

Computational Engineering Minor for engineering majors

<https://chme.nmsu.edu/academics/minors/computational-engineering/>



Description:

The minor in Computational Engineering is designed to provide students with a concentration in the broad spectrum of computations in engineering, including experience with an object-oriented programming language, a background in computational math techniques, and a number of courses that develop or apply engineering software across a broad base of engineering design problems.

Courses:

Required courses (9 credit hours):

- I E 311 Data Analysis (3)
 - or STAT 371 Statistics for Engineers and Scientists (3)
 - or CHME 311 Engineering Data Analysis (3)
- CHME 392 Numerical Methods in Engineering (3)
 - or M E 261 Mechanical Engineering Problem Solving (3)
- C S 151: C++ Programming (3)
 - or ICT 352 Software Programming for Information and Communication Technology (3)
 - or E T 262. Software Technology I (3)
 - or equivalent *pre-approved* object-oriented programming course (3)

Elective courses (select 9 credit hours):

- CHME 352L Simulation of Unit Operations (1)
- CHME 412 Process Dynamics and Control (3)
- CHME 452L Chemical Process Simulation (1)
- CHME 455L Chemical Plant Simulation (1)
- CHME 461/561 Computation of Material and Molecular Properties (3)
- MATH 280 Introduction to Linear Algebra (3)
- MATH 392 Introduction to Ordinary Differential Equations (3)
- CS 480 Linux System Administration (3)
 - or ICT 462. Remote Access Operating Systems with Linux/Unix (3)
 - or E T 463. Advanced Linus and Python Scripting (3)
- M E 460. Applied Finite Elements (3)
- I E 413. Engineering Operations Research I (3)
- I E 423. Engineering Operations Research II (3)
- I E 467. Discrete Event Simulation (3)