# Mathematical Physics Major Requirements (78)

## Foundation Courses

- ☐ MATH 144 - Calculus for the Mathematical and Physical Sciences I
- ☐ MATH 146 - Calculus for the Mathematical and Physical Sciences II
- ☐ PHYS 144 - Newtonian Mechanics
- ☐ PHYS 146 - Fluids and Waves

**3 units from:**
MATH 125 - Linear Algebra I
MATH 127 - Honors Linear Algebra I _____

## Senior Courses

- ☐ MA PH 251 - Differential Equations for Physics
- ☐ MA PH 343 - Classical Mechanics II
- ☐ MA PH 351 - Mathematical Methods for Physics I
- ☐ MA PH 364 - Group Theory in Physics (See Note 2)
- ☐ MA PH 451 - Mathematical Methods for Physics II
- ☐ MATH 214 - Calculus III
- ☐ PHYS 234 - Introductory Computational Physics
- ☐ PHYS 244 - Classical Mechanics I
- ☐ PHYS 271 - Introduction to Modern Physics
- ☐ PHYS 295 - Experimental Physics I
- ☐ PHYS 310 - Thermodynamics and Kinetic Theory
- ☐ PHYS 311 - Statistical Physics
- ☐ PHYS 362 - Optical Physics
- ☐ PHYS 372 - Quantum Mechanics A
- ☐ PHYS 381 - Electromagnetic Theory I
- ☐ PHYS 458 - Special and General Relativity
- ☐ PHYS 472 - Quantum Mechanics B
- ☐ PHYS 481 - Electromagnetic Theory II

**3 units from:**
MATH 225 - Linear Algebra II
MATH 227 - Honors Linear Algebra II _____

**6 units at the 300 and/or 400-level from:**
ASTRO (See Note 1)
GEOPH (See Note 1) _____
MA PH _____
PHYS

- ☐ COMM
- ☐ COMM
- ☐ IND
- ☐ BO___
- ☐ BO___
- ☐ BSBS
- ☐ BSFS
- ☐ BSSS
- ☐ LAB

**Notes:**

1. Students who take 3 units in a 300- or 400-level ASTRO or GEOPH course for this program requirement will also be satisfying the Breadth from Within the Faculty of Science requirement.
2. MA PH 364 may be offered every second year and must be taken in either Year 3 or Year 4.