



## Biomedical Sciences & Biotechnology Course Prerequisites

Students must receive a "C" or better in all prerequisite courses, unless otherwise stated.

### Core Courses

\*Courses are required for Biotechnology majors only.

Course	Prerequisites
<b>BCH 4024</b> Medical Biochemistry	CHM 2211
<b>BCH 4053</b> Biochemistry I	CHM 2211
<b>BSC 2010C</b> Biology I	None
<b>BSC 3403C</b> Quantitative Biological Methods	BSC 2010C and CHM 2046
<b>CHM 2045C</b> Chemistry Fundamentals I	Score of 76% on the Chemistry Placement Exam or CHM 1025
<b>CHM 2046</b> Chemistry Fundamentals II	CHM 2045C
<b>CHM 2046L</b> Chemistry Fundamentals Laboratory	CHM 2046 (can be taken as a co-requisite)
<b>CHM 2210</b> Organic Chemistry I	CHM 2046
<b>CHM 2211</b> Organic Chemistry II	CHM 2210
<b>CHM 2211L</b> Organic Laboratory Techniques I	CHM 2046L and CHM 2210
<b>MAC 2311C</b> Calculus with Analytic Geometry I	Appropriate score on the Math Placement Exam or MAC 1105C, MAC 1114C, and MAC 1140C
<b>MCB 3020C</b> General Microbiology	BSC 2010C and CHM 2210
<b>MCB 4312</b> Molecular Biotechnology*	MCB 3020C
<b>MCB 4720</b> Industrial Perspectives Seminar*	Corequisite: MCB 3020C
<b>MCB 4721C</b> Methods in Biotechnology*	BSC 3403C
<b>PCB 3233</b> Immunology	BSC 2010C
<b>PCB 3233L</b> Immunology Laboratory	BSC 2010C
<b>PCB 3522</b> Molecular Biology I	BSC 2010C and CHM 2046
<b>PCB 4135</b> Applied Molecular Cell Biology*	PCB 3522
<b>PCB 4280</b> Molecular Immunology	MCB 3020C
<b>PCB 4524</b> Molecular Biology II	PCB 3522
<b>PHY 2048C</b> General Physics Using Calculus I	MAC 2311C
<b>PHY 2049C</b> General Physics Using Calculus II	MAC 2312 and PHY 2048C
<b>PHY 2053C</b> College Physics I	MAC 1105C and MAC 1114C
<b>PHY 2054C</b> College Physics II	PHY 2053C
<b>SLS 2311C</b> Overview of Select Medical Careers	None
<b>STA 2023</b> Statistical Methods I	Any MAC course

Note: The Physics I and II lectures and labs can be taken combined (e.g., PHY 2053C) or separately (e.g., PHY 2053 + PHY 2053L).



## Restricted Electives for Biomedical Sciences Majors

See Degree Requirements document for a full list of restricted electives.

Course	Prerequisites
<b>BCH 4054</b> Biochemistry II	BCH 4053
<b>MCB 3202</b> Principles of Infectious Disease	MCB 3020C
<b>MCB 3203</b> Pathogenic Microbiology	MCB 3020C
<b>MCB 3203L</b> Pathogenic Microbiology Lab	MCB 3020C and CR: MCB 3203
<b>MCB 4207</b> Infectious Processes	MCB 3020C
<b>MCB 4224</b> Molecular Biology of Diseases	PCB 3522 or PCB 3023
<b>MCB 4276</b> Epidemiology of Infectious Diseases	MCB 3020C
<b>MCB 4312</b> Molecular Biotechnology	MCB 3020C
<b>MCB 4404</b> Bacterial Genetics and Physiology	PCB 3522
<b>MCB 4414</b> Microbial Metabolism	BSC 3403C
<b>MCB 4503C</b> Virology	PCB 3522
<b>MCB 4721C</b> Methods in Biotechnology	BSC 3403C
<b>MLS 3305</b> Hematology	CHM 2210 and PCB 3703C
<b>MLS 3305L</b> Hematology Lab	MLS 3305
<b>MLS 4334</b> Hemostasis	CHM 2210 and PCB 3703C
<b>MLS 4505C</b> Immunodiagnosics	PCB 3233 and PCB 3233L
<b>PCB 3063</b> Genetics	BSC 2010C and CHM 2046
<b>PCB 3703C</b> Human Physiology	BSC 2010C and CHM 2045C
<b>PCB 4028</b> Molecular and Cellular Pharmacology	PCB 3522
<b>PCB 4234</b> Cancer Biology	PCB 3522 or PCB 3023
<b>PCB 4264</b> Stem Cell Biology	PCB 3522 or PCB 3023
<b>PCB 4514</b> Genetics II	PCB 3063 with a "B" or better
<b>PCB 4521</b> Tissue Engineering	MCB 3020C or CHM 2045C
<b>PCB 4723</b> Animal Physiology ( <i>pre-vet students</i> )	PCB 3023
<b>PCB 4805</b> Endocrinology	CHM 2211 and PCB 3703C
<b>PCB 4843</b> Cellular and Molecular Neuroscience	ZOO 3744
<b>ZOO 3713C</b> Comparative Vertebrate Anatomy ( <i>pre-vet students</i> )	BSC 2010C and BSC 2011C
<b>ZOO 3733C</b> Human Anatomy	BSC 2010C
<b>ZOO 3744</b> Neurobiology	BSC 2010C
<b>ZOO 3755C</b> Introductory Histology	PCB 3703C and ZOO 3733C
<b>ZOO 4513</b> Animal Behavior ( <i>pre-vet students</i> )	PCB 3044
<b>ZOO 4603C</b> Embryology/Development	PCB 3063 and PCB 3023, or PCB 3522
<b>ZOO 4605</b> Human Clinical Embryology	ZOO 3733C
<b>ZOO 4701</b> Dissection Techniques	ZOO 3733C
<b>ZOO 4742</b> Advanced Neurobiology	ZOO 3744
<b>ZOO 4743C</b> Clinical Neuroanatomy & Neuroscience	ZOO 3733C with a "B" or better
<b>ZOO 4747C</b> Clinical Neuroscience	ZOO 3744 or ZOO 4743C
<b>ZOO 4753C</b> Vertebrate Histology	ZOO 3733C



### Restricted Electives for Biotechnology Majors

Course	Prerequisites
<b>BCH 4054</b> Biochemistry II	BCH 4053
<b>BCH 4103L</b> Biochemical Methods	BCH 4053
<b>BSC 3424</b> Nanobiotechnology	MCB 1310 and CHM 2046 or PHY 2054C
<b>BSC 4434</b> Biomedical Informatics: Sequence Analysis	PCB 3522 or PCB 3023
<b>BSC 4439</b> Biomedical Informatics: Structure Analysis	PCB 3522 or PCB 3023
<b>CHM 3120</b> Analytical Chemistry	CHM 2046 and CHM 2046L
<b>CHM 3120L</b> Analytical Chemistry Laboratory	Corequisite: CHM 3120
<b>CHM 3410</b> Physical Chemistry I	CHM 2046, PHY 2049C, and MAC 2312
<b>MCB 3202</b> Principles of Infectious Disease	MCB 3020C
<b>MCB 3203</b> Pathogenic Microbiology	MCB 3020C
<b>MCB 3203L</b> Pathogenic Microbiology Lab	MCB 3020C and CR: MCB 3203
<b>MCB 4201</b> Microbial Stress Response	MCB 3020C and PCB 3522
<b>MCB 4204</b> Cell Micro: Host-Pathogen Interactions	MCB 3020C and PCB 3522
<b>MCB 4207</b> Infectious Processes	MCB 3020C
<b>MCB 4224</b> Molecular Biology of Diseases	PCB 3522 or PCB 3023
<b>MCB 4404</b> Bacterial Genetics and Physiology	PCB 3522
<b>MCB 4414</b> Microbial Metabolism	BSC 3403C
<b>MCB 4503C</b> Virology	PCB 3522
<b>MCB 4603</b> Environmental Microbiology	MCB 3020C
<b>PCB 3063</b> Genetics	BSC 2010C and CHM 2046
<b>PCB 3703C</b> Human Physiology	BSC 2010C and CHM 2045C
<b>PCB 4174</b> Foundation of Bio-Imaging Science	BSC 2010C, CHM 2210, MAC 2311C, and PHY 2049C
<b>PCB 4234</b> Cancer Biology	PCB 3522 or PCB 3023
<b>PCB 4264</b> Stem Cell Biology	PCB 3522 or PCB 3023
<b>PCB 4284</b> Immunobiology	PCB 3233
<b>PCB 4521</b> Tissue Engineering	CHM 2045C or MCB 3020C
<b>PCB 4663</b> Human Genetics	PCB 3522 or PCB 3023
<b>PCB 4805</b> Endocrinology	CHM 2211 and PCB 3703C
<b>PCB 4813</b> Molecular Aspects of Obesity	PCB 3522 or BCH 4053
<b>PCB 4832</b> Cell and Molec Basis of Brain Functions	PCB 3522, PCB 3703C, and ZOO 3733C
<b>PCB 4833</b> Advanced Human Physiology	PCB 3522, PCB 3703C, and ZOO 3733C
<b>PCB 4843</b> Cellular and Molecular Neuroscience	ZOO 3744