

**SAMPLE CURRICULUM with SEMESTER IN LUXEMBOURG  
MANUFACTURING ENGINEERING  
SCHOOL OF ENGINEERING & APPLIED SCIENCE - MIAMI UNIVERESITY  
2008-2009**

**Please see advisor for MUDEC courses and other alternatives**

**Freshman Year**

| <u>First Semester</u>                          |          | <u>Second Semester</u>                     |          |
|--|----------|--|----------|
| EAS 101 Computing, Engineering & Society       | 1        | EAS 102 Problem Solving & Design           | 3        |
| ENG 111 College Composition (MPF I)            | 3        | ENG 112 Composition and Literature (MPF I) | 3        |
| MTH 151 Calculus I (MPF V)                     | 5        | MTH 251 Calculus II                        | 4        |
| PHY 181 The Physical World (MPF IVB)           | 4        | PHY 182 The Physical World (MPF IVB)       | 4        |
| PHY 183 The Physical World Lab (MPF IVB)       | 1        | PHY 184 The Physical World Lab (MPF IVB)   | 1        |
| Miami Plan Biological Science Course (MPF IVA) | 3        | Miami Plan U.S. Cultures Course (MPF IIIA) | 3        |
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**Sophomore Year**

| <u>First Semester</u>                          |          | <u>Second Semester</u>                 |          |
|--|----------|--|----------|
| CHM 141 College Chemistry (MPF IVB)            | 3        | ECE 205 Electric Circuit Analysis      | 3        |
| CHM 144 College Chemistry Lab (MPF IVB)        | 2        | MME 223 Engineering Materials          | 3        |
| ECO 201 Principles of Microeconomics (MPF IIC) | 3        | MME 312 Mechanics of Materials         | 3        |
| MME 213 Computational Methods in Engineering   | 3        | MME/PCE 314 Engineering Thermodynamics | 3        |
| MME 211 Static Modeling of Mechanical Systems  | 3        | STA 368 Introduction to Statistics     | 4        |
| MTH 245 Differential Equations for Engineers   | 3        |  |          |
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**Junior Year**

| <u>First Semester</u>   |          | <u>Second Semester</u>                     |          |
|---|----------|--|----------|
| Language  | 5        | ENG 313 Technical Writing                  | 3        |
| Miami Plan Humanities Course (MPF IIB)                                      | 3        | MME 231 Manufacturing Processes            | 3        |
| Miami Plan Fine Arts Course (MPF IIA)                                       | 3        | MME/ECE 303 Computer-Aided Experimentation | 4        |
| Miami Plan World Cultures Course (MPF IIIB)+                                | 3        | MME/PCE 313 Fluid Mechanics                | 3        |
| Miami Plan Fine Arts, Humanities or Social Science Course (MPF IIA,B, or C) | 3        | MME/PCE 341 Engineering Economics          | 3        |
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**Senior Year**

| <u>First Semester</u>                          |          | <u>Second Semester</u>                            |          |
|--|----------|---|----------|
| MME 311 Dynamic Modeling of Mechanical Systems | 3        | MME 435 Manufacturing Topics                      | 3        |
| MME 334 Quality Planning and Control           | 3        | MME 437 Computer-Integrated Manufacturing Systems | 3        |
| MME 411 Machine and Tool Design                | 4        | MME/ECE 436 Control of Dynamic Systems            | 3        |
| MME 434 Advanced Manufacturing                 | 3        | MME/ECE 449 Senior Design Project (MPC)           | 2        |
| MME/ECE 448 Senior Design Project (MPC)        | 2        | Technical Elective (see below)                    | 3        |
| Technical Elective (see below)                 | 3        | MTH 222 Linear Algebra (thematic sequence)        | 3        |
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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/CSA 287 Digital Systems Design    | PCE 482 Process Control                               |
| ECE 304 Electronics                   | PHY 286 Introduction to Computational Physics         |
| ECE 305 Electric Circuit Analysis II  | CSA 174 Fundamentals of Programming & Problem Solving |
| ECE 306 Signals & Systems             | CSA 271 Object-oriented Programming                   |
| MME 315 Mechanical Vibrations         | CSA 273 Optimization Modeling                         |
| MME/PCE 403 Heat Transfer             | CSA 278 Computer Architecture                         |
| MME 412 Advanced Mechanics            | CSA 372 Analysis of Stochastic Systems                |
| MME 414 Engineering Thermodynamics II | CSA 484 Manufacturing Planning Systems                |