

# IS4537: INFORMATION SYSTEMS AUDIT

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## Effective Term

Semester B 2024/25

## Part I Course Overview

### Course Title

Information Systems Audit

### Subject Code

IS - Information Systems

### Course Number

4537

### Academic Unit

Information Systems (IS)

### College/School

College of Business (CB)

### Course Duration

One Semester

### Credit Units

3

### Level

B1, B2, B3, B4 - Bachelor's Degree

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

Nil

### Precursors

Nil

### Equivalent Courses

IS4501 Information Systems Audit

### Exclusive Courses

Nil

## Part II Course Details

### Abstract

Information security has become more and more important in today's business world. From time to time there are threats and vulnerabilities facing us. This course has been designed to teach us the nature of such threats and vulnerabilities

to information processes so that we can know our enemies and the related technical and managerial solutions for us to counteract with. Besides, through learning the key activities and techniques in performing risk management and information systems control we can know ourselves. To make sure the technical controls and management controls are well designed and functioning properly, role of information systems audit is explained in enhancing asset safeguarding, data integrity, system effectiveness and system efficiency. The other goal of this course is to prepare students in achieving professional qualification as Certified Information Systems Auditor (CISA).

### Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Apply the knowledge of information systems risk management to assess and manage risks in organizations.	25		x	x
2	Identify the technical nature of information systems threats and the technical and managerial solutions to manage them.	25		x	
3	Analyze and examine innovative controls relating to business processes and using different control objectives, activities and metrics to monitor and maintenance.	20		x	x
4	Identify appropriate techniques to handle the information systems audit life cycle and the main types of information systems audit.	20		x	x
5	Identify the professional code of ethics of the Information Systems Audit and Control Association.	10	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.

### Learning and Teaching Activities (LTAs)

LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	LTA1: Lecture  Students will learn the following: IS audit overview: IS security threats, audit purpose and personnel. Key concepts of IS security management: Information technology risks management. IS audit life cycle and main types of IS audit: IS audit concepts and techniques, including Computer Assisted Audit Tools and Techniques (CAATTS) Legal and ethical issues for IT auditors	1, 2, 3, 4, 5	Seminar:3 Hours/Week
2	LTA2: Laboratory  During laboratory sessions, Students will participate in the following activities which used to reinforce the concepts learnt in lectures: Exercises: Students will answer multiple choice questions, short questions, cases or article readings of the related subjects. There will also be individual exercise on CAATTS. Group Discussion: group discussions in the laboratory aim to cultivate critical thinking and application of the concepts to the actual business scenarios.	1, 2, 3, 4, 5	

**Assessment Tasks / Activities (ATs)**

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1 AT1: Continuous Assessment It consists of attendance and class participation. Each tutorial consists of exercises and group discussions to assess students' understanding of the topics and their abilities to apply their knowledge and skills.	1, 2, 3, 4, 5	20	
2 AT2: Mid-Term Test A written mid-term test is developed to assess student' s competence level in the middle of the semester.	1, 2	15	
3 AT3: Project Each student will participate in group project (about 4 students per group) and work on a IS security / audit analysis report. Each group will be required to submit a project paper of detailed findings and recommendations and provide a 20-minute presentation. This allows students to apply security management concepts and methodology to identify IT risks in an organisation and provide resolutions.	1, 2, 3	15	

**Continuous Assessment (%)**

50

**Examination (%)**

50

**Examination Duration (Hours)**

2

**Assessment Rubrics (AR)****Assessment Task**

AT1: Continuous Assessment

**Criterion**

Ability to accurately demonstrate knowledge on risk assessment and risk mitigation.

**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

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**Assessment Task**

AT1: Continuous Assessment

**Criterion**

Ability to correctly understand the various IS security technical concepts and solutions to mitigate the possible threats facing the organization.

**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

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**Assessment Task**

AT1: Continuous Assessment

**Criterion**

Capability to critically analyse the main types of audit management, internal control, evidence collection and evaluation techniques for IS audit.

**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

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**Assessment Task**

AT1: Continuous Assessment

**Criterion**

Capability to accurately assess IS audit techniques to IS audit life cycle and main types of IS audit.

**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

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**Assessment Task**

AT1: Continuous Assessment

**Criterion**

Ability to accurately apply ISACA professional code of ethics and project management techniques.

**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

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**Assessment Task**

AT2:Mid-Term Test

**Criterion**

Ability to accurately demonstrate knowledge on risk assessment and risk mitigation.

**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**

AT2:Mid-Term Test

**Criterion**

Ability to correctly understand the various IS security technical concepts and solutions to mitigate the possible threats facing the organization.

**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**

AT3: Project

**Criterion**

Ability to accurately demonstrate knowledge on risk assessment and risk mitigation.

**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**

AT3: Project

**Criterion**

Ability to correctly understand the various IS security technical concepts and solutions to mitigate the possible threats facing the organization.

**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

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**Assessment Task**

AT3: Project

**Criterion**

Capability to critically analyse the main types of audit management, internal control, evidence collection and evaluation techniques for IS audit.

**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

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**Assessment Task**

AT4:Final Examination

**Criterion**

Ability to accurately demonstrate knowledge on risk assessment and risk mitigation.

**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

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**Assessment Task**

AT4:Final Examination

**Criterion**

Ability to correctly understand the various IS security technical concepts and solutions to mitigate the possible threats facing the organization.

**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

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**Assessment Task**

AT4:Final Examination

**Criterion**

Capability to critically analyse the main types of audit management, internal control, evidence collection and evaluation techniques for IS audit.

**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

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**Assessment Task**

AT4:Final Examination

**Criterion**

Capability to accurately assess IS audit techniques to IS audit life cycle and main types of IS audit.

**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

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**Assessment Task**

AT4:Final Examination

**Criterion**

Ability to accurately apply ISACA professional code of ethics and project management techniques.

**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

Information Systems auditing; IT Governance; Information Technology risk management; Information Systems risk control; Information System audit process; Information Systems audit techniques; Information Systems audit life cycle; Legal and ethical issues for Information Technology Auditors.

### Reading List

#### Compulsory Readings

Title	
1	Hunton, J., Bryant, S. and Bagranoff, N., Core Concepts of Information Technology Auditing, Wiley & Sons. ISBN: 0471222933.

#### Additional Readings

Title	
1	Michael E. Whitman, Herbert J. Mattord, Principles of Information Security, 5th edition, Boston, Mass; [London]: Thomson Course Technology, 2011. ISBN: 1285448367.
2	David L. Cannon, CISA: Certified Information Systems Auditor Study Guide, 4th edition, Indianapolis, IN: Wiley Publishing, Inc, 2011. ISBN: 9781119056249.
3	Dhillon, Gurpreet, Principles of Information Systems Security: Texts and Cases, John Wiley, 2007. ISBN: 978-0-471-45056-6.
4	James A. Hall, Tommie Singleton, Information Technology Auditing, 3rd edition, South-Western, Cengage Learning, 2005. ISBN: 1439079110.
5	Weber, Ron, Information Systems Control and Audit, Prentice-Hall, Inc, 1999. ISBN: 0139478701.
6	CISA Review Manual, Information Systems Audit and Control Association, current year.
7	Selected readings from: Computers and Security; ISACA Journal