New Course Proposal

Date Submitted: 11/13/17 5:06 pm

Viewing: INTA 690 : Cybersecurity Literacy for the Global Arena
Also Known As: CYBR 660
Last edit: 11/17/17 7:43 am
Changes proposed by: jwood

Contact(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Janeen Wood</td>
<td><a href="mailto:jwood@tamu.edu">jwood@tamu.edu</a></td>
<td>979-458-2276</td>
</tr>
</tbody>
</table>

Course prefix  | INTA                  | Course number | 690
Department     | International Affairs |         |
College/School  | Bush School of Gov & Pub Serv |         |
Academic Level  | Graduate              |         |
Academic Level  | Undergraduate         |         |
Effective term  | 2018-2019             |         |
Complete Course Title: Cybersecurity Literacy for the Global Arena
Abbreviated Course Title: CYBERSECURITY LIT GLOBAL ARENA

Catalog course description
- Research technical literacy in cybersecurity; exploration of cybersecurity in applied settings to include private and public sector; use of cybersecurity literacy to develop policy guidelines; examination of intent of cyber-actors; technical and policy risk mitigation strategies.

Prerequisites and Restrictions
- Graduate classification or approval of instructor.

Concurrent Enrollment
- No

Should catalog prerequisites / concurrent enrollment be enforced?
- No

Crosslistings
- Yes Crosslisted With
  CYBR 660

Stacked
- No Stacked with

Semester Credit Hour(s) Contact Hour(s) Lecture: 3 Total 3 Lab: 0 Other: 0
Repeatable for credit?
- No
Three-peat?
- No
CIP/Fund Code
- 1110030006

In Workflow
1. INTA Department Head
2. CLEN Department Head
3. Curricular Services Review
4. GB Committee Preparer
5. GB Committee Chair
6. GB College Dean
7. GC Preparer
8. GC Chair
9. Faculty Senate Preparer
10. Faculty Senate
11. Provost II
12. President
13. Curricular Services
14. Banner

Approval Path
1. 11/13/17 5:44 pm
   Gregory Gause (gregory.gause): Approved for INTA Department Head
2. 11/14/17 8:43 pm
   Tim Jacobs (tjacobs): Approved for CLEN Department Head
3. 11/17/17 7:45 am
   Sandra Williams (sandra-williams): Approved for Curricular Services Review
4. 12/15/17 1:53 pm
   Rane Cunningham (rane): Approved for GB Committee Preparer
5. 12/15/17 2:40 pm
   Belee Graham (cole_graham): Approved for GB Committee Chair
6. 12/16/17 10:16 am
   Frank Ashley (fashley): Approved for GB College Dean
7. 01/22/18 1:04 pm
   Meagan Kelly (meagankelly): Approved for GC Preparer
8. 02/01/18 2:22 pm
   Lariessa Johnson (ljohnson): Approved for GC Chair
Default Grade Mode: Letter Grade (G)
Alternate Grade Modes: Satisfactory/Unsatisfactory
Method of instruction: Lecture
Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education)
   Yes
Will this course be taught as a distance education course?
   No
Is 100% of this course going to be taught in Texas?
   Yes
Will classroom space be needed for this course?
   Yes

This will be a required course or an elective course for the following programs:

<table>
<thead>
<tr>
<th>Required (select program)</th>
<th>Program(s)</th>
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<tbody>
<tr>
<td>(CERT-CYBE) Certificate in Cybersecurity Engineering</td>
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<table>
<thead>
<tr>
<th>Elective (select program)</th>
<th>Program(s)</th>
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<tbody>
<tr>
<td>(MIA-INTA) Master of International Affairs in International Affairs</td>
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**Course Syllabus**

Syllabus: Upload syllabus

Upload syllabus: INTA 690 Cybersecurity Literacy for the Global Arena.docx

Letters of support or other documentation: No

Additional information: Sandra Williams (sandra-williams) (11/12/17 11:44 am): Rollback: is this a required or elective course - what program(s)? Syllabus shows INTA 690 only, however, proposed course is for CYBR 660 (cross-listed with INTA 690).

Trez Jones (rtjones) (11/13/17 5:51 pm): This course is being cross-listed with the advice and consent of the Texas A&M Cybersecurity Center as CYBR 660.

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Sandra Williams (sandra-williams) (11/17/17 7:45 am): Moving forward. Syllabus does not include reference to the cross-listed course (CYBR 660).

Reported to state? Add
Course title and number  INTA 690 Cybersecurity Literacy for the Global Arena

Course Description and Prerequisites

Cybersecurity Literacy for the Global Arena. Credits 3. (3-0). Technical literacy in cybersecurity; exploration of cybersecurity in applied settings to include private and public sector; use of cybersecurity literacy to develop policy guidelines; examination of intent of cyber-actors; technical and policy risk-mitigation strategies. Prerequisites: Graduate classification or approval of instructor.

Learning Outcomes or Course Objectives

At the end of this course, the student should be able to:

- Acquire the common body of knowledge of cybersecurity to include technical concepts.
- Apply technical literacy of cybersecurity to formulate international policy.
- Evaluate needs/gap analyses in the exigent global cybersecurity domain to include risk.
- Discriminate actor(s) and intent in cyber operations scenarios to include individual and nation-states.
- Distinguish information assurance principles to include confidentiality, integrity, and availability.
- Role-play social engineering cybersecurity scenarios from red team and blue team operational perspectives that involve international issues.

Instructor Information

Name  Robert Jones
Telephone number  979-458-2276
Email address  rtjones@tamu.edu
Office hours  Tuesdays 9:30-12:00 or by appointment
Office location  1058 ALLN

Textbook and/or Resource Material

Required Textbook
Course materials will be provided to the class.

Grading Policies

The student’s semester grade will be based on assignments, projects, and class attendance. Class attendance is essential for student success; therefore, students are required to promptly and regularly attend all their classes. A record of attendance will be maintained from the first day of classes and/or the first day the student’s name appears on the roster through final examinations and will constitute the participation grade for the course. Absences may only be excused as defined by the Texas A&M University Student Rules available at
http://student-rules.tamu.edu/rule07.

### Grading Scale

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Points</th>
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<tbody>
<tr>
<td>Weekly Technology Assignments</td>
<td>300</td>
</tr>
<tr>
<td>Policy Exploration Assignments</td>
<td>300</td>
</tr>
<tr>
<td>Red Team/Blue Team Events - Group</td>
<td>150</td>
</tr>
<tr>
<td>Case Study Development Project - Group</td>
<td>150</td>
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<tr>
<td>Class Participation</td>
<td>100</td>
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</tbody>
</table>

**Points Grading Scale:**
Out of 1000 assignable points
A = 900-1000 points
B = 800-899 points
C = 700-799 points
D = 600-699 points
F = <600 points

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### Course Topics, Calendar of Activities, Major Assignment Dates

(Subject to change as necessary)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
<th>Assignment Milestones</th>
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</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction to Course &amp; Expectations; Discussion of Milestone and Semester Assignments.</td>
<td>Technical Weekly Assignment- 2% of course grade</td>
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<tr>
<td></td>
<td>What is cybersecurity? Why is it important? Why does everyone need to know about it?</td>
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<td></td>
<td>Introduction to technologies involved in cybersecurity: operating systems, computer networks, computer architectures, and programming.</td>
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<td>Week 2</td>
<td>The Good Guys- analysis of the Internet, looking at Internet structures, governance, prevention, enforcement. Technical training on firewalls, intrusion detection/prevention environments, NIST 800-181 standards, security versus accessibility, multi-factor authentication.</td>
<td>Technical Weekly Assignment- 2% of course grade</td>
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<tr>
<td>Week 3</td>
<td>The Dark Side- analysis of the Internet, looking at Internet structures, governance, prevention, enforcement. Technical training on sniffing, spoofing, packet capture, cryptocurrencies, CIA triad, and malware attack vectors.</td>
<td>Technical Weekly Assignment- 2% of course grade</td>
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<tr>
<td>Week 4</td>
<td>Fusion of Light and Dark- How did we get here? Where are we going? Discussion of actors, ethos, intent, implications. Technical training on basic Internet detection mechanisms.</td>
<td>Technical Weekly Assignment- 2% of course grade, Policy Assignment #1 Assigned</td>
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<tr>
<td>Week 5</td>
<td>The Web and the Spider. Surface web, deepweb and Dark Web technologies, actors, analysis of disenfranchised nation state, corporate, and individual actors.</td>
<td>Technical Weekly Assignment- 2% of course grade</td>
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<tr>
<td>Week 6</td>
<td>Risk and Cyber. Technical training on policy-based mitigation, public key infrastructure, data warehouse security, identity and access management.</td>
<td>Technical Weekly Assignment- 2% of course grade</td>
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<td>Week 7</td>
<td>Protocols and Networking, RF spectrum and policy analysis/implications. Technical training on wireless security and mobile devices, electronic communications</td>
<td>Technical Weekly Assignment: 2% of course grade; Policy Assignment #1 Due- 15% of course grade</td>
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<tr>
<td>Week 7</td>
<td>The Human Element. Technical training with the social-engineering toolkit, data mining and warehousing, big data and its policy implications for individual, corporate, and nation-state actors, privacy.</td>
<td>Technical Weekly Assignment: 2% of course grade</td>
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<td>Week 8</td>
<td>Baseline policy forensics. Technical training on identifying real data and incidents from false positives and taking into account holistic variables in criminal actions.</td>
<td>Technical Weekly Assignment: 2% of course grade; Policy Assignment #2 Assigned</td>
</tr>
<tr>
<td>Week 9</td>
<td>International law and the individual and corporate responsibility.</td>
<td>Technical Weekly Assignment: 2% of course grade; Final project assigned</td>
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<tr>
<td>Week 10</td>
<td>The Internet of Things and its implications for society and globalization. Examination of the protocols used in IoT. Technical training, hacking the printer versus the coffee pot.</td>
<td>Technical Weekly Assignment: 2% of course grade</td>
</tr>
<tr>
<td>Week 11</td>
<td>Interconnected systems and resources – examination of device interdependencies and how this interconnectedness translates into data acquisition and product life-cycle considerations. Examination of diffusion of innovations.</td>
<td>Technical Weekly Assignment: 2% of course grade; Policy Assignment #2 Due- 15% of course grade, Red Team/Blue Team Prep #1 Assigned</td>
</tr>
<tr>
<td>Week 12</td>
<td>Red/Blue Team Policy and Action Event #1</td>
<td>Technical Weekly Assignment- 2.5% of course grade, Red Team/Blue Team Exercise #1 Due- 7.5% of course grade</td>
</tr>
<tr>
<td>Week 13</td>
<td>Cybersecurity Frontiers on the Horizon. QNX, quantum computing, rate of technical change, artificial intelligence.</td>
<td>Technical Weekly Assignment- 2% of course grade, Red Team/Blue Team Prep #2 Assigned</td>
</tr>
<tr>
<td>Week 14</td>
<td>Red/Blue Team Policy and Action Event #2</td>
<td>Technical Weekly Assignment- 2.5% of course grade, Red Team/Blue Team Exercise #2 Due- 7.5% of course grade</td>
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Week 15- Case Study Project Due- 15% of course grade

**Americans with Disabilities Act (ADA)**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit [http://disability.tamu.edu](http://disability.tamu.edu).

**Academic Integrity**

For additional information please visit: [http://aggiehonor.tamu.edu](http://aggiehonor.tamu.edu)

"An Aggie does not lie, cheat, or steal, or tolerate those who do."