

Articulation Guide
Schoolcraft College – Associate in Engineering
University of Detroit Mercy – Bachelor of Manufacturing Engineering



| Schoolcraft College | | University of Detroit Mercy | |
|---|---------------------------------|---|---------------------------------|
| Degree Requirements | CH | Equivalency and Degree Requirements | CH |
| English Writing Requirements ENG 101 and ENG 102 English Composition | 6 | ENL 130 College Writing * ENL 131 Academic Writing | 3 |
| Humanities (minimum of 6 credit hours required): COMA 103 Fundamentals of Speech Additional Humanities requirement (select one): ART 115, 116, 201, 216; HIST 134- 230; ENG 170, 200, 243-275; MUSIC 105, 109, 149, 164, 165; THEA 101, 231, 232; HUM 150-232 | 3 3 | CST 101 Fundamentals of Speech Objective 5 | 3 3 |
| Mathematics / Sciences (34 credit hours required): CHEM 111 General Chemistry I MATH 150 Calculus with Analytic Geom 1 MATH 151 Calculus with Analytic Geom 2 MATH 240 Calculus with Analytic Geom 3 MATH 252 Differential Equations PHYS 211 Physics for Scientists and Engr 1 PHYS 212 Physics for Scientists and Engr 2 | 4 5 5 5 5 5 5 | CHM 107/110 General Chemistry I/ Lab MTH 141 Analytical Geom and Calculus I MTH 142 Analytical Geom and Calculus II MTH 241 Analytical Geom and Calculus III MTH 372 Differential Eq w/ Linear Alg PHY 160/161 General Physics I/ Lab PHY 162/163 General Physics II/ Lab | 4 4 4 4 4 4 4 |
| Social Sciences (minimum of 7 credits required) ECON 201 Principles of Macroeconomics Additional Social Science requirement (select one): ANTH 112-201, 214; GEOG 133, 241; POLS 207; SOC 210 | 4 3 | Objective 5 (transferable for Assoc in Engr students) Objective 5 - D | 3 3 |
| Additional courses to be used as electives or required courses in Assoc in Engineering degree: ENGR 100 Intro to Engineering & Technology and CAD 103 Engineering Graphics ENGR 201 Statics ENGR 202 Mechanics of Materials ENGR 203 Dynamics CAD 211 or CAD 221 CIS 211 Introduction to C++ | 3 3 3 3 4 4 2 | E 100 Ethics and Politics of Engineering and E 105 Engineering Graphics and Design E 312 Statics E 326 Mechanics of Materials E 313 Dynamics E 107 Intermediate Computer Aided Drafting/Design E 204 Introduction to Engineering Computing | 2 2 3 3 3 2 3 |
| Add'l transferable courses (select up to 4 classes): CHEM 117 General Chem & Qual Analysis PHIL 243 An Introduction to Philosophy ANTH 211 Myth, Magic and World Religions PHIL 247 or PHIL 277 ENG 116 Technical Writing | 5 3 3 3-4 3 | May take up to 12 credits: CHM 108 General Chemistry II PHL 100 Intro to Philosophy (Obj. 4) Religious Studies Requirement (Obj. 4) Objective 4 ENL 303 Technical Writing | 3 3 3 3 3 |
| Maximum Credits at Schoolcraft College | 90 | Credits that transfer to UDM | 76 |

* Note: 3 credits for ENL 130 (prerequisite for ENL 131) are included here, but are not officially part of the BMfgE degree requirements

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Additional courses to be completed at UDM for the BMfgE Degree:

| <u>Course</u> | <u>credits</u> |
|---|----------------------|
| Any course(s) not completed from previous page | min of 3 |
| E 314 Fluid Mechanics | 3 |
| E 315 Thermodynamics I..... | 3 |
| E 317 Science of Materials..... | 3 |
| E 320/ 321 Principles of Electrical Engineering and Lab..... | 4 |
| E 322 Control Systems | 3 |
| E 324 Engineering Economy | 3 |
| E 327 Mechanics of Materials Lab..... | 1 |
| ME 361 Mechanical Measurements Laboratory..... | 2 |
| ME 382/ 383 Manufacturing Processes/ Lab..... | 4 |
| MFE 331/ 332 Manufacturing Systems and Lab | 4 |
| MFE 333 Principles of Lean Manufacturing | 3 |
| MFE 335 Quality Systems | 3 |
| MFE 390 Mechanics and Machinery | 3 |
| MFE 436 Tool Design and Construction | 3 |
| MFE 451 Manufacturing Engineering Capstone | 3 |
| MTH 427 Applied Probability and Statistics | 3 |
| Two Technical Electives | 6 |
| Subtotal: | minimum of 57 |
| Co-op Associated Credits: | |
| E 301, E 302, E 303 Professional World of Work | 3 |
| CEC 300 Cooperative Education Preparation..... | 1 |
| CTA 301, CTA 302, CTA 303 Cooperative Education Assignments | 6 |
| Subtotal: | 10 |
| Minimum credits at UDM: 57 + 10 co-op associated credits | |