

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. Detailed instructions for the proposal should be followed. A [checklist](#) is available to assist in the preparation of a proposal. For more information, call the Faculty Senate Office at 831-2921.

Submitted by: **Charles Boncelet** phone number: **x8008**

Department: **Electrical & Computer Engineering** email: **boncelet@udel.edu**

Date: **April 1, 2015**

Action: **REVISE MINOR**

(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: **15F**
(use format 04F, 05W)

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

Proposed change leads to the degree of: _____
(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: _____
(Example: Applied Music – Instrumental degree BMAS)

Undergraduate minor: **CYBERSECURITY**
(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, either describing the new program or 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")

CPEG 470-Web Applications Security
CPEG 471-Pen Test and Reverse Engineering
CPEG 472-Applied Cryptography
CPEG 473-Cloud Computing and Security
CPEG 474-Scada Systems and Security
CPEG 475-Embedded Computer Systems
CPEG 476-Secure Software Design
CPEG 497-Advanced Cybersecurity

Supply support letter from the Library, Dean, and/or Department Chair if needed
(all new majors/minors will need a support letter from the appropriate administrator.)

NA

Supply a resolution for all new majors/programs; name changes of colleges, departments, degrees; transfer of departments from one college to another; creation of new departments; requests for permanent status. [See example of resolutions.](#)

NA

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

Increasing knowledge of computer and network security is increasingly critical to Goal #1 to "attain effective skills in...the use of information technology." The complex technical areas covered in a cybersecurity education further Goal #2 to "learn to think critically to solve problems." The programs desire to combine subject theory with hands on lab exercises, providing students a deep understanding of fundamentals as well as practical, state-of-the-art tools and techniques of practice. This directly addresses Goal #7 to "develop the ability to integrate academic knowledge with experiences that extend the boundaries of the classroom."

Identify other units affected by the proposed changes:

(This would include other departments/units whose courses are a required part of the proposed curriculum. 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.)

Adding elective courses to our established high quality Cybersecurity education program. These additional electives recognize deeper study in the field.

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 example of side by side.](#)

See Attachment

ROUTING AND AUTHORIZATION: (Please do not remove supporting documentation.)

Department Chairperson  Date 4/4/15

Dean of College _____ Date _____

(By signing above, the Dean confirms that their college policies and bylaws have been followed correctly during consideration of the request described in this form.)

The approval actions that were taken at the college level were (check all that apply) :

_____ college faculty vote; _____ college curriculum approval _____ college senate approval

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 _____

Board of Trustee Notification _____ Date _____

Revised 10/27/2014/khs

Current**MINOR IN CYBERSECURITY**

A minor in Cybersecurity may be earned by a student in any University bachelor's degree program. This minor provides students with an opportunity to help infuse cybersecurity fundamentals into other degree programs. To qualify for a Minor in Cybersecurity, students must complete a minimum of 18 credits as described below with a minimum grade of C- in each course.

CURRICULUM	CREDITS
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Course Requirements

(1) All students must take the following four courses:

CPEG 465/665/ELEG465/665/CISC 465/665/MISY 465/665 Introduction to Cybersecurity	3
CPEG 494/694/ELEG 494/694 System Hardening & Protection	3
CISC 361 Operating Systems	3
CPEG 419/CISC 450 Computer Networks I	3

(2) And two of the following courses:

CPEG 495/695/ELEG 495/695 (a) Digital Forensics	3
CPEG 496/696/ELEG496/696 (a) Topics in Cybersecurity	3
MATH 549 Coding Theory & Cryptography	3
CRJU 457 Criminal Evidence	3

TOTAL CREDITS	18
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Note: (a) The listed 400 and 600-level courses are open to any student who has completed the necessary prerequisites (or obtained permission of instructor). Other courses can be included upon approval by the minor administration committee.

Further inquiries about the Cybersecurity Minor can be made to Professor Chase Cotton at (302) 831-8517 or ccotton@udel.edu.

Revised**MINOR IN CYBERSECURITY**

A minor in Cybersecurity may be earned by a student in any University bachelor's degree program. This minor provides students with an opportunity to help infuse cybersecurity fundamentals into other degree programs. To qualify for a Minor in Cybersecurity, students must complete a minimum of 18 credits as described below with a minimum grade of C- in each course.

CURRICULUM	CREDITS
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Course Requirements

(1) All students must take the following four courses:

CPEG 465/665/ELEG465/665/CISC 465/665/MISY 465/665 Introduction to Cybersecurity	3
CPEG 494/695/ELEG 494/694 System Hardening & Protection	3
CISC 361 Operating Systems	3
CPEG 419/CISC 450 Computer Networks I	3

(2) And two of the following courses:

CPEG 495/695/ELEG 495/695 (a) Digital Forensics	3
CPEG 496/696/ELEG496/696 (a) Topics in Cybersecurity	3
MATH 549 Coding Theory & Cryptography	3
CRJU 457 Criminal Evidence	3

CPEG 470 Web Applications Security	3
CPEG 471 Pen Test and Reverse Engineering	3
CPEG 472 Applied Cryptography	3
CPEG 473 Cloud Computing and Security	3
CPEG 474 Scada Systems and Security	3
CPEG 475 Embedded Computer Systems	3
CPEG 476 Secure Software Design	3
CPEG 497 Advanced Cybersecurity	3

TOTAL CREDITS	18
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Note: (a) The listed 400 and 600-level courses are open to any student who has completed the necessary prerequisites (or obtained permission of instructor). Other courses can be included upon approval by the minor administration committee.

Further inquiries about the Cybersecurity Minor can be made to Professor Chase Cotton at (302) 831-8517 or ccotton@udel.edu.