

UNIVERSITY FACULTY SENATE FORMS

Academic Program Approval

This form is a routing document for the approval of new and revised academic programs. Proposing department should complete this form. For more information, call the Faculty Senate Office at 831-2921.

Submitted by: Robert Hunsperger phone number 302-831-8031

Department: Electrical and Computer Engineering email address hunsperg@ee.udel.edu

Action: revise the Bachelor of Computer Engineering degree program
 (Example: add major/minor/concentration, delete major/minor/concentration, revise major/minor/concentration, academic unit name change, request for permanent status, policy change, etc.)

Effective term 09F
 (use format 04F, 05W)

Current degree BCPEG
 (Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed change leads to the degree of: BCPEG
 (Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed name: _____
 Proposed new name for revised or new major / minor / concentration / academic unit
 (if applicable)

Revising or Deleting:

Undergraduate major / Concentration: Computer Engineering
 (Example: Applied Music – Instrumental degree BMAS)

Undergraduate minor: _____
 (Example: African Studies, Business Administration, English, Leadership, etc.)

Graduate Program Policy statement change: _____
 (Must attach your Graduate Program Policy Statement)

Graduate Program of Study: _____
 (Example: Animal Science: MS Animal Science: PHD Economics: MA Economics: PHD)

Graduate minor / concentration: _____

Note: all graduate studies proposals must include an electronic copy of the Graduate Program Policy Document, highlighting the changes made to the original policy document.

List new courses required for the new or revised curriculum. How do they support the overall program objectives of the major/minor/concentrations)?

(Be aware that approval of the curriculum is dependent upon these courses successfully passing through the Course Challenge list. If there are no new courses enter "None")

EGGG 101 is being added to the curriculum as required by the College of Engineering; therefore we need to adjust total credits. The College of Engineering wants a common first semester with all departments. EGGG 101 is 2 credits and will be inserted in the first semester freshmen year. Also, we are replacing ELEG 212, Signals and Communications (4 cr.) with core course, ELEG 305, Linear Systems I (new title, 3 cr.) which will adjust the total credits to 126, which is in line with the total credits of other engineering departments.

Explain, when appropriate, how this new/revised curriculum supports the 10 goals of undergraduate education:
<http://www.ugs.udel.edu/gened/>

The curriculum change accomplishes two things: it removes courses from the curriculum that were not working, and it focuses the student's elective choices. By replacing courses that were primarily intended to excite the students about electrical engineering (ELEG 212 and ELEG 305) and replacing them with courses that seek to deepen their knowledge in fundamental areas (ELEG 305-revised and renamed, and ELEG 306-revised and renamed), the curriculum change supports goal 2, "Learn to think critically to solve problems."

Identify other units affected by the proposed changes:

(Attach permission from the affected units. If no other unit is affected, enter "None")

None.

Describe the rationale for the proposed program change(s):

(Explain your reasons for creating, revising, or deleting the curriculum or program.)

The addition of EGGG 101 was required for ECE to join the other engineering departments with a common first semester. The changes involving ELEG 212, ELEG 305 and ELEG 306 were desired to reorganize and update our sequence of signal processing courses.

Program Requirements:

(Show the new or revised curriculum as it should appear in the Course Catalog. If this is a revision, be sure to indicate the changes being made to the current curriculum and **include a side-by-side comparison** of the credit distribution before and after the proposed change.)

See attached document.

ROUTING AND AUTHORIZATION:

(Please do not remove supporting documentation.)

Department Chairperson _____ Date _____

Dean of College _____ Date _____

Chairperson, College Curriculum Committee _____ Date _____

Chairperson, Senate Com. on UG or GR Studies _____ Date _____

Chairperson, Senate Coordinating Com. _____ Date _____

Secretary, Faculty Senate _____ Date _____

Date of Senate Resolution _____ Date to be Effective _____

Registrar _____ Program Code _____ Date _____

Vice Provost for Academic Programs & Planning _____ Date _____

Provost _____ Date _____

Board of Trustee Notification _____ Date _____

Revised 5/02/06 /khs

Proposed - ~~strikeout~~ indicates changed CPEG course credits; shaded rows are proposed course addition:**UD Catalog, Bachelor of Computer Engineering degree program to read:****UNIVERSITY REQUIREMENTS**

ENGL 110	Critical Reading and Writing (minimum grade C-)	31F
	First Year Experience	0-4
	Discovery Learning Experience	3

MAJOR REQUIREMENTS**Breadth Requirements** 181-4

College Breadth Requirements. One of these courses must fulfill the University multicultural requirement.

One of the following four courses must be taken: 33F

ENGL 301 Expository Writing

ENGL 312 Written Communications in Business

ENGL 410 Technical Writing

ENGL 415 Writing for the Professions

EGGG 101 Introduction to Engineering

21F

MATH 241 Analytic Geometry and Calculus A 41F

MATH 242 Analytic Geometry and Calculus B 41S

MATH 243 Analytic Geometry and Calculus C 42F

MATH 341 Differential Equations with Linear Algebra I 32S

MATH 342 Differential Equations with Linear Algebra II 33F

PHYS 207 Fundamentals of Physics I 41S

PHYS 208	Fundamentals of Physics II	42F
CHEM 103	General Chemistry	41F
CISC 106	Introduction to Computer Science I	31F
CISC 181	Introduction to Computer Science II	31S
CISC 220	Data Structures	32S
CISC 361	Operating Systems	33S
Students with adequate programming experience may substitute the CISC 181, CISC 200 and CISC 280 sequence for the CISC 105, CISC 181 and CISC 220 sequence.		
CPEG 202	Introduction to Digital Systems	31S
CPEG 222	Microprocessor Systems	42F
CPEG 323	Introduction to Computer System Engineering	33F
CPEG 324	Computer Systems Design I	33S
CPEG 419	Computer Communication Networks	34F
ELEG 205	Analog Circuits I	42F
ELEG 212	Signals and Communications	42S
ELEG 305	Linear Systems I	32S
ELEG 309	Electronic Circuit Analysis I	42S
ELEG 310	Random Signals and Noise	33S
ELEG 320	Field Theory I	43F
ELEG 491	Ethics and Impacts of Engineering	24S

Two of the following five courses must be taken: 3S, 4

ELEG 413 Field Theory II

ELEG 306 Digital Signal Processing

ELEG 312 Electronic Circuit Analysis II

ELEG 428 System Analysis and Control

ELEG 403 Communication Systems Engineering

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Design Requirement

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In addition to the content of the normal program, every student must take at least four credits in CPEG course designated as "design." Regularly offered CPEG design courses include CPEG 410, CPEG 422 and CPEG 460. Other courses may be offered irregularly which satisfy the design requirement. Students should consult with their advisors before selecting their design course or courses.

Technical Electives

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In addition to the design requirement, each student, in consultation with their advisor, must select a program of technical electives satisfying the following: (1) With some exceptions, technical electives consist of 300-level or above engineering, mathematics, natural sciences, and computer science courses. With the permission of the student's advisor, certain 200-level courses, such as PHYS 211, are permitted. (2) At least 12 technical elective credits must be taken. (3) Of the 12 technical elective credits, at least 6 must be in ELEG or CPEG courses.

125

CREDITS TOTAL A MINIMUM OF

126