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 this Program

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelly Brumbelow</td>
<td>Dan Ragsdale</td>
<td><a href="mailto:kbrumbelow@tamu.edu">kbrumbelow@tamu.edu</a></td>
<td>979-862-5891</td>
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<tr>
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<td></td>
<td><a href="mailto:rags@tamu.edu">rags@tamu.edu</a></td>
<td>979-845-7398</td>
</tr>
<tr>
<td>Tim Jacobs</td>
<td>Paulo deWitte</td>
<td><a href="mailto:tjjacobs@tamu.edu">tjjacobs@tamu.edu</a></td>
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<td><a href="mailto:paula.dewitte@tamu.edu">paula.dewitte@tamu.edu</a></td>
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<td>Dan Ragsdale</td>
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<td><a href="mailto:rags@tamu.edu">rags@tamu.edu</a></td>
<td>979-845-7398</td>
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<tr>
<td>Paula deWitte</td>
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<td><a href="mailto:paula.dewitte@tamu.edu">paula.dewitte@tamu.edu</a></td>
<td>979-845-7398</td>
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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, 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

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 (tjjacobs): 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 Enje (enje): Approved for EN Committee Chair UG
5. 11/18/18 12:04 pm
   Prasad Enje (enje): 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 Bisse (t.bisse): Approved for UCC Chair

History

1. Mar 8, 2017 by Trez Jones (rtjones)
2. Apr 17, 2018 by Daniel Ragsdale (rags)
Select one of the following tracks:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td>CSCE 313</td>
<td>Introduction to Computer Systems</td>
<td>4</td>
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<tr>
<td>CSCE 315</td>
<td>Programming Studio</td>
<td>3</td>
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<tr>
<td>CSCE 410</td>
<td>Operating Systems</td>
<td>3</td>
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<tr>
<td>CSCE 465</td>
<td>Computer and Network Security</td>
<td>3</td>
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</table>

Select one of the following:

- 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/CSE 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

Select six hours from the following:

- 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/CSE 477: Cybersecurity Risk
- CYBR 484: Professional Internship 1
- CYBR 485: Directed Studies 1

Total Semester Credit Hours: 16

Select one of the following:

- CSCE 402: Law and Policy in Cybersecurity
- TCMG 308: Cybersecurity and Digital Ethics

Select one of the following:

- 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:

- CSCE 206: Structured Programming in C
- CSCE 221: Data Structures and Algorithms
- ESET 269: Embedded Systems Development in C

Select two from the following:

- 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/CSE 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 308: Cybersecurity and Digital Ethics 2
- TCMG 316: Database Systems Administration and Application

Total Semester Credit Hours: 16
### MINOR-CYBR: Cybersecurity - Minor

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Semester Credit Hours</th>
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<tr>
<td><strong>Technology track</strong></td>
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<tr>
<td>TCMG 308</td>
<td>Cybersecurity and Digital Ethics</td>
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<td>ESET 435</td>
<td>Data Communications</td>
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<td>Law and Policy in Cybersecurity</td>
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<td><strong>CYBR 403/CSCE 477</strong></td>
<td>Cybersecurity Risk</td>
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<td>ESET 269</td>
<td>Embedded Systems Development in C</td>
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<td>ESET 315</td>
<td>Local-and-Metropolitan-Area Networks</td>
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<td>ESET 349</td>
<td>Microcontroller Architecture</td>
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<td>ESET 415</td>
<td>Advanced Network Systems and Security</td>
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<td>ESET 419</td>
<td>Engineering Technology Capstone I 1</td>
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<td>ESET 420</td>
<td>Engineering Technology Capstone II 1</td>
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<td>ESET 456</td>
<td>Embedded Sensors and Internet of Things (IoT) Systems</td>
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<td>TCMG 303</td>
<td>Unix System Administration Practices</td>
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<td>TCMG 316</td>
<td>Database Systems Administration and Application</td>
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<td>TCMG 476</td>
<td>Technical Network Capstone 1</td>
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<td><strong>Total Semester Credit Hours</strong></td>
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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**
- ISMarch.pdf
- CYBR_minor_2019_DegEval_Edits.pdf

**Reviewer Comments**
- Angel Mario Carrizales (carri1214) (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.
Total Credits and GPA: 0.000

Course Credits

1. Take CEEG 408
2. Take CEEG 425
3. Take CEEG 426
4. Take CEEG 410
5. Select other CSCE 4/5 or ENGR course

Requirements

1. Take CEEG 420
2. Select other CSCE 4/5 or ENGR course
3. Take CEEG 425
4. Take CEEG 426
5. Take CEEG 408
6. Select other CSCE 4/5 or ENGR course

Area: Cybersecurity Minor (16.000 credits) - Not met

Revisions for 2019 Catalog

unofficial evaluation

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<th>Course</th>
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<th>Title</th>
<th>Attribute</th>
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