

Restructured Mathematics and Physics, B.S. Degree.

List of new requirements:

Math 1041 (4 cr.) Calculus I
Math 1042 (4 cr.) Calculus II
Math 2043 (4 cr.) Calculus III
Math 3031 (3 cr.) Introduction to Probability Theory
Math 3045 (4 cr.) Differential Equations with linear algebra
Math 3051 (4 cr.) Theoretical Linear Algebra
Math 3098 (3 cr.) Modern algebra
Math 3141 (3 cr.) Advanced Calculus I
Math 3142 (3 cr.) Advanced Calculus II
Math 4051 (3 cr.) Intro to functions of a complex variable
Math 4096 (3 cr.) Senior Problem Solving Seminar or Phys 4796 Experimental Physics
Phys 1061 (4 cr.) Elementary Classical Physics I
Phys 1062 (4 cr.) Elementary Classical Physics II
Phys 2101 (3 cr.) Classical Mechanics
Phys 2501 (3 cr.) Computing for Scientists
Phys 2502 (4 cr.) Mathematical Physics
Phys 2701 (4 cr.) Introduction to Modern Physics
Phys 3101 (3 cr.) Analytical Mechanics
Phys 3301 (4 cr.) Electricity and Magnetism
Phys 3302 (3 cr.) Classical Electromagnetism
Phys 3701 (3 cr.) Introduction to Quantum Mechanics
Phys 4101 (3 cr.) Thermodynamics and Kinetic Theory

Total 76 credits

Comparison to old Math & Physics BS:

Eliminated

Math 2196 Basic Concepts of Math
Math 3043 Numerical Analysis
Phys 4302 Optics

Changed

Math 2101 to 3051 Theoretical Linear Algebra
Math 3041 to 3045 Differential Equations with linear algebra
Math 4096 to choice of Phys 4796 Experimental Physics or Math 4096 Senior Problem Solving Seminar
Choice of Math 4041 Partial Differential Equations or Phys 2502 Mathematical Physics changed to Phys 2502 Mathematical Physics

Previously 83-85 credits

Now 76 credits

Comparison to new Math BA:

Eliminated

Math 2196 Basic Concepts of Math
3 Math electives

Added

Math 3045 Differential Equations with linear algebra
Math 4051 Intro to functions of a complex variable
Phys 2101 Classical Mechanics
Phys 2501 Computing for Scientists
Phys 2502 Mathematical Physics
Phys 2701 Introduction to Modern Physics
Phys 3101 Analytical Mechanics
Phys 3301 Electricity and Magnetism
Phys 3302 Classical Electromagnetism
Phys 3701 Introduction to Quantum Mechanics
Phys 4101 Thermodynamics and Kinetic Theory

Changed

Math 2101 to 3051 Theoretical Linear Algebra
Math 3096 to 3098 Modern algebra
Math 3137 to 3141 Advanced Calculus I
Math 3138 to 3142 Advanced Calculus II
Math 4096 to choice of Phys 4796 Experimental Physics or Math 4096 Senior
Problem Solving Seminar

Comparison to new Math BS:

Eliminated

Math 3101 Topics in Modern Algebra
4 Math electives

Added

Phys 2101 Classical Mechanics
Phys 2501 Computing for Scientists
Phys 2502 Mathematical Physics
Phys 2701 Introduction to Modern Physics
Phys 3101 Analytical Mechanics
Phys 3301 Electricity and Magnetism
Phys 3302 Classical Electromagnetism
Phys 3701 Introduction to Quantum Mechanics
Phys 4101 Thermodynamics and Kinetic Theory

Changed

Math 4096 to choice of Phys 4796 Experimental Physics or Math 4096 Senior
Problem Solving Seminar

Comparison to Physics BA:

Eliminated

Phys 4302 Optics

1 Phys elective (one of 2501,3701,4301)

Added

Math 3031 Introduction to Probability Theory

Math 3045 Differential Equations with linear algebra

Math 3051 Theoretical Linear Algebra

Math 3098 Modern algebra

Math 3141 Advanced Calculus I

Math 3142 Advanced Calculus II

Math 4051 Intro to functions of a complex variable

Phys 2501 Computing for Scientists

P3701 Introduction to Quantum Mechanics

Changed

Phys 4796 to choice of Phys 4796 Experimental Physics or Math 4096 Senior
Problem Solving Seminar

Comparison to Physics BS:

Eliminated

Phys 4302 Optics

2 Phys electives (two of 4301,4701,4702)

2 Math electives

Added

Math 3031 Introduction to Probability Theory

Math 3051 Theoretical Linear Algebra

Math 3098 Modern algebra

Math 3141 Advanced Calculus I

Math 3142 Advanced Calculus II

Math 4051 Intro to functions of a complex variable

Phys 2501 Computing for Scientists

P3701 Introduction to Quantum Mechanics

Changed

Math 3041 to 3045 Differential Equations with linear algebra

Phys 4796 to choice of Phys 4796 Experimental Physics or Math 4096 Senior
Problem Solving Seminar