

ICT338e Information Security Challenges in Smart Computing

Level: 3

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

E-Learning: FULL - Learning is done ENTIRELY online using interactive study materials in Canvas. Students receive guidance and support from online instructors via discussion forums and emails. There are no face-to-face sessions. If the course has an exam component, this will be administered on-campus.

Synopsis:

ICT338 Information Security Challenges in Smart Computing covers information security challenges surrounding smart computing. When building smart solutions, information security is of key importance given the prevailing cyber threat landscape. This course aims to train students in understanding the insecurity of smart computing so that they can identify, evaluate and recommend suitable information security systems and applications based on organisational needs. Students examine the three components that define smart computing, namely the Cloud, Edge and Mobile. Other topics include information security threat types and vectors affecting smart computing, and known security issues. Students study the security trends and approaches to address these security issues.

Topics:

- Smart computing
- Smart computing security
- Security threat types and vectors
- Case studies of well-known attacks targeting smart computing
- Interaction between various components of smart computing
- IoT risks
- Identity and access management
- Detective controls
- Infrastructure protection
- Data protection
- Incident response
- Risk management

Textbooks:

Mark Stamp. (2011).: Information Security: Principles and Practice (eTextbook) 2nd ed. Wiley Publishing
ISBN-13: 9781118027967

Mark Stamp. (2011).: Information Security: Principles and Practice (eTextbook) 2nd ed. Wiley Publishing
ISBN-13: 9781118027967-AA

Learning Outcome:

- Critique on smart computing security and related computer security concepts
- Assess smart computing security threat types and vectors
- Evaluate different case studies surrounding smart computing insecurity
- Demonstrate understanding of how Internet of Things (IoT) interacts with smart computing
- Explain how to secure smart computing
- Appraise the security trends surrounding smart computing
- Apply detective controls to discover threats

Assessment Strategies:

Continuous Assessment Component	Weightage (%)
PRE-CLASS QUIZ	1
DISCUSSION BOARD	10
PRE-CLASS QUIZ	1
GROUP BASED ASSIGNMENT	15
PRE-CLASS QUIZ	1
PRE-CLASS QUIZ	1
PRE-CLASS QUIZ	1
Sub-Total	30

Examinable Component	Weightage (%)
ECA	70
Sub-Total	70

Weightage Total **100**