DO NOT TYPE IN THIS BOX

Bulletin #: 2

Academic Year: 2019-20

FLORIDA INTERNATIONAL UNIVERSITY
UNIVERSITY CURRICULUM COMMITTEE
Proposal for a Course Change

PART I. FILL OUT THIS SECTION COMPLETELY

1. **School/College** Engineering and Computing

   Div./Dept. in Which Taught School of Computing and Information Sciences

2. | Alpha Prefix | 1st Digit | Last 3 Digits | "C"-lec-lab "L"-Lab | Cr. Hrs. |
   |---|---|---|---|---|
   | CGS | 3 | 095 | | 3 |

3. **Present Course Title** Technology in the Global Arena - GL

PART II. FILL OUT CHANGE INFORMATION ONLY

Change Effective 8 / 24 / 2019

4a. **New Course Title** _____

b. **New Abbreviated course Title** *(for computer class schedules, transcripts)* _____

LIMITED TO 25 Characters *(including spaces)*

5a.

New Alpha Prefix	New 1st Digit	New Last 3 Digits	Change "C"-lec-lab "L"-Lab

5b. Change Credit Hours: From _____ **To** _____

6. **New Catalog Description/Major Topics** *(not to exceed 200 characters including spaces)*
   College of Medicine and College of Law: Attach description not exceeding 1,000 characters including spaces.

   Legal, ethical, social impacts of computer technology on society, governance, quality of life: intellectual property, privacy, security, professionalism, social identity in the U.S. and globally.

7. **New Prerequisite(s):** _____

8. **New Corequisite(s):** _____

9. **Explain Reclassification Request:**

   Since SCIS is adding a new BS-in-Cybersecurity program, the topics and outcomes include cybersecurity. Hence this proposal is to include security in the syllabus and the catalog description.

10. **Does this proposed change impact the assessment process of a program or certificate? If yes, then send notification to assessment@fiu.edu.**

PROPOSAL REQUESTED BY:

Faculty Contact	Nagarajan Prabakar		10 / 24 / 2019
	(Type name)	**(Signature)**	
	prabakar@cis.fiu.edu	305-348-2033	
	(Email address)	**(Phone number)**	
Chairperson (Dept./Div.)	S.S. Iyengar		10 / 24 / 2019
	(Type name)	**(Signature)**	
Chairperson (Curr. Comm.)	Wei-Chiang Lin		10 / 31 / 2019
	(Type name)	**(Signature)**	
College/School Dean	John Volakis		11 / 5 / 2019
	(Type name)	**(Signature)**	

Submit one original form. Attach one copy of the Course Justification and Course Syllabus: Course Description, Objectives, Learning Outcomes, Major Topics and textbooks.

CGS-3095 Technology in the Global Arena - GL

Course Change Justification

SCIS is adding a new BS-in-Cybersecurity program effective from Fall 2020. Since CGS-3095 provides a global perspective of computing technology to all computing related degree programs, cybersecurity is added to the topics and outcomes. Hence this proposal is to notify the changes to the syllabus and the catalog description.

School of Computing & Information Sciences

Course Title: Technology in the Global Arena - GL **Date:** September 30, 2019

Course Number: CGS 3095

Number of Credits: 3

Subject Area: Professional Development	**Subject Area Coordinator**: Richard Whitaker **Email**: rwhittak@cs.fiu.edu

Catalog Description: Legal, ethical, social impacts of computer technology on society, governance, quality of life: intellectual property, privacy, security, professionalism, social identity in the U.S. and globally.

Textbook: Computer Ethics – A Global Perspective, by Giannis Stamatellos

References:

Prerequisite Courses: (COP-2250 or COP-2210) and (ENC-3213 or ENC-3249)

Corequisite Courses: None

Type: Required

Prerequisites Topics:

- Programming experience, English technical writing

Course Description

Computing technologies, including the Internet, have led to an increase in opportunities for collaboration and interaction among societies around the world. As additional computing power, storage, and network bandwidth become available, the capabilities of interconnected systems become more and more powerful. This course aims to introduce students to the legal, social, and ethical issues that are brought about by the globally-connected Internet and continuing increases in computing power. These issues, including privacy, security, intellectual property, civil liberties, and cultural integrity will be explored from the perspectives of different global societies and through the professional standards adopted by global computing organizations. The goal of this course is to enable computing professionals to make informed ethical decisions that account for societal differences regarding the technologies that they develop and administer.

Course Outcomes

1. Be able to understand and discuss the legal, ethical, and social impacts of technology as related to intellectual property rights, and how the global reach of the Internet affects these issues. (Global Learning Outcome: Global Perspective)

2. Be able to understand and discuss the legal, ethical, and social impacts of technology as related to individual privacy, identity management, security, and anonymity across the globe and in the global Internet society. (Global Learning Outcome: Global Awareness)
3. Be able to understand and discuss a computing professional's roles and responsibilities as related to intellectual property, privacy, anonymity, personal data privacy, cybercrime, legal, social, and ethical issues. (Global Learning Outcome: Global Engagement)
4. Be familiar with the special issues that virtual worlds present to intellectual property, privacy, security, anonymity, social identity, social behavior, and social inclusion.
5. Be familiar with the global impacts of the technological divide among diverse populations around the world.
6. Be able to create and deliver a professional presentation on global technology impact issues.
7. Be able to explain strategies for continued professional development
8. Be able to produce a research paper on global technology impact issues.

Topic	# of Lecture Hours	Selected Readings Chapters refer to the Stamatellos textbook. Other readings will be available via Moodle and the WWW	Outcome
• Unique aspects of computing technology ○ Unique problems created by technology	1	"Reason, relativity, and responsibility in computer ethics," James Moor "Unique ethical problems in information technology," Walter Maner	1-8

• Intellectual property issues
  ○ Patents, copyrights, and trademarks in the U.S. and abroad
  ○ Software piracy, licensing, and patents
  ○ Media piracy
  ○ Reverse engineering of hardware or software
  ○ Transnational issues concerning intellectual property
  ○ Technology's roles in protecting IP and infringing on IP rights
	2	Chapter 4
		
		"Proprietary Rights in Computer Software: Individual and Policy Issues," Deborah Johnson
			1

• Privacy and security issues
  ○ U.S. Fourth Amendment rights and digital content
  ○ Governments' rights and responsibilities to prevent cyber or physical attacks vs. individual privacy rights
  ○ Privacy issues in the global arena: cultural, social, and legal aspects around the world
  ○ Privacy in the workplace
	2	Chapters 2&3
		
		"Towards a theory of privacy in the information age," James Moor
			2

• Anonymity issues
  ○ Anonymity's role in freedom of expression
  ○ Anonymity's role in criminal or unethical activities
	2	Chapter 3
		"Anonymity, Psuedonimity, or Inescapable Identity on the Net", Deborah Johnson & Keith Miller
		"Anonymity Tools for the Internet," Brian Kim, et al.
			2

• Freedom of expression and civil liberties issues
  ○ Ethical and legal basis for technological privacy protection
  ○ Ethical and legal framework for freedom of information
  ○ Freedom of expression in cyberspace vs. cultural, social, and legal issues in other
	2	Chapter 3
		
		"CDT's Guide to Online Privacy"
			3,4

societies ○ International and intercultural implications of technology use and technology commerce			
• Software and critical public infrastructure ○ Proprietary software protection vs. government's requirements for public safety and disaster prevention/recovery ○ Risks of computing in the implementation of public policy and government (e.g., electronic voting, electronic health records, etc.)	1	Chapter 5 "Is the global information infrastructure a democratic technology?" Deborah Johnson "Therac-25 Case Materials"	1
• Professional roles and responsibilities ○ Purpose & appropriateness of professional codes of conduct ○ Acceptable use policies ○ Whistle-blowing ○ Response to cybercrime ○ Role of professionals in global computing issues ○ Evaluate ACM/IEEE Codes of Ethics	2	Appendices A&B "Informatics and professional responsibility," Donald Gotterbarn "Using the New ACM Code of Ethics in Decision Making," Ronald Anderson, et al	1-5
• Computer-based games ○ Game developers responsibilities: do/should games teach ethical/unethical behaviors?	1	Chapter 10 "The Ethics of E-Games" Special Issue of the International Review of Information Ethics	3,4
• Professional Development ○ The need for continued professional development ○ Strategies for continued professional development	2	Chapter 5 "Teaching Professional and Ethical Aspects of Computing" Harjinder Rahanu	7
• Virtual worlds ○ Real-world laws & social customs for virtual worlds? ○ Economic, social, and legal issues in virtual worlds	2	Chapter 10 "Information Privacy in Virtual Worlds: Identifying Unique Concerns Beyond the Onine and Offline Worlds," Tal Zarsky	1-5
• Student presentations (ACTIVE LEARNING) ○ Individual research and presentations on related topics	19		1-8

Oral and Written Communication:

Topic	Class Time	Student Performance Measures
All topics	Throughout the semester	Student prepares and delivers a presentation based on his/her research of a related topic (ACTIVE LEARNING)
All topics	Throughout the semester	Student prepares a research paper exploring a technology-related issue with global implications
All topics	Throughout the semester	Student participates in forum discussions about related topics (ACTIVE LEARNING)

Social and Ethical Implications of Computing Topics

Topic	Class Time	Student Performance Measures
All topics	Throughout the semester	Forum discussions (ACTIVE LEARNING), student presentations (ACTIVE LEARNING), and research papers

The Coverage of Knowledge Units within Information Technology Body of Knowledge

Knowledge Unit	Topic	Lecture Hours
SP.Professional Communications	Professional Communications	5
SP.Social Context of Computing	Social Context of Computing	3
SP.Intellectual Property	Intellectual Properties	2
SP.Legal Issues in Computing and cybercrime	Legal Issues in Computing	2
SP.Professional and Ethical Issues & Responsibilities	Professional and Ethical Issues & Responsibilities	3
SP.Privacy and Civil Liberties	Privacy and Civil Liberties	2

Source: Computer Science Curriculum 2013
https://www.acm.org/binaries/content/assets/education/cs2013_web_final.pdf
Information Technology 2017: Curriculum Guidelines for Baccalaureate Degree Programs in Information Technology, https://www.acm.org/binaries/content/assets/education/curricula-recommendations/it2017.pdf
and Cybersecurity Curricula 2017, Curriculum Guidelines for Post-Secondary Degree Programs in Cybersecurity, *https://www.acm.org/binaries/content/assets/education/curricula-recommendations/csec2017.pdf*

Grading Policies

Assignments and Grading Weights

- Class Attendance: 20%
- Class Participation / Forum Participation / Pop Quizzes: 20%
- Term Paper: 30%
- Class Presentation: 30%

Evaluation Method

Grades are based on the quality and quantity of each student's participation in class and via web-based forums, and on the quality of each student's paper and presentation. Components are graded as follows:

A. **Class Attendance: REQUIRED & GRADED**. Attendance grade is pro-rated based on your number of absences. ***Missing 4 or more classes is an automatic F grade***. If you miss a class, you are responsible to obtain all assignments and information regarding reading materials and assignments.

B. **Forum participation**: There are 3 required forums. Minimum participation (equivalent to a grade of C) is one post (with proper reference) and one response (with proper reference) per forum, plus reading and ranking all other forum entries. Forum posts must discuss an issue related to the forum topic, including a link to reference article(s). Forums are not about your opinions, but rather are to highlight current ethical issues and trends involving technology. Responses should discuss points related to the post, and should cite related article(s). ***Each forum is graded separately. Skipping one forum will reduce your maximum possible forum grade to 67%.*** To maximize your forum grade, you should have at least 4 quality entries (at least one original post; the rest can be replies to other posts) per forum. Forum participation is based on quantity as well as quality. Quality scoring assesses how well you describe the issue and the quality of the reference article(s) used. Quantity scoring is as follows (assumes quality participation in all forums):

   Approximate Overall Forum Scoring (total across all forums, based on quantity only; this will be scaled to reflect quality as well): 12+ = 100%, 9-11 = 90%, 7-8 = 85%, 6 = 75%, 4-5 = 70%, 3 = 60%, 1-2 = 50%, 0 = 0%

C. **Reading assignments**: All assigned reading material must be completed prior to the next class meeting, to enable the student to participate fully in the discussions.

D. **Term paper**: A well-researched, well-written term paper is a required element for this course. ***Failure to submit a paper is an automatic F grade. Submitting a highly plagiarized paper is an automatic F grade.*** The Term Paper will be graded on content, ethical analysis of the issue presented, grammar, style, and adherence to the formatting requirements. Scoring protocols will be provided via Moodle.

E. **Class presentation**: You are required to make a 10-minute presentation to the class on the topic of your Term Paper. ***Failure to make your presentation at the scheduled time is an automatic F grade.*** Presentation will be graded on content, ethical analysis of the issue presented, interest level, and clarity. Scoring protocols will be provided via Moodle.

Academic Honesty: Anti-plagiarism software is used to validate the authorship of your written assignments. Any paper which scores 20% or higher on the plagiarism measurement will be subject to a failing grade. Any evidence of this or other cheating will result in a failing course grade. See the section below on Academic Honesty for full details.