



BIOSYSTEMS ENGINEERING CURRICULUM

Base Curriculum

Name: _____
 MSUID #: _____
 Net ID: _____
 Advisor: _____

SEMESTER	1	2	3	4	5	6	7	8				
F	CH 1213 Chemistry I	CH 1211 Chem I Lab	PSS 1313 Plant Science						MA 1713 Calculus I	EN 1103 En Comp I	ABE 1912 Comp Problem Solv in BS Eng	15
S	CH 1223 Chemistry II	CH 1221 Chem II Lab	PH 2213 Physics I	**Humanities Elective (3hr)					MA 1723 Calculus II	EN 1113 En Comp II	ABE 1922 Intro to Engr Des	18
F	ABE 3513 GPS & GIS in AG & Eng	ADS 1113 Animal Science	PH 2223 Physics II						EM 2413 Engr Mech I	MA 2733 Calculus III	Math/Stats Elective (MA/ ST 3XXX-4XXX)	18
S	PSS 3303 Soils	PSS 3301 Soils Lab	*Engineering Elective (3hr)						EM 2433 Engr Mech II	MA 2743 Calculus IV	ABE 4803 Biosys Simulation	16
F		*Engineering Elective (3hr)	ABE 3413 Bio Instrum I						EM 3213 Mech of Materials	MA 3253 Diff Equations	**Soc/Beh Elective (3hr)	15
S		ABE 3813 Biophy Prop of Mat	ABE 4423 Bio Instrum II						GE 3513 Tech Writing	*Restrictive Engr Elective (3hr)	ABE 3303 Trans in Biol Env	15
F	ABE Elective (3 hrs)	ABE Elective (3 hrs)	Laboratory or Seminar (1 hr)						Soc/Beh Elec (3hr)	*Restrictive Engr Elective (3hr)	ABE 4813 Princ Engr Design	16
S		**Humanities Elective (3hr)	**Fine Arts Elective (3h)						EM 3313 Fluid Mechanics	*Restrictive Engr Elective (3hr)	ABE 4833 Pract Engr Design	15

L - Lab Included
 F - Fall
 S - Spring

* Restricted elective course options are listed on the back
 ** Must be on University core curriculum

TOTAL 128

Engineering Electives:

ABE 2873 Land Surveying
ABE 4263 Soil and Water Management
ABE 4313 Biological Treatment of NPS Pollution
ABE 4483 Introduction to Remote Sensing Technology
ABE 4443 Spectroscopic Sensing in Biosys
ABE 4463 Intro to Imaging in Bio Eng Sys
ABE 4990 Geospatial Comput in Biosys Apps
ASE 4423 Introduction to Computational Fluid Dynamics
ASE 4713 Introduction to Unmanned Aircraft Systems
CE 2803 Environmental Issues
CE 3313 Construction Materials
CE 3413 Soil Mechanics
CE 3503 Water Resource Engineering
CE 3603 Structural Mechanics
CE 3823 Environmental Engineering
CE 4233 Control
CE 4243 Land Surveys
CE 4513 Engineering Hydrology
CE 4523 Open Channel Hydraulics
CE 4533 Computational Methods in Water Resources Engineering
CE 4563 Sedimentation Engineering
CE 4843 Environmental Engineering Chemistry
CE 4923 Structural Dynamics
CE 4963 Steel Structures I
CE 4983 Engineering of Wood Structures
CHE 3113 Chemical Engineering Thermodynamics I
CHE 3123 Chemical Engineering Thermodynamics II
CHE 4163 Nanotech Chem App
CHE 4173 Polymer Science & Technology
CHE 4613 Air Pollution Control Design
CHE 4673 Industrial Microbiology
CHE 4683 Fundamentals of Biofuels Production
CSE 3713 Introduction to Cybersecurity
CSE 4153 Data Communications and Computer Networks
CSE 4243 Information and Computer Security
CSE 4413 Principles of Computer Graphics
CSE 4423 Data Visualization
CSE 4503 Database Management Systems
CSE 4613 Bio-computing
CSE 4623 Computational Biology
CSE 4633 Artificial Intelligence
CSE 4643 AI Robotics
CSE 4683 Machine Learning and Soft Computing
CSE 4693 Introduction to Machine Learning
ECE 3283 Electronics
ECE 3443 Signals and Systems
ECE 4413 Digital Signal Processing
ECE 4423 Introduction to Remote Sensing Technologies
ECE 4783 Vision Based Guidance for MAVs
ECE 4813 Communications Theory
ECE 4823 Digital Communications
ECE 4943 Automation, Data Acquisition, and PLCs
IE 3323 Manufacturing Processes
IE 3913 Engineering Economy I
IE 4113 Human Factors Engineering
IE 4173 Occupational Safety Engineering
IE 4333 Production Control Systems I
IE 4353 Materials Handling
IE 4513 Engineering Administration
IE 4533 Project Management
IE 4553 Engineering Law and Ethics
IE 4573 Process Improvement Engineering
IE 4613 Engineering Statistics I
IE 4623 Engineering Statistics II
IE 4653 Industrial Quality Control
IE 4673 Reliability Engineering
IE 4683 Machine Learning with Industrial Engineering Applications
IE 4713 Operations Research I
IE 4743 Engineering Design Optimization
IE 4753 Systems Engineering and Analysis
IE 4923 Six Sigma Methods and Project
ME 3133 Engineering Analysis
ME 3103 Experimental Measurements and Techniques
ME 3163 Introduction to Mechanical Design with Finite Element Analysis
ME 3313 Heat Transfer
ME 3403 Materials for Mechanical Engineering Design
ME 3423 Mechanics of Machinery
ME 3513 Thermodynamics I
ME 3523 Thermodynamics II
ME 3613 System Dynamics

Engineering Electives Cont'd:

ME 4113 Material Selection in Design
ME 4123 Failure of Engineering Materials
ME 4133 Mechanical Metallurgy
ME 4193 Automotive Engineering
ME 4223 Mechanical Systems Analysis
ME 4233 Fundamentals of Finite Element Analysis
ME 4343 Intermediate Heat Transfer
ME 4353 Alternate Energy Sources
ME 4403 Machine Design
ME 4413 Casting and Joining
ME 4423 Machining and Forming
ME 4443 Mechanical Systems Design
ME 4453 Lubrication
ME 4543 Combustion Engines
ME 4623 Control Systems
ME 4643 Introduction to Vibrations and Controls
ME 4833 Intermediate Fluid Mechanics

Restricted Engr Electives:

ABE 4313 Biological Treatment of NPS Pollution
ABE 4483 Introduction to Remote Sensing Technology
ABE 4990 Geospatial Comput in Biosys Apps
CE 2803 Environmental Issues
CE 3503 Water Resource Engineering
CSE 4643 AI Robotics
ME 3133 Engineering Analysis
ME 3423 Mechanics of Machinery
ME 3613 System Dynamics
ME 4643 Introduction to Vibrations and Controls