

# Walla Walla College

1953 - 1954

BULLETIN



**THE GRADUATE SCHOOL**

IN

BIOLOGICAL SCIENCES

AND

EDUCATION

WALLA WALLA COLLEGE

BULLETIN

The Graduate School



---

VOLUME LXII

December, 1953

NUMBER 2

---

Entered as second class matter at the post office at College Place, Washington, under the Act of Congress of August 24, 1912.

## Calendar for the Year 1953-1954

### AUTUMN QUARTER, 1953-1954

Registration ..... Sept. 14-17  
 Classes begin, 7:30 a.m. .... Friday, Sept. 18  
 Thanksgiving recess ..... Thursday, Friday, Nov. 26, 27  
 Instruction ends, 12:00 noon ..... Friday, Dec. 4

### WINTER QUARTER, 1953-1954

Registration of new students ..... Sunday, Dec. 6  
 Instruction begins, 7:30 a.m. .... Monday, Dec. 7  
 Instruction ends, 12:00 noon ..... Thursday, March 4

### SPRING QUARTER, 1953-1954

Registration of new students ..... Sunday, March 7  
 Instruction begins, 7:30 a.m. .... Monday, March 8  
 Instruction ends, 12:00 noon ..... Friday, May 21  
 Commencement, 8:30 p.m. .... Saturday, May 22

## PART I

# Administration And General Regulations

## Board of Trustees

C. A. SCRIVEN, <i>President</i> .....	Portland, Oregon
G. W. BOWERS, <i>Secretary</i> .....	College Place, Washington
ARTHUR W. SPOO, <i>Treasurer</i> .....	College Place, Washington
G. S. BELLEAU .....	Portland, Oregon
L. E. BIGGS .....	Portland, Oregon
C. L. BOND .....	Spokane, Washington
THEODORE CARCICH .....	Seattle, Washington
O. T. GARNER .....	Bozeman, Montana
A. J. GORDON .....	Boise, Idaho
CLYDE HARRIS .....	Pendleton, Oregon
E. S. HUMANN .....	Portland, Oregon
J. C. KOZEL .....	Portland, Oregon
C. J. NAGELE .....	Pendleton, Oregon
W. A. NELSON .....	Oshawa, Ontario, Canada
H. J. PERKINS .....	Spokane, Washington
J. T. PORTER .....	Portland, Oregon
H. L. SONNENBERG .....	College Place, Washington

## ADMINISTRATION

GEORGE WINFIELD BOWERS, Ph. D.

*President*

HENRY L. SONNENBERG, Ph. D.

*Dean, Director Summer Session*

ARTHUR W. SPOO, B. S.

*Business Manager*

IRENE SMITH-BLACK, B. A.

*Registrar*

ANNA L. BLACKNEY, B. S., (L.S.), M. A.

*Librarian*

VICTORIA SPECHT-MILLER, R.N., B. S.

*Director of Health Service*

## THE COLLEGE

Walla Walla College is operated by the Seventh-day Adventist denomination, and is fully accredited as a four-year liberal arts college with the University of Washington, the State College of Washington, the Northwest Association of Secondary and Higher Schools, and the Association of Seventh-day Adventist Colleges and Secondary Schools. It is also accredited as a four-year teacher-education institution by the Washington State Board of Education.

### Organization

The faculty of the Graduate School consists of the President and the Dean of the College, members of the faculty of the Departments of Biological Sciences and Education, certain department heads, and several members of the faculty of the College of Medical Evangelists and the School of Tropical and Preventive Medicine, both of Loma Linda, California.

### History

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

### Description

The College buildings occupy an exceptionally beautiful site in the center of an elevated campus comprising about ten acres and commanding a pleasing view of the Blue Mountains to the east and south. This tract, surrounded by the town of College Place, is situated in the celebrated Walla Walla valley. The climate is mild and healthful.

About two and one-half miles to the northeast is Walla Walla, Washington, a city of about twenty-five thousand inhabitants. Two railroads enter Walla Walla: The Union Pacific and the Northern Pacific. An hourly bus service connects College Place with Walla Walla. In addition, the Greyhound Bus Lines stop at the College campus.

### **Library**

The College Library is a vital part of the educational program at Walla Walla College. The building is a spacious, sturdy, beautiful structure of reinforced concrete with brick veneer. Ample seating accommodation, 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 scholarly material on microfilm and microcards. The College Library contains 42,000 volumes besides unbound magazines and pamphlets. Approximately three thousand books are added annually. Four hundred magazines and newspapers are received regularly.

### **Student Health Center**

A Student Health Center with a full time registered nurse as director is maintained on the campus. Clinical and hospital facilities, consultation rooms, treatment rooms, and other necessary facilities are housed in a building 25 by 110 feet.

## **General Regulations**

### **Government**

In all matters pertaining to personal conduct, students are expected to behave as responsible citizens and members of a Christian community. Any student who becomes antagonistic to the spirit and methods of the institution, thereby severs his connection with the College. Every effort will be made to stimulate the student to honest, conscientious work, but the College is not willing to undertake the problem of governing students who are not in sympathy with its purpose.

### **General Regulations**

Persons coming to College Place for the purpose of entering any department of the College are subject to its government from the time of their arrival; and whenever a student has entered the College, he is under its jurisdiction until his connection is formally terminated by graduation or otherwise.

Any regulation adopted by the Board or faculty and announced to the students shall have the same force as if in print.

### **Citizenship**

The standing of a student in the school is based upon his scholastic attainments as well as upon his attitudes, general conduct, and decorum. The student's rating as a citizen in the College community is indicated at certain times during the year and is based upon definite items of attitude, conduct, and faculty judgment.

### **Residence**

The Board of Managers, believing that it should have full control of those for whom it is held responsible, requires all unmarried students to board and room at the College. Students who must find some means of self-support may be permitted, on application, to make other arrangements for their accommodations. Applications are made on forms provided by the Board, and must be approved before these arrangements are completed. The faculty will refuse to matriculate students who fail to comply with these regulations. Students who have received permission to live in the village are subject to call into the school homes at any time.

### **Chapel**

Each student is required to attend chapel three days a week. For each unexcused absence exceeding two in a quarter the student must pay \$1.00.

### **Sabbath Observance**

The seventh-day Sabbath is observed in Walla Walla College, and all students are expected to deport themselves in harmony with the day. The students' devotional service is held on Friday evening. The Sabbath school convenes at 9:30 o'clock Sabbath morning; the church service is held at 11 o'clock. All students are expected to attend these services.

### **Moral Conduct**

Students must abstain from indecent or disorderly behaviour, from profane and unbecoming language, from visiting billiard rooms or gambling places, from attending the theater, motion pictures, or any other entertainments not approved by the College, from indulgence in alcoholic beverages, from the use of tobacco in any form, from card playing and from having cards in their possession, from having or reading pernicious literature, and from improper associations.

### **Social Standards**

Walla Walla College is a co-educational institution and as such recognizes the proper associations of its citizens. Attendance at evening programs and other social functions is permitted in harmony with well defined standards as announced by the College.

### **Use of Vehicles**

Unmarried students, who do not reside with their parents, should not bring their automobiles to the campus. The College administration recognizes that the use of an automobile frequently militates against a satisfactory school program. Failure to comply with the existing regulation pertaining to automobiles may result in the student's separation from the College.

### **Medical Examination and Service**

At the time of entrance to the College each student is required to submit evidence of a standard physical examination or to have such examination under the direction of the College physician.

The College cannot be held responsible for the personal property of any student.



## PART II

**Department of Biological Sciences****Faculty**

LAURENCE M. ASHLEY, Ph. D.

*Professor of Zoology*

ERNEST S. BOOTH, Ph. D.

*Professor of Zoology; Head, Department of Biological Sciences*

\*CLARENCE W. DAIL, M. D., D. N. B.

*Associate Professor of Therapeutics*

BEATRICE I. EMERY, M. S.

*Assistant Professor of Biology*

\*\*BRUCE W. HALSTEAD, M. D.

*Instructor in Medical Zoology*

\*JOHN E. HUGHES, M. D., D. N. B.

*Professor of Anatomy*

\*KENNETH E. KELLOGG, M. D., D. N. B.

*Associate Professor of Physiology*

\*RAYMOND A. MORTENSEN, Ph. D.

*Professor of Biochemistry*

\*\*HAROLD N. MOZAR, M. D., D. N. B.

*Instructor in Parasitology*

\*U. D. REGISTER, Ph. D.

*Instructor in Biochemistry*

\*\*RAYMOND E. RYCKMAN, B. A.

*Medical Entomologist*

CECIL W. SHANKEL, M. S.

*Associate Professor of Chemistry*

\*MILLARD H. SMITH, M. D.

*Instructor in Physiology*

CLAUDE E. THURSTON, Ph. D.

*Professor of Chemistry*

RAYMOND A. UNDERHILL, Ph. D.

*Associate Professor of Entomology*

\*\*EDWARD D. WAGNER, M. S.

*Parasitologist*

\*Resident at the College of Medical Evangelists, Loma Linda, California.

\*\*Resident at the School of Tropical and Preventive Medicine, Loma Linda, California.

### Opportunities for Graduate Study

Opportunities for advanced work are open to those interested in broadening their knowledge or professional training, or those seeking advanced degrees. Those not interested in advanced degrees may enroll for graduate courses for which they have adequate prerequisites.

The equipment of the Department of Biological Sciences includes the latest models of microscopes and microtomes. Adequate space for laboratories and research is provided. The museum includes fine series of mammals, birds, insects, invertebrates and plants. The library, while not extensive, is being enlarged rapidly. Full access to the large libraries of the State College of Washington and the University of Washington supplement that of Walla Walla College.

The work offered in the Department of Biological Sciences of Walla Walla College will be largely in the following branches of the science: Animal Morphology, Animal Parasitology, Histology and Microtechnique, Physiology and Nutrition, Human Anatomy, Bacteriology, Ornithology, Mammalogy, Ichthyology, Entomology, Marine Invertebrates, Ecology, Plant Morphology, and Plant Taxonomy.

Special opportunities are offered for field work through the Biological Station at Anacortes, Washington, through the Blue Mountain Laboratory, and through the Field School of Biology—a traveling school operated at intervals. The Graduate School is affiliated with the School of Tropical and Preventive Medicine and the School of Medicine of the College of Medical Evangelists of Loma Linda, California, and additional field experience may be obtained in its Mexico stations and elsewhere. Also graduate students interested in Medical Zoology, Physiology or Nutrition may carry on part of their courses or research with the College of Medical Evangelists.

### Fields of Graduate Study

The main fields for graduate study featured by the Department of Biological Sciences are surveyed here in order to give the prospective student an idea of the fields from which he may choose his graduate research.

*Animal Morphology.* This includes a study of the structure of vertebrate or invertebrate animals either marine, fresh water or land. Living animals may be studied in animal rooms, aquaria, terraria, outdoor pens and in running sea water.



A Corner of the Microtechnique Laboratory

Undergraduate preparation should include invertebrate and vertebrate zoology, histology and microtechnique, genetics and physiology. Strongly recommended courses are organic and biological chemistry.

*Parasitology.* The study of Parasitology is becoming more prominent in a study of diseases of man and animals and in the control of pests. Preliminary training for this study, undergraduate and graduate, should include comparative anatomy, histology and microtechnique, embryology, physiology, organic chemistry, mammalogy, ornithology and ichthyology.

*Histology and Microtechnique.* The histology of many animals in the western states needs a great deal of original work and thorough training in technique is prerequisite. A separate well-equipped laboratory is maintained for this study.

*Physiology and Nutrition.* This field of study cannot be overemphasized today. Work with laboratory animals is fundamental. A considerable part of the student's time is spent at the College of Medical Evangelists. Preliminary studies should include physiology, nutrition and biological chemistry.

*Human Anatomy.* The study of human anatomy may be carried on at the College of Medical Evangelists after a suitable background has been acquired. Preliminary study should include comparative anatomy, histology and microtechnique, physiology, and mammalogy,

*Bacteriology.* While a minor in Bacteriology is not offered at present, a considerable amount of work in this field is available for those interested. Preliminary work may be taken on the main campus, while the remainder of the work will be in connection with the College of Medical Evangelists in both the School of Medicine and the School of Tropical Medicine.

*Ornithology.* Facilities for the study of birds are excellent in the Blue Mountain Laboratory and the Biological Station. A large museum collection of birds and eggs together with equipment for photography and recording provides adequate experience. Life histories and habits are stressed.

*Mammalogy.* Field and laboratory study of mammals is stressed. The largest collection of mammals in the Northwest is found in our museum. The animal house and pens, the Blue Mountain Laboratory, the Biological Station and the Field School provide adequate facilities and areas of observation for carrying out life history work.

*Ichthyology.* The study of marine fish is abundantly provided for



A Portion of the Museum Collections

at the Biological Station on Puget Sound. The laboratories have fresh and salt running water and tanks for live specimens. Large collections of fish supplemented by field experience with commercial fishermen are helpful in study. Boats, seines, dredges and other equipment are provided.

*Entomology.* The field of Entomology is becoming very important. Since there are excellent openings in this field for our graduates, we are able to offer a good variety of courses. One may specialize in one of two areas, namely Medical and Forest Entomology.

*Marine Invertebrates.* The San Juan islands provide breeding grounds for an abundance of marine animals. Strong tides, protected areas, mud flats, sandy beaches and rocky coasts make many varied habitats. Plankton is abundant. Very little biological work has been done in the area.

*Ecology.* Walla Walla College is located in a semi-arid region. Rainfall from five inches to seventy-five inches occurs within a thirty-mile radius, while three hundred miles to the West there is a two hundred inch rainfall. The Cascade Mountains, the Blue Mountains, and the Wallowa Mountains are within easy reach with altitudes up to 14,000 feet. Nearly every habitat except tropical may be found within a day's drive from the College.

*Morphology of Plants.* Plant morphology is an important branch in the field of botany. Anatomical studies of sea weeds, mushrooms, lichens, bryophytes, and seed plants are all possibilities for research topics. Emphasis in morphology is placed upon life histories, and many of the plants of the Northwest are unknown as far as life histories are concerned. The rearing of these plants can be carried out in the laboratory, or in the field. A modern greenhouse at the biology building is available for this work.

*Taxonomy of Plants.* There is not one book in print dealing with the plants of the entire Northwest. Much work is needed in classification and identification of the plants of this area. There are new species to be discovered and described. There are many of these in the lower plants, and some in the seed plants as well. Many areas of the Northwest have never been worked botanically, while many others have been insufficiently studied. The distribution of many a flowering plant is unknown. Students might consider work on nearly any group of plants as a possibility in this field.

There is a great need for field manuals for plants of the Northwest, and a group of students could begin work on such a project, one taking one group of plants, and others taking other groups. Concerted work of this kind might result in the production of a field manual covering the Northwest.

### **Master of Arts Degree**

The degree of Master of Arts with major in Zoology is offered at present. The minor fields are Botany and Chemistry.

#### **Prerequisites**

Graduation from an accredited college with a major in Zoology or its equivalent;

Acceptable score on the Graduate Record Examination;

A "B" average in the last 15 credits of the major field in the undergraduate work; this must include all the work taken in the major field during the senior year. If the applicant's average is less than a "B," he will be admitted on probation only. He must then maintain a "B" average during the first quarter of residence before he will be granted full graduate status. If he fails to maintain this standard of scholarship he must discontinue his work.

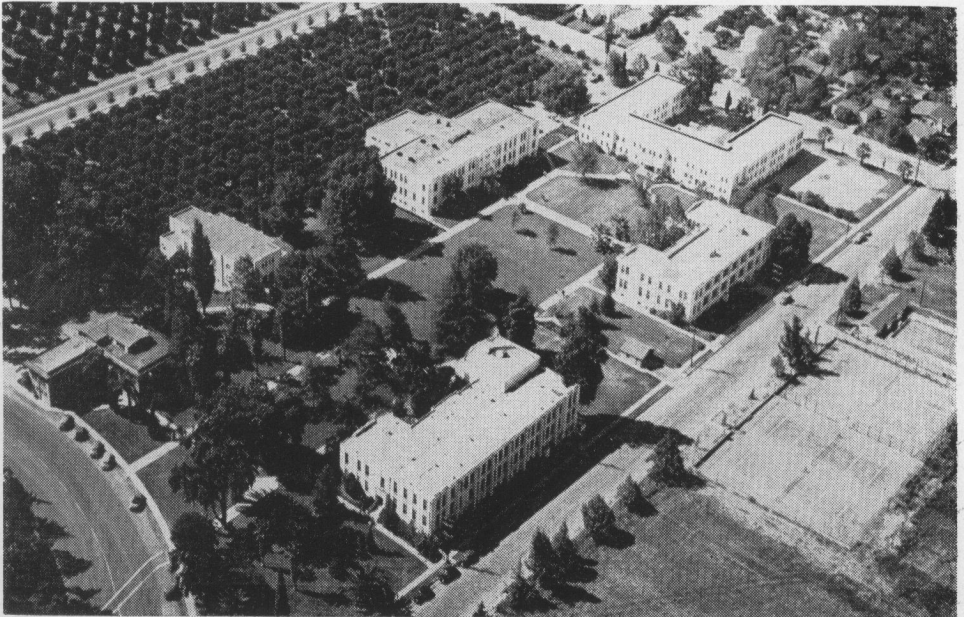
#### **General Requirements**

1. A maximum of six years is allowed to complete the work for the degree of Master of Arts.
2. Three quarters in residence are required, one of which must be taken at the Biological Station.
3. A thesis with a maximum of 9 credits and a minimum of 5 credits; two copies must be presented not later than two weeks before the taking of the degree. Regular instruction must be followed for the writing of the thesis.
4. The graduate program is to be approved by the graduate committee of the candidate; this committee will include the major professor, the minor professor, the head of the Department of Biological Sciences, and one member from another department of the College. In the event the student has done part of his work at the College of Medical Evangelists or the School of Tropical and Preventive Medicine, the committee may include one member from that school.

5. A grade average of "B" must be maintained throughout the graduate residence. No credit will be allowed for courses numbered below 200 in which a grade below B is received; not more than 9 credits will be allowed in which a grade of C is earned.
6. A reading knowledge of French, German or Spanish.
7. The final examination may be oral, or written, or both.
8. Not more than 9 credits may be transferred from another school.
9. A minimum of 12 credits must be chosen from courses numbered 200 or above; the remainder must be chosen from courses numbered from 150 to 199.

#### **Specific Requirements in the Major**

1. 24 credits beyond the undergraduate major in Zoology or Biology. (The undergraduate major must be equivalent to that offered at Walla Walla College.)
2. A minimum of 3 credits must be presented in each of the following branches of Zoology (including upper division courses in the undergraduate major): embryology, morphology, parasitology, genetics, evolution (including paleontology), invertebrates, entomology, vertebrates, seminar.



College of Medical Evangelists, Loma Linda, California



3. A scientific background of at least 18 credits in Chemistry, Physics or Mathematics must have accompanied the undergraduate major in Zoology.

#### **Specific Requirements in the Minor**

The minor may be in Botany or Chemistry:

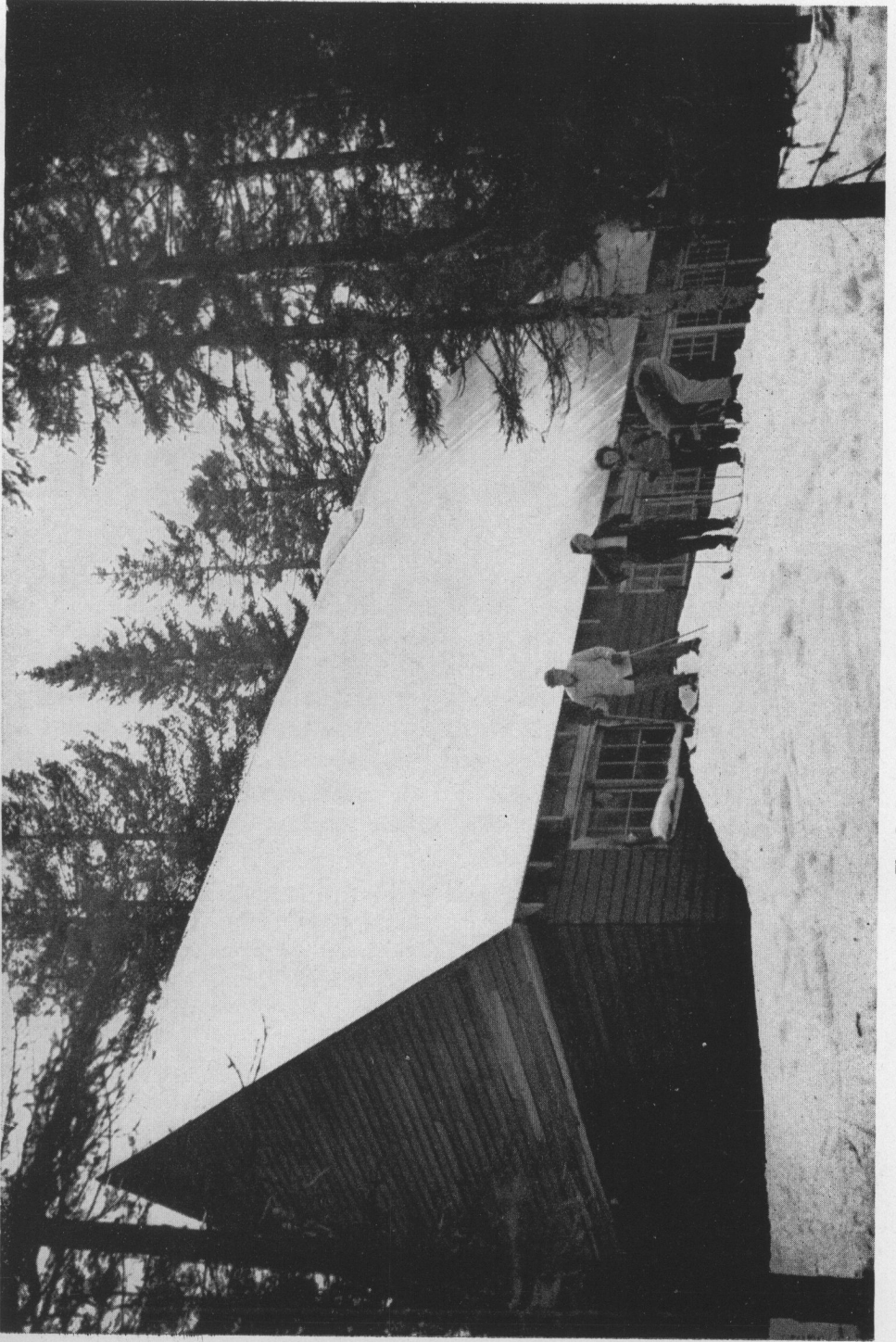
1. Botany: a total of not less than 26 credits upper division, of which at least 12 are taken during graduate residence. Courses 106, 164-165 must be included.
2. Chemistry: a total of not less than 18 credits upper division, of which at least 12 are taken during graduate residence. When the minor is Chemistry, the candidate must elect the following courses in Botany in addition to other requirements: 106, 164-165.

#### **Facilities for Graduate Study**

The physical equipment and buildings used by the Department of Biological Sciences is extensive. A brief description of these facilities follows, including illustrations. The main building on the campus of Walla Walla College includes approximately 9000 feet of floor space, with a total of 30 rooms, including 7 laboratory rooms, museum, two photographic darkrooms, 10 graduate research rooms, four teachers offices, a large stock room, and a store room where trailers, tents, cooking equipment, and other field equipment for the Biological Station and the Field School is stored during the winter or when not in use. An animal house with rooms for preserved animals, live animals, and built-in pens with both ground and underground sections stands near the main building. The room for living animals is heated automatically for controlled experiments. A recently completed greenhouse facilitates work in botany and entomology.

#### **Biological Station**

Located at Anacortes, Washington, 350 miles to the northwest, is the Walla Walla College Biological Station. This station includes two dormitories of 25 rooms each, five cabins, a laboratory building with four laboratories, and other facilities, situated in a cove which is isolated from everything else by water and timber. A small lake, a marsh, mud flats, and rocky and sandy beaches are nearby. Virgin timber occurs only a few feet away. See the bulletin of the Walla Walla College Biological Station for further information.



The Lodge at the Blue Mountain Laboratory

### **Blue Mountain Laboratory**

This is the most recent addition to the facilities of the Department of Biological Sciences. It includes a lodge, 30x50 feet, for living quarters for 32 people, and a laboratory building equipped chiefly for entomological work. The buildings are located on a six-acre tract of heavy timber 35 miles southeast of the College, on an all-weather road. While the snow reaches a depth of 11 feet here in winter, cars may be parked along the highway and students may reach the laboratory by walking about one block, or by use of skis. In this laboratory, work with insect pests of the forest trees will take most of the attention of students, but many other studies may be carried on here as well. For example, work with parasites, birds, mammals, trees, and flowering plants, as well as mushrooms, lichens and other groups of plants, may be carried on.

### **Field School of Biology**

The Field School is a traveling school which has no particular destination as a permanent goal. Trips to different areas have been made in the past. For example: 1938, Cascade Mountains; 1939, Cascade and Blue Mountains; 1941, the states of Idaho, Nevada, Utah, Arizona, and California; 1946, the Canadian Rockies and Glacier Park, including Waterton Park, Banff, Jasper, Yoho, and Kootenai Parks in Canada; 1951, Arizona, California, and northern Mexico.

### **School of Tropical and Preventive Medicine**

Affiliation with the School of Tropical and Preventive Medicine of the College of Medical Evangelists provides much additional experience for students who are interested in Parasitology, Medical Zoology, Physiology and Nutrition. The equipment and facilities of the School include several laboratories in the School proper, plus the additional facilities of the School of Medicine located at Loma Linda and at Los Angeles, California. Large collections of parasites and of animals and plants of medical importance are maintained, as well as much library material.

Tropical stations are operated by the School in Mexico. During the summer such a station is operated at Vera Cruz.

### **School of Medicine**

Affiliation with the School of Medicine at the College of Medical Evangelists includes their facilities at Loma Linda, and at Los Angeles, California. Any student working in Physiology and Nutrition may wish to take advantage of this affiliation for a part of his work.

### **Museum of Natural History**

The Museum of Natural History so far has featured the vertebrates mainly since the collections of mammals and birds are most extensive, being the largest in the Pacific Northwest. Collections of reptiles, amphibians, and fishes are being enlarged rapidly. The collection of insects includes approximately 50,000 specimens housed in regulation steele cabinets. Collections of animal parasites are extensive. The herbarium includes several thousand specimens of flowering plants and trees, and many more of the lower plants.

A part of the museum is maintained permanently at the Biological Station, namely, the collections of marine vertebrates and fishes.

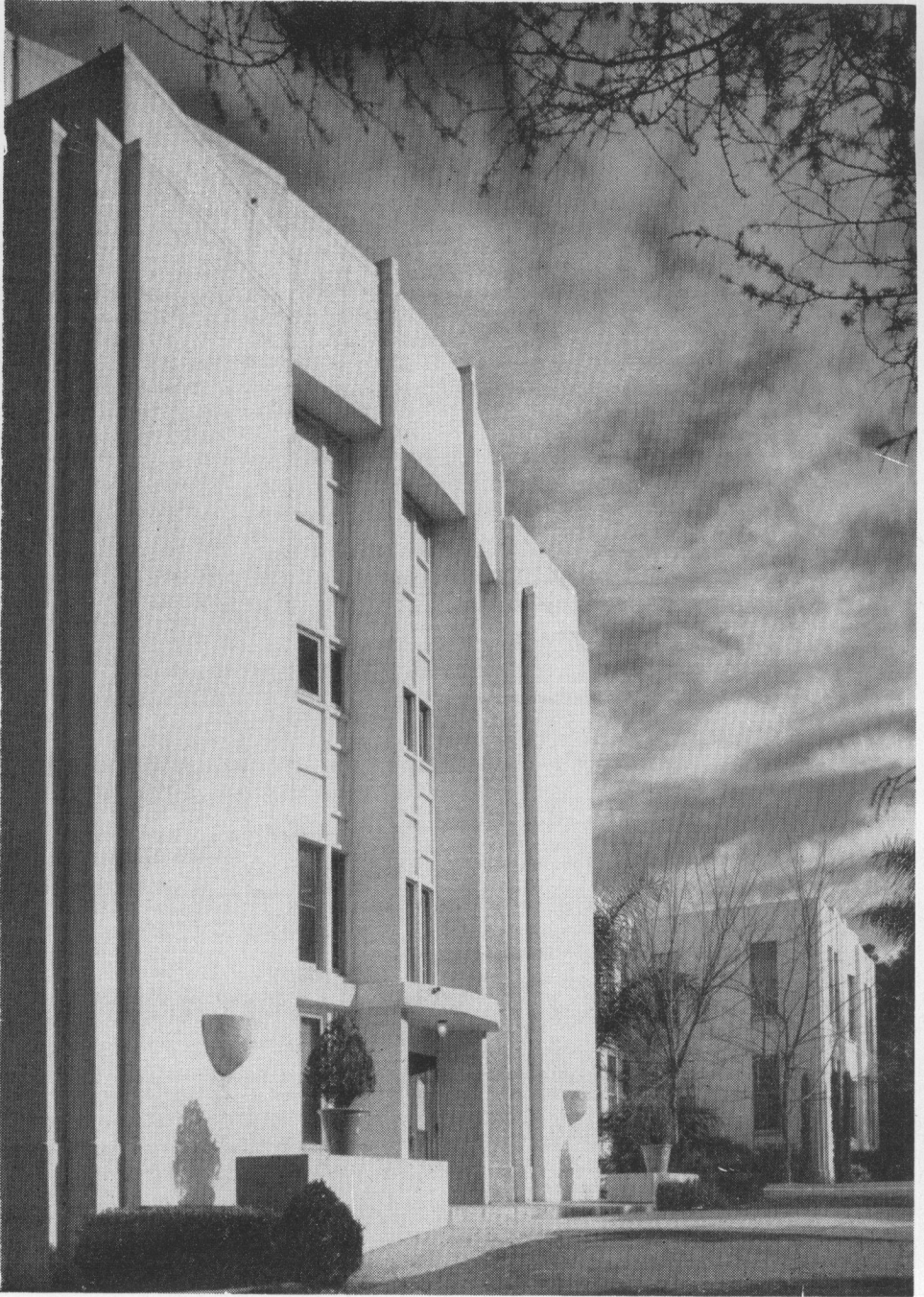
### **Affiliation with the College of Medical Evangelists and the School of Tropical and Preventive Medicine**

Students interested in the fields of Physiology and Nutrition, Medical Zoology, and Parasitology may spend up to one-half of the residence time at the College of Medical Evangelists or the School of Tropical and Preventive Medicine at Loma Linda, California. Here a number of specialized courses in these fields are offered during the regular school year. Opportunity is provided for research toward the thesis, or for research not applying toward the thesis. At least one quarter of residence is required on the campus of Walla Walla College or the Biological Station before the student may go to the Loma Linda campus.

### **Summer Sessions**

The summer sessions at the Biological Station are designed to provide a strong compliment to the work on the campus toward the degree of Master of Arts. In fact, during some years the summer work will be more liberal due to the fact that staff members from the School of Tropical and Preventive Medicine will offer courses at the Biological Station.

It will be possible for those who are working during the school year to complete all requirements for the Master of Arts by attending the summer terms only, provided they have few or no deficiencies to make up.



College of Medical Evangelists, Loma Linda, California

# COURSES OF INSTRUCTION

## Undergraduate Only

Course No.	Title	Credits per Quarter
1-2-3.	<i>Elementary Zoology</i>	4
4.	<i>Survey of Zoology</i> (Restricted to students working for General Certificate)	4
5.	<i>Microbiology</i>	5
15-16.	<i>Elementary Botany</i>	4
19.	<i>Survey of Botany</i> (Restricted to students working for General Certificate)	4
52-53.	<i>Anatomy, Physiology, and Health</i>	6
101.	<i>Vertebrate Embryology</i>	4
102-103.	<i>Comparative Vertebrate Anatomy</i>	4
106.	<i>Systematic Botany</i>	4
<b>Courses Open to Graduates and Undergraduates</b>		
151.	<i>Mammalogy</i>	4
153.	<i>Ornithology</i>	4
155.	<i>General Entomology</i>	4
156.	<i>Systematic Entomology</i>	4
157.	<i>Paleontology</i>	2 or 3
158.	<i>Genetics</i>	2
159.	<i>Philosophy of Science</i>	2
161-162-163.	<i>Seminar</i>	1/2
164-165.	<i>Morphology of Plants</i>	4
166.	<i>Sanitary Bacteriology</i>	4
169.	<i>Fresh Water Biology</i>	4
171.	<i>Animal Microtechnique</i>	3
172.	<i>Vertebrate Histology</i>	3
173.	<i>Plant Microtechnique</i>	3
177-178.	<i>Parasitology</i>	3
181.	<i>Marine Invertebrates</i>	4
182.	<i>Ichthyology</i>	4
183.	<i>Marine Botany</i>	4
186.	<i>Medical Entomology</i>	3
191.	<i>Forest Entomology</i>	3
192.	<i>Fisheries Biology</i>	4
193.	<i>History of Biology</i>	2
194-195.	<i>Methods in Research</i>	1
197.	<i>Methods of Teaching Biology</i>	3
199.	<i>Special Problems</i>	arranged
<b>Graduate Courses, Not Open to Undergraduates</b>		
201.	<i>Research in Zoology</i>	arranged
202.	<i>Research in Botany</i>	arranged
204-205-206.	<i>Graduate Seminar</i>	1
207.	<i>Genetics and Evolution, Prerequisite: 158</i>	3
211.	<i>Plant Ecology, Prerequisite: 106</i>	4
229.	<i>Parasites of Marine Animals, Prerequisites: 177-178, 181, 182</i>	2 or more
230.	<i>Advanced Animal Parasitology, Prerequisites: 151, 153, 177-178</i>	2 or more
235.	<i>Thesis</i>	5-9

## PART III

**Department of Education****Faculty**

KENNETH A. APLINGTON, M. A.

*Professor of English*

ERNEST S. BOOTH, Ph. D.

*Professor of Zoology*

ORASON L. BRINKER, M. A.

*Associate Professor of Mathematics*

ROBERT H. BROWN, Ph. D.

*Associate Professor of Physics*

J. G. MEHLING, M. A., C. P. A.

*Assistant Professor of Business Administration*

CALEB W. PRALL, Ph. D.

*Assistant Professor of Speech*

DAISY SCHLUNTZ, M. S.

*Professor of Home Economics*

BERNICE E. SEARLE, M. A.

*Associate Professor of Elementary Education*

WALTER I. SMITH, Ed. D.

*Professor of Secondary Education; Head, Department of Education*

AGNES L. SORENSON, M. A.

*Professor of Modern Languages*

FRANCES B. STODDARD, M. A.

*Assistant Professor of Elementary Education*

CLAUDE E. THURSTON, Ph. D.

*Professor of Chemistry*

J. J. WALCKER, B. S.

*Assistant Professor of Industrial Arts*

MYRTLE WALKER, M. A.

*Associate Professor of Secretarial Science*

STANLEY E. WALKER, M. Mus., A. A. G. O.

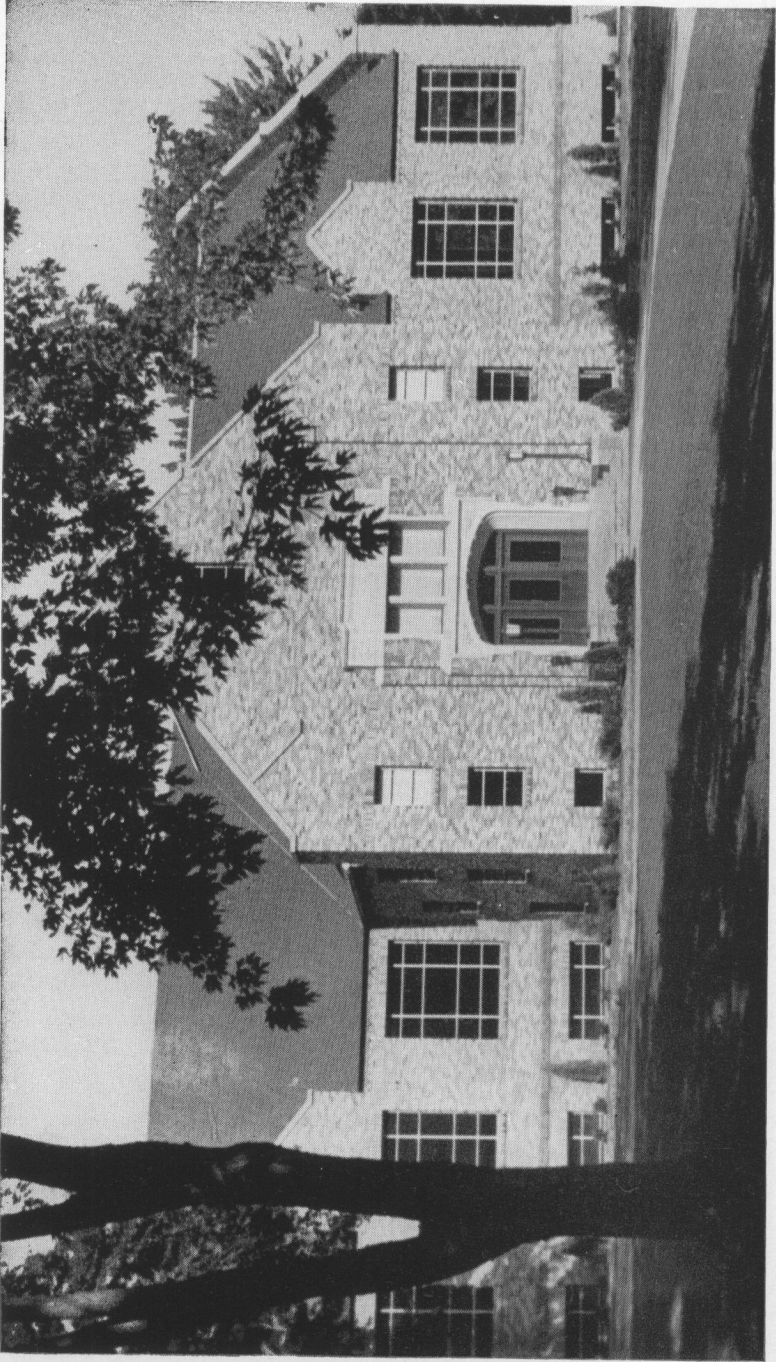
*Professor of Piano and Pipe Organ*

HARRY E. WESTERMEYER, Ph. D.

*Professor of History*

EUGENE S. WINTER, M. A.

*Assistant Professor of Physical Education*



Library



## The Graduate Program in Education

To the Department of Education of Walla Walla College is committed the responsibility of helping to provide better teachers for better schools at each level of the educational system of the North Pacific Union Conference of Seventh-day Adventists. When the department was organized in the "middle nineties," a two year professional program supplemented a common school education and with this preparation teachers went forth to serve the youth in our church-related schools.

Years passed and standards progressed. A secondary school diploma became a prerequisite to professional training. This requirement stimulated the upbuilding of academies to give the basic education, and the latter move made necessary secondary-teacher education in the college to prepare good instructors for the academies.

As certain church centers developed in membership, the needs of their youth called for a new type of school, offering subjects in addition to those of the church school and usually included in grades nine and ten. These were called intermediate schools and for them a new type of teacher-education was needed: a blending of elementary and secondary education. Thus, as the organization has developed, the educational needs have become more complicated and an adequate teacher-education program has become more extended.

The educational program in the State of Washington through these years has, in type, closely paralleled the above. Now, at a time when our academies are being urged denominationally to provide faculties whose members rate the Master's degree or its equivalent, the State of Washington has unified its teacher-education program by authorizing all of its teacher-education institutions to prepare both elementary and high-school teachers on a five-year (225 credit hour) curriculum. On this unified plan Walla Walla College is accredited by the State of Washington.

Further, to conserve on the total time for meeting certification requirements while acquiring the Master's degree, the college is utilizing the free time of the year of the General Certificate program to apply toward this degree. Thus, both the purpose and the content of requirements for the Master's degree are directed toward the improvement of teaching efficiency.

## Master of Arts Degree

The Master of Arts degree with a major in Education and two areas of concentration is offered.

### Prerequisites

1. Graduation from a college within the Association of Seventh-day Adventist Colleges and Secondary Schools, or its equivalent.
2. A "B" average in the last 15 quarter credits in the major field and in the last 15 quarter credits in Education on the undergraduate level. If the applicant's average is less than "B," he will be admitted on probation only. If he fails to maintain this standard of scholarship, he must discontinue his work.
3. An undergraduate minor in Education, to include the requirements for denominational secondary certification.
4. An acceptable score on the Graduate Record Examination may be required.

### Requirements

1. Major field: Education, 24-27 quarter credits on the graduate level.
2. Two areas of concentration with 10-12 credits each, chosen from courses numbered 150-199.
3. A minimum of three quarters in residence.
4. Not more than 9 quarter credits may be transferred from another school.
5. A grade average of "B" must be maintained throughout the graduate residence. No credit will be allowed for courses numbered below 200 in which a grade below "B" is received; not more than 9 credits will be allowed in which a grade of "C" is earned.
6. The graduate program to be completed within a maximum of six years.
7. The final examination may be written, oral, or both.
8. A thesis may be required.

### Teacher Certification

By action of the State Board of Education on July 1, 1949, a new type of certification was defined to replace eventually the Elementary and Secondary certificates. Beginning September 1, 1951, a Provisional General Certificate, renewable yearly for a maximum period of four years, will be issued by the Office of the Superintendent of Public

Instruction, upon recommendation of Walla Walla College, to the graduates who have met specific certification requirements. These requirements are ordinarily completed within the four-year period required for graduation. The Standard General Certificate is not issued until the candidate has completed at least one year of teaching and an additional year of college. However, the additional year of college may be taken in summer schools. This necessitates renewing the Provisional General Certificate yearly for the required period. It is recommended that the fifth year of study be completed during a regular college year whenever possible. The annual bulletin may be consulted for the specific requirements for the Standard General Certificate.

### Denominational Certification

The training of secondary science teachers is one of the main objectives of the Department of Biological Sciences. All students interested in teaching are urged to qualify for secondary teaching in all fields of science.

The General Conference Department of Education issues two Certificates for teachers of secondary subjects—the Five-Year Secondary Certificate and the Life Secondary Certificate.

The Five-Year Secondary Certificate is based on graduation from a college within the Association of Seventh-day Adventist Colleges and Secondary schools.

One requirement for the Five-Year Secondary Certificate is 23 quarter credits in professional education to be done in the following courses, preferably in the order listed and including five quarter credits in Directed Teaching III:

	Credits
1. Introduction to Education, 1, or	3
2. Principles of Education, 59	3
3. General Psychology, 57, 63	3
4. Educational Psychology, 58, or	3
5. Developmental Psychology, 112	3
6. Secondary Education, 121	3
7. Educational Evaluation and Guidance, 118	3
8. Techniques in Secondary Subjects, 134	2
9. Directed Teaching III (161-163)	5-6
10. Optional: Special Methods in Major Field, Counseling and Guidance, History of Education, Audio-Visual Education, School Administration and Supervision.	2-3

Only six quarter credits of psychology may count toward certification.

### Special Requirements for certification in the various fields:

*Religion.* 27 credits, including Daniel and Revelation or advanced Bible doctrines, in addition to 3 secondary units.

*English.* 27 credits, including rhetoric, advanced composition, and types of literature, in addition to 3 secondary units. (Library science or speech is evaluated on a fifty per cent basis. The maximum credit may not exceed 9 credits for both or 5 credits each.)

*History.* 18 credits, including a survey of modern Europe and a national history, in addition to 2 secondary units.

*Language.* 18 credits, in addition to 2 secondary units in the same language.

*Mathematics.* 15 credits, in addition to 2 secondary units.

*Music.* Graduation from the conservatory course in music, or 45 quarter credits in a well-balanced curriculum of theory and practice.

*Natural Science.* 18 quarter credits in laboratory subjects, including 9 credits in the specific field in which certification is desired, in addition to the secondary content and 2 secondary units in that particular field.

*Shorthand.* 15 quarter credits, or the equivalent, secondary units to be evaluated on the basis of 2 hours per semester to a maximum of 4 hours.

*Typewriting.* 6 quarter credits, or the equivalent, with a minimum of 50 words a minute, net, in a certified 10-minute standard speed test. A signed statement verifying this record must accompany the application for certification.

*Other Subjects.* Agriculture, Art, Bookkeeping, Cooking, Health and Physical Education, Printing, Sewing, Speech, Woodworking: 12 quarter credits, or the equivalent in the specific field in which certification is sought, secondary units to be evaluated on the basis of 2 hours per semester, to a maximum of 4 hours.

---

## COURSES OF INSTRUCTION

### Undergraduate Only

Course No.	Title	Credits per Quarter
1, 2	<i>Introduction to Education</i>	3
11	<i>School Arts</i>	3
13 or 113	<i>Teaching of Crafts</i>	3
18	<i>Teaching of Bible</i>	2
21	<i>School Management</i>	3
42	<i>Story Telling</i>	1
52	<i>Principles of Mathematics</i>	3
57, 63	<i>General Psychology</i>	3
58	<i>Educational Psychology</i>	3
59	<i>Principles of Education</i>	3
66	<i>Principles of Geography</i>	5
69	<i>Teaching of Nature Study</i>	3
71	<i>Teaching of Reading</i>	3

Course No.	Title	Credits per Quarter
72	<i>Teaching of Social Studies</i>	3
73	<i>Teaching of Language Arts</i>	3
81, 82, 83	<i>Directed Teaching I</i>	1
91-92-93	<i>Curriculum Methods and Materials</i>	2
101, 102, 103	<i>Directed Teaching II</i>	2
106	<i>Child Literature</i>	3
108	<i>Observation and Problems in Grades 1-8</i>	3-4
111, 112	<i>Developmental Psychology</i>	3
118	<i>Educational Evaluation and Guidance,</i> Prerequisite: 111, 112 or equivalent	3
121	<i>Secondary Education</i>	3
129	<i>School Home Administration</i>	3
134	<i>Techniques in Secondary Subjects</i>	2
136	<i>Washington State Manual</i>	1
149	<i>History of Education</i>	3

### Open to Graduates and Seniors

161, 162, 163,	<i>Participation and Directed Teaching III,</i> Pre- requisite: Senior standing and 15 crs. in Education	5
171, 172, 173	<i>Principles of Audio-Visual Education,</i> Pre- requisite: 9 crs. of Education	1
171A, 172A, 173A	<i>Laboratory in Audio-Visual Education</i>	1
201	<i>Diagnostic and Remedial Teaching</i>	3
202	<i>Remedial Reading</i>	3
203	<i>Curriculum Workshop</i>	3
208	<i>Special Problems in Grades 1-8,</i> Prerequisites: 81, 82, 83, and 101, 102, 103, or equivalent	3
211, 212	<i>Statistics</i>	2
215-216-217	<i>Advanced Audio-Visual Education,</i> Pre- requisite: 171, 172	1
221	<i>Psychology of Learning</i>	3
224	<i>Philosophy of Education,</i> Prerequisite: 149	3
227	<i>History of the Problems of Education,</i> Prerequisite: 149	3
241	<i>Methods of Research</i>	2

Course No.	Title	Credits per Quarter
244, 245, 246, 247	<i>Seminar in Education</i>	2
261	<i>Counseling and Guidance</i>	3
265	<i>School Administration and Supervision, Prerequisite: 121 or equivalent</i>	3
266	<i>The Secondary School Curriculum, Prerequisite: Minor in Education and 121</i>	3
276	<i>Secondary School Supervision</i>	3

### Graduate Offerings

#### 1953 SUMMER

227s	<i>History of Problems of Education</i>	3
265s	<i>School Administration and Supervision</i>	3
221s	<i>Psychology of Learning</i>	3
244s	<i>Seminar</i>	2
261s	<i>Counseling and Guidance</i>	3
245s	<i>Seminar</i>	2

#### 1953-1954 AUTUMN

261	<i>Counseling and Guidance</i>	3
215	<i>Audio-Visual Education</i>	1
201	<i>Diagnostic and Remedial Teaching (Elementary)</i>	3
221	<i>Psychology of Learning</i>	3
246	<i>Seminar</i>	2
211	<i>Statistics</i>	2

#### 1953-1954 WINTER

216	<i>Audio-Visual Education</i>	1
224	<i>Philosophy of Education</i>	3
202	<i>Remedial Reading (Elementary)</i>	3
276	<i>Secondary School Supervision</i>	3
247	<i>Seminar</i>	2
212	<i>Statistics</i>	2

#### 1953-1954 SPRING

217	<i>Audio-Visual Education</i>	1
203	<i>Curriculum Workshop (Elementary)</i>	3
227	<i>History of Problems of Education</i>	3
266	<i>Secondary School Curriculum</i>	3
244	<i>Seminar</i>	2

## PART IV

**Expenses****Deposit**

The College operates on a cash basis and requests that the students do the same. Before registering, students are required to make an advanced deposit as follows:

Dormitory Students (veterans and non-veterans) .....	\$95.00
Village Students (veterans and non-veterans) .....	50.00

The student will pay his actual school charges at the close of each six weeks, the advance deposit being held in reserve until the last period of the school year or until he leaves school. The College Board reserves the right to change all listed fees and tuition without prior notice.

**Tuition**

Quarter Credits	Per six-weeks period
13-16 .....	\$56.00
12 .....	52.25
11 .....	48.50
10 .....	44.75
Less than 10, per credit .....	4.50
Over 16, per credit .....	4.25

**General Fee**

Twelve dollars for each quarter of attendance will be charged each student to cover matriculation, library, lyceum, health service, and gymnasium.

**Special Fees**

Late registration, per day (Maximum \$5.00) .....	\$ 1.00
Change of program .....	1.00
Special examination .....	1.00
Degree, Master's .....	25.00
Research, per quarter credit .....	5.00
Thesis publication .....	25.00

Fees charged for study conducted at Loma Linda include an Infirmary fee of \$12.00 and other fees similar to those charged at Walla Walla College.

**Associated Students Fee**

Since each student automatically becomes a member of the Associated Students of Walla Walla College, a fee of \$3.00 will be charged to each student for each quarter of attendance. This covers cost of *The Collegian*, *The Mountain Ash*, and the Association dues.

**Laboratory Fees**

	Per Quarter	Per Quarter	Credit
Audio-Visual Laboratory .....			\$7.50
Biology (each course) .....	\$10.00		
Curriculum Workshop .....			1.00
Diagnostic and Remedial Teaching .....			1.00
Participation and Directed Teaching III .....			1.00
Special Problems in Grades 1-8 .....	5.00		
Statistics .....	1.00		
Teaching of Crafts, upper division .....	10.00		

**Housing**

Many houses and apartments are for rent in College Place, and it is not usually difficult to find a satisfactory place to live. Unmarried students are expected to reside in the college dormitories when in residence at College Place.

At the Biological Station, unmarried students reside in the two dormitories. There are several small cabins for married students with families. Trailer space and camping areas are available for those who wish to camp out. Electricity and water are provided for those camping out.

Students taking part of their residence work at the College of Medical Evangelists or the School of Tropical and Preventive Medicine will find room in the dormitories if they are unmarried, or in the surrounding village if married. Apartments may usually be secured near the campus.

**Work Opportunities**

The College can offer a limited amount of work to students who do not have sufficient money to defray their expenses. The student should not expect to earn his entire expenses in one of the college industries, as this is not compatible with good school work. There are also opportunities to work at the Biological Station.

**Fellowships and Scholarships in Biological Sciences**

A number of graduate fellowships are available each year to qualified students. The fellowship provides a substantial part of the expenses for the year, and may pay up to \$600 for three quarters in residence at the College. Partial fellowships are also available for those who do not have time for the full fellowship. Students with the full fellowship are permitted to take only 10 credits of class work.

Scholarships may be available in limited numbers for qualified students in fields where their research is of commercial value.