PHYSICS, GENERAL, BACHELOR OF SCIENCE (BS)

The Bachelor of Science–Physics, General degree allows the student to acquire a physics degree with strong emphasis in one or more related fields of study, via second majors, minors, or certificates. This degree is ideal preparation for graduate or industry work in such areas as geophysics, biophysics, computational physics, engineering, and physical chemistry.

University Graduation Requirements (UGR)

- 60 upper-division credits are required to graduate (this major has 29)–contact the Physics advisor or Department Chair;
- A Senior Capstone/Senior Thesis class is a university requirement for graduation–contact the Physics advisor or Department Chair;

Required Physics Courses		
PHYS 151	GENERAL PHYSICS I	4
PHYS 152	GENERAL PHYSICS II	4
PHYS 153	GENERAL PHYSICS III	4
PHYS 221	GENERAL PHYSICS IV	4
PHYS 361	CLASSICAL MECHANICS I	4
PHYS 371	QUANTUM PHYSICS I: INTRODUCTION	4
PHYS 401	ELECTROMAGNETISM I	4
Required Laboratory Courses		
PHYS 161	MECHANICS LABORATORY	1
PHYS 162	HEAT AND OPTICS LABORATORY	1
PHYS 163	ELECTRONICS LABORATORY I	1
PHYS 263	ELECTRONICS LABORATORY II	1
Required Supporting Courses		
MATH/HONS 161	CALCULUS I	5
MATH 162	CALCULUS II	5
MATH 163	CALCULUS III	5
MATH 241	CALCULUS IV	5
Electives–any 300- or 400-level PHYS course except PHYS 497 may be chosen as electives.		**17**
Total Credits		**69**

Plan of Study

The following plan of study is for a student with zero credits. Individual students may have different factors such as: credit through transfer work, Advanced Placement, Running Start, or any other type of college-level coursework that requires an individual plan.

Courses may be offered in different terms and not all courses are offered every term, checking the academic schedule is paramount in keeping an individual plan current. There may be some courses that have required prerequisites not listed in the plan, review the course descriptions for information. **Students should connect with an advisor to ensure they are on track to graduate.**

All Undergraduate students are required to meet the Undergraduate Degree Requirements (http://catalog.ewu.edu/undergraduate-degree/).

First Year					
Fall Quarter	**Credits**	**Winter Quarter**	**Credits**	**Spring Quarter**	**Credits**
ENGL 101	5	ENGL 201	5	MATH 163	5
MATH 161	5	MATH 162	5	PHYS 153 & PHYS 163	5
PHYS 151 & PHYS 161 (Natural Science BACR 1)	5	PHYS 152 & PHYS 162 (Natural Science BACR 2)	5	Humanities & Arts BACR 1[1]	5
	15		**15**		**15**
Second Year					
Fall Quarter	**Credits**	**Winter Quarter**	**Credits**	**Spring Quarter**	**Credits**
MATH 241	5	PHYS 371[3]	4	Physics Elective[4]	4
PHYS 221	4	PHYS 401[3]	4	Diversity - graduation requirement[1]	5
PHYS 263	1	Humanities & Arts BACR 2[1]	5	Social Science BACR 2[1]	5
PHYS 361[2]	4	Social Science BACR 1[1]	5		
	14		**18**		**14**

Third Year

Fall Quarter	Credits	Winter Quarter	Credits	Spring Quarter	Credits
PHYS 361[2]	4	PHYS 371[3]	4	Physics Elective[4]	4
Physics Elective[4]	4	PHYS 401[3]	4	Elective - certificate, minor, or general elective	5
Elective - certificate, minor, or general elective	5	Global Studies - graduation requirement[1]	5	Elective - certificate, minor, or general elective	5
Elective - certificate, minor, or general elective	2	Elective - certificate, minor, or general elective	5		
	15		**18**		**14**

Fourth Year

Fall Quarter	Credits	Winter Quarter	Credits	Spring Quarter	Credits
Physics Elective[4]	4	Physics Elective[4]	4	PHYS 491 or ITDS 490 (Senior Capstone - graduation requirement)	4
Elective - certificate, minor, or general elective	5	Elective - certificate, minor, or general elective	5	Elective - certificate, minor, or general elective	5
Elective - certificate, minor, or general elective	5	Elective - certificate, minor, or general elective	5	Elective - certificate, minor, or general elective	5
	14		**14**		**14**

Total Credits 180

1 University Graduation Requirements (UGR) and Breadth Area Course Requirements (BACR) courses may be less than 5 credits and additional credits may be required to reach the required 180 total credits needed to graduate. Students should connect with an advisor to ensure they are on track to graduate.

2 If fall of the academic year is an even year

3 If fall of the academic year is an odd year

4 Electives—17 credits in any 300- or 400-level PHYS course except PHYS 497 may be chosen as electives.

University Competencies and Proficiencies

English (http://catalog.ewu.edu/undergraduate-degree/#newitemtext)
Quantitative and Symbolic Reasoning (http://catalog.ewu.edu/undergraduate-degree/#mathcompproficienciestext)
Placement and Clearance (http://catalog.ewu.edu/placement/)
Prior Learning/Sources of Credit AP, CLEP, IB (http://catalog.ewu.edu/prior-learning/)

General Education Requirements (http://catalog.ewu.edu/undergraduate-degree/#generaleducationrequirementstext) (GER)

- Minimum Credits—180 cumulative credit hours
  - 60 upper-division credits (300 level or above)
  - 45 credits in residence (attendance) at Eastern, with at least 15 upper-division credits in major in residence at Eastern
- Minimum Cumulative GPA ≥2.0

Breadth Area Core Requirements (BACR)

Humanities and Arts (http://catalog.ewu.edu/undergraduate-degree/#humanitiesandfineartsgecrtext)
Natural Sciences (http://catalog.ewu.edu/undergraduate-degree/#naturalsciencesgecrtext)
Social Sciences (http://catalog.ewu.edu/undergraduate-degree/#socialsciencesgecrtext)

University Graduation Requirements (http://catalog.ewu.edu/undergraduate-degree/#universitygraduationrequirementstext) (UGR)

Diversity Course List (http://catalog.ewu.edu/undergraduate-degree/#cultureandgenderdiversityintheuslisttext)
World Language (http://catalog.ewu.edu/undergraduate-degree/#worldlanguagetext) (for Bachelor of Arts)
Global Studies Course List (http://catalog.ewu.edu/undergraduate-degree/#internationalstudiesrequirementtext)
Minor or Certificate (http://catalog.ewu.edu/undergraduate-degree/#majorminororcertificateugrtext)
Senior Capstone Course List (http://catalog.ewu.edu/undergraduate-degree/#capstonecourselisttext)

Application for Graduation (use EagleNET (https://inside.ewu.edu/eaglenet/)) must be made at least two terms in advance of the term you expect to graduate (undergraduate and post-baccalaureate).

Use the Catalog Archives (http://catalog.ewu.edu/archives/) to determine *two important catalog years*.
Requirements in Degree Works (https://inside.ewu.edu/records-and-registration/degree-works/) are based on these two catalog years:

a. The catalog *in effect at the student's first term* of current matriculation is used to determine **BACR** (Breadth Area Credit Requirements) **and UGR** (Undergraduate Graduation Requirements).
b. The catalog *in effect at the time the student declares a major or minor* is used to determine the program requirements.

Students who earn a BS in Physics, General from EWU should be able to:

- demonstrate knowledge of the basic concepts of physics (such as mechanics, thermodynamics and electricity and magnetism);
- make and interpret laboratory measurements in physics;
- write effectively using the language of physics.