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APR 18 2011

The University Of Toledo

COLLEGE OF GRADUATE STUDIES

Existing Course Modification Form

Administrative Use Only

Code: CM []

Date Received: [] / [] / [] (mm/dd/yyyy)

Effective Date: [] / [] / [] (mm/dd/yyyy)

CIP Code (if changed): []

Subsidy (if changed): []

Please enter the changes below to each existing course. If changes are too extensive for this format, attach a page with all information.

College: ARS NSM

Dept/Academic Unit: PHYS

Contact Person: Steven Federman

Phone:

Email: steven.federman@utoledo.edu

Present

Proposed

Supply all information asked for in this column.

Fill in appropriate blanks only where entry differs

(Supply core and transfer module info if applicable.)

from first column.

Course Alpha/Numeric: PHYS - 7180

Course Alpha/Numeric: -

Course Title:

Course Title:

MODERN PHYSICS LABORATORY

GRADUATE ~~LAB~~ ATOMIC AND NUCLEAR PHYSICS LABORATORY

Credit Hours: 2-3

Credit Hours:

CrossListings:

CrossListings:

Prerequisite(s):

Prerequisite(s):

Catalog Description (only if changed):

Catalog Description (only if changed):

Experiments in atomic, condensed matter and nuclear physics, such as Zeeman, Raman, Mossbauer and Hall Effects, Doppler shifts, X-ray diffraction, NMR, STM, and alpha, beta and gamma ray spectroscopies.

Experiments in nuclear, atomic, and condensed matter physics, such as gamma-ray and X-ray spectroscopies, beta and alpha particle spectroscopies, NMR, ESR, Mossbauer effect, neutron shielding, detectors and electronics, and atomic emission spectroscopy. One four-hour lab and one hour lecture per week.

Univ Core: Engl Hum Math Sci Soc Sci

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US Culture Non-US Culture

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Transfer Module: Arts & Humanity Engl Math

Transfer Module: Arts & Humanity Engl Math

Social Science Natural Science & Physics

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Reason for change

To align it better with other changes in undergraduate and graduate physics laboratories and to address the needs and interests of the Radiation Oncology (MS via HSC, 2 credit hours) and Medical Physics (PhD, 3 credit hours) students. See attached description.

Has course content changed? No Yes If so, give a brief topical outline of the revised course below.

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EDUCATION

Has the course changed from a non-core curriculum course to a core curriculum course? No Yes If so, explain how this course fulfills the core curriculum/general education guidelines.

List any course or courses to be dropped.

Effective Date: / / (mm/dd/yyyy)

Approval:

Department Curriculum Authority: [Signature] Date 3 / 14 / 2011 (mm/dd/yyyy)

Department Chairperson: [Signature] Date 3 / 14 / 2011 (mm/dd/yyyy)

College Curriculum Authority: [Signature] Date 3 / 17 / 2011 (mm/dd/yyyy)

College Dean: [Signature] Date 4 / 19 / 2011 (mm/dd/yyyy)

After college approval, submit the original signed form to the Faculty Senate (UH 3320) for undergraduate-level courses; for graduate-level courses submit the original signed form to the Graduate School (UH3240). For undergraduate/graduate dual-level courses, submit the proposals to each office.

UUCC or Graduate Council Curriculum Chair: _____ Date _____ / _____ / _____ (mm/dd/yyyy)

Faculty Senate Core Curriculum Committee Chair: _____ Date _____ / _____ / _____ (mm/dd/yyyy)

Office of the Provost : _____ Date _____ / _____ / _____ (mm/dd/yyyy)

Registrar's Office: _____ Date _____ / _____ / _____ (mm/dd/yyyy)