

## Physics, Applied Physics Emphasis, B.S., Major

The following is a hypothetical schedule, based on the 2018-2019 catalog. It assumes no transferred credits, no requirements waived by placement tests, and no courses taken in the summer. UW-Eau Claire cannot guarantee all courses will be offered as shown, but will provide a range of courses that will enable prepared students to fulfill their requirements in a timely period. This is just a guide. Please consult your advisor, the catalog, and your degree audit for specific requirements.

### FIRST YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
MATH 114	Calculus I (S2)	4	CS 163	Introduction to Programming in C++	3
PHYS 186 <sup>a</sup>	Introductory Seminar	0.5	MATH 215	Calculus II	4
CHEM 115	Chemical Principles (K1)	6	PHYS 231	University Physics I (K1)	5
WRIT 114/116	Blugold Seminar (S1)	5	LE Core Elective	Humanities (K3) and Equity, Diversity, Inclusivity with Design for Div. (R1, DD)	3
<b>TOTAL</b>		15.5	<b>TOTAL</b>		15

### SECOND YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
MATH 216	Calculus III	4	MATH 312	Differential Equations and Linear Algebra	4
PHYS 232	University Physics II (K1)	5	PHYS 332	University Physics III (I1)	3
Minor		3	Minor		3
LE Core Elective	Communication (S1)	3	LE Core Elective	Humanities (K3) and Global Learning (R2)	3
			LE Core Elective	Fine Arts (K4)	3
<b>TOTAL</b>		15	<b>TOTAL</b>		16

### THIRD YEAR

FIRST SEMESTER – Apply for Admission to Major			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
MATH 345 <sup>a</sup> or PHYS 365 <sup>c</sup>	Introduction to Probability or Theoretical Mechanics	4	PHYS 340 <sup>b</sup>	Optics	4
PHYS 350 <sup>a</sup>	Electric and Electronic Circuits	4	LE Core Elective	Integrative Learning (I1)	3
Minor		3	LE Core Elective	Social Science (K2) and Civic, Social, and Environmental Responsibility (R3)	3
LE Core Elective	Social Science (K2) and Equity, Diversity, Inclusivity (R1)	3	Minor		3
			Minor		3
<b>TOTAL</b>		14	<b>TOTAL</b>		16

### FOURTH YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
MATH 345 <sup>a</sup> or PHYS 365 <sup>c</sup>	Introduction to Probability or Theoretical Mechanics	4	PHYS 360 <sup>b</sup>	Electronics	4
PHYS 430 <sup>a</sup>	Advanced Laboratory	2	Physics Elective <sup>d</sup>	See elective list	4
PHYS 486 <sup>a</sup>	Senior Seminar (S3)	0.5	Minor		3
Minor		6	Elective <sup>e</sup>		3
Elective <sup>e</sup>		3	Elective <sup>e</sup>		3
<b>TOTAL</b>		15.5	<b>TOTAL</b>		17

**RECOMMENDATIONS FOR OPTIONAL HIGH IMPACT PRACTICES (HIPs)**

The University of Wisconsin-Eau Claire encourages all students to participate in High Impact Practices. The following information identifies any specific recommendations that faculty in this major have concerning which HIPs might be most beneficial to students, and any recommendations about when those HIPs best fit into the degree plan. Students should also consult their faculty advisor for information on HIPs.

Required: Students must complete an approved research project PHYS 486. This may be a collaborative research project with a faculty member, an internship, or other independent research project.

**NOTES****Liberal Education Core (LE Core)**

The LE Core comprises 17 learning experiences across 11 learning outcomes. Students must complete a minimum of 36 credits in courses approved for the LE Core.

- K1 – Natural Sciences; two experiences (one lab science experience is required in K1 or K2).
- K2 – Social Sciences; two experiences (one lab science experience is required in K1 or K2).
- K3 – Humanities; two experiences.
- K4 – Fine Arts; one experience.
- S1 – Written and Oral Communication; two experiences (one experience must satisfy the University writing requirement).
- S2 – Mathematics; one experience (must satisfy the University math competency requirement).
- S3 – Creativity; one experience (can be fulfilled in a student's major).
- R1 – Equity, Diversity, and Inclusivity; two experiences (one experience must meet the UW System Design for Diversity (DD) requirement).
- R2 – Global Perspectives; one experience.
- R3 – Civic and Environmental Issues; one experience.
- I1 – Integration; two experiences (one experience can be fulfilled in a student's major).

**Additional LE Core Information**

- Most LE Core learning experiences are course based, and many courses meet more than one learning outcome (e.g., K3 and R2 or K1 and R3).
- Some learning experiences can also be met outside of a traditional course (e.g., undergraduate research (S3), study abroad (I1)).
- S1 – An English placement score that fulfills the University writing requirement fulfills one S1 experience.
- S1 – A foreign Language placement score that qualifies the student to enter the 102 level satisfies one S1 experience.
- S1, R2 – A foreign language placement score that qualifies the student to enter the 202 level satisfies one experience in S1 and the R2 experience.
- S2 – A math placement score that qualifies the student to enter Math 111, 112, 113 or 114 fulfills the S2 experience.
- S3 – Completion of two credits from any approved music ensemble fulfills the S3 experience.
- I1 – Any semester long study abroad program can fulfill one I1 experience.

**Course Suggestions (if applicable)**

<sup>a</sup>Offered only in fall semesters.

<sup>b</sup>Offered only in spring semesters.

<sup>c</sup>Physics 365 is offered in fall of odd numbered years.

<sup>d</sup>Select from the following: any physics course numbered 325 or higher, including PHYS/MSE 374 and MSE 315, 357, 372, and 451.

<sup>e</sup>Electives need to be carefully selected to ensure that a student's degree comprises at least 39 credits of upper division courses (300-400 level).