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: Dr. Charles Boncelet phone number: 831-8008

Department: Electrical & Computer Engineering email address: Boncelet@ee.udel.edu

Action: Revise major – add to list of foundation electives
(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 **13F** (use format 04F, 05W)

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

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

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

Revising or Deleting: Revising

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")
We want to add the following courses as foundation electives:

ELEG 456, Electric Power II

ELEG 492, Radar Systems and Technology

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

NA

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.)

This change is designed to give the students additional flexibility in selecting their Foundation Electives.

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.)

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 Affairs & International Programs _____ Date _____

Provost _____ Date _____

Board of Trustee Notification _____ Date _____

Revised 10/23/2007 /khs

Current

DEGREE: BACHELOR OF COMPUTER ENGINEERING

MAJOR: COMPUTER ENGINEERING

CURRICULUM	**CREDITS**

CURRICULUM	**CREDITS**
Parenthesized figures indicate year and semester in which the course should be taken. (1 = freshman, 2 = sophomore, 3 = junior, 4 = senior) and semester (F= fall, S = spring)	
UNIVERSITY REQUIREMENTS	
ENGL 110 Critical Reading and Writing (minimum grade C-)	3(1F)
First Year Experience (FYE)	0-4
Discovery Learning Experience (DLE)	3
Breadth Requirements	12
Multi-cultural Course(s)	3
Major Requirements	
Breadth Requirements	21
College of Engineering Breadth Requirements The College of Engineering requires 21 total Breadth Requirement credits (essentially 9 credits in addition to the University Breadth Requirement.) • If chosen carefully, up to 3 credits from each of the University Breadth Requirement categories may be used to simultaneously satisfy the College of Engineering Breadth Requirements for this major. • Of the 21 credits, 6 credits must be at the Upper Level (usually 300-level or higher) as designated on the College of Engineering Breadth Requirement list. • Of the 21 credits, 3 credits may be used to satisfy the University Multicultural Requirement (recommended for timely progress toward degree completion.) • All Breadth Requirement coursework must be passed with a minimum grade of C-.	
One of the following four courses must be taken:	3(3F)
ENGL 301 Expository Writing	
ENGL 312 Written Communications in Business	
ENGL 410 Technical Writing	
ENGL 413 Topics in Professional Writing	
EGGG 101 Introduction to Engineering	2(1F)
MATH 241 Analytic Geometry and Calculus A	4(1F)
MATH 242 Analytic Geometry and Calculus B	4(1S)
MATH 243 Analytic Geometry and Calculus C	4(2F)
MATH 341 Differential Equations with Linear Algebra I	3(2S)
MATH 342 Differential Equations with Linear Algebra II	3(3F)
CHEM 103 General Chemistry	4(1F)
PHYS 207 Fundamentals of Physics I	4(1S)
PHYS 208 Fundamentals of Physics II	4(2F)
CISC 106 General Computer Science for Engineers	3(1F)
CISC 181 Introduction to Computer Science II	3(1S)

Revised

DEGREE: BACHELOR OF COMPUTER ENGINEERING

MAJOR: COMPUTER ENGINEERING

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MATH 242 Analytic Geometry and Calculus B	4(1S)
MATH 243 Analytic Geometry and Calculus C	4(2F)
MATH 341 Differential Equations with Linear Algebra I	3(2S)
MATH 342 Differential Equations with Linear Algebra II	3(3F)
CHEM 103 General Chemistry	4(1F)
PHYS 207 Fundamentals of Physics I	4(1S)
PHYS 208 Fundamentals of Physics II	4(2F)
CISC 106 General Computer Science for Engineers	3(1F)
CISC 181 Introduction to Computer Science II	3(1S)

CISC 220 Data Structures	3(2F)
CISC 361 Operating Systems Students with adequate programming experience may subsitute the CISC 181, CISC 220, and CISC 280 sequence for CISC 106, CISC 181 and CISC 220 sequence.	3(3S)
CPEG 202 Introduction to Digital Systems	3(1S)
CPEG 222 Microprocessor Based Systems	4(2S)
CPEG 323 Introduction to Computer System Engineering	3(3F)
CPEG 324 Computer Systems Design I	3(3S)
CPEG 419 Computer Communication Networks	3(4F)
ELEG 205 Analog Circuits I	4(2F)
ELEG 305 Signals and Systems	3(2S)
ELEG 309 Electronic Circuit Analysis I	4(2S)
ELEG 310 Random Signals and Noise	3(3S)
ELEG 320 Field Theory I	4(3F)
ELEG 491 Ethics and Impacts of Engineering	3(4S)
One of the following five foundation elective courses must be taken: 3S	3
ELEG 306 Digital Signal Processing	
ELEG 312 Electronic Circuit Analysis II	
ELEG 403 Communication Systems Engineering	
ELEG 413 Field Theory II	
ELEG 418 Digital Control Systems	
Design Requirement (DLE)	6(4F&S)
In addition to the content of the normal program, every student must take at least six credits in CPEG course designated as "design." Regularly offered CPEG design courses include CPEG 498 offered in the fall and CPEG 499 offered in the spring.	
Technical Electives	12
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 CPEG or ELEG courses.	
CREDITS TO TOTAL A MINIMUM OF	126

CISC 220 Data Structures	3(2F)
CISC 361 Operating Systems Students with adequate programming experience may subsitute the CISC 181, CISC 220, and CISC 280 sequence for CISC 106, CISC 181 and CISC 220 sequence.	3(3S)
CPEG 202 Introduction to Digital Systems	3(1S)
CPEG 222 Microprocessor Based Systems	4(2S)
CPEG 323 Introduction to Computer System Engineering	3(3F)
CPEG 324 Computer Systems Design I	3(3S)
CPEG 419 Computer Communication Networks	3(4F)
ELEG 205 Analog Circuits I	4(2F)
ELEG 305 Signals and Systems	3(2S)
ELEG 309 Electronic Circuit Analysis I	4(2S)
ELEG 310 Random Signals and Noise	3(3S)
ELEG 320 Field Theory I	4(3F)
ELEG 491 Ethics and Impacts of Engineering	3(4S)
One of the following eight foundation elective courses must be taken: 3S	3
ELEG 306 Digital Signal Processing	
ELEG 312 Electronic Circuit Analysis II	
ELEG 403 Communication Systems Engineering	
ELEG 404 Digital Imaging and Audio Signal Processing	
ELEG 413 Field Theory II	
ELEG 418 Digital Control Systems	
ELEG 456 Electric Power II	
ELEG 492 Radar Systems and Technology	
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Current

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MAJOR: COMPUTER ENGINEERING

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MATH 241 Analytic Geometry and Calculus A	4(1F)
MATH 242 Analytic Geometry and Calculus B	4(1S)
MATH 243 Analytic Geometry and Calculus C	4(2F)
MATH 341 Differential Equations with Linear Algebra I	3(2S)
MATH 342 Differential Equations with Linear Algebra II	3(3F)
CHEM 103 General Chemistry	4(1F)
PHYS 207 Fundamentals of Physics I	4(1S)
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Revised

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HONORS BACHELOR OF COMPUTER ENGINEERING

A recipient of the Honors Bachelor of Computer Engineering must satisfy the following:

1. All requirements for the Bachelor of Computer Engineering degree.
2. All generic University requirements for the Honors Degree. Graduate courses approved for this purpose by the department may be counted as Honors courses