

OFF-ROAD EQUIPMENT, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Description

This interdisciplinary minor complements several engineering, agricultural, and mining degrees, helping students understand some specific technological aspects of mobile equipment (from lawn tractors to large excavators). The minor would strengthen the program for students with machinery interests by exposing them to several of the technical aspects of off-road equipment such as electronics, power generation, power transmission, traction, ergonomics, and safety.

You Might Like This Program If...

- You are pursuing an engineering or engineering technology major and want to complement it with applications in applied machinery.
- You want to take application-focused classes with interactive labs and hands-on learning opportunities.
- You are interested in solving problems related to machinery.
- You are passionate about technology.

Program Requirements

Requirement	Credits
Requirements for the Minor	18-20

Requirements for the Minor

The minor in Off-Road Equipment requires 18-20 credits from the approved courses. Courses in the minor have prerequisites including calculus, physics, and, depending on the student's major, at least one engineering or engineering technology type course (e.g., BRS 221). These courses should be completed prior to entering the minor.

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/#59-10>). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
ASM 420	Principles of Off-Road Machines	3
Additional Courses		
<i>Additional Courses: Require a grade of C or better</i>		
ASM 320 or ME 431	Combustion Engines for Mobile Equipment Internal Combustion Engines	3
BE 461 or BRS 426	Design of Fluid Power Systems Safety and Health in Agriculture and Biorenewable Industries	3
Select 3 credits of the following:		3
ASM 310	Power Transmission in Agriculture	

BE 306	Machines for Agricultural and Biological Processing	
ME 360	Mechanical Design	
Select 3-4 credits of the following:		3-4
BE 305	Agricultural Measurements and Control Systems	
BRS 428	Electric Power and Instrumentation	
ME 345	Instrumentation, Measurements, and Statistics	
Select 3-4 credits of the following:		3-4
AGRO 423	Forage Crop Management	
AGRO 425	Field Crop Management	
ASM 424	Precision Agriculture Technology	
HORT 408	Landscape Plant Establishment and Maintenance	
TURF 425	Turfgrass Cultural Systems	

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy/>)

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