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