MATHEMATICS

1. Solid Geometry.

Text-book: Wentworth-Smith, *Solid Geometry*, or Hawkes-Luby-Touton, *Solid Geometry*.

Prescribed for students in Science, unless presented for admission. Three hours a week; 3 credits.

2. Trigonometry.

Text-book: Rothrock, *Elements of Plane and Spherical Trigonometry*.

Prescribed for students in Arts and in Science, unless presented for admission. Three hours a week; 3 credits.

3. Advanced Algebra.

Text-book: Fite, *College Algebra*.

Prescribed for: {Science students who do not present Advanced Algebra for admission. Arts students who do not present Advanced Algebra for admission, unless Mathematics 41 is elected.

Three hours a week; 3 credits.

4. Analytic Geometry and Calculus.

Text-books: Wilson and Tracey, *Analytic Geometry*; Granville, *Differential and Integral Calculus*.

Prerequisite: Entrance Solid Geometry or Mathematics 1, Entrance Trigonometry or Mathematics 2, and Entrance Advanced Algebra or Mathematics 3. Prescribed for students in Science; elective for students in Arts and in Social Science. Five hours a week; 5 credits.

5. Calculus.

Text-book: Granville, *Differential and Integral Calculus*.

Prerequisite: Mathematics 4. Prescribed for students in Science; elective for students in Arts and in Social Science. Five hours a week; 5 credits.

7. Elements of Analytic Geometry and Calculus.

Text-book: Griffin, *Introduction to Mathematical Analysis*.

Prescribed for students in Social Science who do not present Solid Geometry and Trigonometry for admission. Four hours a week; 4 credits.

8. Elements of Analytic Geometry and Calculus.

Text-book: Griffin, *Introduction to Mathematical Analysis*.

Prerequisite: Mathematics 7 or 57. Prescribed for students in Social Science. Four hours a week; 4 credits.

11. Arithmetic. *Professor Whitford.*
Prerequisite: Mathematics 5 or 42. Fall term, two hours a week; 2 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 42. Spring term, two hours a week; 2 credits.

13. Advanced Differential Calculus. *Professor Reynolds.*
Text-book: Williamson, *Differential Calculus*.
Prerequisite: Mathematics 5. Fall term, three hours a week; 3 credits.

14. Advanced Integral Calculus. *Professor Reynolds.*
Text-book: Williamson, *Integral Calculus*.
Prerequisite: Mathematics 5. Spring term, three hours a week; 3 credits.

15. Ordinary Differential Equations.
Fall term, *Professor Pedersen.*
Spring term, *Professor Reynolds.*
Text-book: Murray, *Differential Equations*.
Prerequisite: Mathematics 5. Three hours a week; 3 credits.

16. Vector Analysis. Fall Term, *Professor Reynolds.*
Spring Term, *Professor Hubert.*
Prerequisite: Mathematics 5. Three hours a week; 3 credits.

17. Differential Geometry. *Professor Reynolds.*
Text-book: Snyder and Sisam, *Analytic Geometry of Space*.
Prerequisite: Mathematics 15. Fall term, three hours a week; 3 credits.

18. Partial Differential Equations. *Professor Saurel.*
Text-book: Johnson, *Differential Equations*, Byerly, *Fourier's Series and Spherical Harmonics*.
Prerequisite: Mathematics 15 and 17. Spring term, three hours a week; 3 credits. (Not offered in 1925-1926.)

19. Theory of Probability. *Professor Linehan.*
Prerequisite: Mathematics 5 or 42. Spring term, three hours a week; 3 credits.

41. Analytic Geometry (Outline).
Text-book: Wilson and Tracey, *Analytic Geometry*.
Prerequisite: Entrance Trigonometry or Mathematics 2. Elective for students in Arts. Three hours a week; 3 credits.

42. Differential and Integral Calculus (Outline).

Text-books: Fisher, *Infinitesimal Calculus*; Osborne, *Differential and Integral Calculus*.

Prerequisite: Mathematics 41. Elective for students in Arts. Three hours a week; 3 credits.

53. Intermediate and Advanced Algebra.

Text-books: Hawkes-Luby-Touton, *Complete School Algebra*, Fite, *College Algebra*.

Prescribed for students in Arts and in Science who do not present Intermediate Algebra for admission. Five hours a week; 3 credits.

57. Elements of Analytic Geometry and Calculus.

Text-book: Griffin, *Introduction to Mathematical Analysis*.

Prescribed for students in Social Science who do not present Intermediate Algebra for admission. Five hours a week; 4 credits.

120. Mathematical Theory of Investment. *Professor Philip.*

Text-book: Skinner, *The Mathematical Theory of Investment*.

Prerequisite: completion of the prescribed mathematics. Fall term, two hours a week; 2 credits.

Mathematics 74, 75, and 76, which are given in the Evening Session are together equivalent to Mathematics 4 and 5.

74. Analytic Geometry.

Text-book: Wilson and Tracey, *Analytic Geometry*.

Prerequisites: Entrance Solid Geometry or Mathematics 1, Entrance Trigonometry or Mathematics 2, and Entrance Advanced Algebra or Mathematics 3. Prescribed for students in Science; elective for students in Arts and in Social Science. Four hours a week; 4 credits.

75. Differential Calculus.

Text-book: Granville, *Differential and Integral Calculus*.

Prerequisite: Mathematics 74. Prescribed for students in Science; elective for students in Arts and in Social Science. Three hours a week; 3 credits.

76. Integral Calculus.

Text-book: Granville, *Differential and Integral Calculus*.

Prerequisite: Mathematics 75. Prescribed for students in Science; elective for students in Arts and in Social Science. Three hours a week; 3 credits.

212. Fundamental Concepts of Modern Mathematics.
Professor Linehan.

Orientation in the modern higher mathematics, especially for those who intend to teach mathematics in the high schools. Historical and logical development of the concepts of number, function, transformation, group, invariant; history and role of postulate-system; projective geometry and metric geometry; non-Euclidean geometry; n-dimensional geometry; geometrical constructions.

> Prerequisite: Analytic Geometry and Calculus. Thirty hours, twenty weeks; 2 credits in the School of Education. Main Building. Fee: Reg., $2.50; tuition, $5.00.

220. Mathematical Theory of Investment. *Professor Philip.*

Text-book: Skinner, *The Mathematical Theory of Investment.*

> Prerequisite: completion of the prescribed mathematics. Two hours a week; 2 credits. Fee, $5.00.

City College N. Y. 1923-25