each day in the Infirmary after the seven-day period is nine dollars. The Infirmary is open when college is in session and during spring vacation. It is closed during Christmas vacation.

Non-resident students must pay a fee of $15, which entitles them to unlimited dispensary and laboratory service and free consultation with the College physicians and psychiatrists. Married non-resident students who maintain their own homes need not pay the fee unless they desire dispensary privileges.

All communications from parents and guardians, outside physicians and others, concerning the health of the students, should be addressed to the Dean of the College or to the College Physician. Any student who becomes ill when absent from College must notify the Dean of the College immediately and present to the Infirmary when she returns a signed statement from her physician.

The College reserves the right, if the parents or guardians cannot be reached, to make decisions concerning operations or other matters of health.

The College has arranged for health insurance, known as the Students' Reimbursement Plan. Individual policies providing reimbursement for medical, surgical and hospitalization expenses within specified limits are available to resident students. The cost is $15 a year and includes protection during all vacations. Application forms may be obtained from the Comptroller.

THE EDUCATION PLAN

Since some parents prefer to pay tuition and other college fees in equal monthly instalments during the college year, the College offers this convenience under the Bryn Mawr Trust Company. The cost of a one- or two-year contract is four per cent greater than when payment is made in cash. The interest rate is slightly higher for three- or four-year contracts. All contracts include the benefit of parent life and total and permanent disability insurance.

INSURANCE

The College is not responsible for loss due to fire, theft or any other cause. Students who wish to insure against these risks should do so individually or through their own family policies.

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Curriculum

THE undergraduate curriculum is designed to achieve two main purposes: to give a broad and sound education in the liberal arts and sciences, and to provide adequate preparation for advanced study for those students who wish to enter graduate and professional schools.

In order to assure breadth in the curriculum the College has established the following requirements which must be met by all candidates for the A.B. degree regardless of their choice of major subject: (1) Freshman English composition, (2) History of Philosophic Thought, (3) one course in the natural sciences, (4) one course in literature and (5) one course in the social sciences or history. These requirements may be met by (a) completing successfully an appropriate course at Bryn Mawr, (b) presenting the appropriate Advanced Placement Test of the College Entrance Examination Board with an honor grade,[1] or, (c) in exceptional circumstances, completing with a grade of at least C a summer school course approved in advance by the department concerned and by the Dean. Each student must also demonstrate a knowledge of two foreign languages. This may be done by (1) attaining a score of 590 on a College Board achievement test, taken in the senior year of high school,[2] or, by passing with an honor grade an Advanced Placement Test, (2) passing examinations offered by the College every spring and fall, or, (3) passing with a grade of at least 70 a college course above the elementary level before the Senior year.

The major subject, chosen at the end of the sophomore year, is combined with work in allied subjects. The purpose of the major subject is to give each student the kind of training that continuity in the study of one field of knowledge provides. As she progresses toward more complex advanced work she acquires a deeper insight into the fundamental principles and general concepts of her subject. At Bryn Mawr the departments offering major courses of study are: Biology, Chemistry, Classical and Near Eastern Archaeology, Economics, English, French, Geology, German, Greek, History, History of Art, Italian, Latin, Mathe-

1. The grade of 5 is required in English and in History.
2. Students admitted under the Early Decision Plan may offer tests taken in the junior year in high school.

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matics, Music, Philosophy, Physics, Political Science, Psychology, Russian, Sociology and Anthropology, Spanish. The departments of Education and History of Religion offer elective work which may be allied with certain major subjects but no separate majors.

Each major department offers Honors work to a number of its senior students who have demonstrated unusual ability. Honors work is of a more advanced character than that done in the regular courses and requires more initiative and power of organization than is usually expected of undergraduate students. Such work may be carried on in connection with an advanced course or may be planned especially for individual students. It usually includes independent work of a critical and analytical nature with source material, periodic reports and the preparation of an Honors paper. To be eligible a student must have completed two years of study in the major subject, and her candidacy must be approved by the Dean and the Curriculum Committee. The Honors work must be undertaken in addition to at least one full unit of advanced course work.

The plan for the curriculum determines the framework within which each student constructs her own program of courses.

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The minimum of 15½ units of work for the A.B. degree is distributed as follows: 4-5½ units meet general college requirements, approximately 7 units constitute work in the major subject including allied work and the preparation for the Final Examination in the major subject, required of all students. The remaining units (3-4½) are for courses to be elected freely by the student. Each full year course is the equivalent of one unit of work and each course constitutes one quarter of a student's working time for one year. For the information of transfer students, one course is the equivalent of 8 semester hours. In most cases, Freshmen, Sophomores and Juniors take 4 units of work and Seniors 3½, including the unit of preparation for the Final Examination in the major field. This preparation usually consists of independent reading and conferences with members of the major department designed to review and correlate the material covered in the major.

The plan for the curriculum may be outlined as follows:

I. A total of at least 15½ units of work must be presented by all candidates for the A.B. degree. The total usually represents 14½ regular courses and the unit of preparation for the Final Examination in the major subject which takes the place

of an additional advanced course. One or two departments do not permit the unit of preparation to substitute for a course but require it as additional independent work.

II. Unless the student has been exempted by means of Advanced Placement, the 14½ units of course work must include the following:

1. The course for Freshmen in English Composition.

2. A course in literature to be chosen from the courses designated as appropriate by the departments of English, French, German, Greek, Italian, Latin, Russian and Spanish.

3. A course in one of the following sciences: Biology, Chemistry, Geology or Physics.

4. The course in History of Philosophic Thought.

5. A course in social science to be chosen from offerings in Economics, History, Political Science, Psychology, Sociology or Anthropology.

6. Although no specific course or courses are required, each student must demonstrate a knowledge of two foreign languages. (See page 41.)

Language examinations may be taken in any autumn or spring after entrance, up to the beginning of the senior year. A Senior who fails either examination or is conditioned in both in the autumn will not receive her degree the following June. If having passed one examination she is conditioned in the other, she may take a second examination in January.

III. The total number of at least 15½ units of work must include a major subject chosen at the end of the sophomore year. The major subject must consist of:

1. Six units of work to be distributed as follows:

a. At least three and usually four courses in the major field. Of these one or two must be second-year courses, and one must be advanced.

b. The remaining courses to be chosen among the courses listed by the major departments as acceptable for allied work.

2. One unit of preparation for the Final Examination in the major subject. One or two departments do not permit the

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unit of preparation to substitute for a course but require it of their majors as additional independent work. All students who receive the degree must have passed this examination.

IV. Elective work. The remaining units of work making up the required total of 15½ are devoted to elective courses. Students may choose freely any courses which do not have prerequisites or any courses whose prerequisites they can meet.

V. Grades. Numerical grades on the scale of 100 are given in all courses counting for the degree. Each student must attain a grade of 70 or above in at least half of these courses and a grade of at least 60 in the remainder. In all courses in her major subject, she must attain grades of 70 or above. Should she receive a grade below 70 in a second-year or advanced course in her major subject, she may be required to change her major.

VI. The degree of Bachelor of Arts is conferred upon students who have completed the course of study described above. The degree is awarded *cum laude, magna cum laude,* and *summa cum laude* to students whose numerical average in all their courses is 80-84, 85-89, 90 or above respectively. To students who have completed Honors work in their major subject the degree is awarded with honors in that subject.

VII. Credit for work taken elsewhere:

1. Transfer credit (see page 29)

2. Cooperation with Neighboring Institutions

Under the Three-College Plan for Cooperation, full-time students at Bryn Mawr may register for courses at Haverford College and Swarthmore College without payment of additional fees. Such registration must be approved by the Dean and the departments concerned. Credit toward the Bryn Mawr degree will be granted for such courses.

3. Summer School Work

Students desirous of supplementing their work at Bryn Mawr by taking courses in summer school are encouraged to do so. Students who wish to present summer school work for credit should first obtain approval of their plan from the Dean and from the department concerned. No credit will ever be given for work in which a student has received a grade below C. Credit given will be calculated on an hour-for-hour basis.

VIII. Supplementary requirements for the Degree:

1. In addition to completing the course of study outlined above, all candidates for the A.B. degree must take the following work:

a. Hygiene

All students must meet the requirements in Hygiene by passing an examination based on reading assigned by the College Physician and the Consulting Psychiatrists and given annually. The examination must be taken no later than the autumn of the junior year.

b. Physical Education

All students must meet the requirement in Physical Education, consisting of work taken throughout the freshman and sophomore years (see page 119).

2. Residence—Every candidate for the degree of Bachelor of Arts unless she is a transfer student or is permitted to accelerate her program must attend Bryn Mawr College for a period of four years. Students admitted on transfer from other colleges must study at Bryn Mawr for at least two years.

3. Full Program of Work—With few exceptions, all students carry a complete program and no student may spend more than the equivalent of the four undergraduate years in completing the work for the A.B. degree.

PREMEDICAL PREPARATION

Bryn Mawr, through the curriculum in liberal arts and sciences, provides the opportunity of meeting requirements for admission to the leading medical schools of the country, and each year a number of its graduates enter these schools. The minimal requirements for most medical schools are met by the following courses: Biology 101, Chemistry 101, Chemistry 202, Mathematics 101, Physics 101. Some medical schools also stipulate Chemistry 201a, and reading facility in French and German.

The requirements are fulfilled by a major in Biology, with the election of Mathematics 101 and Physics 101, or by a major in Chemistry, with the election of Biology 101. They can be met by a major in other subjects, such as literature or history, with careful planning of the student's courses during her four years at Bryn Mawr and some work in the summer at an institution

HONORS WORK: Honors work either in classical or in mediaeval Latin is offered to qualified seniors. The subject will be determined by the interests of the student. The work is carried out under the direction of one member of the Department and the results are presented in a paper.

Mathematics

PROFESSORS: JOHN C. OXTOBY, M.A., *Chairman*
MARGUERITE LEHR, PH.D.[1]
ASSOCIATE PROFESSOR: FREDERIC CUNNINGHAM, JR., PH.D.
ASSISTANT PROFESSOR: ETHAN D. BOLKER, M.A.

The major is designed to provide a balanced introduction to the subject, emphasizing its nature both as a deductive and as an applied science, at the same time providing the technical foundation for more advanced study. The courses in calculus are basic for all applications of mathematical analysis and for more advanced work in function theory. The courses in algebra and geometry introduce the student to some of the unifying ideas and postulational methods that are characteristic of much of modern mathematics.

REQUIREMENTS IN THE MAJOR SUBJECT: Mathematics 101, 201, 202c, 301, 303a, and at least one other advanced half course.

ALLIED SUBJECTS: Chemistry, Economics, Philosophy, Physics and Psychology.

101. *Calculus, with Analytic Geometry:* Mr. Oxtoby, Mr. Bolker.

Differentiation and integration of algebraic and elementary transcendental functions, with the necessary elements of analytic geometry and trigonometry. The interplay between mathematical ideas and applications is exploited.

103. *Topics in Modern Mathematics:* Mr. Cunningham.

This course is offered as an alternative to Calculus, for students electing one year of Mathematics, having had three years of high school preparation and not intending to continue to more advanced courses in Mathematics. Topics will be selected from Algebra, inequalities, set theory, matrices, game theory, linear programming, probability, statistics, and other subjects. The emphasis will be on techniques and ideas finding application in the social and biological sciences. The aim of the course is to develop facility in manipulating mathematical ideas and notations and in reading material relying on them, and to develop understanding of Mathematics as a field of independent interest.

1. On sabbatical leave for the year, 1964-1965.

201. *Second-Year Calculus:* Mr. Oxtoby.

The definite and indefinite integral, infinite series, partial derivatives, multiple integrals, differential equations, with applications to geometry, physics and chemistry.

202c. *Solid Analytic Geometry and Algebra:* Mr. Bolker.

Determinants, vectors, matrices, and selected topics from the Theory of Equations; linear algebra motivated by and applied to space geometry; classification and transformation of planes and quadric surfaces.

301. *Advanced Calculus:* Mr. Cunningham.

The classical theory of real functions, based on Cantor's construction of the real number system; the Riemann integral, functions defined by power series, Fourier series, functions of several variables. Prerequisite: Mathematics 201.

[302b. *Introduction to Geometric Theories.*]

Analytic generalizations and group-theoretic classification, as related to postulational methods and the problem of introducing coordinates. Development motivated from the basic projective, Euclidean, and non-Euclidean space theories. Prerequisite: Mathematics 202c.

303. *Introduction to Abstract Algebra:* Mr. Bolker.

Permutations, linear transformations, abstract groups, rings, and fields; postulational characterization of number systems. Prerequisite: Mathematics 202c.

[304a. *Theory of Probability and Statistics.*]

Mathematical formulation of problems of statistical inference, exhibiting the inherent probability aspect. Probability distributions for discrete and continuous ranges; sampling theory; central limit theorems; tests of hypotheses. Prerequisite: Mathematics 201.

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[305b. *Topics in Differential Geometry:* Miss Lehr.]

[310. *Theory of Functions of a Complex Variable:* Mr. Oxtoby.]

Special functions, conformal mapping, the general theory according to Cauchy, singular points, Laurent series, series of partial fractions, infinite products, elliptic functions. Prerequisite: Mathematics 301.

[311b. *Differential Equations:* Mr. Cunningham.]

General methods, existence theorems, linear equations and Wronskians, oscillation and separation theorems, partial differential equations and boundary-value problems. Prerequisite: Mathematics 301 (may be taken concurrently).

312a. *Topology:* Mr. Cunningham.

Properties of topological spaces and continuous mappings. Prerequisite: Mathematics 301 or 303.

312b. *Topics in Topology:* Mr. Cunningham.

Prerequisite: Mathematics 312a.

FINAL EXAMINATION: The final examination consists of three parts: (a) an examination in analysis, (b) an examination in algebra and geometry, and (c) an examination in some particular branch of advanced analysis or geometry, or in an allied field.

HONORS WORK: Qualified students are admitted to Honors work on recommendation of the Department.

Music

PROFESSOR AND DIRECTOR OF CHORUS: ROBERT L. GOODALE, A.B., B.MUS., A.A.G.O., *Chairman*

PROFESSOR AND DIRECTOR OF ENSEMBLE GROUPS: AGI JAMBOR, M.A.

VISITING PROFESSOR: HORACE ALWYNE, F.R.M.C.M.

LECTURER: ISABELLE CAZEAUX, PH.D.

ASSISTANT: CAROLINE M. CUNNINGHAM, M.A.

DIRECTOR OF ORCHESTRA: WILLIAM H. REESE, PH.D.

The purpose of the Music major is to enable the student to appreciate the significance of music from an historical and sociological as well as from an aesthetic point of view and to develop a technique of intelligent listening, a faculty of critical judgment and the ability to use the materials of music as a means of expression for creative talent.

Students in the courses in History and Appreciation of Music must devote two hours or more a week to listening to recordings.

REQUIREMENTS IN THE MAJOR SUBJECT: Music 101, 102, and at least two and one-half units of additional work, the selection of courses depending upon the student's desire to specialize in the history and literature of music or the technique of composition. A student intending to major in Music must have sufficient knowledge of pianoforte or organ playing to enable her to play music of the technical difficulty of a Bach figured chorale. She is strongly urged to be a member of the Chorus or the Orchestra and/or an Ensemble Group.

ALLIED SUBJECTS: History, History of Art, Modern Languages, English, Greek, Latin, Philosophy, History of Religion.

101. *An Introduction to the History and Appreciation of Music:* Mr. Alwyne.

A comprehensive survey from the period of Bach to the end of the nineteenth century, with special emphasis on the technique of intelligent listening.

102. *Music Materials:* Mr. Goodale.

A course in the elements of theory. The study of harmony and counterpoint, simple formal analysis and an introduction to orchestration.

201. *The Romantic Period:* Miss Cazeaux.

An intensive study of nineteenth-century music. The Symphonic Poem, Art-Song and Music-Drama. Expansion of orchestral and pianoforte technique; development of symphonic and chamber-music forms; growth of nationalism. Prerequisite: Music 101 or its equivalent.

202. *Advanced Theory and Analysis:* Mr. Goodale.

A continuation of Music 102, with emphasis on analysis (harmonic, contrapuntal and formal) of larger forms. Prerequisite: Music 102 or its equivalent.

203c. *Bach:* Mme. Jambor.

Prerequisite: Music 101 or its equivalent.