

B. S. MICROBIOLOGY

FRESHMAN YEAR

<u>First Semester</u>	<u>Second Semester</u>
BIOL 110 Prin. of Biol. I ¹ 5(4,3)	BIOL 111 Prin. of Biol. II ¹ 5(4,3)
CH 101 General Chemistry 4(3,3)	CH 102 General Chemistry 4(3,3)
COMM 150 Intro. to Human Comm. or 3(2,2)	ENGL 103 Accelerated Composition 3(3,1)
COMM 250 Public Speaking 3(3,1)	Mathematical Sciences Requirement ² 3-4
MICRO 101 Microbes and Human Affairs... 1(1,0)	15-16
MTHSC 106 Calculus of One Var. I 4(4,0)	
17	

SOPHOMORE YEAR

CH 223 Organic Chemistry and 3(3,0)	BIOSC 434 Bio. Chem. Lab Techniques..... 2(1,3)
CH 227 Organic Chemistry Lab 1(0,3)	CH 224 Organic Chemistry and 3(3,0)
Arts and Humanities (Literature) Req. ³ 3	CH 228 Organic Chemistry Lab 1(0,3)
General Microbiology Requirement ⁴ 4	Arts and Humanities (Non-Lit) Req. ³ 3
Social Science Requirement ³ 3	Biochemistry Requirement ⁶ 3
Elective ⁵ 3	Microbiology Requirement ⁷ 3
17	15

JUNIOR YEAR

BIOSC 461 Cell Biology 3(3,0)	ENGL 315 Scientific Writing and Comm..... 3(3,0)
MICRO 401 Microbial Diversity and Ecol... 4(2,6)	MICRO 412 Bacterial Physiology 4(3,3)
PHYS 207 General Physics I and 3(3,0)	Microbiology Requirement ⁷ 3
PHYS 209 General Physics I Lab or 1(0,2)	Virology Requirement ⁸ 3
PHYS 122 Physics with Calculus I and ... 3(3,0)	Elective ^{5,9} 4
PHYS 124 Physics Lab I 1(0,3)	17
Microbiology Requirement ⁷ 3	
14	

SENIOR YEAR

MICRO 415 Microbial Genetics 4(3,3)	MICRO 493 Senior Seminar 2(2,0)
Microbiology Requirement ⁷ 4	Microbiology Requirement ⁷ 4
Social Science Requirement ³ 3	Elective ⁵ 9
Elective ⁵ 3	15
14	

Total Semester Hours = 124 -125

¹ BIOL 110 and BIOL 111 are strongly recommended; however, BIOL 103/105 may substitute for BIOL 110 and BIOL 104/106 may substitute for BIOL 111. The remaining 1-2 credits required must be satisfied by completing 1-2 extra credits from departmental course offerings at the 300 level or above. See advisor

² MTHSC 111, 301, EX ST 301 or other approved coursework. See advisor. Medical/dental schools have different mathematics requirements.

³ See General Education Requirements. Six of these credit hours must also satisfy the Cross-Cultural Awareness and Science and Technology in Society Requirements.

⁴ MICRO 305 or other approved coursework.

⁵ Elective hours may be used toward satisfying the requirements of a minor.

⁶ BIOCH 301 or 305 or other approved coursework.

⁷ See advisor. Minimum of 17 credits is required. At least one course must be selected from each of the following fields:

Biomedicine—BIOSCI 420, 434, 456/457, 467, 484, 489, GEN 300, HLTH 380, MICRO 400, 411, (AVS, BIOSC) 414, 417

Environmental— BIOSC (PL PA) 425, MICRO 402, 403, 410

Food Safety, Industrial, and Technology — BIOSC 487, GEN (BIOSC, MICRO) 418, MICRO 407, 413

⁸ BIOSC 454 or MICRO 416

⁹ Students planning on applying to medical/dental schools should take PHYS 208 and 210 during the second semester junior year.

B. S. MICROBIOLOGY BIOMEDICINE CONCENTRATION

FRESHMAN YEAR

<u>First Semester</u>	<u>Second Semester</u>
BIOL 110 Prin. of Biol. I ¹ 5(4,3)	BIOL 111 Prin. of Biol. II ¹ 5(4,3)
CH 101 General Chemistry 4(3,3)	CH 102 General Chemistry 4(3,3)
COMM 150 Intro. to Human Comm. or 3(2,2)	ENGL 103 Accelerated Composition 3(3,1)
COMM 250 Public Speaking 3(3,1)	Mathematical Sciences Requirement ² 3-4
MICRO 101 Microbes and Human Affairs... 1(1,0)	15-16
MTHSC 106 Calculus of One Var. I 4(4,0)	
17	

SOPHOMORE YEAR

CH 223 Organic Chemistry and 3(3,0)	CH 224 Organic Chemistry and 3(3,0)
CH 227 Organic Chemistry Lab 1(0,3)	CH 228 Organic Chemistry Lab 1(0,3)
Arts and Humanities (Literature) Req. ³ 3	Arts and Humanities (Non-Lit) Req. ³ 3
General Microbiology Requirement ⁴ 4	Biochemistry Requirement ⁵ 3
Elective 4	Biomedicine Requirement ⁶ 3
15	Social Science Requirement ³ 3
	16

JUNIOR YEAR

MICRO 401 Microbial Diversity and Ecol... 4(2,6)	ENGL 315 Scientific Writing and Comm..... 3(3,0)
MICRO (AVS, BIOSC) 414 Basic Immunol.. 4(2,6)	MICRO 412 Bacterial Physiology 4(3,3)
PHYS 207 General Physics I and 3(3,0)	PHYS 208 General Physics I and 3(3,0)
PHYS 209 General Physics I Lab or 1(0,2)	PHYS 210 General Physics I Lab or 1(0,2)
PHYS 122 Physics with Calculus I and ... 3(3,0)	PHYS 221 Physics with Calculus II and 3(3,0)
PHYS 124 Physics Lab I 1(0,3)	PHYS 223 Physics Lab II 1(0,3)
Genetics Requirement ⁷ 3	Elective 4
15	15

SENIOR YEAR

BIOSC 461 Cell Biology 3(3,0)	MICRO 411 Pathogenic Bacteriology and 3(3,0)
BIOSC 462 Cell Biology Lab 2(1,2)	MICRO 421 Pathogenic Bacteriology Lab ... 1(0,3)
MICRO 415 Microbial Genetics 4(3,3)	MICRO 417 Mol. Mech. Carcin & Aging 3(3,0)
MICRO 416 Introductory Virology 3(3,0)	MICRO 493 Senior Seminar 2(2,0)
Social Science Requirement ³ 3	Biomedicine Requirement ⁶ 3
15	Elective 3
	15

Total Semester Hours = 123 -124

¹ BIOL 110 and BIOL 111 are strongly recommended; however, BIOL 103/105 may substitute for BIOL 110 and BIOL 104/106 may substitute for BIOL 111. The remaining 1-2 credits required must be satisfied by completing 1-2 extra credits from departmental course offerings at the 300-level or above. See advisor

² MTHSC 111, 301, EX ST 301 or other approved coursework. See advisor. Medical/dental schools have different mathematics requirements.

³ See General Education Requirements. Six of these credits must also satisfy the Cross-Cultural Awareness and the Science and Technology in Society Requirements.

⁴ MICRO 305 or other approved coursework.

⁵ BIOCH 301, 305 or other approved coursework.

⁶ BIOCH 423, 432, BIOSC 420, (PL PA) 425, 434, 456 & 457, 467, 484, 489, HLTH 380, MICRO 400, or 491

⁷ GEN 300, 302 or other approved coursework.