DEGREE/PROGRAM CHANGE
FORM C
Form Number: C1837

Fields marked with * are required

Name of Initiator: Shannon Kindilien **Email:** skindili@unm.edu **Phone Number:** 505 277-2501 **Date:** 03-10-2016

Associated Forms exist? No

Initiator's Title Grant Coordinator

Faculty Contact Mark Gilmore

Administrative Contact Shannon Kindilien

Department Electrical & Computer Engineering

Admin Email skindili@unm.edu

Branch MAIN

Admin Phone 277-6126

Proposed effective term

Semester Fall Year 2016

Course Information

Select Appropriate Program Graduate Degree Program

Name of New or Existing Program MS Electrical Engineering & MS Computer Engineering

Select Category Degree Degree Type MS

Select Action Revision

Exact Title and Requirements as they should appear in the catalog. If there is a change, upload current and proposed requirements.
See current catalog for format within the respective college (upload a doc/pdf file)

Catalog Change Form C.docx

☐ **Does this change affect other departmental program/branch campuses? If yes, indicate below.**

Reason(s) for Request (enter text below or upload a doc/pdf file)
The ECE department is replacing the Plan II track with the Plan III track in the M.S. degree.

Upload a document that inlcudes justification for the program, impact on long-range planning, detailed budget analysis and faculty workload implications.(upload a doc/pdf file)

Plan III Memo.pdf

☐ **Are you proposing a new undergraduate degree or new undergraduate certificate? If yes, upload the following documents.**

Upload a two-page Executive Summary authorized by Associate Provost. (upload a doc/pdf file)

Upload memo from Associate Provost authorizing go-ahead to full proposal. (upload a doc/pdf file)

Current UNM Catalog Description

Master's Degree Programs

Course Requirements

In addition to Graduate Studies requirements for the masters degrees, the department also requires at least one credit hour of graduate seminar ECE 590. All candidates for the M.S. degree must satisfactorily pass a final examination, which is the thesis defense for Plan I students and project presentation based on a short term project for Plan II students. Among the required courses (a minimum of 15 credit hours in ECE for Plan I students and 18 credit hours in ECE for Plan II students), four courses are specified by the area of focus chosen by students. Other program information is available at the Electrical and Computer Engineering department Web site.

Master of Science in Computer Engineering

Areas of focus are: Computer Architecture, Computer Graphics and Vision, Computer Networks and Systems, Image Processing, Computational Intelligence, and Bioengineering.

Master of Science in Electrical Engineering

Areas of Focus are: Systems and Controls, Signal Processing, Image Processing, Communications, Optoelectronics, Applied Electromagnetics, Microelectronics, Power and Energy, and Bioengineering.

Master of Science in Optical Science and Engineering

The Optics Program is jointly administered by the Department of Physics and Astronomy and the Department of Electrical and Computer Engineering. It features an internship option under which a student can apply qualified industrial/government laboratory research along with successfully completed course work toward the degree.

Current research areas: advanced materials, atom optics, biomedical optics, fiber optics, laser physics, lithography, nanostructures, nonlinear optics, optical imaging, optical sensors, optoelectronics, photonic integrated circuits, quantum optics, spectroscopy, and ultra-fast phenomena.

See the *Graduate Interdisciplinary Studies* section of this Catalog for degree requirements. Other program information is available at the Optical Science and Engineering program Web site.

Proposed UNM Catalog Description (additions in color)

Master's Degree Programs

Course Requirements

In addition to Graduate Studies requirements for the masters degrees, the department also requires at least one credit hour of graduate seminar ECE 590. Other program information is available at the Electrical and Computer Engineering department Web site.

Plan I: Among the required courses (a minimum of 15 credit hours in ECE), there must be four courses specified by the area of focus chosen by the student. Candidates for the M.S. degree must also satisfactorily pass the thesis defense.

Plan III: Among the required courses (a minimum of 18 credit hours in ECE), there must be four courses specified by the area of focus chosen by the student.

Master of Science in Computer Engineering

Areas of focus are: Computer Architecture, Computer Graphics and Vision, Computer Networks and Systems, Image Processing, Computational Intelligence, and Bioengineering.

Master of Science in Electrical Engineering

Areas of Focus are: Systems and Controls, Signal Processing, Image Processing, Communications, Optoelectronics, Applied Electromagnetics, Microelectronics, Power and Energy, and Bioengineering.

Master of Science in Optical Science and Engineering

The Optics Program is jointly administered by the Department of Physics and Astronomy and the Department of Electrical and Computer Engineering. It features an internship option under which a student can apply qualified industrial/government laboratory research along with successfully completed course work toward the degree.

Current research areas: advanced materials, atom optics, biomedical optics, fiber optics, laser physics, lithography, nanostructures, nonlinear optics, optical imaging, optical sensors, optoelectronics, photonic integrated circuits, quantum optics, spectroscopy, and ultra-fast phenomena.

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THE UNIVERSITY of NEW MEXICO | SCHOOL of ENGINEERING

Department of Electrical & Computer Engineering

To Whom It May Concern,

The UNM Graduate Studies (OGS) office has made a plan III option (coursework only) available within the M.S. degree. The Department of Electrical and Computer Engineering has presented this option to its faculty. It has been agreed to by both the department graduate committee and by the full faculty in separate meetings. Official votes were conducted during the Fall of 2015. The Plan III option will replace the current Plan II option in ECE as soon as the official catalog changes are made.

There will be no impact on planning, budget, or faculty workload. The areas of degree emphasis will remain unchanged; the current graduate course offerings are sufficient to accommodate the new Plan III students. It is, however, expected that this plan offering in place of Plan II will be of greater interest to student applicants, particularly working professionals, military personnel, and students apprenticed to government laboratories.

Assessment of quality and student outcomes will follow the existing rubric of standards in place for Plan I. Each student will be expected to complete their classes under the supervision of a department faculty advisor. This advisor and mentor will help select appropriate and rigorous classwork to ensure progress toward the degree. Assessment will take place both with the staff advisor when a program of studies is filed and with the faculty advisor and department graduate program director at the time the student completes all degree requirements.

If there are any inquires or requests for further information about the proposed catalog change, please feel free to contact Shannon Kindilien, scheduling coordinator, at skindili@unm.edu or Dr. Mark Gilmore, Director of Graduate Studies, in the Electrical and Computer Engineering department.

Thank you,

Mark Gilmore, PhD
Associate Professor
Director of Graduate Studies
Electrical and Computer Engineering

Christos Christodoulou, PhD
Department Chair
Associate Dean for Research
Electrical and Computer Engineering