2009-11 Cal Poly Catalog

Industrial & Manufacturing Engineering

BS MANUFACTURING ENGINEERING

- 60 units upper division
- 2.0 GPA
- = Required in Support; also satisfies GE

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: Matls Joining.. 2
IME 144 Intro Design and Manufacturing ............. 4
IME 157 Electronics Manufacturing .................. 4
IME 223 Process Improvement Fundamentals ......... 4
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 I ............. 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

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/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

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’t Area B)* ............... 4
MATH 241 Calculus IV ..................................... 4
MATH 244 Linear Analysis I ............................. 4
ME 211 Engineering Statics ................................ 3
ME 212 Engineering Dynamics ........................... 3
ME 302 Thermodynamics I ................................ 3
PHYS 141 General Physics IA (Add’t 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 50 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’t 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
B5 (requirement for Liberal Arts students only)
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 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.
4 IME 156 (2 units) and an additional 2 units of technical electives may substitute. (1/23/14)
5 An additional 4 units of technical electives may substitute. (1/23/14)
### Area C  Arts and Humanities (16 units)
- C1 Literature ........................................... 4
- C2 Philosophy ........................................ 4
- C3 Fine/Performing Arts ............................... 4
- C4 Upper-division elective .......................... 4

### Area D/E  Society and the Individual (16 units)
- D1 The American Experience (40404) .......... 4
- D2 Political Economy ................................ 4
- D3 Comparative Social Institutions ............... 4
- D4 Self Development (CSU Area E) ............. 4

40

### FREE ELECTIVES
0

196