Engineering Science Minor

Description:

The Engineering Science Minor offers students the opportunity to learn and practice engineering design on the very first day of class. Students complete course work side by side with Engineering Science majors, creating opportunities for interdisciplinary teamwork around identifying and solving 21st century engineering grand challenges. The minor program culminates in a two-course minor capstone sequence; ENGR 199: Cohort Grand Challenge I and ENGR 299: Cohort Grand Challenge II. Finally, students must complete a one-credit selective experiential opportunity such as an internship, a research project or other approved professional enhancement activity. Complete overlap between major and minor courses and a focus on design, offers flexibility to students who wish to experiment with becoming an Engineering Science major.

Objectives of the Minor:

Upon completion of the Engineering Science Minor students will be able to:

* Collaborate on engineering teams to identify, formulate and solve complex engineering problems
* Communicate through the interpretation and creation of engineering drawings
* Employ the engineering design approach to solving real problems and communicate solutions to a range of audiences
* Examine public health, safety, welfare, global, cultural, social, environmental and economic factors in proposing engineering solutions
* Describe and identify the ethical and professional responsibilities of engineers in society

Requirements:

(‘C’ or better in the required courses for them to count toward minor completion)

Program Requirements (18 credits):

Foundation Requirement (3 credits):

Complete the following:

* ENGR 101 - Inquiring Minds Want to Design: An Introduction to Engineering   
  (3 credits)

Minor Requirements (14 credits):

* ENGR 102 - Engineering Graphics Communication (3 credits)
* ENGR 201 - Engineering Problem Solving (3 credits)
* PHYS 250 - Communication in STEM (3 credits)
* ENGR 203 - Engineering Professionalism and Pathways (3 credits)
* ENGR 199 - Cohort Grand Challenge I (1 credit)
* ENGR 299 - Cohort Grand Challenge II (1 credit)

Professional Enhancement Elective (1 credit):

Complete 1 credit of any one of the following:

* ENGR 397 - Independent Research (1 credit)
* ENGR 495 - Engineering Internship (1 credit)
* Or with department approval:
  + CCU Education Abroad
  + CCU International Internship
  + Co-operative Education
  + Service Learning
  + Graduate course
  + Professional certification
  + Professional course

Total Credits Required: 18 credits