

New Minors in Computer Science Available Fall 2018

MINOR IN CYBERSECURITY

Required courses (13 – 14 hours):

One of:

CMPS 1013 Computer Concepts & Applications

- CMPS 1023 Computing for Science Majors
- 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 (prerequisite CMPS 2084)
- CMPS 4663 Computer Forensics
- CMPS 4663 Network Security
- CMPS 4663 Software security (Web applications)
- CMPS or MATH Special Topics: Cryptography/Encryption

MINOR IN HIGH PERFORMANCE COMPUTING

Required Courses (22 hours) – Non-Math Majors

- CMPS 1044 Computer Science 1
- CMPS 1063 Data Structures & ADT
- MATH 1634 Calculus 1
- MATH 2753 Linear Algebra
- CMPS 4563 GPU Programming
- CMPS 4563 High Performance Computing
- CMPS 4563 (Any different topic)

Required Courses (18 hours) –Math Majors

- CMPS 1044 Computer Science 1
- CMPS 1063 Data Structures & ADT
- CMPS XXX3 CMPS course approved by Department Chair
- CMPS 2084 Introduction to Computer Architecture (recommended)
- CMPS 4563 GPU Programming
- CMPS 4563 High Performance Computing
- CMPS 4563 (Any different topic)

MINOR IN COMPUTATIONAL SCIENCE

Required Courses (8 hours)

- CMPS 1044 Computer Science 1 (CMPS majors/minors substitute course from another category)
- CMPS 1023 Computing for Science Majors

Choose 8-9 hours from the following

- CMPS 1063 Data Structures and ADTs (*prereq: CMPS1044*)
- CMPS 2433 Discrete Structures/Analysis (*prereq: CMPS1063*)
- MATH 1634 Calculus 1 (*prereq: MATH 1433 or MATH 1534*)
- MATH 1734 Calculus 2 (*prereq: CMPS1063*)
- MATH 2534 Calculus 3 (*prereq: MATH 1734*)
- MATH 2753 Linear Algebra (*prereq: MATH 1634*)
- PHYS 1624 Mech, Wave, Motion and Heat (*coreq: MATH 1634*)
- PHYS 2644 Elec & Mag & Optic (*prereq: PHYS 1624 and coreq: MATH 1734*)
- GEOS 1134 Physical Geology (*prereq: none*)

Applied Math (Choose 3 hours from the following)

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 or MATH 3533 Numerical Analysis
- MATH 3433 Differential Equations
- STAT 3573 Probability and Statistics

Choose 3-4 advanced hours from the following

- CMPS 3013 Adv 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