MIS761
Cybersecurity Strategies

Dept. of Information Systems & Business Analytics

Deakin Business School

Week 10 – Review and Exam Preparation

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THE EXAM

This is an open book exam, you can refer to any material including books, lecture and seminar notes, online material, etc.

Be sure and check the date and time (available from Wednesday 7/10/2024 4:30 PM AEDT).

The exam timetable is available on ***StudentConnect***.

EXAM INSTRUCTIONS

- Upload your exam response to the Exam Submission Dropbox in the CloudDeakin unit site.
- Check that you upload the correct file.
- Answer FOUR questions within a **24 hour** time period.
- The actual work required to complete the exam is expected to be about **2 hours.**
- Worth 50%
- Word Limit: 2000 words (References excluded)
- Late submissions will not be marked.
- Save this document on your computer using the file name: student ID, and unit code, for example: **123456789_MIS761**
- Remember to save your work regularly.
- It is important that you complete this task individually. Your submission will be reviewed for the purposes of detecting collusion and/or plagiarism.

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ACADEMIC MISCONDUCT

Deliberate academic misconduct such as plagiarism is subject to severe penalties. Plagiarism may include but not limited to the following:

- Copying works of others in the public domain without appropriate references
- Re using assignment material from other students past or present
- Posting your assignment solutions on CloudDeakin forums, other public forums and on the internet.
- Contracting others to complete the assignment on your behalf
- For more information about academic misconduct Deakin University Website.

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WHAT NOT TO DO IN EXAMS...

DO NOT copy and paste from online materials;

DO NOT upload the exam paper to third-party websites (e.g., Course Hero, Studocu, …)

DO NOT waste your time searching online;

DO NOT waste your time using ChatGPT/GenAI;

DO NOT leave any questions unanswered;

DO NOT cheat or risk an Academic Integrity breach.

Do Not Panic!

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EXAM SCOPE

Week 1-8 are examinable.

Lecture slides are important.

See Pre exam information document on the unit site.

THE TOPICS COVERED

- Cyber Security as a business problem
- Cyber Talent
- Cyber Threats
- Cyber Security Technologies
- Security awareness, training, education and culture
- Risk Management
- Australian laws relevant to cyber security
- Contingency Planning
- Governance, policies and outsourcing

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CYBER SECURITY AS A BUSINESS PROBLEM

- Misconception 1: Cybersecurity is a Technology Issue
- Misconception 2: Cybersecurity can be Considered Afterwards
- Misconception 3: Cybersecurity is a cost centre

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CYBER TALENT

- Talent gap and vicious cycle
- Career Frameworks
- Certifications

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CYBER THREATS

- C-I-A triad
- Distinguish threat, vulnerability and risk
- Social engineering: Phishing, Pretexting, BEC
- Ransomware
- DoS, DDoS
- Fake threat
- Supply chain threat

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CYBER SECURITY TECHNOLOGIES

- Identity and Access Management
- Endpoint Protection
- Operating System Security
- Network Protection
- Data Protection

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SECURITY AWARENESS, TRAINING, EDUCATION AND CULTURE

- Design factors
- Effects on employee's behaviors
- Research findings: willingness, trust, confidence, feedback, customization
- Security culture

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RISK MANAGEMENT

- Risk Assessment
- Identification
- Weighted table analysis for ranking information assets
- Threats-Vulnerabilities-Assets worksheet
- Analysis
- Risk Rating Worksheet
- Evaluation
- Risk Treatment
- Defense, Transference, Mitigation, Acceptance and Termination
- Cost-Benefit Analysis (CBA): SLE, ALE, ACS, …
- Other Feasibility

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AUSTRALIAN LAWS RELEVANT TO CYBER SECURITY

- Privacy Act
  - Rights and Responsibilities
  - Australian Privacy Principles
  - Notifiable Data Breaches (NDB) scheme
- Online Safety Act 2021
- Regulations on telemarking and e-marketing
  - Do Not Call Register
  - Spam Act Compliance
- Rules and Industry Code to Combat Scam Calls and SMS

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CONTINGENCY PLANNING

- Incident Response
- Incident Response Life Cycle
- Preparation: elements, team, communication, information sharing
- Detection & Analysis: information source, escalation, impact levels,
- Containment, Eradication, and Recovery: Containment Strategies, NIST Criteria
- Post-Incident Activity: Four key activities, Key metrics
- Disaster Recovery
- Key Metrics
- Backup strategies
- DR sites
- Testing
- Business Continuity
- Redundancy

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GOVERNANCE, POLICIES AND OUTSOURCING

- Security Governance
  - Objectives
  - Indicators of effective governance
  - ISO27014
  - Control framework
- Security Policies
  - Distinguish policies, guidelines and standards,
  - Key elements and structure
  - How to establish a policy
- Outsourcing
  - Benefits and risks
  - 5 Steps to outsource

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GENERAL ADVICE

- Start with the easy questions first
- Align with relevant messages in the case description
- Identify ‘key words’ e.g.: explain, list, compare, etc
- DO NOT leave questions unanswered.

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FINAL WORD

Good luck everyone with the exam and for your future careers!

And please keep in touch via Linkedin or email

From the MIS761 2024 T2 Teaching Team