

SUBJECT MATTER PROGRAM (PHYSICS)

In Workflow

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Approval Path

1. Fri, 20 Sep 2019 19:30:05 GMT
Thomas Krabacher (tsk): Approved for NSM College Committee Chair
2. Fri, 20 Sep 2019 21:40:23 GMT
Shannon Datwyler (datwyler): Approved for NSM Dean

New Program Proposal

Date Submitted: Tue, 17 Sep 2019 17:28:58 GMT

Viewing: Subject Matter Program (Physics)

Last edit: Wed, 18 Sep 2019 22:39:10 GMT

Changes proposed by: Shannon Datwyler (102041314)

Academic Group: (College)

Natural Sciences & Mathematics

Academic Organization: (Department)

Natural Sciences and Mathematics

Catalog Year Effective:

2020-2021 Catalog

NOTE: This degree major program will be subject to program review evaluation within six years after implementation.

Individual(s) primarily responsible for drafting the proposed degree major program:

Name (First Last)	Email	Phone 999-999-9999
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Type of Program Proposal:

Credential

Is this a pilot program?

No

Is this a Fast Track program?

No

Title of the Program:

Subject Matter Program (Physics)

Designation: (degree terminology)

Credential

Abstract of the proposal:

While this is coming through as a new program, this is actually an existing program with a request to add this to a new location in the catalog. Historically, the subject matter program in physics has been consumed under the Physics program Teacher Preparation concentration. We wish to list the revised subject matter program independently from the concentration in teacher preparation. The courses indicated in here are a subset of those required for the Physics Teacher Preparation concentration.

Briefly describe the program proposal (new or change) and provide a justification:

The Science Subject Matter Program (in biology, chemistry, physics, or foundational level general science) is designed to meet the Commission on Teacher Credentialing (CTC) subject matter requirement for students to enter a California Single Subject teaching credential program in the area of emphasis (biology, chemistry, physics, or foundational level general science). Meeting the subject matter requirement is a credential program admission requirement, and can be met either through a subject matter program (such as those being proposed here) or by taking a state approved content exam (currently the California Subject Exam for Teachers, the CSET).

Subject matter programs are not degrees or concentrations; instead they are a series of courses that allow a student to meet the requirements for admission to a teaching credential program.

In summer 2018, faculty from the College of Natural Sciences and Mathematics worked with the College of Education on recertification of the science subject matter programs through CTC. In order to ensure the individual programs met the new California K-12 content standards for science (Next Generation Science Standards), changes to the list of courses required to meet the standards were necessary. The Science Subject Matter Programs in biology, chemistry, physics, and foundational science were approved by CTC in fall 2018. This Form B is submitted for the purpose of updating catalog copy and providing accurate information to the campus community through normal approval channels (including CPSP, the Council on the Preparation of School Personnel).

Objectives of the degree program:

To provide students with the necessary coursework to be eligible for a single-subject credential program in Physics in the State of California by waiving the CSET exam.

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Knowledge of human cultures and the physical and natural world
Integrative learning
Personal and social responsibility
Intellectual and practical skills

Graduate (Masters) Learning Goals:

Disciplinary knowledge

Will this program be required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

Yes

For the Council for the Preparation of School Personnel (to be filled out with assistance of your department chair):

Does this program change impact your department's currently written Program Standards Document?

No

Common Standards: In what way does this course or program change impact the currently written Common Standards document? Please include any suggested language changes.

This proposal is to align with the new CTC standards.

Is this change in response to program or unit assessment activities?

No

Catalog Description:

The Science Subject Matter Program in physics is designed to meet the California Commission on Teacher Credentialing (CTC) subject matter requirement for students to enter a California Single Subject teaching credential program. Meeting the subject matter requirement is a credential program admission requirement, and can be met either through a subject matter program (such as those described below) or by taking a state approved content exam (currently the California Subject Exam for Teachers, the CSET). In order to meet the subject matter obtain a California K-12 Teaching Credential, a program requirement, all courses must be completed with a grade of "C-" or better. In order to teach public school in California, you must also complete a teaching credential program.

Subject matter programs are not degrees or concentrations; instead they are a series of courses that allow a student to meet the requirements for admission to a teaching credential program. Students must also complete a BA or BS degree (with any major) to fulfill the credential requirements.

Science majors who intend to pursue a teaching credential should see a faculty advisor or the department chair in the department of their academic major. It is recommended that they do so early as it is critical that their science coursework be carefully planned and coordinated to include the required subject matter program courses. In addition, students are encouraged to become involved with education related activities like grading, assisting in labs, tutoring K-12 students, and visiting schools; please speak with the subject matter advisors in your area for more information.

Admission Requirements: Course prerequisites and other criteria for admission of students to the degree major program, and for their continuation in it.

N/A

Program Requirements: (If new courses are being created as part of a new program, it will be useful to propose courses first.)

Program Requirements

Code	Title	Units
ASTR 4A	Introduction to the Solar System	3
ASTR 4B	Introduction to Stars, Galaxies, and Cosmology ¹	3
BIO 1 & BIO 2 or BIO 10 & BIO 15L	Biodiversity, Evolution and Ecology Cells, Molecules and Genes ¹ Basic Biological Concepts Laboratory Investigations in Biology	4 - 10
CHEM 1A	General Chemistry I ¹	5
CHEM 1B	General Chemistry II	5
ENVS 10	Introduction to Environmental Science ¹	3
GEOL 10	Physical Geology ¹	3
PHYS 11A	General Physics: Mechanics ¹	4
PHYS 11B	General Physics: Heat, Light, Sound, Modern Physics	4
PHYS 11C	General Physics: Electricity and Magnetism	4
PHYS 106	Introduction to Modern Physics	3
PHYS 115	Electronics and Instrumentation	4
Total Units		45-51

¹ Course also satisfies General Education (GE)/Graduation Requirement.

Attach the results of a formal survey in the geographical area to be served indicating demand for individuals who have earned the proposed degree and evidence of serious student interest in majoring in the proposed program:

Physics_Survey.docx

For graduate programs, the number of declared undergraduate major and the degree production over the preceding years of the corresponding baccalaureate program:

N/A--not a degree program

Professional uses of the proposed degree major program:

N/A--not a degree program

The expected number of majors in:

1st Year Enrollment:

4

3rd Year Enrollment:

4

5th Year Enrollment:

4

1st Year Graduates:

4

3rd Year Graduates:

4

5th Year Graduates:

4

Key: 465