

**SAMPLE CURRICULUM -- DOUBLE MAJOR
MANUFACTURING ENGINEERING and
ENGINEERING MANAGEMENT with MANUFACTURING ENGINEERING TECHNICAL SPECIALTY**

2003-04

First Year

<u>First Semester</u>		<u>Second Semester</u>		<u>Summer</u>	
EGR 141	Intro to Engineering Design	1	EGR 143	Engineering Design/Comp Graphics	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
CSA 163	Intro to Computer Concepts and Programming (MPF V)	<u>3</u>	Miami Plan Fine Arts Elective (MPF IIA)	<u>3</u>	
		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	
CHM 144	College Chemistry Lab (MPF IVB)	2	ECO 202	Prin of Macroeconomic (MPF IIC)	3	
ECO 201	Prin of Microeconomic (MPF IIC)	3	EGR 203	Electric Circuit Analysis	4	
EGR 211	Static Modeling of Mechanical Sys	3	EGR 231	Manufacturing Processes	3	
EGR 223	Engineering Materials	3	STA 368	Introduction to Statistics	<u>4</u>	
MTH 245	Differential Equations for Engineer	<u>3</u>			17	
		17				
				COM 135	Public Express/Critical (MPF IIB)	3
				MGT 291	Organizational Behavior & Theory	3
				MGT 302	Operations Management	3
				MKT 291	Principles of Marketing	<u>3</u>
						12

Third Year

<u>First Semester</u>		<u>Second Semester</u>		<u>Summer</u>	
CSA 372	Analysis of Stochastic Systems	3	EGR 303	Computer-Aided Experimentations	3
EGR 311	Dynamic Modeling of Mech Sys	3	EGR/PSE 314	Engineering Thermodynamics	3
EGR 312	Mechanics of Materials	3	EGR 334	Quality Planning and Control	3
EGR/PSE 313	Fluid Mechanics	3	EGM/MGT 311	Project Management	3
EGR/PSE 341	Engineering Economics	3	Miami Plan U.S. Cultures Course (MPF IIIA)	3	
ENG 313	Technical Writing	<u>3</u>	Miami Plan World Cultures (MPF IIIB)+	<u>3</u>	
		18			18

Fourth Year

<u>First Semester</u>		<u>Second Semester</u>			
EGR 411	Machine & Tool Design	4	EGR 435	Manufacturing Topics	3
EGR 434	Advanced Manufacturing	3	EGR 437	Computer-Integrated Mfg Systems	3
EGR 436	Control of Dynamic Systems	3	EGR 449	Senior Design Project (MPC)	2
EGR 448	Senior Design Project (MPC)	2	EGR Technical Elective	3	
EGR Technical Elective	3	MGT Track	3		
MGT Track	<u>3</u>	Miami Plan Biological Science (MPF IVA)	<u>3</u>		
	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 (CSA 163 or 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) (fulfilled with the completion of both majors) and a 3 hour Senior Capstone Experience (MPC) (EGR 448/449 fulfills the capstone requirement).

Technical Electives - Select two courses from the courses listed below

EGR 304	Electronics	PSY 453	Human Factors
EGR 306	Signals & Systems	PSY 461	Fitting the Environment to the Human Body
EGR 431	Engineering Cost Analysis	PSY 462	Work Space & Work Organization
EGR/CSA 287	Digital Systems Design	CSA 174	Fundamentals of Programming and Problem Solving
IES 431	Principles & Applications of Environmental Science	CSA 271	Object-Oriented Programming
IES 450	Environmental Law	CSA 273	Analysis of Deterministic Systems
PHY 286	Introduction to Computational Physics	CSA 283*	Data Communication and Networks
PSE 403	Heat Transfer	CSA 285*	Client Server Systems
PSE 440	Solid & Hazardous Waste Management	CSA 471	Simulation
PSE 482	Process Control	CSA 484	Analysis of Manufacturing Systems

*Prerequisite: CSA 174