INDUSTRIAL ENGINEERING CURRICULUM FLOW SHEET – STARTING FALL 2020

Community College Courses – Cannot Exceed 64 Hours

1. **1st Semester**
   - MAT 1613: ACT Math subscore of 28, or grades of C or better in MAT 1323† Trig or 1343† Precalculus.
   - CHE 1214: ACT Math subscore of 24 or grades of C or better in MAT 1313 Algebra.
   - ENG 1113: A score of 17 or above in the English section of the ACT or EN 0103.

2. **2nd Semester**
   - PHY 2514: PHYSICS I
   - PHY 2524: PHYSICS II
   - CHE 1224: CHEM II & LAB

3. **3rd Semester**
   - ENG 1123: ENG COMP II
   - MAT 2113: LIN ALG

4. **4th Semester**
   - ECO 2123: MICROECON
   - MAT 1623: CAN be taken with credit-producing labs

5. **5th Semester**
   - IE 1313: LEAN Offered: FA

6. **6th Semester**
   - IE 4733: MGMT Offered: SP

7. **7th Semester**
   - IE 491: 4TH Year Standing

8. **8th Semester**
   - IE XXX: IE ELECTIVE

MSU Courses

- IE 493: INFO SYS
- IE 4623: MACRO ECON Offered: FA, SU
- IE 3323: MFG PROC
- IE 4653: QUALITY Offered: FA, SU
- IE 4914: DESIGN
- IE 4543: LOGISTICS Offered: SP, SU

- IE 4613: STAT I Offered: SP
- ENR 3123: IND ERGO Offered: FA
- IE 3913: ENG ECON
- IE 3753: ENG ECON Offered: FA, SU
- IE 4773: SYS SIM I
- IE 4433: PC I Offered: FA, SU
- IE 4753: LOGISTICS Offered: SP, SU
- IE 4653: LOGISTICS Offered: FA, SU

Arrows indicate course pre- or co-requisites

Course Prerequisite Notes:

1. MAT 1613: ACT Math subscore of 28, or grades of C or better in MAT 1323† Trig or 1343† Precalculus.
2. CHE 1214: ACT Math subscore of 24 or grades of C or better in MAT 1313 Algebra.
3. ENG 1113: A score of 17 or above in the English section of the ACT or EN 0103.
4. MAT 1323 Trigonometry: ACT Math subscore of 24 or grades of C or better in MAT 1313.
5. MAT 1343 Precalculus: Math ACT of 24 or C or better in MAT 1323 or a score of at least 70 on the Precalculus Qualifying Exam.
6. Macro Econ is not required for ISE students. Sophomore standing is required.
7. Prerequisite (ACC 2213) override needed to enter ACCT II without first taking ACCT I. Contact Community College Business Department Chair to request override.

To take a required IE course, students must have a grade of C or better in each prerequisite IE course.

P.O. Box 100 | Health Sciences Building – Office 140 | 2300 Hwy 90 | Gautier, MS 39553 | P. 228.497.7669 | ise.msstate.edu
REQUIRED HOURS:

<table>
<thead>
<tr>
<th>Mathematics (15 HRS)</th>
<th>Chemistry (8 HOURS)</th>
<th>Physics (8 HOURS)</th>
<th>Math/Science Elective (3 HOURS)</th>
<th>Fine Arts (3 HOURS)</th>
<th>Humanities (6 HOURS)</th>
<th>Communication (12 HOURS)</th>
<th>Other (3 HOURS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 1613 CALCULUS I</td>
<td>CHE 1214 CHEMISTRY I</td>
<td>PHY 2514 PHYSICS I-A</td>
<td>EGR 2433 ENGINEERING MECHANICS I</td>
<td>MATH/SCIENCE ELECTIVE</td>
<td>__3 HUMANITIES ELECTIVE</td>
<td>ENG 1113 ENGLISH COMPOSITION I</td>
<td>ACC 2023 MANAGERIAL ACCOUNTING</td>
</tr>
<tr>
<td>MAT 1623 CALCULUS II</td>
<td>CHEMISTRY I AND LAB</td>
<td>PHY 2524 PHYSICS II-A</td>
<td>__3 ENGINEERING SCIENCE ELECTIVE</td>
<td>__3 FINE ARTS ELECTIVE</td>
<td>__3 HUMANITIES ELECTIVE</td>
<td>ENG 1123 ENGLISH COMPOSITION II</td>
<td>INDUSTRIAL ENGINEERING</td>
</tr>
<tr>
<td>MAT 2613 CALCULUS III</td>
<td>CHE 1224 CHEMISTRY II AND LAB</td>
<td></td>
<td>__3 ENGINEERING SCIENCE ELECTIVE*</td>
<td>__3 FINE ARTS ELECTIVE*</td>
<td>__3 HUMANITIES ELECTIVE*</td>
<td>GSA 1435 GRAPhic COMMUNICATION</td>
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</tr>
<tr>
<td>MAT 2623 CALCULUS IV</td>
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<td></td>
<td>__3 COMPUTER PROGRAMMING ELECTIVE*</td>
<td></td>
<td></td>
<td>GE 3513 GRAPHIC COMMUNICATION</td>
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<tr>
<td>MAT 2113 LINEAR ALGEBRA</td>
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<td></td>
<td></td>
<td>GE 3513 TECHNICAL WRITING</td>
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</table>

SOCIAL SCIENCES (6 HOURS)

<table>
<thead>
<tr>
<th>Economics 2123 PRINCIPLES OF MICROECONOMICS</th>
<th>Psychology 1013 GENERAL PSYCHOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Listed in Columns 3 and 4</td>
<td><strong>A 24 HOURS</strong></td>
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OTHER ENGINEERING (12 HOURS)

<table>
<thead>
<tr>
<th>Electrical Engineering 4933</th>
<th>Mechanical Engineering 4933</th>
</tr>
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<tbody>
<tr>
<td>IE 4513</td>
<td>IE 4533</td>
</tr>
</tbody>
</table>

ELECTIVE CHOICES: Unless stated otherwise, course numbers correspond to MSU catalog

<table>
<thead>
<tr>
<th>Math/Science Elective</th>
<th>IE Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH 2233 Physics III</td>
<td>Any three hour non-required industrial engineering course.</td>
</tr>
<tr>
<td>MAT 2943 Differential Equations (Comm. College)</td>
<td>|</td>
</tr>
<tr>
<td>MA 3253 Differential Equations I</td>
<td>|</td>
</tr>
<tr>
<td>MA 3053 Foundation of Math I</td>
<td>|</td>
</tr>
<tr>
<td>MA 4143 Graph Theory</td>
<td>|</td>
</tr>
<tr>
<td>MA 4313 Numerical Analysis I</td>
<td>|</td>
</tr>
<tr>
<td>MA 4533 Probabilistic Random Process</td>
<td>|</td>
</tr>
<tr>
<td>ST 4213 Nonparametric Methods</td>
<td>|</td>
</tr>
<tr>
<td>CH 2313 Analytical Chemistry</td>
<td>|</td>
</tr>
<tr>
<td>BIO 1134 Biology I</td>
<td>|</td>
</tr>
<tr>
<td>GG 4153 Engineering Geology</td>
<td>|</td>
</tr>
<tr>
<td>GG 4233 Applied Geophysics</td>
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</table>

Humanities Electives

<table>
<thead>
<tr>
<th>AA 1063 Introduction to African American Studies</th>
<th>English 1103 Introduction to African American Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 2313 History of Architecture I</td>
<td>English 1104 Introduction to African American Studies</td>
</tr>
<tr>
<td>ARC 3313 History of Architecture II</td>
<td>Engineering 1105 Introduction to African American Studies</td>
</tr>
<tr>
<td>ARC 3323 History of Architecture III</td>
<td>Art 1105 Introduction to African American Studies</td>
</tr>
<tr>
<td>EN 2203 Introduction to Literature</td>
<td>Art 1106 Introduction to African American Studies</td>
</tr>
<tr>
<td>EN 2213 English Literature</td>
<td>Art 1107 Introduction to African American Studies</td>
</tr>
<tr>
<td>EN 2223 English Literature</td>
<td>Art 1108 Introduction to African American Studies</td>
</tr>
<tr>
<td>EN 2243 American Literature</td>
<td>Art 1109 Introduction to African American Studies</td>
</tr>
<tr>
<td>EN 2253 American Literature</td>
<td>Art 1110 Introduction to African American Studies</td>
</tr>
<tr>
<td>EN 2273 World Literature</td>
<td>Art 1111 Introduction to African American Studies</td>
</tr>
<tr>
<td>EN 2283 World Literature</td>
<td>Art 1112 Introduction to African American Studies</td>
</tr>
<tr>
<td>FL 1113 English I Langue I</td>
<td>Art 1113 Introduction to African American Studies</td>
</tr>
<tr>
<td>FL 1123 Language II</td>
<td>Art 1114 Introduction to African American Studies</td>
</tr>
<tr>
<td>FL 1133 Language III</td>
<td>Art 1115 Introduction to African American Studies</td>
</tr>
<tr>
<td>FL 1143 Language IV</td>
<td>Art 1116 Introduction to African American Studies</td>
</tr>
<tr>
<td>Hi 1063 Early U.S. History</td>
<td>Art 1117 Introduction to African American Studies</td>
</tr>
<tr>
<td>Hi 1073 Modern U.S. History</td>
<td>Art 1118 Introduction to African American Studies</td>
</tr>
<tr>
<td>Hi 1163 World History before 1500</td>
<td>Art 1119 Introduction to African American Studies</td>
</tr>
<tr>
<td>Hi 1173 World History since 1500</td>
<td>Art 1120 Introduction to African American Studies</td>
</tr>
<tr>
<td>Hi 1213 Early Western World</td>
<td>Art 1121 Introduction to African American Studies</td>
</tr>
<tr>
<td>Hi 1223 Modern Western World</td>
<td>Art 1122 Introduction to African American Studies</td>
</tr>
<tr>
<td>Hi 1313 East Asian Civilizations to 1300</td>
<td>Art 1123 Introduction to African American Studies</td>
</tr>
<tr>
<td>Hi 1323 East Asian Civilizations since 1300</td>
<td>Art 1124 Introduction to African American Studies</td>
</tr>
<tr>
<td>Hi 4683 Europe The First World War to Hitler</td>
<td>Art 1125 Introduction to African American Studies</td>
</tr>
<tr>
<td>HON 1163 The Quest Begins</td>
<td>Art 1126 Introduction to African American Studies</td>
</tr>
<tr>
<td>HON 3183 Honors Seminar in the Humanities</td>
<td>Art 1127 Introduction to African American Studies</td>
</tr>
<tr>
<td>PHI 103 Introduction to Philosophy</td>
<td>Art 1128 Introduction to African American Studies</td>
</tr>
<tr>
<td>PHI 1113 Introduction to Logic</td>
<td>Art 1129 Introduction to African American Studies</td>
</tr>
<tr>
<td>PHI 1123 Introduction to Ethics</td>
<td>Art 1130 Introduction to African American Studies</td>
</tr>
<tr>
<td>PHI 3023 History of Western Philosophy: Part I</td>
<td>Art 1131 Introduction to African American Studies</td>
</tr>
<tr>
<td>PHI 3033 History of Western Philosophy: Part II</td>
<td>Art 1132 Introduction to African American Studies</td>
</tr>
<tr>
<td>PHI 3153 Aesthetics</td>
<td>Art 1133 Introduction to African American Studies</td>
</tr>
<tr>
<td>REL 1103 Introduction to Religion</td>
<td>Art 1134 Introduction to African American Studies</td>
</tr>
<tr>
<td>REL 3123 World Religions: Part I</td>
<td>Art 1135 Introduction to African American Studies</td>
</tr>
<tr>
<td>REL 3223 World Religions: Part II</td>
<td>Art 1136 Introduction to African American Studies</td>
</tr>
<tr>
<td>**French (FLF), German (FLG), Greek (FLH) Japanese (FLJ), Latin (FLL), Russian (FLR), and Spanish (FLS)</td>
<td>Art 1137 Introduction to African American Studies</td>
</tr>
</tbody>
</table>

Professional Enrichment Elective

Any class that aids in the enrichment of their undergraduate program. A class that counts toward a minor or certificate, an F.E. prep class, etc.

Approved Elective

Almost any non-remedial, non-LSK, non-physical education (excluding varsity sports) course. To be discussed with advisor.

Fine Arts Elective

<table>
<thead>
<tr>
<th>ARC 1013 Architectural Appreciation</th>
<th>ART 1013 Art History I</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 1023 Art History II</td>
<td>ART 1113 Art Appreciation</td>
</tr>
<tr>
<td>BCS 1013 Architectural Appreciation</td>
<td>CO 1503 Introduction to Theatre</td>
</tr>
<tr>
<td>HON 3173 Honors Seminar in Fine Arts</td>
<td>HON 3173 Honors Seminar in Fine Arts</td>
</tr>
<tr>
<td>ID 3643 History of Interiors</td>
<td>LA 1803 Landscape Appreciation</td>
</tr>
<tr>
<td>MU 1113 History and Appreciation of Music</td>
<td>MU 1133 The History of Rock and Roll</td>
</tr>
<tr>
<td>MU 2213 History and Literature of Music I</td>
<td>MU 2213 History and Literature of Music I</td>
</tr>
<tr>
<td>MU 2223 History and Literature of Music I</td>
<td>PE 1323 History and Appreciation of Dance</td>
</tr>
<tr>
<td>PE 1323 History and Appreciation of Dance</td>
<td>PSS 2343 Floral Design</td>
</tr>
<tr>
<td>TKI 2413 History and Appreciation of the Artcrafts</td>
<td></td>
</tr>
</tbody>
</table>

Computer Programming Elective

<table>
<thead>
<tr>
<th>CSC 2133 Advanced Computer Programming C (Comm. College)</th>
<th>CSC 2134 Programming I with C++ (Comm. College)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 2134A Programming I with C++ (Comm. College)</td>
<td>CSC 2134A Programming I with C++ (Comm. College)</td>
</tr>
<tr>
<td>CSE 1233 Computer Programming with C</td>
<td>CSE 1284 Intro to Computer Programming</td>
</tr>
</tbody>
</table>

Engineering Science Electives

<table>
<thead>
<tr>
<th>ABE 3413 Biotechnology</th>
<th>ABE 3513 GPS &amp; GIS in Ag. &amp; Eng.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABE 4613 Biomechanics</td>
<td>CE 2803 Environmental Engineering</td>
</tr>
<tr>
<td>CE 3113 Transportation Engineering</td>
<td>CE 3603 Structural Mechanics</td>
</tr>
<tr>
<td>CHE 2213 Chemical Engineering Analysis</td>
<td>CHE 3113 Chemical Engineering Thermodynamics</td>
</tr>
<tr>
<td>CHE 3413 Engineering Materials</td>
<td>ECE 3413 Intro to Electronic Circuits</td>
</tr>
<tr>
<td>EM 3313 Fluid Mechanics</td>
<td>ME 3513 Thermodynamics I</td>
</tr>
<tr>
<td>ME 3403 Materials for ME Design</td>
<td>ME 3113 Engineering Analysis</td>
</tr>
</tbody>
</table>

Engineering Management Elective

| IE 4513 Engineering Administration | IE 4533 Project Management |

Approved Elective

Almost any non-remedial, non-LSK, non-physical education (excluding varsity sports) course. To be discussed with advisor.