New Minors in Computer Science
Available Fall 2018
(Update 7/3/2018)

MINOR IN CYBERSECURITY (19 – 20 hours)
Required courses (13 – 14 hours):
• One of:
  o CMPS 1013 Computer Concepts & Applications
  o CMPS 1023 Computing for Science Majors
  o CMPS 2084 Introduction to Computer Architecture
• CMPS 1044 Computer Science 1
• CMPS 1063 Data Structures & ADT
• CMPS 4663 Topics in Computer & Networking Security: Cybersecurity

Electives (6 hours)
• CMPS 4103 Introduction to Operating Systems
• CMPS 4663 Topics in Computer & Networking Security: Computer Forensics
• CMPS 4663 Topics in Computer & Networking Security: Network Security
• CMPS 4663 Topics in Computer & Networking Security: Software Security (Web applications)
• CMPS 4663 Topics in Computer & Networking Security: Cryptography (MATH course in Cryptography can be substituted.)

MINOR IN HIGH PERFORMANCE COMPUTING
Required Courses (23 hours) – Non-Math Majors
• CMPS 1044 Computer Science 1
• CMPS 1063 Data Structures & ADT
• MATH 1634 Calculus 1
• MATH 2753 Linear Algebra
• CMPS 4563 Topics in Parallel & Distributed Computing: GPU Programming
• CMPS 4563 Topics in Parallel & Distributed Computing: High Performance Computing
• CMPS 4563 Topics in Parallel & Distributed Computing

Required Courses (19-20 hours) – Math Majors
• CMPS 1044 Computer Science 1
• CMPS 1063 Data Structures & ADT
• 3 Credit hours CMPS (approved by Department Chair) (CMPS 2084 Introduction to Computer Architecture recommended)
• CMPS 4563 Topics in Parallel & Distributed Computing: GPU Programming
• CMPS 4563 Topics in Parallel & Distributed Computing: High Performance Computing
• CMPS 4563 Topics in Parallel & Distributed Computing

7/3/2018
MINOR IN COMPUTATIONAL SCIENCE – (19 – 22 hours)
Required Courses (7 hours)
- CMPS 1044  Computer Science 1
- CMPS 1023  Computing for Science Majors

Choose 6-8 hours from the following (2 courses)
- CMPS 1063  Data Structures and ADTs
- CMPS 2433  Discrete Structures & Analysis
- MATH 1634  Calculus 1
- MATH 1734  Calculus 2
- MATH 2534  Calculus 3
- MATH 2753  Linear Algebra
- PHYS 1624  Mechanics, Wave Motion & Heat
- PHYS 2644  Electricity & Magnetism & Optics
- GEOS 1134  Physical Geology

Applied Math
Choose 3 hours from the following (1 course)
Math majors applying all courses to the major may substitute an advanced course from another category. Prerequisites for all courses must be met.
- CMPS 3533  Numerical Analysis
- MATH 3533  Numerical Analysis
- MATH 3433  Differential Equations
- STAT 3573  Probability and Statistics

Choose 3-4 hours from the following (1 course)
- CMPS 3013  Advanced Data Structures & Algorithms
- CMPS 4233  Artificial Intelligence
- CMPS 4553  Topics in Computational Science
- MATH 4243  Operations Research
- MATH 3353  Discrete Dynamical Systems
- PHYS 3333  Thermodynamics
- PHYS 3343  Modern Physics I
- GEOS 3434  Structural Geology
- GEOS 3634  Fundamentals of Remote Sensing
- GEOS 4013  Data Analysis for the Geological Sciences