COMPUTER-AIDED ENGINEERING UNDERGRADUATE ACADEMIC CERTIFICATE

This certificate is designed to provide undergraduate students with specialized knowledge and skills in computer-aided mechanical engineering, which is used in various industries and companies. The program is intended to prepare students for careers in computer-aided mechanical engineering or related fields and future graduate studies in this field.

All required coursework must be completed with a grade of C or better (O-10-a (https://catalog.uidaho.edu/general-requirements-academic-procedures/o-miscellaneous/))

Code	Title	Hours
Select 12 credits from the following:		12
ME 4500	Fundamentals of Computational Fluid Dynamics	
ME 4580	Finite Element Applications in Engineering	
ME 4800	Python Programming for Engineers	
ME 4900	Solid Modeling, Simulation and Manufacturing Capstone	
ENGR 4280	Numerical Methods	
CS 4701	Artificial Intelligence [1]	
or CS 4712	Machine Learning	
or CS 4731	Evolutionary Computation	
or CS 4771	Python for Machine Learning	
Total Hours		**12**

Courses to total 12 for this certificate

[1] A maximum of three credits from CS courses may be included.

1 - Ability to use computer-aided engineering design and analysis or related fields based on knowledge and skills gained from the certificate for mechanical engineering design.

2 - Develop and design engineering systems or components using modern engineering software tools or numerical/algorithmic methods while following real-world constraints.

3 - Communicate with clients, engineers, or the general public on topics related to computer-aided solutions in engineering, technologies, and/or related fields.