1.	Course title	Security Risk management & Ethics
2.	Course number	1911221
3.	Credit hours (theory, practical)	3
	Contact hours (theory, practical)	3
4.	Prerequisites	1911101
5.	Program title	Cybersecurity
6.	Year of study and semester (s)	Second year
7.	Final Qualification	Bachelor degree
8.	Other department (s) involved in teaching the course	None
9.	Language of Instruction	English
10.	Date of production/revision	October, 3, 2022
11.	Required/ Elective	Required

12. Course Instructors:

Prof. Mohammad Qatawneh
Email address: mohd.qat@ju.edu.jo

13. Other instructors:

N/A

14. Course Description:

This course introduces students to the three key elements of risk management. Topics covered: risk analysis, risk assessment, and vulnerability assessment. Both quantitative and qualitative methodologies will be discussed as well as how security metrics can be modeled, monitored, and controlled. Several case studies will be used to demonstrate the risk management principles featured throughout the course. Risk assessments on the selected case study scenarios will be conducted by team work. Mitigation plans will be developed, and the results of their analysis will be presented, both in written reports and oral presentations. Ethical implications of security procedures will be studied as well.

15. Course aims and outcomes:

A- Aims:

After completing the course, students will be able to:

1. Identify and prioritize information assets
2. Identify and prioritize threats to information assets.
3. Perform risk analysis, risk assessment, and vulnerability assessment.
4. Perform risk treatment.
5. Perform security controls

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to

A- Knowledge and Understanding: Students should …

A1) learn the basic concepts involved with security and risk management.

A2) Understand the legal, ethical and professional issues related to cybersecurity. A3) Understand the importance of having a secure network.

A4) Identify the technologies that can be used to achieve security. A5) Understand the main concepts related to cryptography.

A6) Understand the basic concepts related to digital forensic and ethical hacking

B- Intellectual skills: with the ability to …

B1) identify the assets, risks, threats, vulnerabilities and perform risk analyses.

B2) Distinguish between Qualitative and quantitative analyses.

B3) Analyze risk assessment and risk treatment.

B4) Classify different types of security controls.

C- Subject specific skills – with ability to …

C1) Governance elements.

C2) Importance of code of ethic

D- Transferable skills – with ability to

D1) Discuss and work in a group in order to identify security risk management.

D2) Use security risk tools

16. Topic Outline and Schedule:

Topic	Hours	ILOs	Program SOs	TLA: Teaching/Learning & Assessment Methods
Concepts of Information Security: Introduction to InfoSec, Information, CIA - confidentiality, integrity, availability, additional security concepts such as authentication, authorization, audit, nonrepudiation and privacy. Security plan, CNSS.	5	A1, B4	6	**T**: Lecture **L**: Reading lecture notes and chapter **A**: In class questions

Concepts of Security Risk Management: TVAR: Threat, Vulnerability, Asset, and Risk. Threats: Categories of threats: Intentional Threats: Malware, Phishing, Spear Phishing, Man in the middle attack, Denial of Service Attack (DOS), SQL Injection, Zero-day-Exploit, Advanced Persistent Threats APT, Ransomware, and DNS Attack. Unintentional threats and Natural threats. Vulnerabilities, Assets, Risk. Cyber Threat Actors. **Aspects of organization's security profile.** **Security Policy.** **Assignment.**	9	A1, B3, B4, D2	6	**T**: Lecture and presentation **L**: Reading lecture notes and chapter **A**: Assignment: how to build an inventory of organization's assets.
Assignment #1:				1- How to build an inventory of organization's assets. 2- Introduction to MS Excel files, Workbooks, Worksheets, Columns and Rows. Formatting Worksheets. AutoFill, Numeric formats, previewing worksheets, etc.
Risk management process. **Context establishment**. **Risk Assessment**: gathering a list of Assets, identify risk, Assigning impact and likelihood, methods of analyzing and prioritizing risk: Qualitative and Quantitative risk analysis. **Risk Treatment**: Risk treatment options: Avoidance, Acceptance, Mitigation and transfer. **Risk communication and conclusion.** **Risk monitoring and review.** **Project.**	15	A1, A2, B1, D1	4, 6	**T**: Lecture and presentation, Examples **L**: Reading lecture notes and chapter **A**: Project
Assignment #2				1. Build the security risk assessment Matrix. 2. How to build a Risk Assessment Matrix in Excel.
Midterm Exam	2			A: Exam on material in all above chapters.
Security Controls	6	A1, B1, B3, B4, D1	6	**T**: Present examples **L**: Reading lecture notes and chapter **A**: In class questions.
Governance Elements	3	A1, A3, B3,B4, C2, D2	1, 6	**T**: Present examples **L**: Reading lecture notes and chapter. A: Assignment.

Code of Ethics	6	A1, A4, B3, B4, C2, D2	1, 6	**T:** Lectures and presentation **L**: Reading chapter. **A**: Assignment.
Review and Final Exam	2	All		Q&A.

17. Evaluation Methods and Course Requirements (Optional):

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:
There will be several assessment methods of evaluation the performance of the students such as attending and class participation, Practical assignments; conducting the midterm, and the final exam.

18. Course Policies:

A- Attendance policies: Deliberate abstention from attending 1911221 classes and any other similar acts will lead to student deprivation from the course according to the UJ regulations

B- Absences from exams and handing in assignments on time:

If you miss the midterm, then a makeup exam will not be provided unless you submit a valid absence excuse, within three days from the midterm, to your lecturer. This excuse must be signed and stamped from the UJ hospital in order to be valid. If your lecturer accepts the excuse then you will be able to take the makeup. You need to follow up the departmental announcements regarding the makeup dateand time. Please note that the lecturer may either accept or reject your excuse based on UJ regulations

C- Health and safety procedures:

N/A

D- Honesty policy regarding cheating, plagiarism, misbehavior:

All students in this course must read the University policies on plagiarism and academic honesty

http://registration.ju.edu.jo/RegRegulations/Forms/All_Regulations.aspx

E- Grading policy:

- Midterm	30%
- Practical assignments	20%
- Final Exam:	50%

F- Available university services that support achievement in the course: N/A

G- Statement on Students with disabilities

Students with Disabilities: Students with disabilities who need special accommodations for this class areencouraged to meet with the instructor and/or their academic advisor as soon as possible. In order to receive accommodations for academic work in this course, students must inform the course instructor and/or their academic advisor, preferably in a written format, about their needs no later than the 4th week of classes.

19. Required equipment:

20. References:

1. Whitman, Michael E., and Herbert J. Mattord. 6th edition. Management of information security. Nelson Education, 2018.
2. Newsome, Bruce. A practical introduction to security and risk management. SAGE Publications, 2013.
3. Harkins, Malcolm. "Managing risk and information security." New York City: Apress (2013): 87.
4. Douglas A. Ashbaugh. Security Software Development: Assessing and Managing Security Risks. Auerbach Publications, 2008.
5. Calder, Alan, and Steve G. Watkins. Information security risk management for ISO27001/ISO27002. It Governance Ltd, 2010.

21. Additional information:

Course website: elearning.ju.edu.jo

Date: ----------

Name of Course Coordinator: ----------Signature: ----------

Head of curriculum committee/Department: ---------- Signature: ----------

Head of Department: ---------- Signature: ----------

Head of curriculum committee/Faculty: ---------- Signature: ----------

Dean: ---------- -Signature: ----------