

2012-2013 SHORT SIGNATURE SHEET



UNC CHARLOTTE

Date: 3/28/13

Subject: NAME CHANGE OF E C G R 5192

Originating Department: ECE

TYPE OF PROPOSAL: UNDERGRADUATE _____ GRADUATE UNDERGRADUATE & GRADUATE _____
 (Separate proposals sent to UCCC and Grad. Council)

DATE RECEIVED	DATE FORWARDED	COMMENTS: APPROVED, APPROVED WITH REVISIONS, ETC.	SIGNATURES
			<u>PERSON ORIGINATING PROPOSAL</u> EO STOKES [print name here:] -longzhang
		Approved	<u>DEPARTMENT CHAIR</u> [print name here:]
		Approved	<u>COLLEGE CURRICULUM COMMITTEE CHAIR</u> [print name here:] Wesley B. Williams
	5/21/13	Approved	<u>COLLEGE DEAN</u> [print name here:]
		Approved	<u>GENERAL EDUCATION</u> (if applicable; for General Education courses only) [print name here:]
		Approved	<u>UNDERGRADUATE COURSE & CURRICULUM COMMITTEE CHAIR</u> (for undergraduate courses only)
		Approved	<u>GRADUATE COUNCIL CHAIR</u> (for graduate courses only)
			<u>FACULTY GOVERNANCE ASSISTANT</u> (received and processed in Academic Affairs)



UNC CHARLOTTE

SHORT FORM COURSE AND CURRICULUM PROPOSAL

*To: Rob Roy McGregor, Graduate Council Chair

From: Edward Stokes, ECE Professor

Date: 14 Feb 2013

Re: Change title of ECGR 5192 and make catalog verbage consistent with 4134

The Short Form is used for minor curriculum changes. Minor changes may include:

- Changes to course numbering (note: must follow Course Numbering Policy)
- Editorial changes to current catalog copy
- Individual new courses (undergraduate only)
- Other small changes that have limited to no impact on other departments or units

Submission of this Short Form indicates review and assessment of the proposed curriculum changes at the department and collegiate level either separately or as part of ongoing assessment efforts.

*Proposals for undergraduate courses should be sent to the Undergraduate Course and Curriculum Committee Chair. Proposals related to both undergraduate and graduate courses, (e.g., courses co-listed at both levels) must be sent to both the Undergraduate Course and Curriculum Committee and the Graduate Council.

SUMMARY: State clearly and concisely the proposed changes. Please give a brief statement as to why the change is being proposed.

Ex. "The Biology Department proposes to add a prerequisite to the existing course, BIOL 2222."

Ex. "The College of Information Technology proposes a change in the course description for ITCS 6132."

ECGR 5192, currently entitled "Solid State Microelectronics II", is cross-listed with ECGR 4134 and is currently offered in fall semesters. The course is open to all new ECE graduate students who have completed the equivalent of ECGR 3133 and ECGR 3121 in their undergraduate curriculum. However, many new graduate students are hesitant to enroll in a course with a "II" in the title. Also, somehow, the catalog verbage of the two cross-listed courses is currently inconsistent in the undergraduate and graduate catalogs. Therefore, we seek to change the title of ECGR 5192 to "Solid State Microelectronic Devices". We also seek to change the catalog verbage of ECGR 5192 to match that of ECGR 4134, the cross-listed undergraduate class.

FOR CONSULTATION WITH OTHER DEPARTMENTS:

1. Does the proposed change affect other departments (including additions and/or changes to degree requirements or prerequisites offered in other departments)?

_____ Yes No

2. If Yes, please list the other departments affected by the proposed change:

3. Have you consulted with each department listed in item 2 regarding the proposed change?

_____ Yes _____ No

Result(s) of Consultation(s) (please attach documentation):

For a new course or for major modification of an existing course, include Consultation on Library Holdings.

RESOURCES:

1. For a new course or revisions to an existing course, check all the statements that apply:

This course will be cross listed with another course.

_____ There are prerequisites for this course.

_____ There are co-requisites for this course.

_____ This course is repeatable for credit.

_____ This course will affect the number of credits hours for its program.

_____ This proposal results in the deletion of an existing course(s) from the degree program and/or catalog.

_____ This proposal will alter an agreement with a North Carolina community college.

For all items checked above, applicable statements and content must be reflected in the proposed catalog copy.

2. Indicate the additional resources required, if any, to implement and maintain the proposed change. None.

CREDIT HOUR (Mandatory if new and/or revised course in proposal):

Review statement and check box once completed.

- The appropriate faculty committee has reviewed the course outline/syllabus and has determined that the assignments are sufficient to meet the University definition of a credit hour.

PROPOSED CATALOG COPY: For existing courses copy and paste the current catalog copy and use the Microsoft Word “track changes” feature (or use red text with “strikethrough” formatting for text to be deleted, and adding blue text with “underline” formatting for text to be added). For new courses, draft comprehensive catalog copy.

~~ECGR 5192. Solid State Microelectronics~~ Microelectronic devices. (3) Prerequisites: ECGR 31213122 and 3133 or their equivalents. PN-junctions and Schottky junctions; bipolar and field effect transistors; optoelectronic and heterojunction devices; lithography and integrated circuits; microwave devices; light emitting devices and detectors; quantum devices using superlattices; quantum wells and quantum dots; material preparation and characterization; and measurement techniques. Advanced device concepts for MOSFET, bipolar, and CMOS integrated circuits. Gate length, transit time, and power-frequency limits. Device scaling concepts. Tunneling and avalanche devices, and hot electron behavior. Device and interconnect reliability and failure and device interconnects. Submicron channel, MODFET, and quantum well devices. High frequency solid state devices. Limits of switching speed. Solid state power devices. Credit will not be given for ECGR 5192 where credit has been given for ECGR 4134. (Spring/Fall)

ACADEMIC PLAN OF STUDY (UNDERGRADUATE ONLY): If the proposed change will impact an existing Academic Plan of Study, provide updated Academic Plan of Study in template format.

STUDENT LEARNING OUTCOMES: If applicable, please indicate what SLOs are supported by this course or whether this curricular change requires a change in SLOs or assessment for the degree program.

TEXTBOOK COSTS: It is the policy of the Board of Governors to reduce textbook costs for students whenever possible. Have electronic textbooks, textbook rentals, or the buyback program been considered and adopted?

IMPORTANT NOTE: A Microsoft Word version of the final course and curriculum proposal should be sent to facultygovernance@uncc.edu upon approval by the Undergraduate Course and Curriculum Committee and/or Graduate Council chair.