


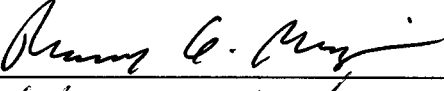
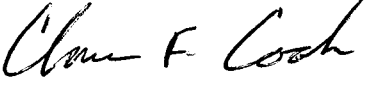

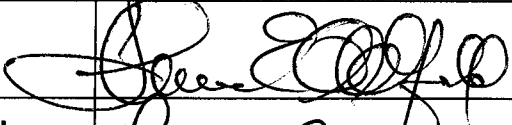

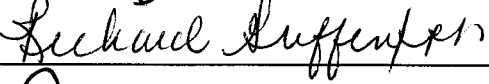

Revised 7/23/07

PROPOSAL SUMMARY AND ROUTING FORM

Proposal Title: Creation of EEET-214, Advanced Electric Circuits

Initiating Unit or Individual: EEET/CNS Department, College of Technology
Contact Person's Name: Ronald Mehringer e-mail: mehrinr@ferris.edu phone: X3064
Date or Term of Proposal Implementation: 200808

- Group I - A – New degree/major or major, redirection of a current offering, or elimination of a degree, major or minor
- Group I - B – New minors or concentrations
- Group II - A – Minor curriculum clean-up and course changes
- Group II - B – New Course
- Group III - Certificates
- Group IV – Off-Campus Programs

Group/Individual	Signature	Date	Vote/Action *
Program Faculty		11/20/07	<input type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Department Faculty		11/20/07	<input type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Department Head / Chair		11/20/07	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
College Curriculum Committee		12/11/07	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Dean		12/12/07	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
University Curriculum Committee		1/16/08	<input checked="" type="checkbox"/> Support, 7-0 <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Senate		1/16/08	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Academic Affairs		1/13/08	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support

* Support with Concerns or Not Support must include a list of specific concerns. Votes must be shown for faculty groups. Administrators check appropriate action taken.

To be completed by Academic Affairs

President (Date Approved) Board of Trustees (Date Approved) President's Council (Date Approved)

1. Proposal Summary

(Summary is generally less than one page. Briefly: state what is proposed with a summary of rationale and highlights. Additional rationale may be attached.)

The EEET/CNS department has been evaluating a temporary course, EEET-290, as a continuation of two existing courses, EEET-114 and EEET-124. These existing courses are now being taught using a new textbook, "DC/AC Circuits and Electronics: Principles and Applications" by Robert Herrick, which approaches the standard subject material with a new and more contemporary approach. In order to mesh this new approach into the existing curriculum, it was necessary to offer a temporary course, EEET-290, as a follow-up course that would continue the material in a comprehensive manner and integrate it into the existing curriculum. EEET-290 was designated to be offered for only two years and the effectiveness of the course to be evaluated during that time. EEET-290 has proven to be an effective connection between the EEET-114/124 courses and the rest of the existing curriculum. Because of the limited duration of the EEET-290 course, it is necessary to create EEET-214 to take the place of the expiring EEET-290. EEET-214 will be a permanent replacement for the temporary EEET-290 course and will now be part of the required courses in the IET/EET curriculum. EEET-290 was offered in the fall semester of the sophomore year as a "Technical Elective" on the standard check sheet. The new course, EEET-214, will replace the "Technical Elective" slot on the check sheet and as a result will not result in any change in credits for the semester or total credits for the degree.

2. Summary of All Course Action Required*

a. Newly Created Courses to FSU:

Prefix	Number	Title
EEET	214	Advanced Electric Circuits

b. Courses to be Deleted From FSU Catalog:

Prefix	Number	Title
---------------	---------------	--------------

c. Existing Course(s) to be Modified:

Prefix	Number	Title
---------------	---------------	--------------

d. Addition of existing FSU courses to program

Prefix	Number	Title
---------------	---------------	--------------

e. Removal of existing FSU courses from program

Prefix	Number	Title
---------------	---------------	--------------

*Contact Senate Secretary or UCC Chair if spaces for additional courses are needed.

NEW COURSE INFORMATION FORM

Course Identification:

Prefix:	Number	Title
EEET	214	Advanced Electric Circuits

Course Description:

This course will address basic ac circuit concepts including waveforms, phasors, series and parallel circuits, resonance, transformers and filters. Application of methods of analysis, theorems and power calculations will be investigated.

Course Outcomes and Assessment Plan:

The student will be able to:

1. Be able to recognize and compute basic quantities of a sine expression.
2. Compute and work with various forms of phasors.
3. Compute impedance using reactance and resistance.
4. Understand and compute voltages in series and parallel circuits
5. Know how to apply analysis and network theorems to circuits.
6. Understand various forms of power.
7. Understand how to apply transformers and filters in circuits.
8. Demonstrate each above item through homework, exams and labs.

Course Outline including Time Allocation:

Week	Topic	Chapter(s)	Homework
1	Course Introduction Components of a sine wave	13	
2	Sine wave equation, Calculations Phasors, Phasor diagrams, phase shift	13	Homework #1
3	Reactance, Resistance, Impedance	14	Homework #2
4	Series Circuits, R, RL, RC Voltage Divider	14	Homework #3
5	Parallel Circuits, R, RL, RC Current Divider	14	Homework #4
6	Series/ Parallel Circuits, Test Review Exam #1	14	
7	Power in ac circuits	14	Homework #5
8	Power triangle, Power factor correction	14	Homework #6

9	Source Conversion, Mesh analysis	15	Homework #7
10	Nodal analysis, Superposition	15	
11	Review, Exam #2		
12	Thevenin, Norton Theorems	15	Homework #8
13	Resonance in Series Circuits And parallel circuits, Bandwidth	14	Homework #9
14	Filter Circuits	14	Homework # 10
15	Active Filter Circuits	14	

Lab Assignments

Week	Topic	LAB #
1	Circuit Review	1
2	Frequency Dependent Circuits (Simulation)	2
3	Frequency Dependent Circuits (Wired)	3
4	Open Lab	
5	Series Circuits	4
6	Parallel Circuits	5
7	Power Circuits	6
8	Frequency Response	7
9	Mesh Analysis	8
10	Thevenin Equivalent Circuits	9
11	Series Resonance	10
12	Parallel Resonance	11
13	Filter Circuits	12
14	Open Lab	
15	Final Exam Review	

CREATE NEW COURSE
Course Data Entry Form

FORM F

Create New Course
Rev. 07/23/07

I. ACTION TO BE TAKEN: CREATE A NEW COURSE

Notes

1. Complete each item in Section I and Section II.
2. If this course is to be used as a prerequisite for other university courses, Form Fs that reflect the prerequisite change must be submitted for those courses as well.

Term Effective (6 digit code only): 200808 Examples: 200801(Spring), 200805(Summer), 200808(Fall)
Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. PROPOSED FOR NEW COURSE: Complete all sections a through r, See manual for clarification.

a. Course Prefix EEET b. Number 214 c. Enter Contact Hours per week in boxes.
LECTure 2 LAB 2 INDEpendent Study – Check (x)
Practicum: Seminar:
d. Course Title: Advanced Electric Circuits (Limit to 30 characters/spaces.)

e. College Code: TECH f. Department Code: EEET
Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: Variable Fixed h. Minimum Credit Hours 3 i. Maximum Credit Hours 3

j. May Be Repeated for Added Credit: Check (x) Yes No

k. Levels: Check (x) Undergraduate Graduate Professional

l. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

m. Does proposed new course replace an equivalent course? Check (x) Yes No

n. Equivalent course: Prefix Number See instructions on Replacement courses.

o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

This course will address basic ac circuit concepts including waveforms, phasors, series and parallel circuits, resonance, transformers and filters. Application of methods of analysis, theorems and power calculations will be investigated.

p. Term(s) Offered: Fall (See instructions for listing.) q. Max. Section Enrollment: 16

r. Prerequisites/Co-requisites/Restrictions: (If none, leave blank.) Limited to 100 spaces. Pre – EEET-124, Pre - MATH-126.

UCC Chair Signature/Date:

 1/16/08

Academic Affairs Approval Signature/Date:

 1/17/08

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE ___ SCADETL ___ SCARRS ___ SCAPREQ ___

Associate In Applied Science Degree
Industrial Electronics Technology

Curriculum Guide Sheet
 Current Checksheet

Year 1 - Fall Semester

		Course	Credits	Grade
EEET	111	Mobile Robots	1	_____
EEET	114	Electric Circuits 1 (Co-Req: MATH 116)	4	_____
ENGL	150	English 1	3	_____
MATH	116	Intermediate Algebra & Numerical Trig (Pre-Req: C- in MATH-110 or ACT 19)	4	_____
_____	_____	Cultural Enrichment	3	_____
FSUS	100	Freshman Seminar	(1)	_____
		Total Semester Credits	15 (16)	

Year 1 - Spring Semester

		Course	Credits	Grade
EEET	122	Digital 1 (Co-Req: EEET-114)	4	_____
EEET	124	Electric Circuits 2 (Pre-Req: EEET-114, Math 116)	4	_____
ENGL	250	English 2 (Pre-Req: ENGL 150)	3	_____
MATH	126	Algebra & Analytical Trigonometry (Pre-Req: C- in MATH 116)	4	_____
		Total Semester Credits	15	

Year 2 - Fall Semester

		Course	Credits	Grade
EEET	210	Communication Circuits (Pre-Req: EEET-124 ; Co-Req: EEET-211, EEET-212)	4	_____
EEET	211	Electronics	3	_____
EEET	212	Digital 2 (Pre-Req: EEET-122)	4	_____
_____	_____	Technical Elective	3	_____
PHYS	211	Introductory Physics 1 (Pre-Req: C- in MATH 116)	4	_____
		Total Semester Credits	17	

Year 2 - Spring Semester

		Course	Credits	Grade
EEET	221	Troubleshooting (Pre-Req: EEET-210, EEET-211, EEET-212)	3	_____
EEET	222	Microprocessor Applications (Pre-Req: EEET-212)	4	_____
ECNS	322	PC Data Acquisition and Control (Pre-Req: EEET-122, EEET-124 or Dept. Approval)	3	_____
EEET	224	Industrial Automation and Motors (Pre-Req: EEET-124)	4	_____
_____	_____	Social Awareness Elective	3	_____
		Total Semester Credits	17	

Associate In Applied Science Degree
Industrial Electronics Technology

Curriculum Guide Sheet
 Proposed Checksheet

Year 1 - Fall Semester

		Course	Credits	Grade
EEET	111	Mobile Robots	1	_____
EEET	114	Electric Circuits 1 (Co-Req: MATH 116)	4	_____
ENGL	150	English 1	3	_____
MATH	116	Intermediate Algebra & Numerical Trig (Pre-Req: C- in MATH-110 or ACT 19)	4	_____
_____	_____	Cultural Enrichment	3	_____
FSUS	100	Freshman Seminar	(1)	_____
		Total Semester Credits	15 (16)	

Year 1 - Spring Semester

		Course	Credits	Grade
EEET	122	Digital 1 (Co-Req: EEET-114)	4	_____
EEET	124	Electric Circuits 2 (Pre-Req: EEET-114, Math 116)	4	_____
ENGL	250	English 2 (Pre-Req: ENGL 150)	3	_____
MATH	126	Algebra & Analytical Trigonometry (Pre-Req: C- in MATH 116)	4	_____
		Total Semester Credits	15	

Year 2 - Fall Semester

		Course	Credits	Grade
EEET	210	Communication Circuits (Pre-Req: EEET-124 ; Co-Req: EEET-211, EEET-212)	4	_____
EEET	211	Electronics	3	_____
EEET	212	Digital 2 (Pre-Req: EEET-122)	4	_____
EEET	214	Advanced Electric Circuits (Pre-Req: EEET-124)	3	_____
PHYS	211	Introductory Physics 1 (Pre-Req: C- in MATH 116)	4	_____
		Total Semester Credits	17	

Year 2 - Spring Semester

		Course	Credits	Grade
EEET	221	Troubleshooting (Pre-Req: EEET-210, EEET-211, EEET-212)	3	_____
EEET	222	Microprocessor Applications (Pre-Req: EEET-212)	4	_____
ECNS	322	PC Data Acquisition and Control (Pre-Req: EEET-122 or Dept. Approval)	3	_____
EEET	224	Industrial Automation and Motors (Pre-Req: EEET-124)	4	_____
_____	_____	Social Awareness Elective	3	_____
		Total Semester Credits	17	