

**2018 – 2019 Sample schedule ADJUSTED for
Undergraduate Biomedical Signals and Systems Concentration majors (BMSS)**

First Semester

MATH 113 Analytic Geom. and Calculus I	4
BENG 101 Intro to Bioengineering	3
ENGR 107 Intro to Engineering	2
Mason Core*	3
CHEM 211+213 OR CHEM 271+272 Gen.Chem/ Engr	4
Total	16

Second Semester

MATH 114 Analytic Geom. And Calculus II	4
CS 112 Intro to Computer Programming	4
PHYS 160 University Physics I	3
PHYS 161 University Physics I Lab	1
Mason Core*	3
Total	15

Third Semester

MATH 213 Analytic Geom. & Calculus III	3
MATH 203 Linear Algebra ¹	3
PHYS 260 University Physics II	3
PHYS 261 University Physics II Lab	1
BIOL 213 Cell Structure and Function ¹	4
Total	14

Fourth Semester

MATH 214 Elem. Differential Equations	3
BENG [220]/ 230 Cont. Biomech. & Transp. I	3
BENG 313 Physiology for Engineers	3
PHYS 262 University Physics III ²	3
PHYS 263 University Physics III Lab ²	1
Mason Core*	3
Total	16

Fifth Semester

BENG 320 Bioengineering Signals & Systems	3
BENG [301]/ 330 Comp. Methods in BE	3
BENG [302]/ 331 Comp. Methods in BE lab	1
CS 222 Computer Programming for Engineers OR	3
CS 211 Obj. Oriented Programming	3
Mason Core*	3
Mason Core*	3
Total	16

Sixth Semester

STAT 344 Probability & Statistics for Engineers	3
BENG [380]/ 370 Bioinstrumentation & Devices I	3
BENG [381]/ 371 Bioinst. and Devices I Lab I	1
BENG 304/ BENG 360 Mod.&Cont. Phys. Syst.	3
ECE 301 Digital Electronics OR TE⁴	3
Mason Core (ENGH 302 Adv. Comp) ^{***}	3
Total	16

Seventh Semester

BENG [491]/ 391 Bioengineering Senior Seminar I	1
BENG 492 Senior Advanced Design Project I	3
BENG 420 Bioinformatics for Engineers	3
Technical Elective ³	3
Technical Elective ³	3
Mason Core*	3
Total	16

Eighth Semester

BENG 495 Bioengineering Senior Seminar II	1
BENG 493 Senior Advanced Design Project II	3
Technical Elective ³	3
Technical Elective ³	3
Mason Core*	3
Total	12

Total: 121 credits

¹ All bioengineers will be required to register for a specific section of MATH 203 including a 1-hour recitation with practical applications and for a specific section of BIOL 213.

² Students may substitute CHEM 211 and CHEM 213 (or CHEM 211H + lab) and CHEM 212 and CHEM 214 (or CHEM 212H + lab) for PHYS 262, PHYS 263, and CHEM 271+272.

³ Students choose from a list of approved technical electives, including one of the [Technical Electives](#) from an approved life science course.

⁴ Students in this catalog year and earlier are allowed to substitute ECE 301 with a BIOE Technical Elective. The BIOE Technical Elective will depend on concentration and semester and has to be approved by the academic advisor first.

* <http://masoncore.gmu.edu> Mason Core Categories: One course from each: Social and Behavioral Sciences (ECON103, PSYC100 OR SOCI 101), Oral Communication, Composition I, Arts, Global Understanding, Literature, Western Civilization/World History. ** Composition I and Mason Core-Literature must be completed before taking ENGH 302. ENGH 302 needs to be completed before Senior Design Projects. BIOE allows for ENG 302 natural science section or multidisciplinary section.