The Ohio State University
College of Arts and Sciences
Computational Physics Certificate, Type 1b (CMPPH1B-CR)

Advising Contacts:

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The Computational Physics certificate will clarify to students, grad schools, and employers that the student was engaged in a coherent set of undergraduate coursework to prepare the student to pursue computational physics as a career or to use it in graduate school.

Course pre-requisites: Note that there are significant pre-requisites for all required and elective courses, and that students who are outside of the physics, engineering physics, and astronomy majors should speak with an academic advisor before attempting to pursue the certificate.

The Computational Physics certificate requires a minimum of 12 credits drawn from Physics and other departments and distributed as follows:

Take all of the following Physics courses:

Physics 5680: Big Data Analytics in Physics (3 credits)
Physics 5810: Topics in Computational Physics (4 credits)

Students will take two courses in other departments from the following list:

CBE 5780: Molecular Dynamics Simulations (3 credits)
Math 3607: Beginning Scientific Computing (3 credits)
CSE 5361: Numerical Methods (3 credits)
STAT 3201: Introduction to Probability for Data Analytics (3 credits)
STAT 5730: Introduction to R for Data Science (2 credits)
ECE 5510: Introduction to Computational Electromagnetics (3 credits)
Math 5601: Essentials of Numerical Methods (3 credits)

Computational Physics Certificate Program Guidelines

Credit hours required: A minimum of 12.

Overlap with degree program: A student is permitted to overlap up to 50% of credit hours between other degree program (major, minor, other certificate, or general education) and the certificate program.

Grades required
- Minimum C- for a course to be counted on the certificate
- Minimum 2.00 cumulative GPA for all certificate course work.

Certificate approval: The certificate may be approved by the student's assigned academic advisor via the Degree Audit Report (DAR). If the certificate is not complete on the DAR, the student must consult with a Department of Physics advisor, either Lindsey Thaler or David Zach.

Filing the certificate program form: The certificate form must be filed at least by the time the graduation application is submitted to a college/school advisor.