



**California State Polytechnic University, Pomona**  
**Degree Curriculum Sheet**

Plan (Major) **INDUSTRIAL ENGINEERING**

Catalog Year **2010-2011**

Name \_\_\_\_\_

Evaluator \_\_\_\_\_

Subplan/Option \_\_\_\_\_

Minimum Units Required **198**

Student ID \_\_\_\_\_

GWT Satisfied \_\_\_\_\_ Yes \_\_\_\_\_ No

| Required Core Courses   |                    |           |
|---|--------------------|-----------|
| Course  |                    | Units     |
| <i>Students in this major are expected to <b>maintain</b> a GPA of at least 2.00 in all core courses.</i> |                    |           |
| Fundamentals of Human Factors Engineering/Lab   | IE 225/225L        | 3/1       |
| Elements of Industrial Engineering Systems/Lab  | IE 327/327L        | 3/1       |
| Operations Research I   | IE 416             | 4         |
| Operations Research II  | IE 417             | 4         |
| Discrete Systems Simulation/Lab   | IE 429/429L        | 3/1       |
| Operations Planning & Control/Lab   | IE 436/436L        | 2/1       |
| Industrial & Manufacturing Engr Fundamentals  | IME 112            | 3         |
| Industrial & Manufacturing Engr Computations/Lab  | IME 113/113L       | 2/1       |
| Work Analysis & Design/Lab  | IME 224/224L       | 3/1       |
| Industrial Costs & Controls   | IME 239            | 3         |
| Application of Statistics   | IME 301            | 3         |
| Engineering Probability & Statistics  | IME 312            | 3         |
| Production Planning & Control   | IME 326            | 3         |
| Facilities Planning Layout & Design/Lab   | IME 331/331L       | 3/1       |
| Quality Control by Statistical Methods/Lab  | IME 415/415L       | 3/1       |
| Senior Project  | IME 460            | 1         |
| Senior Project  | IME 471 or IME 461 | 2         |
| Senior Project  | IME 472 or IME 462 | 3         |
| Analytic Geometry Calculus II   | MAT 115            | 4         |
| Analytic Geometry Calculus III  | MAT 115            | 4         |
| Calculus of Several Variables I   | MAT 214            | 3         |
| Calculus of Several Variables II  | MAT 215            | 3         |
| Elem Linear Algebra and Diff Equations  | MAT 224            | 4         |
| Engineering Graphics/Lab  | MFE 126/126L       | 2/1       |
| Manufacturing Systems Processes/Lab   | MFE 201/201L       | 3/1       |
| Introduction to Computer Integrated Manuf/Lab   | MFE 450/450L       | 3/1       |
| General Physics/Lab   | PHY 132/132L       | 3/1       |
| General Physics/Lab   | PHY 133/133L       | 3/1       |
| <b>Total Units</b>  |                    | <b>96</b> |

| Elective Core Courses              |          |
|------------------------------------|----------|
| Course                             | Units    |
| Industrial Engineering Electives** | 7        |
| **Select from approved list.       |          |
| <b>Total Units</b>                 | <b>7</b> |

| Required Support Courses                    |              |           |
|---|--------------|-----------|
| Course                                      |              | Units     |
| General Chemistry                           | CHM 121      | 3         |
| General Chemistry Lab (B3)                  | CHM 121L     | 1         |
| General Chemistry/Lab                       | CHM 122/122L | 3/1       |
| Elements of Electrical Engineering/Lab      | ECE 231/231L | 3/1       |
| Analytic Geometry/Calculus I (B4)           | MAT 114      | 4         |
| Vector Statics                              | ME 214       | 3         |
| Strength of Materials                       | ME 218       | 3         |
| Materials Science & Engineering             | MTE 207      | 3         |
| General Physics/Lab (B1, B3)                | PHY 131/131L | 3/1       |
| Ethical Considerations in Tech Science (C4) | EGR 402      | 4         |
| Principles of Economics (D2)                | EC 201       | 4         |
| or Principles of Economics (D2)             | EC 202       | (4)       |
| Asset Allocation in Tech Decision (D4)      | EGR 403      | 4         |
| <b>Total Units</b>                          |              | <b>41</b> |

| Elective Support Courses      |          |
|-------------------------------|----------|
| Course                        | Units    |
| Engineering Science Electives | 7        |
| <b>Total Units</b>            | <b>7</b> |

| General Education Requirements                              |           | IGE (G.E. Alternative)  |
|---|-----------|---|
| Area  | Units     |   |
| <b>Area A Communication &amp; Critical Thinking</b>         | <b>12</b> | IGE 120 4<br>IGE 121 4<br>IGE 122 4<br>IGE 220 4                                      |
| 1 Oral Communication  |           |   |
| 2 Written Communication                                     |           |   |
| 3 Critical Thinking   |           |   |
| <b>Area B Mathematics &amp; Natural Sciences</b>            | <b>16</b> | IGE 221 4<br>IGE 222 4<br>IGE 223 4<br>or EC 201<br>or EC 202                         |
| <i>Select at least one lab course from sub-area 1or 2.</i>  |           |   |
| 1 Physical Science  |           |   |
| 2 Biological Science  |           |   |
| 3 Laboratory Activity                                       |           |   |
| 4 Math/Quantitative Reasoning                               |           |   |
| 5 Science and Technology Synthesis                          |           |   |
| <b>Area C Humanities</b>                                    | <b>16</b> | Area A1 4<br>Area A3 4<br>Area B 16<br>Area C1, C2, or C3 4<br>Area C4 4<br>Area D4 4 |
| 1 Visual and Performing Arts                                |           |   |
| 2 Philosophy and Civilization                               |           |   |
| 3 Literature and Foreign Language                           |           |   |
| 4 Humanities Synthesis                                      |           |   |
| <b>Area D Social Sciences</b>                               | <b>20</b> |   |
| 1 U.S. History, Constitution, American Ideals               |           |   |
| 2 History, Economics and Political Science                  |           |   |
| 3 Sociology, Anthropology, Ethnic & Gender Studies          |           |   |
| 4 Social Science Synthesis                                  |           |   |
| <b>Area E Lifelong Understanding &amp; Self Development</b> | <b>4</b>  | See University Catalog for information on how IGE meets G.E. requirements.            |
| <b>Total Units</b>  | <b>68</b> |   |

| American Institutions   |   |
|---|---|
| Courses that satisfy this requirement may also satisfy G.E. Area D1 | 8 |

| American Cultural Perspectives Requirement   |   |
|--|---|
| Refer to catalog for list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements. | 4 |

| The following required support courses should be taken to satisfy the indicated GE Requirements to achieve the minimum units to degree listed at the top of this sheet. |               |         |
|---|---------------|---------|
| Course  |               | GE Area |
| General Physics/Lab   | PHY 131/131L  | B1, B3  |
| and General Chemistry Lab   | CHM 121L      | B3      |
| Analytic Geometry/Calculus I  | MAT 114       | B4      |
| Ethical Considerations in Tech. & Applied Science   | EGR 402       | C4      |
| Principles of Economics   | EC 201 or 202 | D2      |
| Asset Allocation in Tech Decision Making  | EGR 403       | D4      |
| The remaining GE requirements may be satisfied by any course approved for that area.  |               |         |

No more than 105 community college quarter units or 36 extension credit quarter units may be applied toward a Bachelor's degree.

A minimum 2.0 cumulative GPA is required in core (including option) courses, Cal Poly Pomona courses, and overall work completed in order to receive a degree in this major.

## 2010-2011

