

New Mathematics and Computer Science, B.S. Degree.

List of requirements:

Math 1041 (4 cr.) Calculus I

Math 1042 (4 cr.) Calculus II

Math 2043 (4 cr.) Calculus III

Math 2101 (3 cr.) Linear Algebra

Math 3003 (3 cr.) Theory of Numbers or Math 3098 (3 cr.) Modern Algebra

Math 3031 (3 cr.) Introduction to Probability Theory

Math 3043 (4 cr.) Numerical Analysis I

Math 4096 (3 cr.) Senior Problem Solving or CIS 4398 (4 cr.) W version of Projects in C

Math Elective (3 cr.)

Math Elective (3 cr.)

CIS 1068 (4 cr.) Program Design and Abstraction

CIS 1166 (4 cr.) Mathematical Concepts in Computing I

CIS 2107 (4 cr.) Computer Systems and Low-Level Programming

CIS 2166 (4 cr.) Mathematical Concepts in Computing II

CIS 2168 (4 cr.) Data Structures

CIS 3207 (4 cr.) Introduction to Systems Programming and Operating Systems

CIS 3223 (4 cr.) Data Structures and Algorithms

CIS Elective (4 cr.)

CIS Elective (4 cr.)

Science I (4 cr.) Physics 1061 Elementary Classical Physics I or Chem 1031/1033

General Chemistry I with Laboratory

Science II (4 cr.) Physics 1062 Elementary Classical Physics II or Chem 1032/1034

General Chemistry II with Laboratory

Total 78-79 credits

Comparison to new Math BA:

Eliminated

Math 2196 Basic Concepts of Math
Math 3095 Introduction to Modern Algebra
1 Math elective

Added

Math 3003 Theory of Numbers or Math 3098 Modern Algebra
Math 3045 Differential Equations with linear algebra
Math 4051 Intro to functions of a complex variable
Math 3043 Numerical Analysis I
CIS 1068 Program Design and Abstraction
CIS 1166 Mathematical Concepts in Computing I
CIS 2107 Computer Systems and Low-Level Programming
CIS 2166 Mathematical Concepts in Computing II
CIS 2168 (4 cr) Data Structures
CIS 3207 Introduction to Systems Programming and Operating Systems
CIS 3223 Data Structures and Algorithms
CIS Elective
CIS Elective

Changed

Math 2101 to 2101 Linear Algebra or 3051 Theoretical Linear Algebra
Math 3137 to 3141 Advanced Calculus I
Math 3138 to 3142 Advanced Calculus II
Math 4096 to choice of CIS 4398 W version of Projects in C or Math 4096 Senior Problem Solving Seminar
Physics 1061 to Science I: Physics 1061 Elementary Classical Physics I or Chem 1031/1033 General Chemistry I with Laboratory
Physics 1062 to Science II: Physics 1062 Elementary Classical Physics II or Chem 1032/1034 General Chemistry II with Laboratory

Comparison to new Math BS:

Eliminated

Math 3041
Math 3098
Math 3101
Math 3141
Math 3142
1 Math elective

Added

Math 3003 Theory of Numbers or Math 3098 Modern Algebra
Math 3043 Numerical Analysis I
CIS 1166 Mathematical Concepts in Computing I

CIS 2107 Computer Systems and Low-Level Programming
CIS 2166 Mathematical Concepts in Computing II
CIS 2168 Data Structures
CIS 3207 Introduction to Systems Programming and Operating Systems
CIS 3223 Data Structures and Algorithms
CIS Elective

Changed

CIS 1053 or 1057 or 1068 to 1068 Program Design and Abstraction
Math 4096 to choice of CIS 4398 W version of Projects in C or Math 4096 Senior
Problem Solving Seminar
Physics 1061 to Science I: Physics 1061 Elementary Classical Physics I or Chem
1031/1033 General Chemistry I with Laboratory
Physics 1062 to Science II: Physics 1062 Elementary Classical Physics II or
Chem 1032/1034 General Chemistry II with Laboratory

Comparison to CS BA:

Eliminated

CIS 4307 Intro. to Distributed Systems & Networks
English 2596 or English 2696 or Stoc 1111 (Communications courses)

Added

Math 2043 Calculus III
Math 2101 Linear Algebra
Math 3003 Theory of Numbers or Math 3098 Modern Algebra
Math 3043 Numerical Analysis I
Math Elective
Math Elective
CIS Elective

Changed

Math 3031 or Phil 3211 or CIS 3211 or CIS 3242 to Math 3031 Introduction to Probability Theory
CIS 4298 Software Engineering to Math 4096 Senior Problem Solving or CIS 4398 W version of Projects in C
Any Science A to Science I: Physics 1061 Elementary Classical Physics I or Chem 1031/1033 General Chemistry I with Laboratory
Any Science B to Science II: Physics 1062 Elementary Classical Physics II or Chem 1032/1034 General Chemistry II with Laboratory

Comparison to CS BS:

Eliminated

CIS 4298 Software Engineering
CIS 4307 Intro. to Distributed Systems & Networks
CIS Elective

Added

Math 2043 Calculus III
Math 2101 Linear Algebra
Math 3003 Theory of Numbers or Math 3098 Modern Algebra
Math 3043 Numerical Analysis I
Math Elective
Math Elective

Changed

Math 3031 or Phil 3211 or CIS 3211 or CIS 3242 to Math 3031 Introduction to Probability Theory
CIS 4339 Software Engineering to Math 4096 Senior Problem Solving or CIS 4398 W version of Projects in C

Any Science A to Science I: Physics 1061 Elementary Classical Physics I or
Chem 1031/1033 General Chemistry I with Laboratory
Any Science B to Science II: Physics 1062 Elementary Classical Physics II or
Chem 1032/1034 General Chemistry II with Laboratory