| DEREE COLLEGE SYLLABUS FOR: CS 4350 INFORMATION SYSTEMS SECURITY AND CONTROL | |
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| (Spring 2018) | **UK LEVEL: 6**<br>**UK CREDITS: 15**<br>**US CREDITS: 3/0/3** |

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| **PREREQUISITES:** | CS 1070 Introduction to Information Systems<br>CS 2179 Business Information Systems<br>CS 3245 Data Management and IT for Business |
| **CATALOG DESCRIPTION:** | An overview of information systems security, audit and control function. Threats, attacks and security technology measures. Legal, ethical and professional issues. Planning for security. |
| **RATIONALE:** | In this course students are introduced into information systems security principles and standards as well as in control objectives for information technology. It also covers concepts, methods, and best practices in securing information systems. Moreover, this course equips students with sufficient knowledge to view information systems as organizational assets to be valued and protected. |
| **LEARNING OUTCOMES:** | As a result of taking this course the student, should be able to:<br><br>1. Examine the multiple layers of IS security in organizations.<br>2. Analyze the risk management approach to information assets' security with respect to operational and organizational goals.<br>3. Evaluate physical and logical security controls, and the automated approaches in IS security. |
| **METHOD OF TEACHING AND LEARNING:** | In congruence with the learning and teaching strategy of the College, the following tools/activities are used:<br><br>• Lectures, class discussions of recent information systems' security best practices<br>• Office hours held by the instructor to provide further assistance to students.<br>• Use of the Blackboard Learning platform to further support communication, by posting lecture notes, assignment instruction, timely announcements, and online submission of assignments. |
| **ASSESSMENT:** | **Summative**: |

| Midterm Examination (1-hour, comprehensive): answers to essay questions | **50** |
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| Research Paper: literature review, data collection, methodology, interpretation | **50** |

**Formative:**

| On-Line "diagnostic" test: short answers to essay questions | **0** |
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The formative assessments aim to prepare students for the summative assessments.

The midterm examination tests Learning Outcome 1, 2.
The project tests Learning Outcomes 2, 3, with emphasis placed on 3.

(Guidelines and assessment rubrics are distributed on the first day of classes along with the course outline.)

| **READING LIST:** | "Principles of Information Security", by Michael E. Whitman and Herbert J. Mattord, Thomson Course Technology, 2003, ISBN: 0619063181 |
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| **RECOMMENDED MATERIAL:** | • Handbook of Information Security Management, by Micki Krause and Harold F. Tipton, ISACA Publication, 1999.<br>• Handbook of IT Auditing, D.Warren, L.Edelson, X.Parker, Coopers & Lybrand LLP, Warren, Gorham & Lamont. Boston, 1995 with 1999 supplement.<br>• The information audit: an important management tool / Katherine Bertolucci. - Managing Information, June 1996, vol.3, no.6, p.34-35.<br>• The value and impact of information / edited by M. Feeney and M. Grieves. - London : Bowker Saur, 1994. - ISBN 1 85739 084 9.<br>• The value of information to the intelligent organisation. - Hatfield: University of Hertfordshire Press, 1994. - ISBN 0 900458 54 2.<br>• Porter, M. E. (1985). Competitive Advantage: Creating and Sustaining Superior Performance. New York, N.Y.: Collier Macmillan.<br>• Information Systems Security Trading Publication<br>• Journal of Information, Information Technology & Organizations<br>• International Journal of Information Security<br>• Journal of Computer Security<br>• Computer Security Update periodical. |
| **COMMUNICATION REQUIREMENTS:** | Use of Blackboard CMS.<br>Use of word processing and/or presentation graphics software for documentation of assignments |
| **SOFTWARE REQUIREMENTS:** | |
| **WWW RESOURCES:** | www.c3i.osd.mil/org/cio/i3/AWG_Digital_Library/index.htm<br>www.isaca.org<br>www.bsi.org<br>www.isaca.org/gir<br>www.isaca.org/cobit.htm |
| **INDICATIVE CONTENT:** | 1.  Information Systems Audit Standards and Practices and Information System Security and Control Practices<br>1.1 Standards and Guidelines for IS Auditing<br>1.2 The Control Objectives<br>1.3 Other Laws and Regulations<br>2.  Auditing Information Systems Organization and Management<br>2.1 Information Systems Strategies to achieve business management objectives<br>2.2 Policies and Procedures<br>2.3 Information Systems Management Practices<br>2.4 Organizational Structure<br>2.5 Audit and Evaluation Techniques<br>3.  Auditing the Information Systems Process<br>3.1 Information Systems Hardware Platform<br>3.2 Information Systems Software Platform<br>3.3 Information Systems Network and Telecommunication Infrastructure<br>3.4 Information System Operational Practices<br>4.  Information Systems Integrity, Confidentiality and Availability<br>4.1 Logical Access Controls<br>4.2 Physical Access Controls<br>4.3 Environmental Controls<br>4.4 Data validation, processing and balancing controls<br>4.5 Business Continuity Planning and testing<br>5.  Auditing Information Systems Software Development, Acquisition and Maintenance<br>5.1 System Integration Concepts<br>5.2 SDAM Methodologies<br>5.3 SDAM Practices<br>5.4 Information Systems Maintenance Practices |