

# BIOLOGICAL SYSTEMS ENGINEERING: MACHINERY SYSTEMS ENGINEERING

## REQUIREMENTS

Code	Title	Credits
<b>Major Requirements</b>		
Common Requirements		53
Specialization & Technical Electives		43
Capstone		5
<b>Total Credits</b>		<b>101</b>

## COMMON REQUIREMENTS

See Major Requirements (<http://guide.wisc.edu/undergraduate/agricultural-life-sciences/biological-systems-engineering/biological-systems-engineering-bs/#requirementstext>).

## MACHINERY SYSTEMS ENGINEERING SPECIALIZATION

This is a named option that will appear on the student's transcript upon completion.

Code	Title	Credits
BSE 405	Intelligence and Automation in Agriculture	3
BSE/M E 475	Engineering Principles of Agricultural Machinery	3
BSE/M E 476	Engineering Principles of Off-Road Vehicles	3
E M A 202 or M E 240	Dynamics	3
M E 306 or E M A 303	Mechanics of Materials	3
E M A/M E 307	Mechanics of Materials Lab	1
M E 342	Design of Machine Elements	3
M E 310 or M E 311	Manufacturing: Polymer Processing and Engineering	3
M E 361	Thermodynamics	3
M E 363	Fluid Dynamics	3
AGRONOMY 100 or DY SCI/ AN SCI 101 or SOIL SCI 301	Principles and Practices in Crop Production	4
	Introduction to Animal Sciences	
	General Soil Science	
Complete one of the following BSE breadth courses:		2-3
BSE 301	Land Information Management	
BSE 364	Engineering Properties of Food and Biological Materials	

BSE/ ENVIR ST 367	Renewable Energy Systems
BSE/CIV ENGR/ SOIL SCI 372	On-Site Waste Water Treatment and Dispersal
BSE 460	Biorefining: Energy and Products from Renewable Resources
BSE 461	Food and Bioprocessing Operations
BSE 464	Heat and Mass Transfer in Biological Systems
BSE 472	Sediment and Bio-Nutrient Engineering and Management
BSE 473	Water Management Systems
BSE 571	Small Watershed Engineering

**Total Credits** **34-35**

## TECHNICAL ELECTIVES

See Major Requirements (<http://guide.wisc.edu/undergraduate/agricultural-life-sciences/biological-systems-engineering/biological-systems-engineering-bs/#requirementstext>).

## CAPSTONE

See Major Requirements (<http://guide.wisc.edu/undergraduate/agricultural-life-sciences/biological-systems-engineering/biological-systems-engineering-bs/#requirementstext>).