

APMA MAJOR

1st YEAR

Lower Division Program Requirements: 42 UNITS

- CMPT 120/130:** Intro to Computer Science and Programming I
- CMPT 125/135:** Intro to Computer Science and Programming II
- MACM 200**:** Computing with Linear Algebra
- MACM 204**:** Computing with Calculus
- MATH 152:** Calculus II
- MATH 232*/240:** Linear Algebra
- MATH 252:** Vector Calculus
- MATH 260:** Intro to Ordinary Differential Equations
- STAT 270:** Intro to Probability and Statistics
- 6 UNITS:** Faculty of Science courses outside of MATH/STATS.

- ONE OF:
- MACM 201:** Discrete Mathematics I
 - CMPT 225:** Data Structures and Programming
 - ENSC 220:** Electric Circuits I
 - MSE 250:** Electric Circuits
 - PHYS 285:** Quantum I
 - STAT 285:** Intermediate Probability and Statistics

- 6 UNITS:**
- B-HUM:**
- 6 UNITS:**
- 3 UNITS:**
- LDW designated course:

ELECTIVES: 26 UNITS

- PHIL 345W:** Philosophy of Mathematics
- PHYS 413:** Advanced Mechanics
- STAT 380:** Introduction to Stochastic Processes

3rd YEAR

Upper Division Program Requirements: 30 UNITS

- MATH 316:** Numerical Analysis I
- MATH 320:** Intro to Analysis II
- MATH 322:** Complex Variables
- MATH 418:** Partial Differential Equations
- MATH 380W:** History of Mathematics
- MATH 381W:** Undergraduate Mathematics Seminar
- MATH 402W:** Operations Research
- MATH 480W:** The Art and Craft of Problem Solving
- PHIL 345W:** Philosophy of Mathematics

- ONE OF:
- MATH 426:** Probability
 - MATH 462:** Fluid Dynamics
 - MATH 467:** Dynamical Systems
 - MATH 475:** Mathematical Topics in Data Science

+3 UNITS: UD MATH/MACM*

- TWO OF:**
- MACM 401:** Intro to Computer Algebra
 - MACM 416:** Numerical Analysis II
 - MATH 309:** Continuous
 - MATH 338:** Advanced
 - MATH 343:** Applied Discrete Mathematics
 - MATH 345:** Graph
 - MATH 349:** Intro to Stochastic Models
 - MATH 410:** Linear Analysis
 - MATH 426:** Probability
 - MATH 462:** Special Topics
 - MATH 467:** Dynamical Systems
 - MATH 475:** Mathematical Topics in Data Science
 - MATH 495:** Selected Topics
 - PHIL 345W:** Philosophy of Mathematics
 - PHYS 413:** Advanced Mechanics
 - STAT 380:** Introduction to Stochastic Processes

*Up to 6 units can be from PHIL 345W, PHYS 413, or any UD STAT course (except for STAT 302, STAT 305, STAT 310, STAT 311, STAT 320, and STAT 403).

4th YEAR

