INFS5905
INFORMATION SYSTEMS AUDITING
AND ASSURANCE

Course Outline
Semester 2, 2015

Part A: Course-Specific Information

Please consult Part B for key information on Business School policies (including those on plagiarism and special consideration), student responsibilities and student support services.
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PART A: COURSE-SPECIFIC INFORMATION

1 STAFF CONTACT DETAILS
Lecturer-in-charge: Mark Sercombe
Phone No: TBA
Email: lecturer@technologyrisk.com.au
Consultation: Mark will be available for consultations at the conclusion of each lecture.

If you need to contact the school urgently, ring 9385 5320 or email istm@unsw.edu.au.

Please note that the ‘messaging’ system in Moodle is not used in this course.

The course announcements page on the course website contains the various announcements made by the course coordinator from time to time. It is assumed that you check the announcement page at least twice a week. Important announcements may also be made in the weekly seminar.

You should note that it is School policy to only respond to e-mail messages that are clearly identifiable as having originated from legitimate accounts. Legitimate e-mail accounts are:

- UNSW student accounts;
- identifiable employer provided accounts; or
- identifiable ISP accounts (bigpond, optusnet, etc).

Messages from Hotmail, Yahoo, Google and other similar services will not be replied to. All students and staff are expected to use e-mail responsibly and respectfully.

2 COURSE DETAILS

2.1 Teaching Times and Locations
Lectures start in Week 1(to Week 13): The Time and Location are:
Monday 18:00 – 21:00, Colombo Theatre C (B16)

2.2 Units of Credit
The course is worth 6 units of credit.

This course is taught in parallel with INFS4805 IS Auditing and Assurance.

2.3 Summary of Course
This course explores the nature of IS auditing and how IS audits are undertaken. The course starts with an overview of the IS audit process and notion of controls, it then examines the key assurance tasks most relevant to the contemporary role of IS Auditors. The course then explores several IS Audit frameworks and methodologies and the role of IS auditors in the statutory audit. The course concludes with an examination of the ethics and professionalism in IS audit.

The course focuses primarily on the Internal Audit perspective and examines in detail each of the areas that IS auditors operating in the internal audit context will face. The course will make use of cases and exercises throughout the semester.
2.4 Course Aims and Relationship to Other Courses

This course addresses the specific issues of how we can attest to the efficacy of our information resources and provide assurance that the objectives and performance of these systems are being met. The other courses offered by the School address issues relating to the provision of information systems, provision of IS infrastructure and the management of these resources and processes. IS Audit applies to the entire IS effort. Ongoing changes to legislation, the greater reliance on information resources by organisations and individuals and, lastly, the increased access to technology has made auditing of this resource an imperative for all organisations.

2.5 Student Learning Outcomes

This course aims to review concepts, theory, methodologies and techniques discussed in the Information Systems Audit literature and current practice.

During the course, students will develop and enhance their skills, understanding and experience of IS Auditing in relation to:

1. Explaining the concepts and theories underlying IS Auditing.
2. Explaining contemporary IS Auditing practices, methods, tools and techniques.
3. Explaining how the IT Assurance Framework is applied to and organisations processes, information systems, and information technology and related processes.
4. Explaining the auditor's role in risk analysis, contingency planning and systems development and implementation.
5. Applying current IS audit methods, tools and techniques.
6. Explaining professional standards and bodies, industry standards and bodies and the regulatory frameworks relevant to IS Audit.
7. Discussing the ethical and professional responsibilities of IS auditors.

The Course Learning Outcomes are what you should be able to DO by the end of this course if you participate fully in learning activities and successfully complete the assessment items.

The Learning Outcomes in this course also help you to achieve some of the overall Program Learning Goals and Outcomes for all postgraduate coursework students in the Business School. Program Learning Goals are what we want you to BE or HAVE by the time you successfully complete your degree (e.g. 'be an effective team player').

You demonstrate this by achieving specific Program Learning Outcomes – what you are able to DO by the end of your degree (e.g. 'participate collaboratively and responsibly in teams').

For more information on the Postgraduate Coursework Program Learning Goals and Outcomes, see Part B of the course outline.

<table>
<thead>
<tr>
<th>Business Postgraduate Coursework Program Learning Goals and Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge: Our graduates will have current disciplinary or interdisciplinary knowledge applicable in local and global contexts.</td>
</tr>
<tr>
<td>You should be able to identify and apply current knowledge of disciplinary or interdisciplinary theory and professional practice to business in local and global environments.</td>
</tr>
<tr>
<td>2. Critical thinking and problem solving: Our graduates will have critical thinking and problem solving skills applicable to business and management practice or issues.</td>
</tr>
</tbody>
</table>
You should be able to identify, research and analyse complex issues and problems in business and/or management, and propose appropriate and well-justified solutions.

3. Communication: Our graduates will be effective communicators in professional contexts. You should be able to:
   a. Produce written documents that communicate complex disciplinary ideas and information effectively for the intended audience and purpose, and
   b. Produce oral presentations that communicate complex disciplinary ideas and information effectively for the intended audience and purpose.

4. Teamwork: Our graduates will be effective team participants. You should be able to participate collaboratively and responsibly in teams, and reflect on your own teamwork, and on the team's processes and ability to achieve outcomes.

5. Ethical, social and environmental responsibility: Our graduates will have a sound awareness of ethical, social, cultural and environmental implications of business issues and practice. You should be able to:
   a. Identify and assess ethical, environmental and/or sustainability considerations in business decision-making and practice, and
   b. Consider social and cultural implications of business and/or management practice.

The following table shows how your Course Learning Outcomes relate to the overall Program Learning Goals and Outcomes, and indicates where these are assessed (they may also be developed in tutorials and other activities):

<table>
<thead>
<tr>
<th>Program Learning Goals and Outcomes</th>
<th>Course Learning Outcomes</th>
<th>Course Assessment Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>This course helps you to achieve the following learning goals for all Business postgraduate coursework students:</td>
<td>On successful completion of the course, you should be able to:</td>
<td>This learning outcome will be assessed in the following items:</td>
</tr>
<tr>
<td>1 Knowledge</td>
<td>Explain how IS/IT can assist organisations to meet strategic goals and increase innovation and agility.</td>
<td>• Assignments, Exam</td>
</tr>
<tr>
<td></td>
<td>Explain the IS/IT strategy development process.</td>
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<td></td>
<td>Explain what is involved in managing IS/IT at the strategic level, the role of senior IS/IT management in this regard and the management of the IT infrastructure, applications portfolio and the strategic alignment of IS/IT within the organisation.</td>
<td></td>
</tr>
<tr>
<td>2 Critical thinking and problem solving</td>
<td>Deploy a number of models and techniques to analyse the current state and strategic contribution of IS/IT in an organisation and identify further opportunities to improve IS/IT’s strategic contribution to innovation and agility.</td>
<td>• Assignments, Exam</td>
</tr>
<tr>
<td></td>
<td>Analyse an organisation’s current situation and develop a high level IS/IT strategy for that organisation.</td>
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</tbody>
</table>
Analyse an organisation’s current situation and develop plans to manage the IT infrastructure, the applications portfolio and the strategic alignment of IS/IT within the organisation.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>3a</td>
<td>Written communication</td>
</tr>
<tr>
<td>3b</td>
<td>Oral communication</td>
</tr>
<tr>
<td>4</td>
<td>Teamwork</td>
</tr>
<tr>
<td>5a</td>
<td>Ethical, social and environmental responsibility</td>
</tr>
<tr>
<td>5b</td>
<td>Social and cultural awareness</td>
</tr>
</tbody>
</table>

3a Written communication
Construct written work which is logically and professionally presented.

- Assignments, Exam

3b Oral communication
Communicate ideas in a succinct and clear manner

- As part of participation mark

4 Teamwork
Work collaboratively to complete a task.

- As part of participation mark

5a Ethical, social and environmental responsibility
Discuss the key concerns at a strategic level that IS/IT management must be aware of now and in the future.

- Assignments, Exam

5b Social and cultural awareness
Not specifically addressed in this course.

### 3 LEARNING AND TEACHING ACTIVITIES

#### 3.1 Approach to Learning and Teaching in the Course

In INFS5905 we take an active, adult-learning approach that stresses interactive and problem-centred teaching and learning. Our aim is to create a cooperative learning and teaching environment in which we all are valuable and competent contributors to knowledge creation and sharing. Your prior knowledge and your work experience are highly important and we should all benefit from it. In addition all reading materials – the textbook and articles – are an integral part of the knowledge development process, helping you grasp new knowledge and linking it to your prior knowledge and experience. We foster this approach through a range of strategies throughout the session. Our seminars will be interactive and you will be expected to actively contribute to the class via your involvement in presentations and discussions. Your contribution to class activities and discussions will reflect your readings and your ability to acquire new concepts and models and connect them to your experience and problems investigated. Our seminars are also designed to improve your communication, problems solving, teamwork and critical thinking skills.

This course is developed and delivered within the context of the following learning and teaching philosophy.

In addition to students learning the fundamental content of the course, the content is designed to foster critical thinking and to facilitate the acquisition of life-long learning skills. The course and its delivery are designed with a view to assisting the development of problem solving skills.

The assessment tasks used in this course have been designed for you to apply your knowledge to real life problems in managing strategic deployment of IS/IT. Our design of assessment tasks reinforces the development of knowledge and skills and their integration with your prior knowledge and experience.
The role of the lecturer in this course is to facilitate knowledge co-creation processes by leading and stimulating the class discussions and activities and will assist you with problems you may encounter through the seminars and consultations.

It is however your responsibility to make a concerted effort in your studies. Being prepared, keeping up to date with readings and tasks are very important for your comprehension, advancement of knowledge and development of new skills. Each week builds on the prior weeks so it is important that you get your study regime organised early. By keeping up you are also properly prepared to participate in the seminar and make most of it.

3.2 Learning Activities and Teaching Strategies
Each week is devoted to a particular topic which is studied by drawing from chapters from the textbook, a set of essential readings and tasks to be completed.

The readings and questions, along with the learning outcomes (deliverables) and other information will be provided weekly in advance. Each seminar is three hours long and for each topic in weeks 2-13 will include activities such as exercises, group discussions and presentations and class discussion.

The seminars will be highly interactive hence preparation is essential for your competent participation. Preparation includes completion of the essential readings and the prescribed activities for the topic each week. Details of the preparation required for each seminar are set out in the weekly plan and will be discussed in advance.

Each topic may also include some optional readings for those who might want to explore various aspects of the topic in more detail. Students are also encouraged to bring new and interesting readings, from academic, professional literature or current affairs to the attention of the class and include those in their discussions and presentations.

The course has ten topics which are addressed, in turn, over the twelve weeks of the course. Each topic involves a set of required readings and exercises which you will work through. These readings and questions, along with other relevant information are set out on the course website. The examination and assessments will assume you are familiar with these essential readings.

4 ASSESSMENT

4.1 Formal Requirements
To receive a pass grade in this course, you must meet ALL of the following criteria:
- Attain an overall mark of at least 50%.
- Attend at least 80% of all scheduled classes.
- Attain a satisfactory performance in each component of the course. A mark of 45% or higher is normally regarded as satisfactory.
- Attain a mark of at least 45% in the final exam.

In the case of peer assessed group work, the mark assigned to each member of the group may be scaled based on peer assessment of each member’s contribution to the task.
The School reserves the right to scale final marks to a mean of 60%.

It should be noted that group members are expected to work in a harmonious and professional fashion which includes adequate management of non-performing members.

4.2 Assessment Details

Formal assessment in this course is based on an individual minor assignment, a major group assignment and a formal closed book examination.

Details of the assignments will be posted on the course website. The breakdown of marks allocated to each of the assessment tasks is as follows:

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Weighting</th>
<th>Length</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Assignment 1 (Individual)</td>
<td>20%</td>
<td>2500 words</td>
<td>Week 6</td>
</tr>
<tr>
<td>*Assignment 2 (Group)</td>
<td>25%</td>
<td>6000 words</td>
<td>Week 12</td>
</tr>
<tr>
<td>Class Participation</td>
<td>5%</td>
<td></td>
<td>Ongoing, during Semester</td>
</tr>
<tr>
<td>Final Exam</td>
<td>50%</td>
<td>2 hours</td>
<td>University Exam Period</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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</tr>
</tbody>
</table>

*Signed Cover Sheets for all Assignments –

“Submission of assignments must be accompanied by a signed cover page. Digital signatures are not allowed. Missing cover page or cover page without authentic signatures may result in a penalty of 5% of the maximum marks available for assignments.”

Participation

Your participation in the seminars is encouraged and will be assessed over the length of the course. The mark you receive will reflect the extent to which you have contributed to class discussions and exercises. Participation addresses all the learning outcomes of the course and the programme.

Assignment 1

Assignment 1 is worth 20% of your overall marks and is to be undertaken individually and is due in the Week 6 seminar.

The Assignment 1 involves the preparation of a report of no more than 2,500 words which investigates a key aspect of IS Auditing. The Individual Assignment will involve research of the academic and professional literature as well as the discussion of real or illustrative examples.

Marks will be awarded in the Individual Assignment for the quality of the report as evidenced by the references cited, the quality of the arguments made and conclusions drawn. The detailed breakdown of the marking criteria is set out on the Assignment 1 specification.
The requirements for the Individual Assignment will be available online in Week 1 and will be discussed in the Week 2 lecture.

Assignment 1 addresses course learning outcomes 1, 2 & 3 and Programme Learning Outcomes 1, 2 & 3a.

Assignment 2
Assignment 2 is worth 25% of your overall marks and is to be undertaken groups (of 2 or 3, membership of your choosing) and is due in the Week 12 Seminar. Assignment will also incorporate a presentation of findings of your investigation to the class in Week 12 Seminar.

Assignment 2 will involve the preparation of a report of no more than 5,000 words which investigates a key aspect of IS Auditing and will involve research of the academic and professional literature as well as the discussion of real or illustrative examples.

Assignment 2 will also involve a short exercise where you will be required to reflect on the operation of your group in completing the assignment.

A voluntary confidential peer assessment will be available for this assignment.

Marks will be awarded in Assignment 2 for the quality of the report as evidenced by the references cited, the quality of the arguments made and conclusions drawn. The detailed breakdown of the marking criteria is set out on the Assignment 2 specification.

The requirements for Assignment 2 will be available online in Week 6 and will be discussed in the Week 7 seminar. The groups for Assignment 2 will be finalised in the Week 7 seminar.

Assignment 2 addresses course learning outcomes 4, 5, 6 & 7 and Programme Learning Outcomes 1, 2, 3a & 5a.

Final Exam
The final exam will be a 2 hour written paper held in the formal examination period. The examination is worth 50% of your overall assessment. The examination will be closed book. The format and coverage of the exam will be discussed in the Week 11 seminar.

All exams are conducted in accordance with the UNSW Rules for the Conduct of Examinations and it is the student’s responsibility to be familiar with these rules. Information about exams is available from my.unsw.edu.au.

The exam will cover the entire course and will address learning outcomes 1 through 7 and Programme Learning Outcomes 1, 2, & 5a.

4.3 Assignment Submission Procedure
It is your responsibility to adhere to the procedures for submission of assignments otherwise a penalty may apply. Assignments are to be submitted by the due date to the ‘Turnitin’ facility in Moodle. You are also required to provide a hardcopy of your assignment in the seminar.
Please note you will only be able to upload an assignment to be lodged in class or using online facilities during the week (day and time) that they are due as indicated in the course schedule. Also note that this course only allows once only upload to Turnitin.

Details regarding the format and style of the assignments are set out in each assignment specification.

4.4 Late Submission

It is your responsibility to adhere to the procedures for submission of assignments otherwise a penalty may apply. Assignments shall be lodged in class or using online facilities during the week (day and time) that they are due as indicated in the course schedule. The late submission penalty is typically in the order of 10% of the available marks per day of lateness.

Quality Assurance

The Business School is actively monitoring student learning and quality of the student experience in all its programs. A random selection of completed assessment tasks may be used for quality assurance, such as to determine the extent to which program learning goals are being achieved. The information is required for accreditation purposes, and aggregated findings will be used to inform changes aimed at improving the quality of Business School programs. All material used for such processes will be treated as confidential.

5 COURSE RESOURCES

The course website is hosted on Moodle (access via my.unsw.edu.au). You will have access to the course website once you have enrolled in the course. The course website contains the study guides, seminar slides, assignment details, announcements and other information about the course.

Textbook

The textbook for this course is:


You will require unimpeded access to both of these textbooks throughout the course. You will need to bring the text to the seminars.

Recommended Reading

The following texts will provide further information on the various aspects of the course:

- *Please refer to Moodle for any additional readings posted by the Lecturer on each topic during the Semester.*
Other Readings
Most weeks will involve one or more articles from academic journals, professional journals and other sources. Some of these readings are considered essential and form a key component of the course. Other readings are considered optional and are made available for those who wish to read a little further on the topic at hand.

Both the essential and optional readings are listed on the topic pages on the course website. Each reading is available electronically and can be accessed and downloaded from the relevant journal on the 'electronic journals' function the UNSW library Sirius system. (http://sirius.library.unsw.edu.au/).

The readings from the text and essential readings are considered examinable.

6 COURSE EVALUATION AND DEVELOPMENT
Each session feedback is sought from students and other stakeholders about the courses offered in the School and continual improvements are made based on this feedback. UNSW’s Course and Teaching Evaluation and Improvement (CATEI) Process (http://www.unsw.edu.au/learning/pve/catei.html) is one of the ways in which student evaluative feedback is gathered. The School also solicits feedback from students during the session. Significant changes to courses and programs within the School are communicated to subsequent cohorts of students.

7 COURSE SCHEDULE

Lecture Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Seminar Topic</th>
<th>Required Reading</th>
<th>Other Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1 27 July</td>
<td>Build and maintain an internal IT audit function with maximum effectiveness and value and understanding the Audit Methodology.</td>
<td>Davis, Schiller &amp; Wheeler Chapter 1 and 2</td>
<td>Assignment 1 Released</td>
</tr>
<tr>
<td>Week 2 3 August</td>
<td>Understanding controls and Audit Programs. High level understanding of standards and frameworks, such as COBIT, ISO, ITIL and ITAF (IT Assurance Framework)</td>
<td>Davis, Schiller &amp; Wheeler Chapter 16 and 17, ISACA ITAF Framework on Moodle, and COBIT and SOX also on Moodle</td>
<td>Assignment 1 Discussed in Class</td>
</tr>
<tr>
<td>Week 3 10 August</td>
<td>How to develop Audit Programs and apply frameworks and standards to meet regulatory requirements including Sarbanes-Oxley and PCI. Implement proven risk management practices during IT Audits, understanding risks and types of risks in an IT environment.</td>
<td>Davis, Schiller &amp; Wheeler Chapter 16, 17 &amp; 18</td>
<td></td>
</tr>
<tr>
<td>Week 4 17 August</td>
<td>Apply IT Assurance Framework (ITAF) over Audit entity-level controls, data centres, and disaster recovery, physical, environmental and logical controls.</td>
<td>Davis, Schiller &amp; Wheeler Chapter 3 and 4</td>
<td></td>
</tr>
<tr>
<td>Week 5 24 August</td>
<td>Apply ITAF over Audit Web servers and applications, (plus user access controls, passwords, encryption) and UAT, as well as analyse databases and storage solutions. Drill down into applications to find potential</td>
<td>Davis, Schiller &amp; Wheeler Chapter 8, 9 &amp; 10</td>
<td></td>
</tr>
<tr>
<td>Week 6</td>
<td>31 August</td>
<td>Apply ITAF over Revenue and Expenditure controls and audit process, ERP’s and integration of financial and IT audits over business and systems.</td>
<td>Hall Chapter 9, 10 &amp; 11</td>
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<tr>
<td>Week 7</td>
<td>7 September</td>
<td>SDLC Audits and IT Project Governance Audit reviews/IT Project Management (Project Phases, Work Packages, Stage Gates, etc)</td>
<td>Davis, Schiller &amp; Wheeler Chapter 15</td>
</tr>
<tr>
<td>Week 8</td>
<td>14 September</td>
<td>Examine switches, routers, and firewalls (and rulesets), evaluate Windows, UNIX, and Linux operating systems, internet gateways, online banking audit reviews, Network Security/Perimeter Security.</td>
<td>Davis, Schiller &amp; Wheeler Chapter 5, 6, 7 &amp; 11</td>
</tr>
<tr>
<td>Week 9</td>
<td>21 September</td>
<td>Assess WLAN and mobile devices (mobile computing), Audit virtualized environments</td>
<td>Davis, Schiller &amp; Wheeler Chapter 11 and 12</td>
</tr>
</tbody>
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Mid-semester break: Saturday 26 September – Monday 5 October inclusive

<table>
<thead>
<tr>
<th>Week 10</th>
<th>5 October</th>
<th>(Monday 5 Oct is a public holiday  Note: No seminar as Monday this week is the Labour Day public holiday.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 11</td>
<td>12 October</td>
<td>Evaluate risks associated with cloud computing and outsourced operations</td>
</tr>
<tr>
<td>Week 12</td>
<td>19 October</td>
<td>Understanding Computer Forensics and ID Fraud</td>
</tr>
<tr>
<td>Week 13</td>
<td>26 October</td>
<td>Why is ethics so important during an Audit review? Why is clear communication between the Auditor and the Client important? Techniques to value-add during an Audit. Course in Review in preparation for final exam.</td>
</tr>
</tbody>
</table>