2011-13 Cal Poly Catalog
Industrial & Manufacturing Engineering
Department
BS MANUFACTURING ENGINEERING

☐ 60 units upper division  ☐ GWR
☐ 2.0 GPA  ☐ USCP
* = Required in Support; also satisfies GE
Note: No major or support courses may be taken as credit/no credit.

MAJOR COURSES

IME 101 Intro Industrial and Manufacturing Engr .......................... 1
IME 140 Graphics Communication and Modeling ......................... 2
IME 141 Manufacturing Processes: Net Shape .......................... 1
IME 142 Manufacturing Processes: Mats Joining ......................... 2
IME 144 Intro Design and Manufacturing ................................. 4
5 IME 157 Electronics Manufacturing .............................. 4
IME 223 Process Improvement Fundamentals .......................... 4
6 IME 241 Process Design I ........................................... 4
IME 314 Engineering Economics ........................................... 3
IME 326 Eng Test Dsgn & Analysis or IME 327 (1/23/14) .................. 4
IME 335 Computer-Aided Manufacturing .................................. 4
IME 341 Tool Engineering I or IME 330 (1/23/14) ............. 4
IME 342 Manufacturing Systems Integration ......................... 4
IME 352 Manufacturing Process Design II or IME 450 (1/23/14) ............... 4
IME 356 Manufacturing Automation .................................. 4
IME 417 Supply Chain and Logistics Management ............... 4
IME 418 Product-Process Design ......................................... 4
IME 430 Quality Engineering ............................................... 4
IME 481, 482 Senior Project Design Lab I, II ......................... 2, 3
1, 2, 3 Select 12 units from the following. All but 4 units must be upper level (300-level or above) engineering courses (AERO, BMED, CE, EE, IME, MATE, ME):
AERO 300, 301, 302, 303, 304, 306, 320, 331, 401;
BMED 212, 310, 410, 420, 425, 440;
BUS 310, 311, 346, 488;
BUS/AG/HUM/EDES/ENGR/SCM/UNIV 350;
CE 207;
EE 361;
IME/MATE/HNRS 322;
IME/MATE 458/CPE 488;
IME/AERO 510, 511;
IT 326, 329, 330, 336, 341, 371, 406, 407;
MATE 310, 320, 330, 340, 350, 355, 360, 430, 435, 440, 445, 450, 460;
MATH 344, 350;
ME 305, 318, 326, 328, 329, 341, 343, 405, 406, 410, 412, 415, 416, 422, 423, 430, 431, 441, 446
1, 2, 3

Effective Spring 2012

SUPPORT COURSES

BIO 213 and ENGR/BRAE 213 (B2) ........................................ 2, 2
CE 204 Mechanics of Materials I ........................................ 3
CHEM 124 Gen Chem for Engineering (B3/B4) .......................... 4
CHEM 125 Gen Chem for Engineering .................................... 4
CSC 232 Computer Programming for Scientists and Engineers ........................................... 3
EE 201 Electric Circuits Theory ........................................... 3
EE 251 Electric Circuits Lab ............................................... 1
EE 321 Electronics ........................................................... 3
ENGL 149 Technical Writing for Engineers (A3) ..................... 4
MATE 210 Materials Engineering ......................................... 3
MATE 215 Materials Laboratory I ....................................... 1
MATH 141, 142 Calculus I, II (B1) ..................................... 4, 4
MATH 143 Calculus III (Add'l Area B) .................................. 4
MATH 241 Calculus IV ...................................................... 4
MATH 244 Linear Analysis .................................................. 4
ME 211 Engineering Statics ............................................... 3
ME 212 Engineering Dynamics .......................................... 3
ME 302 Thermodynamics .................................................. 3
PHYS 141 General Physics IA (Add'l Area B) .......................... 4
PHYS 132, 133 General Physics II, III .................................. 4, 4
STAT 321 Prob/Stats for Engrs/Scientists (B6) ......................... 4

GENERAL EDUCATION (GE)

72 units required, 32 of which are specified in Support.
See page 39 for complete GE course listing.
Minimum of 8 units required at the 300 level.

Area A Communication (8 units)

A1 Expository Writing ....................................................... 4
A2 Oral Communication ...................................................... 4
A3 Reasoning, Argumentation, and Writing * 4 units in Support .......... 0

Area B Science and Mathematics (no add'l units required)
B1 Mathematics/Statistics * 8 units in Support ......................... 0
B2 Life Science * 4 units in Support ....................................... 0
B3 Physical Science * 4 units in Support ................................. 0
B4 One lab taken with either a B2 or B3 course ....................... 0
B5 (not required for Engineering students) ................................ 0
B6 Upper-division Area B * 4 units in Support ........................ 0
Additional area units * 8 units in Support ............................. 0

1 IME 400 and IME 500 require a course substitution form and no more than 4 total units are allowed.
2 The courses selected to satisfy this requirement may not be used to satisfy other major, support, or general education requirements (no double counting of coursework).
3 A maximum of 4 units of technical electives may be taken outside of the College of Engineering.
4 Consultation with advisor is recommended prior to selecting technical electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.
5 IME 156 (2 units) and an additional 2 units of technical electives may substitute. (1/23/14)
6 An additional 4 units of technical electives may substitute. (1/23/14)
### Area C  Arts and Humanities (16 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1 Literature</td>
<td>4</td>
</tr>
<tr>
<td>C2 Philosophy</td>
<td>4</td>
</tr>
<tr>
<td>C3 Fine/Performing Arts</td>
<td>4</td>
</tr>
<tr>
<td>C4 Upper-division elective</td>
<td>4</td>
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</tbody>
</table>

**Total for Area C:** 16 units

### Area D/E  Society and the Individual (16 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1 The American Experience (40404)</td>
<td>4</td>
</tr>
<tr>
<td>D2 Political Economy</td>
<td>4</td>
</tr>
<tr>
<td>D3 Comparative Social Institutions</td>
<td>4</td>
</tr>
<tr>
<td>D4 Self Development (CSU Area E)</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total for Area D/E:** 16 units

**FREE ELECTIVES.................................** 0

**Total for FREE ELECTIVES:** 0 units

**Total for all areas:** 196 units