

A Sophomore who has received during Freshman year seven or more grades as high as B and who has not failed in any course, may elect not more than two Junior courses to satisfy Sophomore requirements, but he must secure the consent of the department concerned if he has fallen below the grade of B in the prerequisite for such Junior course, or if he has not taken the prerequisite. Sophomores who have not received the required number of high grades may secure this privilege only through the combined consent of the Advisory Committee and the department concerned.

GRADES

The following grade system of marking is used:

There are five grades, namely, A, "excellent"; B, "good"; C, "fair"; D, "passing"; E, "failing."

These grades have no numerical equivalents and the interpretation of the adjectives, "excellent," "good," "fair," etc., rests wholly with the instructor.

COMPLETION OF COURSES

T A course is considered as completed for any semester when the student has obtained a grade as high as D on the daily work (which includes all oral or written exercises prior to the semiannual examinations) and the semiannual examination combined.* A student who receives a grade of E must repeat the course, or, if it is an elective, take an equivalent, subject to the approval of the Advisory Committee. In certain year-courses a failure in the first semester may, if the instructor and Advisory Committee approve, be canceled by a grade as high as C gained in the second semester. Credit in the first semester of a year-course may be canceled on account of failure in the second semester, upon the recommendation of the department concerned, and with the approval of the Advisory Committee. A failure in French 1-2, French 3-4, German 1-2, German 3-4, Spanish 1-2, or Spanish 3-4 may be canceled by passing the corresponding admission examinations in June or September with a mark as high as 80.

* A student deficient in his daily work is not admitted to the semiannual examination.

GRADUATION

G The number of year-courses or their equivalent in semester-courses, required for graduation, is 20; but a student, in order to be graduated, must have received 20 semester grades above D in the courses taken by or credited to him in college including 6 semester grades above D in the major courses of Junior and Senior years; and all courses regularly taken in the Senior year must be passed, even though they may not be necessary for completing the number of courses indicated above. In addition, the requirements in Hygiene, Public Speaking, Physical Training, and Swimming must be satisfied.

BACHELOR OF ARTS

The degree of Bachelor of Arts is conferred by vote of the Trustees at the annual Commencement upon students who have completed the requirements as to courses and grades to the satisfaction of the Faculty, have paid to the Treasurer all college dues and other college charges, and have returned all books belonging to the Library; but the degree may be forfeited by misconduct at any time previous to the close of the Commencement exercises.

HONORS

Honors for high scholarship are awarded by the Faculty at the end of each college year. The names of the recipients are printed in the next annual catalogue. The names of Seniors taking honors are printed on the Commencement program.

DEGREES WITH DISTINCTION

The Faculty will recommend to the Trustees that the degree of Bachelor of Arts *cum laude* be conferred upon all members of the graduating class who have received grades equivalent to three-fourths of their semester-courses of grade B and one-fourth of grade C; that the degree *magna cum laude* be conferred upon those who have received grades equivalent to one-half of their semester-courses of grade A and one-half of grade B; and that the degree *summa cum laude* be conferred upon those who have received

[Political Science 11. American Constitutional Law. Interpretation of the constitutional law of the United States. Assigned reading, court decisions, and legal opinions. Preparation of opinions or briefs on constitutional problems.

Prerequisite, Political Science 3-4. Group letter, K. Examination group, K.]

[Political Science 12. Development of English Common Law. The Common Law of England as a system: its sources, subject matter, and principles.

Prerequisite, Political Science 3-4. Group letter, K. Examination group, K.]

[Political Science 13. International Relations. International relations, chiefly from the nonlegal point of view. Nationalism, imperialism, economic and diplomatic problems. Lectures, selected readings, and discussions.

Senior course. Prerequisite, Political Science 3-4 or 5-6. Group letter, E. Examination group, E.]

[Political Science 14. International Organization. The organization of the international community and the law by which it is governed. Developments since the establishment of the League of Nations.

Senior course. Prerequisite, Political Science 3-4 or 5-6. Group letter, E. Examination group, E.]

HYGIENE (Div. III)

(For description of course see under HEALTH AND ATHLETICS.)

ITALIAN (Div. I)

(For description of courses see under ROMANIC LANGUAGES.)

LATIN (Div. I)

(For description of courses see under CLASSICS.)

MATHEMATICS (Div. III)

Chairman, Professor J. G. HARDY

Professor HARDY, Professor AGARD, Associate Professor SHEPARD, Associate Professor WELLS, Assistant Professor RICHMOND

Major — Prerequisite: Mathematics 1-2 or 21-22 or 3-4. *Junior year:* (a) Mathematics 3-4 or 5-6; (b) Mathematics 7-8; (c) one of the following

courses: Statistics 1-2, Physics 7-8*, or 1-2, 5-6, 9-10*, Economics 5-6. *Senior year:* Mathematics 5-6 or 9-10, and a year-course, or its equivalent, selected from Mathematics 9-10, 11-12*, 13*, Statistics 1-2.

Students intending to major in mathematics are advised to elect Mathematics 3-4 in sophomore year.

Mathematics 1-2. Elementary Analysis.

Trigonometry: Trigonometric analysis, logarithms, solution of triangles.

Algebra: Simultaneous equations, determinants, theory of equations.

Analytic Geometry: Straight line, circle, parabola, ellipse, hyperbola, curve tracing.

Elementary Calculus: Differentiation and integration of polynomials with simple applications.

Sections, 1-A, 2-C, 3-D, 4-H, 5-I. Examination group, R.

HARDY, AGARD, WELLS.

Mathematics 21-22. Elementary Analysis.

Algebra: Simultaneous equations, determinants, theory of equations, complex numbers, exponential functions.

Analytic Geometry: Straight line, conics, curve tracing, transformation of coordinates, parametric equations, polar coordinates.

Elementary Calculus: Differentiation and integration of polynomials with simple applications.

Prerequisite, admission credit in trigonometry. Sections, 1-A, 2-D, 3-E, 4-H. Examination group, R.

AGARD, SHEPARD, RICHMOND.

Mathematics 3-4. Calculus. Differentiation and simple methods of integration. Maxima and minima; definite integrals; determination of plane areas, lengths of curves, areas and volumes of solids of revolution; series, multiple integrals.

Prerequisite, Mathematics 1-2 or 21-22. Sections, 1-B, 2-E, 3-G. Examination group, R.

HARDY, AGARD, WELLS.

Mathematics 5-6. Advanced Calculus. Continuation of Mathematics 3-4; more advanced methods of integration, multiple integration; the determination of areas, volumes, mean values, centers of gravity, and moments of inertia; approximate integration; partial differentiation, infinite series, and an introduction to differential equations.

Prerequisite, Mathematics 3-4. Group letter, K. Examination group, K. HARDY.

* Not given in 1935-36.

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WILLIAMS COLLEGE

Mathematics 7-8. Advanced Algebra and Analytic Geometry.

First semester: Theory of equations, determinants, matrices, systems of linear equations, linear dependence. Fundamental concepts of modern abstract algebra, including invariants, groups, fields.

Second semester: Plane and solid analytic geometry. Elementary geometrical applications of invariants and groups, synthetic and analytic methods.

Prerequisite, Mathematics 3-4. Group letter, H. Examination group, H. WELLS.

Mathematics 9-10. Differential Equations and Special Topics.

Solution of ordinary differential equations, and elementary theory of linear equations; integration in series, including a study of the properties of Bessel's functions and Legendre polynomials. Introduction to boundary value problems; Fourier series and general expansion problems, with applications to the theory of vibration and wave mechanics. Special topics from the calculus of variations, theory of functions of a complex variable, and potential theory.

Prerequisite, Mathematics 5-6. Group letter, B. Examination group, R. RICHMOND.

[Mathematics 11-12. Modern Geometry. Geometry from the standpoint of the invariant theory of a group of transformations. Projective, affine, metric, complex, inverse, and noneuclidean geometries.

Prerequisite, Mathematics 7-8. Group letter, J. Examination group, J.]

[Mathematics 13. Descriptive Geometry. Problems of the straight line and plane; curved surfaces; intersection and development of surfaces; shades and shadows, and perspective.

Senior course. Prerequisite, Mathematics 3-4 or 21-22. Group letter, H. Examination group, H.]

Statistics 1-2.

First semester: Theory and Methods of Statistics. Collection and compilation of statistics; graphical methods; computation of statistical measures; correlation; application of probability curve. Use and computation of index-numbers, with special study of the statistical methods used by the Harvard Committee on Economic Research. Three lectures and recitations and one two-hour seminar period each week.

Second semester: Mathematics of Finance. Theory of interest and discount; annuities; amortization; valuation of bonds; sinking funds and depreciation. Methods of computation of interest-tables and bond-tables. Introduction to actuarial mathematics; endowments, life annuities, computation of insurance premiums and reserves.

Junior course. Prerequisite, Mathematics 1-2 or 21-22. Sections, 1-G, 2-I. Examination group, I.

SHEPARD.

COURSES OF INSTRUCTION

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PHILOSOPHY (Div. II)

Chairman, J. W. MILLER

Professor PRATT, Associate Professor MILLER, Dr. BEALS

Major — Prerequisite: Philosophy 1-2. *Junior year:* (a) Philosophy 3-4; (b) Philosophy 5-6; (c) one of the following courses: Religion 1-2, Fine Arts 3-4, Greek 9-10. *Senior year:* Philosophy 7-8 and two semester-courses selected from Religion 3, 4, and Philosophy 9, 10, 12.

Philosophy 1-2. Introduction to Philosophy, and Ethics.

First semester: A survey of the persistent philosophic systems, and a study of the problems that they involve.

Second semester: An attempt by means of discussions, original papers, and assigned readings to build up a system of ethical principles and to apply them to various problems of individual and social life.

Sophomore course. Sections, 1-E, 2-F, 3-H. Examination group, L. PRATT, MILLER, BEALS.

Philosophy 3-4. History of Philosophy. The development of philosophic thought in ancient Greece and Rome and in Western Europe from the Middle Ages to the present century. The writings of leading philosophers, assigned historical reading, lectures, written papers, and discussion.

Prerequisite, Philosophy 1-2. Group letter, C. Examination group, C. MILLER, BEALS.

Philosophy 5-6. General Psychology. A study of the human mind, with emphasis upon the principles of motivation, and a critical survey of psychoanalysis and other contemporary schools of psychology, including the theory of personality.

Prerequisite, Philosophy 1-2. Group letter, K. Examination group, K. BEALS.

Philosophy 7-8. Contemporary Metaphysics.

First semester: Modern realism and the problem of consciousness.

Second semester: Problems of philosophy from an idealistic standpoint. Reports, discussions, and an original paper from each student.

Senior course, required in the philosophy major. Prerequisite, Philosophy 3-4. Group letter, E. Examination group, E. MILLER, BEALS.

Philosophy 9. Logic. The method and formal structure of natural science and of other fundamental types of organized knowledge.

Prerequisite, Philosophy 3-4 or 5-6. Group letter, B. Examination group, B. MILLER.