## **CYBR 462: Information System Risk Management (3 credits)**

This course focuses on the identification, analysis, and management of risks associated with information systems. The course covers topics such as risk management frameworks, risk assessment methodologies, risk mitigation strategies, and risk monitoring and control. The course is designed to provide students with an understanding of the principles and techniques for managing information system risks and ensuring the confidentiality, integrity, and availability of information.  *(Prerequisite: CYBR 362)*

**Course Learning Outcomes:**

By the end of the course, students will be able to:

A1. Demonstrate a comprehensive critical and specialized understanding of the risks associated with information systems, considering factors that impact confidentiality, integrity, and availability.

A2. Apply specialized risk management principles in real-world scenarios, demonstrating the ability to make informed decisions to safeguard information systems.

B1. Utilize various risk assessment methodologies and tools to evaluate potential risks, considering both qualitative and quantitative factors.

B2. Critically analyse the application of different risk management frameworks to systematically identify, assess, and manage information system risks.

B3. Communicate risk management findings effectively, both in written and oral formats, ensuring clarity and understanding among stakeholders.

C1. Develop effective and legal risk mitigation strategies to address identified information system risks.

C2. Demonstrate effective teamwork and collaboration skills in the context of information system risk management projects.

**Course Learning Materials:**

* Darril Gibson, Andy Igonor, Managing Risk in Information Systems, 3rd Edition, Jones & Bartlett Learning, November 2020
* Risk Management Framework for Information Systems and Organizations, NIST, 2018
* R. Austin and M. Fischer, "Enterprise Risk Management: A Common Framework for the Entire Organization," McGraw-Hill, 2011.
* D. Dhillon and T.S. Dhillon, "Information Risk Management: A Practitioner's Guide," John Wiley & Sons, 2014.

**Course Content:**

1. Risk Management Fundamentals
2. Managing Risk: Threats, Vulnerabilities, and Exploits
3. Understanding and Maintaining Compliance
4. Developing a Risk Management Plan
5. Defining Risk Assessment Approaches
6. Performing a Risk Assessment
7. Identifying Assets and Activities to Be Protected
8. Identifying and Analyzing Threats, Vulnerabilities, and Exploits
9. Identifying and Analyzing Risk Mitigation Security Controls
10. Turning a Risk Assessment into a Risk Mitigation Plan
11. Mitigating Risk with a Business Impact Analysis
12. Mitigating Risk with a Business Continuity Plan
13. Mitigating Risk with a Disaster Recovery Plan
14. Mitigating Risk with a Computer Incident Response Team Plan