The Department utilizes various intramural and extramural athletic activities for the purposes of securing a further promotion of the constructive health habits of physical recreation and play, and, through those habits, the development of physical power and the establishment and maintenance of high standards of sportsmanly conduct on the part of the individual and the group.

At present the schedule includes the following sports: baseball, basketball, boxing, football, lacrosse, track and field, swimming and water polo, tennis, fencing, and wrestling.

The Department of Hygiene accepts certain types of athletic training under the instruction of the regular teaching staff of the Department as equivalent for the part of the work in the regular Courses in Physical Training.

All students who have achieved a record of C or better, for their preceding term's work in the Department, and whose practical work for that term averages 80 per cent, or better, and who are found physically fit, may substitute full time training in basketball, boxing, football, lacrosse, swimming, track, field, and wrestling in the regular seasons of those sports for the required practical work in Courses 3 and 4.

"Full time athletic training" covers a full training period each day, five days a week, under the direction of the departmental instructor in charge of the athletic squad concerned.

Students in Courses 1 and 2 may offer these substitute equivalents for a part of their practical work, provided they first pass a satisfactory special examination as to their physical fitness, muscular development, muscular control, and health habits, but in no case may a student substitute athletic training for all the practical work in Course 1 or 2.

Students offering these athletic substitutions will not be excused from attendance on days of registration, enrollment, lectures and written ex-

Students offering athletic training in substitution for regular requireaminations. ments must complete the athletic training requirements in the athletic "courses" which they elect. Failure to train satisfactorily throughout the entire season of the athletic sport selected by the student will be regarded as a failure in the Course for which the substitution was offered.

# MATHEMATICS

Students planning to take electives in mathematics are advised to acquire, as early in their college course as possible, a reading knowledge of French and of German.

Elements of Analytic Geometry and Calculus.

Textbook: Griffin, Introduction to Mathematical Analysis. Prescribed for all students in the College of Liberal Arts and Science.

hours a week; 3 credits.

# COLLEGE OF LIBERAL ARTS AND SCIENCE

# 2. Elements of Analytic Geometry and Calculus.

Textbook: Griffin, Introduction to Mathematical, Analysis. Prerequisite: Mathematics 1. Prescribed for all students in the College of Liberal Arts and Science. Three hours a week; 3 credits.

# 3. Differential Calculus.

Prerequisite: Mathematics 2. Prescribed for students in Science. Three hours a week; three credits.

## 4. Integral Calculus.

Prerequisite: Mathematics 3. Prescribed for students in Science. Three hours a week; three credits.

#### 5. Calculus.

Prerequisite: Mathematics 4. Three hours a week; 3 credits.

# 7. Analytic Geometry and Calculus.

Textbooks: Wilson and Tracy, Analytic Geometry; Granville, Smith, Longley, Differential and Integral Calculus.

Prerequisites: Mathematics 1 and 2, or four entrance units of high school mathematics. Prescribed for students in Technology; elective for other students in place of Mathematics 3. Five hours a week; 5 credits.

# 8. Calculus

Textbook: Granville, Smith, Longley, Differential and Integral Calculus. Prerequisite: Mathematics 7. Prescribed for students in Technology; elective for other students in place of mathematics 4. Five hours a week; 5 credits.

11. Theory of Numbers. Professors Gill and Wright Prerequisite: Mathematics 5 or 8. Fall term, three hours a week; 3 credits.

## 12. History of Mathematics.

Professor Allen

In this historical survey special emphasis is given to the development and to the modern forms of ideas such as number systems, postulates, symbols, functions, infinity, operations, etc., which are essential in elementary mathematics.

Prerequisite: Mathematics 5 or 8. Spring term, two hours a wek; 2 credits.

# 13. Advanced Differential Calculus.

Professors Reynolds, Hubert and Gill Prerequisite: Mathematics 5 or 8. Three hours a week; 3 credits.

14. Advanced Integral Calculus. Professors Reynolds, Hubert and Gill Prerequisite: Mathematics 13. Three hours a week; 3 credits.

# 15. Ordinary Differential Equations.

Professors Linehan, Pedersen and Turner Prerequisite: Mathematics 5 or 8. Three hours a week; 3 credits.

- 16. Vector Analysis. Professors Turner and Hubert Prerequisite: Mathematics 5 or 8. Three hours a week; 3 credits.
- 17. Differential Geometry. Professors Reynolds and Linehan Prerequisite: Mathematics 14. Fall term, three hours a week; 3 credits.

- Professor Wirth 18. Calculus of Variations. Prerequisites: Mathematics 14 and 15. Spring term, three hours a week; 3 credits.
- Professor Linehan 19. Theory of Probability. Prerequisite: Mathematics 5 or 8. Spring term, three hours a week; 3 credits.
- Professor Hubert 20. Mathematical Theory of Investment. Prerequisite: Completion of the prescribed mathematics. Fall term, two hours a week; 2 credits.
- Professors Reynolds and Gill 31. Introduction to Modern Geometry. Prerequisite: Mathematics 14. Spring term 1935, three hours a week; 3 credits.
- Professors Reynolds and Gill 32. Introduction to Modern Analysis. Prerequisite: Mathematics 14. Fall term 1935; three hours a week; 3 credits.
- Professors Reynolds and Gill 33. Introduction to Modern Algebra. Prerequisite: Mathematics 14. Spring term 1936, three hours a week; 3 credits.
- 34. Theory of Functions of Real Variable. Prerequisite: Mathematics 14. Three hours a week; 3 credits. To be first offered in the Fall of 1936; and thereafter as a Fall term course.

## 41. Solid Geometry.

Textbook: Hawkes-Luby-Touton, Solid Geometry. Three hours a week; 3 credits.

#### 42. Trigonometry.

Textbook: Rothrock, Elements of Plane and Spherical Trigonometry. Three hours a week; 3 credits.

#### 43. Advanced Algebra.

Textbook: Fite, College Algebra. Three hours a week; 3 credits.

#### 53. Intermediate Algebra.

Textbook: Hawkes-Luby-Touton, Complete School Algebra. Prescribed for students who do not present Intermediate Algebra for admission. Three hours a week.

### 77. Analytic Geometry.

Text-book: Wilson and Tracey, Analytic Geometry. Prerequisites: Mathematics 1 and 2, or four entrance units of high school mathematics. Four hours a week; 4 credits.

### 78. Differential Calculus.

Text-book: Granville-Smith-Longley, Differential and Integral Calculus. Prerequisite: Mathematics 77. Three hours a week; 3 credits.

## 79. Integral Calculus.

Text-book: Granville-Smith-Longley, Differential and Integral Caculus. Prerequisite: Mathematics 78. Three hours a week; 3 credits.