Physics, Bachelor of Science

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

Major Academic Plan (MAP) for Catalog Year 2022-2023

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.

Fall Semester 1	**Spring Semester 1**	**Summer 1[3]**
PHYS 231 Introductory Physics I[1,F] MATH 231 Calculus I[1]* or MATH 233 Calculus I B (2)[1] *CORE 101: First Year Seminar* *First Year CATC options-* ▪ *AHS 101: Wellness (2)* ▪ *COMM 101: Oral Comm (2)* ▪ *ENGW 103: First-Year Writing* ▪ *Language Core Competency*	PHYS 232 Introductory Physics II[S]* PHYS 294 Physics for the Future (2)[S] MATH 232 Calculus II* or MATH 234 Calculus II B (2)* *First Year CATC Options*	*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.*
Fall Semester 2	**Spring Semester 2**	**Summer 2[3]**
PHYS 334 Computer Modeling (2)[F]* PHYS 351 Analog Electronics (2)[F]* MATH 333 Differential Equations* *BITH 211/ARCH 211: Old Testament* *Thematic Core*	PHYS 341 Analytical Mechanics[S]* PHYS 331 Spacetime and Quanta[S]* MATH 245 Linear Algebra* MATH 331 Vector Calculus (2)* *COMM 101: Oral Comm (2)* *Visual and Performing Arts (2)*	*Consider summer coursework*
Fall Semester 3	**Spring Semester 3**	**Summer 3[3]**
PHYS 342 Electromagnetic Theory[F#]* or PHYS 344 Quantum Mechanics[F#]* CHEM 231 General Chemistry I Consider semester abroad – GPS *Advanced Integrative Seminar?* *Visual and Performing Arts (2)*	PHYS Elective (2 or 4)[3] PHYS 343 Experimental Physics (2)[S, 2]* Consider semester abroad – GPS *BITH 213/ARCH 213: New Testament* *Advanced Integrative Seminar* *Thematic Core* *Visual and Performing Arts (2)*	*Consider summer coursework*
Fall Semester 4	**Spring Semester 4**	**Summer 4**
PHYS 342 Electromagnetic Theory[F#]* or PHYS 344 Quantum Mechanics[F#]* PHYS 345 Data Analysis and Presentation (2)[F#]* Course Elective *BITH 315: Christian Thought** *Thematic Core*	PHYS 494 Senior Capstone (2)[S]* *Complete CATC Coursework*	

Notes or Special Guidance for Majors:

*Course has prerequisite
[F] Fall only course
[S] Spring only course
[#] Offered every other year

[1]Classes that meet CATC Thematic Core tags: PHYS 231 (SP), MATH 231 or MATH 233 (AAQR)

[2] PHYS 343[S,3]* or an approved research or internship experience.

[3] 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 359 Thermodynamics*, internships and research options are strongly recommended for students planning on graduate physics studies.

-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 3rd and 4th 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 courses.