BS GENERAL ENGINEERING

☑ 60 units upper division ☑ GWR
☑ 2.0 GPA ☑ USCP

* = Required in Support; also satisfies GE

Note: No major, support or concentration courses may be taken as credit/no credit.

MAJOR COURSES

CE 204 Mechanics of Materials I .................................................. 3
CSC 234/CSC 101 ................................................................. 3
EE 201 Electric Circuit Theory .................................................. 3
1 ENGR 110, 111, 112 Engineering Science I, II, III 3, 3, 3
IME 314 Engineering Economics ............................................. 3
MATE 210 Materials Engineering and
MATE 215 Materials Laboratory I ............................................. 3, 1
ME 211 Engineering Statics .................................................... 3
ME 212 Engineering Dynamics ............................................... 3
ME 302 Thermodynamics I .................................................... 3
ME 341 Fluid Mechanics I ..................................................... 3
ME 343 Heat Transfer .......................................................... 4
ENGR 481, 482 Sr. Project Design Lab I, II or
Sr. Project-appropriate engineering discipline ...... 2, 2
2 Concentration or individual course of study ................. 46

SUPPORT COURSES

BIO 213 and ENGR/BRAE 213 (B2)* ........................................ 2, 2
CHEM 124 Gen Chem for Enggr I (B3/B4)* and
CHEM 125 Gen Chem for Enggr II (Add’l Area B)* or CHEM 127, 128 Gen Chem I, II .......... 4, 4
ENGL 149 Technical Writing for Engineers (A3)* ............... 4
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
Select one of the following: MATH 344; STAT 312, 321, 350 (B6)* .......... 4
PHYS 141 General Physics IA ................................................ 4
PHYS 132, 133 General Physics ............................................. 4, 4
Physical science electives .................................................... 4, 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’l units req’d)
B1 Mathematics/Statistics * 8 units in Support ............... 0
B2 Life Science *4 units in Support ................................. 0
B3 Physical Science* 4 units in Support .......................... 0

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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CONCENTRATIONS OR INDIVIDUALIZED COURSE OF STUDY (select one)

Bioengineering Concentration
CSC 341 Numerical Engineering Analysis .......... 4
ENGR 450 Special Topics in Bioengineering ......... 4
IME 144 Introduction to Design and Manufacturing 4
MATH 344 Linear Analysis II ......................... 4

ME 326 Intermediate Dynamics ......................... 4
Select 12 units from the following: ......................... 12
BIO 361, 432, 442; CHEM 305, 371; CSC 471;
EE 336, 419; ENVE 304, 331, 421, 443; MATE
330; ME 328, 329, 401, 428, 445; STAT 312, 321,
350
Advisor approved electives ..................................... 14

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Biomedical Engineering Concentration
CHEM 312 Survey of Organic Chemistry .......... 4
CHEM 313 Survey of Biochemistry and Biotechnology 4
ENGR 450 Special Topics in Bioengineering ......... 4
IME 144 Introduction to Design and Manufacturing 4
MATE 425 Corrosion Engineering ...................... 4
Select 12 units from the following: ......................... 12
BIO 361, 432; BOT 426; CHEM 305, 306, 371,
473, 475, CSC 473, 474; ENVE 304, 331; MATE
446; MATH 344; IME 319, 437; ME 326, 401, 422,
423, 445; PHYS 315, 323; STAT 312, 321, 350
Advisor approved electives ..................................... 13

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Individualized Course of Study ......................... 46

Technical electives. A minimum of 35 units
must be at 300-400 level.

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1 BMED 212 may be substituted for ENGR 112.

2 A minimum of 35 units at 300-400 level must be completed, in a
concentration, individual course of study or free electives, in addition
to those required in Major, Support and General Education, for a total
of 60 upper division units.