

SAMPLE CURRICULUM -- DOUBLE MAJOR
MANUFACTURING ENGINEERING and ENGINEERING MANAGEMENT - MANUFACTURING
ENGINEERING TECHNICAL SPECIALITY
SCHOOL OF ENGINEERING & APPLIED SCIENCE - MIAMI UNIVERESITY
2008-2009

First Year

First Semester

EAS 101 Computing, Engineering & Society
 ENG 111 College Composition (MPF I)
 MTH 151 Calculus I (MPF V)
 PHY 181 Physical World (MPF IVB)
 PHY 183 Physical World Lab (MPF IVB)
 Miami Plan World Cultures (MPF IIIB)+

Second Semester

1 EAS 102 Problem Solving & Design
 3 ENG 112 Composition & Literature (MPF I)
 5 MTH 251 Calculus II
 4 PHY 182 Physical World (MPF IVB)
 1 PHY 184 Physical World Lab (MPF IVB)
 3 Miami Plan Fine Arts Elective (MPF IIA)
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Summer

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Second Year

First Semester

CHM 141 College Chemistry (MPF IVB)
 CHM 144 College Chemistry Lab (MPF IVB)
 ECO 201 Prin of Microeconomic (MPF IIC)
 MTH 245 Differential Equations for Engineers

Second Semester

3 ACC 221 Intro to Financial Accounting
 2 ECO 202 Prin of Macroeconomic (MPF IIC)
 3 STA 368 Introduction to Statistics
 3 Miami Plan U.S. Cultures Course (MPF IIIA)

Summer

3 COM 135 Public Express/Critical (MPF IIB) 3
 3 MGT 291 Organizational Behavior & Theory 3
 4 MGT 302 Operations Management 3
 3 MKT 291 Principles of Marketing 3

Choose two of the following:

MME 213 Computational Methods in Engineering
 MME 211 Static Modeling of Mechanical Systems
 MME 223 Engineering Materials
 ECE 205 Electric Circuit Analysis

Choose two of the following:

3 MME 213 Computational Methods in Engineering
 3 MME 211 Static Modeling of Mechanical Systems
 3 MME 223 Engineering Materials
 3 ECE 205 Electric Circuit Analysis

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Third Year

First Semester

MME 231 Manufacturing Processes
 MME 311 Dynamic Modeling of Mech Systems
 MME 312 Mechanics of Materials
 MME/PCE 313 Fluid Mechanics
 MME/PCE 341 Engineering Economics
 ENG 313 Technical Writing

Second Semester

3 MME/ECE 303 Computer-Aided Experimentation
 3 MME/PCE 314 Engineering Thermodynamics
 3 MME 334 Quality Planning and Control
 3 EGM/MGT 311 Project Management
 3 CSA 372 Analysis of Stochastic Systems
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Summer

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Fourth Year

First Semester

MME 411 Machine & Tool Design
 MME 434 Advanced Manufacturing
 MME/ECE 436 Control of Dynamic Systems
 MME/ECE 448 Senior Design Project (MPC)
 MFG Technical Elective
 Management Track

Second Semester

4 MME 435 Manufacturing Topics
 3 MME 437 Computer-Integrated Mfg Systems
 3 MME/ECE 449 Senior Design Project (MPC)
 2 MFG Technical Elective
 3 Management Track
 3 Miami Plan Biological Science (MPF IVA)
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+The School of Engineering & Applied Science and its Industrial Advisory Council suggest you consider taking IDS 159, Strength Through Cultural Diversity, to meet the World Cultures (MPF IIIB) requirement.

The Miami Plan for Liberal Education Foundation (MPF) requirement includes 6 hours of English Composition (ENG 111-112 fulfills this requirement); 12 hours in Fine Arts, Humanities, and Social Science (ECO 201 fulfills 3 hours of Social Science) with a minimum of 3 hours in each; 6 hours in U.S. and World Cultures; 9 hours of Natural Science, including one laboratory course with a minimum of 3 hours in Biological Science and 3 hours in Physical Science (PHY 181-182, 183-184 and CHM 141-144 more than fulfills the Physical Science requirement; however, a biological science course is still required); 3 hours of Mathematics, Formal Reasoning or Technology (MTH 151 fulfills this requirement). At least one of these foundation courses must provide a historical perspective (H). The actual order in which you take these courses is up to you. The outline above is just one sample of how the courses might be arranged. You must also complete 12 hours of Focus: Advanced Liberal Learning courses, including 9 hours in an approved Thematic Sequence (MPT) and a 3 hour Senior Capstone Experience (MPC) (MME/ECE 448/449 fulfills the capstone requirement).

Technical Electives - Select two courses from the courses listed below

ECE 287 Digital Systems Design
 ECE 304 Electronics
 ECE 305 Electric Circuit Analysis II
 ECE 306 Signals & Systems
 MME 315 Mechanical Vibrations
 MME/PCE 403 Heat Transfer
 MME 412 Advanced Mechanics
 MME 414 Engineering Thermodynamics II
 PCE 482 Process Control

PHY 286 Introduction to Computational Physics
 CSA 174 Fundamentals of Programming & Problem Solving
 CSA 271 Object-oriented Programming
 CSA 273 Optimization Modeling
 CSA 278 Computer Architecture
 CSA 372 Analysis of Stochastic Systems
 CSA 484 Manufacturing Systems