GE2338: EVERYDAY SECURITY - PROTECTING YOURSELF IN THE DIGITAL AGE

Effective Term

Semester B 2023/24

Part I Course Overview

Course Title

Everyday Security - Protecting Yourself in the Digital Age

Subject Code

GE - Gateway Education

Course Number

2338

Academic Unit

Computer Science (CS)

College/School

College of Engineering (EG)

Course Duration

One Semester

Credit Units

3

Level

A1, A2 - Associate Degree
B1, B2, B3, B4 - Bachelor's Degree

GE Area (Primary)

Area 3 - Science and Technology

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

Today, interacting with each other and doing transactions online is commonplace. An enormous amount of personal and business communication and data transfer are done directly over the Internet. While this brings about great convenience and efficiency it also offers opportunities for malicious parties to gain access to and misuse our information. This course aims to provide introductory level knowledge about various online technologies together with a focus on related security and privacy considerations. A wide spectrum of topics are covered, including: Internet technology and services, eCommerce, social networking, wireless networks, mobile Apps, digital marketing and location-based services. The legal, ethical and societal aspects of security and privacy, as well as the good practices for computing and online interaction will also be discussed. Learning activities include lectures, group projects, case studies, hands-on assignment, and tutorial sessions.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Identify essential information security, privacy and service requirements and issues through observation of the operations of computer and online applications and services (e.g., e-commerce, e-banking, social networks, location-based services and digital marketing) and discovering the practice and standards.		x	x	
2	Demonstrate working knowledge of those various computing and networking technologies supporting online applications and services, and relate those technologies to different application spectrum.			x	
3	Discover the security & privacy obstacles that remain to be addressed for the growth of online applications and services and their impacts, including legal, ethical and societal aspects.		x	x	
4	Apply the general technology principle in information security and privacy for online applications and services.		x	x	x
5	Develop an attitude to evaluate security and privacy issues in computer systems and online applications, and propose solutions for them through independent investigation.		x	x	x

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Teaching and Learning Activities (TLAs)

	TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture	Explain key issues and solutions information security and privacy as it relates to online applications and services.	1, 2, 3, 4, 5	3 hours/week
2	Tutorial	Require students to conduct hands-on exercises about information security and privacy of online applications and services.	1, 2, 3, 4, 5	8 hours/ semester
3	Assignment	Require student to work on individual assignment that consists of questions related to information security and privacy issues of some modern online applications that are commonly used and related in students' daily life.	1, 2, 3, 4, 5	After class
4	Quiz	Require students to complete one in-class quiz that includes questions about the teaching materials and tests their understanding and knowledge about the subject.	1, 2, 3, 4, 5	In-class
5	Group project	Require students to work as a small team on a timely issue related to information security and privacy of online applications and services. They have to identify an issue, prove the existence of the issue, find out a solution, and evaluate the solution.	1, 2, 3, 4, 5	After class

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Assignment	1, 2, 3, 4	20	
2	Quiz	1, 2, 3, 4	20	
3	Group Projects	4, 5	20	

Continuous Assessment (%)

60

Examination (%)
40

Examination Duration (Hours)
2

Additional Information for ATs
For a student to pass the course, at least 30% of the maximum mark for the examination must be obtained.

Assessment Rubrics (AR)

Assessment Task
Assignment

Criterion
CAPACITY for DIRECTED LEARNING to understand the key concepts of information security and privacy as it related to online applications and services.

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal levels

Assessment Task
Quiz

Criterion
CAPACITY for DIRECTED LEARNING to understand the key concepts of information security and privacy issues of online applications and services.

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

Group project and presentation

Criterion

ABILITY to IDENTIFY an existing real-world issue or a new challenge related to security and privacy, DESIGN a solution, EVALUATE the effectiveness of the solution, and EXPLAIN in DETAIL about the project.

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

Examination

Criterion

ABILITY to APPLY and EXPLAIN knowledge and understanding of information security and privacy for online applications and services.

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

· Online Security & Privacy
· Data Security & Privacy
· Introduction to the Internet
· Wireless networks
· E-commerce
· Social Networking
· Location-Based Services
· Digital Marketing and Cookies
· Mobile apps

Reading List

Compulsory Readings

	Title
1	Nil

Additional Readings

	Title
1	Sara Baase (2017), "A Gift of Fire: Social, Legal, and Ethical Issues for Computing and the Internet", Prentice Hall, 5th edition.
2	Stephen P Borgatti (2013), Martin G Everett and Jeffrey C Johnson, "Analyzing Social Networks", SAGE Publications Ltd.
3	David Easley and Jon Kleinberg (2010), "Networks, Crowds, and Markets - Reasoning About a Highly Connected World", Cambridge Press.
4	Lisa Guerin J. D. (2009), "Smart policies for workplace technology: email, blogs, cell phones & more", NOLO.

Annex (for GE courses only)

A. Please specify the Gateway Education Programme Intended Learning Outcomes (PILOs) that the course is aligned to and relate them to the CILOs stated in Part II, Section 2 of this form:

Please indicate which CILO(s) is/are related to this PILO, if any (can be more than one CILOs in each PILO)

PILO 1: Demonstrate the capacity for self-directed learning

1, 2, 3

PILO 2: Explain the basic methodologies and techniques of inquiry of the arts and humanities, social sciences, business, and science and technology

1, 2, 3, 4, 5

PILO 3: Demonstrate critical thinking skills

2, 5

PILO 4: Interpret information and numerical data

2, 3

PILO 5: Produce structured, well-organised and fluent text

1, 2, 3, 4, 5

PILO 6: Demonstrate effective oral communication skills

1, 2, 3, 5

PILO 7: Demonstrate an ability to work effectively in a team

5

PILO 9: Value ethical and socially responsible actions

2

PILO 10: Demonstrate the attitude and/or ability to accomplish discovery and/or innovation

5

B. Please select an assessment task for collecting evidence of student achievement for quality assurance purposes. Please retain at least one sample of student achievement across a period of three years.

Selected Assessment Task

Nil