

Program Change Request

Date Submitted: 11/09/18 3:34 pm

Viewing: **MINOR-CYBR : Cybersecurity - Minor**

Last approved: 04/17/18 9:05 am

Last edit: 11/14/18 9:40 am

Changes proposed by: kbrumbelow

Catalog Pages Using [Cybersecurity - Minor](#)
this Program

In Workflow

1. CLEN Department Head
2. Curricular Services Review
3. EN Committee Preparer UG
4. EN Committee Chair UG
5. EN College Dean UG
6. UCC Preparer
7. UCC Chair
8. Faculty Senate Preparer
9. Faculty Senate
10. Provost II
11. President
12. Curricular Services

Approval Path

1. 11/11/18 5:31 pm
Tim Jacobs (tjacobs): Approved for CLEN Department Head
2. 11/14/18 9:44 am
Angel Mario Carrizales (carri1214): Approved for Curricular Services Review
3. 11/17/18 8:31 am
Eileen Hoy (ehoy): Approved for EN Committee Preparer UG
4. 11/18/18 11:35 am
Prasad Enjeti (enjeti): Approved for EN Committee Chair UG
5. 11/18/18 12:04 pm
Prasad Enjeti (enjeti): Approved for EN College Dean UG
6. 11/19/18 8:28 am
Sandra Williams (sandra-williams): Approved for UCC Preparer
7. 12/10/18 10:33 am
Terra Bissett (t.bissett): Approved for UCC Chair

History

1. Mar 8, 2017 by Trez Jones (rtjones)
2. Apr 17, 2018 by Daniel Ragsdale (rags)

Contact(s)

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Academic level Undergraduate
 Effective Term 2019-2020
 Department College of Engineering
 College Engineering
 Program type Minor
 With a minor in Cybersecurity (CYBR)
 Associated Program **Not Applicable**

Catalog Program Title
 Cybersecurity - Minor

Rationale for Proposal

Minor adjustments ~~Adjusting courses to~~ **course requirements to incorporate newly created courses,** meet student **demand,** ~~demand~~ and **meet** program assessment goals.

Program hours 16
 Is this program eligible for financial aid? Yes
 Will program hours change (increase/decrease) due to the proposed curriculum changes? No

Catalog Program Requirements

Select one of the following tracks:

Code	Title	Course List	Semester Credit Hours
Engineering Track			
CSCE 313	Introduction to Computer Systems		4
CSCE 315	Programming Studio		3
CSCE 410	Operating Systems		3
CSCE 465	Computer and Network Security		3
Select one of the following:			3
Select six hours from the following:			6
CSCE 402	Law and Policy in Cybersecurity		
CSCE 451	Software Reverse Engineering		
CSCE 463	Networks and Distributed Processing		
CSCE 485	Directed Studies 1		
CYBR 403/CSCE 477	Cybersecurity Risk		
CYBR 484	Professional Internship 1		
CYBR 485	Directed Studies 1		
CYBR 491	Research 1		
ECEN 424	Fundamentals of Networking		
ECEN 484	Professional Internship 1		
ECEN 485	Directed Studies 1		
Total Semester Credit Hours			16

Code	Title	Course List	Semester Credit Hours
Interdisciplinary Track			
Select one of the following:			3
CSCE 402	Law and Policy in Cybersecurity		3
or TCMG 308	or Cybersecurity and Digital Ethics		
Select one of the following:			4
CSCE 110	Programming I		
CSCE 111	Introduction to Computer Science Concepts and Programming		
CSCE 121	Introduction to Program Design and Concepts		
Select one of the following:			3
CSCE 206	Structured Programming in C		
CSCE 224	Data Structures and Algorithms		
ESET 269	Embedded Systems Development in C		
Select two from the following:			6
Select nine hours from the following:			9
BMEN 428/CSCE 461	Embedded Systems for Medical Applications		
CSCE 402	Law and Policy in Cybersecurity 2		
CSCE 436	Computer-Human Interaction		
CSCE 465	Computer and Network Security		
CYBR 403/CSCE 477	Cybersecurity Risk		
ECEN 424	Fundamentals of Networking		
ESET 315	Local-and-Metropolitan-Area Networks		
ESET 349	Microcontroller Architecture		
ESET 415	Advanced Network Systems and Security		
ESET 455	Wireless Transmission Systems		
FIVS 123	Forensic Investigations		
FIVS 205	Introduction to Forensic and Investigative Sciences		
FIVS 310	Applied Digital Forensics and Incident Response		
GEOG 392	GIS Programming		
ISTM 310	Network Communications and Infrastructure		
ISTM 315	Database Programming		
ISTM 320	Business Systems Analysis and Design		
MATH 470	Communications and Cryptography		
MATH 471	Communications and Cryptography II		
POLS 447	National Security Policy		
TCMG 303	Unix System Administration Practices		
TCMG 304	Applied Server Security, Identity and Access Management		
TCMG 308	Cybersecurity and Digital Ethics 2		
TCMG 316	Database Systems Administration and Application		
Total Semester Credit Hours			16

Code	Title	Course List	Semester Credit Hours
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Code	Title	Semester Credit Hours
Technology track		
TCMG 308	Cybersecurity and Digital Ethics	3
Select one of the following:		
ESET 435	Data Communications	3
Select thirteen hours from the following:		
CSCE 402	Law and Policy in Cybersecurity	13
CYBR 403/CSCE 477	Cybersecurity Risk	
ESET 269	Embedded Systems Development in C	
ESET 315	Local-and-Metropolitan-Area Networks	
ESET 349	Microcontroller Architecture	
ESET 415	Advanced Network Systems and Security	
ESET 419	Engineering Technology Capstone I 1	
ESET 420	Engineering Technology Capstone II 1	
ESET 456	Embedded Sensors and Internet of Things (IoT) Systems	
TCMG 303	Unix System Administration Practices	
TCMG 304	Applied Server Security, Identity and Access Management	
TCMG 316	Database Systems Administration and Application	
TCMG 476	Technical Network Capstone 1	
Total Semester Credit Hours		16

1 Course must be approved by the Director of Interdisciplinary Engineering for inclusion in the minor and include applications in cybersecurity .

2 Course may be applied to latter category only if it is not applied above.

Minimum required GPA to declare minor is a 2.5.

Must make a grade of 'C' or better in each course used towards minor.

Must achieve an overall GPA of 2.5 in approved minor coursework.

Minimum of 6 hours at 300-400 level.

Additional information

Required Proposal	cybr-minor-17.pdf
Forms	FS-March.pdf CYBR_minor_2019_DegEval_Edits.pdf
Reviewer Comments	Angel Mario Carrizales (carr1214) (11/14/18 9:44 am): Edits made to conform to catalog style guidelines. Terra Bissett (t.bissett) (12/10/18 10:33 am): UCC approved December 2018.

Key: 537

Revisions for 2019 Catalog

Area : Cybersecurity Minor (16.000 credits) - Not Met

Description Minimum of 6 hrs at 300- to 400-level.

: Must maintain minimum 2.5 GPA.

Must make a grade of 'C' or better in each course used towards the minor.

Select one track for a total of 16hrs.

Met Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Grade Source

No (A. Engineering Track 16hrs

- 1. Take CSCCE 313
- 2. ~~Take CSCCE 315~~ ⁴⁰² ^{485, 477, CYBR 403, 484, 485, 491}
- 3. Take CSCCE 410
- 4. Take CSCCE 465
- 5. Select ~~8~~ ⁶ hrs from CSCCE 451, 463; ECEN 424, 484, 485

No)OR(B. Interdisciplinary Track 16hrs

- 1. Select 3hrs from TCMG 308 or ~~ECEN 465~~ ⁹ CSCCE 402
- 2. Select 4hrs from CSCCE 110, 111, 121; ^{ESET 269.}
- 3. ~~Select 3hrs from CSCCE 206, 221, 269.~~
- 4. ~~Select 8hrs from BMEN 428; CSCCE 426;~~ ⁹ ECEN 424; ESET 315, 349, 415, 455; FIVS 123, 205, 310; MATH 470, 471; TCMG 303; ^{CYBR 403; ISTM 310, 315, 320; POLS 447; TCMG 304, 308, 316.} CSCCE 461, 402, 436, 465, 477; GEOG 392;

No)OR(C. Technology Track 16

- 1. ~~Take ESET 269~~
- 2. ~~Take ESET 315~~
- 3. Take TCMG 308
- 4. ~~TAKE ESET 415~~
- 5. ¹³ Select ~~3~~ ¹³ hrs from TCMG 303, 476; ESET 435, 456; ^{TCMG 304, 316.} CSCCE 402, 477; ¹³ CYBR 403; ESET 269, 315, 349, 415, 419, 420;

Total Credits and GPA 0.000 .00