INFS4805
IS AUDITING AND ASSURANCE

INFS5905
INFORMATION SYSTEMS AUDITING

Course Outline*
Semester 2, 2012

Part A: Course-Specific Information

Please consult **Part B for key information on ASB policies (including those on plagiarism and special consideration), student responsibilities and student support services.

*This is a draft course outline. An updated version will be available via Blackboard in O week.
**Part B will be available via Blackboard.
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PART A: COURSE-SPECIFIC INFORMATION

1 STAFF CONTACT DETAILS
Course Coordinator: Ken Stevens (k.stevens@unsw.edu.au, ph: 93854242)
Lecturer: Sharon Lockman (slockman@westpac.com.au, ph: 0411 835 191)

The best way to contact Ken or Sharon is via e-mail or at consultation time. If you need to contact the course staff urgently but are unable to contact them directly then you should leave a message at the School office either in person (Quad 2091E) or by telephone (02 9385 5320).

Please note that the ‘messaging’ system in Blackboard 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
Seminar: Monday 18:00 – 21:00 ASB119

2.2 Units of Credit
INFS4805 and INFS 5905 are 6 units of credit.

2.3 Summary of Course
This course seeks to answer the questions; what is Information Systems Audit?; why audit information systems?; and, how is an information systems audit performed?

Topics include analysis and review of internal controls in contemporary ICT installations and applications, use of basic and advanced information systems audit techniques and methodologies, the role of internal information systems audit, IS security, ‘best practices’, and audit methodologies.

The course will use concurrent auditing techniques for a ‘real life’ case study and may use industry standard audit software to set integrated test facilities. In addition, legal
and professional requirements, computer abuse / fraud auditing, and computer forensics are discussed. The course concludes with a review of future IS audit techniques, methodologies and social implications.

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. Recent changes to legislation, the greater reliance on information resources by organisations and 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. The course aims to answer three basic questions:

- What is IS Audit?
- Why is IS Audit necessary?
- How is IS Audit conducted?

During the course, students will develop and enhance their skills, understanding and experience of IS Auditing.

After studying this course you will be able to:

1. Explain and apply the concepts and theory underlying IS Auditing;
2. Evaluate internal control in an IS environment - emphasising the auditor's role in risk analysis, contingency planning and systems development, etc;
3. Explain contemporary IS Auditing practice, considering techniques and methods for auditing computerised information systems;
4. Describe and differentiate between contemporary IS auditing techniques;
5. Apply the Information Systems Auditing Methodology;
6. Appraise the audit significance and implications of:
   a. Auditing in a Mobile Computing environment
   b. Auditing in a Cloud Computing environment
   c. Auditing as a part of project SDLC
   d. Auditing web servers and applications
   e. Auditing switches, routers and firewalls, including UNIX and Windows operating systems
   f. Auditing DRP/BCM and Data Centers
   g. e-Forensics and ID Fraud,
7. Assess the current status of professional and legal requirements; and,
8. Discuss current research issues in IS auditing by use of the web to review current research efforts in IS auditing.

ASB Graduate Attributes
This course contributes to your development of the following Australian School of Business Graduate Attributes, which are the qualities, skills and understandings we want you to have by the completion of your degree:

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>ASB Graduate Attributes</th>
<th>ASB GA No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2, 5</td>
<td>Critical thinking and problem solving</td>
<td>1</td>
</tr>
<tr>
<td>2, 5</td>
<td>Communication</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Teamwork and leadership</td>
<td>3</td>
</tr>
<tr>
<td>6, 7</td>
<td>Social, ethical and global perspectives</td>
<td>4</td>
</tr>
<tr>
<td>1 – 8</td>
<td>In-depth engagement with relevant disciplinary knowledge</td>
<td>5</td>
</tr>
<tr>
<td>1 – 8</td>
<td>Professional skills</td>
<td>6</td>
</tr>
</tbody>
</table>

To see how the ASB Graduate Attributes relate to the UNSW Graduate Attributes, refer to the ASB website (Learning and Teaching > Graduate Attributes).

### 3 LEARNING AND TEACHING ACTIVITIES

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

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 role of the convenor of a course is to facilitate learning. It is recognised that students are individuals who bring a diverse range of experiences, interests and abilities and that these aspects of the student will influence their own learning. The responsibility for learning lies with the student. The role of the convenor then, is to provide the environment within which students can participate and contribute, interact and experiment while adding to their own skills and knowledge. An important element of such an environment is that students are encouraged to engage in cooperative learning in an enjoyable setting.

Within the context of this philosophy students will be encouraged to participate, reflect on the material and to engage in meaningful debate with respect to the topics covered. It is essential that students prepare prior to lectures so that they are in a position to contribute to the class discussions. One of the interesting aspects of information and communication technology studies is that *there is rarely, if ever, one irrefutable, correct answer to a problem* – often the answer is ‘dependent’ on the context.

Students are encouraged to investigate and explore the contexts within which certain courses of action are preferable to others and to consider the situation where the best technical solution may not necessarily be the best solution given the constraints of the case at hand.

Accordingly, assessment is weighted toward informed, reasoned and well argued personal opinion based on the contextual factors and constraints in the various scenarios presented and are not based on the acquisition of knowledge alone.
3.2 Learning Activities and Teaching Strategies
The course has twelve 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.

Each of the topics is addressed in the weekly seminars. Each seminar is 2 hours long and will involve a wide variety of activities including presentations by the course co-ordinator, individual and group exercises and class discussions, all centred on the topic at hand. The seminars will be highly interactive and require that you have completed the readings and preparation as set out on the course website.

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 percent 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>Learning Outcomes assessed</th>
<th>ASB Graduate Attributes assessed</th>
<th>Length</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Assignment</td>
<td>20%</td>
<td>1, 2, 3</td>
<td>1, 5, 6</td>
<td>2000 words</td>
<td>Week 7</td>
</tr>
<tr>
<td>Group Assignment</td>
<td>20%</td>
<td>3, 5, 6</td>
<td>1, 4 – 6</td>
<td></td>
<td>Week 11</td>
</tr>
</tbody>
</table>
The dates for submission of the assignments is provided in the Seminar Schedule presented at the end of this course outline. A marking schedule / criteria will be published on the course website for the individual assignment and the major group assignment.

4.2.1 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.

4.2.2 Individual Assignment
The Individual Assignment is worth 20% of your overall marks and is to be undertaken individually and is due in the Week 7 Seminar.

The Individual Assignment involves the preparation of a report of no more than 2,000 which discusses 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 2 and will be discussed in the Week 2 lecture.

4.2.3 Group Assignment
The Group Assignment is worth 20% of your overall marks and is to be undertaken in groups and is due in the Week 11 Seminar.

The Group Assignment involves the preparation of a report by your group of some aspect of IS Audit. The Group 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 Group 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 Group Assignment specification.

The requirements for the Group Assignment will be available online in Week 7 and will be discussed in the Week 7 lecture.
4.2.4 Final Exam
The final exam will be a 2 hour closed book exam held in the formal examination period. The examination is worth 50% of your overall assessment. The format and coverage of the exam will be discussed in the Week 10 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.

4.3 Assessment Format
The assessment for this course is designed to help you maximise your learning opportunities. The assessment items require you to apply all the main knowledge and skills areas presented in the course to problems representing as closely as possible the real world problems encountered by managers of the security effort in organisations. In particular, they provide you with an opportunity:

- to practice and improve your application of the concepts and theory underlying Information Systems Auditing;
- to practice and improve your application of the current methodologies used in Information Systems Auditing;
- to demonstrate your understanding of the techniques and methods for planning and conducting Information Systems Audits;
- to develop your oral and written skills in evaluating and conveying arguments and issues in a high-tech environment;
- to share ideas, knowledge and different perspectives during workshops and in the group assignment;
- to receive ongoing feedback on your learning;
- to simulate, as far as possible, real-world problem solving and practice in an environment in which you are free to experiment and learn; and
- to synthesise and integrate the core concepts and issues raised in the readings, lectures and workshops.

A summary of the assessment tasks is provided above. Detailed explanations of each of the assignment tasks can be found with the assignment specification on the course website.

4.4 Assignment Submission Procedure
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.

4.5 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.
5 COURSE RESOURCES

The course website is hosted on Blackboard (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:


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/](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
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<th>Week</th>
<th>Lecture Topic</th>
<th>References</th>
<th>Other Activities/ Assessment</th>
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<td>Week 1 16 July</td>
<td>What is IS/IT Audit?</td>
<td>Davis, Schiller &amp; Wheeler Chapter 1 and 2</td>
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<tr>
<td>Week 2 23 July</td>
<td>Understanding controls and Audit Programs. Introduction to standards and frameworks (COBIT, ISO, ITIL and ITAF).</td>
<td>Davis, Schiller &amp; Wheeler Chapter 16 and 17, ISACA ITAF Framework on Blackboard, and COBIT and SOX on Blackboard</td>
<td></td>
</tr>
<tr>
<td>Week 3 30 July</td>
<td>Developing Audit Programs and Applying frameworks and standards to meet regulatory requirements.</td>
<td>Davis, Schiller &amp; Wheeler Chapter 16, 17 &amp; 18</td>
<td></td>
</tr>
<tr>
<td>Week 4 6 August</td>
<td>Applying ITAF to 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 13 August</td>
<td>Applying ITAF to Audit Web servers and applications and UAT.</td>
<td>Davis, Schiller &amp; Wheeler Chapter 8, 9 &amp; 10</td>
<td></td>
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<tr>
<td>Week 6 20 August</td>
<td>Applying ITAF over Revenue and Expenditure controls and audit process, ERP's and integration of financial and IT audits over business and systems.</td>
<td>TBA</td>
<td></td>
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<tr>
<td>Week 7 27 August</td>
<td>Examining IT networks and security.</td>
<td>Davis, Schiller &amp; Wheeler Chapter 5, 6, 7 &amp; 11</td>
<td>Individual Assignment due</td>
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<td>Mid-Session Break: Week 3-9 September</td>
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<td>Week 8 10 Sept</td>
<td>Computer Forensics and ID Fraud.</td>
<td>TBA</td>
<td></td>
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<td>Week 9 17 Sept</td>
<td>Evaluating risks associated with cloud computing and outsourced operations.</td>
<td>Davis, Schiller &amp; Wheeler Chapter 14</td>
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<tr>
<td>Week 10 24 Sept</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>
<td></td>
</tr>
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<td>Week 11 1 October</td>
<td>Assess WLAN and mobile devices (mobile computing), Audit virtualized environments.</td>
<td>Davis, Schiller &amp; Wheeler Chapter 11 and 12</td>
<td>Group Assignment due</td>
</tr>
<tr>
<td>Week 12 8 October</td>
<td>Examining ethics and IT Audit.</td>
<td>TBA</td>
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<tr>
<td>Week 13 15 October</td>
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