

# Mathematics

Graduates of the Mathematics major at Haigazian University receive the Bachelor of Science (B.S.) degree.

Students who complete the degree in Mathematics should be able to:

- Understand the role of axioms or assumptions and the basic rules of logic.
- Abstract general principles from examples.
- Analyze, model, and solve computational problems.
- Recognize which real-world problems are subject to mathematical reasoning.
- Formulate a mathematical statement precisely and write a coherent proof.
- Teach mathematics for high school students.
- Continue in graduate studies and conduct research in different fields of mathematics.

The Department of Mathematics offers the degree of Bachelor of Science (B.S.). In addition to the general university requirements, the Mathematics Department requires a minimum of 39 credits in mathematics, 12 credits in computer science, 7 credits in physics, and 6 credits in economics. All students majoring in mathematics must pass MAT 201 and MAT 202 with a minimum grade of 70.

*Note : For a Normal Diploma (Teaching Diploma), all diploma requirements must be met. Total 200-level courses taken for the B.S. degree and the Normal Diploma should add up to 112 credits.*

## General Education (30 cr.)

Core requirements for all HU students are listed on page 58.

## Core Requirements (27 cr.)

|         |   |       |
|---------|---|-------|
| MAT 201 | Calculus and Analytic Geometry III          | 3 cr. |
| MAT 202 | Differential Equations                      | 3 cr. |
| MAT 209 | Fundamentals of Mathematics                 | 3 cr. |
| MAT 213 | Topics in Geometry                          | 3 cr. |
| MAT 219 | Linear Algebra I                            | 3 cr. |
| MAT 223 | Advanced Calculus I                         | 3 cr. |
| MAT 227 | Introduction to Complex Variables           | 3 cr. |
| MAT 233 | Probability and Statistics for the Sciences | 3 cr. |
| MAT 241 | Abstract Algebra I                          | 3 cr. |

## Elective Courses (12 cr.)

Four mathematics courses in the Department.

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| <b>Computer Science Requirements</b>         | <b>(12 cr.)</b> |
| CSC 202 Computer Programming                 | 3 cr.           |
| CSC 204 Advanced Computer Programming & Data | 3 cr.           |
| Two elective courses from Computer Science   | 6 cr.           |
| <b>Physics Requirements</b>                  | <b>(7 cr.)</b>  |
| PHY 211 Electricity and Magnetism            | 3 cr.           |
| PHY 213 Electricity and Magnetism Lab        | 1 cr.           |
| PHY 217 Mechanics                            | 3 cr.           |
| <b>Economics Requirements</b>                | <b>(6 cr.)</b>  |
| ECO 201 Microeconomic Principles             | 3 cr.           |
| ECO 202 Macroeconomic Principles             | 3 cr.           |