



Walla  
Walla  
College

Graduate Division  
1965 - 1967



**The College is Accredited by**

The Northwest Association of  
Secondary and Higher Schools

The Washington State Board of  
Education

Department of Baccalaureate and  
Higher Degree Programs of the  
National League for Nursing

National Association of Schools of  
Music

**is a member of**

Association of American Colleges

Association of Seventh-day Ad-  
ventist Colleges and Secondary  
Schools

Council of Member Agencies, De-  
partment of Baccalaureate and  
Higher Degree Programs of the  
National League for Nursing

American Council on Education  
National Commission on Accredi-  
tation

**is approved by**

U.S. Government for the training  
of veterans under the G.I. Bills  
550 and 894

The Attorney General of the  
United States for nonimmigrant  
students

Washington State for training in  
Vocational Rehabilitation

## FOR INFORMATION

Concerning general information, bulletins, application blanks, view-books, student handbooks, write

The Registrar

Concerning the graduate programs, special credentials, write

Chairman, The Graduate Council or

Chairman, Department involved

Concerning work, financial arrangements, and apartments, write

Finance Counseling Office

Concerning room reservations and other matters of residence, write

The Dean of Men or

The Dean of Women

WALLA WALLA COLLEGE

College Place, Washington 99324

Telephone

Walla Walla

JACKSON 5-7560

Area Code 509

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# CALENDAR, 1965-66

## AUTUMN QUARTER

September 19—Sunday	All students arrive, Orientation and Registration
September 20—Monday	Registration, Tests, Orientation
September 21—Tuesday	Registration, Tests, Orientation
September 22—Wednesday	Instruction begins, 7:30 a.m.
October 6	Last day to add a course
October 27	Midquarter
November 2	Last day to drop a course
November 24 (1:00 p.m.)—Nov. 28 (10:00 p.m.)	Thanksgiving Recess
December 5-8	Registration for Winter Quarter
December 13, 14, 15	Final Examinations
December 15—Wednesday (6:00 p.m.)	Quarter Ends
December 15—(6:00 p.m.)—Jan. 2 (10:00 p.m.)	Christmas Recess

## WINTER QUARTER

January 2, 3—Sunday, Monday	Registration of new students
January 3—Monday	Instruction begins, 7:30 a.m.
January 17	Last day to add a course
February 2	Midquarter
February 7	Last day to drop a course
March 6-9	Registration for Spring Quarter
March 14, 15, 16	Final Examinations
March 16—Wednesday (6:00 p.m.)	Quarter Ends
March 16 (6:00 p.m.)—March 21 (10:00 p.m.)	Spring Recess

## SPRING QUARTER

March 21—Monday	Registration of new students
March 22—Tuesday	Instruction begins, 7:30 a.m.
March 28 and 29	Graduate Record Examinations
April 4	Last day to add a course
April 20	Midquarter
April 25	Last day to drop a course
May 31, June 1, 2	Final Examinations
June 3—Friday (6:00 p.m.)	Quarter ends
June 3—Friday (8:00 p.m.)	Senior Consecration
June 4—Saturday (11:00 a.m.)	Baccalaureate
June 5—Sunday (10:00 a.m.)	Commencement

## SUMMER SCHOOL, 1966

June 13-July 15	First Term
July 18-August 19	Second Term

## ADMINISTRATION

### BOARD OF TRUSTEES

W. J. HACKETT, <i>Chairman</i>	J. O. EMMERSON	J. T. PORTER
W. H. SHEPHARD, <i>Secretary</i>	A. J. GORDON	R. C. REMBOLDT
W. E. ANDERSON, <i>Treasurer</i>	CLYDE HARRIS	H. C. RHODES
J. W. BOTHE	E. S. HUMANN	E. E. RIPPEY
L. W. CROOKER	G. W. LISCOMBE	H. L. RUDY
N. R. DOWER	C. J. NAGELE	

### OFFICERS OF ADMINISTRATION

WILLIAM H. SHEPHARD, ED. D.	President of the College
ROBERT H. BROWN, PH. D.	Vice President, Student Affairs
HANS L. RASMUSSEN, ED. D.	Academic Dean
W. E. ANDERSON, M. B. A.	Business Manager
ORPHA N. OSBORNE, B. A.	Registrar
LENOA PEEBLES SILVER, M. L.	Librarian
RICHARD D. FEARING, M. A.	Chaplain
NORMAN J. WOODS, B. A.	Dean of Men
HELEN WARD EVANS, PH. D.	Dean of Women
GORDON S. BALHARRIE, B. D.	Dean, School of Theology
WILMA L. LEAZER, R. N., M. S.	Dean, School of Nursing

### ADMINISTRATIVE COUNCIL

W. H. SHEPHARD, W. E. ANDERSON, G. S. BALHARRIE, R. H. BROWN, HELEN EVANS, J. J. HAFNER, R. G. MANALAYSAY, ORPHA OSBORNE, H. L. RASMUSSEN, C. W. SHANKEL, N. J. WOODS.

### GRADUATE COUNCIL

J. W. RHODES, C. C. BARNETT, D. F. BLAKE, R. H. BROWN, R. G. MANALAYSAY, F. E. MECKLING, ORPHA OSBORNE, J. V. PETERS, H. L. RASMUSSEN, D. W. RIGBY.

## THE GRADUATE FACULTY

Courses which may be applied towards the degree of Master of Arts are taught by members of the Walla Walla College faculty or by visiting professors. Majors are offered in education and biology, while certain other departments offer supporting courses.

### Biology

- RIGBY, DONALD W.**, Associate Professor of Biology  
B. A., 1950, La Sierra College; M. A., 1956, Walla Walla College
- BLAKE, DONALD F.**, Assistant Professor of Biology  
B. A., 1953, Oakwood College; B. S., 1957, M. S., 1959, Michigan State University; Ph. D., 1965, University of Rhode Island
- FORSS, CARL**, Assistant Professor of Biology  
B. A., 1958, Walla Walla College; M. A., 1959; Ph. D., 1965, Oregon State University
- GRABLE, ALBERT**, Assistant Professor of Biology  
B. S., 1959, La Sierra College; M. S., 1962, Ph. D., 1964, University of Minnesota
- STOUT, JOHN F.**, Assistant Professor of Biology  
B. A., 1957, Columbia Union College; Ph. D., 1963, University of Maryland

### Education

- PETERS, J. V.**, Associate Professor of Education  
B. A., 1936, Minnesota Teachers College; M. A., 1946, University of Idaho; Ed. D., 1962, University of Montana
- LEONIE, ANDREW**, Associate Professor of Education  
B. A., 1952, Columbia Union College; M. S., 1960, University of Oregon; Ph. D., 1965, Montana State University
- MANALAYSAY, RAQUEL**, Associate Professor of Education  
B. S. E., 1942, Philippine Union College; M. Ed., 1954, University of the Philippines; Ed. D., 1957, Indiana University
- MANALAYSAY, REUBEN G.**, Professor of Education  
B. S. E., 1938, B. A., 1939, Philippine Union College; M. A., 1947, Far Eastern University; M. Ed., 1950, University of the Philippines; Ed. D., 1951, Indiana University
- RHODES, J. WESLEY**, Professor of Education  
B. A., 1931, Emmanuel Missionary College; M. Mus., 1947, Northwestern University; Ed. D., 1957, Columbia Teachers College
- SILVER, ROBERT E.**, Professor of Education  
B. A., 1948, Walla Walla College; M. A., 1950, Ed. D., 1956, University of Washington
- STAHLNECKER, ROBERT E.**, Assistant Professor of Education  
B. Th., 1950, Walla Walla College; M. A., 1960, Eastern New Mexico University; Ed. D., 1965, University of Oregon
- TEEL, LOIS FLORETTA**, Assistant Professor of Education  
B. A., 1947, Emmanuel Missionary College; M. Ed., 1959, University of Oregon
- WALTERS, THOMAS W.**, Professor of Education  
B. A., 1934, Walla Walla College; M. A., 1950, Ed. D., 1955, Stanford University

### Supporting Departments, Chairmen

- BALHARRIE, GORDON S.**, Professor of Religion  
B. A., 1945, Columbia Union College; M. A., 1949, B. D., 1960, Theological Seminary, Andrews University
- BARNETT, CLAUDE C.**, Professor of Physics  
B. S., 1952, Walla Walla College; M. S., 1956, State College of Washington; Ph. D., 1960, Washington State University
- BURNS, J. R.**, Associate Professor of English  
B. A., 1965, Honours B. A., 1959, University of South Africa



**HARE, GORDON B., Associate Professor of Mathematics**

B. A., 1951, Columbia Union College; M. S., 1954, Ph. D., 1964, University of Colorado

**HARTBAUER, ROY E., Assistant Professor of Speech**

B. Th., 1950, Walla Walla College; M. A., 1961, University of Southern California

**JONES, CARL T., Professor of Chemistry**

B. A., 1933, Columbia Union College; M. S., 1939, Catholic University of America; Ph. D., 1959, Oregon State College

**LITKE, RICHARD L., Professor of Biblical Languages**

B. A., 1948, Walla Walla College; B. A., 1953, M. A., 1953, University of California; Ph. D., 1959, Yale University

**MECKLING, FRANK E., Professor of History**

B. A., 1929, Columbia Union College; M. A., 1931, University of Maryland; Ph. D., 1950, University of California at Los Angeles

**MEHLING, J. G., Professor of Business and Economics**

B. B. A., 1934, Walla Walla College; M. A., 1947, University of Washington; C. P. A., 1947, State of Washington

**PIERCE, L. CHARLES, Associate Professor of Modern Languages**

B. A., 1948, Mexico City College; M. A., 1949, University of Maryland; Ph. D., 1964, University of Southern California

**RITTENHOUSE, EVELYN, Associate Professor of Secretarial Science**

B. A., 1943, Pacific Union College; M. S., 1951, University of Southern California

**TRAUTWEIN, CALVIN L., Professor of Industrial Education**

B. A., 1945, La Sierra College; B. S., 1950, Pacific Union College; Ed. M., 1955, Oregon State College; Ed. D., 1962, Colorado State College

**WEST, MELVIN K., Professor of Music**

A. B., 1952, Emmanuel Missionary College; M. Mus., 1955, Redlands University; Mus. A. D., 1959, Boston University; F. A. C. O., 1957

**WINTER, EUGENE S., Professor of Physical Education**

B. A., 1941, Walla Walla College; M. S., 1948, State College of Washington; Ph. D., 1963, University of Oregon

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## GENERAL INFORMATION

**W**ALLA WALLA COLLEGE is a Christian institution of higher learning operated by the Seventh-day Adventist Church.

The College is located in the city of College Place, in the historic fertile Walla Walla valley of southeastern Washington. The Old Oregon Trail, near the campus, leads directly to the site of the old mission which was conducted by Marcus Whitman from 1836 to 1847, and which has been reconstructed by the Federal government as the Whitman Mission. The scenic Blue Mountains to the east are but a few minutes' drive from the campus, and offer unusual opportunities for recreation and relaxation.

The College, in successful operation since December 7, 1892, was established in harmony with a resolution unanimously adopted at the General Conference of Seventh-day Adventists held in Battle Creek, Michigan, in 1891.

The principal objectives of the College are the fostering of an intelligent understanding and devotion to Christian ideals, loyalty to God and service to humanity, and the offering of an educational experience encouraging the formation of character marked by a full, harmonious development of the intellectual, physical, and spiritual powers.

### OBJECTIVES OF THE GRADUATE PROGRAM

1. To provide an atmosphere which will stimulate intellectual curiosity and independent thinking.
2. To develop an appreciation of the value of research and an acquaintance with basic research techniques.
3. To strengthen the professional competence of the individual in his area of specialization.

## **SABBATH OBSERVANCE**

The seventh-day Sabbath is observed at Walla Walla College from sunset Friday to sunset Saturday. No instructional activities are conducted during these hours.

## **SCHOLARSHIPS, ASSISTANTSHIPS, AND LOANS**

### **Conference Teachers' Scholarships**

The North Pacific Union Conference of Seventh-day Adventists has authorized five full-tuition graduate scholarships for three quarters of study leading to the master's degree with a major in education at Walla Walla College. Application for the scholarship should be made to the conference educational secretary in whose territory the individual is currently employed or the conference in which he will be employed upon completion of the year of study.

### **Department of Education Assistantships**

Five graduate assistantships are available annually. They include the following benefits: full tuition and fees for four quarters and a cash stipend of \$100 per month for a maximum of 12 months.

It is planned that graduate assistants will complete the master's degree in this time period and that in the assistantships the graduate student will participate in a variety of research, instructional and guidance services, and professional writing.

For additional information and the procedures of application, interested individuals should write the department chairman.

### **Department of Biology Assistantships**

1. Teaching. A number of half-time teaching assistantships for the nine-month academic year as well as for the summer at the Marine Biological Station are available. A stipend of \$900 is given for the academic year and full tuition and fees are remitted. The teaching assistant is normally involved in laboratory instruction in basic courses.

The teaching assistantship stipends for the summer are awarded at the same rate as those during the academic year; however, half-time tuition is remitted and laboratory fees are not included.

2. Research. Members of the staff frequently have at their disposal research funds. Stipends start at \$150 per month. Research assistants are normally involved in assisting one of the professors with a current research program.

Application forms for teaching and/or research assistantships may be obtained by writing directly to the head of the biology department. Applications must be completed by April 15.

### **Loans**

All graduate students working for a master's degree are eligible for the National Defense Educational Loan after the need has been established. There are other sources of loans such as the Carrie Welch Loan Fund, Grettner Loan Fund, and the National Bank of Commerce Worthy Student Loan Fund. These loans can usually be worked out quickly after the need is presented.

## **TUITION AND FEES, STUDENT HOUSING**

For complete financial information see the current College Bulletin. For student housing see the Director of Student Finance.



### W. I. SMITH HALL

Pictured are two views of W. I. Smith Hall, a three-story structure of reinforced concrete frame with brick masonry occupied in the summer of 1965 and dedicated on August 22. The building provides facilities for the department of education: classrooms, conference and testing rooms, laboratories, curriculum library, education offices, and a child psychology seminar with one-way glass into an elementary education classroom.

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# GRADUATE PROGRAM

**T**HE Graduate Division offers programs leading to the Master of Arts degree in the departments of Biological Sciences and Education. In addition, the Walla Walla College Board has authorized a specialized content area teaching degree, the Master of Arts in Teaching. The various programs are directed and supervised by the Graduate Council, which is the legislative body responsible for the formulation of all graduate academic policies and curricula.

## ADMISSION TO GRADUATE STUDY

Students enrolled to complete fifth-year requirements or the master's degree are considered graduate students.

Applicants for admission to the Graduate Division shall have been graduated from a recognized four-year college or university, and shall have completed a basic background of undergraduate work in the proposed field of graduate study. The applicant should file completed application forms and two official transcripts of all work taken on the collegiate level with the Registrar of the College at least three months prior to the quarter in which graduate study is to commence. Failure to do so may result in delay in admission and registration. All forms and transcripts submitted for admission become the property of the College and are not returned. Admission forms are available in the Registrar's Office.

All students admitted to the Graduate Division are given conditional standing. Admission does not imply degree candidacy. A student is considered a candidate for a degree only after demonstrating above-average scholastic ability, making provision for removal of any deficiencies which may have existed at the time of admission, and successfully completing any qualifying examinations required by the department.

Admission to the Graduate Division to pursue the master's degree is determined by the Admissions Committee of the College and the Chairman of the Graduate Council upon the recommendation of the major department. The basis of recommendation is the demonstrated scholastic ability and performance on the graduate record examinations, as well as on other tests prescribed by the department concerned. The candidate must also meet specific requirements as listed by the separate departments.

Students with a cumulative G.P.A. below 2.5 are discouraged from working toward a master's degree. However, upon completing one quarter of graduate work in approved courses with a G.P.A. of 3.00 or above, the student may petition the Graduate Council for admission to the master's degree program. Any 500 level courses and courses in the field of specialization taken before admittance may be counted toward the degree only if they are approved by the student's committee and the chairman of the Graduate Council.

## GRADUATE CREDIT FOR SENIORS

A senior who is within 12 credits of completing the requirements for the baccalaureate degree and who otherwise meets the admission requirements of the Graduate Division, may register for graduate work if recommended by the head of his department and approved by the chairman of the Graduate Council. For such registration a petition for graduate credit in excess of senior requirements must be filed. Approval of such petition will be granted only to students who at the same time are completing the requirements for the bachelor's degree. Students who are taking graduate and undergraduate courses concurrently cannot register for more than a combined load of sixteen credits. The master's degree may not be conferred until two full quarters have elapsed after receiving the baccalaureate degree.

## REGISTRATION

After admission to the Graduate Division, the student should confer with the head of the department in which graduate study is proposed. The head of the department, or an assigned adviser, will assist the student in selecting the courses for the first quarter in residence, and in planning the program of study for the degree. The approval of the head of the department, or the adviser, is required for all courses used in meeting the master's degree requirements.

The normal course load is from 12 to 15 credits per quarter. Any course load above this amount must be approved by the Graduate Council. Students engaged in part-time employment must confer with their adviser and limit their course load proportionately.

## CHANGES IN REGISTRATION

Changes in registration require the approval of the adviser and must be made during the first full week of instruction in the quarter. A student withdrawing from college or an individual course must file an official drop voucher with the Registrar's Office. During the first seven weeks of any quarter, the student may withdraw from a course and receive a W. Withdrawals after this time will result in the recording of a Wf unless exception is granted by the Academic Dean. Credits for which Wf is received are included in calculating the grade-point average.

## COURSE NUMBERING

Courses numbered 500 or above are primarily for graduate students. Courses numbered 400-499 are open to both upper-division undergraduate and graduate students. Certain courses numbered 300-399 may be included in the graduate program on approval of the Graduate Council.

## SCHOLARSHIP REQUIREMENTS

Students wishing to qualify for the master's degree must maintain a cumulative grade-point average of 3.00 (B) or higher on all course work taken toward the master's degree including deficiency courses. Grades below C are regarded as unsatisfactory and are not accepted for graduate credit. Grades of all courses included on the graduate program will be included in computing the grade-point average.

The following system of grades and grade-point values is used in the Graduate Division:

A—superior	4 grade points per credit
B—good	3
C—satisfactory	2
D—unsatisfactory	1
F—failure	0

## TRANSFER OF GRADUATE CREDIT

A maximum of 15 quarter credits of graduate work taken at other recognized institutions may be applied toward the master's degree. Acceptance of such work, however, does not reduce the residence requirement of the Graduate Division. Correspondence credit or credit by examination is not accepted.

## RESPONSIBILITIES OF THE STUDENT

The graduate student is responsible for a complete knowledge of all regulations and procedures as published in this Bulletin. The student should assume the initiative in such matters as arranging for required tests and examinations, securing approval of the program of study, and following all procedures in their proper sequence. See page 19. Failure to do so may result in unnecessary delay or interruption of graduate study.

## LIBRARY

The College Library is a vital part of the educational program at Walla Walla College. The building, completed in 1944, is convenient and well planned. Reading room accommodations, the open-shelf system, seminar and conference rooms, and a browsing room contribute to the study and enjoyment of books. A microfilm reader and a microcard reader make accessible microfilmed, scholarly material. The Library contains 74,943 bound volumes and 5,000 pamphlets. An average of 2,500 volumes is accessioned annually. The Library receives 600 current periodicals regularly and also has a classified file of almost 1,500 mounted pictures. All these materials are adequately catalogued by modern methods, and periodical indexes and other bibliographical aids are available. Resources in other libraries are available to students and faculty members through the Library's membership in the Pacific Northwest Bibliographic Center, which serves as a clearinghouse for interlibrary loans.

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## DEGREE REQUIREMENTS

**T**HE basic philosophy of the Graduate Division of the College is that graduate study should be planned in reference to the individual interest and needs of the student. In planning the program of study the student's experience, future objectives, personal qualifications, and previous academic preparation are also considered. The importance of careful planning and close cooperation on the part of the student and the adviser is emphasized.

The general requirements for the master's degree programs in Biological Sciences and Education follow.

### GENERAL REQUIREMENTS

The degree of Master of Arts may be conferred upon a student who has received regular admission to the Graduate Division, who satisfactorily completes a program of study approved by the Graduate Council, who has been advanced to candidacy for degree, and who successfully completes all examinations required by his department and the Graduate Division. A student is not eligible for the master's degree until all above requirements and procedures have been completed.

### COURSE REQUIREMENTS

The completion of 45 credits in approved graduate courses, including a minimum of 25 credits in the major field with a cumulative grade-point average of at least 3.00 (B), is required. The selection of a minor, or supporting courses, is made in counsel with the adviser, and in harmony with the basic philosophy of the Graduate Division.

All graduate students seeking the master's degree are required to complete satisfactorily Methods of Research (Ed. 561 or Biol. 491, 492, 493).

A minimum of 24 credits must be earned in courses numbered 500 or above.



## **RESIDENCE**

Three quarters in residence, or the equivalent, are required. Students working toward the Master of Arts degree must earn a minimum of 30 of the required 45 credits in residence.

All degree requirements must be completed within six calendar years after initial registration in the Graduate Division.

## **DEPARTMENTAL REQUIREMENTS**

Candidates for a master's degree must also satisfy additional departmental requirements as listed in this Bulletin under the section Departments of Instruction.

## **PROGRAM OF STUDY**

During the first quarter of graduate study, the student, under the direction of the adviser, shall submit a complete program of study to the Graduate Council for approval. This program of study shall include all courses proposed in meeting the degree requirements, and normally should be approved by the Graduate Council before the second quarter of graduate study.

## **ADVANCEMENT TO MASTER'S DEGREE CANDIDACY**

All students admitted to the Graduate Division are given conditional status. Admission merely constitutes permission to register for course work and does not imply degree candidacy.

A student may be advanced to master's degree candidacy by fulfilling the following conditions:

1. Completion of a minimum of 12 credits of graduate work in approved courses demonstrating ability to do work of a graduate character.
2. Completion of graduate guidance examinations, including required departmental examinations.
3. Provision for removal of any undergraduate deficiencies which may have existed.
4. Submission of the "Application for Degree Candidacy and Proposed Program of Courses" form to the Graduate Study Office outlining a master's degree study program approved by the department concerned.
5. Approval by the Graduate Council. Approval for master's degree candidacy indicates that the Graduate Council and the departments concerned encourage the candidate to work for the master's degree. The degree is granted only after successful completion of the approved program of studies within the regulations of the College. After the program is approved by the Graduate Council, no changes may be made without the prior approval of the Chairman of the Department, the Chairman of the Graduate Council and Registrar.

## **THESIS REQUIREMENTS**

A thesis demonstrating ability to conduct research in a systematic and scholarly manner must be presented by the degree candidate. Students majoring in Education may substitute a professional project, planned with and approved by the adviser. Three copies of the thesis or professional project shall be submitted to the chairman of the Graduate Council at least one week prior to the final examination. An abstract of approximately 300 words in length shall accompany each copy of the thesis or project. The copies of the thesis or professional project and the abstract are kept on permanent file in the College Library and the respective department.

## GRADUATE GUIDANCE EXAMINATIONS

Students desiring graduate degree status must have taken the graduate record examination before advancement to degree candidacy. They must also complete preliminary examinations as required which may consist of:

1. A test of general academic background.
2. A test of knowledge in the student's major field.
3. A test of ability to write coherently and correctly.

## COUNSELING

A faculty adviser is appointed for each graduate student by the chairman of the major department. This adviser will assist the student in planning his graduate program.

After master's degree candidacy has been achieved, a master's degree committee is appointed to:

1. Counsel the candidate in his study program.
2. Direct and supervise the candidate's research.
3. Direct the candidate in preparing for his comprehensive examination.
4. Arrange, conduct, and appraise the comprehensive examination.

## FINAL COMPREHENSIVE EXAMINATIONS

Master's degree candidates must pass a comprehensive written and/or oral examination administered by their master's degree committee. The nature of further examination, if required, is to be determined by the candidate's committee. A representative of the Graduate Council, who is not a member of the candidate's committee, attends each oral examination.

1. The examination should be completed at least two weeks, but in no case later than one week, before commencement.
2. It is the candidate's responsibility to schedule his examination with his committee chairman; the committee chairman notifies the Graduate Study Office immediately of each examination scheduled.
3. The examination is conducted by the chairman of the candidate's committee. Success or failure in the examination is determined by the committee.
4. Questions in the examination will be based upon the candidate's thesis and areas of study.
5. The time allowed for the examination is ordinarily not more than two hours.
6. Any candidate who fails this examination may, upon recommendation of the adviser and the approval of the chairman of the Graduate Council, be granted a second examination after a lapse of at least one quarter. The second examination is final.

## CONFERMENT OF DEGREE

The order form for the master's degree must be filed with the Graduate Study Office at the beginning of the final quarter.

Students are required to participate in the graduation exercises. Permission to receive the master's degree *in absentia* is granted only by the President of the College.

## SUMMARY OF GRADUATE DIVISION PROCEDURES

The following procedures are outlined for the guidance of graduate students wishing to qualify for the master's degree. The student is expected to assume initiative and responsibility for following these procedures. Failure to follow these in their proper sequence may result in delay or interruption in completing the program of graduate study.

1. Submit two official transcripts of undergraduate and graduate credits earned at other colleges to the Registrar and apply for admission as a graduate student.
2. Report to the Graduate Study Office for advisement.
3. Write the graduate guidance examinations as required.
4. Report to the Chairman of the major department for assistance in planning a program for the first quarter and for assignment of a graduate adviser.
5. Prior to the completion of 15 quarter credits of graduate work, and in conference with the adviser, prepare the proposed program of graduate study. Normally no more than 15 quarter credits of graduate work may be counted toward the master's degree before the proposed graduate program and application for degree candidacy are submitted to the Graduate Office.
6. After receiving the letter of acceptance as a master's degree candidate, confer with the chairman of the major department and the adviser to complete the appointment of the graduate study committee.
7. Secure approval of the thesis topic or professional project from the adviser.
8. At the beginning of the final quarter make application for master's degree and make arrangements for cap and gown in the Graduate Study Office.
9. Schedule final master's degree examination with adviser.
10. Present the thesis or professional project report to the adviser at least one week before final oral examination.
11. Make final financial arrangements at the Business Office.
12. Present three copies of the finally approved and typed thesis or professional project report to the Graduate Study Office.
13. Participate in graduation ceremony.



LIFE SCIENCES BUILDING  
WALLA WALLA COLLEGE — COLLEGE PLACE, WASHINGTON  
PHILLIP R. BALSIGER A. I. A. ARCHITECT

The Life Sciences Building, now under construction, will furnish complete modern facilities for Biology and Home Economics departments and research centers for the two departments and for the Human Dynamics Research Institute.

Included are classrooms varying in size from seminar rooms to an amphitheater, offices for staff and graduate students, general, specialized, and teaching laboratories.

Conditions of temperature, light, and humidity can be controlled in rooms and chambers for plant and animal growth. A lounge and banquet area will be the setting for demonstrations and banquets in the Home Economics department.

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## DEPARTMENTS OF INSTRUCTION

**I**NFORMATION concerning course descriptions and times courses are offered may be obtained by referring to the current annual bulletin and class schedule, respectively. Courses numbered 500 or above are primarily for graduate students. Courses numbered 400 to 499 are open to both upper-division undergraduate and graduate students. Certain courses numbered 300 to 399 may be included in the graduate program, on approval of the Graduate Council.

### BIOLOGICAL SCIENCES

The Department of Biological Sciences offers a master's degree with a major in biology. Supporting areas are required to complete the educational background. One summer's attendance at the Biological Station is expected. Biol. 491, 492, 493 is required.

The department offers courses in zoology and botany on the main campus and at the Biological Station near Anacortes, Washington.

The specific objectives of the Department of Biological Sciences in the graduate program are:

1. To increase the competence of secondary school teachers, especially those in the Seventh-day Adventist educational system.
2. To prepare students for positions in institutions of higher education by giving them a firm foundation for work toward the doctorate.
3. To provide a preparation for research careers in government and in industry.

### COURSES

401. **PLANT PHYSIOLOGY.** A course designed to cover the principles of physiology of plants in general. Prerequisite: 271. One laboratory per week. Four credits; autumn.

403. **ORNITHOLOGY.** A systematic study of native birds of North America, with emphasis on identification, migration, geographical distribution, habits and life histories. Two laboratories per week. Four credits; spring. (149)

405. **GENERAL ENTOMOLOGY.** A study of insect morphology, physiology, ecology, and control. One laboratory per week. Four credits; winter.

407. **PHILOSOPHY OF SCIENCE.** A study of origins of living things of special creation as opposed to evolution, the Flood, glaciation, problems of speciation, and distribution of plants and animals. Does not apply on a biology major. Three credits; autumn. (157)

409. **PALEONTOLOGY.** A study of plant and animal fossils, with a survey of the principles of geology. One laboratory per week. Four credits; spring. (159)

411. **PLANT ANATOMY.** A study of the microscopic anatomy of plant tissues with emphasis on their origin and development. Primary attention will be devoted to the vascular plants. Prerequisite: 271. One laboratory per week. Four credits; autumn.

\*424. **HERPETOLOGY.** A systematic study of amphibians and reptiles with emphasis on natural history and ecology. Two laboratories per week. Four credits; autumn. (164)

426. **SYSTEMATIC BOTANY.** Principles of classification of plants with emphasis on the angiosperms. Two laboratories per week. Four credits; spring.

427. **COASTAL FLORA.** A study of the principles of classification and of the ecological relationships of the vascular plants of the Puget Sound area. Special emphasis is given to the salt marshes, fresh-water pond, estuarine, grassland, and forest habitats of the islands and mainland. Four credits; summer. (WWC Marine Biological Station.) (This course can be substituted for Systematic Botany for the biology major, but both courses may not apply to an undergraduate major.)

429. **LIMNOLOGY.** A study of the factors responsible for the presence and distribution of animals and plants in fresh waters. Field work includes trips to a number of lakes and streams for collection of living specimens as well as habitat analysis. Four credits; summer (WWC Biological Station.) (169)

442. **MICROTECHNIQUE.** A course designed to cover the important methods of making microscope slides. Two laboratories per week. Three credits; winter. (172)

444. **MAMMALOLOGY.** A systematic study of mammals with emphasis on natural history and ecology. Two laboratories per week. Four credits; autumn. (174)

446. **GENERAL ECOLOGY.** A course designed to cover the basic principles of plant and animal ecology. Field trips to nearby areas illustrating these principles are part of the laboratory work. Two laboratories per week. Four credits; spring.

447. **PARASITOLOGY.** A systematic study of the morphology, life cycle, and host-parasite relationships of protozoan, helminth, and arthropod parasites. Two laboratories per week. Five credits; autumn.

\*Not offered the current year.

449. **VERTEBRATE HISTOLOGY.** The microscopic anatomy of vertebrate cells, tissues and organs including reference to their functions. Two laboratories per week. Four credits; spring. (179)

461. **INVERTEBRATE ZOOLOGY.** A study of the invertebrate animals of Puget Sound with emphasis on systematics and natural history. Four credits; summer (WWC Biological Station).

462. **ICHTHYOLOGY.** A systematic study of the fishes found in Puget Sound, with a survey of the fishes of other waters. Four credits; summer (WWC Biological Station). (182)

463. **MARINE BOTANY.** A systematic study of plants found in Puget Sound, with a survey of the marine plants from other areas. Four credits; summer (WWC Biological Station). (183)

464. **ANIMAL BEHAVIOR.** A comparative study of the behavior of animals with emphasis on an experimental analysis of behavior. A research project will be required. Four credits; summer (WWC Biological Station).

465. **BACTERIOLOGY.** A presentation of the basic principles necessary for an understanding of morphology and function of bacteria. Laboratory work, including unknowns, points out techniques employed in their study. Two laboratories per week. Five credits; winter. (185)

466. **SYSTEMATIC ENTOMOLOGY.** A study of the principles of taxonomy as applied to entomology. Laboratory work emphasizes recognition of orders and families, with special problems on the specific level. Course 405 recommended. Two laboratories per week. Four credits; spring.

467. **BIOLOGICAL OCEANOGRAPHY.** A study of the geology, geography, and biology of the ocean. Four credits; summer (WWC Biological Station). (187)

468. **COMPARATIVE PHYSIOLOGY.** A comparative study of the physiology and life processes of animals with emphasis on invertebrates. Prerequisite: 392, 393. Recommended prerequisite: 461. Four credits; summer (WWC Marine Biological Station).

470. **BIOPHYSICS.** An introductory course emphasizing the physical aspects of living organisms studied by the experimental and conceptual methods of physics with application to marine life. Four credits; summer (WWC Marine Biological Station).

472. **METHODS OF TEACHING BIOLOGY.** This course deals with the basic principles of teaching biology in the secondary school. Observation, demonstration, and class presentation are required of the students as part of this course. Not applicable to a major or minor. Three credits; winter.

477, 478, 479. **SPECIAL PROBLEMS IN BIOLOGICAL SCIENCE.** Directed, independent study in an approved area. The student will be required to read widely on an assigned subject, follow regular research methods, and present a paper showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits. Autumn, winter, spring. (191, 192, 193)

**482. PHILOSOPHY OF ORIGINS AND SPECIATION.** The various theories on the origin and history of living organisms will be compared in light of present scientific knowledge in the areas of biochemistry, paleontology, morphology, geology, genetics, and other related areas. For majors and minors only. Three credits; winter.

**491-492-493. SEMINAR IN RESEARCH METHODS.** A study of biological literature, with emphasis on the research paper; methods of gathering data; methods of compiling data; methods of writing the finished paper; presentation of an acceptable research paper. One credit; autumn, winter, spring. (194-195-196)

**501. RESEARCH IN BIOLOGY.** Individual work in a topic of original research carried out under the direction of one of the instructors. Two to four credits per quarter, maximum credits eight. (201)

**502. GENETICS AND EVOLUTION.** Detailed study of the variability of the genetic mechanism as the latter relates to speciation. Processes of significance in species formation at the organism and population levels will be considered. Prerequisite: 322. Three credits; winter.

**504. MORPHOLOGY OF PLANTS.** An advanced study of the type forms of the Thallophytes, Bryophytes, Pteridophytes, and Spermatophytes. One laboratory per week. Four credits; autumn.

**510. GRADUATE SEMINAR.** Presentation of topics and discussion of current research in specific areas of biology. One credit; any quarter. Maximum: five credits.

**512. PRINCIPLES OF TAXONOMY.** A course designed to give the student a working knowledge of the rules of nomenclature, the factors considered in classification, the preparation of synonymies and keys, and new methods for determining relationships. Four credits; winter.

**516. ARTHROPOD VECTORS.** Vectors and other insects of medical import to humans are covered. The host-parasite relationships as well as preventive and control methods in tropical and temperate regions are considered. Prerequisite: 447. Four credits; spring.

**519. FOREST ENTOMOLOGY.** A study of economically important forest insects with methods of control. Practical field experience is stressed. Prerequisite: 405. One laboratory per week. Four credits; spring.

**522. CELLULAR BIOLOGY.** Current knowledge and research in the areas of cell physiology, biochemical genetics, bacteriological genetics, and radiation biology will be considered. Prerequisite: 392, 393. Five credits; winter.

**524. MARINE INVERTEBRATES.** An advanced study of invertebrate animals, with emphasis on marine forms. Individual research projects are required. Four credits; summer (WWC Biological Station). (181)

**539. HELMINTHOLOGY.** A detailed study of the more common helminth parasites of animals is undertaken. Emphasis is given to current areas of research in helminthology. Basic techniques of importance in laboratory work with helminths are covered. Prerequisite: 447. Two laboratories per week. Four credits; spring.

**541. BIostatISTICS.** Practice and theory in the use of statistical methods in quantitative biology. Four credits; autumn.

**545. THESIS.** Preparation of the master's dissertation after successfully carrying out original study with a suitable topic to be selected after consultation with the major professor. Eight credits. (235)



## EDUCATION

The Department of Education offers master's degree programs with four different areas of specialization: administration, elementary teaching, guidance, secondary teaching; and the Master of Arts in Teaching which is a content area degree. All candidates for the Master of Arts degree in education must meet the requirements for a teaching certificate in the State of Washington before the degree is granted.

In addition to the general objectives of the Graduate Division, the following are specific objectives of the Department of Education.

1. To assist the student in developing a philosophy of education consistent with Christian ethics.
2. To develop an understanding of the relationship between teaching and the learning process.

## MASTER OF ARTS

Basic requirements for the Master of Arts degree include the following:

	Credits
561 Methods of Research	3
580 Professional Project      or	4
590 Thesis	8
	9

Select from the following:

404 History of Education
501 Statistics in Education and Psychology
521 Psychology of Learning
522 Philosophy of Education
525 Education in the 20th Century
567 Comparative Education

Total	16-20
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## ADMINISTRATION:

	Credits
Basic Requirements	16-20
Area of Specialization:	15
430 Educational Evaluation	
426 Introduction to Counseling      or	
483 Counseling and Guidance      or	
509 Vocational Guidance	
435 Child Psychology      or	
436 Adolescent Psychology	
444 Social Psychology	
526 School Finance	
527 School Planning	
539 Supervision	
544 Administration—Elementary      or	
551 Administration—Secondary	
556 Curriculum Planning	

Electives:	10-14
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At least six credits must be from some area other than education

Total	45
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## ELEMENTARY TEACHING

Basic Requirements	Credits
	16-20
Area of Specialization:	9
369 Science in the Elementary School	
373 Mathematics in the Elementary School	
431 Psychology of Exceptional Children	
435 Child Psychology	
HPE441 School Health	
463 Methods of Audio-Visual Education	
504 Elementary School Curriculum	
531 Individual Testing—Binet	
533 Individual Testing—WISC	
535 Remedial Reading	
556 Curriculum Planning	
Electives:	16-20
At least twelve credits must be from some area other than education	
Total	45

## GUIDANCE

Basic Requirements	Credits
	16-20
Area of Specialization:	15
426 Introduction to Counseling	
431 Psychology of Exceptional Children	
435 Child Psychology	
436 Adolescent Psychology	
444 Social Psychology	3
483 Counseling and Guidance	3
509 Vocational Guidance	
531 Individual Testing—Binet	
532 Individual Testing—WAIS	
533 Individual Testing—WISC	3
535 Remedial Reading	
549 Mental Health in Education	
565 Practicum in School Counseling	
Electives:	10-14
At least six credits must be in some area other than education	
Total	45

## SECONDARY TEACHING

Basic Requirements	Credits
	16-20
Area of Specialization:	6
430 Educational Evaluation	
436 Adolescent Psychology	
463 Methods of Audio-Visual Education	
483 Counseling and Guidance	3
511 Literature in the Secondary School	
539 Supervision	3
556 Curriculum Planning	3

Electives:

19-23

At least eighteen credits must be in  
some area other than education

Total

45

## MASTER OF ARTS IN TEACHING

A master's degree program with emphasis on content for teaching has been approved by the Walla Walla College Board of Trustees. The proposed degree permits enrichment for teaching through liberal course election from related disciplines. Areas of specialization being planned include Language Arts, Social Science, Physical and Biological Science.

The candidate for the Master of Arts in Teaching must meet the admission requirements of the Graduate Division including the procedures for advancement to candidacy. One year of successful teaching and a valid teacher's certificate are required. Up to 30 credits may be taken prior to fulfilling the teaching requirement. Usually the Professional Project will be done in a content area.

Prospective candidates should write the Department chairman for details.

Basic requirements for the Master of Arts in Teaching include the following:

	Credits
561 Methods of Research	3
580 Professional Project	4
Select from the following:	3
521 Psychology of Learning	
522 Philosophy of Education	
556 Curriculum Planning	
Electives (with advisement)	35
Courses elected must be from not more than three related areas	
Total	45

## TEACHING CERTIFICATION

Walla Walla College is a state-approved teacher education institution. As such it is authorized to recommend graduates to the Washington Department of Education for the provisional certificate (initial), the standard certificate (permanent), principal's credential.

The course offerings provide for currently available teaching certificates from the General Conference Department of Education.

## PROVISIONAL CERTIFICATES

### Elementary Grades

Graduation with a Bachelor of Science with a major in elementary education entitles the student to the provisional teaching certificate, a license to teach in the schools of Washington for three years. It is renewable for an additional three-year period upon the completion of a minimum of 12 quarter credits and one year of successful teaching.

### Secondary Grades

Candidates for the provisional certificate must complete the basic requirements for a Bachelor of Science or Bachelor of Arts degree and the following specific courses or their equivalent:

- 210 Introduction to Education
- 220 Educational Psychology
- 430 Educational Evaluation
- 436 Adolescent Psychology
- 460 Directed Teaching
- 470 Methods and Curriculum
- 471, 472, 473 Methods Course
- \*483 Counseling and Guidance
- \*446 History of the Pacific Northwest

## STANDARD CERTIFICATE — FIFTH YEAR

To be recommended for the Washington standard certificate, the candidate must fulfill the following requirements:

1. Hold a valid provisional certificate
2. Complete two years of successful teaching
3. Complete 45 quarter credits beyond the bachelor's degree.

Of the 45 quarter credits, 22½ credits must be in residence; 30 credits may be earned prior to the first year of teaching; a maximum of 12 credits may be earned by correspondence and/or extension study. No correspondence work is applicable to the master's degree.

By careful planning and counseling, many students are able to complete the requirements for the master's degree at the same time they are completing the standard certificate requirements.

### Principal's Credential

Walla Walla College provides course offerings leading to both the provisional and standard principal's credentials (elementary, secondary, and general).

In addition to the teacher certification programs currently in force, programs are being developed to provide for the following certification:

<b>Washington:</b>	School Psychologist (Provisional) School Nurse (Provisional)
<b>Oregon:</b>	Secondary School Principal Elementary School Principal Elementary or Secondary School Principal Elementary Certificate 1-8 Secondary Certificate 9-12 Special Subjects (Music, Industrial Arts)
<b>Idaho:</b>	Secondary School Principal Elementary School Principal Advanced Secondary Standard Secondary Advanced Elementary Standard Elementary Guidance Certificate

\*May be deferred to the fifth year.

## COURSES

404. **HISTORY OF EDUCATION.** A survey of the history of education from early times to the present. Three credits; autumn. (154)

426. **INTRODUCTION TO COUNSELING.** Consideration of effective techniques of counseling individuals in the solution of personal problems in the school, family, church, and community. Prerequisite: 121, 122, 123. Two credits; spring. (166)

430. **EDUCATIONAL EVALUATION.** A study of methods and instruments for the evaluation of aptitudes, achievement, and personality in the school, including practical work in test construction for the elementary and secondary levels. Three credits; winter or spring. (330 & 118, 119)

431. **PSYCHOLOGY OF EXCEPTIONAL CHILDREN.** Characteristics and problems of all types of exceptional children with consideration of essential educational adaptation. Prerequisite: 121, 122, 123. Three credits; summer.

435. **CHILD PSYCHOLOGY.** Principles of growth as related to various phases of human development during the preadolescent years: physical, mental, and emotional. Prerequisite: 121, 122. Three credits; spring.

436. **ADOLESCENT PSYCHOLOGY.** Principles of growth as related to various phases of human development during the adolescent years: physical, mental, and emotional. Prerequisite: 121, 122. Three credits; spring.

441HPE. **SCHOOL HEALTH EDUCATION.** See Health & PE.

444. **SOCIAL PSYCHOLOGY.** A study of personality patterns that function in the interpersonal and intergroup life into which all human beings are born, and within which they develop and mature. The course is concerned with human behavior, attitudes, and processes of the phenomena of communication, suggestion, conflict, accommodation, assimilation, and socialization. Three credits; autumn. (174)

463. **METHODS OF AUDIO-VISUAL EDUCATION.** A survey of the methods of instruction through the use of audio-visual aids, including recording devices, motion pictures, slides, film strips, charts, maps, posters, opaque projection, flat pictures, and blackboard illustrations. Three credits; spring. (183)

470. **METHODS AND CURRICULUM.** Meets daily for two or three periods during the first and last weeks of the quarter. Considers the basic principles of curriculum and instruction, fundamental teaching procedures which are applicable at any grade level. Includes orientation in organization of classroom procedures, keeping records, making reports, guiding and disciplining students, and other activities which support the instructional program. Three credits; autumn, winter, or spring. (340, 121, 122)

471, 472 or 473. **METHODS COURSES.** Several methods courses are offered by the various departments of the College. They deal with materials and specific methods applicable to the teaching of each individual subject. Actual classroom presentation and demonstration is included. Three credits. (All have the same numbers.) (197)

477, 478, 479. **SPECIAL PROBLEMS IN EDUCATION.** Directed, independent study in an approved area. The student will be required to read widely on an assigned subject, follow regular research methods, and present a paper showing competence in and extent of his study. Open to students preparing for teacher certification. Permission from the chairman of the department is required. One to three credits any quarter. Maximum, three credits; autumn, winter, spring. (280)

483. **COUNSELING AND GUIDANCE.** Principles and techniques of individual and group counseling with emphasis on the scope; needs; organization of the program; services to students, the instructional staff, and the administration; personnel needed for the program. Three credits; spring. (252)

501. **STATISTICS IN EDUCATION AND PSYCHOLOGY.** Statistical procedures and interpretations particularly as applied to research in education, psychology and related fields. Three credits; summer.

504. **ELEMENTARY SCHOOL CURRICULUM.** A study of the elementary school curriculum, including objectives, essentials of a good program, varying curriculum patterns and appraisal of current practices. Three credits; autumn.

509. **VOCATIONAL GUIDANCE.** A study of current materials and trends in educational and vocational guidance. Three credits; spring or summer.

511. **LITERATURE IN THE SECONDARY SCHOOL.** A survey of literature suitable to grades 7-12 with attention to evaluation, selection, authors, illustrators, and publishers. Three credits; summer. (211)

521. **PSYCHOLOGY OF LEARNING.** The course includes analysis of the mechanisms involved in the learning process. The physiological and psychological bases for functional learning are discussed, and the experimental evidence supporting psychological hypotheses is reviewed. Three credits; autumn. (221)

522. **PHILOSOPHY OF EDUCATION.** A study of the basic philosophies and development of educational thinking resulting in the formulation of aims and objectives of education for today's schools. Three credits; winter. (222)

525. **EDUCATION IN THE TWENTIETH CENTURY.** Historical background of modern education with emphasis on trends and developments in the twentieth century. Three credits; winter. (223)

526. **SCHOOL FINANCE.** A course designed for administrators, emphasizing origin and disbursement of school funds derived from tax sources and other revenues. Techniques of budget construction are studied and a general overview is given of the principles of financing education. Three credits; summer. (226)

527. **SCHOOL PLANNING AND CONSTRUCTION.** A survey of how to plan and build schools, including the involvement of the lay citizen. Selection of the site, trends in design, function of buildings and plant, costs and obligations will be studied. Professional architects and engineers will be guest lecturers. Three credits; summer. (227)

531. **INDIVIDUAL TESTING—BINET.** A course designed to familiarize the student with the Stanford-Binet Intelligence Scale, its administration and interpretation. Arrangements should be made through the department chairman. Three credits; summer. (231)

532. **INDIVIDUAL TESTING—WAIS.** A course designed to familiarize the student with Wechsler Adult Intelligence Scale, its administration and interpretation. Arrangements should be made through the department chairman. Three credits; summer. (232)

533. **INDIVIDUAL TESTING—WISC.** A course designed to familiarize the student with the Wechsler Intelligence Scale for Children, its administration and interpretation. Arrangements should be made through the department chairman. Three credits; summer. (233)

535. **REMEDIAL READING.** Diagnostic and remedial reading techniques, how to recognize reading difficulties and improve reading skills. Three credits; summer. (235)

539. **SUPERVISION.** For principals, classroom teachers or those planning to be supervisors. Problems, responsibilities, privileges and duties of both teacher and supervisor, and the improvement of teachers in service through a comprehensive program of supervision. Three credits; spring.

544. **ADMINISTRATION OF THE ELEMENTARY SCHOOL.** Organization, supervision, and administration of elementary schools. Three credits; summer. (244)

549. **MENTAL HEALTH IN EDUCATION.** Physiological and psychological factors related to emotional maturity. Identification of mental health activities. Individual mental health, classroom climate, patterns of acceptance and rejection. Three credits; spring. (249)

551. **ADMINISTRATION OF THE SECONDARY SCHOOL.** Problems and procedures in the organization of secondary schools. Three credits; autumn. (251)

556. **CURRICULUM PLANNING.** The relation of curricular materials to educational outcomes in terms of personal and social values. A brief review of curriculum investigations and their significance in the selection and evaluation of school materials and activities. Current practices in curriculum revision. Three credits; spring. (256)

560. **ADMINISTRATIVE PRACTICUM.** Professional laboratory experience for candidates for an administrative credential. The course is designed to involve each candidate in a variety of practical administrative experiences and to assist in his successful induction into school leadership. Five to ten credits; any quarter.

561. **METHODS OF RESEARCH.** Procedures in the selection and evaluation of research projects, and techniques in the analysis of research data. Three credits; autumn. (261)

565. **PRACTICUM IN SCHOOL COUNSELING.** Practical experience in various guidance techniques under supervision of qualified school counselors. Prerequisite: departmental approval. Ten credits; arranged.

567. **COMPARATIVE EDUCATION.** A comparison of systems and philosophies of education in various parts of the world; emphasis on the role of cultural impacts. Three credits; spring.

570. **TOPICS.** Selected topics in education involving individual research and reports in addition to regular class activities. Three credits; any quarter. Maximum, six credits.

580. **PROFESSIONAL PROJECT.** Non-thesis candidates for the master's degree register under this number for the professional paper. Three credits; any quarter.

590. **THESIS.** Eight credits; any quarter. (290)

## SUPPORTING DEPARTMENTS

The following departments offer courses which may be included in the student's graduate program as the minor or supporting work. The selection of a minor or supporting work presumes an adequate background in the subject matter area or areas involved.

### BIBLICAL LANGUAGES

- 441-442-443. HEBREW I. Three credits each quarter.  
451, 452, 453. HEBREW READING. One credit each quarter.  
477, 478, 479. SPECIAL PROBLEMS IN BIBLICAL LANGUAGES. One to three credits any quarter; maximum three credits.

### BUSINESS AND ECONOMICS

411. STATISTICS. Three credits.  
414. BUSINESS MANAGEMENT. Three credits.  
431, 432, 433. ACCOUNTING PROBLEMS. Three credits each quarter.  
434. FUND ACCOUNTING. Three credits.  
439. AUDITING PROCEDURE. Three credits.  
441. INVESTMENTS. Three credits.  
452. HUMAN RELATIONS IN MANAGEMENT. Three credits.  
463. MONEY AND BANKING. Five credits.  
477, 478, 479. SPECIAL PROBLEMS IN BUSINESS ADMINISTRATION. One to three credits any quarter; maximum three credits.  
492. SEMINAR. One credit.

### CHEMISTRY

- 401-402, 413. PHYSICAL CHEMISTRY. Four credits each quarter.  
406. BIOCHEMISTRY. Four credits.  
424. ORGANIC SYNTHESIS. Three credits.  
425. INORGANIC SYNTHESIS. Three credits.  
426. ORGANIC QUALITATIVE ANALYSIS. Three credits.  
429. ADVANCED ORGANIC CHEMISTRY. Two credits.  
461, 462, 463. ADVANCED ANALYTICAL CHEMISTRY. Three credits each quarter.  
477, 478, 479. SPECIAL PROBLEMS IN CHEMISTRY. One to three credits any quarter; maximum three credits.  
486. HISTORY OF CHEMISTRY. Two credits.

### ENGLISH

402. TWENTIETH CENTURY LITERATURE. Three credits.  
404, 405, 406. THE VICTORIAN PERIOD. Three credits any quarter.  
407, 408, 409. AMERICAN LITERARY MASTERS. Two credits each quarter.  
421, 422, 423. THE ROMANTIC PERIOD. Two credits each quarter.  
425. HISTORY OF THE ENGLISH LANGUAGE. Three credits.  
427-428-429. EIGHTEENTH CENTURY LITERATURE. Two credits each quarter.  
441-442-443. OLD AND MIDDLE ENGLISH LITERATURE. Three credits each quarter.  
464, 465, 466. SEVENTEENTH CENTURY LITERATURE. Three credits each quarter.  
469. LITERATURE OF THE BIBLE. Three credits.  
472. METHODS OF TEACHING ENGLISH IN THE SECONDARY SCHOOL. Three credits.  
491-492-493. SEMINAR. One credit each quarter.



## HEALTH AND PHYSICAL EDUCATION

403. LEADERSHIP IN CAMPING AND CAMPCRAFT. Two credits.  
410. COMMUNITY HEALTH TEACHING. Three credits.  
421. FOUNDATIONS OF PHYSICAL EDUCATION. Three credits.  
423. TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION.  
One credit.  
424, 425, 426. ADVANCED ARTS AND CRAFTS. Two credits each  
quarter.  
426. ADMINISTRATION OF PHYSICAL EDUCATION AND HEALTH  
IN SECONDARY SCHOOLS. Three credits.  
441. SCHOOL HEALTH EDUCATION. Three credits.  
442. HEALTH ADMINISTRATION. Three credits.  
471. METHODS OF TEACHING PHYSICAL EDUCATION. Three  
credits.  
477, 478, 479. SPECIAL PROBLEMS IN HEALTH AND PHYSICAL  
EDUCATION. One to three credits any quarter; maximum three credits.  
492, 493. SEMINAR. One credit each quarter.

## HISTORY, POLITICAL & SOCIAL SCIENCE

### History

- 404, 405, 406. HISTORY OF ENGLAND. Two credits each quarter.  
407, 408, 409. EUROPE SINCE 1815. Three credits each quarter.  
421, 422, 423. HISTORY OF RUSSIA. Two credits each quarter.  
424, 425. THE AMERICAN FRONTIER. Three credits each quarter.  
427. THE LATE MIDDLE AGES. Three credits.  
428. THE RENAISSANCE. Three credits.  
429. THE REFORMATION. Three credits.  
446. HISTORY OF THE PACIFIC NORTHWEST. Three credits.  
447, 448, 449. TWENTIETH CENTURY AMERICA. Three credits each  
quarter.  
467, 468, 469. HISTORY OF LATIN AMERICA. Two credits each  
quarter.  
477, 478, 479. SPECIAL PROBLEMS IN HISTORY. One to three  
credits each quarter; maximum three credits.  
491, 492, 493. SEMINAR. One credit each quarter.

### Political Science

401. CONSTITUTIONAL INTERPRETATION. Three credits.  
402. WORLD POLITICS AND INTERNATIONAL RELATIONS.  
Three credits.  
414, 415, 416. AMERICAN DIPLOMATIC HISTORY. Two credits  
each quarter.  
424, 425, 426. POLITICAL HISTORY AND THEORY. Three credits  
each quarter.

### Social Science

442. PERSONALITY AND LEADERSHIP. Two credits.  
445. CURRENT SOCIAL PROBLEMS. Three credits.  
471. METHODS OF TEACHING SOCIAL SCIENCE. Three credits.

## INDUSTRIAL EDUCATION

447. HISTORY OF INDUSTRIAL ARTS. Two credits.  
472. METHODS OF TEACHING INDUSTRIAL ARTS. Three credits.  
477, 478, 479. SPECIAL PROBLEMS IN INDUSTRIAL EDUCATION.  
Six credits maximum from this and/or special projects any quarter.

484, 485, 486. **SPECIAL PROJECTS.** Six credits maximum from this and/or special problems any quarter.

488. **SENIOR PROBLEM.** One credit.

## **MATHEMATICS**

401. **MODERN GEOMETRY.** Four credits.

402. **INTRODUCTION TO MODERN ALGEBRA.** Four credits.

403. **MATRIX THEORY.** Four credits.

471. **METHODS OF TEACHING MATHEMATICS.** Three credits.

477, 478, 479. **SPECIAL PROBLEMS IN MATHEMATICS.** One to three credits any quarter; maximum three credits.

## **MODERN LANGUAGES**

### **Spanish**

402. **SPANISH APPLIED LINGUISTICS.** Three credits.

414, 415, 416. **SPANISH DIRECTED READING.** One to three credits each quarter.

417. **ADVANCED SPANISH FOR TEACHERS.** Two credits.

421, 422, 423. **SPANISH LITERATURE OF THE GOLDEN AGE.** Three credits each quarter.

424. **SPANISH ESSAY.** Three credits.

425, 426. **LATIN AMERICAN LITERATURE.** Three credits each quarter.

### **French**

404, 405, 406. **FRENCH DIRECTED READING.** One to three credits each quarter; maximum six.

### **German**

403. **MODERN GERMANY AND ITS LITERATURE.** Three credits.

411, 412, 413. **GERMAN DIRECTED READING.** One to three credits each quarter; maximum six credits.

421. **GERMAN ROMANTICISM.** Three credits.

422. **CLASSIC GERMAN LITERATURE.** Three credits.

423. **ADVANCED GERMAN COMPOSITION AND CONVERSATION.** Three credits.

471. **METHODS OF TEACHING MODERN LANGUAGES IN THE SECONDARY SCHOOL.** Three credits.

477, 478, 479. **SPECIAL PROBLEMS IN MODERN LANGUAGES.** One to three credits any quarter; maximum three credits.

## **MUSIC**

404-405-406. **ANALYTICAL TECHNIQUES.** Two credits each quarter.

407-408-409. **ORCHESTRATION.** Two credits each quarter.

411, 412, 413. **COMPOSITION.** Two credits each quarter.

441, 442, 443. **HISTORY AND LITERATURE OF MUSIC SINCE 1750.** Two credits each quarter.

463. **METHODS OF TEACHING MUSIC IN THE ELEMENTARY SCHOOL.** Three credits.

472. **METHODS OF TEACHING MUSIC IN THE SECONDARY SCHOOL.** Three credits.

481, 482, 483. **SELECTED TOPICS IN MUSIC.** One to three credits any quarter; maximum three credits.

## PHYSICS

- 411, 412, 413. **ATOMIC AND NUCLEAR PHYSICS.** Three credits each quarter.
- 414, 415, 416. **EXPERIMENTAL PHYSICS.** One credit each quarter.
- 417, 418, 419. **PHYSICS SEMINAR II.** One credit each quarter.
- 421, 422, 423. **THEORETICAL MECHANICS.** Three credits each quarter.
471. **METHODS OF TEACHING PHYSICAL SCIENCE.** Three credits.
- 477, 478, 479. **SPECIAL PROBLEMS IN PHYSICS.** One to three credits any quarter; maximum three credits.

## RELIGION

402. **MODERN DENOMINATIONS.** Three credits.
403. **WORLD RELIGIONS.** Three credits.
- 421, 422, 423. **PHILOSOPHY OF RELIGION.** Two credits each quarter.
426. **ESCHATOLOGY.** Three credits.
- 427, 428. **CHRISTIAN DYNAMICS.** Two credits each quarter.
429. **STUDIES IN CHRISTIAN DYNAMICS.** Two credits.
- 444, 445, 446. **BIBLICAL BACKGROUNDS.** Two credits each quarter.
- 464, 465, 466. **NEW TESTAMENT EPISTLES.** Two credits each quarter.
- 477, 478, 479. **SPECIAL PROBLEMS IN RELIGION.** One to three credits any quarter; maximum three credits.
- 491, 492, 493. **SEMINAR IN RELIGION.** One credit each quarter.

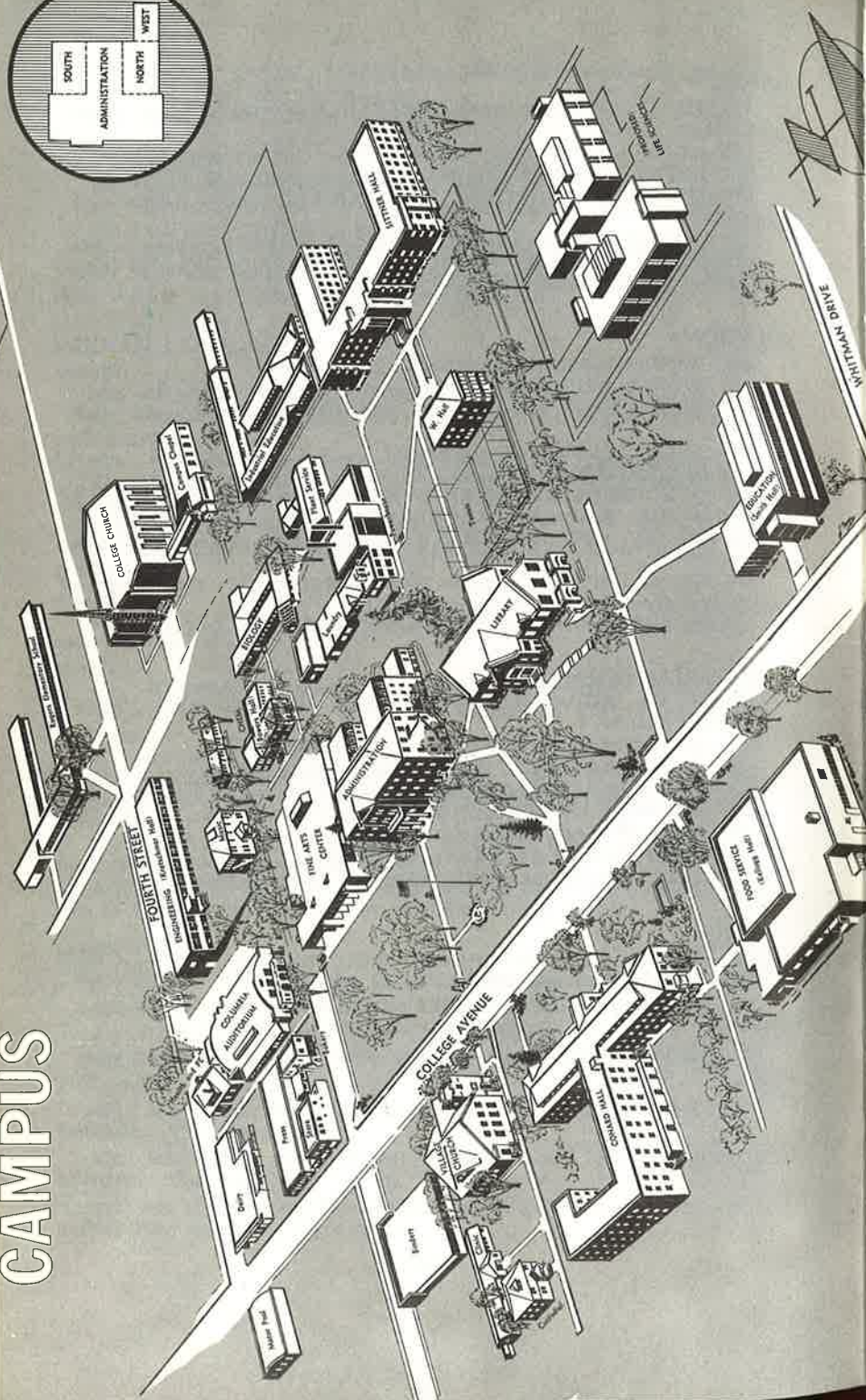
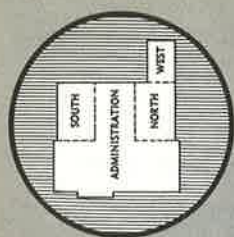
## SECRETARIAL SCIENCE

- 407-408, 409. **ADVANCED SECRETARIAL PROCEDURES.** Three credits each quarter.
427. **SHORTHAND REPORTING.** Three credits.
428. **DENOMINATIONAL REPORTING.** Three credits.
- 448-449. **MEDICAL REPORTING.** Three credits each quarter.
471. **METHODS OF TEACHING TYPEWRITING.** Three credits.
472. **METHODS OF TEACHING SHORTHAND.** Three credits.
480. **PROBLEMS IN SECRETARIAL SCIENCE.** Two credits.
492. **SECRETARIAL SCIENCE SEMINAR.** One credit.

## SPEECH

422. **SPEECH COMPOSITION AND ANALYSIS.** Three credits.
443. **PERSUASIVE SPEAKING.** Three credits.
- 477, 478, 479. **SPECIAL PROBLEMS IN SPEECH.** One to three credits any quarter; maximum three credits.
- 497, 498, 499. **SEMINAR IN SPEECH.** One credit each quarter; maximum three credits.

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