

PHYS 270: RESEARCH METHODS

In Workflow

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Approval Path

1. Fri, 13 Sep 2024 20:21:42 GMT
Mikkel Jensen (mikkel.jensen): Approved for PHYS Committee Chair
2. Fri, 13 Sep 2024 20:27:20 GMT
William DeGraffenreid (degraff): Approved for PHYS Chair
3. Thu, 17 Oct 2024 19:33:19 GMT
Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
4. Mon, 21 Oct 2024 20:32:12 GMT
Chris Taylor (ctaylor): Approved for NSM Dean

New Course Proposal

Date Submitted: Wed, 11 Sep 2024 16:27:08 GMT

Viewing: PHYS 270 : Research Methods

Last edit: Wed, 16 Oct 2024 22:24:33 GMT

Changes proposed by: Rodolfo Barniol Duran (219696192)

Contact(s):

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Catalog Title:

Research Methods

Class Schedule Title:

Research Methods

Academic Group: (College)

NSM - Natural Sciences & Mathematics

Academic Organization: (Department)

Physics and Astronomy

Will this course be offered through the College of Continuing Education (CCE)?

No

Catalog Year Effective:

Fall 2025 (2025/2026 Catalog)

Subject Area: (prefix)

PHYS - Physics

Catalog Number: (course number)

270

Course ID: (For administrative use only.)

TBD

Units:

3

Is the ONLY purpose of this change to update the term typically offered or the enforcement of existing requisites at registration?

No

In what term(s) will this course typically be offered?

Fall term only

Does this course require a room for its final exam?

No, final exam does not require a room

Does this course replace an existing experimental course?

No

This course complies with the credit hour policy:

Yes

Justification for course proposal:

Physics 270 is one of the core courses being proposed as part of a new Master of Science in Physics. This course is the graduate writing intensive course that introduces graduate students to diverse fields or research as they develop skills in literature searches, peer reviews, research proposals, and professional papers and other communications. The MS program is designed to allow flexibility for students to prepare for PhD programs or to prepare for a career in teaching, industry or government.

Course Description: (Not to exceed 90 words and language should conform to catalog copy.)

Graduate level introduction to professional communications in physics and astronomy research including literature reviews, presentation methods, publication formats, research proposals, curricula vitae, and professional ethics. Students will work together in a seminar setting to understand, critique and develop communications of research results in various formats concluding with the construction of individual student research proposals. Graduate Writing Intensive course.

Are one or more field trips required with this course?

No

Fee Course?

No

Is this course designated as Service Learning?

No

Is this course designated as Curricular Community Engaged Learning?

No

Does this course require safety training?

No

Does this course require personal protective equipment (PPE)?

No

Does this course have prerequisites?

No

Does this course have corequisites?

No

Graded:

Letter

Approval required for enrollment?

No Approval Required

Course Component(s) and Classification(s):

Seminar

Seminar Classification

CS#05 - Seminar (K-factor=1 WTU per unit)

Seminar Units

3

Is this a paired course?

No

Is this course crosslisted?

No

Can this course be repeated for credit?

No

Can the course be taken for credit more than once during the same term?

No

Description of the Expected Learning Outcomes and Assessment Strategies:

List the Expected Learning Outcomes and their accompanying Assessment Strategies (e.g., portfolios, examinations, performances, pre- and post-tests, conferences with students, student papers). Click the plus sign to add a new row.

	Expected Learning Outcome	Assessment Strategies
1	Analyze and critique peer reviewed professional papers, conference abstracts and research proposals within a intercultural/global perspective.	Weekly assignments and discussions.
2	Compare methods for communicating research results to diverse communities.	Weekly assignments and discussions.
3	Construct, using peer and instructor feedback, a research proposal or paper.	Draft research proposals or papers and a final written portfolio.
4	Assess how professional ethics is applied to curricula vitae, research design, data analysis, and communications.	Weekly assignments, presentations and written literature reviews.
5	Identify the major research and/or professional areas, practices, and methods of inquiry in physics and astronomy.	Weekly assignments, presentations and written literature reviews.
6	Describe the major formats, genres, and styles of writing used to communicate physics and astronomy.	Weekly assignments, presentations and written literature reviews.
7	Explain reading and writing within physics and astronomy as a learning process involving peer and instructor feedback, revision, critical reflection, and self-editing.	Weekly assignments, presentations and written literature reviews.

Attach a list of the required/recommended course readings and activities:

Phys 270 assignments example.docx
 PHYS 270 Research Methods syllabus.docx

For whom is this course being developed?

Majors in the Dept

Is this course required in a degree program (major, minor, graduate degree, certificate?)

Yes

Has a corresponding Program Change been submitted to Workflow?

No

Identify the program(s) in which this course is required:

Programs:

MS in Physics

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

No

Will there be any departments affected by this proposed course?

No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Graduate (Masters) Learning Goals:

Disciplinary knowledge
Communication
Information literacy
Professionalism
Intercultural/Global perspectives

Is this course 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)?

No

Is this a Graduate Writing Intensive (GWI) course?

Yes

Please attach the GWI Course Approval Request form:

GWIFORM_Phys_270.doc

Key: 14751