

GEORGE MASON UNIVERSITY
THE VOLGENAU SCHOOL OF INFORMATION TECHNOLOGY AND ENGINEERING
B.S. DEGREE IN BIOENGINEERING (3800 Nguyen Engineering Building, 703-993-4190)
<http://bioengineering.gmu.edu/>
2013-2014 CATALOG

	<u>Department(s) & Course #(s)</u>	<u>Completed/ Grade(s)</u>	<u>Needed</u>
<u>GENERAL EDUCATION REQUIREMENTS (24)</u>			
a. Written Communication: ENGH 101 (100), ENGH 302 (C or better) (3,3)		___ ___	___ ___
b. Oral Communication: COMM 100 (3)		_____	_____
c. Quantitative Reasoning (satisfied by completion of major requirements)		_____	_____
d. Literature (3) (from courses approved by the department)	_____	_____	_____
e. Arts (3) (from courses approved by the department)	_____	_____	_____
f. Western Civilization (HIST 100, 125, or acceptable transfer course)		_____	_____
g. Social & Behavioral Science: ECON 103 (3)		_____	_____
h. Natural Science (satisfied by completion of major requirements)		_____	_____
i. Global Understanding (3) (from courses approved by the department)	_____	_____	_____
j. Information Technology (satisfied by completion of major requirements)		_____	_____
k. Synthesis (BENG 492 and 493 are pending approval to meet this requirement)		_____	_____

BIOENGINEERING, MATHEMATICS, COMPUTER SCIENCES, AND BASIC SCIENCES (71)

a. BENG 101, BENG 220 (3,3)		a. ___ ___	___ ___
b. BENG 301, BENG 302 (3,1)		b. ___ ___	___ ___
c. BENG 304, BENG 320 (3,3)		c. ___ ___	___ ___
d. BENG 380, BENG 381 (3,1)		d. ___ ___	___ ___
e. BENG 491, BENG 492 (1,2)		e. ___ ___	___ ___
f. BENG 493, BENG 495 (2,1)		e. ___ ___	___ ___
g. BIOL 213 & BIOL 425 or BIOL 430 or BENG 313 (4,3-4)		g. ___ ___	___ ___
h. CS 112, ENGR 107 (4,2)		g. ___ ___	___ ___
i. Technical Foundation Sequence (see BENG advisor for course options (6)		i. ___ ___	___ ___
j. MATH 113, MATH 114 (4,4)		j. ___ ___	___ ___
k. MATH 213, MATH 214 (3,3)		k. ___ ___	___ ___
l. MATH 203 (3)		l. ___ ___	___ ___
m. PHYS 160, PHYS 161 (3,1)		m. ___ ___	___ ___
n. PHYS 260, PHYS 261 (3,1)		n. ___ ___	___ ___
o. STAT 344 (3)		o. ___ ___	___ ___
p. CHEM 251 (4)		p. ___ ___	___ ___

Concentration in Biomedical Signals and Systems (25)

a. Biomedical Signals and Systems (25)			
1. BENG 425, BINF 401 (3,3)		1. ___ ___	___ ___
2. ECE 301 and one of the following (circle choice): CS 211, CS 222 (3,3)		2. ___ ___	___ ___
3. PHYS 262, PHYS 263 (3,1)		3. ___ ___	___ ___
4. Nine credits of Technical Electives chosen from the following (circle choices): BENG 341, 392, 395, 406, 441, 499, 525, 538; ECE 305, 410, 421, 450 (Students may choose to substitute one of the three credit technical electives with one of the following: BIOL 305/306, CHEM 313/315, CS 310, CS 444, CS 445, NEUR 327, PSYC 372)			

A grade of C or better is required in all BIOL, BENG, ECE, and ENGR courses presented as part of the 120 credits hours needed for the degree.

MINIMUM HOURS TO GRADUATE: 120

UPPER DIVISION HOURS (minimum 45): Satisfied by required courses.

TRANSFER COURSES WITH "L" IN "EQUIVALENCIES" DO NOT CONTRIBUTE TO THE REQUIRED 45 HOURS.

This planning form is intended to be used in consultation with your academic advisor and reflects the requirements for the 2013-2014 Catalog; the University Catalog is the official reference for program requirements

Course Lists (Bioengineering)

University General Education Requirements

Written Communication: ENGH 101 (or 100) and ENGH 302

Oral Communication: COMM 100

Quantitative Reasoning: MATH 113. The Math Placement Test is required to take a MATH course. See this web site for more information: http://cos.gmu.edu/academics/undergraduate/math_placement_testing)

Literature: ARAB 325; CHIN 310, 311, 325, 328; CLAS 250, 260, 340, 350, 360, 380; ENGH 201, 202, 203, 204; FREN 325, 329; FRLN 330; GERM 325; ITAL 320, 325; JAPA 340; PHIL 253; RELI 235; RUSS 325, 326, 327; SPAN 325

Arts: ARTH 101, 102, 103, 200, 201, 203, 204, 321, 322, 324, 333, 334, 335, 340, 341, 342, 344, 345, 360, 362, 372, 373, 376; AVT 103, 104, 215, 222, 232, 243, 252, 253, 262, 272; DANC 101, 119, 125, 131, 145, 161, 225, 231, 245, 301, 390, 391; ENGH 370, 372, 396; FAVS 225; GAME 101; MUSI 100, 101, 102, 107, 301, 302, 380, 381, 382, 383, 384, 385, 387, 389, 485; PHIL 156; THR 101, 150, 151, 210, 230, 395, 411, 412.

Western Civilization: HIST 100 or 125; transfer students may substitute the following courses for HIST 100: HIST 101, 102, 301, 302, 304, 305, 306, 308, 309, 312, 314, 322, 388, 435, 436, 480; transfer students may substitute the following courses for HIST 125: HIST 202 & 387.

Social and Behavioral Sciences: **ECON 103**

Natural Sciences: PHYS 160/161 & 260/261; BIOL 213; CHEM 251

Global Understanding: ANTH 302, 304, 306, 307, 308, 309, 311, 312, 313, 316, 331, 332, 385; ARTH 319, 320, 380, 382, 383, 384, 385, 386; CEIE 100; COMM 305, 456; CRIM 405; DANC 118, 318, 418; ECON 360, 361, 362, 380, 390; ENGH 362, 366; GCH 205; GGS 101; GLOA 101; GOVT 132, 133; HIST 130, 251, 252, 261, 262, 271, 272, 281, 282, 328, 329, 356, 358, 360, 364, 365, 387, 460, 462; JAPA 310; MSOM 305; MUSI 103, 431; PHIL 243; PSYC 379; RELI 100, 211, 212, 313, 315, 341, 374; RUSS 354; SOCI 120, 320, 332; SPAN 322; SYST 100; THR 359, TOUR 210; WMST 100

Information Technology: CS 112 and ENGR 107

Synthesis: **BENG 492 and 493**