

BIOLOGICAL SYSTEMS ENGINEERING: MACHINERY SYSTEMS ENGINEERING

REQUIREMENTS

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

COMMON REQUIREMENTS

See Major Requirements (<https://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	Artificial Intelligence 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	Dynamics	3
M E 342	Design of Machine Elements	3
E M A 303	Mechanics of Materials	3
E M A/M E 307	Mechanics of Materials Lab	1
M E 310	Manufacturing: Polymer Processing and Engineering	3
or M E 311	Manufacturing: Metals and Automation	
M E 361	Thermodynamics	3
M E 363	Fluid Dynamics	3
Complete one course in Production Agriculture:		3-4
DY SCI/ AN SCI 101	Introduction to Animal Sciences	
BSE 305	Introduction to Precision Agriculture (Cannot double count to meet both BSE breadth requirement and Production Agriculture requirement.)	

PLANTSCI 110	Introduction to Plant Science and Technology	
SOIL SCI 301	General Soil Science	
Complete one of the following BSE breadth courses:		3-4
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	
BSE/M E 474	Fluid Power	
BSE/AN SCI 344	Digital Technologies for Animal Monitoring	
BSE 305	Introduction to Precision Agriculture (Cannot double count to meet both BSE breadth requirement and Production Agriculture requirement.)	
Total Credits		34-36

TECHNICAL ELECTIVES

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

CAPSTONE

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