REQUEST FOR CHANGE IN UNDERGRADUATE PROGRAM

1. General Information

College: Engineering

Department: Electrical and Computer Engineering

Current Program Name: BS in Electrical Engineering

Proposed Program Name:

Current Major Name: Electrical Engineering

Proposed Major Name:

Current Degree Title: BSEE

Proposed Degree Title:

Formal Option:

Specialty Field:

Bulletin (yr and pgs): 2008/p202-203 CIP Code: UK ID #: HEGIS CODE:

Accrediting Agency (if applicable): Accreditation Board of Engineering and Technology (ABET)

2. Particular University Studies Requirements or Recommendations for this Program.

	Current	*Proposed*
I. Mathematics		No Change
II. Foreign Language		No Change
III. Inference-Logic		No Change
IV. Written Communication	ENG 104 or Honors	No Change
V. Oral Communication	~~Suspended through Fall 2009~~	*~~Suspended through Fall 2009~~*
VI. Natural Sciences		No Change
VII. Social Sciences		No Change
VIII. Humanities		No Change
IX. Cross-Cultural		No Change
X. USP Electives (3 must be outside the student's major)		No Change

To the extent that proposed changes in sections 3 through 8 involve courses offered in another program, please submit correspondence with the program(s) pertaining to the availability of such courses to your students.

3. University Graduation Writing Requirement - select from approved courses.

4. College Depth & Breadth of Study Requirements (if applicable). Include particular courses required/recommended for this program.

Current	*Proposed*
	No Change

5. Premajor or Preprofessional Course Requirements (if applicable).

Current	*Proposed*
	No Change

6. Credit Hours.

a. Credit Hours Required: Current: 130 *Proposed:* 131

b. Total Required for Graduation: Current: 130 *Proposed:* 131

c. Required by Level:

	100:	200:	300:	400-500:
Currently:	19	29	9	16
Proposed:	*100:* same	*200:* 30	*300:* 6	*400-500:* 19

d. Current Premajor or Preprofessional:	12	*d. Proposed Premajor or Preprofessional:*	12
e. Current Field of Concentration:		*e. Proposed Field of Concentration:*	
f. Current Division of Hrs between Major Subject & Related Field:		*f. Proposed Division of Hrs between Major Subject & Related Field:*	
g. Current Hrs Needed for a Specific Option or Specialization:		*g. Proposed Hrs Needed for a Specific Option/Specialization:*	
h. Current Technical or Professional Support Electives:	39	*h. Proposed Technical or Professional Support Electives:*	40
i. Current Minimum Hours of Free or Supportive Electives:	3	*i. Proposed Minimum Hours of Free or Supportive Electives:*	3

7. Major or Professional Course Requirements.

Current	*Proposed*
See Attached.	See Attached.

8. Minor Requirements (if applicable).

Current	*Proposed*

9. Rationale for Change(s) – if rationale involves accreditation requirements, please include specific references to those.

See Attached.

10. List below the typical semester by semester program for a major.

Current	Hours	*Proposed*	*Hours*
YEAR 1 - Fall		*YEAR 1 - Fall*	
EE 101 Professions Seminar	1	EE 101 Professions Seminar	1
MA 113 Calculus I	4	MA 113 Calculus I	4
CS 115 Intro. to Computer Prog.	3	CS 115 Intro. to Computer Prog.	3
ENG 104 Writing I	4	ENG 104 Writing I	4
USP (Univ. Studies Program)	3	USP (Univ. Studies Program)	3
USP (Univ. Studies Program)	3	USP (Univ. Studies Program)	3
Current Total, Year 1 Fall	18	*Proposed Total, Year 1 Fall:*	18
YEAR 1 – Spring		*YEAR 1 – Spring*	
MA 114 Calculus II	4	MA 114 Calculus II	4
PHY 231 Gen Univ Physics	4	PHY 231 Gen Univ Physics	4
PHY 241 Gen Univ Physics Labl	1	PHY 241 Gen Univ Physics Labl	1
CHE 105 General College Chem	3	CHE 105 General College Chem	3
Oral Comm. Requirement	3	Oral Comm. Requirement	3
Current Total, Year 1 Spring:	15	*Proposed Total, Year 1 Spring:*	15
YEAR 2 - Fall		*YEAR 2 – Fall*	
MA 213 Calculus III	4	MA 213 Calculus III	4
PHY 232 Gen Univ Physics II	4	PHY 232 Gen Univ Physics II	4
PHY 242Gen Univ Physics LabII	1	PHY 242Gen Univ Physics LabII	1
EE 211 Circuits I	4	EE 211 Circuits I	4
EE 280 Design of Logic Circuits	3	EE 280 Design of Logic Circuits	3
Current Total, Year 2 Fall:	16	*Proposed Total, Year 2 Fall:*	16
YEAR 2 - Spring		*YEAR 2 – Spring*	
MA 214 Calculus IV	3	MA 214 Calculus IV	3
EE 221 Circuits II	3	EE 221 Circuits II	3
EE 222 EE Laboratory I	2	EE 222 EE Laboratory I	2
EE 360 Intro Semiconductor De	3	EE 360 Intro Semiconductor Devices	3
Engineering/Science Elective	3	CS 215 Intro to Prog Desgn, Abstr, and Problem Solving	4
USP	3	USP	3
Current Total, Year 2 Spring:	17	*Proposed Total, Year 2 Spring:*	18

10. Semester Plans, continued.

Current	Hours	*Proposed*	*Hours*
YEAR 3 - Fall		*YEAR 3 - Fall*	
EE 415G Electromechanics	3	EE 415G Electromechanics	3
EE 421G Signals & Systems	3	EE 421G Signals & Systems	3
Elective EE Lab	2	Elective EE Lab	2
EE 380 Computer Organization	3	EE 380 Computer Organization	3
EE 461G Intro to Electronics	3	EE 461G Intro to Electronics	3
MA 320 Introductory Probability	3	MA 320 Introductory Probability	3
Current Total, Year 3 Fall:	17	*Proposed Total, Year 3 Fall:*	17
YEAR 3 - Spring		*YEAR 3 - Spring*	
EE 468G Intro Engr Electromag	4	EE 468G Intro Engr Electromagnet	4
Elective EE Laboratory	2	Elective EE Laboratory	2
Engineering/Science Elective	3	Engineering/Science Elective	3
Technical Elective	3	Technical Elective	3
USP	3	USP	3
Current Total, Year 3 Spring:	15	*Proposed Total, Year 3 Spring:*	15
YEAR 4 – Fall		*YEAR 4 - Fall*	
EE Technical Elective	3	EE 490 EE Capstone Design I	3
EE Technical Elective	3	EE Technical Elective	3
Elective EE Laboratory	2	EE Technical Elective	3
Math/Statistics Elective	3	Elective EE Laboratory	2
Technical Elective	3	Math/Statistics Elective	3
USP	3	USP	3
Current Total, Year 4 Fall:	17	*Proposed Total, Year 4 Fall:*	17
YEAR 4 - Spring		*YEAR 4 - Spring*	
EE 499 Senior Design	3	EE 491 EE Capstone Design II	3
EE Technical Elective	3	EE Technical Elective	3
EE Technical Elective	3	EE Technical Elective	3
Supportive Elective	3	Supportive Elective	3
Engineering/Science Elective	3	Engineering/Science Elective	3
Current Total, Year 4 Spring:	15	*Proposed Total, Year 4 Spring:*	15
Current Total Hours:	130	*Proposed Total Hours:*	131

10. Signatures of Approval:

1/10/2009	Lawrence Holloway	Lawrence Holloway
DATE of Approval by Department Faculty	printed name / Reported by Department Chair	signature
3/11/2009	RICHARD J. SWEIGARD	Richard J. Sweigard
DATE of Approval by College Faculty	printed name / Reported by College Dean	signature
04/07/2009	Sharon Gill	Digitally signed by Sharon Gill DN: cn=Sharon Gill, o, ou=Undergraduate Education, email=sgill@uky.edu, c=US Date: 2009.04.13 08:29:26 -04'00'
*DATE of Approval by Undergraduate Council	printed name / Reported by Undergraduate Council Chair	signature
*DATE of Approval by Graduate Council	printed name / Reported by Graduate Council Chair	signature
*DATE of Approval by Health Care Colleges Council (HCCC)	printed name / Reported by Health Care Colleges Council Chair	signature
*DATE of Approval by Senate Council	Reported by Office of the Senate Council	
*DATE of Approval by the University Senate	Reported by the Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules.*

7. Major or Professional Course Requirements

Current #1
Engineering/Science Electives-Any engineering, physics, computer science, or math course at the 200-level or higher, other than an electrical engineering course and excluding more elementary versions of required courses (9 credit hours total).

Proposed #1
Engineering/Science Electives-Any engineering, physics, computer science, or math course at the 200-level or higher, other than an electrical engineering course and excluding more elementary versions of required courses (6 credit hours total).

Engineering/Science Electives (6 hrs), replacing the third with
CS 215 (4 cr. hrs)-Intro to Program Design, Abstraction, and
Problem Solving or other programming course (3 credit hour minimum) approved by DUS.

Current #2
Technical Electives may be selected from upper division (300-level or higher) engineering, mathematics, statistics, computer science, physics, or other technically-related fields and excluding more elementary versions of required courses, to be selected in consultation with the academic advisor (6 credit hours total).

Proposed #2
Technical Elective may be selected from upper division (300-level or higher) engineering, mathematics, statistics, computer science, physics, or other technically-related fields and excluding more elementary versions of required courses, to be selected in consultation with the academic advisor (3 credit hours total).

9. Rationale for Change(s)-if rationale involves accreditation requirements, please include specific references to those.

Change 1: Addition of CS 215
Several employers have commented that our EE undergraduate students have inadequate programming experience, and the students' capabilities are below the capabilities of other students on the market. Students are already required to take CS 115-Introduction to Programming, but that seems insufficient based on student and employer comments. The curriculum will have 3 hours less in Engineering/Science electives in order to accommodate the 4 credit hours of CS 215 (or minimum of 3 credit hours in other programming course as approved by DUS).

Change 2: Two-semester Senior Design
The change for the Senior Design course to two semesters will allow sufficient exposure to a wide range of topics such as team management, time management, budget management, and writing and presentation skills. An ABET review of our curriculum indicated that many or our senior designs lacked evidence of critical engineering processes such as setting specifications and designing around them. The two-semester Capstone Design proposal will remedy the lack of these processes. The curriculum will have 3 hours less in Technical Elective requirements in order to accommodate the additional 3 hours in senior design.