



# Biochemistry & Molecular Biology Major (BS)

Total Major hours: 54  
Suggested hours per  
semester: 16-18

## Major Academic Plan (MAP) for Catalog Year 2024-2025

The catalog is the final authority on CATC and major requirements; this is intended as a tool for planning purposes.

Student course sequencing may vary depending on course offerings and other variables. Students are strongly encouraged to seek guidance from their faculty advisor regarding their course schedule and possible studies off-campus.

NOTE: BIOL 326 is scheduled for the Fall semester, and BIOL/CHEM 461 is scheduled for the Spring semester for 2023-2024 year.

<p><b>Fall Semester 1</b></p> <p>BIOL 241 Organization of Life<sup>F,1</sup> CHEM 231 General Chemistry I<sup>F</sup></p> <p><i>CORE 101: First Year Seminar</i> <i>CORE 131: Holistic Human Flourishing (1)</i></p> <p><i>Core Competency Course(s)</i></p> <ul style="list-style-type: none"> <li>▪ COMM 101: Oral Comm (2)</li> <li>▪ ENGW 103: First-Year Writing</li> <li>▪ Language</li> </ul>	<p><b>Spring Semester 1</b></p> <p>CHEM 232 General Chemistry II<sup>S*</sup> MATH 235 Calculus I<sup>1,2</sup></p> <p><i>Core Competency Course(s)</i> <i>BITH 211/ARCH 211: Old Testament</i></p>	<p><b>Summer 1</b></p> <p>Consider study (eg. Wheaton In programs), internship, or research options</p>
<p><b>Fall Semester 2</b></p> <p>CHEM 341 Organic Chem I<sup>*F</sup> PHYS 221 General Physics I<sup>F</sup> or PHYS 231 Intro Physics<sup>*F</sup></p> <p><i>Core Competency Course(s)</i> <i>BITH 213/ARCH 213: New Testament</i></p>	<p><b>Spring Semester 2</b></p> <p>CHEM 342 Organic Chem II<sup>*S</sup> BIOL 326 Adv Cell and Molecular Biology<sup>*S,5</sup></p> <p><i>Thematic Core Course(s)</i> <i>BITH 315: Christian Thought*</i></p>	<p><b>Summer 2</b></p> <p>Consider study (eg. Wheaton In programs), internship, or research options</p>
<p><b>Fall Semester 3</b></p> <p>BIOL/CHEM 461 General Biochemistry<sup>*F,5</sup> BIOL or CHEM Elective (with lab) course<sup>4</sup> <b>MB:</b> BHS 252 Intro to Biological &amp; Health Science Research<sup>*3,6</sup></p> <p><i>Thematic Core Course(s)</i></p>	<p><b>Spring Semester 3 – CHOOSE EMPHASIS<sup>3</sup></b> <b>(B=biochemistry; MB=molecular biology)</b></p> <p><b>B:</b> CHEM 462 Adv Biochem<sup>*S,3</sup> <b>and/or</b> CHEM 463 Biochem Analysis<sup>*S,3</sup> <b>MB:</b> BIOL 356 Genetics<sup>*S,3</sup></p> <p><i>Advanced Integrative Seminar*</i> <i>Thematic Core Course(s)</i></p>	<p><b>Summer 3</b></p> <p>Consider study (eg. Wheaton In programs), internship, or research options</p>
<p><b>Fall Semester 4</b></p> <p><b>B:</b> CHEM 355 Intro to Analytical Chem<sup>*F,3</sup></p> <p>BIOL or CHEM Elective course<sup>4</sup> <b>MB:</b> BIOL 356 Genetics, if not complete<sup>*S,3</sup></p> <p><i>Thematic Core Course(s)</i></p>	<p><b>Spring Semester 4</b></p> <p><b>B:</b> CHEM 462 Adv Biochem<sup>*S,3</sup> <b>and/or</b> CHEM 463 Biochem Analysis<sup>*S,3</sup>, if not complete</p> <p>BMB 494 Biochemistry &amp; Molecular Biology Capstone BIOL or CHEM Elective course<sup>4</sup>, if not complete</p> <p><i>Thematic Core Course(s)</i></p>	<p><b>Summer 4</b></p>

<i>Outstanding CATC requirements</i>		
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**Notes or Special Guidance for Majors:**

\*Course has prerequisite

<sup>F</sup> Fall only course

<sup>S</sup> Spring only course

<sup>#</sup> Offered every other year

<sup>1</sup> Course that meet the CATC Thematic Core tags for the Biology major: BIOL 241 (SP), MATH 135 (AAQR) or MATH 235 (AAQR)

<sup>2</sup> MATH 235 is required for the major; however, students who enrolled at Wheaton prior to Fall 2023 can use MATH 231 to meet this requirement.

<sup>3</sup> Students may choose the emphasis they wish to pursue between Molecular Biology or Biochemistry.

Molecular Biology Emphasis required courses:

- BHS 252 Intro to Biological & Health Science Research (4) offered during fall and spring
- BIOL 356 Genetics (4) Fall – beginning 2025

Biochemistry Emphasis required courses:

- CHEM 355 Intro to Analytical Chemistry (2) Fall
- CHEM 462 Advanced Biochemistry (2) Spring – beginning in 2025
- CHEM 463 Biochemistry Analysis (4) Spring

<sup>4</sup> **Elective Courses**-depending on which Emphasis a student chooses. See the list of electives to choose from in the College catalog for 2023-2024.

Biochemistry Emphasis:

- one elective course must be a 300- or 400-level BIOL prefix
- at least one elective course must have a lab
- remaining elective credits must be 300- or 400-level CHEM prefix courses
- no elective courses in the emphasis can overlap with CATC coursework

Molecular Biology Emphasis:

- one elective course must be a 300-or 400-level CHEM prefix
- at least one elective course must have a lab
- remaining elective credits must be 300- or 400-level BIOL prefix courses
- no elective courses in the emphasis can overlap with CATC coursework.

<sup>5</sup> During the 2024-2025 academic year, BIOL 326 is offered in the Spring and BIOL/CHEM 461 is offered in the Fall.

<sup>6</sup> Course may be taken in Fall or Spring.