

# BACHELOR OF SCIENCE DEGREE

## MICROBIOLOGY

### COORDINATE MAJOR

FOR ADDITIONAL INFORMATION, PLEASE CONTACT THE [DEPARTMENT OF MICROBIOLOGY & MOLECULAR GENETICS](#)

#### (1) UNIVERSITY REQUIREMENTS

##### Writing Requirement

Tier I: LB 133 4  
 Tier II: Satisfied by completing the Lyman Briggs College History, Philosophy and Sociology of Science and Senior requirements listed below.

##### Integrative Studies in Arts & Humanities (IAH)

IAH 201-210\* 4  
 IAH 211-241\*† 4

##### Integrative Studies in Social, Behavioral & Economic Sciences (ISS)

ISS 200-level course\* 4  
 ISS 300-level course\*‡ 4

\*National, International, & Multicultural Diversity  
 Students must include at least one "N" course and one "I" course in their Integrative Studies programs. A "D" course may meet either an "N" or an "I" requirement, but not both.

†Beginning Summer 2013, LB 331, 333, and 336 will fulfill the IAH "B" university requirement (IAH 211 or higher). Please consult your LBC advisor for specific details for your program.

‡Beginning Summer 2013, LB 332, 334, and 335 will fulfill the ISS 300-level university requirement. Please consult your LBC advisor for specific details for your program.

##### Mathematics, Biological and Physical Sciences

Satisfied by the Lyman Briggs College requirements in Mathematics, Biological and Physical Sciences (see below).

Minimum number of credits required: 120

Minimum cumulative and major grade point average: 2.0

#### (2) LYMAN BRIGGS COLLEGE REQUIREMENTS

##### Biological Sciences (9 cr.)

Complete ONE of the following groups of courses  
 (1) LB 144 & 145\* 9  
 (2) BS 161, 162, 171, & 172\* 10

##### Chemistry (9 cr.)

Complete ONE of the following groups of courses  
 (1) LB 171, 171L, 172, & 172L\* 9  
 (2) CEM 141, 142, 161, & 162\* 9

##### Physics (8-10 cr.)

Complete ONE of the following groups of courses  
 (1) LB 273, 274\* 8  
 (2) PHY 231, 232, 251, & 252\* 8

##### Mathematics (6-8 cr.)

Complete ONE of the following groups of courses  
 (1) LB 118 & 119\* 8  
 (2) LB 118 & STT 231\* 7  
 (3) MTH 132 & 133\* 7  
 (4) MTH 132 & STT 231\* 7

##### History, Philosophy & Sociology of Science (11-12 cr.)

LB 133 4  
 LB 330-336, 355, 490E; ENG 473A; HST 425; SOC 368 7-8

##### Senior Seminar (4 cr.)

LB 492 4

\*Biology, Chemistry, Physics & Mathematics courses also meet graduation requirements for major

### (3) MAJOR REQUIREMENTS

Complete ONE of the following options (8 cr.)			
CEM	251	Organic Chemistry I	3
CEM	252	Organic Chemistry II	3
CEM	255	Organic Chemistry Laboratory	2
Or			
CEM	351	Organic Chemistry I	3
CEM	352	Organic Chemistry II	3
CEM	355	Organic Laboratory I	2
Complete ONE of the following options (4-6 cr.)			
BMB	401	Basic Biochemistry	4
Or			
BMB	461	Advanced Biochemistry I	3
BMB	462	Advanced Biochemistry II	3
Complete the following courses (16 cr.)			
MMG	301	Introductory Microbiology	3
MMG	302	Introductory Laboratory for General And Allied Health Microbiology	1
MMG	408	Advanced Microbiology Laboratory	3
MMG	421	Prokaryotic Cell Physiology	3
MMG	431	Microbial Genetics	3
Complete ONE of the following options (3-4 cr.)			
MMG	491	Current Topics in Microbiology & Molecular Genetics	3
Or			
MMG	492	Undergraduate Research Seminar And	1
MMG	499	Undergraduate Research	2
Or			
MMG	499H	Honors Research	2
Complete FOUR of the following courses (12-13 cr.)			
EPI	390	Disease in Society: Intro to Epidemiology And Public Health	4
MMG	413	Virology	3
MMG	425	Microbial Ecology	3
MMG	426	Biogeochemistry	3
MMG	433	Microbial Genomics	3
FSC	440	Food Microbiology	3
MMG	445	Microbial Biotechnology	3
MMG	451	Immunology	3
MMG	461	Molecular Pathogenesis	3
MMG	463	Medical Microbiology	3
MMG	801	Integrative Microbial Biology	4

**IMPORTANT: These guidelines are presented for planning purposes only. Students MUST consult a department advisor for confirmation of major requirements.**