

**DEGREE/PROGRAM CHANGE
FORM C
Form Number: C1051**

Fields marked with * are required

Name of Initiator: Amber Mattson **Email:*** midget1@unm.edu **Date:*** 04-24-12
Phone Number:* 7-9929 Initiator's Title* Administrative Assistant/Scheduling
Coordinator
Associated Forms exist?*: Please Select ▼
Faculty Contact* Luke Lester Administrative Contact* Amber Mattson
Department* Electrical and Computer Engineering Admin Email* amattson@ece.unm.edu
Branch Admin Phone* 277-9929

Proposed effective term:

Semester Fall ▼ Year 2012 ▼

Course Information

Select Appropriate Program Graduate Degree Program ▼
Name of New or Existing Program * Ph.D. Engineering Electrical & Computer Engineering
Select Category Concentration ▼ Degree Type
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)

[ECE Concentration changes.doc](#)

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)

(REGISTRAR'S NOTE: THIS FORM REQUESTS CHANGES TO THE COMPUTER ENGINEERING CONCENTRATION THAT INCLUDE CHANGES TO THE CORE COURSES, ELIMINATION OF ANY EMPHASIS, ADDITION OF AN EMPHASIS, AND REVISION OF EMPHASES REQUIREMENTS. IT ALSO REQUESTS FOR THE ELECTRICAL ENGINEERING CONCENTRATION CHANGES TO CORE COURSES, AN EMPHASIS NAME CHANGE, ADDITION OF AN EMPHASIS, AND CHANGES TO THE EMPHASES REQUIREMENTS.) The emphases and core courses for the Electrical and Computer Engineering concentrations have changed to provide more relevant education for the students within each emphasis. The hours of technical electives for a Ph.D. have been decreased to promote a greater focus on the emphasis courses.

Upload a document that includes justification for the program, impact on long-range planning, detailed budget analysis and faculty workload implications. *

Graduate Program

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Ph.D. in Engineering

Concentration in Computer Engineering

Emphases are: Computer Architecture, ~~High Performance Computing~~, Computer Graphics and Vision, Computer Networks and Systems, Image Processing, and Computational Intelligence.

Computer Engineering Core Courses:

ECE ~~500, 509, 516~~, 517, 520, ~~522~~, 533, 536, 537, 538, 539, 540, ~~547~~, 549.

Computer Engineering Emphases:

- Computer Architecture: ECE 520, ~~537~~, ~~522~~, 538.
- ~~High Performance Computing: 509, 537, 538.~~
- Computer Graphics and Vision: ECE 516, 533, 537.
- Computer Networks and Systems: ECE 536, 537, 540.
- Image Processing: ECE ~~517~~, 533, 537, ~~539, 641~~.
- Computational Intelligence: ECE 517, ~~533~~, 537, ~~539~~, 549.

Concentration in Electrical Engineering

Emphases are: ~~Control Systems~~ Systems and Controls, Signal Processing, Image Processing, Communications, Optoelectronics, Applied Electromagnetics, ~~and~~ Microelectronics, ~~and~~ Power and Energy.

Electrical Engineering Core Courses:

ECE 500, 520, 523, 533, 534, 539, 541, 542, 546, 560, 561, ~~565~~, 569, 570, 572, 576, 582, 584, 588.

Electrical Engineering Emphases:

- ~~Control Systems~~ Systems and Controls: ECE 500, 541, 546.
- Signal Processing: ECE 500, 539, 541.
- Image Processing: ECE ~~500~~, 533, 539, 541.
- Communications: ECE 500, 541, 542.
- Optoelectronics: ECE 561, ~~565~~, 570, 572.
- Applied Electromagnetics: ECE 534 or 569, 560, 561.
- Microelectronics: ECE 520, 523, 576.
- Power and Energy: ECE 582, 584, 588.

Course Requirements

In addition to the general University doctoral degree requirements listed in the Graduate Program section of the UNM Catalog, students pursuing a Ph.D. must choose an area of emphasis and take three courses (9 hours) from this area of emphasis, one course (3 hours) from another computer engineering or electrical engineering emphasis, and ~~42~~ 36 hours of technical electives. The department also requires at least two credit hours of ECE 590, Graduate Seminar. No more than 9 hours of problems courses (ECE 551 or 651) will count toward the Ph.D. Other program information is available at <http://www.ece.unm.edu>.

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(end of Graduate Program section, delete the following)

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