

# Physics, Bachelor of Arts

Total Semester Hours: 52  
Hours Per Semester: 16-18

## Major Academic Plan (MAP) for Catalog Year 2020-2021

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>PHYS 231 Introductory Physics I<sup>1</sup> MATH 231 Calculus I<sup>1*</sup> or MATH 233 Calculus I B (2)<sup>1</sup></p> <p>CORE 101: First Year Seminar First Year CATC options-</p> <ul style="list-style-type: none"> <li>▪ AHS 101: Wellness (2)</li> <li>▪ COMM 101: Oral Comm (2)</li> <li>▪ ENGW 103: First-Year Writing</li> <li>▪ Language Core Competency</li> </ul>	<p><b>Spring Semester 1</b></p> <p>PHYS 232 Introductory Physics II<sup>S*</sup> PHYS 294 Physics for the Future (2)<sup>S</sup> MATH 232 Calculus II* or MATH 234 Calculus II B (2)*</p> <p>First Year CATC Options</p>	<p><b>Summer 1</b></p> <p>Consider study, internship or research options –Wheaton In summer program, WIN (HoneyRock), non-major internship, summer research or other options that provide work experience, build your resume, or grow you personally.</p>
<p><b>Fall Semester 2</b></p> <p>PHYS 334 Computer Modeling (2)<sup>F*</sup> PHYS 351 Analog Electronics (2)<sup>F*</sup> MATH 333 Differential Equations*</p> <p>BITH 211/ARCH 211: Old Testament Thematic Core</p>	<p><b>Spring Semester 2</b></p> <p>PHYS 341 Analytical Mechanics<sup>S*</sup> PHYS 331 Spacetime and Quanta<sup>S*</sup> MATH 245 Linear Algebra* MATH 331 Vector Calculus (2)*</p> <p>Visual and Performing Arts (2)</p>	<p><b>Summer 2</b></p> <p>Consider study, internship or research options –Wheaton In summer program, WIN (HoneyRock), non-major internship, summer research or other options that provide work experience, build your resume, or grow you personally.</p>
<p><b>Fall Semester 3</b></p> <p>Upper Division PHYS requirement<sup>2</sup> CHEM 231 General Chemistry I</p> <p>Consider semester abroad – GPS</p> <p>Advanced Integrative Seminar Visual and Performing Arts (2)</p>	<p><b>Spring Semester 3</b></p> <p>Upper Division PHYS requirement<sup>2</sup>, if not complete PHYS 343 Methods of Experimental Physics (2)<sup>S, 3*</sup></p> <p>Consider semester abroad – GPS</p> <p>BITH 211/ARCH 211: Old Testament Advanced Integrative Seminar Thematic Core Visual and Performing Arts (2)</p>	<p><b>Summer 3</b></p> <p>Consider study, internship or research options –Wheaton In summer program, WIN (HoneyRock), non-major internship, summer research or other options that provide work experience, build your resume, or grow you personally.</p>
<p><b>Fall Semester 4</b></p> <p>PHYS 345 Methods of Data Analysis and Presentation (2)<sup>F*</sup> BA Program Elective<sup>4</sup></p> <p>BITH 315: Christian Thought* Thematic Core</p>	<p><b>Spring Semester 4</b></p> <p>PHYS 494 Senior Seminar (2)<sup>S*</sup> PHYS Elective (2-4)<sup>5</sup></p> <p>Thematic Core Complete CATC Coursework</p>	<p><b>Summer 4</b></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: PHYS 231 (SP), MATH 231 or MATH 233 (AAQR).

<sup>2</sup> Select one from the following set of three upper level physics courses: PHYS 342 Electromagnetic Theory, PHYS 344 Quantum Mechanics, or PHYS 359 Thermodynamics.

<sup>3</sup> PHYS 343 or an approved research or internship experience.

<sup>4</sup> Select one 4-credit course outside the PHYS prefix approved by the advisor as contributing to the student's intended post-graduation plans.

<sup>5</sup> PHYS Elective 2-4 hours. Choose from the following: PHYS 311, PHYS 352, PHYS 354, PHYS 359, PHYS 361, PHYS 362, PHYS 366, or PHYS 367.

-PHYS 343 Experimental Physics is offered both Fall and Spring. All other major courses are offered Fall only or Spring only in the semester indicated. Major courses in the 3<sup>rd</sup> and 4<sup>th</sup> years may be taken in any order and in either year.

-Seven CATC Themes are not covered by major requirements or Visual and Performing Arts but some of these satisfy 2 Themes and Advanced Integrative Seminar satisfies at least one Theme. Students are encouraged to take at least 1 double-tagged Thematic Core course.