

BIOMEDICAL SCIENCES-BS-GENERAL EMPHASIS

THIS IS A **GENERAL** CURRICULUM GUIDE AND IS NOT APPLICABLE TO EVERY STUDENT. IT IS IMPORTANT TO MEET WITH YOUR ADVISOR.

Year One			
BIO 120 General Biology I (w/lab) Prerequisites: High school chemistry, CHM 109, or CHM 115 strongly recommended (CHM 109 or 115 may be taken concurrently)	4 (6)	BMS 208 Human Anatomy Prerequisite: BIO 120 CHM 116 Principles of Chemistry II (w/lab) Prerequisites: CHM 115 and (MTH 122 or MTH 125 or MTH 201)	3 5 (7)
CHM 115 Principles of Chemistry I (w/lab) Prerequisites: High school chemistry and (MTH 110 or MTH 122 or MTH 125 or MTH 201)	4 (6)	WRT 150 Strategies in Writing Gen Ed	4 3
⁴ MTH 122 College Algebra Prerequisite: MTH 110 or by Grand Valley math placement	3		
Gen Ed	3		
Elective	1		
<i>Numbers noted within (parentheses) are contact hours</i>	Total 15		Total 15
Year Two			
BMS 290 Human Physiology Prerequisites: BMS 208 and two semesters of chemistry	3	BIO 375 Genetics/ BIO 376 Genetics Laboratory Prerequisites: BIO 120. Concurrent enrollment in BIO 376 is required (<i>Recommended for pre-med students</i>) OR BIO 355 Human Genetics (lecture only)	3/1 (6)
BMS 291 Laboratory in Human Physiology Prerequisite: BMS 290 or concurrent registration	1 (3)	Prerequisite: BIO 120 or BIO 103, or permission of instructor	3
CHM 241 Organic Chemistry for Life Sciences I (w/lab) Prerequisite: CHM 116	5 (7)	CHM 242 Organic Chemistry for Life Sciences II (w/lab) Prerequisite: CHM 241	4 (6)
STA 215 Introductory Applied Statistics Prerequisite: MTH 110 or equivalent	3	BMS 301 Introduction to Research in Biomedical Sciences Prerequisites: STA 215 and sophomore standing	3
Gen Ed	3	⁴ MTH 123 Trigonometry Prerequisite: MTH 122 or assignment through Grand Valley math placement (MTH 122 may be taken concurrently)	3
		² Elective	1-2
	Total 15		Total 15
Year Three			
CHM 461 Biochemistry I Prerequisite: CHM 242 or CHM 247 and CHM 248	4	BMS 212 Introductory Microbiology Prerequisites: BIO 120 and (CHM 230 or CHM 232 or CHM 241)	3
PHY 220 General Physics I (w/lab & discussion) Prerequisites: MTH 122 and MTH 123	5 (7)	BMS 213 Laboratory in Microbiology Prerequisite: BMS 212 or concurrent enrollment	1 (4)
Gen Ed	3	PHY 221 General Physics II (w/lab & discussion) Prerequisites: PHY 220	5 (7)
Gen Ed	3	Issue	3
		Gen Ed	3
	Total 15		Total 15
Year Four			
³ BMS 495 Concepts in Wellness (Capstone) SWS Prerequisites: BMS 208, BMS 212, BMS 290 or 291, and senior standing	3	¹ Biomedical Science Elective ¹ Biomedical Science Elective	3 3
Issue	3	Gen Ed	3
² Elective	3	² Elective	3
² Elective	3	² Elective	3
² Elective	3		
	Total 15		Total 15

*The block tuition rate is for 12-15 credits. You will pay additional tuition for any credits over 15.

¹Biomedical Science Electives must consist of at least 6 hours of upper-division Biomedical Science courses. See list on the back for elective options.

² Elective refers to any course that will help you reach the required 120 credits to graduate. **Consider a minor or certificate.**

³ Students must complete two courses with an SWS attribute.

⁴ For students with the Advanced Waiver/Override for Mathematics based on ACT scores, it is **STRONGLY RECOMMENDED** that proficiency in MTH 123 – Trigonometry – be demonstrated by either taking the MTH 123 course or by achieving a passing score on the GVSU math placement test **PRIOR** to taking PHY 220 and 221. Students who have AP/IB/dual enrollment credit for MTH 201 (Calculus I), or complete the MTH 122 and 123 proficiency tests, only need to complete STA 215. **To take the Math Proficiency Tests online, visit this link:** gvsu.edu/s/mv

Declaring the BMS Major:

1. In myBanner, select "Student" > "Student Records" > "Change Major" > "Change Major 1/Program"
2. Choose "Biomedical Science-BS" from the drop-down box. You have the option of adding an emphasis in Nutrition or Microbiology but this is not required.
3. Click "Submit" and then "Change to New Program"
4. Declare "**PreProfessional Preparation**" as your SECOND MAJOR if you are planning on medical, dental, pharmacy, chiropractic, podiatry, or optometry school.

General Education Overlap

General Education Categories fulfilled by the Biomedical Sciences Major:	
Life Sciences with Lab: BIO 120	Physical Sciences with Lab: CHM 115
Mathematical Sciences: STA 215, MTH 122, MTH 123	
Additional Overlap for Pre-Professional Students	
Social and Behavioral Sciences: PSY 101 and SOC 101	

Biomedical Science Elective Courses (6 credits required)

Anatomy	Microbiology	Nutrition
BMS 309 Laboratory in Human Anatomy (1)	¹ BMS 312 Bacterial Genetics (3) (only offered in even-numbered years)	BMS 305 Clinical Nutrition (3)
² BMS 355 Anatomy of Joints (2) w/Lab	¹ BMS 313 Bacterial Genetics Laboratory (1) (only offered in even-numbered years)	¹ BMS 306 Advanced Human Nutrition (3)
BMS 393 Laboratory Assistant in Human Anatomy (1)	¹ BMS 410 Immunology (3)	² BMS 404 Community Nutrition (3)
¹ BMS 427 Neuroanatomy (1)	² BMS 411 Immunology Laboratory (1)	BMS 407 Nutrition in the Life Cycle (3)
¹ BMS 450 Human Histology (4) w/Lab	² BMS 412 Medical Bacteriology (3)	² BMS 415 Nutrition and Physical Performance (3)
² BMS 460 Regional Human Anatomy (4) w/Lab	² BMS 413 Medical Bacteriology Laboratory (2)	
¹ BIO 422 Embryology (3) w/Lab	¹ BMS 422 Bacterial Physiology (3) (only offered in odd-numbered years)	
	¹ BMS 423 Bacterial Physiology Laboratory (2) (only offered in odd-numbered years)	General
	² BMS 431 Medical Virology (3)	BMS 380/480 Special Topics in the Biomedical Sciences (1-4)
	¹ BMS 433 Medical Parasitology (3) w/Lab	BMS 399 Readings in the Biomedical Sciences (1-3)
Physiology		BMS 492 Biomedical Sciences Internship (1-4)
BMS 310 Basic Pathophysiology (3)		BMS 499 Research in the Biomedical Sciences (1-3)
BMS 311 Pharmacological Aspects of Biomedical Sciences (3)		CMB 405 Cell and Molecular Biology (4)
¹ BMS 375 The Biology of Aging (3)		CMB 406 Cell and Molecular Biology Laboratory (2)
BMS 392 Laboratory Assistant in Physiology (1)		² CMB 440 Research Applications in Drosophila Genomics (3) w/Lab
² BMS 426 Sensory Systems Neuroscience: Anatomy and Physiology (3)		
² BMS 428 Neurosciences (3)		<i>Numbers in parentheses indicate # of credits</i>
² BMS 475 The Pathology of Aging (3)		¹ <i>Offered in Fall Only</i>
² BMS 508 Advanced Human Physiology (3)		² <i>Offered in Winter Only</i>

It is imperative to meet with your faculty advisor and an advisor in the CLAS Academic Advising Center regularly.

The CLAS Academic Advising Center is located in C-1-140 MAK, 616-331-8585

<http://www.gvsu.edu/clasadvising> (Also find us on Orgsync, Facebook, and Twitter!)

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Pre-Professional Students

(Pre-Chiropractic, Pre-Dental, Pre-Medical, Pre-Optometry, Pre-Pharmacy, Pre-Podiatry, & Pre-Veterinary)

Keep in mind that you may choose any major as long as you complete the prerequisites for your professional program.

See <http://gvsu.edu/s/zY> for additional details regarding professional school information.

Follow the Pre-Professional Blog: <https://preprofessionallakers.wordpress.com>