

MANUFACTURING ENGINEERING TRANSFER, AS OSU ADVISING GUIDE

Prerequisites and Course Availability per Term
(for complete information, see 2016-2017 UCC Catalog)

REVISED 11/20/16

| | UCC Course No. and Course Name | Term Offered | | | | Credits | Prerequisites/Notes | | OSU Course No. | Credits |
|-----------------------------|--------------------------------|--|---|---|---|---------|---------------------|--------------------------|---|---------|
| | | F | W | S | S | | | | | |
| Term 1 | CH 221 ^E | General Chemistry I /Lec/Lab/Rec | x | | | | 5 | MTH 111 | CH 201 / CH 231 Lec & CH 261 Lab | 3/4 |
| | ENGR 111 | Engineering Orientation I | x | | | | 3 | MTH 65 | MIME 101 | 2 |
| | MTH 251 ^E | Calculus I | x | x | | | 5 | MTH 112 | MTH 251 | 4 |
| | WR 121 ^E | English Composition: Intro to Argument | x | x | x | x | 4 | WR 115 or Placement Test | WR 121 | 3 |
| | DRF 111 | CAD I (See Note 2) | x | | | | | | | |
| Term 2 | CH 222 | General Chemistry II | | x | | | 5 | CH 221 | CH 202+CH 205 Lab / CH 232 Lec & CH 262 Lab | 4 |
| | ENGR 112 ^E | Engineering Orientation II | | x | | | 3 | ENGR 111 | ENGR 112 | 3 |
| | MTH 252 ^E | Calculus II | | x | x | | 4 | MTH 251 | MTH 252 | 4 |
| | HPE 295 | Wellness & Health | x | x | x | x | 3 | | HHS 231 & HHS 241 | 3 |
| | Perspectives | General Ed Req - See Advisor | x | x | x | x | 3 | | Perspectives Elective - See Advisor | 3 |
| Term 3 | Perspectives ⁵ | Biological Science With Lab | | | x | | 4 | | Biological Science Elective | 4 |
| | ENGR 245 | Engineering Graphics | | | x | | 3 | | ENGR 248 | 3 |
| | MTH 253 ^E | Calculus III | | | x | | 4 | | UCC MTH 253 & MTH 261 = OSU MTH 306 | 4 |
| | MTH 261 ^E | Linear Algebra | | | x | | 2 | MTH 111 Algebra | See note above for MTH 306 | |
| | SP 111 ^E | Public Speaking | x | x | x | | 4 | WR 095 | COMM 111 | 3 |
| Summer | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Term 4 | ENGR 201 | Electrical Fundamentals I | x | | | | 4 | MTH 251 Co-requisite | ENGR 201 | 3 |
| | ENGR 211 ^E | Statics | x | | | | 4 | MTH 112 | ENGR 211 | 3 |
| | MTH 254 ^E | Vector Calculus I | x | | | | 4 | MTH 252 | MTH 254 | 4 |
| | PH 211 ^E | Physics I w/Calculus | x | | | | 5 | MTH 251 Co-requisite | PH 211 & PH 221 Rec | 4 |
| Term 5 | ECON 201 or ECON 202 | Economics | x | x | x | | 3 | WR 121-123 & MTH 111 | Perspectives Elective - SP&I | 3 |
| | ENGR 212 | Dynamics | | x | | | 4 | ENGR 211 | ENGR 212 | 4 |
| | MTH 256 ^E | Differential Equations | | x | | | 4 | MTH 252 | MTH 256 | 4 |
| | PH 212 ^E | Physics II w/Calculus | | x | | | 5 | PH 211 | PH 212 & PH 222 Rec | 4 |
| | | | | | | | | | | |
| Term 6 | ENGR 213 ^E | Strength of Materials | | | x | | 4 | ENGR 211 | ENGR 213 | 4 |
| | MTH 265 | Statistics for Engineers & Scientists | | | x | | 4 | MTH 251 | ST 314 - See Note 3 | 4 |
| | PH 213 ^E | Physics III w/Calculus | | | x | | 5 | PH 212 | PH 213 & PH 223 Rec | 4 |
| | WR 227 | Technical Report Writing | x | x | x | x | 4 | WR 122 | WR 327 | 3 |
| TOTAL DEGREE CREDITS | | | | | | | 102 | | | |

*A grade of "C" or better is required for all courses.

Program Advisor:

NOTES:

1. ^ERequired by OSU College of Engineering for entry into the Pro Program
2. Recommend student take DRF 112 CAD I (AutoCAD) during all fall quarter of Year 1 and potentially take DRF 112 CAD II (AutoCAD). Autocad courses will increase opportunities for paid summer internship and acceptance into MECOP, and help with ENGR 245 (SolidWorks).
3. Students can take 5 Perspective Electives for Humanities/Social Science that transfer to OSU as General Ed requirements. See Advisor. Link to OSU/UCC General Ed Transfer for Bac Core Courses is <http://admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-umpqua-community-college>
4. ENGR 390 Engineering Economics is not required for Pro-School. Can either be taken during Pro-School at OSU or online through OSU, after admission to OSU
5. Consider SOILS 205/206 as the Biological Elective

Manufacturing Engineering (MfgE) MECOP Program Guide

This guide is for planning purposes only. Course offerings subject to change.

| | Fall | Winter | Spring | Summer |
|-----------|--|--|---|--------|
| Freshman | MIME 101 Intro to MIME | ENGR 248 Engr Graphics - 3D Modeling | ENGR 112 Intro Engr Computing | |
| | CH 201 Chem for Engineers | CH 202 Chem for Engineers | MTH 254 Vector Calculus | |
| | MTH 251 Differential Calculus | MTH 252 Integral Calculus | COMM 111 or 114 Communication | |
| | WR 121 English Comp | HHS 231 + PAC Lifetime Fitness & PAC | PH 211 Physics w/Calculus I | |
| | Perspective (Western Culture) | Perspective (Cultural Diversity) | Difference, Power & Discrimination | |
| | Total | Total | Total | Total |
| Sophomore | ENGR 211 Statics | ENGR 213 Strength of Materials | ENGR 212 Dynamics | |
| | IE 285 Intro to IE and MfgE | IE 212 Computational Mthds for IE | IE 299/ST 314 Statistics for Engineers | |
| | MTH 256 Applied Differential Equations | MTH 306 Matrix & Power Series | WR 327 Technical Writing | |
| | PH 212 Physics w/Calculus II | PH 213 Physics w/Calculus III | ME 250 Intro to Mfg Processes | |
| | | | Perspective (Social Proc. & Institutions) | |
| | | ENGR 390 <i>Engineering Economy</i> | | |
| Total | Total | Total | Total | |
| Junior | MATS 321 <i>Intro to Material Science</i> | IE 356 <i>Experimental Design for Industrial Processes</i> | MECOP Internship | |
| | IE 355 <i>Statistical Quality Control</i> | IE 366 <i>Work Systems Engineering</i> | | |
| | IE 367 <i>Production Planning & Control</i> | IE 368 <i>Facility Design & Operations Management</i> | | |
| | ME 382 <i>Introduction to Design</i> | MFGE 336 <i>Production Engineering</i> | | |
| | ENGR 407 <i>MECOP Seminar</i> | | | |
| Total | Total | Total | Total | |
| Senior | IE 412 <u>Information Systems Engineering</u> | ENGR 201 Electrical Fundamentals I | MECOP Internship | |
| | MFGE 436 <u>Lean Manufacturing Systems Engineering</u> | IE 415 <u>Simulation & Decision Support Systems</u> | | |
| | ME 311 Intro to Thermo-Fluids | MFGE 337 <u>Materials & Manufacturing Processes</u> | | |
| | MfgE Systems Elective | Perspective (Literature & Arts) | | |
| Total | Total | Total | Total | |
| Senior | IE 497 Senior Design | IE 498 Senior Design | Bold Courses in gray cells are used in the pre-core GPA calculation and must be completed prior to taking Pro courses. | |
| | ME 413 Computer-Aided Design & Manufacturing | MfgE Process Elective | | |
| | Perspective (Biology + Lab) | Synthesis (Contemporary Global Issues) | <i>Italic Courses</i> in blue cells must be completed prior to FIRST MECOP internship | |
| | | Synthesis (Science Tech & Society) | <u>Underlined Courses</u> in orange cells must be completed prior to SECOND MECOP Internship | |
| Total | Total | Total | Total | |

Manufacturing Engineering (MfgE) Non-MECOP Program Guide

This guide is for planning purposes only. Course offerings subject to change.

| | | Fall | Winter | Spring | Summer | | |
|--------------|---|--------------|---|--------------|--|--------------|--------------|
| Freshman | MIME 101 Intro to MIME | 3 | ENGR 248 Engr Graphics - 3D Modeling | 3 | ENGR 112 Intro Engr Computing | 3 | |
| | CH 201 Chem for Engineers | 3 | CH 202 Chem for Engineers | 3 | MTH 254 Vector Calculus | 4 | |
| | MTH 251 Differential Calculus | 4 | MTH 252 Integral Calculus | 4 | COMM 111 or 114 Communication | 3 | |
| | WR 121 English Comp | 3 | HHS 231 + PAC Lifetime Fitness & PAC | 3 | PH 211 Physics w/Calculus I | 4 | |
| | Perspective (Western Culture) | 3 | Perspective (Cultural Diversity) | 3 | Difference, Power & Discrimination | 3 | |
| | Total | 16 | Total | 16 | Total | 17 | Total |
| Sophomore | ENGR 211 Statics | 3 | ENGR 213 Strength of Materials | 3 | ENGR 212 Dynamics | 3 | |
| | IE 285 Intro to IE and MfgE | 3 | IE 212 Computational Mthds for IE | 4 | IE 299/ST 314 Statistics for Engineers | 3 | |
| | MTH 256 Applied Differential Equations | 4 | MTH 306 Matrix & Power Series | 4 | WR 327 Technical Writing | 3 | |
| | PH 212 Physics w/Calculus II | 4 | PH 213 Physics w/Calculus III | 4 | ME 250 Intro to Mfg Processes | 1 | |
| | | | | | Perspective (Social Proc. & Institutions) | 3 | |
| | | | | | ENGR 390 Engineering Economy | 3 | |
| Total | 14 | Total | 15 | Total | 16 | Total | 0 |
| Junior | MATS 321 Intro to Material Science | 4 | IE 356 Experimental Design for Industrial Processes | 4 | ENGR 201 Electrical Fundamentals I | 3 | |
| | IE 355 Statistical Quality Control | 4 | IE 366 Work Systems Engineering | 4 | Perspective (Literature & Arts) | 3 | |
| | IE 367 Production Planning & Control | 4 | IE 368 Facility Design & Operations Management | 4 | MfgE Process Elective | 4 | |
| | ME 382 Introduction to Design | 4 | MFGE 336 Production Engineering | 4 | | | |
| | Total | 16 | Total | 16 | Total | 10 | Total |
| Senior | IE 497 Senior Design | 4 | IE 498 Senior Design | 4 | MfgE Systems Elective | 3 | |
| | IE 412 Information Systems Engineering | 4 | IE 415 Simulation & Decision Support Systems | 4 | Perspective (Biology + Lab) | 4 | |
| | MFGE 436 Lean Manufacturing Systems Engineering | 4 | MFGE 337 Materials & Manufacturing Processes | 3 | Synthesis (Contemporary Global Issues) | 3 | |
| | ME 413 Computer-Aided Design & Manufacturing | 4 | ME 311 Intro to Thermo-Fluids | 4 | Synthesis (Science Tech & Society) | 3 | |
| | Total | 16 | Total | 15 | Total | 13 | Total |

Bold Courses in gray cells are used in the pre-core GPA calculation and must be completed prior to taking Pro courses.