



Student Name and ID Number

Estimated Graduation Term

I. Interpersonal Development Courses	Credits
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**Required Courses (3 credits)**

ENT2961 Teaming in the Enterprise (2) <b>and</b> ENT2962 Communication Contexts (1) <b>or</b> MGT2000 Team Dynamics and Decision Making (3)	
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**Required Communication Course - Select one (1-3 credits)**

CM3410 Technical Communication for Chemical Engrs (3)	
ED3510 Communicating Science (1)	
HU3120 Technical and Professional Communication (3)	

II. Business/Innovation Courses (3 credits)	Credits
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EC2001 Principles of Economics (3)	
EC3400 Economic Decision Analysis (3)	
ENT3953 Ideate, Innovate, Create! (1)	
ENT3954 Enterprise Market Principles (1) <b>or</b> MKT3000 Principles of Marketing (3)	
AF3001 USAF Leadership Studies I (3) <b>or</b> ENT3961 Enterprise Strategic Leadership (1) <b>or</b> MGT3100 Leadership Development (3)	
ENT3963 Explore, Develop, Execute! (1) <b>or</b> MGT3650/SS3650 Intellectual Property Management (3) <b>or</b> MGT3800 Entrepreneurship (3)	
ENT3964 Project Management (1) <b>or</b> OSM3200 Project Management (1) <b>or</b> OSM4300/SSE4300 Project Planning and Mgmt for Engrs (3)	
ENT4951 Business Plans & Budgeting/Enterprise (1)	
ENT4954 Global Competition (1)	

III. Required Project Work (6 credits)	Credits
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ENT3950 Enterprise Project Work III (1)	
ENT3960 Enterprise Project Work IV (1)	
ENT4900 Senior Enterprise Project Work I Capstone (2) <b>or</b> ENT4950 Enterprise Project Work V Capstone (2)	
ENT4910 Senior Enterprise Project Work II Capstone (2) <b>or</b> ENT4960 Enterprise Project Work VI Capstone (2)	

IV. Elective Courses (minimum 3 credits)	Credits
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ENT1960 Enterprise Orientation (1) <b>or</b> ENT2950 Enterprise Project Work I (1) <b>or</b> ENT2960 Enterprise Project Work II (1) <b>or</b> ENT3980 Pre-Capstone Enterprise Project (1) <b>or</b> ENT4961 Enterprise Project Work VII (1)	
CM4310 Chemical Process Safety/Environment (3) <b>or</b> ENT3956 Industrial Health and Safety (1)	
ENT3959 Fundamentals of Six Sigma I (1)	
ENT3958 Ethics in Engrg Design and Implementation (1) <b>or</b> CE3331 Professional Practice (2)	
ENT3966 Design for Manufacturing (1)	
ENT3967 Fundamentals of Six Sigma II (1)	
ENT3971 Seven Habits of Highly Effective People (1)	
ENT3983 Culture of Continuous Improvement (1)	
ENT3984 Lean Six Sigma Principles (3)	
ENT3979 Alternative Energy Technology and Processes (1) <b>or</b> CM3979 Alternative Energy Technology and Processes (1)	

Courses listed in this minor have the following prerequisites (shown in parenthesis). Concurrency is illustrated by the letter C: CM3410 (UN1015), CM4310 (CM3120 and CM3220), EC3400 (UN1015 and (UN1025 or Modern Language 3000- or higher)), ENT2962 (UN1025), ENT3958 [ENG1101 or (ENG1100 and ENG1001)], ENT3961 (ENT2961 and PSY2000 or SS2100 or SS2200 or SS2400 or SS2500 or SS2501 or SS2502 or SS2503 or SS2504 or SS2505 or SS2600 or SS2700), ENT3966 (ENG1102); ENT3979 (CH1112 or (CH1150 and CH1151) and (MA1160 or MA1161)); ENT4954 (ENT2961 and (EC2001 or PSY2000 or SS2100 or SS2200 or SS2400 or SS2500 or SS2501 or SS2502 or SS2503 or SS2504 or SS2505 or SS2600 or SS2700), ENT4961 (ENT3950 and ENT3960 and ENT4950 and

Student Signature

Date

Director, Enterprise Program

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Select 18 credits	Credits
<i>Select six of the following courses, with at least four from Social Science. At least 9 credits must be at the 3000-level or higher</i>	
SS 2210 Evolution of Cities (3)	
SS 2300 Environment & Society (3)	
SS 3110 Food Systems & Sustainability (3)	
SS 3240 Reading the Landscape (3)	
SS 3300 Environmental Problems (3)	
SS 3313 Sustainability Science (3)	
SS 3315 Populatin & Environment (3)	
SS 3410 World Resources & Development (3)	
SS 3510 History of American Technology (3)	
SS 3520 U.S. Environmental History (3)	
SS 3521 Energy in American History (3)	
SS/FW 3760 Human Dimensions of Natural Resources (3)	
SS 3800 Energy Policy and Technology (3)	
SS 3815 Energy & Society (3)	
SS 4000 Independent Study (1-3) <i>Readings or research on environmental issues; repeatable</i>	
SS 4200 Environmental Anthropology (3)	
SS 4325 Water Policy, History, & Governance (3)	
SS 4390 Seminar in Sustainability (3)	
SS 4540 Global Environmental History (3)	
SS 4700 Communities & Research (3)	
BL 3400 Principles of Ecology (4)	
EC 4640 Natural Resources Economics (3)	
EC 4650 Environmental Economics (3)	
FW 3110 Natural Resource Policy (3)	
FW 3410 Conservation Biology (3)	
<b>Total Credits Required = 18</b>	

Courses listed in this minor have the following prerequisites (shown in parenthesis). Concurrency is illustrated by the letter C: BL3400 (BL1020 or BL1040), EC4640 ((EC2001 or EC2002 or EC2003 or FW4080) and (UN1015 and UN1025)), EC4650 ((EC2001 or EC3002) and (UN1015 and UN1025)), SS3110 (UN1015 and UN1025), SS3240 (UN1015 and UN1025) and SS3520, SS3300 (UN1015 and UN1025), SS3313 (UN1015 and UN1025), SS3315 ((MA1030 and MA1031) or MA1032) and (UN1015 and UN1025)), SS3410 (UN1015 and UN1025), SS3510 (UN1015 and UN1025), SS3512 (UN1015 and UN1025), SS3520 (UN1015 and UN1025), SS3521 (UN1015 and UN1025), SS3630 (UN1015 and UN1025), SS/FW3760 (UN1015 and UN1025), SS3800 (UN1015 and UN1025), SS3815 (UN1015 and UN1025), SS4200 (SS2100, (UN1015 and UN1025), SS4325 (UN1015 and UN1025), UN4390 (UN1015 and UN1025), SS4540 (UN1015 and UN1025) and SS3520, SS4700 (UN1015 and UN1025).

Student Signature \_\_\_\_\_ Date \_\_\_\_\_

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Required Courses: 6 Credits	Credits
FW 3097 Forest Biomaterials (3) <i>Prereqs: none</i>	
ENG 4510 Sustainable Futures I (3) <i>May not be Freshman or Sophomore</i>	

Core Elective Course: Choose One	Credits
CEE 4233 Structural Timber Design (3) <i>Prereqs: CEE3202</i>	
EC 4640 Natural Resource Economics (3) <i>Prereqs: (EC2001 or EC3002 or FW4080) and UN1015 and (UN1025 or Modern Lang -3000 +)</i>	
FW 1035 Wood Anatomy and Properties (4) <i>Prereqs: none</i>	
SS 3313 Sustainability Science, Policy, and Assessment (3) <i>Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)</i>	

Elective Courses: Choose 9 credits, not already completed	Credits
CEE 4233 Structural Timber Design (3) <i>Prereqs: CEE3202</i>	
CEE 4506 Application of Sustainability Principles to Engineering Practice (3) <i>Prereqs: CEE3501 or CEE3503</i>	
CEE 4993 Engineering with Developing Communities (2) <i>Prereqs: (ENG2120 or MEEM2150) and (CEE3620)</i>	
CH 3540 Biophysical Chemistry (3) <i>Prereqs: (BL1020 or BL1040) and CH1122 or (CH1160 and CH1161) and MA2160 and PH2200</i>	
CH 3541 Biophysical Chemistry Laboratory (2) <i>Prereqs: (CH3540)</i>	
CH/CM 4610 Introduction to Polymer Science (3) <i>Prereqs: CH1122 or (CH1160 and CH1161)</i>	
CM 3979 Alternative Energy Technologies and Processes (1) <i>Prereqs: CH1112 or (CH1150 and CH1151) and (MA1160 or MA1161)</i>	
CM 4080 Undergraduate Research in Biofuels Engineering (1-3) <i>Prereqs: none</i>	
CMG 3250 Structural Analysis and Design (3) <i>Prereqs: CMG 2120 or MET 2120</i>	
CMG 4800 Sustainable Construction (3) <i>Must have Junior or Senior standing</i>	
EC/GE 4620 Energy Economics (3) <i>Prereqs: EC2001 and UN1015 and (UN1025 or Modern Language - 3000 level or higher)</i>	
EC 4640 Natural Resource Economics (3) <i>Prereqs: (EC2001 or EC3002 or FW4080) and UN1015 and (UN1025 or Modern Lang -3000 +)</i>	
EC 4650 Environmental Economics (3) <i>Prereqs: (EC2001 or EC3002) and UN1015 and (UN1025 or Modern Language - 3000 Level +)</i>	
ENG 3505 Modeling Laboratory for Sustainable Systems (1) <i>Prereqs: ENG1505 and Eng2505 and ENG4510(c)</i>	
ENG 4505 Systems Analysis, Modeling, and Design (3) <i>Prereqs: ENG3505 and ENG4510</i>	
FA 2190 Art and Nature (3) <i>Prereqs: none</i>	
FW 3010 Practice of Silviculture (4) <i>Prereqs: FW 2010 and FW2051</i>	
FW 3098 Adding Value to Biomaterials (2) <i>Prereqs: none</i>	
FW 3110 Natural Resource Policy (3) <i>Prereqs: none</i>	
FW 3116 Ethnobotany (3) <i>Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)</i>	
FW 3150 Timber Harvesting (2) <i>Prereqs: FW2051</i>	
FW 3765 Maple Syrup Management and Culture (1) <i>Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)</i>	
FW 4080 Forest Economics & Finance (3) <i>Prereqs: none</i>	
MSE 4777 Distributed Additive Manufacturing Open-Source 3-D Printing (3) <i>Must be enrolled in the College of Engineering; Must have Junior or Senior standing</i>	
SS 3300 Environmental Problems (3) <i>Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)</i>	
SS 3313 Sustainability Science, Policy, and Assessment (3) <i>Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)</i>	
SS 3630 Environmental Policy and Politics (3) <i>Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)</i>	
SS 4390 Seminar in Sustainability Issues (3) <i>Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)</i>	
<b>Total Credits Required = 18</b>	

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Required Fluid and Heat Transfer Courses (Select one set of courses, 4 - 8 credits)	Credits
CM 3110 Transport/Unit Operations I (3) <i>Prereqs: CM2120 and (MA3520 or MA3521 or MA3530 or MA3560) and MA3160 and PH2100</i> and CM 3120 Transport/Unit Operations II (3) <i>Prereq: CM3110 and CM2120 and (MA3520 or MA3521 or MA3530 or MA3560)</i>	
MEEM 3201 Intro Fluid Mech & Heat Trans (4) <i>Prereqs: MEEM2201 and MEEM2911(C) and MA3520 or MA3521 or MA3530 or MA3560</i>	
MET 3400 Applied Fluid Mechanics (3) <i>Prereqs: MET2130</i> and MET 4300 Applied Heat Transfer (3) <i>Prereqs: MET3600 or (MET3700 and MET4360(C))</i>	
MSE 3100 Materials Processing I (4) <i>Prereqs: MSE2100 and MA2160</i> and MSE 3110 Material Processing II (4) <i>Prereqs: MSE2110 and MSE3100 and (MA3520 or MA3521 or MA3530 or MA3560)</i>	

Required Circuits Course (Select one course, 3 credits)	Credits
EE 2111 Electric Circuits I (3) <i>Prereqs: EE1110 and MA2160</i>	
EE 3010 Circuits and Instrumentation (3) <i>Prereqs: none</i>	
EET 3131 Instrumentation (3) <i>Prereqs: EET1411 or EET2220 or PH2230 or EE2110 or EE3010</i>	

Required Energy Technology Courses (Select 6 or more credits)	Credits
CM/ENT 3979 Alternative Energy Tech and Processes (1) <i>Prereqs: (CH1112 or (CH1150 and CH1151)) and (MA1160 or MA1161)</i>	
EC 4620 Energy Economics (3) <i>Prereqs: EC2001 and UN1015 and (UN1025 or Modern Language, 3000-level or higher)</i>	
EE 3120 Electric Energy Systems (3) <i>Prereqs: EE2110 or EE3010 or (EE2111 and EE2112(C))</i>	
EET/MET 4380 Alternative Energy Applications (3) <i>Prereqs: EET2233</i>	
ENG 4510 Sustainable Futures I (3) <i>Prereqs: none</i>	
ENG 5520 Sustainable Futures II (3) <i>Prereqs: none</i>	
MEEM 4200 Principles of Energy Conversion (3) <i>Prereqs: MEEM 4201(C) or MEEM3230(C) or CM3230 or ENG3200 or MY3100</i>	
MEEM 4260 Fuel Cell Technology (3) <i>Prereqs: MEEM3230 or CM3110 or MEEM 3201</i> or CM/ENT 3974 Fuel Cell Fundamentals (1) <i>Prereqs: CH1112 or (CH1150 and CH1151)</i>	
SS 3800 Energy Technology & Policy (3) <i>Prereqs: UN1015 and (UN1025 or Modern Language, 3000-level or higher)</i>	

Elective Courses (Select Remaining credits, 0 - 5)	Credits
CM 4080 Undergrad Research in Biofuels Engineering (1-6) <i>Prereqs: none</i>	
EE 4219 Intro to Electric Machinery and Drives (3) <i>Prereqs: EE2110 or EE2112 or EE3010</i>	
EE 4227 Power Electronics (3) <i>Prereqs: EE3120 and (EE3130(C) or EE3131)</i>	
EE 4295 Introduction to Propulsion Systems for Hybrid Electric Vehicles (3) <i>Prereqs: MEEM2200 or ENG3200</i>	
EE 4296 Experimental Studies in Hybrid Electric Vehicles (3) <i>Prereqs: none</i>	
EET 3390 Power Systems (3) <i>Prereqs: EET2233</i>	
ENT 29xx Enterprise Project Work* (up to 2 credits) <i>Prereqs: none</i>	
ENT 39xx Enterprise Project Work* (up to 4 credits) <i>Prereqs: none</i>	
ENT 49xx Enterprise Project Work* (up to 4 credits) <i>Prereqs: variable</i>	
MEEM 4220 Internal Combustion Engines I (3) <i>Prereqs: MEEM 3210 or MEEM4201(C)</i>	
MEEM 4240 Combustion & Air Pollution (3) <i>Prereqs: MEEM2200 or MEEM2201</i>	
MET 4390 Internal Combustion Engines (3) <i>Prereqs: MET3600 or MET4300 or (MET3700 and MET4360(C))</i>	
MSE 4410 Science of Ceramic Materials (3) <i>Prereqs: MSE2100</i>	
XX xxxx Undergraduate Research* (1-6) <i>Prereqs: none</i>	
<b>Total Credits Required = 18</b>	

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\*Topic must be approved by academic advisor