CURRICULUM CHANGE PROPOSAL

Prepare proposal in accordance with the guidelines below and the format shown on the following pages. Should any item under the headings not pertain to your proposal, write N/A.

PROPOSAL NUMBER: Click or tap here to enter text.

REVISION (label Revision #1, #2, etc.):Click or tap here to enter text.

SECTION 1: CONTACT INFORMATION

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SECTION 2: PROGRAM INFORMATION

College:	College of Science & Technology
Department:	Natural Sciences
Title of Degree Program/Certificate:	Physics Minor
Degree Program Level:	Minor
Date Originally Submitted:	Click or tap to enter a date.
Implementation Date Requested:	8/1/2025

APPROVAL

The Deans of the affected colleges must sign below to indicate their notification and departmental approval of this proposal. Should this proposal affect any course or program in another college, a memo must be sent to the Dean of each college impacted and a copy of the memo(s) must be included with this proposal.

By signing below, you are indicating your college and department(s)'s approval of this proposal.

College	Dean's Signature
Science & Technology	Deb Hember

ADDITIONAL COMMENTS:

SECTION 3: Curriculum Change Request

A. PROPOSAL ABSTRACT.

Write a brief abstract, not exceeding 150 words, describing proposed changes.

The Physics Minor will be revised to reduce the required number of credits, allow more flexibility for students, and to include more course options which overlap with other programs. Students will now only be required to take 2 out of the 3 upper-level physics courses. In addition, multiple alternate course options will be available to allow students from departments such as mechanical engineering, electrical engineering, and chemistry to count more credits from their existing degree program towards the physics minor.

Along with the above program changes, the calculus-based introductory 5-credit physics courses PHYS 1105/1106 will be replaced with 4-credit PHYS 1115/1116, while the advanced 4-credit physics classes PHYS 3325/3335 will be replaced with 3-credit PHYS 3320/3330.

B. DESCRIPTION OF THE PROPOSAL

1. Full Program Name:	Physics Minor
2. Current number of credit hours required for the program:	24-32
3. Is the program changing the number of credit hours required for the program?	Yes 🗷 No 🗆
4. How many credit hours will be added to the program?	0
5. How many credit hours will be deleted from the program?	Up to 6

6. Added Course(s) (If applicable): List the course(s) to be added to program (if applicable). Indicate whether the course is an existing course or will be a proposed new course.

The following new courses will be added:

- PHYS 1115 will replace PHYS 1105
- PHYS 1116 will replace PHYS 1106
- PHYS 3320 will replace PHYS 3325
- PHYS 3330 will replace PHYS 3335

The following existing courses will be added as alternative program requirements, as outlined in the attached program summary:

- ELEC 1120
- ELEC 2210
- MECH 2210
- MECH 2220
- CHEM 3301
- PHYS 4498

- PHYS 2202
- PHYS 3230
- COMP 1110
- 7. **Deleted Courses (if applicable):** List course(s) to be deleted from the program (if applicable). Indicate the term in which the course will no longer be available for students to take and the catalog in which students will not have the option to take the course.

No courses will be deleted. Students will be required to choose two out of three course options, where before they had to take all three.

- 8. **Teach-out Arrangement**: If a required course will be deleted from the program, how will you accommodate current students in the program to complete the required course?
 - □ Courses will continue of be offered for students to complete program under previous catalog. (Typical)

□ Students must transition to new catalog and meet all requirements. (Student advising required)

- Students in old catalog will take new or existing courses as outlined below. (Student advising required)
- Department will petition course changes for each student. (Not recommended)
- □ Change is only editorial and will not impact student progress.

C. CHANGE IN PROGRAM DESCRIPTION (if applicable)

1. Current Program Description

No change

2. Proposed Program Description

D. RATIONALE

1. What is the rationale for this change?		
	Annual assessment results	
	Program review	

- □ Program accreditation
- Z College or Department strategic plan
- □ To align with University policy or standard
- □ Other
- 2. **Description of the Rationale.** Describe the evidence that supports changing the program's curriculum. For example, indicate the types of assessment data (e.g., surveys, interviews, capstone courses, projects, licensure exams, nationally-normed tests, locally developed measurements, accreditation reports, etc.) collected and analyzed to determine that curricular changes were warranted. Is it due to market trends? Does it reflect changes in the discipline? What are the expected results of the change?

The current physics minor is a high credit load for students with very little overlap with other programs. This makes it difficult for many students to have space in their schedules to add the minor, particularly since our target audience is STEM majors who are already in high credit degree programs. The proposals outlined here allow students more flexibility to choose the classes they are interested in. In addition, students from programs including mechanical engineering, chemistry, electronics engineering, and computer science can all have at least one of their major classes count towards the physics minor, further decreasing the burden on the students and allowing more students to pursue the minor.

E. RESOURCES

1. Will new faculty, be needed to support the program change? If no new faculty are required and the revision is adding classes or substituting courses, identify how current faculty will meet the demand.

No – the allowance of alternative options for different required courses will allow the physics faculty to not have to teach all of the required classes for the students.

2. Will new facilities, equipment, space modification, and/or library materials/services be needed to support the program change? Provide an estimate of the increased cost, or reduction in cost of implementation (if applicable).

No

F. PROGRAM CHANGE SUMMARY

Physics Minor Current Program Requirements

- PHYS 1105 Principles of Physics 1 (strongly encouraged) or PHYS 1101 Introduction to Physics 1 5 or 4 Credit Hours
- PHYS 1106 Principles of Physics 2 (strongly encouraged) or PHYS 1102 Introduction to Physics 2 – 5 or 4 Credit Hours
- MATH 2501 Calculus 1 or TECH 2290 Engineering Analysis 1 4 Credit Hours
- MATH 2502 Calculus 2 or TECH 3330 Engineering Analysis 2 4 Credit Hours

- PHYS 3310 Electricity and Electronics 4 Credit Hours
- PHYS 3325 Advanced Physics 1 4 Credit Hours
- PHYS 3335 Advanced Physics 2 4 Credit Hours
- PHYS 3340 Special Problems 2 Credit Hours

Total Credit Hours: 30-32

Physics Minor Proposed Program Requirements

- PHYS 1115 Principles of Physics 1 (strongly encouraged) or PHYS 1101 Introduction to Physics 1 4 Credit Hours
- PHYS 1116 Principles of Physics 2 (strongly encouraged) or PHYS 1102 Introduction to Physics 2 4 Credit Hours
- MATH 2501 Calculus 1 or TECH 2290 Engineering Analysis 1 4 Credit Hours
- MATH 2502 Calculus 2 or TECH 3330 Engineering Analysis 2 4 Credit Hours

Students must choose one of the following courses

- PHYS 3230 Intermediate Physics Laboratory 2 Credit Hours
- PHYS 3340 Special Problems 2 Credit Hours
- PHYS 2202 Astronomy 3 Credit Hours
- COMP 1110 Intro to Programming 3 Credit Hours
- PHYS 4998 Undergraduate Research 2-6 Credit Hours

Students must choose one course each from two out of three categories below

A – Mechanics/Thermodynamics

- PHYS 3320 Mechanics and Thermodynamics 3 Credit Hours
- MECH 2210 Thermodynamics 1 3 Credit Hours
- MECH 2220 Fluid Mechanics 3 Credit Hours
- *CHEM 3301 Physical Chemistry 1 4 Credit Hours
- B Modern Physics
 - PHYS 3330 Modern Physics 3 Credit Hours
 - *CHEM 3301 Physical Chemistry 1 4 Credit Hours
- C Electricity/Electronics
 - PHYS 3310 Electricity and Electronics 4 Credit Hours
 - ELEC 1120 AC/DC Electronics Analysis 3 Credit Hours AND ELEC 2210 – Circuit Analysis 2 – 3 Credit Hours

*CHEM 3301 may not be counted double – it can only satisfy one category requirement.

Total Credit Hours: 24-32