BS MATERIALS 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

MATE 110 Intro to Materials Engrg Design I ........ 1
MATE 120 Intro to Materials Engrg Design II ........ 1
MATE 130 Intro to Materials Engrg Design III ....... 1
MATE 210 Materials Engineering and MATE 215 Materials Laboratory I ......................... 3,1
MATE 222 Materials Selection for the Life Cycle .. 4
MATE 225 Materials Laboratory II ..................... 1
MATE 232 Materials, Ethics, and Society .......... 4
MATE 235 Materials Laboratory III ................. 1
MATE 310 Noncrystalline Materials Systems ...... 4
MATE 330 Hybrid Materials Systems ............... 4
MATE 340 Electronic Materials Systems .......... 4
MATE 350 Structural Materials Systems .......... 4
MATE 360 Metallurgical Materials Systems ...... 4
MATE 370 Process Design ............................... 4
MATE 481 Corporate Culture .......................... 1
MATE 482, 483, 484 Senior Project I, II, III ....... 1,2,2

1,2 Technical electives ..................................... 12

Select at least 3 courses from the following:

1,2 Approved electives/Technical Breadth electives .... 13

Select 13 units from the following:
AERO/HNRS 310;
BMED 310, 550; BMED/MATE 530;
BRAE 239;
BUS 207, 212, 488;
CD/PSY 254; CE 207;
CHEM 312, 316, 317, 318, 319, 444, 447;
CHEM/MATE 446;
CPE 488/IME/MATE 458;
CSC/CPE 235;
EE/PHYS 422;
ECON 221;
ENGR 451, 470, 471;
ERSC/GEOG 250;
GEOL 201;
HIST 410, 417;
IME 223, 303, 421;
IME/HNRS/MATE 322;
IT 341;

ME 212, 341;
NR/RPTA 203;
PHYS 211, 412, 413;
PSY 256, 305, 419;
UNIV/HNRS 392, 424, 492;
ZOO 331

Total units for Major Courses: 72

SUPPORT COURSES

CE 204 Mechanics of Materials I ..................... 3
CHEM 124 Gen Chem for Engrg I (B3/B4)* .......... 4
CHEM 125 Gen Chem for Engineering II .......... 4
CHEM 305 Physical Chemistry ....................... 4
CSC 231 Programming for Engineering Students or CSC 234 C and Unix ......................... 2
EE 201, 251 Electric Circuits Theory and Lab ...... 3,1
ENGL 149 Technical Writing for Engineers (A3)* 4
IME 314 Engineering Economics (or IME 326) ...... 3
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 I ......................... 4
ME 211 Engineering Statics ......................... 3
ME 343 Heat Transfer or ME 302 Thermodyn. .. 3
PHYS 141 General Physics IA (Add’l Area B) ... 4
PHYS 132, 133 General Physics II, III .......... 4,4
STAT 312 Statistical Methods for Engineers (B6)* 4
IME 144 Intro to Design and Manufacturing ....... 4

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GENERAL EDUCATION (GE)

72 units required, 28 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 (4 units)

B1 Mathematics/Statistics * 8 units in Support .... 0
B2 Life Science .......................................... 4
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 B units* 8 units in Support ...... 0

1 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).

2 Consultation with advisor is recommended prior to selecting approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.

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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

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

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