the applicant to submit to additional tests if it is felt that the results from these tests will provide a fairer basis upon which to judge the student's possible success in graduate work.

Students may not enroll in the following courses until after having had one year of full-time teaching experience: Education 601, 602, 603, 604, 606, 607, 614, 646, 649, and 650.



Courses for persons minoring in education shall be chosen from the following: Education 560, 590, 616 or 648, 609, 610, 515 or 615, 641, 535, 545, 614, 635, 646, 667.

### Courses in Educational Research

#### Education 679, Problem Report.

This course may be taken for one to three hours credit by those who wish to submit a finished written report on a research problem, experiment, or field project in education. This report is not a thesis. Those who submit it must do thirty-three additional hours for the master's degree unless Education 680, Thesis, is completed satisfactorily for three hours credit.

#### Education, 680, Thesis.

This course may be taken for three hours credit by those whose reports in Education 679 are excellent in quality, have been accepted for three hours credit, and are of such a character as warrant further research worth three semester hours. Students completing Education 679 and 680 for six hours credit by submitting acceptable theses may qualify for the master's degree by earning twenty-six additional semester hours, making a total of thirty-two for the degree.

Students completing Education 680 may choose between an oral examination involving the thesis and the comprehensive written examination.

The course requirements for the several curriculums follow:

### I. Administrative Certificates

#### A. COUNTY SUPERINTENDENT'S CERTIFICATE

Minimum requirements .....	32-36 hours
1. Education 601, 602, 603, 604, 606, 607, 621 .....	19 hrs.
2. With the approval of the adviser select from Education 517, 528, 535, 545, 560, 565, 590, 610, 615, 616, 635, 648, 675, 679, 680 .....	3 hrs.
3. With the approval of the adviser select not fewer than six hours in teaching field or field of interests (courses listed as education excluded) .....	6 hrs.
4. Electives selected with the approval of the adviser .....	4-8 hrs.

#### B. ELEMENTARY PRINCIPAL'S CERTIFICATE

Minimum Requirements .....	32-36 hours
1. Education 601, 604, 606, 607, 610, 621 .....	18 hrs.
2. With the approval of the adviser select from Education 528, 543, 590, 595, 616, 635, 656, 657, 670, 671, 675, 679, 680 .....	3-6 hrs.
3. With the approval of the adviser select not fewer than six hours in student's field of interest (courses listed as education excluded) .....	6-12 hrs.
4. Electives selected with the approval of the adviser .....	0-9 hrs.

#### C. SECONDARY PRINCIPAL'S CERTIFICATE

Minimum Requirements .....	32-36 hours
1. Education 601, 604, 606, 607, 610, 621 .....	18 hrs.
2. With the approval of the adviser select from Education 515, 517, 528, 535, 541, 545, 560, 565, 590, 613, 614, 615, 635, 646, 647, 648, 675, 679, 680 .....	3-6 hrs.
3. With the approval of the adviser select not fewer than six hours in student's field of interest (courses listed as education excluded) .....	6-12 hrs.
4. Electives selected with the approval of the adviser .....	0-9 hrs.



## D. CERTIFICATE IN GENERAL SUPERVISION

Minimum Requirements .....32-36 hours

1. General requirements  
Education 606, 616, 621..... 9 hrs.
2. \*Practice in Supervision  
Education 672, 673, 674.....9 hrs.
3. Requirements in problems of teaching education  
Education 543 or 545, 656, 657, 667 or 670, 671..... 15 hrs.
4. Electives (must be outside field of education) .....0-3 hrs.

\*Courses to be acquired through not less than two years of field experience on a county-wide basis, supervised jointly by college, State Department of Education, and county superintendent.

## II. Teacher-Education Curricula

## PROGRAMS IN COUNSELING AND GUIDANCE

There are two types of certificates granted by the State Board of Education in counseling. The first is a teacher-counselor certificate based on meeting the requirement for the first-class teaching certificate at the level at which guidance is to be done, two years of successful teaching experience at that level, and completion of twelve semester hours of graduate work in guidance distributed among five required courses (all of which must be taken regardless of hours' credit). The second type is the counselor or permanent certificate based on meeting the requirements for a first class teaching certificate at the level at which guidance is to be done, two years of successful teaching at that level, cumulative wage earning experience to a total of 1400 clock hours of regular paid employment (cooperative work experience programs may count), and a master's degree which includes the completion of thirty-two to thirty-six semester hours of graduate work distributed among required and elective courses.

While it is possible to qualify for the first type of certificate without doing the equivalent of a master's degree, most students prefer to qualify while working toward a degree. Therefore, the following programs are designed to enable the student to complete courses which will help him reach both goals.

## A. TEACHER-COUNSELOR CERTIFICATE

Minimum Requirements .....32-36 hours

1. Education 590, 614, 621, 646, 647, and either 649 or 650 ..... 18 hrs.
2. Electives in education selected with the approval of the adviser (may not enroll in Education 602, 603, 604, 607) ..... 6-12 hrs.
3. With the approval of the adviser select from six to twelve hours in student's teaching field or field of interest (courses listed as education excluded) ..... 6-12 hrs.

## B. COUNSELOR CERTIFICATE

Minimum Requirements .....32-36 hours

1. Education 535 or 635, 590, 614, 616 or 648, 621, 646, 647, 649 or 650 ..... 24 hrs.
2. With the approval of the adviser select from Education 517, 610, 613, 640 or 641, 649 or 650 ..... 3-6 hrs.
3. With the approval of the adviser select from two to nine hours in student's teaching field or field of interest (courses listed as education excluded) ..... 2-9 hrs.

NOTE: For the Counselor's Certificate at least 25 semester hours must be completed in guidance courses.



## C. PROGRAMS FOR TEACHERS IN ELEMENTARY SCHOOLS

The two programs of study outlined below are intended for students in elementary education. Option A is designed particularly for students who wish to become better prepared as teachers in elementary schools. The field of study includes courses in child development, the curriculum, and investigations in teaching in the several areas in the elementary school.

Option B provides opportunities for studying the problems involved in teaching atypical children. The emphasis in the program of study is upon those aspects of professional education usually referred to as special education. Students wishing to prepare themselves for positions such as general supervisors of elementary education or as teachers of atypical children should consider the offerings of Option B.

Students under this program may take not more than six hours in Educational Guidance to be chosen from Education 590, 648, 614, and 646.

The courses in education and other fields for Options A and B are as follows:

## Option A

Minimum Requirements .....	32-36 hours
1. Education 609, 616, 621 .....	9 hours
2. With the approval of the adviser select from Education 515, 535, 543, 560, 565, 595, 610, 635, 640 or 641, 656, 657, 670, 671, 678 .....	9 hours
3. Electives .....	14-18 hours
Courses in the several fields listed below are to be selected by students with approval of the adviser: art, education, science, English, geography, geology, history, home economics, music, philosophy, political science, psychology, sociology and speech.	

## Option B

Minimum Requirements .....	32-36 hours
1. Education 609, 616, 621 .....	9 hrs.
2. Electives in education and speech .....	12 hrs.
Two of the three combinations of courses listed below must be completed:	
Education 543 and 595 .....	6 hrs.
Education 657 and 658 .....	6 hrs.
Speech 518 and 519 .....	6 hrs.
3. Electives .....	11-15 hrs.
Courses in the several fields listed below are to be selected by students with approval of the adviser: art, education, science, English, geography, geology, history, home economics, music, philosophy, political science, psychology, sociology, and speech.	

## D. PROGRAM FOR TEACHERS OF BUSINESS ADMINISTRATION

This program is intended to promote the development of master teachers of business administration in secondary schools. It provides an opportunity for students to distribute their study between courses in business subjects and education. The programs of study are planned to meet the needs of the students.

Minimum Requirements .....	32-36 hours
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1. From Education 569, 609, 610, 621, 640 or 641, 648, 661, 662, 663 ..... 15 hrs.
- Note: Students electing to write theses must include Education 621.
2. From Business Administration 504, 505, 507, 511, 512, 513, 514, 515, 521, 522, 524, 534, 640 ..... 12 hrs.
3. Electives ..... 5-9 hrs.  
(Selected by student with approval of adviser)

#### E. PROGRAM FOR TEACHERS OF ENGLISH IN SECONDARY SCHOOLS

This program is intended to promote the development of master teachers of English in junior and senior high schools. It provides an opportunity for students to distribute their study between courses in English and education. The programs of study are to be planned so as to meet the needs of the students.

Minimum Requirements ..... 32-36 hours

1. From Education 541, 545, 609, 648, 652 ..... 15 hrs.
2. English 555, 612, 630, 631 ..... 9 hrs.  
(Education 621 or English 630 may be completed but not both courses)
3. Electives in English and education ..... 8-12 hrs.  
(Students are expected to do at least one half of their work in English)

#### F. PROGRAM FOR TEACHERS OF HOME ECONOMICS

This program is designed for teachers who wish to work for the master's degree in home economics and education. From six to twelve hours in home economics must be taken in courses approved by the adviser in a recognized graduate school and transferred to Marshall College.

Minimum Requirements ..... 32-36 hours

1. Education 606, 609 ..... 6 hrs.
2. From Home Economics 500, 501, 505, 506, 507, 520, 540 ..... 6 hrs.
3. Graduate work in home economics or home economics-education completed with the adviser's approval at an approved college or university ..... 6-12 hrs.
4. From Education 535, 545, 560, 565, 590, 610, 616, 621, 635, 640 or 641, 648, 678 ..... 6-9 hrs.

NOTE: Students electing to write theses must include Education 621.

5. Electives (selected by student with approval of adviser) ..... 3-12 hrs.

##### Suggested Electives:

Art 603, Experiencing Art in Everyday Life.  
 Biology 607, Problems in Genetics.  
 Economics 505, The Nature and Significance of Economics.  
 Economics 508, Contemporary Economic Systems.  
 English 601, Folk and Popular Literature.  
 English 621, Contemporary Novel.  
 English 644, The American Novel.  
 Geography 603, Problems in the Geography of North America.  
 Geography 605, Geography in World Political Affairs.  
 Geography 607, Problems in World Economic Geography.  
 Philosophy 510, The Philosophical Sources of American Culture.  
 Sociology 602, Contemporary Social Change.  
 Speech 518, Speech Correction.  
 Speech 550, Direction of Speech Activities.



### G. PROGRAM FOR TEACHERS OF PHYSICAL SCIENCE IN SECONDARY SCHOOLS

The purpose of this program is to meet the needs of teachers who wish additional training in chemistry and physics. Teachers with sixteen hours of chemistry, eight hours of physics, and ten hours of mathematics on the undergraduate level are eligible for this program.

Deficiencies in mathematics may be taken concurrently with this program. The writing of a thesis is optional.

Minimum Requirements .....32-36 hours

1. From Education 560, 590, 609, 610, 621, 640 or 641,  
648 .....12 hrs.

NOTE: Students electing to write theses must include  
Education 621.

2. Chemistry and physics .....18 hrs.

#### Option A

From Chemistry 620, 621, 622, 623 and 624 or 625.....12 hrs.  
Physics 640 and 641 ..... 6 hrs.

#### Option B

- From Physics 640, 641, 642, 643 and 644 or 645 .....12 hrs.  
Chemistry 620 and 621 ..... 6 hrs.
3. Electives in science or education .....2-6 hrs.

### H. PROGRAM FOR TEACHERS OF SOCIAL STUDIES IN SECONDARY SCHOOLS

For the purpose of this program social studies includes economics, geography, history, political science, and sociology. This program is designed to meet the needs of teachers who wish to distribute the work for the master's degree over the general area of the social studies. Only teachers with at least twenty-four hours of undergraduate work in this general area are eligible to pursue this program.

The general pattern is as follows:

1. Professional and specialized courses ..... 9 hours
  - Education 667, Teaching Social Studies in Secondary  
Schools ..... 3 hours
  - Education 648, Advanced Studies of Human  
Adjustment ..... 3 hours  
or
  - Education 616, Advanced Studies in Child  
Development ..... 3 hours
  - Education 640, Literature of Education ..... 3 hours
  - (The work done in Education 640 will generally be in the  
literature of the social studies and social sciences. The  
adviser may vary the requirements in this course to meet  
the needs of the student.)
2. Social Studies and electives .....23-27 hours
  - a. Twelve hours shall be distributed equally in two of the  
following fields: economics, geography, history, political  
science, and sociology.
  - b. The rest of the work may be distributed among the five  
fields in accordance with the needs and interests of the  
student, provided: First, that not more than fifteen hours  
may be counted in any one of the social studies for  
credit; and, second, at least six hours must be earned in  
each of the social studies in undergraduate and graduate  
work combined for graduation.



- c. After the minimum requirements in social studies are met, electives may be chosen from the following:
- Art 501, History of Art to 1400 A. D.
  - Art 502, History of Art from 1400 to the Present.
  - Philosophy 510, The Philosophical Sources of American Culture.
  - Philosophy 519, Survey of Religious Thought in the Western World.
  - Education 541, Literary Materials for English and Social Studies in the Secondary School.

### EDUCATION

- 515. History of Modern Education.** 2-3 hrs. I, II, S. (Formerly 415\*)  
Our debt to the ancient Hebrews, Greeks, and Romans. Emphasis on movements since the beginning of the Renaissance.  
Prerequisite: Enrollment in Education 350 or 450.
- 517. Statistical Methods.** 3 hrs. S. (Formerly 417\*)  
Elementary statistics for students in economics, education, political science, and sociology.  
Prerequisites: Consent of instructor. Enrollment in Education 350 or 450.
- 528. The Junior High School Curriculum.** 3 hrs. I, II, S.  
Provides for the study of procedures for creating a functional junior high curriculum with emphasis upon the needs of early adolescents.
- 535. Tests and Measurements.** 3 hrs. I, II, S. (Formerly 435\*)  
History, basic philosophy, and elementary statistical devices for evaluating pupil progress; new type tests constructed and standardized tests for elementary and secondary schools examined and administered.  
Prerequisites: Consent of instructor. Enrollment in Education 350 or 450.
- 541. Literary Materials for English and Social Studies.** 3 hrs. I, S. (Formerly 441\*)  
Reading and evaluation of a variety of literary selections suitable for Grades VII through XII.  
Prerequisite: Enrollment in Education 450.
- 543. Teaching of Reading in Elementary Schools.** 3 hrs. I, II, S. (Formerly 443\*)  
Modern techniques and practices in the teaching of reading.  
Prerequisite: Enrollment in Education 350.
- 545. Teaching Reading in Secondary Schools.** 3 hrs. I, II, S. (Formerly 445\*)  
Principles underlying teaching of reading in secondary schools.  
Prerequisite: Enrollment in Education 450.
- 560. Philosophy of Education.** 2-3 hrs. I, II, S. (Formerly 460\*)  
Basic philosophic schools and concepts and application to educational practice.  
Prerequisite: Enrollment in Education 350 or 450.
- 565. Audio-Visual Aids in Learning.** 2-3 hrs. I, II, S. (Formerly 465\*)  
Utilization of audio-visual materials, equipment, and techniques.  
Prerequisites: Enrollment in Education 350, 410, or 450.  
Laboratory fee \$1.00
- 566. Production of Audio-Visual Aids.** 3 hrs. I, S.  
Basic techniques in making slides, photographs, dry and wet mountings, felt board materials, movies, tape recordings, and similar teaching aids. Laboratory fee \$3.00.



- 569. Teaching Business Education.** 2-3 hrs. I, II, S. (Formerly 469\*)  
Materials and methods of teaching business subjects in secondary schools.  
Prerequisite: Enrollment in Education 450.
- 582-585. Special Topics.** 1-4 hrs. I, II, S.
- 590. Principles and Practices of Guidance.** 2-3 hrs. I, II, S. (Formerly 490\*)  
Objectives, principles, and practices of guidance.  
Prerequisite: Enrollment in Education 450.
- 595. Clinical Practice in Reading Instruction.** 2-3 hrs. S. (Formerly 495\*)  
Diagnosis of difficulties; plans for corrective treatment; actual work with pupils.  
Prerequisite: Education 443 or 543 or consent of instructor.
- 601. General School Administration: Basic Course.** 3 hrs. I, S. (Formerly 501)  
Federal and state participation in school administration; place of state and county boards of education; relation of school to other community agencies; organization of staff and selection of personnel.
- 602. General School Administration: Financial Aspects.** 2 hrs. I or II, S. (Formerly 502)  
Basic principles of school finance; taxation for school support; budgeting; accounting and auditing; insurance; extra levies and bond issues.  
Prerequisite: Education 501 or 601.
- 603. General School Administration: Plant and Equipment.** 2 hrs. I or II, S. (Formerly 503)  
Planning buildings; architectural service; maintenance and replacement of equipment; transportation equipment and its maintenance and use.  
Prerequisite: Education 501 or 601.
- 604. The School Principal.** 3 hrs. I or II, S. (Formerly 504)  
Duties and responsibilities of elementary and secondary school principals; problems in organizing and directing the school program.  
Prerequisite: Education 501 or 601.
- 606. Supervision of Instruction: Basic Course.** 3 hrs. I or II, S. (Formerly 506)  
Principles; procedures used in improving instructional program in schools.
- 607. Problems in Supervision of Instruction.** 3 hrs. I or II, S. (Formerly 507).  
Investigation of specific problems in improving instruction in the several areas of the curriculum in elementary and secondary schools.  
Prerequisite: Education 506 or 606.
- 609. The Teacher and School Administration.** 3 hrs. I or II, S. (Formerly 509)  
Technical background of the fundamentals of school administration for the classroom teacher; West Virginia School System emphasized; teacher participation in administration with attention to ethics, retirement, salary, and tenure. Not acceptable in administrative programs and not open to students who have completed Education 501 or 601.
- 610. The Curriculum in the Modern School.** 3 hrs. I or II, S. (Formerly 510)  
Curricular development in elementary and secondary schools; attention given to procedures for examining, evaluating, and revising existing curricular programs.
- 613. Organization and Administration of Guidance Programs.** 2-3 hrs. I or II, S. (Formerly 513)  
Problems in planning and administering a guidance program in elementary and secondary schools.



- 614. Counseling Techniques.** 2-3 hrs. I or II, S. (Formerly 514)  
Techniques employed by the counselor, with emphasis on the place of the interview.
- 615. History of Education in the United States.** 2 hrs. (Formerly 515)  
Development of public and private educational systems in the United States.
- 616. Advanced Studies in Child Development.** 3 hrs. I or II, S. (Formerly 516)  
Nature of growth and environmental factors affecting it.
- 617-618. Field Course in Current School Problems.** 3-3 hrs. (Formerly 517-518)  
Investigations in current problems confronting local schools; content determined by needs of students.
- 621. Educational Research and Writing.** 3 hrs. I, II, S.  
Investigative methods and techniques and their application to individual problems.
- 635. Evaluation in Elementary and Secondary Schools.** 3 hrs. (Formerly 535)  
Procedures for evaluating effectiveness of a school program, with emphasis on procedures other than formal tests.
- 640. Literature of Education.** 1-3 hrs. I, II, S. (Formerly 540)  
A program of reading, either extensive or intensive, to meet needs of the student; readings and reports on a group of outstanding contributions to education; readings selected with guidance of adviser. Only one registration for Education 640 permitted.
- 641. Seminar in Education.** 2-3 hrs. (Formerly 541)  
A guided program of readings, reports, and discussions. No student may register for this course a second time.
- 646. Individual Inventory Techniques.** 2-3 hrs. (Formerly 546)  
Techniques used in collecting data, including test results, recording of data, and interpretation of tests and other data.
- 647. Occupational Information Techniques.** 2-3 hrs. (Formerly 547)  
Techniques used in selecting, filing, and using materials pertaining to various occupations and professions.
- 648. Advanced Studies of Human Adjustment.** 2-3 hrs. (Formerly 548)  
Psychological foundations of personality development with emphasis on principles of mental hygiene as related to problems of everyday life.
- 649-650. Seminar in Counseling.** 3-3 hrs. (Formerly 549-550)  
Counseling tools and techniques, with emphasis on problem categories and patterns as related to the psychology of individual differences.
- 652. Investigations in Teaching of English in Secondary Schools.** 3 hrs. (Formerly 552)  
Emphasis on particular problems in teaching of English rather than general techniques.
- 656. Teaching of the Language Arts.** 3 hrs. (Formerly 556)  
Current methods and available materials for teaching handwriting, spelling, and oral and written expression.
- 657. Teaching of Arithmetic.** 3 hrs. (Formerly 557)  
Acquainting students with available materials and giving knowledge of the most widely accepted methods of instruction.
- 658. Clinical Practice in Arithmetic Instruction.** 3 hrs. (Formerly 558)  
Working with pupils under guidance; diagnosing, planning and putting into effect an instructional program for a limited number of pupils.  
Prerequisite: Education 557.



- 661. Teaching Shorthand and Typewriting.** 2-3 hrs. S. (Formerly 561)  
Emphasis on recent research and experimentation in teaching, testing, and evaluating students' achievements in shorthand and typewriting; the psychology of skill development; evaluation of teaching materials.
- 662. Teaching General Business (Basic Business) and Bookkeeping.** 2-3 hrs. S. (Formerly 562)  
Emphasis on recent research and experimentation in teaching, testing, and evaluating students' achievements in general business and bookkeeping; evaluation of teaching materials.
- 663. Teaching Office Machines and Filing.** 2-3 hrs. S.  
Formulation of individual school programs; ways and means of inaugurating courses in the high school; evaluation of teaching materials and sources, and emphasis on improvement of operating proficiency.
- 667. Teaching Social Studies in Secondary Schools.** 2-3 hrs. S. (Formerly 567)  
Various techniques for teaching social studies with suggestions for procurement and use of pertinent materials.
- 670. Teaching Social Studies in Elementary Schools.** 3 hrs. (Formerly 570)  
Materials and procedures for teaching social studies with emphasis on a survey of successful programs of instruction.
- 671. Teaching Science in Elementary Schools.** 3 hrs. (Formerly 571)  
Problems and methods of teaching science. Laboratory fee: \$2.00.
- 672-673-674. Practice in Supervision, Course I, II, and III.** 3-3-3 hrs. (Formerly 572, 573, 574)  
Practice of supervisory techniques presented in theory courses; sharing the responsibility for carrying forward a supervisory program in a school system.
- 675. School Law.** 3 hrs.  
The legal basis of education in the United States as revealed in constitutions, statutes, court decisions, and in administrative rulings and practices with some emphasis on West Virginia.
- 678. The Critic Teacher.** 3 hrs. (Formerly 578)  
Duties and responsibilities of the teacher who directs learning experiences of student teachers.
- 679. Problem Report.** 1-3 hrs. (Formerly 579)
- 680. Thesis.** 3 hrs. (Formerly 580)

### SAFETY EDUCATION

Associate Professor Fitch

- 585. Driver Education and Training.** 2 hrs. (Formerly 435\*)  
Materials and methods in teaching driver education and training to students preparing to teach in high schools. Two periods of classroom instruction and one hour laboratory per week.  
Prerequisite: Ability to drive an automobile and possession of a West Virginia driver's license. Non-drivers with the instructor's permission may enroll without credit for the laboratory section of this course in order to learn to drive an automobile.

### PHYSICAL EDUCATION

- 560. Education for Personal and Family Life.** 2-3 hrs. (Formerly 460\*)  
Development of programs concerned with sex-character education in schools and other community agencies.



## ENGLISH

Professors Sechler, Brown

Assistant Professor Mitchell

Graduate courses in English give students detailed consideration of various periods in literary history, types, and authors. Students are expected to select an area as a specialty and concentrate on it as a part of their work. They may elect to write a thesis in their area or demonstrate their knowledge by answering questions concerning it in the comprehensive examination. Students are also expected to be familiar with the forms of literature, critical standards, and the materials and methods of research.

At the conclusion of the required number of hours of work for a master's degree students are expected to pass a comprehensive examination. Students doing a graduate major in English must have an undergraduate background of at least twelve hours in English or American literature. Students taking English as a minor must have six hours credit in literature on the undergraduate level. Students with deficiencies may enroll for graduate work but must take undergraduate courses suggested by the department before becoming candidates for degrees. English 630, Materials and Methods of Research, is required for a major in English and will be offered twice during the year, once in the regular session, usually during the fall semester, and once in the summer school. Students should take this course as early as possible in their graduate work. Graduate students in English should discuss their backgrounds and programs frequently with their advisers.

**508. Advanced Expository Writing.** 3 hrs. (Formerly 408\*)

Preparation of reports, theses, briefs, abstracts, and other expository types. Material adapted to the needs of the individual student.

**511. Chaucer.** 3 hrs. (Formerly 411\*)

**544. Emerson, Poe, Whitman.** 3 hrs. (Formerly 444\*)

Studies in the poetry and prose of these writers in relation to the intellectual background of their times.

**546. Drama of the Restoration and Eighteenth Century.** 3 hrs. (Formerly 446\*)

**547. Studies in the Romantic Poets.** 3 hrs. (Formerly 447\*)

**555. Literary Criticism.** 3 hrs. (Formerly 455\*)

History of literary criticism with application of principles

**560. Studies in English Literature from 1660 to 1745.** 3 hrs.

Dryden, Swift, Pope, and their contemporaries.

**561. Studies in English Literature from 1745 to 1800.** 3 hrs.

Major figures of the Age of Johnson.

**570. Twentieth Century Literature.** 2-3 hrs.

A study of the twentieth century mind through representative genres of literature.

**600. Shakespeare.** 3 hrs. (Formerly 500)

Intensive reading of Shakespeare's plays. Problems of Shakespearean scholarship.

**601. Folk and Popular Literature.** 3 hrs. (Formerly 501)

Relation of types to their ages and subsequent literature.

**603. Children's Literature.** 3 hrs. (Formerly 503)

Intensive reading of recent works in the field. Evaluation of recent trends.

**610. Readings in English and American Literature.** 2-3 hrs. (Formerly 510)

Opportunity for independent reading in a field not covered by regular lecture courses. To be taken toward the end of work for a master's degree under supervision of a graduate instructor.



612. **The Study of Poetry.** 3 hrs. (Formerly 512)  
The development of principal types, forms, themes and prosody.
613. **Milton.** 3 hrs. (Formerly 513)
614. **The Victorian Novel.** 3 hrs. (Formerly 514)  
The chief novelists of the age.
615. **Studies in Victorian Poetry.** 3 hrs. (Formerly 515)  
Chief poets of the age.
616. **Essayists of the Nineteenth Century.** 3 hrs. (Formerly 516)  
Chief non-fictional prose writers of the century.
620. **Contemporary Drama.** 3 hrs. (Formerly 520)  
Major English and American dramatists.
621. **Contemporary Novel.** 3 hrs. (Formerly 521)  
Works of a few major twentieth century novelists.
630. **Materials and Methods of Research.** 3 hrs. (Formerly 530)  
Training in scholarly research. Required of all candidates for a master's degree in English.
631. **Historical English Grammar.** 3 hrs. (Formerly 531)  
Present-day constructions in the light of historical evolution.
632. **History of English Words.** 3 hrs. (Formerly 532)  
Historical development of modern vocabulary.
644. **The American Novel.** 3 hrs. (Formerly 544)  
From the eighteenth to the early part of the twentieth century.
- 680-681. **Thesis or Problem Report.** I and II. 1-3; 1-3 hrs.

### GEOGRAPHY

Professors Davis, Britton

Associate Professor Clagg

The undergraduate prerequisite for a major in geography is twelve hours; the undergraduate prerequisite for a minor in geography is six hours.

Students who major in geography must complete not fewer than twenty-four hours in the major field. At least one-half of the hours must be earned in 600 series courses.

A major must include:

529 or 530 .....	3 hrs.
505 or 605 .....	3 hrs.
603 .....	3 hrs.
602 or 608 .....	3 hrs.
620 .....	3 hrs.
606 or 609 .....	3 hrs.

501. **Historical Geography of the United States.** 3 hrs. (Formerly 401\*)  
Study of coastal settlements, the population spread through Appalachia and the Mississippi Valley, and the development of inter-mountain and Pacific Coast centers.
503. **Economic Geography of Asia.** 3 hrs. (Formerly 312, 403\*)  
Special attention given activities and environment in continental countries and nearby islands.



505. **World Political Geography.** 3 hrs. (Formerly 405\*)  
Survey of international relations showing influence of economic-environmental adjustments, stressing studies of the United States, Russia, the British Empire, and Germany.
506. **Geography of Brazil.** 2 hrs. (Formerly 406\*)  
Regional study of relation of man's activities to natural environment.
507. **Geography of Argentina.** 2 hrs. (Formerly 407\*)  
Regional study of relation of man's activities to natural environment.
508. **Geography of Mexico.** 2 hrs. (Formerly 408\*)  
Regional study of relation of man's activities to natural environment.
509. **Geography of Canada.** 2 hrs. (Formerly 409\*)  
Regional study of relation of man's activities to natural environment.
510. **Urban Geography.** 3 hrs. (Formerly 410\*)  
Study of numerous cities of the world, with local field survey made.
512. **Geography of Soviet Lands.** 2 hrs. (Formerly 412\*)  
Russian agriculture, grazing, mining, industry, and transportation explained in environmental terms.
513. **Geography of British Isles.** 2 hrs. (Formerly 413\*)  
Climate, minerals, and land forms checked in explaining economic activities.
515. **Geography of India.** 2 hrs. (Formerly 415\*)  
India, Pakistan, Ceylon, and Burma studied to show cultural-environmental relationships.
520. **Field Geography of West Virginia.** 3 hrs. (Formerly 420\*)  
Type areas in lumbering, mining, agriculture, and industry checked through field methods.
525. **Climatology.** 3 hrs.  
Causes and results of regional weather of the world studied under modified Koppen's classification.
529. **Map Intelligence and Projections.** 3 hrs.  
Principles and practice in construction of map grill, use of drafting equipment, and understanding of earth features as shown on a map.
530. **Applied Cartography.** 3 hrs.  
Map making with regard to projection selection, source materials, compilation, restitution, and photo revision.
601. **Problems in Geography of the Far East.** 3 hrs. (Formerly 501)  
Agriculture, industry, transportation, and trade of selected regions in eastern Asia and the islands of the western Pacific Ocean.
602. **Problems in Geography of Europe.** 3 hrs. (Formerly 502)  
Consideration of problems in selected countries following a geographical review.
603. **Problems in Geography of North America.** 3 hrs. (Formerly 503)  
Relationship of human activities to natural environment in selected regions.
604. **Problems in Geography of Latin America.** 3 hrs. (Formerly 504)  
Problems studied in each country following geographical review.
605. **Geography in World Political Affairs.** 3 hrs. (Formerly 505)  
Key nations of world studied in light of significance of geographic items and their effects on international relations.



606. **Field Problems in Geography of the Tri-State Area.** 3 hrs. (Formerly 506)
607. **Problems in World Economic Geography.** 3 hrs. (Formerly 507)  
Problems of world exchange of outstanding trade items.
608. **Problems in Geography of Africa and Australia.** 3 hrs. (Formerly 508)  
Selected regions studied in both continents.
609. **Geographical Research.** 3 hrs. (Formerly 509)  
Research methods stressed with special attention given to a consideration of the literature of the field.
620. **Problems in Conservation of Natural Resources.** 3 hrs.  
Presents elements of conservation education in the specific areas of soil, water, and human conservation.
- 680-681. **Thesis or Problem Report, I and II.** 1-3; 1-3 hrs.

### GEOLOGY

Professor Janssen

Associate Professor Stewart

518. **Paleontology.** 3 hrs. I. (~~Formerly 318, 418\*~~)  
Fossil animal and plant life; its development, evolution and dominance through the geologic ages. Recommended for biological science majors.  
Prerequisite: Geology ~~300~~ or graduate status.
522. **Economic Geology.** 3 hrs. II. (~~Formerly 322, 422\*~~)  
Nature, origin, distribution, and uses of the world's commercially valuable mineral and rock resources.  
Prerequisite: Geology ~~300~~ (~~and 314 recommended~~) or graduate status.
551. **Geomorphology.** 3 hrs. II. (~~Formerly 451\*~~)  
Geologic nature and origins of the world's land forms.  
Prerequisite: Geology 200 (~~and 350 recommended~~) or graduate status.

### HISTORY

Professors Toole, Cometti, Heath, Moffat

Courses may be taken with the approval of the student's adviser and the instructor in the course.

All candidates for the master's degree with a major in history must take one of the following courses which emphasizes the use of materials and methods of research: 525, 526, 606, 609, 611, 627, 628, and 678.

502. **American Diplomacy.** 3 hrs. (Formerly 402\*)
521. **The Era of the Renaissance and the Reformation.** 3 hrs. (Formerly 421\*)
522. **The French Revolution and the Napoleonic Era.** 3 hrs. (Formerly 422\*)
525. **European History, 1814-1914.** 3 hrs. (Formerly 425\*)
526. **European History, 1914 to the Present.** 3 hrs. (Formerly 426\*)
527. **Russia in the 19th and 20th Centuries.** 3 hrs. (Formerly 427\*)
532. **American History since 1914.** 3 hrs. (Formerly 432\*)
602. **Constitutional History of the United States.** 3 hrs. (Formerly 502)
605. **Social and Economic Problems of American Colonies.** 3 hrs. (Formerly 505)
606. **Social and Economic Problems of Early National Period in America.** 3 hrs. (Formerly 506)
607. **Old Northwest.** 3 hrs. (Formerly 507)



608. **Civil War and Reconstruction, 1850-1877.** 3 hrs. (Formerly 508)
609. **Problems of Recent American History, 1877 to Present.** 3 hrs. (Formerly 509)
610. **Readings in History.** 2-3 hrs. (Formerly 510)
611. **Methods and Problems of Research in West Virginia History.** 3 hrs. (Formerly 511)
612. **American Leaders to 1865.** 3 hrs. (Formerly 512)
613. **Hispanic American History.** 3 hrs. (Formerly 513)
614. **American Revolutionary Period, 1760-1789.** 3 hrs. (Formerly 514)
615. **American Leaders since 1865.** 3 hrs. (Formerly 515)
617. **Trans-Allegheny Frontier.** 3 hrs. (Formerly 517)
621. **Nineteenth Century England.** 3 hrs. (Formerly 521)
622. **Far East in Twentieth Century.** 3 hrs. (Formerly 522)
627. **Problems in Early Modern European History. 1500-1650.** 3 hrs. (Formerly 527)
628. **Problems in Recent European History, 1871-1914.** 3 hrs. (Formerly 528)
678. **Historical Research.** 2-3 hrs. (Formerly 578)
680. **Thesis or Problem Report I.** 1-3 hrs. (Formerly 580)
681. **Thesis or Problem Report II.** 1-3 hrs. (Formerly 581)

### HOME ECONOMICS

Professor Rouse

Associate Professors Foose, C. Gray

Assistant Professor Neely

Courses may be taken with approval of student's adviser and instructor in the course. See Home Economics-Education Program listed under Education.

500. **Consumer Buying.** 3 hrs. (Formerly 400\*)  
Opportunities and responsibilities of the consumer; problems in purchasing specific household commodities.
501. **Special Topics.** 1-4 hrs. (Formerly 401\*)  
Special problems in the fields of home economics.  
Prerequisite: Permission of instructor.
505. **Quantity Cookery.** 3 hrs. (Formerly 405\*)  
Practice in large-quantity food purchasing, preparation and serving.
506. **Methods in Adult Home Economics Education.** 3 hrs. (Formerly 406\*)  
Philosophy, promotion, organization, methods and techniques of working with out-of-school groups.
507. **Institutional Management.** 3 hrs. (Formerly 407\*)  
Organization and administrative problems of food in institutions such as the school lunch, residence halls, hospitals, and cafeterias.
520. **Household Equipment.** 3 hrs. (Formerly 420\*)  
Household equipment, its selection, care and use.



- 540. Nutrition in the Home and School.** 3 hrs. II, S. (Formerly 440\*)  
(Formerly Home Economics 340)

For teachers and any person interested in the home and school. A study of the fundamental principles of human nutrition and their applications to the school lunch program.

- 554. Problems in Home Furnishings.** 3 hrs.

Problems relating to modern decorating. Considering the selection and using of suitable fabrics for making curtains, draperies, and slip-covers.

## MATHEMATICS

Professor Barron

Associate Professors Goins, Hardman

Courses may be taken with approval of student's adviser and instructor in the course.

- 520. College Geometry.** 3 hrs. (Formerly 420\*)

Recent geometry of triangle and circle studied by Euclidean methods; problems in ruler and compass constructions. A problem course in advanced plane geometry of special value to those training to teach high school mathematics.

Prerequisite: Mathematics 122.

- 521. Solid Analytic Geometry.** 3 hrs.

The point, plane, straight line, surfaces and curves referred to co-ordinate systems in space.

Prerequisites: Mathematics 224 or 225.

- 527. Advanced Calculus.** 4 hrs. I. (Formerly 427\*)

The number system; theory of limits; infinite sequences; functions of real variables; derivatives; partial differentiation, with applications to differential geometry; maxima and minima of functions of several variables.

Prerequisite: Mathematics 326.

- 528. Advanced Calculus.** 4 hrs. II. (Formerly 428\*)

A continuation of 527. Theory of definite integrals, multiple integrals, line and surface integrals, Green's theorem, transformation of multiple integrals, improper integrals, infinite series.

Prerequisite: Mathematics 427.

- 530. Vector Analysis.** 3 hrs. I. (Formerly 430\*)

The algebra of vectors; the differential calculus of vectors; applications to geometry, physics, mechanics.

Prerequisite: Mathematics 326.

- 532. Vector Analysis.** 3 hrs. II. (Formerly 432\*)

A continuation of Mathematics 530. The integral calculus of vectors, introduction to tensor analysis, applications.

Prerequisite: Mathematics 430 or 530.

- 535. Ordinary Differential Equations.** 4 hrs. I, S. (Formerly 435\*)

An exposition of methods used in solving ordinary differential equations, with applications to geometry, physics, and mechanics.

Prerequisite: Mathematics 326.



**536. Partial Differential Equations. 3 hrs. II. (Formerly 436\*)**

An exposition of methods used in solving partial differential equations, with applications to geometry and boundary value problems of ordinary occurrence in mathematical physics involving Fourier Series and Series of Bessel Functions.

Prerequisite: Mathematics 435 or 535.

**540-541. Higher Algebra. 3 hrs. each. I, II.**

The number system, elementary theory of groups, theory of numbers, rings, integral domains, and fields; theory of polynomials, determinants and matrices.

Prerequisite: Graduate standing.

**545. Introduction to the Theory of Statistics. 3 hrs. (Formerly 445\*)**

The theory and application of mathematical statistics, treating such topics as averages, measures of dispersion and skewness, frequency distributions, frequency curves, and correlation. Applications to miscellaneous practical problems.

Prerequisites: Mathematics 310, 325.

**550. Fundamental Concepts and History of Mathematics. 3 hrs.**

A discussion of the logical foundations of geometry, algebra, and analysis as an approach to an answer to the question, "what is mathematics?". Discussion correlated with the historical development of mathematics from ancient to modern times.

Prerequisite: Senior or graduate standing.

**560. Functions of a Complex Variable. 3 hrs. (Formerly 460\*)**

Complex numbers; analytic functions; properties of elementary functions; integrals; power series; residues of poles, conformal mapping with applications to problems in potential, steady temperatures, and flow of fluids.

Prerequisite: Mathematics 326.

## MUSIC

Professors Kingsbury, Gelvin

Associate Professor Hugoboom

Assistant Professors Lanegger, O'Connell, Pursley

### Admission

Students in music-education must hold a bachelor's degree from a recognized institution with a major in music or the equivalent. Two official transcripts of all previous college work and other evidence of special training in music must be sent to the Dean of Graduate School. Application for admission forms may be secured from the Graduate School Office. A conference should be arranged with the head of the Music Department as a part of the admission procedure. At this conference the conditions of admission will be defined.

### General Requirements

The requirements for the degree of Master of Arts in music-education may be met by completing a minimum of thirty-two semester hours of graduate work of which not more than six hours may be earned by submitting a thesis. The thesis may be in the form of a problem report, graduate recital, or music composition of merit. If a thesis is not submitted, a minimum of thirty-six hours of course work must be completed. All candidates for the master's degree must participate in a major music ensemble.



The program completed for the degree must include eighteen hours of music education of which six hours may be in instrumental techniques, six hours of music history and literature, six hours of education, and six hours from other fields of music. Six hours may be taken in applied music.

Majors in music-education are given a comprehensive written examination in music as well as an audition in applied music covering piano and the major instrument or voice not later than the time of completion of twelve semester hours of graduate work. Applicants are encouraged to take this examination prior to registering for graduate courses.

### MUSIC-EDUCATION—INSTRUMENTAL EMPHASIS

Education .....	6 hours
Education 648, Advanced Studies in Human Adjustment ....	3 hrs.
Education 606, Educational Supervision .....	3 hrs.
Music history and literature .....	6 hours
Music 601, Survey of Music Literature .....	3 hrs.
Music History Electives .....	3 hrs.
Music Education .....	18 hours
Music 610, Philosophy of Music Education .....	3 hrs.
Music 611, Psychology of Music .....	3 hrs.
Music 630, Instrumental Conducting and Interpretation ....	2 hrs.
Music 615, Band Maneuvers and Pageantry .....	2 hrs.
Music Education Electives .....	8 hrs.
Electives in Music .....	6 hours

### MUSIC-EDUCATION—VOCAL EMPHASIS

Education .....	6 hours
Education 648, Advanced Studies in Human Adjustment ....	3 hrs.
Education 606, Educational Supervision .....	3 hrs.
Music history and literature .....	6 hours
Music 601, Survey of Music Literature .....	3 hrs.
Music History Electives .....	3 hrs.
Music Education .....	18 hours
Music 610, Philosophy of Music Education .....	3 hrs.
Music 611, Psychology of Music .....	3 hrs.
Music 629, Choral Conducting and Interpretation .....	2 hrs.
Music Education Electives .....	10 hrs.
Electives in Music .....	6 hours

### MUSIC-EDUCATION—SUPERVISION OF PUBLIC SCHOOL MUSIC

(Special Supervisor's Certificate)

A student wishing to earn a master's degree in music-education and meet the requirements for the Special Supervisor's Certificate may complete either of the programs outlined above. However, nine semester hours of electives in music must be reserved for field courses in practice in supervision.

#### Music History and Literature

601-a. Survey of Music Literature. 3 hrs. (Formerly 501-a)

Comprehensive survey of solo, chamber, symphonic, and choral literature; special emphasis given to analysis of style.



**601-b. Symphonic Literature. 3 hrs. (Formerly 501-b)**

A survey of orchestra literature beginning with the sixteenth century: the Mannheim composers, Viennese classics, the Romanticists, the national schools, and late European, South American and American developments.

**602-a. Ancient, Medieval, and Renaissance Music. 3 hrs. (Formerly 502-a)**

Oriental and Greek music, Gregorian Chant, Troubadours and *ars antiqua*, *ars nova*, Flemish school; development of notation and styles. Renaissance: ecclesiastical and secular forms of composition.

**602-b. Seventeenth and Eighteenth Century Music. 3 hrs. (Formerly 502-b)**

Development of opera, oratorio, and cantata; beginnings of instrumental music. Baroque music, Bach, Handel, their forerunners and contemporaries. The "gallant" style. The development of sonata form, symphony, and cantata. Haydn and Mozart.

**603-a. Beethoven and the Romantic Movement. 3 hrs. (Formerly 503-a)**

A study and evaluation of Beethoven's principal works and the life and works of Schubert, Mendelssohn, Chopin, Schumann, Brahms, and their contemporaries.

**603-b. Contemporary Music. 3 hrs. (Formerly 503-b)**

Musical developments since Wagner. Debussy, Ravel, Stravinsky, Schoenberg, Bartok and their contemporaries. Particular emphasis given to contemporary American music.

**604-a. Keyboard Literature. 2 hrs. (Formerly 504-a)**

Survey and study of literature for harpsichord, clavichord and piano, covering their history, structure, interpretation, and aesthetic values.

**604-b. Chamber Music Literature. 2 hrs. (Formerly 504-b)**

A survey of chamber music literature from the Baroque Era to the 20th Century. Analysis of form emphasized in the study of string quartet, trio, quintet, and various other combinations.

**604-c. Song Literature. 2 hrs. (Formerly 504-c)**

The song literature of Germany, France, Italy, England, and America, as well as contemporary material from other countries; interpretation, song study, program building, and languages.

**604-d. Choral Literature. 2 hrs. (Formerly 504-d)**

A comprehensive study of choral composition beginning with sixteenth century, with special emphasis on music for school organizations.

**605. Aesthetics of Music. 2 hrs. (Formerly 505)**

The principles of the aesthetics of music and related arts and the nature of musical experience. Studies in analysis and criticism.

### Music Education

**610. Philosophy of Music Education. 3 hrs. (Formerly 510)**

Basic concepts of music education and their application to problems of music teaching, supervision, and administration.

**611. Psychology of Music. 3 hrs. (Formerly 511)**

A study of reactions to musical stimuli and the factors involved in the development of musical skills.

**612. Projects and Problems in Music Education. 3 hrs. (Formerly 512)**

Special problems and projects chosen by the student for investigation. Extensive study of a single problem or project in detail for use in schools

**613. Tests and Measurements in Music. 3 hrs. (Formerly 513)**

Principles and techniques of measurement in music.



**614. The Teaching of Music Appreciation.** 2 hrs. (Formerly 514)

Advanced methods and materials for teaching appreciation of music in Grades I through XII.

**615. Band Maneuvers and Pageantry.** 2 hrs. (Formerly 515)

The marching band. The marching and musical problems which are encountered in training and operating a band for football games and other events involving marching and playing.

**616. Curriculum Construction and Revision.** 3 hrs. (Formerly 516)

Survey of recent developments in curriculum and their effect on music courses; consideration of various methods of determining and stating curriculum content. Preparation of a detailed course of study in a specific area of music education by each student.

**617. Seminar in Music Education.** 2 hrs. (Formerly 517)

An advanced study of basic concepts of current problems in music education.

**618-a. Administration of Instrumental Music.** 3 hrs. (Formerly 518-a)

The planning and operation of the instrumental program and the details of programming the work in a school system.

**618-b. Administration of Choral Music.** 3 hrs. (Formerly 518-b)

Organization for tryouts and selection of members, rehearsal schedules, and all detailed arrangements for school, public, and radio rehearsals and concerts as well as other problems of rehearsals and performances.

**619-a. Seminar in Vocal Pedagogy.** 2 hrs. (Formerly 519-a)

Problems in the teaching of voice production: diagnosis, breath control, resonance, diction, repertory and interpretation. For teachers of voice, supervisors of school music, and choir directors.

**619-b. Seminar in Piano Pedagogy.** 2 hrs. (Formerly 519-b)

A comparative study of several pedagogical methods and open discussions on various facets of piano teaching, including papers covering important phases of teaching as well as demonstrations in class and private teaching. Materials and repertoire included.

**620-a. Instrumental Workshop.** 2 hrs. (Formerly 520-a)

Problems of the instrumental teacher at all levels; practical work in the techniques of handling beginning classes and ensembles of all types.

**620-b. Choral Workshop.** 2 hrs. (Formerly 520-b)

Review of available materials for high school and junior high school levels and actual performance of chosen selections to give each student opportunity at singing, conducting, and discussion; also music for church and radio.

**625-a. Woodwind Techniques.** 1 hr. (Formerly 525-a)

Advanced instrumental techniques courses designed to strengthen the student's playing—teaching knowledge of the various band and orchestra instruments, with the main emphasis on the teaching problems, including private lessons, class lessons, seminars, and a term paper on teaching problems. Not more than two semester hours on any one instrument nor more than a total of six in this area apply toward a degree.

**625-b. Woodwind Techniques.** 1 hr. (Formerly 525-b)**626-a. Brass Techniques.** 1 hr. (Formerly 526-a)**626-b. Brass Techniques.** 1 hr. (Formerly 526-b)**627-a. String Techniques.** 1 hr. (Formerly 527-a)**627-b. String Techniques.** 1 hr. (Formerly 527-b)**628. Percussion Techniques.** 1 hr. (Formerly 528)



**629-a. Choral Conducting and Interpretation. 2 hrs. (Formerly 529-a)**

A thorough study and analyzation of choral works chosen from the Renaissance, classical, Baroque and Romantic periods with direct application of choral techniques to actual performance. Mainly a cappella music with some emphasis on the Madrigal. Rehearsal of performing groups included in assignment.

**629-b. Choral Conducting and Interpretation. 2 hrs. (Formerly 529-b)**

Continuation of 629-a covering late Romantic and Modern choral works for the a cappella and accompanied choir as well as major choral works with orchestra. Experience gained as assistant conductors with the performing choirs.

**630-a. Instrumental Conducting and Interpretation. 2 hrs. (Formerly 530-a)**

The special problems involved in conducting and training instrumental groups at all levels.

**630-b. Instrumental Conducting and Interpretation. 2 hrs. (Formerly 530-b)**

A continuation of 630-a.

**670. Advanced Materials and Methods (Grades I-VI). 3 hrs. (Formerly 570)**

A comprehensive survey of available materials in singing, reading, listening, rhythm, and creating program of school music for the elementary grades; use of such materials in the methodology of teaching.

**675. Creative Activity for Children. 3 hrs. (Formerly 575)**

Ways of using creative activity in the music program, methods of presenting creative song writing, rhythms, instrument construction, instrumental expression, dramatization, program building.

**676. Research in Music-Education. 1-3 hrs. (Formerly 576)****680-681. Thesis or Problem Report, I and II. 1-3; 1-3 hrs. (Formerly 580-581)**

### **Theory and Composition**

**640-a. Music Theory. 3 hrs. (Formerly 540-a)**

Advanced study and drill in correlated theory including ear training, melodic dictation, harmonic dictation, sight singing, and part writing with application for school music teachers.

**640-b. Music Theory. 3 hrs. (Formerly 540-b)**

Continuation of Music 640-a.

**645-a. Original Composition. 2 hrs. (Formerly 545-a)****645-b. Original Composition. 2 hrs. (Formerly 545-b)****646-a. Advanced Choral Arranging. 2 hrs. (Formerly 546-a)**

Techniques of choral composition and arranging with emphasis on the mixed choir. Arrangements and original works sung by choral groups and conducted by students.

**646-b. Advanced Choral Arranging. 2 hrs. (Formerly 546-b)**

Continuation of 646-a with emphasis on arranging for male and female voices and usual combinations with final work including original or arrangement for choir and band, orchestra, or organ, to be rehearsed and conducted by student either in performance or workshop.

**647-a. Advanced Band Arranging. 2 hrs. (Formerly 547-a)**

A study of the scoring for modern concert band, the transcription of works for other media as well as original works; analysis of band literature, harmonic and formal.

**647-b. Advanced Band Arranging. 2 hrs. (Formerly 547-b)**

A continuation of 647-a.

**648-a. Advanced Orchestra Arranging. 2 hrs. (Formerly 548-a)****648-b. Advanced Orchestra Arranging. 2 hrs. (Formerly 548-b)**



**649. Dance Band Arranging.** 2 hrs. (Formerly 549)

A study of the special techniques involved in scoring for the contemporary dance band, including harmony used, voicing of the various instruments, and a study of current practices.

**650. Acoustics of Music.** 2 hrs. (Formerly 550)

Review of physical laws underlying music. The physical basis of musical tones; objective causes of harmony and dissonance; design and operation of musical instruments; theory of intervals and scales; acoustical problems of music rooms and concert halls; problems of amplifying, reproducing, and recording music.

**Applied Music**

- 682-a, b, c, d. **Flute.** 1-2 hrs. (Formerly 582-a, b, c, d)  
 683-a, b, c, d. **Oboe.** 1-2 hrs. (Formerly 583-a, b, c, d)  
 684-a, b, c, d. **Clarinet.** 1-2 hrs. (Formerly 584-a, b, c, d)  
 685-a, b, c, d. **Bassoon.** 1-2 hrs. (Formerly 585-a, b, c, d)  
 686-a, b, c, d. **French Horn.** 1-2 hrs. (Formerly 586-a, b, c, d)  
 687-a, b, c, d. **Trumpet.** 1-2 hrs. (Formerly 587-a, b, c, d)  
 688-a, b, c, d. **Trombone.** 1-2 hrs. (Formerly 588-a, b, c, d)  
 689-a, b, c, d. **Baritone.** 1-2 hrs. (Formerly 589-a, b, c, d)  
 690-a, b, c, d. **Tuba.** 1-2 hrs. (Formerly 590-a, b, c, d)  
 691-a, b, c, d. **Violin.** 1-2 hrs. (Formerly 591-a, b, c, d)  
 692-a, b, c, d. **Viola.** 1-2 hrs. (Formerly 592-a, b, c, d)  
 693-a, b, c, d. **Cello.** 1-2 hrs. (Formerly 593-a, b, c, d)  
 694-a, b, c, d. **String Bass.** 1-2 hrs. (Formerly 594-a, b, c, d)  
 695-a, b, c, d. **Piano.** 1-2 hrs. (Formerly 595-a, b, c, d)  
 696-a, b, c, d. **Voice.** 1-2 hrs. (Formerly 596-a, b, c, d)  
 697-a, b, c, d. **Organ.** 1-2 hrs.

**Miscellaneous**

597. **Piano Tuning and Repair.** 2 hrs. (Formerly 497\*)  
 598. **Piano Tuning and Repair.** 2 hrs. (Formerly 498\*)

**PHILOSOPHY**

Professor Beck

Assistant Professor Jennings

Courses may be taken without prerequisites with approval of student's adviser and instructor in the course.

**510. Philosophical Sources of American Culture.** 3 hrs. (Formerly 410\*)

Study of a select group of ancient, medieval, and modern thinkers directly influential in determining the basic American beliefs and ideals in the realms of religion, science, morality, politics, economics, and education.

**511. John Dewey: Philosopher and Educator.** 3 hrs. I, S. (Formerly 411\*)

Exposition of Dewey's entire philosophy as a background for his views on education.

**519. Religious Thought in Western World.** 3 hrs. (Formerly 419\*)

A study of the many directions which the philosophy of religion has taken in the western world, including an analysis of the principal religious philosophies of the present.



**POLITICAL SCIENCE**

Professors Dillon, Harper, Harris  
Associate Professors Leiden, Stewart

Graduate work in political science is planned to satisfy the needs of persons engaged in public school work, those who wish to prepare for government service, and those who wish to begin advanced study in this field.

A candidate for the master's degree in political science must present a minimum of twelve hours undergraduate work in the field. Courses in economics, geography, history, philosophy, and sociology are recommended for students who are preparing to do graduate work in political science. If a deficiency exists in basic courses in political science, these must be taken without graduate credit before admission to full graduate standing.

**500, 501, 502, 503, 504. Special Topics.** 3; 3; 3; 3; 3 hrs.

**505. International Relations.** 3 hrs. (Formerly 405\*)

Special consideration given to the rise and development of international institutions, particularly the United Nations.

**506. Contemporary World Politics.** 3 hrs. (Formerly 406\*)

Special emphasis given to problems of American Foreign Policy; the factors, forces and movements abroad which affect our foreign policy.

**507. Far Eastern Politics.** 3 hrs. (Formerly 407\*)

Detailed discussion of the contemporary institutions and politics of China, Japan and other nations of the Far East.

**508. Politics of the Middle East.** 3 hrs. (Formerly 408\*)

Detailed examination of the institutions and politics of such states as Egypt, Turkey, Persia, Afghanistan, Iraq, Jordan, Syria and Israel.

**509. Parliamentary Governments.** 3 hrs. (Formerly 409\*)

Origin, development, structure and current operations of the English, French, Swiss and other selected democratic governments; emphasis on the English system.

**510. Modern Dictatorships.** 3 hrs. (Formerly 410\*)

Detailed examination of the ideology, structure and operations of the modern totalitarian state; emphasis on the Soviet Union.

**520. State Administration.** 3 hrs. (Formerly 420\*)

Administrative organization and methods of executing policies in the forty-eight states.

Prerequisite: Political Science 202.

**525. Early Political Theory.** 3 hrs. (Formerly 425\*)

Political thought and philosophy from Plato to the 17th century.

**526. Recent Political Theory.** 3 hrs. (Formerly 426\*)

Political thought and philosophy from the 17th century to the present time.

**600. Trends in American Civilization.** 3 hrs. (Formerly 500)

Political, economic, social, educational, and spiritual trends in American civilization. For teachers not interested in specialized courses.

**601. Readings in Political Science.** 2-3 hrs. (Formerly 501)

Readings to meet the needs and interests of individual students.

**603. Problems in American National Government.** 3 hrs. (Formerly 503).

Contemporary problems, procedures, and trends in American National Government. Recommended for teachers.



604. **American Political Ideas.** 3 hrs. (Formerly 504)  
Political ideas of representative American thinkers.
605. **International Law.** 3 hrs. (Formerly 505)  
Legal aspects of the relations between states.
606. **American Constitutional Law.** 3 hrs. (Formerly 506)  
Case study of constitutional law giving some attention to the conflict of political, social, and economic forces.
611. **Legislative Process and Legislative Procedure.** 3 hrs. (Formerly 511)  
Principles, procedures, and problems of statute lawmaking in the United States at all levels of government.
615. **Labor Legislation.** 3 hrs. (Formerly 515)  
Theory, organizations, procedure, content, and effect of labor legislation in the state, national, and international sphere.
617. **National Administration.** 3 hrs. (Formerly 517)  
Organization and function of national administrative departments, boards and commissions in their relation to other branches of the government.
621. **Municipal Administration.** 3 hrs. (Formerly 521)  
Principles and methods of municipal administration in the United States.
623. **Administrative Law.** 3 hrs. (Formerly 523)  
Law of administrative tribunals.
624. **Administration of Justice.** 3 hrs. (Formerly 524)  
Organization of courts in the United States, trends in the reorganization of judicial machinery, improvement of judicial procedure, socialization of the law, and professional ideals of the bar.
648. **Problems in West Virginia Government.** 3 hrs. (Formerly 548)  
Readings, lectures, and reports on contemporary governmental problems in West Virginia.
- 650-651. **Seminar.** Credit to be arranged. (Formerly 550-551)  
To be offered in connection with courses listed above.
- 680-681. **Thesis or Problem Report I and II.** 1-3; 1-3 hrs. (Formerly 580-581)

## PSYCHOLOGY

Professors Loemker, VanBibber  
Associate Professor Feil

Graduate students majoring in psychology will observe the following requirements:

1. Before recommending the student for admission to candidacy for the master's degree, the department may require a qualifying examination.
2. The final comprehensive examination in part will be uniform for all candidates, and in part will vary according to the area in which the student has done most of his work. All candidates will be held responsible for information covering the following fields:  
Historical orientation and contemporary systems of psychology.  
General methods of psychology: Experimental, Differential (including Statistical), Clinical.  
Psychological testing: theory and methods.



3. Only four courses are specifically required: Psychology 680, 681, 690 and 691. The rest of the work is planned, with the approval of the adviser, to meet the needs and interests of the student.
  4. During regular semesters every graduate student will enroll for Psychology 690 or 691, Seminar, one (1) hour credit. Additional credit for these courses may be earned with approval of the instructor and adviser.
  5. A thesis is a requirement for the master's degree in psychology. Early in graduate study the student should enroll for 680, Thesis I, one to three (1—3) hours credit. During that term or semester the student will select his thesis problem, plan his research in detail, submit it to his adviser for approval, and do extensive reading in related literature. Credit for Psychology 680 will be determined by the adviser on the basis of accomplishment at the end of the semester. It will not exceed three (3) hours. During the next term or semester the student will enroll for Psychology 681, one to three (1—3) hours, and will work toward completion of his research and the thesis. No credit for this course will be given or grade assigned until the thesis is presented in final form.
  6. Under certain conditions a minor may not be required.
- 506. Intelligence: Theories and Development.** 3 hrs. I. (Formerly 406\*)  
Nature of intelligence, individual differences in intelligence, mental levels; significance and methods of measuring intelligence; relation of intelligence to social efficiency.  
Prerequisite: Nine hours of psychology.
- 516. Psychology of Learning.** 3 hrs. (Formerly 416\*)  
Review and critical evaluation of experimental studies and theories in the field of learning.  
Prerequisite: Nine hours of psychology.
- 518. Psychology of Personnel.** 3 hrs. I, II, S. (Formerly 418\*)  
Techniques in personnel administration, with emphasis on the psychological principles and methods involved; problems of employment procedures, training programs, personnel records, communication, and human relations in business and industry.  
Prerequisite: Psychology 201 (or 101).
- 520. Mental Measurements.** 3 hrs. I.  
Instruction and practice in the use of individual intelligence tests, including the Stanford-Binet and Wechsler scales; evaluation of test results.  
Prerequisite: Nine hours of psychology.
- 521. Psychological Tests.** 3 hrs. II. (Formerly 421\*)  
Instruction and practice in the use of group tests of intelligence and abilities, and in tests of interests and personality; evaluation of test results.  
Prerequisite: Psychology 420 or 520.
- 550. Perception.** 3 hrs.  
Experimental studies of and theories of perception and the significance of perception in human behavior.  
Prerequisite: Nine hours of psychology.
- 560. History and Systems of Psychology.** 3 hrs. I, S. (Formerly 460\*)  
Prerequisite: Nine hours of psychology.



- 603. Psychology of Exceptional Children.** 3 hrs. (Formerly 503)  
Child nature, innate tendencies, causes of maladjustment, behavior problems in home, school, and society. Consideration given to individual differences, motivation, speech disorders, delinquency, lefthandedness, psychopathy, and other deviations; remedial measures emphasized.  
Prerequisite: Consent of instructor.
- 606. Psychology of Mental Deficiency.** 3 hrs. (Formerly 506)  
Classes and levels of mental deficiency; causes, prevention, training, adjustment, and institutional care. Clinics at institutions.  
Prerequisite: Nine hours of psychology.
- 608. Psychopathology.** 3 hrs.  
Minor and major behavior deviations and related phenomena, with special attention to causes and prevention of development of disorders. Clinics at institutions.  
Prerequisite: Nine hours of psychology.
- 614. Psychology of Personality.** 3 hrs. (Formerly 514)  
Factors involved in the development of the mature personality, with an analysis of the structure and dynamics of personality; a critical review of the methods used in the psychological evaluation of personality.  
Prerequisite: Nine hours of psychology.
- 620. Clinical Psychology. Institutional Case Techniques.** 3 hrs. (Formerly 520)  
A practical laboratory study of mental and behavior cases in the mental hospital. Intensive study and training in administration and interpretation of clinical tests, psychological diagnosis, and preparation of clinical reports.  
Prerequisite: Psychology 520 or 420, 521 or 421, and 608.
- 621. Clinical Psychology: Non-Institutional Case Techniques.** 3 hrs. (Formerly 521)  
Intensive study and practice of psychological clinic procedures in dealing with mental and behavior problems of children and non-institutionalized adults; administration and interpretation of clinical tests, obtaining pertinent personal and family history data, preparation of clinical report.  
Prerequisite: Psychology 520 or 420, 521 or 421, 606 and 608.
- 623. Scientific Method in Psychology.** 3 hrs.  
Critical evaluation of scientific methods in psychology, with emphasis on the experimental methods. Laboratory exercises.  
Prerequisite: Nine hours of psychology.
- 680-681. Thesis I and II.** 1-3; 1-3 hrs. (Formerly 580 and 581)
- 690-691. Seminar.** 1-3; 1-3 hrs. (Formerly 590 and 591)  
Research and reports on current problems and literature in psychology and related fields. Ordinarily, two hours credit may be earned in seminars; not more than four hours may be earned in seminars.

#### SCIENCE EDUCATION (ASTRONOMY)

Professor Darlington

**500. Astronomy.** 3 hrs.

A course in astronomy (science of the stars and planets) for teachers designed to enable the student to identify what he sees and to stimulate interest in the physical universe.



**SCIENCE EDUCATION (CHEMISTRY)**

Professors Scholl, Rumble  
Associate Professors Hoback, Whelpley

NOTE: The following courses are open to students working for the master's degree in Education. See Program G under Education.

**620-621. Chemical Education.** 3-3 hrs. S. (Formerly 520-521)

Fee \$8.00; Deposit \$5.00.

Prerequisite: Chemistry 204 or equivalent.

**622-623. Organic.** 2-2 hrs. S. (Formerly 522-523)

Fee \$8.00; Deposit \$5.00.

Prerequisite: Chemistry 520-521 or 620-621.

**624-625. Physical.** 2-2 hrs. S. (Formerly 524-525)

Fee \$8.00; Deposit \$5.00.

Prerequisite: Chemistry 520-521 or 620-621.

**SCIENCE EDUCATION (PHYSICS)**

Professor Martin

Note: The following courses are open to students working for the master's degree in Education. See Program G under Education.

**640-641. Physics Education.** 3-3 hrs. (Formerly 540-541)

A review and extension of basic principles of physics with particular stress on materials and methods of demonstration.

**642-643. Electronics.** 2-2 hrs. (Formerly 542-543)

Basic principles of electron tubes and their applications in industry, medicine, and communications, with accompanying laboratory work.

Fee \$2.00 per each course.

**644. Atomic Physics.** 2 hrs. (Formerly 544)

A historical development of the modern theories concerning the structure of matter, electricity, and light, including applications of optical spectra and X-Rays.

**645. Physics of the Nucleus.** 2 hrs. (Formerly 545)

Structure and properties of the nucleus of the atom, radioactivity, atomic transmutations, the basic principles of atom smashing machines, and atomic energy.

Fee \$2.00.

**646. Seminar on Recent Developments in the Physical Sciences.** 2 hrs. (Formerly 546)

Reports from current issues from various periodicals in the field of physical science.

**SOCIOLOGY**

Professors Richardson, Hayward

Candidates for the master's degree in sociology will be expected to fulfill the following requirements:

1. Complete eighteen hours of sociology on the graduate level including Sociology 521, 601, 670, 671.
2. Complete a minimum of six hours or a maximum of twelve hours in the following fields: economics, geography, history, psychology, philosophy, political science, or education.



3. Write a thesis under the direction of the adviser. The final acceptance of this work is subject to the approval of the Department of Sociology and of the Dean of the Graduate School.
4. Pass a comprehensive written examination covering the field of concentration in sociology.
5. Pass an oral examination in defense of the thesis conducted by the staff of the Department of Sociology.
501. **Population Problems.** 3 hrs. I. (Formerly 401\*)  
Growth and distribution of population in relation to natural resources, commerce, and social relationships.
503. **Social Investigation.** 3 hrs. II. (Formerly 403\*)  
Methods of investigation and research in the social sciences; sources of data, their evaluation, organization, and presentation.
506. **Family Living.** 3 hrs. II.  
Seminar in the basic structure and function of the modern American family.
508. **The Family.** 3 hrs. I, II. (Formerly 408\*)  
The family as an institution, its structure, functions, and relation to social organization.
512. **Group Relations.** 3 hrs. II. (Formerly 412\*)  
Analysis of the group, participation, intergroup relationships, group tensions, and group control.
521. **History of Social Thought,** 3 hrs. II. (Formerly 421\*)  
A survey of sociological literature and thought from the earliest times to the contemporary period.
526. **The American Negro.** 3 hrs. II. (Formerly 426\*)  
Historical background, accomplishments in American cultural spheres, social and economic problems of the Negro.
527. **Race Problems.** 3 hrs. II. (Formerly 427\*)  
The nature, criteria, classification and distribution of races; race differences and contacts.
528. **Medicine in Modern Society.** 3 hrs. I. (Formerly 428\*)  
Changing patterns in medicine, government participation in the field, group practice, research and foundations, and international aspects.
529. **Social Legislation.** 3 hrs. II. (Formerly 429\*)  
Social insurance as a device to meet the hazards of old age, illness, retirement, unemployment and physical handicaps. Special emphasis is placed on the Social Security Act.
530. **The American Indian.** 3 hrs. I. (Formerly 430\*)  
The physical and cultural study of the American Indian; special emphasis on his contributions to our culture.
- 531-532. **Classroom and Field Studies.** 3-3 hrs.
533. **Industrial Sociology.** 3 hrs. II.  
A study of the relationships existing between industry and the institutional phases of our society.
534. **Tri-State Area.** 3 hrs.  
A study of human and natural resources of West Virginia, southern Ohio and eastern Kentucky.
601. **Sociological Theory.** 3 hrs. (Formerly 501)  
Systematic survey of sociology from the early Greek school to modern times.



602. **Contemporary Social Change.** 3 hrs. (Formerly 502)  
The development of social movements, the effect of discovery, invention, disaster, and rapid shifts in social interests.
611. **Seminar in Social Pathology.** 3 hrs. (Formerly 511)  
A research course dealing with the basic ills of society.
620. **Seminar in Delinquency and Criminology.** 3 hrs. (Formerly 520).  
Physical, social, economic, and geographical factors concerning crime and criminals discussed in round table style; outside readings required.
625. **Social Control.** 3 hrs. (Formerly 525)  
Formal and informal means of social control such as legal processes, institutional control, propaganda, and public opinion.
632. **Rural Social Organization.** 3 hrs. (Formerly 532)  
The different forms of human association in rural life, their relation, and organization.
668. **Seminar.** 1-3 hrs. (Formerly 568)
- 670-671. **Research.** 2-2 hrs. (Formerly 570-571)  
Special problems selected by the student with the approval of the staff. Readings in the literature of research techniques.
- 680-681. **Thesis or Problem Report.** 1-3; 1-3 hrs. I and II. (Formerly 580-581)

### SPEECH

Professor Ranson

Associate Professors Harbold, Page

Assistant Professor Garrett

Courses may be taken with approval of student's adviser and instructor in the course.

503. **Play Direction.** 3 hrs. I. (Formerly 403\*)  
Problems in directing plays; laboratory practice. Primarily for students who expect to produce plays in schools and/or community groups.
518. **Speech Correction.** 3 hrs. I and II. (Formerly 418\*)  
Causes, symptoms, and treatment of speech problems with special attention to classroom application.
519. **Speech Correction.** 3 hrs. II. (Formerly 419\*)  
Introduction of clinical methods in speech correction; theory and clinical practice.  
Prerequisite: Speech 418 or 518.
540. **Play Writing.** 3 hrs. (Formerly 440\*)  
Principles of dramatic construction, including finding dramatic materials, building the play, characterization, and dialogue; writing one-act plays and short sketches for experimental and public production.
545. **Children's Theatre.** 3 hrs. (Formerly 445\*)  
The theory, directing, and staging of various types of plays for children with particular attention to problems encountered in the elementary school.
550. **The Direction of Speech Activities.** 3 hrs. (Formerly 450\*)  
For teachers conducting the extra-curricular speech program, including coaching and evaluating group discussion, debate, oratory, oral reading, extemporaneous speaking.
560. **Audiology.** 3 hrs. (Formerly 460\*)  
Survey of the area of audiology as related to speech correction.  
Prerequisite: Speech 418 or 518.



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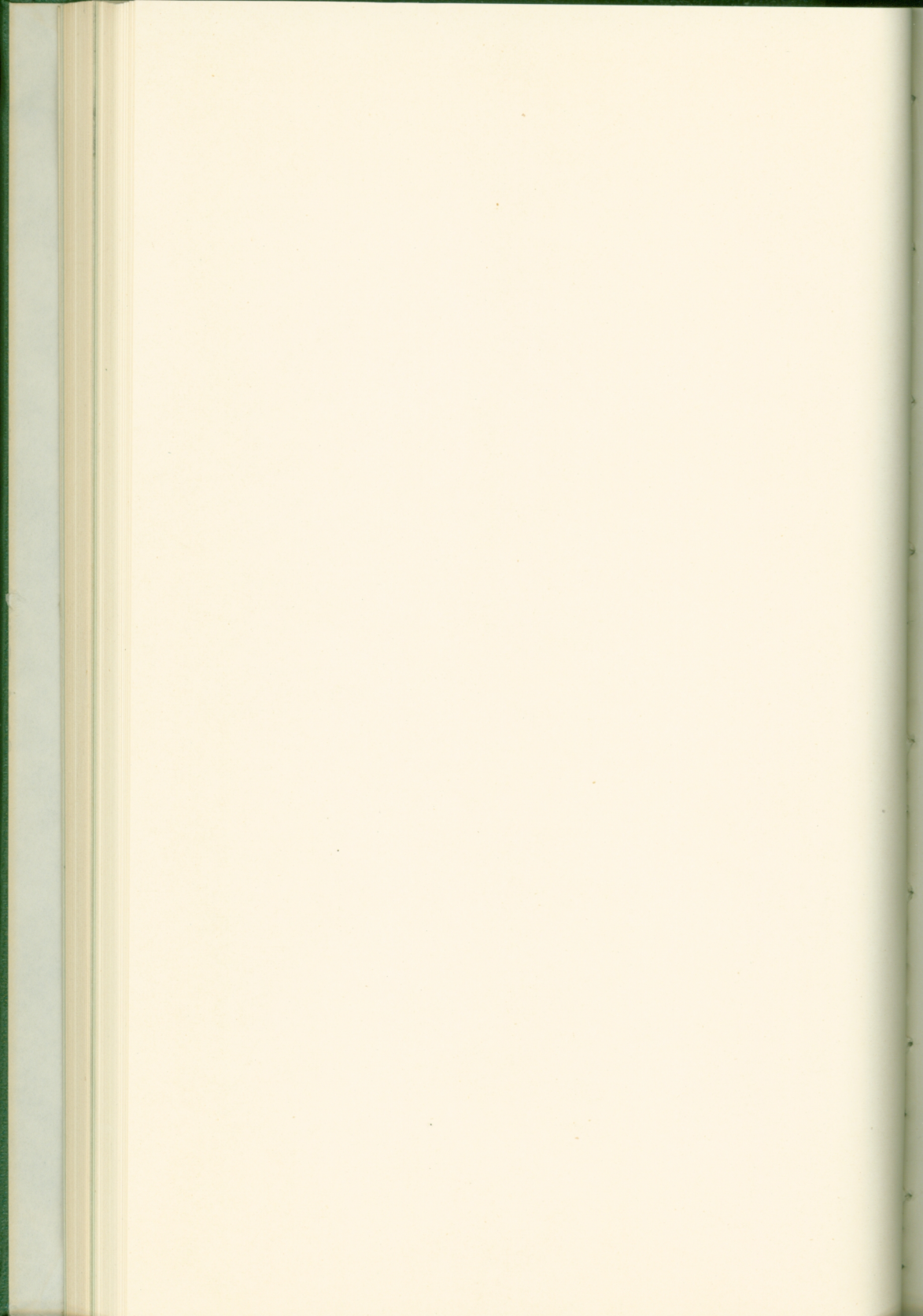








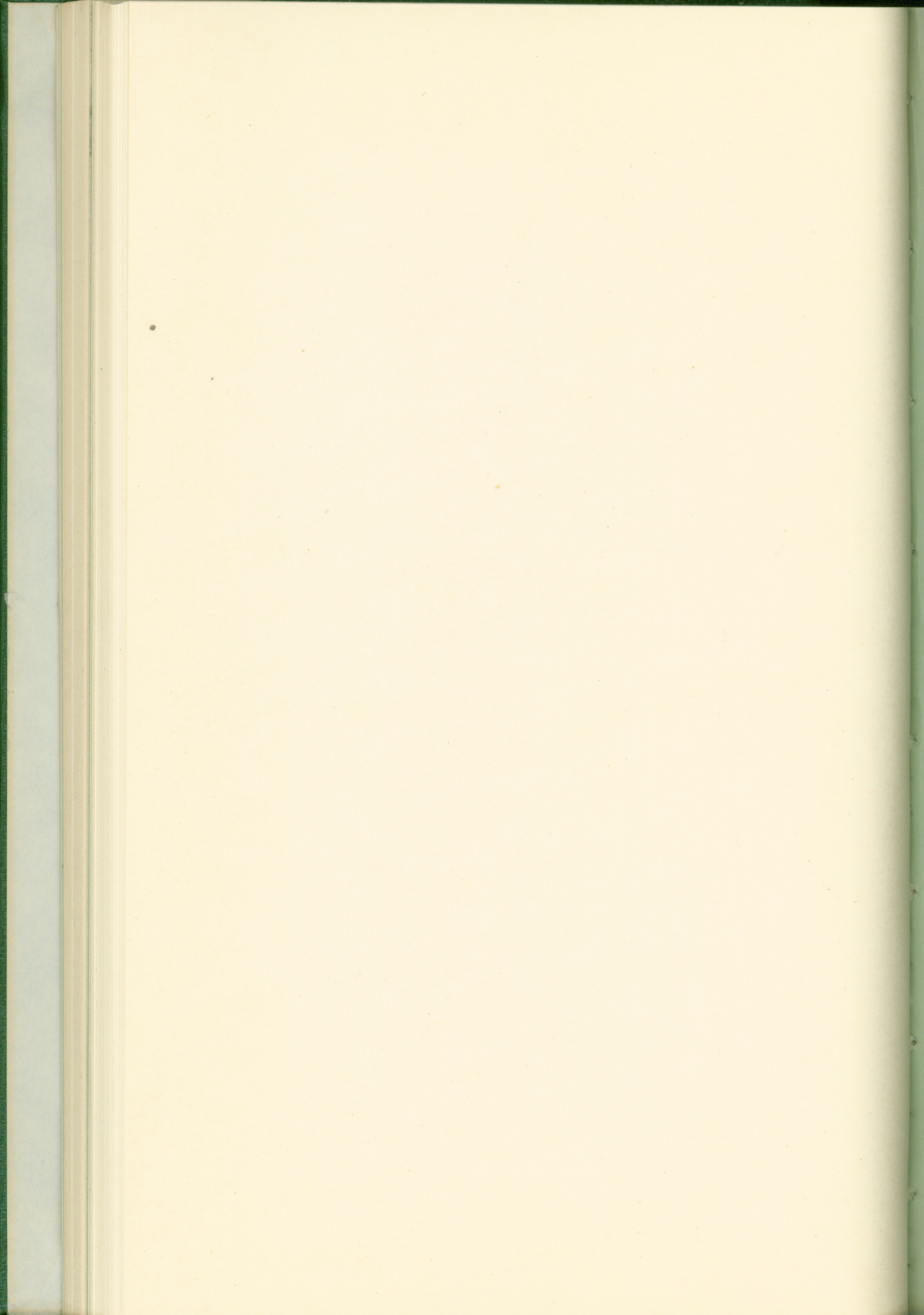


















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