

**SAMPLE CURRICULUM -- DOUBLE MAJOR  
MANUFACTURING ENGINEERING and ENGINEERING MANAGEMENT - MANUFACTURING  
ENGINEERING TECHNICAL SPECIALITY  
SCHOOL OF ENGINEERING & APPLIED SCIENCE - MIAMI UNIVERESITY  
2005-2006**

**First Year**

<u>First Semester</u>	<u>Second Semester</u>	<u>Summer</u>
EAS 101 Computing, Engineering & Society	1 EAS 102 Problem Solving & Design	3
ENG 111 College Composition (MPF I)	3 ENG 112 Composition & Literature (MPF I)	3
MTH 151 Calculus I (MPF V)	5 MTH 251 Calculus II	4
PHY 181 Physical World (MPF IVB)	4 PHY 182 Physical World (MPF IVB)	4
PHY 183 Physical World Lab (MPF IVB)	1 PHY 184 Physical World Lab (MPF IVB)	1
Miami Plan World Cultures (MPF IIIB)+	3 Miami Plan Fine Arts Elective (MPF IIA)	3
	17	18

**Second Year**

<u>First Semester</u>	<u>Second Semester</u>	<u>Summer</u>
CHM 141 College Chemistry (MPF IVB)	3 ACC 222 Intro to Managerial Accounting	3 COM 135 Public Express/Critical (MPF IIB) 3
CHM 144 College Chemistry Lab (MPF IVB)	2 ECO 202 Prin of Macroeconomic (MPF IIC)	3 MGT 291 Organizational Behavior & Theory 3
ECO 201 Prin of Microeconomic (MPF IIC)	3 MME 223 Engineering Materials	3 MGT 302 Operations Management 3
MME 143 Engineering Design/Comp Graphics	3 MME 312 Mechanics of Materials	3 MKT 291 Principles of Marketing 3
MME 211 Static Modeling of Mechanical Systems	3 MTH 245 Differential Equations for Engineers	
STA 368 Introduction to Statistics	4 Miami Plan U.S. Cultures Course (MPF IIIA)	
	18	18 12

**Third Year**

<u>First Semester</u>	<u>Second Semester</u>	<u>Summer</u>
ECE 205 Electric Circuit Analysis	3 MME/ECE 303 Computer-Aided Experimentation	4
MME 231 Manufacturing Processes	3 MME/PSE 314 Engineering Thermodynamics	3
MME 311 Dynamic Modeling of Mech Systems	3 MME 334 Quality Planning and Control	3
MME/PSE 313 Fluid Mechanics	3 EGM/MGT 311 Project Management	3
MME/PSE 341 Engineering Economics	3 CSA 372 Analysis of Stochastic Systems	3
ENG 313 Technical Writing		
	18	16

**Fourth Year**

<u>First Semester</u>	<u>Second Semester</u>	
MME 411 Machine & Tool Design	4 MME 435 Manufacturing Topics	3
MME 434 Advanced Manufacturing	3 MME 437 Computer-Integrated Mfg Systems	3
MME/ECE 436 Control of Dynamic Systems	3 MME/ECE 449 Senior Design Project (MPC)	2
MME/ECE 448 Senior Design Project (MPC)	2 MFG Technical Elective	3
MFG Technical Elective	3 Management Track	3
Management Track	3 Miami Plan Biological Science (MPF IVA)	3
	18	17

+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/CSA 287 Digital Systems Design	PSY 453 Human Factors
ECE 304 Electronics	PSY 462 Work space & Work Organization
ECE 306 Signals & Systems	CSA 174 Fundamentals of Programming & Problem Solving
MME 431 Cost Estimating for Engineers	CSA 271 Object-oriented Programming
IES 431 Principles & Applications of Environmental Science	CSA 273 Optimization of Modeling
IES 450 Environmental Law	CSA 283* Data Communication and Networks
PHY 286 Introduction to Computational Physics	CSA 285* Client Server Systems
PSE 403 Heat Transfer	CSA 471 Simulation
PSE 405 Industrial Environmental Control	CSA 484 Manufacturing Systems
PSE 482 Process Control	* Prerequisite: CSA 174