CS 103

California State University San Marcos • NEW COURSE • FORM C

ORIGINATOR'S SECTION:

1. College:

☐ **CHABSS** ☐ **CoBA**
☐ **CoEHHS** ☒ **CSM**

Desired Term and Year of Implementation (e.g., Fall 2008):

Fall 2019

2.Course is to be considered for G.E.? (If yes, also fill out appropriate GE form*) ☒ Yes ☐ No

3. Course will be a variable-topics (generic) course? ☐ Yes ☒ No
("generic" is a placeholder for topics)

4. Course abbreviation and Number:* CS 103

5. Title: ***(Titles using jargon, slang, copyrighted names, trade names, or any non-essential punctuation may not be used.)***
Critical Thinking about Cyber Security for You and Our Critical Infrastructure

6. Abbreviated Title for PeopleSoft:
(no more than 25 characters, including spaces)
Critical Think Cyber Security

7. Number of Units: 3

8. Catalog Description: ***(Not to exceed 80 words; language should conform to catalog copy. Please consult the catalog for models of style and format; include all necessary information regarding consent for enrollment, pre- and/or corequisites, repeated enrollment, crosslisting, as detailed below. Such information does not count toward the 80-word limit.)***

This course introduces students to key cybersecurity concepts and critical thinking skills. Students will apply critical thinking skills to examine cybersecurity related policies and events to determine their impact on personal lives as well as critical infrastructure sectors. They will develop understanding of effective defense systems against potential cyber-attacks.

9. Why is this course being proposed?

see attached

With increasing integration of cyberinfrastructure in our daily lives and the society, it is important for students to develop ~~a good understanding of~~ key cybersecurity concepts and ~~learn to~~ interact with cyberinfrastructure, avoiding activities that could potentially result in cyber-crimes. In addition, it is important for students to think critically about cybersecurity related policies and be able to discern cyber-attacks. A special topic course of the same content was approved and certified by GEC in Spring 2016 but has not been offered due to budget constraints at the college level. It is finally put on the schedule for Spring 2018.

10. Mode of Instruction*
For definitions of the Course Classification Numbers:
http://www.csusm.edu/academic_programs/curriculumscheduling/catalogcurricula/DOCUMENTS/Curricular_Forms_Tab/Instructional%20Mode%20Conventions.pdf

Type of Instruction	Number of Credit Units	Instructional Mode (Course Classification Number)
Lecture	3	C2
Activity		
Lab		

11. Grading Method:*
☒ Normal (N) *(Allows Letter Grade +/-, and Credit/No Credit)*
☐ Normal Plus Report-in-Progress (NP) *(Allows Letter Grade +/-, Credit/No Credit, and Report-in-Progress)*
☐ Credit/No Credit Only (C)
☐ Credit/No Credit or Report-in-Progress Only (CP)

12. If the (NP) or (CP) grading system was selected, please explain the need for this grade option.

13. Course Requires Consent for Enrollment? ☐ Yes ☒ No

☐ Faculty ☐ Credential Analyst ☐ Dean ☐ Program/Department - Director/Chair

14. Course Can be Taken for Credit More than Once? ☐ Yes ☒ No
If yes, how many times? (including first offering)

15. Is Course Crosslisted: ☐ Yes ☒ No

If yes, indicate which course and check "yes" in item #22 below.

16. Prerequisite(s): ☐ Yes ☒ No

* If Originator is uncertain of this entry, please consult with Program/Department Director/Chair

Tracker
RP
PS

17. Corequisite(s): □ Yes ☒ No

18. Documentation attached:
☒ Syllabus □ Detailed Course Outline

19. If this course has been offered as a topic, please enter topic abbreviation, number, and suffix:* A special topic course (CS 200-4) of the same content was approved and certified by GEC in Spring 2016 but has not been offered due to budget constraints at the college level. It is finally put on the schedule for Spring 2018.

20. How often will this course be offered once established?* Every semester

PROGRAM DIRECTOR/CHAIR - COLLEGE CURRICULUM COMMITTEE SECTION:
(Mandatory information – all items in this section must be completed.)

21. Does this course fulfill a requirement for any major (i.e., core course or elective for a major, majors in other departments, minors in other departments)? □ Yes ☒ No

If yes, please specify:

22. Does this course impact other discipline(s)? ***(If there is any uncertainty as to whether a particular discipline is affected, check "yes" and obtain signature.)*** □ Yes ☒ No

If yes, obtain signature(s). Any objections should be stated in writing and attached to this form.

Discipline ____________________ Signature ____________ Date ______Support ______Oppose

Discipline ____________________ Signature ____________ Date ______Support ______Oppose

SIGNATURES : (COLLEGE LEVEL) :

YOUWEN OUYANG 11/7/17
1. Originator (please print or type name) Date

11/7/17
2. Program Director/Chair Date

Bill Krist 11/14/17
3. College Curriculum Committee Date

11/14/17
4. College Dean (or Designee) Date

(UNIVERSITY LEVEL)

5. UCC Committee Chair Date

6. Vice President for Academic Affairs (or Designee) Date

7. President (or Designee) Date

* If Originator is uncertain of this entry, please consult with Program/Department Director/Chair.

California State University San Marcos
Dept. of Computer Science and Information Systems

CS 103 Critical Thinking about Cybersecurity for You and Our Critical Infrastructure

Instructor: **TBD**
Meeting Time: **TBD**
Office Hour: **TBD**
Email: **TBD**
Office: **TBD**

COURSE DESCRIPTION:

This course introduces students to key cybersecurity concepts and critical thinking skills. Students will apply critical thinking skills to examine cybersecurity related policies and events to determine their impact on personal lives as well as critical infrastructure sectors. They will develop understanding of effective defense systems against potential cyber-attacks.

PRE-REQUISITE: *None*

COURSE OBJECTIVES:

Upon successful completion of the course, students will be able to:

- apply Critical Thinking skills
- identify the key concepts of Cyber Security
- identify the Critical Infrastructure Sectors
- think critically about daily Cyber Security news reports
- prepare a personal plan to defend themselves and their families against cyber security attacks
- contribute to the ongoing social debate on Cyber Security-related issues

General Education Program Student Learning Outcomes (GEPSLOs):

This course fulfills the Lower Division General Education Requirement in the area of Critical Thinking. Upon successful completion of the course, students will be able to:

- Distinguish matters of fact from issues of judgment or opinion and derive factual or judgmental inferences from unambiguous statements of knowledge or belief.
- Judge the reliability and credibility of sources.
- Effectively argue a point of view by clarifying the issues, focusing on the pertinent issues, and staying relevant to the topic.
- Understand the nature of inductive and deductive reasoning, identify formal and informal fallacies of reasoning, and employ various methods for testing the strength, soundness, and validity of different argument forms.

- Understand the basic concepts of meaning (sense, reference, connotation, etc.) and identify different methods of word definition.
- Understand logic and its relationship to language by identifying the basic components of reasoning, including the propositional content of statements, the functions of premises and conclusions in the makeup of arguments, the linkage between evidence and inference, and the rules of inference and logical equivalence.

TEXTBOOK:

- **Reasoning Skills Success in 20 Minutes a Day** 3rd Edition
- **Thinking about Cybersecurity: From Cyber Crime to Cyber Warfare**
- **An Illustrated Book of Bad Arguments**

All-university Writing Requirement:

Students will write two 1,500-word essays on topics related to cybersecurity and the nation's critical infrastructure. In addition, students will engage in online discussions throughout the semester on questions related to course topics.

DISABLED STUDENT SERVICES

Students with disabilities who require reasonable accommodations must be approved for services by providing appropriate and recent documentation to the Office of Disabled Student Services (DSS). This office is located in Craven Hall 5205, and can be contacted by phone at (760)750-4905, or TTY (760)750-4909. Students authorized by DSS to receive reasonable accommodations should meet with me during my office hours in order to ensure confidentiality.

ACADEMIC HONESTY

Students will be expected to adhere to standards of academic honesty and integrity, as outlined in the Student Academic Honesty Policy. All written work and oral presentation assignments must be original work. **All ideas/material that are borrowed from other sources must have appropriate references to the original sources.** Any quoted material should give credit to the source and be punctuated with quotation marks.

Students are responsible for honest completion of their work including examinations. **There will be no tolerance for infractions.** If you believe there has been an infraction by someone in the class, please bring it to the instructor's attention. The instructor reserves the right to discipline any student for academic dishonesty, in accordance with the general rules and regulations of the university. Disciplinary action at the class level will include no grade for the assignment/exam and may result in a failing grade for the class as a whole. In addition, **incidents of Academic Dishonesty will be reported to the Dean of Students**. Sanctions at the University level may include suspension or expulsion from the University.

CLASS POLICIES

1. Be courteous to each other and avoid activities that are potentially disruptive.
2. It is impossible and unnecessary for the instructor to lecture on everything you are expected to know in order to complete assigned homework/exam. Students are expected to read related materials and complete hands-on tutorials outside of scheduled class meetings.
3. Do not ask others to share their solution for homework assignments. Explain your struggle and ask for guidance. Do not offer to share your solution for homework assignments. Help others resolve their problems.
4. This class uses Cougar Courses (http://cc.csusm.edu) to support dissemination of course information, interaction among students and instructors, and submission of student work. Questions concerning homework assignments shall be directed to the instructor via email or posted on Cougar Courses forums for feedback from the instructor as well as other students. Questions about accessing Cougar Courses are best directed to the **Student Technology Help Desk** http://www.csusm.edu/iits/sth/index.htm.
5. Late submissions will **NOT BE GRADED FOR CREDIT**.
6. Mark your calendar for all scheduled exams. **NO MAKE-UP EXAM** will be given except under the most extraordinary of situations. The class will use the scheduled final exam time for presentation and peer evaluation of the final project. Failure to participate in such event without proper excuse will result in no credit for the final project.
7. Any discrepancy on grades shall be submitted to the instructor **within one week** of the day that the grades are released (not the day you check it).

ASSESSMENT

Your grade for the class will be assessed based on your performance in class participations, quizzes, online discussions, presentations, essays, and exams. The following table indicates weights for each portion of your work toward final numeric score.

Category	Class Participation	Quizzes	Online Discussions	Presentations	Essays	Exams	Totals
Weight	10%	15%	15%	15%	20%	25%	100%
Points	100	150	150	150	200	250	1,000

Your letter grade for the class will be based on the following scale:

Overall %	> = 93	> = 90 <93	>= 86 <90	>= 82 <86	>= 79 <82	>= 76 <79	>= 70 <76	>= 60 <70	<60
Grade	A	A-	B+	B	B-	C+	C	D	F

TENATIVE SCHEDULE:

Week	Topic
1	Recognizing and defining a problem, Stuxnet – the first cyber guided missile
2	Focused observation, brainstorming with graphical organizers, the incredible scope of cyberspace
3	Setting goal and troubleshooting, the five gateways of internet vulnerability
4	Finding resources and evaluating facts, the problem of identity on the network
5	Persuasion techniques, cyber fraud, theft, and organized crime
6	The numbers game, government regulation of cyberspace
7	Checking your emotions, nations at cyber war
8	**Review and midterm**
9	Deductive reasoning, big data and privacy for the cyber age
10	Inductive reasoning, critical infrastructure and resiliency
11	Explanation and arguments, listening in and going dark, hardware failure
12	Distracting techniques
13	Making judgement calls, protecting yourself in cybersapce
14	Putting it all together
15	Looking forward – what does the future hold
16	**Final Exam**

LOOK FORWARD TO A GREAT SEMESTER!!!

Key cybersecurity concepts and interaction with cyberinfrastructure, avoiding activities that could potentially result in cyber-crimes. Critical thinking about cybersecurity-related policies and discerning cyber-attacks.