Yeshiva University
Stern College for Women
Academic Advisement

Mathematics

Total Credits: **42+**

Department Chair: Professor Antonella Marini
marini@yu.edu

Find the Website here

The department of mathematical sciences offers degrees in three concentrations:

1. **Specialization in Pure and Applied Mathematics**
2. **Specialization in Computational Science**
3. **Specialization in Actuarial and Financial Mathematics**

Details for each specialization can be found on pages 2-4

Mathematics Minor   Total Credits: **21**

REQUIRED COURSES

Course #	Course Name	Credits
MATH 1412	Calculus I	4
MATH 1413	Calculus II	4
MATH 1510	Multivariable Calculus	4
MATH 2105	Linear Algebra	3

ELECTIVES (6 credits)

Two (2) MATH courses 1500 or higher

Note: Graduate courses in Mathematics are open to undergraduate students who successfully completed Multivariable Calculus and Linear Algebra.

Specialization in Pure and Applied Mathematics

Total Credits: 42+

REQUIRED COURSES (7 courses, 24 credits)

Course #	Course Name	Credits
MATH 1412	Calculus I	4
MATH 1413	Calculus II	4
MATH 1510	Multivariable Calculus	4
MATH 1520	Advanced Calculus 1 **or** MAT 5300	3
MATH 2105	Linear Algebra	3
MATH 2461	Probability Theory	3
MATH 2601	Ordinary Differential Equations **or** MAT 5201	3

ELECTIVES 1500 Level or higher (4 courses, 12 credits)

Recommended courses include

- MATH 1504
- MATH 2462 **or** MAT 5002
- MATH 1521 **or** MAT 5651
- MATH 1540 **or** MAT 5405
- MATH 2215 **or** MAT 5253

CORRELATES (2 courses, 6+ credits)

Chosen from computer science, or graduate mathematics, artificial intelligence, data analytics and visualization

Specialization in Computational Science
Total Credits: 42+

REQUIRED COURSES (7 courses, 24 credits)

Course #	Course Name	Credits
MATH 1412	Calculus I	4
MATH 1413	Calculus II	4
MATH 1510	Multivariable Calculus	4
MATH 2105	Linear Algebra	3
MATH 2461	Probability Theory	3
MATH 2462	Mathematical Statistics **or** MAT 5002	3
MATH 2651	Numerical Methods **or** MAT 5003	3

ELECTIVES (4 courses, 12+ credits)

Chosen from computer science or advanced mathematics.

Recommended courses include

- COMP 1300
- COMP 1320
- COMP 2314
- COMP 2545
- COMP 3562
- COMP 3921

CORRELATES (2 courses, 6+ credits)

Chosen from computer science, or graduate mathematics, artificial intelligence, data analytics and visualization

Specialization in Actuarial and Financial Mathematics

Total Credits: 42

REQUIRED COURSES (7 courses, 24 credits)

Course #	Course Name	Credits
MATH 1412	Calculus I	4
MATH 1413	Calculus II	4
MATH 1510	Multivariable Calculus	4
MATH 2105	Linear Algebra	3
MATH 2461	Probability Theory	3
MATH 2462	Mathematical Statistics **or** MAT 5002	3
MATH 2901	Mathematics of Finance **or** MAT 5640	3

ELECTIVES (4 courses, 12 credits)

Chosen from economics, business intelligence and marketing analytics or advanced mathematics.

Recommended courses include

- ECON 1010
- ECON 1101
- ECON 1201
- ECON 1421
- ECON 2601
- ACC 1001
- ACC 1002
- FIN 1001
- IDS 2030
- IDS 2550
- IDS 3000
- IDS 2160
- IDS 2020

CORRELATES (2 courses, 6 credits)

Chosen from computer science, or graduate mathematics, artificial intelligence, data analytics and visualization