



## Engineering (4-Year Program) Biomedical Engineering Concentration

Total Major hours at Wheaton: 75  
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.

<p><b>Fall Semester 1</b></p> <p>MATH 235: Calculus I<sup>1*</sup>          PHYS 231: Introductory Physics I<sup>F, 1*</sup>          ENGR 101: Intro. to Engineering (1)<sup>F</sup></p> <p><i>CORE 101: First Year Seminar</i>  <i>CORE 131: Holistic Human Flourishing (1)</i>  <i>ENGW 103: Writing</i></p>	<p><b>Spring Semester 1</b></p> <p>MATH 236: Calculus II*          PHYS 232: Introductory Physics II<sup>S*</sup>          ENGR 132: Engineering Graphics and CAD (3)</p> <p><i>COMM 101: Oral Communication (2)</i>  <i>BITH or ARCH 211 Old Testament</i></p>	<p><b>Summer 1</b></p> <p><i>Consider study, internship or research options –Wheaton In summer program, WIN (HoneyRock), Wheaton in the Black Hills, non-major internship, summer research or other options that provide work experience, build your resume, or grow you personally.</i></p>
<p><b>Fall Semester 2</b></p> <p>MATH 237: Calculus III*          ENGR 211: Statics<sup>F*</sup> (3)          ENGR 271: Biology for Engineers (2)<sup>3</sup>          ENGR 334: Computer Modeling of Physical Systems (2)<sup>F*</sup>          ENGR 351 Analog Electronics (2)<sup>F*</sup></p> <p><i>Language Core Competency I</i></p>	<p><b>Spring Semester 2</b></p> <p>MATH 333: Differential Equations*          ENGR 212: Dynamics<sup>S*</sup> (3)          ENGR 214: Innovative Design in Engr.<sup>S*</sup> (3)</p> <p><i>Language Core Competency II</i>  <i>Visual and Performing Arts (2)</i></p>	<p><b>Summer 2</b></p> <p><i>Consider study, internship or research options</i></p>
<p><b>Fall Semester 3</b></p> <p>CHEM 231: General Chemistry I<sup>F</sup>          ENGR 313 Mechanics of Materials<sup>F*</sup> (3)          ENGR 371: Biomaterials<sup>F*</sup>(3)          ENGR 372: Cell and Tissue Engineering <sup>F*(3)</sup></p> <p><i>Language Core Competency III</i></p>	<p><b>Spring Semester 3</b></p> <p>ENGR 302: Engineering Systems and Analysis<sup>S*</sup> (2)          ENGR 373: Biomechanics (3)          ENGR 374: Biomedical Device Design (3)</p> <p><i>BITH or ARCH 213 New Testament Thematic Core Course<sup>2</sup></i></p>	<p><b>Summer 3</b></p> <p><i>Consider study, internship or research options</i></p>
<p><b>Fall Semester 4</b></p> <p>ENGR 451: Senior Design I <sup>F</sup>          ENGR 3/4XX: Engineering Elective (3)<sup>F*</sup></p> <p><i>Visual and Performing Arts (2)</i>  <i>BITH 315: Christian Thought*</i></p>	<p><b>Spring Semester 4</b></p> <p>ENGR 452: Senior Design II (2)<sup>S*</sup>          ENGR 494: Engineering Ethics Capstone (2)<sup>S*</sup></p> <p><i>Advanced Integrative Seminar<sup>2*</sup></i>  <i>Thematic Core Courses (8)<sup>2</sup></i></p>	<p><b>Summer 4</b></p> <p><i>Consider study, internship or research options</i></p>

**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> Classes that meet CATC Thematic Core tags: MATH 231 (AAQR), PHYS 231 (SP), PSYC 101 (SI), ECON 211 (SI). General Engineering majors should use the General BA/BS checklist for CATC. A maximum of 3 tags can count for both CATC and the major.

<sup>2</sup> Double tagged courses are strongly encouraged for all CATC thematic courses.

<sup>3</sup> ENGR 271: biology for Engineers (2) is the required Math/Science course for the Biomedical Engineering concentration.

- Please contact the Engineering Program Director, Jeff Yoder with questions. He can be reached at [jeff.yoder@wheaton.edu](mailto:jeff.yoder@wheaton.edu).