

2014-2015 SHORT SIGNATURE SHEET




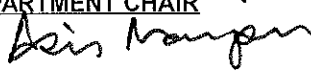
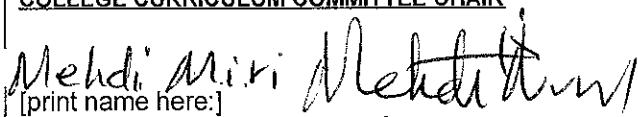
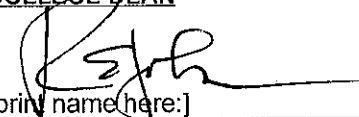
UNC CHARLOTTE

Date: 16 September 2014

Subject: Creation of Solar Cell Fundamentals Course

Originating Department: ECE

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

DATE RECEIVED	DATE FORWARDED	COMMENTS: APPROVED, APPROVED WITH REVISIONS, ETC.	SIGNATURES
			PERSON ORIGINATING PROPOSAL  10/3/14 [print name here:] AbasiFreke Ebong
		Approved	DEPARTMENT CHAIR  9/29/14 [print name here:] ASIS NASIPURI
		Approved	COLLEGE CURRICULUM COMMITTEE CHAIR  [print name here:] Mehdi Miri
10/14/2014	Oct 14, 2014	Approved	COLLEGE DEAN  [print name here:]
		Approved	GENERAL EDUCATION (if applicable; for General Education courses only) [print name here:]
		Approved	HONORS COLLEGE (if applicable; for Honors courses & programs) [print name here:]
		Approved	UNDERGRADUATE COURSE & CURRICULUM COMMITTEE CHAIR (for undergraduate courses only)
		Approved	GRADUATE COUNCIL CHAIR (for graduate courses only)
			FACULTY GOVERNANCE ASSISTANT (received and processed in Academic Affairs)



UNC CHARLOTTE

SHORT FORM COURSE AND CURRICULUM PROPOSAL

*To: Dr. Mehdi Miri

From: Dr. Ryan Adams

Date: 16 September 2014

Re: Creation of Solar Cell Fundamentals Course

SUMMARY:

The Electrical and Computer Engineering Department proposes to add a new course, ECGR 4151: Solar Cell Fundamentals and Technology. This class will enhance the department offerings in renewable energy, a major new area of focus for the department. The class will consist of two lectures and a two hour lab in the Cameron clean room each week in which students will learn the basic structure, design, modeling, fabrication and characterization of solar cells. Students will fabricate, characterize and analyze silicon solar cells fabricated in the department clean room. This will be a 3 credit 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):

4. For a new course or for major modification of an existing course, include Consultation on Library Holdings.
5. For proposals involving Honors courses or programs, include written consultation with the Honors Council.

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.

This class will use the existing Electrical and Computer Engineering microelectronics fabrication clean room in Cameron. All necessary equipment and facilities are currently in place

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 4151. Solar Cell Fundamentals and Technology (3) Prerequisite: ENGR 1202 "E" sections for electrical and computer engineering students with a grade of C or better.

Principles of operation and basic design features of silicon solar cells. Clean room protocols, processes, and fabrication techniques. Solar cell fabrication, testing, and process modifications to improve performance.

ACADEMIC PLAN OF STUDY (UNDERGRADUATE ONLY): Does the proposed change impact an existing Academic Plan of Study?

- Yes. If yes, please provide updated Academic Plan of Study in template format.
 No.

STUDENT LEARNING OUTCOMES (UNDERGRADUATE & GRADUATE): Does this course or curricular change require a change in SLOs or assessment for the degree program?

- Yes. If yes, please provide updated SLOs in template format.
 No.

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?

- Yes. Briefly explain below.
 No. Briefly explain below.

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.



J. Murrey Atkins Library

Consultation on Library Holdings

To: John Hudak
From: Jeff McAdams
Date: 09/09/14
Subject: ECGR 3090 – Solar Cell Fundamentals Lab

Summary of Librarian's Evaluation of Holdings:

Evaluator: Jeff McAdams Date: 09/09/14

Check One:

- 1. Holdings are superior _____
- 2. Holdings are adequate x
- 3. Holdings are adequate only if Dept. purchases additional items. _____
- 4. Holdings are inadequate _____

Comments:

Library holdings should be adequate to support student research for this course (see list of items held by subject heading below). Students will have access to relevant databases including *Compendex*, *IEEE Xplore*, *Institute of Physics*, *Science Direct*, *CRC Press*, and many others.

LC Subject Heading	Books	Journals
Solar cell	759	5
Photovoltaic	396	16
Photolithography	54	2

Evaluator's Signature

09/09/14

Date