

Updated: May 2011

**ACCT-210 Financial Accounting**

4 credit hours

Minimum Class Standing: SO I

**ACCT-212 Managerial Accounting**

4 credit hours

Minimum Class Standing: SO

**ACCT-313 Cost Accounting**

4 credit hours

Prerequisite: ACCT-212

Minimum Class Standing: JR

**ACCT-411 Intermediate Accounting**

4 credit hours

Prerequisite: ACCT-210, ACCT-212

Corequisites: None

Minimum Class Standing: JR

**ACCT-518 Accounting /Financial Concepts**

4 credit hours

Prerequisites: Graduate Admission

**ACCT-639 Managerial Accounting**

4 credit hours

Prerequisites: ACCT-212 or ACCT-315 or ACCT-518

**ART-305 Art: Styles and Aesthetics**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: None

**BINF-310 Introduction to Bioinformatics**

4 credit hours

Prerequisites: BIOL-241, BIOL-242, CS-102

Minimum Class Standing: None

**BINF-490 Bioinformatics Capstone**

4 credit hours

Prerequisites: BINF-310, CHEM-351, CHEM-352, CS-465

Minimum Class Standing: SR

**BIOL-141 General Biology I**

3 credit hours

Corequisite: BIOL-142

Minimum Class Standing: FRI

**BIOL-142 General Biology Lab**

1 credit hour

Corequisite: BIOL-141

Minimum Class Standing: FRI

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**BIOL-241 Human Biology**

3 credit hours

Prerequisites: CHEM-135/136 or CHEM-137/136

Corequisite: BIOL-242

Minimum Class Standing: FR/II

**BIOL-242 Human Biology Lab**

1 credit hour

Prerequisites: CHEM-135/136 or CHEM-137/136

Corequisite: BIOL-241

Minimum Class Standing: FR/II

**BIOL-341 Anatomy & Physiology**

4 credit hours

Prerequisite: BIOL-241/242 or MECH-350

Minimum Class Standing: SO/JR

**BIOL-441 Molecular and Cellular Biology**

4 credit hours

Prerequisites: BIOL-241, BIOL-242

Minimum Class Standing: JRI

**BIOL-441 Molecular and Cellular Biology Lab**

2 credit hours

Prerequisites: BIOL-241, BIOL-242

Minimum Class Standing: JRI

**BIOL-481 Genetics**

4 credit hours

Prerequisites: BIOL-241, BIOL-242

Minimum Class Standing: JRI

**BUSN-104 Introduction to Business**

4 credit hours

Minimum Class Standing: FR

**BUSN-226 Business Statistics**

4 credit hours

Prerequisites: MATH-100 or MATH-101

Minimum Class Standing: None

**BUSN-253 Business Law**

4 credit hours

Prerequisites: None

Corequisites: None

Minimum Class Standing: None

**BUSN-260 Quantitative Methods in Business**

4 credit hours

Prerequisites: MATH-100 or MATH-101

Minimum Class Standing: SO

Updated: May 2011

**BUSN-372 Innovation and New Ventures**

4 credit hours

Prerequisite: None

Minimum Class Standing: SO

**BUSN-373 Intrapreneurship & Innovation Devp**

4 credit hours

Prerequisites: None

Minimum Class Standing: JR

**BUSN-451 International Business**

4 credit hours

Prerequisite: None

Minimum Class Standing: JR

**BUSN-659 International Business**

4 credit hours

Prerequisites: Second Year Standing or Instructor permission

**BUSN-689 Organizational Behavior**

4 credit hours

Prerequisites: MGMT-639

**BUSN-779 MBA Capstone: Innovation and New Ventures**

4 credit hours

Prerequisites: MGMT-659 and completion of 30 total hours of graduate work

**CE-210 Digital Systems I**

4 credit hours

Prerequisite: CS-101

Minimum Class Standing: N/A

**CE-320 Microcomputers I**

4 credit hours

Prerequisites: CS-101, CE-210

Minimum Class Standing: JR

**CE-412 Digital Systems II**

4 credit hours

Prerequisites: CE-210, EE-320, EE-321

Minimum Class Standing: JR

**CE-420 Microcomputers II**

4 credit hours

Prerequisites: CE-320, EE-320, EE-321

Minimum Class Standing: N/A

**CE-422 Computer Architecture and Organization**

4 credit hours

Prerequisite: CE-320

Minimum Class Standing: SR

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**CE-424 VLSI Design**

4 credit hours

Prerequisites: CE-320

Minimum Class Standing: JR

**CE-426 Real-Time Embedded Systems**

4 credit hours

Prerequisites: CE-320

Minimum Class Standing: JR

**CE-430 Logic Systems**

4 credit hours

Prerequisites: CE-320, EE-210, EE-211

Minimum Class Standing: JR

**CE-442 Introduction to Mobile Robotics**

4 credit hours

Prerequisites: CE-320

Minimum Class Standing: SR Standing in either CE, CS, or EE

**CE-470 Haptic Systems**

4 credit hours

Prerequisites: CS-101

Minimum Class Standing: SR

**CE-480 Computer Networks**

4 credit hours

Prerequisites: CE-320, MATH-408

Minimum Class Standing: SR

**CE-482 Distributed Embedded Systems**

4 credit hours

Prerequisites: CE-320

Minimum Class Standing: SR Standing in either CE, CS, or EE

**CE-490 Senior Computer Engineering Design Project**

4 credit hours

Prerequisite: None

Minimum Class Standing: SR Thesis Standing in CE

**CE-612 Digital Systems Design**

4 credit hours

Prerequisites: Graduate standing in CE or EE, or instructor's approval.

Minimum Class Standing: Graduate

**CE-620 Microcomputer Systems**

4 credit hours

Prerequisites: Graduate standing in CE or EE, or instructor's approval.

Minimum Class Standing: Graduate

**CE-622 Computer Architecture and Organization**

4 credit hours

Prerequisites: Graduate standing in CE or EE, or instructor's approval.

Minimum Class Standing: Graduate

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**CE-624 VLSI Design**

4 credit hours

Prerequisites: Graduate standing in CE or EE, or instructor's approval.  
Minimum Class Standing: Graduate

**CE-626 Real-Time Embedded Systems**

4 credit hours

Prerequisites: Graduate standing in CE or EE, or instructor's approval.  
Minimum Class Standing: Graduate

**CE-630 Logic Systems**

4 credit hours

Prerequisites: Graduate standing in CE or EE, or instructor's approval.  
Minimum Class Standing: Graduate

**CE-642 Mobile Robotics**

4 credit hours

Prerequisites: Graduate standing in CE or EE, or instructor's approval.  
Minimum Class Standing: Graduate

**CE-670 Haptic Systems**

4 credit hours

Prerequisites: Graduate standing in CE or EE, or instructor's approval.  
Minimum Class Standing: Graduate

**CE-680 Computer Networks**

4 credit hours

Prerequisites: Graduate standing in CE or EE, or instructor's approval.  
Minimum Class Standing: Graduate

**CE-682 Distributed Embedded Systems**

4 credit hours

Prerequisites: Graduate standing in CE or EE, or instructor's approval.  
Minimum Class Standing: Graduate

**CE-695 Graduate Research in Computer Engineering** 1-8 credit hours

Prerequisites: Graduate standing in CE  
Minimum Class Standing: Graduate

**CHEM-135 Principles of Chemistry**

3 credit hours

Corequisite: CHEM-136  
Minimum Class Standing: FRI

**CHEM-136 Principles of Chemistry Laboratory**

1 credit hour

Corequisite: CHEM-135  
Minimum Class Standing: FRI

**CHEM-137 General Chemistry I**

3 credit hours

Corequisites: CHEM-136  
Minimum Class Standing: FRI

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**CHEM-145 Industrial Organic Chemistry**

3 credit hours

Corequisite: CHEM-146

Minimum Class Standing: FRII

**CHEM-146 Industrial Organic Chemistry Laboratory**

Corequisite: CHEM-145

1 credit hour

Minimum Class Standing: FRII

**CHEM-171 Environmental & Safety Policies**

4 credit hours

Minimum Class Standing: FRI

**CHEM-221 Materials Characterization**

4 credit hours

Prerequisites: CHEM-135 or CHEM-137 and CHEM-145 or CHEM-345 Minimum Class Standing: SOI

**CHEM-223 Introduction to Polymer Science**

4 credit hours

Prerequisites: CHEM-135 or CHEM-137

Minimum Class Standing: SOI

**CHEM-225 Adhesive Technology and Applications**

4 credit hours

Prerequisites: CHEM-145 /146, or CHEM-345/346

Minimum Class Standing: SOI

**CHEM-227 Industrial Painting Technology**

4 credit hours

Prerequisites: CHEM-135 or CHEM-137, CHEM-145 or CHEM-345 Minimum Class Standing: SOI

**CHEM-237 General Chemistry II**

3 credit hours

Prerequisites: CHEM-135 or CHEM-137

Corequisite: CHEM-238

Minimum Class Standing: FR2

**CHEM-238 General Chemistry II Laboratory**

1 credit hour

Prerequisites: CHEM-135 or CHEM-137

Corequisite: CHEM-237

Minimum Class Standing: FRII

**CHEM-245 Applied Chemistry for Engineers**

4 credit hours

Prerequisite: Prerequisite: CHEM-135, or CHEM-137, or CHEM-137X

**CHEM-247: Survey of Organic Chemistry**

4 credit hours

Prerequisites: CHEM 135 or CHEM 137

Minimum Class Standing: FRII

Updated: May 2011

**CHEM-251 Environmental Ecology**

4 credit hours

Prerequisite: CHEM-135 or CHEM-137

Minimum Class Standing: SOI

**CHEM-271 Handling Hazardous Material**

4 credit hours

Prerequisites: CHEM-135 and CHEM-136, or CHEM-137 and CHEM-136, CHEM-145 and CHEM-146, or CHEM-345 and CHEM-346

Minimum Class Standing: SOI

**CHEM-337 Chemistry of Fuel Cells**

3 credit hours

Prerequisites: CHEM-237, CHEM-238

Corequisite: CHEM-338

Minimum Class Standing: SO

**CHEM-338 Chemistry of Fuel Cells Lab**

1 credit hour

Prerequisites: CHEM-237, CHEM 238

Corequisite: CHEM-337

Minimum Class Standing: SO

**CHEM-345 Organic Chemistry I**

4 credit hours

Prerequisite: CHEM-237

Minimum Class Standing: SOI

**CHEM-346 Organic Chemistry I Laboratory**

2 credit hours

Prerequisites: CHEM-237, CHEM-238

Corequisite: CHEM-345

Minimum Class Standing: SOI

**CHEM-347 Organic Chemistry II**

4 credit hours

Prerequisite: CHEM-345

Minimum Class Standing: SOII

**CHEM-348 Organic Chemistry II Laboratory**

2 credit hours

Prerequisites: CHEM-345, CHEM-346

Corequisite: CHEM-347

Minimum Class Standing: SOII

**CHEM-351 Biochemistry**

4 credit hours

Prerequisites: CHEM-347, CHEM-348

Corequisite: CHEM-352

Minimum Class Standing: SOI

Updated: May 2011

**CHEM-352 Biochemistry I Laboratory**

2 credit hours

Prerequisites: CHEM-345, CHEM-346

Corequisite: CHEM-351

Minimum Class Standing: SOI

**CHEM-361 Physical Chemistry I**

4 credit hours

Prerequisites: CHEM-237, CHEM-238, MATH-102 or MATH-102H, PHYS-224, PHYS-225

Corequisite: CHEM-362

Minimum Class Standing: JRI

**CHEM-362 Physical Chemistry I Laboratory**

2 credit hours

Corequisite: CHEM-361

Minimum Class Standing: JRI

**CHEM-363 Physical Chemistry II**

4 credit hours

Prerequisites: CHEM-237, MATH-203 OR MATH-203H, PHYS-224, PHYS-225, CHEM-361 or permission of Instructor

Corequisite: CHEM-364

Minimum Class Standing: JR II

**CHEM-364 Physical Chemistry II Laboratory**

2 credit hours

Corequisite: CHEM-363

Minimum Class Standing: JR II

**CHEM-371 Introductory Environmental Chemistry**

3 credit hours

Prerequisites: CHEM-135 or CHEM-137, CHEM-145 or CHEM-345 Corequisite: CHEM-372

Minimum Class Standing: SOI

**CHEM-372 Introductory Environmental Chemistry Lab**

1 credit hour

Prerequisites: CHEM-135 or CHEM-137, CHEM-145 or CHEM-345 Corequisite: CHEM-371

Minimum Class Standing: SOI

**CHEM-373 Analytical Chemistry**

4 credit hours

Prerequisites: CHEM-237, CHEM-238, CHEM-345, CHEM-346

Corequisite: CHEM-374

Minimum Class Standing: JR II

**CHEM-374 Analytical Chemistry Laboratory**

2 credit hours

Prerequisites: CHEM-237, CHEM-238, CHEM-345, CHEM-346

Corequisite: CHEM-373

Minimum Class Standing: JR II

Updated: May 2011

**CHEM-437 Advanced Inorganic Chemistry**

4 credit hours

Prerequisite: CHEM-237, CHEM-345

Corequisite: CHEM-438

Minimum Class Standing: JRI

**CHEM-438 Advanced Inorganic Chemistry Laboratory**

2 credit hours

Prerequisites: CHEM-238, CHEM-346

Corequisite: CHEM-437

Minimum Class Standing: JRI

**CHEM-451 Biochemistry II**

4 credit hours

Prerequisites: CHEM-351/352

Corequisite: CHEM-452

Minimum Class Standing: JR II

**CHEM-452 Biochemistry II Lab**

2 credit hours

Prerequisite: CHEM-351, CHEM-352

Corequisite: CHEM-451

Minimum Class Standing: JR II

**CHEM-461 Colloid Science**

3 credit hours

Prerequisite: CHEM-361 or CHEM-237/MECH-320 or CHEM-237/PHYS-452

Corequisite: CHEM-462

Minimum Class Standing: JRI

**CHEM-462 Colloid Science Lab**

1 credit hour

Prerequisites: CHEM-361 or CHEM-237/MECH-320 or CHEM-237/PHYS-452

Corequisite: CHEM-461

Minimum Class Standing: JRI

**CHEM-475 Environmental Organic Chemistry**

4 credit hours

Prerequisites: CHEM-351/352, CHEM-363/364, CHEM-373/374

Minimum Class Standing: SRI

**CHEM-476 Environmental Organic Chemistry Laboratory**

Prerequisites: CHEM-363, CHEM-364

2 credit hours

Corequisite: CHEM-475

Minimum Class Standing: SRI

**CHEM-477 Advanced Organic Chemistry**

4 credit hours

Prerequisites: CHEM-347/348

Corequisite: CHEM-478

Minimum Class Standing: SRI

Updated: May 2011

**CHEM-478 Advanced Organic Chemistry Lab**

2 credit hours

Prerequisites: CHEM-347/348

Corequisite: CHEM-477

Minimum Class Standing: SRI

**CHEM-491 Special Topics in Chemistry**

4 credit hours

Prerequisites: Permission of instructor

Minimum Class Standing: JRI

**CHEM-494 Senior Research/Seminar I**

2 credit hours

Prerequisites: None

Minimum Class Standing: JR II

**CHEM-496 Senior Research/Seminar II**

2 credit hours

Prerequisite: CHEM-494

Minimum Class Standing: SR II

**CHEM-499 Special Projects and Independent Study**

4 Credits

Prerequisite: Permission of advising faculty and Chemistry Discipline Chair prior to enrollment

Minimum Class Standing: JRI

**CHEM-561 Physical Chemistry of Energy Conversion**

4 credit hours

Prerequisite: CHEM-237 or equivalent and enrollment in graduate engineering program, or permission on instructor

Minimum Class Standing: JRI

**CHEM-635 Multi-component Polymer Systems**

4 credit hours

Prerequisites: Undergraduate organic chemistry, thermodynamics, polymer science, rheology or Instructor permission

**CHME-200 Mass & Energy Balance**

4 credit hours

Prerequisites: CHEM-237, MATH-102 or MATH-102H, MECH-320

Minimum Class Standing: SO

**CHME-300 Unit Operations**

3 credit hours

Prerequisites: CHME-200, MATH-203 (or 203H), CHEM-347, MECH-320, MECH-322

Corequisite: CHME-301, MECH-420

Minimum Class Standing: JR

**CHME-301 Unit Operations Laboratory**

1 credit hour

Prerequisites: CHME-200, MATH-203 (or 203H), CHEM-347, MECH-320, MECH-322

Corequisite: CHME-300, MECH-420

Minimum Class Standing: JR

Updated: May 2011

**CHME-400 Mass Transfer Operations**

3 credit hours

Prerequisites: CHEM-361, CHME-300, MECH-420

Corequisite: CHME-401

Minimum Class Standing: SR

**CHME-401 Mass Transfer Operations Laboratory**

1 credit hour

Prerequisites: CHEM-361, CHME-300, MECH-420

Corequisite: CHME-400

Minimum Class Standing: SR

**CHME-410 Chemical Engineering Thermodynamics**

4 credit hours

Prerequisites: CHEM-361, MECH-320

Corequisite: None

Minimum Class Standing: JR

**CHME-420 Applied Transport Phenomena**

3 credit hours

Prerequisites: CHME-400, MECH-420

Corequisite: CHME-421

Minimum Class Standing: SR

**CHME-421 Applied Transport Phenomena**

1 credit hour

Prerequisites: CHME-400, MECH-420

Corequisite: CHME-420

Minimum Class Standing: SR

**CHME-435 Process Control**

3 credit hours

Prerequisites: CHME-400

Corequisite: CHME-436

Minimum Class Standing: SR

**CHME-436 Process Control Laboratory**

1 credit hour

Prerequisites: CHME-400

Corequisite: CHME-435

Minimum Class Standing: SR

**CHME-450 Reactor Design**

3 credit hours

Prerequisites: CHME-400

Corequisite: CHME-451

Minimum Class Standing: SR

**CHME-451 Reactor Design Laboratory**

3 credit hours

Prerequisites: CHME-400

Corequisite: CHME-450

Minimum Class Standing: SR

Updated: May 2011

**CHME-480 Senior Chemical Engr Design Capstone**

4 credit hours

Prerequisites: CHME-450

Corequisite: None

Minimum Class Standing: SR

**CHN-101 Beginning Chinese I**

4 credit hours

Prerequisites: None

Minimum Class Standing: None

**CHN-102 Beginning Chinese II**

4 credit hours

Prerequisites: CHN-101

Minimum Class Standing: None

**COMM-101 Written & Oral Communication I**

4 credit hours

Minimum Class Standing: FR

**COMM-301 Written & Oral Communication II**

4 credit hours

Prerequisites: COMM-101

Minimum Class Standing: JR

**COMM-311 Rhetorical Principles of Persuasion**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**COMM-313 Rhetorical Principles of Public Speaking**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**COMM-435 Written & Oral Communication for Overseas Students**

4 credit hours

Minimum Class Standing: None

**CS-101 Computing and Algorithms I**

4 credit hours

Minimum Class Standing: None

**CS-102 Computing and Algorithms II**

4 credit hours

Prerequisite: CS-101

Minimum Class Standing: None

**CS-202 System Programming Concepts**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: SO

Updated: May 2011

**CS-203 Computing & Algorithms III**

4 credit hours

Prerequisites: CS-102, CS-211

Minimum Class Standing: SO

**CS-211 Discrete Mathematics**

4 credit hours

Corequisite: MATH-101

Minimum Class Standing: None

**CS-300 The Computing Professional**

4 credit hours

Prerequisites: CE-210 or CS-102, COMM-101

Minimum Class Standing: SO

**CS-312 Theory of Computation**

4 credit hours

Prerequisites: CS-102, CS-211

Minimum Class Standing: SO

**CS-320 Computer Graphics**

4 credit hours

Prerequisites: CS-102, MATH-101

Minimum Class Standing: SO

**CS-331 Programming Language Design**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: JR

**CS-341 Web Software Tools**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: None

**CS-385 Introduction to Game Design**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: None

**CS-415 Cryptography**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: JR

**CS-420 Multimedia Design**

4 credit hours

Prerequisite: CS-320

Minimum Class Standing: None

**CS-425 Parallel Models and Algorithms**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: JR

Updated: May 2011

**CS-431 Compiler Design and Construction I**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: JR

**CS-435 Functional Languages and Parsing**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: None

**CS-451 Operating Systems**

4 credit hours

Prerequisites: CS-102

Minimum Class Standing: None

**CS-455 Computer and Network Security**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: JR

**CS-458 Computer and Network Forensics**

4 credit hours

Prerequisite: CS-102

Corequisite: CS-202

Minimum Class Standing: None

**CS-459 Secure Software**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: None

**CS-461 Database Systems**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: JR

**CS-465 Information Retrieval and Data Mining**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: JR

**CS-471 Software Engineering**

4 credit hours

Prerequisite: CS-102

Minimum Class Standing: JR

**CS-481 Artificial Intelligence**

4 credit hours

Prerequisites: CS-203

Minimum Class Standing: None

Updated: May 2011

**CS-485 Advanced Game Development**

4 credit hours

Prerequisites: CS-385

Minimum Class Standing: None

**CS-491 Special Topics in Computer Science**

4 Credits

Prerequisite: Permission of Instructor

Minimum Class Standing: JR

**CS-499 Computer Science Independent Study**

4 Credits

Prerequisite: Permission of Instructor

Minimum Class Standing: JR

**CS-541 Web Technology**

4 credit hours

Prerequisites: CS-461

**CS-571 Software Requirements Engineering**

4 credit hours

Prerequisites: CS-471

**ECE-101 MATLAB and C Programming**

4 credit hours

Prerequisite: None

Standing: None

**ECE-610 Modeling of Dynamic Systems**

4 credit hours

Prerequisites: Linear algebra and difference and differential equations, or Instructor's permission

**ECE-620 CMOS Analog Design**

4 credit hours

Prerequisite: Knowledge of multi-stage amplifier design.

Minimum Class Standing: BSEE

**ECE-630 Advanced Digital Signal Processing**

4 credit hours

Prerequisites: EE-424, MATH-408, or instructor's permission

**ECE-642 Electric Machine Drives**

4 credit hours

Prerequisites: EE-342, EE-424, or Instructor's approval

**ECE-648 Electromagnetic Compatibility**

4 credit hours

Prerequisites: Basic topics in electromagnetic compatibility or permission of the instructor

**ECE-680 Robot Motion Planning for Industrial Automation**

4 credit hours

Prerequisite: EE-582

Minimum Class Standing: BSEE

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**ECE-682 Mobile and Wireless Computing**

4 credit hours

Prerequisites: CE-480 or Instructor's permission

**ECON-201 Economic Principles**

4 credit hours

Prerequisite: None

Minimum Class Standing: None

**ECON-342 Intermediate Microeconomics: Managerial Economics**

4 credit hours

Prerequisite: ECON-201

Minimum Class Standing: SO

**ECON-344 Intermediate Macroeconomics: Economic Growth and Fluctuation**

4 credit hours

Prerequisite: ECON-201

Minimum Class Standing: SO

**ECON-346 Introduction to Econometrics**

4 credit hours

Prerequisite: ECON-201

Minimum Class Standing: SO

**ECON-348 History of Economic Thought**

4 credit hours

Prerequisite: ECON-201

Minimum Class Standing: SO

**ECON-350 Comparative Economic Systems**

4 credit hours

Prerequisite: ECON-201

Minimum Class Standing: SO

**ECON-352 International Economics**

4 credit hours

Prerequisite: ECON-201

Minimum Class Standing: SO

**ECON-513 Micro/Macro Economic Concepts & Applications**

4 credit hours

Prerequisite: None

**EE-210 Circuits I**

3 credit hours

Prerequisites: MATH-203 OR MATH-203H, PHYS-224, PHYS-225

Corequisite: EE-211, MATH-204

Minimum Class Standing: None

**EE-211 Circuits I Laboratory**

1 credit hour

Corequisite: EE-210

Minimum Class Standing: None

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**EE-212 Applied Electrical Circuits**

3 credit hours

Prerequisites: PHYS-224, PHYS-225

Corequisite: MATH204, MECH-231L

Minimum Class Standing: None

**EE-240 Electromagnetic Fields and Applications**

4 credit hours

Prerequisites: EE-210, PHYS-224, PHYS-225

Minimum Class Standing: None

**EE-310 Circuits II**

4 credit hours

Prerequisites: EE-210, MATH 204

Corequisite: EE-332

Minimum Class Standing: None

**EE-320 Electronics I**

3 credit hours

Prerequisites: CE-210, EE-210, EE-211

Corequisite: EE-321

Minimum Class Standing: None

**EE-321 Electronics I Laboratory**

1 credit hour

Prerequisites: EE-210, EE-211

Corequisite: EE-320

Minimum Class Standing: None

**EE-322 Applied Power Electronics**

4 credit hours

Prerequisites: EE-212, MECH 231L

Minimum Class Standing: None

**EE-325 Principles of Microelectronics Processing**

4 credit hours

Prerequisites: EE-210, EE-211, EE-320, EE-321 or PHYS-342

Minimum Class Standing: None

**EE-332 Signals and Systems**

4 credit hours

Prerequisite: EE-210, MATH-204

Minimum Class Standing: None

**EE-336 Continuous-Time Signals and Systems**

4 credit hours

Prerequisite: MATH-204

Standing: SOI

**EE-338 Discrete-Time Signals and Systems**

4 credit hours

Prerequisite: MATH-102

Standing: FRII

Updated: May 2011

**EE-340 Electromagnetic Wave Propagation**

4 credit hours

Prerequisite: EE-240

Minimum Class Standing: None

**EE-342 Electrical Machines**

4 credit hours

Prerequisites: EE-210, EE-211, EE-240

Corequisite: EE-310

Minimum Class Standing: None

**EE-344 Fundamentals of Power Systems**

4 credit hours

Prerequisites: EE-210, EE-211

Minimum Class Standing: None

**EE-346 High Voltage Generation and Measurement Techniques**

4 credit hours

Prerequisites: EE-210, EE-211, EE-240

Minimum Class Standing: None

**EE-348 Electromagnetic Compatibility**

4 credit hours

Prerequisites: EE-210, EE-240

Minimum Class Standing: None

**EE-420 Electronics II**

4 credit hours

Prerequisites: EE-310, EE-320, EE-321

Minimum Class Standing: None

**EE-424 Power Electronics and Applications**

4 credit hours

Prerequisites: EE-310, EE-320, EE-321

Minimum Class Standing: None

**EE-427 Semiconductor Device Fundamentals**

4 credit hours

Prerequisites: EE-210, EE-320

Minimum Class Standing: None

**EE-430 Communication Systems**

4 credit hours

Prerequisites: EE-310, EE-320, EE-332, MATH-408

Minimum Class Standing: None

**EE-432 Feedback Control Systems**

4 credit hours

Prerequisites: EE-310, EE-320, EE-321

Minimum Class Standing: None

Updated: May 2011

**EE-434 Digital Signal Processing**

4 credit hours

Prerequisite: EE-320, EE-321, EE-332

Minimum Class Standing: None

**EE-444 Computational Methods in Power Systems**

4 credit hours

Prerequisite: EE-344

Minimum Class Standing: None

**EE-490 Senior Electrical Engineering Design Project**

4 credit hours

Prerequisites CE-210, CE-320, EE-210, EE-211, EE-240, EE-310,  
EE-320, EE-321, EE-332

Minimum Class Standing: SR Thesis Standing

**EE-524 Fuel Cell System Integration and Packaging**

4 credit hours

Prerequisites: EE-322 or EE-424, and MECH-325 or MECH 420

Minimum Class Standing: None

**EE-530 Digital Control Systems**

4 credit hours

Prerequisite: EE-432

Minimum Class Standing: None

**EE-580 Automotive Electronic Systems**

4 credit hours

Prerequisites: EE-320 and (EE-432 or MECH-430)

Minimum Class Standing: None

**EE-582 Robot Dynamics and Control**

4 credit hours

Corequisite: EE-432

Minimum Class Standing: None

**EE-584 Wireless Communications**

4 credit hours

Prerequisite: EE-430

Minimum Class Standing: None

**EE-695 Graduate Research in Electrical Engineering**

1-8 credit hours

Prerequisites: Graduate standing in CE

Minimum Class Standing: Graduate

**FINC-310 Financial Markets**

4 credit hours

Prerequisite: ACCT-212

Updated: May 2011

**FINC-311 Financial Management**

4 credit hours

Prerequisite: ACCT-212 or ACCT-315 or MATH-350

Corequisites: None

Minimum Class Standing: JR

**FINC-411 Investments**

4 credit hours

Prerequisite: FINC-311

Corequisites: None

Minimum Class Standing: JR

**FINC-412 International Finance**

4 credit hours

Prerequisite: BUSN-104 or FINC-311 or FINC-315

Minimum Class Standing: JR

**FINC-619 Financial Management**

4 credit hours

Prerequisites: ACCT-212 or ACCT-315 or ACCT-518

**GER-101 Beginning German I**

4 credit hours

Prerequisite: None

Minimum Class Standing: None

**GER-102 Beginning German II**

4 credit hours

Prerequisite: None

Minimum Class Standing: None

**GER-103 Beginning German III**

4 credit hours

Prerequisite: None

Minimum Class Standing: None

**HIST-306 International Relations**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**HIST-308 America and the World**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**HIST-310 Imperialism**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

Updated: May 2011

**HIST-312 History of Science**

4 credit hours

Prerequisites: HUMN-201, SSCI-201

Minimum Class Standing: SO

**HIST-314 Human Conflict & Conflict Resolution**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**HIST-316 History of the Atlantic World**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**HIST-318 Africa in the 20th Century**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**HIST-320 Modern Middle East**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**HMGMT-409 Healthcare Management**

4 credit hours

Prerequisite: None

Minimum Class Standing: JR

**HMGMT-609 Healthcare Management**

4 credit hours

Prerequisite: Graduate Admission

**HUMN-201 Introduction to the Humanities**

4 credit hours

Prerequisite: COMM-101

Minimum Class Standing: FR

**HUMN-376 American Culture and Technology**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: None

**HUMN-391 Introduction to the Humanities**

4 credit hours

Prerequisite: COMM-101, HUMN 201, SSCI 201

Minimum Class Standing: SO

**IME-100 Interdisciplinary Design and Manufacturing**

4 credit hours

Minimum Class Standing: FR

Updated: May 2011

**IME-211 Algorithms and Computer Programming**

4 credit hours

Prerequisite: Sophomore II Standing

Minimum Class Standing: SOII

**IME-251 Systems Analysis I: Engineering Cost Analysis**

4 credit hours

Prerequisite: MATH 101

Minimum Class Standing: SO

**IME-301 Engineering Materials**

4 credit hours

Prerequisites: CHEM-135, CHEM136, IME 100, MECH-210

Minimum Class Standing: SOII

**IME-321 Systems Modeling I: Deterministic Models**

4 credit hours

Prerequisite: None

Minimum Class Standing: SOII

**IME-332 Engineering Statistics II: Statistical Inference and Regression**

Prerequisite: MATH-310 or MATH-408

4 credit hours

Minimum Class Standing: SOII

**IME-333 Engineering Statistics III: Design of Experiments**

4 credit hours

Prerequisite: IME-332

Minimum Class Standing: JRI

**IME-361 Work Design I: Methods & Standards**

4 credit hours

Prerequisite: MATH-310 or MATH-408

Minimum Class Standing: JRI

**IME-403 Computer Numerical Control Machining**

4 credit hours

Prerequisites: IME-100, IME 301

Minimum Class Standing: JR II

**IME-404 Sheet Metal Forming**

4 credit hours

Prerequisite: IME-301

Minimum Class Standing: JR II

**IME-405 Casting Process**

4 credit hours

Prerequisite: IME -301

Minimum Class Standing: None

**IME-408 Robotics in Manufacturing & Service/Healthcare**

4 credit hours

Prerequisites: IME-100, MECH-100 or approval of instructor

Minimum Class Standing: JR II

Updated: May 2011

**IME-409 Computer Integrated Manufacturing**

4 credit hours

Prerequisites: MECH-100

Minimum Class Standing: JR II

**IME-412 Applied Control Systems Design**

4 credit hours

Prerequisite: None

Minimum Class Standing: SRI

**IME-422 System Modeling II: Production Systems & Simulation** Prerequisites: MATH-310 or MATH-408

4 credit hours

Minimum Class Standing: JRI

**IME-423 Systems Modeling III: Stochastic Models**

4 credit hours

Prerequisite: IME-321

Minimum Class Standing: JR II

**IME-452 Designing Value in the Supply Chain**

4 credit hours

Prerequisite: MATH-310 or MATH-408

Minimum Class Standing: IE Junior or non-IE SR

**IME-453 Tools for Managing the Supply Chain**

4 credit hours

Prerequisite: IME-452

Minimum Class Standing: None

**IME-454 Senior Design Project**

4 credit hours

Prerequisite: final term on campus or Program Director approval

Minimum Class Standing: Final Term on Campus

**IME-456 Engineering for Healthcare Systems**

4 credit hours

Prerequisite: None

Minimum Class Standing: SR

**IME-462 Work Design II: Ergonomics**

4 credit hours

Prerequisite: MATH-310 or MATH-408, MECH-210

Minimum Class Standing: JR II

**IME-471 Quality Systems I: Quality Assurance**

4 credit hours

Prerequisite: IME-332

Minimum Class Standing: JRI

**IME-474 Design for Manufacture and Assembly**

4 credit hours

Prerequisite: IME-301

Minimum Class Standing: SR II

Updated: May 2011

**IME-476 Lean Six Sigma**

4 credit hours

Prerequisites: IME-332

Minimum Class Standing: SR

**IME-540 Environmentally Conscious Design and Manufacturing**

4 credit hours

Prerequisite: None

Minimum Class Standing: SR

**IME-563 Safety & Human Factors**

4 credit hours

Prerequisite: None

Minimum Class Standing: SR in the Industrial Engineering Program

**IME-564 Ethics and Practice of Engineering**

4 credit hours

Prerequisite: Admission to Engineering Graduate Program

Minimum Class Standing: SR in Industrial Engineering program

**IME-572 Maintainability & Reliability**

4 credit hours

Prerequisite: IME-332

Minimum Class Standing: SR

**IME-573 Advanced Quality Assurance**

4 credit hours

Prerequisites: IME-333, IME-471

Minimum Class Standing: SR II

**IME-575 Failure Analysis**

4 credit hours

Prerequisite: IME-301

Minimum Class Standing: SR

**IME-583 Industrial Engineering Concepts**

4 credit hours

Prerequisite: None

Minimum Class Standing: Non-IE SR or Graduate student with non-IE undergraduate degree

**IME-599 Industrial Engineering Independent Study**

4 credit hours

Prerequisite: Permission of Instructor

Minimum Class Standing: None

**IME-601 Fundamentals of Manufacturing Engineering**

4 credit hours

Prerequisites: Admission to Graduate Program

**IME-603 Computer Numerical Control Machining**

4 credit hours

Prerequisites: IME-100, IME-301 or equivalent

Updated: May 2011

**IME-604 Sheet Metal Forming**

4 credit hours

Prerequisites: IME-301 or equivalent

**IME-625 Business Dynamics**

4 credit hours

Prerequisites: None

**IME-627 Simulation of Facilities**

4 credit hours

Prerequisites: Admission to an engineering graduate program

**IME-652, Designing Value in the Supply Chain**

4 credit hours

Prerequisite: A first course in Probability and Statistics

Minimum Class Standing: Admission to Graduate Program

**IME-654 Enterprise Resource Planning**

4 credit hours

Prerequisites: Admission to a graduate program or Instructor's permission

**IME-656 Engineering for Healthcare Systems**

4 credit hours

Prerequisite: none; Co-requisite: none.

Minimum Class Standing: Admission to Graduate Program

**IME-660 Design for Manufacture & Assembly**

4 credit hours

Prerequisites: IME-601 or Instructor's permission

**IME-674 Quality Assurance & Reliability**

4 credit hours

Prerequisites: MATH-602, MFGO-603, MGMT 521 or instructor's permission

**IME-676, Lean Six Sigma**

4 credit hours

Prerequisites: A first course in Probability and Statistics

Co-requisites: none

Minimum Class Standing: Admission to Graduate Program

**IME-680 Computer Integrated Mfg**

4 credit hours

Prerequisites: IME-601 or instructor's permission

**IME-683 Elements of CIM for Management**

4 credit hours

Prerequisites: IME-601 or MFGO-633

**IME-684 Materials & Processes Seminar**

4 credit hours

Prerequisites: IME-301 Engineering Materials or equivalent

Updated: May 2011

**IME-698 Master's Project**

4 credit hours

Prerequisites: At a minimum, must be in final term of classes for the program. Permission of the advisor.

**ISYS-201 Fundamentals of Information Systems**

4 credit hours

Minimum Class Standing: FR

**ISYS-290 Enterprise Systems**

4 credit hours

Prerequisites: None

Minimum Class Standing: None

**ISYS-440 Information Management**

4 credit hours

Prerequisite: None

Minimum Class Standing: JR

**ISYS-442 Technical Infrastructure**

4 credit hours

Prerequisite: None

Minimum Class Standing: JR

**ISYS-444 Systems Analysis**

4 credit hours

Prerequisite: None

Minimum Class Standing: JR

**ISYS-450 Enterprise Information System Models**

4 credit hours

Prerequisite: None

Minimum Class Standing: JR

**ISYS-609 Information Management**

4 credit hours

Prerequisite: None

**ISYS-619 Analysis, Modeling and Design**

4 credit hours

Prerequisites: ISYS-669

**ISYS-629 Managing an IT Infrastructure**

4 credit hours

Prerequisites: ISYS-669

**ISYS-649 IT Policy and Strategy**

4 credit hours

Prerequisites: MRKT-570

**ISYS-659 Integrated Information System Capstone**

4 credit hours

ISYS-619, ISYS-649, ISYS-669, MGMT-619 Ask Andy

Updated: May 2011

**ISYS-669 Enterprise Information System Models**

4 credit hours

Prerequisite: None

**LIT-304 American Literature and Philosophy**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: None

**LIT-307 Poetry: Substance and Structure**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: None

**LIT-309 The Literature of Multicultural America**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**LIT-310 African American Literature**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201.

Minimum Class Standing: SO.

**LIT-315 Literature of the Fantastic**

4 credit hours

Prerequisites: HUMN-201, SSCI-201

Minimum Class Standing: SO

**LIT-317 Masterpieces of Drama**

4 credit hours

Prerequisites: HUMN-201, SSCI-201

Minimum Class Standing: SO

**LIT-351 Literature in a Foreign Language**

4 credit hours

Prerequisites: COMM-101, LANG-103 or equivalent, HUMN-201, SSCI-201

Minimum Class Standing: SO

**LIT-372 Masterpieces of Literature**

4 credit hours

Prerequisites: HUMN-201, SSCI-201

Minimum Class Standing: SO

**LIT-379 The Plays of Shakespeare**

4 credit hours

Prerequisites: HUMN-201, SSCI-201

Minimum Class Standing: SO

**LS-489 Senior Seminar: Leadership, Ethics and Contemporary Issues**

4 credit hours

Prerequisites: COMM-101, COMM-301, ECON-201, HUMN-201, SSCI-201, a 300 level course in either Humanities or Social Science

Minimum Class Standing: SR

Updated: May 2011

**MATH-100 College Mathematics**

4 credit hours

Prerequisite: Placement Test.

Minimum Class Standing: FRI

**MATH-101 Calculus I**

4 credit hours

Prerequisite: MATH-100, MATH-100X, or a sufficient score on the placement exam

Minimum Class Standing: FR

**MATH-101X Calculus I**

4 credit hours

Prerequisite: MATH-100, a sufficient score on the Placement Test Minimum Class Standing: FRI

**MATH-102 Calculus II**

4 credit hours

Prerequisite: MATH-101 or MATH 101X

Minimum Class Standing: FR

**MATH-102H Calculus II – Honors**

4 credit hours

Prerequisite: MATH-101 or MATH-101X

Minimum Class Standing: FR

**MATH-203 Multivariate Calculus**

4 credit hours

Prerequisite: MATH-102 or MATH-102H

Minimum Class Standing: FR

**MATH-203HH Multivariate Calculus – Honors**

4 credit hours

Prerequisite: MATH-102H or MATH-102, and professor's recommendation

Minimum Class Standing: FR1

**MATH-204 Differential Equations and Laplace Transforms**

4 credit hours

Prerequisite: MATH-203 or MATH-203H

Minimum Class Standing: FRI

**MATH-204H Differential Equations and Laplace Transforms-Honors**

4 credit hours

Prerequisite: MATH-203 or MATH-203H and Professors Recommendation

Minimum Class Standing: FR1

**MATH-205 Applied Probability and Statistics**

4 credit hours

Prerequisite: MATH-203 OR MATH-203H

Minimum Class Standing: SO

**MATH-305 Numerical Methods and Matrices**

4 credit hours

Prerequisite: MATH-204

Minimum Class Standing: SOII

Updated: May 2011

**MATH-307 Matrix Algebra**

4 credit hours

Prerequisite: MATH-101

Minimum Class Standing: None

**MATH-308 Abstract Algebra**

4 credit hours

Prerequisites: MATH 307 or CS-211 and MATH-101

Minimum Class Standing: SO1

**MATH-310 Biostatistics I**

4 credit hours

Prerequisite: MATH-102

Minimum Class Standing: SOI

**MATH-313 Boundary Value Problems**

4 credit hours

Prerequisite: MATH-204

Minimum Class Standing: SOII

**MATH-317 Advanced Matrix Theory**

4 credit hours

Prerequisite: MATH-307

Minimum Class Standing: JR

**MATH-321 Real Analysis I**

4 credit hours

Prerequisite: MATH-203 OR MATH-203H

Minimum Class Standing: JR

**MATH-327 Mathematical Statistics I**

4 credit hours

Prerequisite: MATH-203 OR MATH-203H

Minimum Class Standing: JR

**MATH-328 Methods of Applied Mathematics**

4 credit hours

Prerequisite: MATH-204

Minimum Class Standing: JRI

**MATH-350 Financial Mathematics**

4 credit hours

Prerequisites: MATH-102 and BUSN-226 or MATH-327 or MATH-408

Minimum Class standing: JRI

**MATH-360 Life Contingencies I**

4 credit hours

Prerequisite: MATH-350

Minimum Class Standing: JR

**MATH-361 Life Contingencies II**

4 credit hours

Prerequisite: MATH-360

Minimum Class Standing: JR II

Updated: May 2011

**MATH-408 Probability and Statistics**

4 credit hours

Prerequisite: MATH-203 OR MATH-203H

Minimum Class Standing: SOII

**MATH-410 Biostatistics II**

4 credit hours

Prerequisite: MATH-310

Minimum Class Standing: SOII

**MATH-412 Complex Variables**

4 credit hours

Prerequisite: MATH-203 OR MATH-203H

Minimum Class Standing: SO

**MATH-416 Vector Analysis**

4 credit hours

Prerequisite: MATH-203 OR MATH-203H

Minimum Class Standing: SOII

**MATH-418 Intermediate Differential Equations**

4 credit hours

Prerequisites: MATH-204, MATH-305

Minimum Class Standing: JRI

**MATH-420 Mathematical Modeling**

4 credit hours

Prerequisites: MATH-204, MATH-205, MATH-305

Minimum Class Standing: JRI

**MATH-421 Real Analysis II**

4 credit hours

Prerequisites: MATH-317, MATH-321

Minimum Class Standing: JRII

**MATH-423 Partial Differential Equations**

4 credit hours

Prerequisites: MATH-305, MATH-313

Minimum Class Standing: JRI

**MATH-427 Mathematical Statistics II**

4 credit hours

Prerequisite: MATH-327

Minimum Class Standing: JRI

**MATH-428 Sampling Theory**

4 credit hours

Prerequisite: MATH: 426

Minimum Class Standing: SRI

**MATH-438 Data Analysis for Engineers and Scientists**

4 credit hours

Prerequisite: IME-332, or MATH-205, or MATH-227, or MATH-408

Minimum Class Standing: SRI

Updated: May 2011

**MATH-448 Time Series**

4 credit hours

Prerequisite: MATH-327

Minimum Class Standing: SR

**MATH-601 Advanced Engineering Math**

4 credit hours

Prerequisite: Undergraduate Mathematical Review

**MATH-602 Applied Statistics**

4 credit hours

Prerequisites: Undergraduate Engineering Math Review

**MECH-100 Engineering Graphical Communication**

4 credit hours

Minimum Class Standing: FRI

**MECH-210 Statics**

4 credit hours

Prerequisite: MATH-101

Corequisites: PHYS-114, PHYS-115, MATH-102 or MATH-102H

Minimum Class Standing: SO

**MECH-212 Mechanics of Materials**

4 credit hours

Prerequisite: MECH-210

Minimum Class Standing: SO

**MECH-231L Signals for Mechanical Systems Lab**

1 credit hour

Corequisite: EE-212

Minimum Class Standing: SO

**MECH-300 Computer Aided Engineering**

4 credit hours

Prerequisites: MECH-100, MECH-212

Minimum Class Standing: JR

**MECH-310 Dynamics**

4 credit hours

Prerequisites: PHYS-114, PHYS-115, MATH-102 or MATH-102H, MECH-210

Minimum Class Standing: JR

**MECH-311 Introduction to Mechanical System Design**

4 credit hours

Prerequisites: MECH-100, MECH-210

Corequisites: MECH-231 or EE-212

Minimum Class Standing: None

**MECH-312 Mechanical Component Design I**

4 credit hours

Prerequisites: MECH-212, MECH-311

Minimum Class Standing: None

Updated: May 2011

**MECH-320 Thermodynamics**

4 credit hours

Prerequisites: PHYS-224, PHYS-225

Minimum Class Standing: SO

**MECH-322 Fluid Mechanics**

4 credit hours

Prerequisite: MECH-320

Minimum Class Standing: SO

**MECH-330 Dynamic Systems with Vibrations**

4 credit hours

Prerequisites: MATH-204, MECH-310

Corequisite: MATH-305 or MATH-307, EE-210 or EE-212

Minimum Class Standing: None

**MECH-350 Introduction to Bioengineering Applications**

4 credit hours

Prerequisites: BIOL-241, and/or CHEM-145, MECH-212

Minimum Class Standing: JR

**MECH-412 Mechanical Component Design II**

4 credit hours

Prerequisites: IME-301, MECH-312

Minimum Class Standing: None

**MECH-420 Heat Transfer**

4 credit hours

Prerequisite: MECH-320

Corequisite: MECH-322

Minimum Class Standing: SR

**MECH-422 Energy Systems Laboratory**

4 credit hours

Prerequisites: MECH-320, MECH-322

Corequisite: MECH-420

Minimum Class Standing: SR

**MECH-430 Dynamic Systems with Controls**

4 credit hours

Prerequisite: MATH-305, MECH-330

Minimum Class Standing: SR

**MECH-490 Fluid Power Systems**

4 credit hours

Prerequisites: MECH-300

Corequisite: MECH-312

Minimum Class Standing: JR

**MECH-510 Analysis and Design of Machines and Mechanical Assemblies**

4 credit hours

Prerequisites: MECH-300, MECH-310, MECH-312

Corequisite: MECH-330

Minimum Class Standing: JR II

Updated: May 2011

**MECH-512 Mechanical Systems Design Project**

4 credit hours

Prerequisite: MECH-300, MECH-312, IME-301 or PHYS-342

Minimum Class Standing: SR

**MECH-514 Experimental Mechanics**

4 credit hours

Prerequisites: MECH-300, MECH-312, MECH-330, IME-301 or PHYS-342

Minimum Class Standing: SR II

**MECH-515 Failure and Material Considerations in Design**

4 credit hours

Corequisite: MECH-412

Minimum Class Standing: JR II

**MECH-516 Introduction to Finite Element Analysis with Structural Application**

4 credit hours

Prerequisites: MECH-212, MECH-310, MECH-330

Minimum Class Standing: SR

**MECH-521 Energy and Environmental Systems Design**

4 credit hours

Prerequisites: MECH-300, MECH-312, MECH-420, IME-301 or PHYS-342

Corequisite: MECH-422

Minimum Class Standing: SR II

**MECH-522 Engineering Analysis**

4 credit hours

Prerequisites: MATH-204, MATH-305, MECH-330, MECH-420

Minimum Class Standing: SR

**MECH-523 Applied Computational Fluid Dynamics**

4 credit hours

Prerequisites: MECH-320, MECH-322 and MATH-313 or MATH-418 or MATH-423, or Permission of Instructor

Minimum Class Standing: SR III

**MECH-526 Fuel Cell Science & Engineering**

4 credit hours

Prerequisites: CHEM-237/238 or CHEM-361 or PHYS-452, MECH-325 or MECH-420

Minimum Class Standing: SR

**MECH-527 Energy and the Environment**

4 credit hours

Prerequisite: NONE

Minimum Class Standing: SR

**MECH-528 BIO and Renewable Energy Laboratory**

4 credit hours

Prerequisites: MECH-320, MECH-322

Minimum Class Standing: None

Updated: May 2011

**MECH-529 Design and Modeling of Fuel Cell Systems**

4 credit hours

Prerequisites: MECH-322, MECH-420

Corequisite: MECH-422, MECH-526

Minimum Class Standing: SR

**MECH-540 Introduction to Internal Combustion Engines and Automotive Power Systems**

4 credit hours

Prerequisite: MECH-320

Minimum Class Standing: JR

**MECH-541 Advanced Automotive Power Systems**

4 credit hours

Prerequisite: MECH-540

Minimum Class Standing: SR

**MECH-542 Chassis System Design**

4 credit hours

Prerequisite: MECH-330

Minimum Class Standing: SR

**MECH-544 Introduction to Automotive Powertrains**

4 credit hours

Prerequisite: MECH-212

Corequisite: MECH-312

Minimum Class Standing: SR

**MECH-545 Hybrid Electric Vehicle Propulsion**

4 credit hours

Corequisites: EE-432 or MECH-430 or Permission of Instructor

Minimum Class Standing: SR

**MECH-546 Vehicle Systems Dynamics**

4 credit hours

Prerequisites: MECH-330

Minimum Class Standing: SRI

**MECH-548 Vehicle Design Project**

4 credit hours

Prerequisite: MECH-320, IME-301 or PHYS-342

Minimum Class Standing: SR

**MECH-550 Automotive Bioengineering: Occupant Protection and Safety**

4 credit hours

Prerequisite: MECH-310

Minimum Class Standing: None

**MECH-551 Vehicular Crash Dynamics and Accident Reconstruction**

4 credit hours

Prerequisites: MECH 310

Minimum Class Standing: SR

Updated: May 2011

**MECH-554 Bioengineering Applications Project**

4 credit hours

Prerequisites: MECH-300, MECH-310, MECH-312, MECH 350, IME-301 or PHYS-342

Minimum Class Standing: SR

**MECH-562 Compressible Flow/Gas Dynamics**

4 credit hours

Prerequisites: MECH-320, MECH-322

Minimum Class Standing: SR III

**MECH-564 Aerodynamics and Wing Theory**

4 credit hours

Prerequisite: MECH-320, MECH-322, MATH-305 or MECH-522, or permission of instructor

Minimum Class Standing: JR II

**MECH-570 Computer Simulation of Metal Forming Processes**

4 credit hours

Prerequisites: IME-301, MECH-212, MECH-310

Corequisite: MECH-300

Minimum Class Standing: JR

**MECH-572 CAD/CAM and Rapid Prototyping Project**

4 credit hours

Prerequisites: MECH-100, MECH-300

Minimum Class Standing: SR

**MECH-580 Properties of Polymers**

4 credit hours

Prerequisites: IME-301, MECH-212, MECH-300

Minimum Class Standing: SR II

**MECH-582 Mechanics and Design Simulation of Fiber-Reinforced Composite Materials**

4 credit hours

Prerequisites: MECH-212, MECH-300

Minimum Class Standing: SO

**MECH-584 Plastics Product Design**

4 credit hours

Prerequisites: MECH-300, MECH-310, MECH-312, IME-301 or PHYS-342

Minimum Class Standing: SR

**MECH-595 Automotive Seminar I**

4 credit hours

Prerequisite: None

**MECH-596 Automotive Seminar II**

4 credit hours

Prerequisite: None

**MECH-600 Engineering Mathematics with Applications**

4 credit hours

Requisites: MATH 204, MATH-305 or MATH-307, MECH-420

Updated: May 2011

**MECH-610 Mechanics of Materials I: Linear Elasticity**

4 credit hours

Prerequisite: None

**MECH-611 Mechanics of Materials II: Nonlinear Elastic-Plastic Behavior**

4 credit hours

Prerequisites: MECH-610

**MECH-613 Nonlinear Finite Element Analysis**

4 credit hours

Prerequisites: MECH-611

**MECH-615 Engineering Optimization**

4 credit hours

Prerequisites: MECH-522

**MECH-621 Applied Transport Phenomena**

4 credit hours

Prerequisites: MECH-322, MECH-420

**MECH-622 Computational Heat & Mass Transfer**

4 credit hours

Prerequisites: MECH-522, MATH-601

**MECH-626 Hydrogen Generation, Storage and Safety**

4 credit hours

Prerequisite: Undergraduate Chemistry, Fuel Cell Science and Technology or Instructor's Permission

**MECH-627 Green Energy Conversion**

4 credit hours

Prerequisites: MECH-320, MECH-322, MECH-420

**MECH-641 Combustion & Emissions**

4 credit hours

Prerequisites: MECH-322, MECH-420

**MECH-643 Noise, Vibration & Harshness**

4 credit hours

Prerequisites: Graduate Standing

**MFGO-601 The Globally Integrated Manufacturing Company**

4 credit hours

Prerequisite: None

**MFGO-603 Data Analysis for Problem Solving**

4 credit hours

Prerequisite: Knowledge of MINITAB software required

**MFGO-605 Global Human Resources and Supply Chains**

4 credit hours

Prerequisites: MFGO-601

Updated: May 2011

**MFGO-633 Lean Production Systems**

4 credit hours

Prerequisites: (MFGO-601 and MFGO-603) or ((MATH-205 or MATH-337 or MATH-408 or MGMT-521) and IME-601)

**MFGO-635 Work Analysis for Lean Production Applications**

4 credit hours

Prerequisites: MFGO-633

**MFGO-637 Quality Systems for Zero Defects**

4 credit hours

Prerequisites: MFGO-633

**MFGO-649 Metrics for Lean Production Improvement**

4 credit hours

Prerequisites: MFGO-635, MFGO-637

**MFGO-659 Integrative Capstone Project**

4 credit hours

Prerequisites: MFGO-605, MFGO-649

**MGMT-222 Organizational Behavior**

4 credit hours

Prerequisite: None

Corequisites: None

Minimum Class Standing: None

**MGMT-350 Managing Organizations**

4 credit hours

Prerequisite: None

Minimum Class Standing: SOI

**MGMT-395 Labor Relations**

4 credit hours

Prerequisite: MGMT-350

Minimum Class Standing: JR

**MGMT-452 International Management**

4 credit hours

Prerequisite: BUSN-104 or MGMT-350

Minimum Class Standing: JR

**MGMT-456 Strategic Management**

4 credit hours

Prerequisites: FINC-311, MGMT-350, MRKT-370

Minimum Class Standing: SRI

**MGMT-461 Operations Management**

4 credit hours

Prerequisites: MGMT-350

Minimum Class Standing: JR

Updated: May 2011

**MGMT-469 Fundamentals of Supply Chain Management**

4 credit hours

Prerequisite: None

Minimum Class Standing: JR

**MGMT-521 Statistical & Quantitative Methods for Managerial Decisions**

4 credit hours

Prerequisite: Graduate Admission

**MGMT-546 Project Management**

4 credit hours

Prerequisite: None

Corequisites: None

Minimum Class Standing: JR

**MGMT-550 Management Concepts & Applications**

2 credit hours

Prerequisite: Graduate Admission

**MGMT-609 Technology Management**

4 credit hours

Prerequisite: Admission to graduate program

Minimum Class Standing: None

**MGMT-619 Project and Change Management**

4 credit hours

Prerequisites: ACCT-212 or ACCT-315 or ACCT-518

**MGMT-629 Management Science**

4 credit hours

Prerequisites: MATH-205 or MATH-337 or MATH-408 or MFGO-603 or MGMT-521

**MGMT-639 Managing People & Organizations**

4 credit hours

Prerequisites: MFGO-605 or MGMT-350 or MGMT-550

**MGMT 649 Business Ethics and Leadership**

4 credit hours

Prerequisite: MGMT-639

**MGMT-659 Strategy**

4 credit hours

Prerequisites: BUSN-659, FINC-619, MGMT-639, MRKT-679

**MGMT-661 Operations Management**

4 credit hours

Prerequisites: MATH-205 or MATH-337 or MATH-408 or MFGO-603 or MGMT-521

**MGMT-669 Supply Chain Operations**

4 credit hours

Prerequisite: None

Minimum Class Standing: Graduate Admission

Updated: May 2011

**MGMT-674 Advanced Supply Chain Management**

4 credits hours

Prerequisite: None

Minimum Class Standing: Graduate Admission

**MGMT-679 Leadership**

4 credit hours

Prerequisite: None

**MISC-499 Independent Project**

4 Credits

Minimum Class Standing: N/A

**MRKT-370 Marketing Fundamentals**

4 credit hours

Prerequisite: N/A

Minimum Class Standing: JRI

**MRKT-376 Promotional Strategies**

4 credit hours

Prerequisite: MRKT-370

Minimum Class Standing: JR

**MRKT-471 Marketing Management**

4 credit hours

Prerequisite: MRKT-370

Minimum Class Standing: JR

**MRKT-472 International Marketing**

4 credit hours

Prerequisite: BUSN-104 or MRKT-370

Minimum Class Standing: JR

**MRKT-477 Sales Concepts & Strategies**

4 credit hours

Prerequisite: MRKT-370

Minimum Class Standing: JR

**MRKT-570 Marketing Concepts & Applications**

2 credit hours

Prerequisite: Graduate Admission

Corequisite: MGMT-550

**MRKT-679 Marketing Management**

4 credit hours

Prerequisites: MRKT-370 or MRKT 570

**MUS-380 Music, the Arts, and Ideas**

4 credit hours

Prerequisites: HUMN-201, SSCI-201

Minimum Class Standing: SO

Updated: May 2011

**ORTN-101 Learning, Success, and Teamwork**

1 credit hour

Minimum Class Standing: FRI

**ORTN-600 Graduate Orientation**

0 credit hours

Prerequisite: None

**PHIL-373 Philosophy**

4 credit hours

Prerequisite: HUMN-201, SSCI-201

Minimum Class Standing: SO

**PHIL-378 Moral and Ethical Philosophy**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**PHYS-114 Newtonian Mechanics**

3 credit hours

Prerequisite: MATH-101

Corequisites: MATH-102 or MATH-102H, PHYS-115

Minimum Class Standing: FRI

**PHYS-115 Newtonian Mechanics Laboratory**

1 credit hour

Prerequisite: MATH-101

Corequisites: MATH-102 or MATH-102H, PHYS-114

Minimum Class Standing: FRI

**PHYS-224 Electricity and Magnetism**

3 credit hours

Prerequisites: MATH-102 or MATH-102H, PHYS-114, PHYS-115

Corequisites: MATH-203 OR MATH-203H, PHYS-225

Minimum Class Standing: None

**PHYS-225 Electricity and Magnetism Laboratory**

1 credit hour

Prerequisites: MATH-102 or MATH-102H, PHYS-114, PHYS-115

Corequisites: MATH-203 OR MATH-203H, PHYS-224

Minimum Class Standing: None

**PHYS-235 Computers in Physics**

4 credit hours

Prerequisites: PHYS-224, PHYS-225, and permission of instructor

Minimum Class Standing: SO

**PHYS-302 Vibration, Sound, and Light**

4 credit hours

Prerequisites: MATH-203 OR MATH-203H, PHYS-224, PHYS-225

Corequisite: MATH-204

Minimum Class Standing: SOII

Updated: May 2011

**PHYS-342 Materials Science and Nanotechnology**

4 credit hours

Prerequisites: CHEM-135 or CHEM 137, PHYS-224, PHYS-225

Corequisite: MATH -203

Minimum Class Standing: SO

**PHYS-354 Medical Physics Principles**

4 credit hours

Prerequisites: PHYS-224, PHYS-225

Minimum Class Standing: SOI

**PHYS-362 Modern Physics**

4 credit hours

Prerequisites: PHYS-224, PHYS-225

Corequisites: MATH-204 or MATH-204H

Minimum Class Standing: SOII

**PHYS-376 Fundamentals of Photonics and Fiber Optics**

4 credit hours

Prerequisites: MATH-203 OR MATH-203H, PHYS-224, PHYS-225

Minimum Class Standing: None

**PHYS-376 Photonics and Optoelectronics**

4 credit hours

Prerequisites: MATH-203 OR MATH-203H, PHYS-224, PHYS-225

Minimum Class Standing: SO

**PHYS-378 Spectroscopy and Microscopy**

Prerequisites: PHYS-224, PHYS-225, PHYS-362

4 credit hours

Minimum Class Standing: JRI

**PHYS-388 Acoustics in the Human Environment**

4 credit hours

Prerequisites: PHYS-224, PHYS-225

Minimum Class Standing: JR

**PHYS-412 Theoretical Mechanics**

4 credit hours

Prerequisites: MATH-204, PHYS-114

Minimum Class Standing: None

**PHYS-446 Solid State Physics**

4 credit hours

Prerequisites: MATH-204, PHYS-362

Minimum Class Standing: JR

**PHYS-452 Thermodynamics and Statistical Physics**

4 credit hours

Prerequisites: MATH-203 or MATH-203H, PHYS-224, PHYS-225

Corequisites: MATH-204 or MATH-204H, PHYS-362

Minimum Class Standing: SOII

Updated: May 2011

**PHYS-462 Quantum Mechanics**

4 credit hours

Prerequisites: MATH-204, PHYS-362

Minimum Class Standing: JR

**PHYS-464 Nuclear Physics: Principles and Applications**

4 credit hours

Prerequisites: CHEM-135 or CHEM-137, PHYS-224, PHYS-225

Minimum Class Standing: JR

**PHYS-477 Optics**

4 credit hours

Prerequisites: MATH-204, PHYS-302

Minimum Class Standing: JR

**PHYS-485 Acoustic Testing and Modeling**

4 credit hours

Prerequisites: MATH-204, PHYS-302

Minimum Class Standing: NONE

**PHYS-495 Scientific Research in Physics I**

2 credit hours

Prerequisite: 16 credits of PHYS or permission of PHYS faculty

**PHYS-496 Scientific Research in Physics II**

2 credit hours

Prerequisite: PHYS-495; permission of a Physics faculty member

**SCIE-199 Science Transfer Course**

4 credit hours

Minimum Class Standing: None

**SOC-332 Contemporary Social Problems**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SOI

**SOC-335 Analysis of Social Dissent**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SOI

**SOC-336 Sociology of the Family**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SOI

**SOC-337 Religion in Society**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

Updated: May 2011

**SOC-338 Gender and Society**

4 credit hours

Prerequisites: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SOI

**SSCI-201 Introduction to the Social Sciences**

4 credit hours

Prerequisite: COMM-101

Minimum Class Standing: FRI

**SSCI-314: Technology and Sustainable Development**

4 credit hours

Prerequisites: COMM 101, HUMN 201, SSCI 201

Minimum Class Standing: SO

**SSCI-398 Topics in Social Science**

4 credit hours

Prerequisite: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**SSCI-499 Independent Study in Social Science**

4 credit hours

Prerequisite: COMM-101, HUMN-201, SSCI-201

Minimum Class Standing: SO

**THS 2 Thesis Project**

4 credit hours