Physics, Dual Degree Engineering Emphasis, B.S., Major

The following is a hypothetical schedule, based on the 2019-2020 catalog. It assumes no transferred credits, no requirements waived by placement tests, no courses taken in the summer or winter, and no remedial courses that may be required. 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, your degree audit, and the catalog to create your personalized degree plan. Note: In order to complete their degrees in four years, students should plan to take 15 credits each semester or 30 credits each year.

FIRST YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	**Title**	**Crs**	**Subj/Area/Course**	**Title**	**Crs**
MATH 114	Calculus I (S2)	4	CHEM 105	General Chemistry I	3
MSE 120	Introductory to Engineering (S3)	2	CHEM 106	General Chemistry Lab I (K1)	2
PHYS 231	University Physics I (K1)	5	MATH 215	Calculus II	4
WRIT 114/116	Blugold Seminar (S1)	5	PHYS 232	University Physics II (K1)	5
			LE Core Elective	Humanities (K3) and Equity, Diversity, Inclusivity with Design for Div. (R1, DD)	3
TOTAL		16	**TOTAL**		17

SECOND YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	**Title**	**Crs**	**Subj/Area/Course**	**Title**	**Crs**
CS 163	Introduction to Programming in C++	3	MATH 312	Differential Equations and Linear Algebra	4
MATH 216	Calculus III	4	PHYS 340[b]	Optics	4
PHYS 255[a]	Statics	3	PHYS 356[b]	Dynamics	3
PHYS 332	University Physics III (I1)	3	LE Core Elective	Social Science (K2) and Equity, Diversity, Inclusivity (R1)	3
LE Core Elective	Communication (S1)	3	LE Core Elective	Integrative Learning (I1)	3
TOTAL		16	**TOTAL**		17

THIRD YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	**Title**	**Crs**	**Subj/Area/Course**	**Title**	**Crs**
PHYS 350[a]	Electric and Electronic Circuits	4	Physics Elective[c]	See elective list	4
MATH Minor	Math Minor Elective	4	Physics Elective[c]	See elective list	4
LE Core Elective	Fine Arts (K4)	3	MATH Minor	Math Minor Elective	4
LE Core Elective	Humanities (K3) and Global Learning (R2)	3	LE Core Elective	Social Science (K2) and Civic, Social, and Environmental Responsibility (R3)	3
Elective[d]		3	Elective[d]		3
TOTAL		17	**TOTAL**		18

RECOMMENDATIONS FOR 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. There are many additional high impact opportunities available. Talk to your academic advisor for more information about incorporating HIPs like Study Abroad, Intercultural Immersion, Internship, and/or Student/Faculty Collaborative Research into your time at UW-Eau Claire.

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).
- SL—Service Learning; 30 hours

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)

- [a]Offered only in fall semesters.
- [b]Offered only in spring semesters.
- [c]Select from the following: any physics course numbered 325 or higher, including PHYS/MSE 374 and MSE 315, 357, 372, and 451.
- [d]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).

Additional Notes

- The Dual Degree Emphasis is for students who wish to obtain a physics degree at UWEC and an engineering degree at one of our partner institutions. This plan outlines a path to complete the UWEC portion of the dual degree in three years.
- Each minor has its own requirements beyond the number of credits, and it is the student's responsibility to investigate those and to be sure to have fulfilled those requirements. This plan assumes a minor in Mathematics.
- The additional credits needed to satisfy the 36 credit minimum for the UWEC Physics major can be satisfied by engineering courses that transfer as 300 level physics courses or above or by UWEC major courses and electives. 300 level or above engineering courses will be considered individually as 300 level physics electives by the UWEC Physics Department Chair.
- Students need to be aware of the degree requirements of the institution they plan to transfer to for the engineering degree. That institution will have their own degree requirements. Courses taken at UWEC can be used to meet those requirements but it requires careful planning. Students should consult with their academic and faculty advisors regarding their academic plan at least once every semester.
- Students should try to satisfy the Service Learning Requirement while at UW-Eau Claire.