Biochemistry & Molecular Biology Major (BS)

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

Major Academic Plan (MAP) for Catalog Year 2023-2024

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.

Fall Semester 1	Spring Semester 1	Summer 1

BIOL 241 Organization of Life[F,1]
CHEM 231 General Chemistry I[F]
 	
CORE 101: First Year Seminar
 	
Core Competency Course(s)
  ▪ *COMM 101: Oral Comm (2)*
  ▪ *ENGW 103: First-Year Writing*
  ▪ *Language*
	CHEM 232 General Chemistry II[S]*
	MATH 235 Calculus I[1, 2]
	
	Core Competency Course(s)
	BITH 211/ARCH 211: Old Testament
		Consider study (eg. Wheaton In programs), internship, or research options

Fall Semester 2	**Spring Semester 2**	**Summer 2**
CHEM 341 Organic Chem I*[F] PHYS 221 General Physics I[F] **or** PHYS 231 Intro Physics*[F] *Core Competency Course(s)* *BITH 213/ARCH 213: New Testament*	CHEM 342 Organic Chem II*[S] BIOL 326 Adv Cell and Molecular Biology*[S,5] *Thematic Core Course(s)* *BITH 315: Christian Thought**	Consider study (eg. Wheaton In programs), internship, or research options
Fall Semester 3	**Spring Semester 3 – CHOOSE EMPHASIS[3]** (**B**=biochemistry; **MB**=molecular biology)	**Summer 3**
BIOL/CHEM 461 General Biochemistry*[F,5] BIOL or CHEM Elective (with lab) course[4] *Thematic Core Course(s)*	**B:** CHEM 462 Adv Biochem*[S,3] **and/or** CHEM 463 Biochem Analysis*[S,3] **MB:** BHS 252 Intro to Biological & Health Science Research*[3] *Advanced Integrative Seminar** *Thematic Core Course(s)*	Consider study (eg. Wheaton In programs), internship, or research options
Fall Semester 4	**Spring Semester 4**	**Summer 4**
B: CHEM 355 Intro to Analytical Chem* [F,3] **MB**: BIOL 356 Genetics* [F,3] BIOL or CHEM Elective course[4] *Thematic Core Course(s)* *Outstanding CATC requirements*	**B:** CHEM 462 Adv Biochem*[S,3] **and/or** CHEM 463 Biochem Analysis*[S,3], if not complete BMB 494 Biochemistry & Molecular Biology Capstone BIOL or CHEM Elective course[4], if not complete *Thematic Core Course(s)*	

Notes or Special Guidance for Majors:
*Course has prerequisite

[F] Fall only course
[S] Spring only course
[#] Offered every other year

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

[2] 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.

[3] 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)
- BIOL 356 Genetics (4) Fall – beginning 2024
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

[4] **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.

[5] During the 2023-2024 academic year, BIOL 326 is offered in the Fall and BIOL/CHEM 461 is offered in the Spring.