All certificates and testimonials must be sent to the Secretary before July 1.

The certificate privilege is granted to a school for a period not exceeding three years. Blank forms of application may be obtained from the Secretary. Application for the certificate privilege for a school must be made before March 15.

REQUIREMENTS FOR THE DEGREE OF A.B.

The following courses are required of all candidates for the degree.

Each three hours per week through the year unless otherwise stated.

1 English	Freshman year
1 Mathematics	Freshman year
1 Latin or 1 Greek	Freshman year
One modern language	Freshman or Sophomore year
1 History	Freshman or Sophomore year
A *Physics or A *Chemistry	Freshman or Sophomore year
1 Philosophy, First semester or 2 Psychology, Second semester	Junior year
3 Ethics, First semester	Senior year

Freshmen are required to take 15 hours per week:

Sophomores, 15 hours in the first semester, 14 or 15 in the second:

Juniors, 14 or 15 hours per week:

Seniors, 12 to 15 hours per week.

All elections are subject to the approval of the Faculty.

Elections should be made so carefully that changes will not be necessary.

All requests for changes of elections for the first semester should be sent to the Secretary of the College *before* September 1 and no changes may be made after the first Monday of the semester.

*See p. 59

Students who offered at entrance the "extra year" of modern language must elect at some time during the course a year of another modern language.

Those who offered science in place of a modern language must elect a year of science.

Not more than 5 courses may be taken in one semester.

Not more than 6 hours may be taken in one department in any semester.

Unless otherwise stated, all courses are open to Sophomores.

Two beginning courses in modern language may not be elected for the same year.

FRESHMAN COURSES

Every candidate for the Freshman class must send her list of elections to the Secretary of the College *before* September 1. Election blanks are provided by the College.

Before choosing courses the rules governing elections (p. 26) and the descriptions of the courses must be carefully read.

Courses open to Freshmen.

Each three hours per week through the year

1 English
1 Mathematics
1 Latin
1 Greek
1 French
1 German
A French
A German
O French
O German
1 History
A Chemistry
A Physics

All new students are required to attend a course of six lectures on Hygiene. Time for these will be taken during the first six weeks from the time assigned to Mathematics and English.)

Five of the above courses are to be taken by every member of the Freshman class, under the following regulations:

Course C. Argumentation. Writing and criticism. Oral debates. Open to students who have completed Course 1. First and second semesters [3]. MISS MANN.

Course D. Development of Rhetorical Theory and Literary Criticism. A study of rhetorical theory from Plato to the present time with a view to determining the principles of its development. Open to students who have completed Course A or Course B. First semester [3]. ASSOCIATE PROFESSOR BUCK.

Course E. Poetics. History and theory. Open to students who have completed two courses of elective English. Second semester [3]. ASSOCIATE PROFESSOR BUCK.

Course F. Development of English Literature from *Beowulf* to Johnson. Open to students who have completed Course 1, and required as preliminary to all other courses in literature. First and second semesters [3].
ASSOCIATE PROFESSOR KEYS (In 1904-5 MISS REED AND MISS BANCKER).

Course G. Old English. Cook, *First Book in Old English*. Sievers-Cook, *Grammar*. Prose reading. *Beowulf*. Open to students who have completed Course 1. First and second semesters [3]. MISS FISKE.

Course H. Middle English. Morris and Skeat, *Specimens*. Open to students who have completed Course G. First semester [3].

Course I. Chaucer. *The Canterbury Tales* and *Minor Poems*. Open to students who have completed Courses F and G. Second semester [3].

Course J. Nineteenth Century Poetry, with especial reference to Wordsworth and Shelley, Tennyson and Browning. Open to students who have completed Course F. First and second semesters [3]. PROFESSOR WYLIE AND MISS MCLEOD.

Course K. Nineteenth Century Prose from Coleridge to Pater. Open to students who have completed Course F. First and second semesters [3]. ASSOCIATE PROFESSOR BUCK.

Course L. Shakespeare. Critical reading of a few plays, with special emphasis upon dramatic technique, followed by careful reading of a number of plays as illustrating the development of Shakespeare's dramatic art and his place in Eliza-

bethan drama. Open to students who have completed Course F. First and second semesters [3].
ASSOCIATE PROFESSOR KEYS.
[Not offered in 1904-5.]

Course M. The development of the English Drama from the time of the Miracle Play. Open to students who have completed Course F and one semester of Course L. Second semester [3].

Course N. American Literature. Open to students who have completed Course F. Second semester [3].
[Not offered in 1904-5.]

Course O. Development of the classic and romantic movement in English literature, beginning with Spenser. Open to students who have completed four semesters' work in literature. First and second semesters [3]. PROFESSOR WYLIE.

MATHEMATICS

PROFESSOR ELY, MISS RICHARDSON, MISS SMITH, MISS CUMMINGS AND MISS COWLEY.

REQUIRED

Course 1. Solid and Spherical Geometry. Freshman year, first semester [3].

The exercises in geometry include recitations from the text-book, original demonstrations of propositions and applications of principles to numerical examples. The text-book is Chauvenet (revised by Byerly).

Algebra and Plane Trigonometry. Freshman year, second semester [3].
MISS RICHARDSON, MISS SMITH, MISS CUMMINGS AND MISS COWLEY.

ELECTIVE

Course A. Analytic Geometry. Sophomore year, first semester [3]. PROFESSOR ELY.

Course AA. Analytic Geometry. Sophomore year, second semester [3]. PROFESSOR ELY.

In analytic geometry the student is carried through the elementary properties of lines and surfaces of the second degree. All principles are illustrated by numerous exercises and applications.

Course B. Advanced Algebra. First semester [3].

Vassar 1904-05

Course C. Differential Calculus (Osborne). First semester [3].
PROFESSOR ELY.

Course D. Integral Calculus (Osborne). Second semester [3].
PROFESSOR ELY.

The elective course in differential and integral calculus is designed for those who wish to pursue the subject of either pure or applied mathematics. The text-book forms the basis of work but is largely supplemented by oral instruction.
Prerequisite: Courses A, AA.

Course E. Advanced Integral Calculus. First semester [3].
PROFESSOR ELY.

Course F. Quaternions. Second semester [3].
PROFESSOR ELY.

This course includes the general properties of scalars and vectors, quaternion interpretation and applications of quaternions to the geometry of the plane, right-line and sphere.
Prerequisite: Courses A, AA, C, D.

Course G. Differential Equations. First and second semesters [3].
PROFESSOR ELY.

Course H. Determinants and Theory of Equations. First semester [3].
MISS SMITH.

Burnside and Panton's Theory of Equations is used as the basis of the work, supplemented by lectures.

Course I. Curve Tracing. Second semester [3].
MISS SMITH.

Lecture course with daily practice in curve-tracing.
Prerequisite: Courses A, AA, C, H.

Course J. Analytic Geometry of Three Dimensions (C. Smith). The geometry of planes and quadric surfaces. Second semester [3].
MISS RICHARDSON.

Prerequisite: Courses A, AA, C, H.

Course K. The Theory of Functions. First and second semesters [3].
MISS CUMMINGS.

Course L. Modern Methods of Analytic Geometry. First and second semesters [3].
MISS COWLEY.

Course M. Projective Geometry. First semester [3].

A lecture course based on Reye's *Geometrie der Lage*.
Prerequisite: Courses A, AA.
MISS RICHARDSON.

Course O. Analytic Mechanics. First semester [3].
MISS CUMMINGS.

Course P. Analytic Mechanics. Second semester [2 or 3].
MISS CUMMINGS.

The elements of statics and dynamics. Applications to practical problems. The fundamental principles of mechanics and the elements of the theory of the potential.
Prerequisite: Courses A, AA, C, D.

ASTRONOMY
PROFESSOR WHITNEY AND DR. FURNESS.

The courses in Astronomy are presented under two main divisions, descriptive and mathematical. The descriptive Courses A and B are designed for purposes of general culture; Courses C and D for observational training and pedagogical service; the mathematical Courses E, F and G for the more advanced treatment of method, dependent upon exact mathematical processes.

DESCRIPTIVE COURSES

Course A. Descriptive Astronomy. First semester [3].
The Celestial Sphere. The Solar System.
PROFESSOR WHITNEY.

A general study, without mathematical processes, of the phenomena of the sky and of the relations of the solar system. Lectures and topical reading. A limited amount of sky observation.

Course B. Descriptive Astronomy. Second semester [3].
The Stellar System. Astrophysics.
PROFESSOR WHITNEY.

A study of the luminous bodies of space from the point of view of astronomy; of their nature and constitution by the methods of spectroscopic investigation. The latter part presents in an elementary form the principles and methods of the new astronomy. Observational work with the spectroscope.

Course C. Observational Astronomy. First semester [2].

Course D. Observational Astronomy. Second semester [2].
DR. FURNESS.

Courses conducted by observational and laboratory methods. Study of stellar and planetary positions and motions;