

Mississippi State University

Microbiology Degree (B.S.) Requirements- 124 Hours

(Must earn a "C" or higher in all Biology Courses)

Revised 05/2023

Departmental Core Requirements:

Welcome to Biological Sciences- BIO 1111
Biology 1 w/ lab- BIO 1134
Biology 2 w/ lab- BIO 1144
Cell Biology- BIO 2103

Microbiology Requirements:

General Microbiology w/lab- BIO 3304
Pathogenic Microbiology w/ lab- BIO 4405
Immunology- BIO 4413
Virology- BIO 4433
Bacterial Genetics- BIO 4443
Bacterial Genetics Lab- BIO 4442
Bacterial Physiology- BIO 4463

Microbiology Electives:

(8 hours)

(Consult advisor)

Additional Degree Requirements:

Chemistry 1- CH 1213
Invst in Chemistry 1 Lab - CH 1211
Chemistry 2- CH 1223
Invst in Chemistry 2 Lab - CH 1221
Organic Chemistry 1- CH 4513
Organic Chemistry 1 Lab- CH 4511
Organic Chemistry 2- CH 4523
Organic Chemistry 2 Lab- CH 4521
General Physics 1 w/ lab (trig based)- PH 1113
General Physics 2 w/ lab (trig based)- PH 1123

General Physics 3 w/ lab (trig based)- PH 1133 %

(% only required for pre-med students planning to attend an out-of-state medical school)

Choose **one** Biochemistry Course below:

Principles of Biochemistry- BCH 4013 (degree requirements only)
General Biochemistry 1- BCH 4603 (pre-professional and graduate track)
General Biochemistry 2- BIO 4613

University General Education Requirements:

English Comp 1- EN 1103
English Comp 2- EN 1113
1 Literature Elective (see elective sheet)
1 Fine Arts Elective (see elective sheet)
1 History Elective (see elective sheet)
1 Foreign Language (see elective sheet)
(must be the second level - ex. FLS 1123)
Fundamentals of Public Speaking (CO 1003) **(or)**
Intro to Communication (CO 1013)
2 Social Science Electives (see elective sheet)
(must be from two separate disciplines)

Mathematics Requirements:

Calculus 1 - MA 1713*
Intro to Statistical Inference - ST 3123** **OR**
Intro to Statistics - ST 2113

General Electives (any courses outside of degree requirements)
15-20 Hours

(Do not take BIO 1004, BIO 1023, BIO 1123)

*Requires an ACT Math sub score of 26+ or a grade of "C" or better in Trigonometry or Pre-Calculus (MA 1453)

**Requires an ACT Math sub score of 24+ or a grade of "C" or better in College Algebra

(Pre-Dental Students must take the degree math requirements **and College Algebra-MA 1313, or Trigonometry-MA 1323, or Calculus 2 MA-1723.)**

COLLEGE OF ARTS & SCIENCES ELECTIVES 2018-2019

Optional Courses for Fine Arts, Humanities, Social Sciences & Behavioral, Foreign Language, and Public Speaking

FINE ARTS (ONE course required)

- AAS 1103 African American Music
- ARC 1013 Architectural Appreciation
- ART 1013 Art History I
- ART 1023 Art History II
- ART 1113 Art Appreciation
- CO 1503 Introduction to the Theatre
- HON 3173 Honors Seminar in Fine Arts
- MU 1103 African American Music
- MU 1113 History and Appreciation of Music
- MU 1123 History and Appreciation of American Music
- MU 1133 The History of Rock and Roll
- MU 2323 Music History III
- MU 3023 Survey of Western Music History II
- PE 1323 History and Appreciation of Dance

HUMANITIES (ONE EN and ONE HI course required)

- AAS 1063 Introduction to African American Studies
- AAS 2363 Introduction to African American Literature
- AAS 3013 African American History to 1865
- AAS 3023 African American History since 1865
- EN 2203 Introduction to Literature (Not applicable if honors sections are taken)
- EN 2213 English Literature before 1800
- EN 2223 English Literature After 1800
- EN 2243 American Literature Before 1865
- EN 2253 American Literature After 1865
- EN 2273 World Literature Before 1600
- EN 2283 World Literature After 1600
- HI 1063 Early U.S. History
- HI 1073 Modern U.S. History
- HI 1163 World History Before 1500
- HI 1173 World History Since 1500
- HI 1213 Early Western World
- HI 1223 Modern Western World
- HI 1313 East Asian Civilizations to 1300
- HI 1323 East Asian Civilizations Since 1300
- HI 3013 African American History to 1865
- HI 3023 African American History since 1865
- HON 1163 The Quest Begins
- HON 3183 Honors Seminar in the Humanities

SOCIAL AND BEHAVIORAL SCIENCES (TWO courses in different disciplines required)

- AN 1103 Introduction to Anthropology
- AN 1143 Introduction to Cultural Anthropology
- AN 1543 Introduction to Archaeology
- AN 2403 Introduction to the Study of Language
- CO 1223 Introduction to Communication Theory
- CO 1403 Introduction to Mass Media
- EC 1033 Economics of Social Media
- EC 2113 or 2123 Principles of Macroeconomics *or* Principles of Microeconomics
- EN 2403 Introduction to the Study of Language
- GR 1123 Introduction to World Geography
- GR 2013 Cultural Geography
- HON 1173 The West and the Wider World
- HON 3143 Honors Seminar in Social Science
- PS 1113 American Government
- PS 1313 Introduction to International Relations
- PS 1513 Comparative Government
- PSY 1013 General Psychology
- PSY 3073 Psychology of Interpersonal Relations
- SO 1003 Introduction to Sociology
- SO 1103 Contemporary Social Problems
- SO 1203 Sociology of Families

FOREIGN LANGUAGE (TWO semesters in one language required)

- FLS 1113 and FLS 1123 Spanish I & II
- FLF 1113 and FLF 1123 French I & II
- FLG 1113 and FLG 1123 German I & II
- FLJ 1113 and FLJ 1123 Japanese I & II
- FLL 1113 and FLL 1123 Latin I & II
- FLR 1113 and FLR 1123 Russian I & II

PUBLIC SPEAKING (ONE REQUIRED)

- CO 1003 Fundamental of Public Speaking *or*
- CO 1013 Introduction to Communication