ACCTG 675
Seminar in AIS Audit and Control
Fall 2016 | Thursdays 4:00 – 6:40 PM

Instructor Contact Information
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Office Hours:
Wednesday and Thursday 2:30 – 3:30 PM or by appointment

Prerequisites
ACCTG 673 or MIS 687 with a B or better. May be taken concurrently with ACCTG 673.

Course Description (from the university catalog)
Risk assessment and management in accounting systems, including impact on clients’ business and audit functions, external and internal auditor issues, internal controls in computerized environments, issues related to Sarbanes-Oxley Act, and application of computer-assisted audit techniques (CAATs) using current audit software.

Course Objectives
In recent years, information technology (IT) has made striking advances and is a primary driver in the reengineering of Corporate America. The rapid advance of technology and information systems (IS) has had a profound effect on the accounting profession.

“Big Data and other information-driven insights have the potential to transform decision-making by businesses, but the right infrastructure and safeguards must be in place to pay off on that promise. Accounting professionals are helping to capitalize on these new opportunities for their clients and employers, but are also becoming more cognizant of the challenges involved with emerging technologies, a joint survey by the American Institute of CPAs and Chartered Professional Accountants of Canada (CPA Canada) found.”
[http://www.aicpa.org/Press/PressReleases/2013/Pages/North-American-Accounting-Professionals-See-Data-Oversight-as-Top-Tech-Priority.aspx]

With the increased capabilities of IT/IS, new risks related to IT/IS have become the major concern for firms and for their auditors. CPA firms are finding that they can no longer audit ‘around the computer.’ This requires CPAs to understand the types of risk arising in IT-based systems and consider their impact on a client’s business and the audit. This course introduces these types of risk, the implications these risks have for the traditional audit and the other
services accountants provide to address IT-based risks. IT is also a powerful tool that accountants and auditors must know how to harness.

This will be a seminar course. Each meeting will focus on a specific topic. Key concepts will be introduced and integrated into compliance frameworks for internal controls and IT governance. You will be able to identify the key threats arising in IT-based systems, and discuss solutions to these threats. You will apply these concepts by developing recommendations for cases based on real-world organizations. In addition, you will use a CAAT (computer-aided audit tool) to pull data from databases as you might in a real life audit.

**MSA Program Goals**

**Goal 1: Communication Skills**

*DLO 1 Students will compare, contrast, interpret, or criticize accounting and business decisions and information using professional business communication.*

**Goal 2: Group/Interpersonal Skills**

*DLO 2 Students will actively participate in team decision making displaying interpersonal skills, motivation, appropriate attitude, and meaningful contributions.*

**Goal 3: Ethics**

*DLO 3 Students will apply ethical judgment and professional standards in analyzing situations and formulating accounting and business decisions.*

**Goal 4: Research**

*DLO 4 Students will use relevant research tools and academic/professional literature to analyze or take a position in accounting and business situations.*

**Goal 5: Problem Solving/Critical Thinking/Technical Competence**

*DLO 5 Students will address unstructured problems in the areas of accounting information systems, financial reporting, or taxation.*

**Goal 6: Global/International**

*DLO 6 Students will identify and discuss the significance of diversity and cultural differences in the global business environment.*

ACCTG 675 contributes to these goals through its course learning outcomes noted below.

**Course Learning Outcomes**

1. Identify the major threats/risks associated with the implementation and operation of IT-based accounting information systems. [DLO 5]
2. Evaluate alternative compliance frameworks for controlling IT-based accounting systems. [DLO 5]
3. Recommend control processes that would mitigate IT-related risks. [DLO 5]
4. Apply computer-assisted audit techniques to improve the effectiveness and efficiency of audit processes. [DLO 5]
5. Present professional oral reports on AIS audit and control related topics. [DLO 1] [DLO 5]
6. Prepare professional written reports on AIS audit and control related topics. [DLO 1] [DLO 5]
7. Apply individual knowledge and skills to team decision making. [DLO 2]
**Textbooks and Other Required Resources**

1. ISACA Student Books (to be posted in BlackBoard in “Course Documents”):
   a) *IT Audit & Assurance Based on COBIT5 Student Book*
   b) *Student Book Using COBIT5 for InfoSec*
   c) *Basic Foundational Concepts Student Book*
   d) *Risk Management Student Book*
   e) *IT Governance Using COBIT and ValIT*

2. *COBIT 5.0*, ISACA website free download at [http://www.isaca.org/COBIT/Pages/Product-Family.aspx](http://www.isaca.org/COBIT/Pages/Product-Family.aspx) (See the References section, “Course Documents”, on our BlackBoard site)

3. Various other articles and links to be posted in BlackBoard.

Some of the topics we will be discussing may not be covered in our textbook(s). Articles and web links will be posted throughout the semester. In addition, you are encouraged to do your own research and discover your own resources for information regarding course content and pertinent topics.

**Add/Drop Policy**

You are not allowed to add this course if you have missed the first class period. Also, any student who does not attend class during the first week of classes may be dropped from the course.

**Use of Technology**

Computer work is required throughout this course. **You may need to bring your laptop to some class sessions.** A PC-based computer is preferable to those with Apple/Mac operating systems as some of the software that we will be using either works better on a PC or will not work on an Apple machine at all.

**Assignments**

Most of the assignments in this class will require effort and time and, therefore, should not be postponed until the last minute. To do the assignment well, you will have to read through reference materials and apply the concepts. You may even need to do additional research outside of the given references. Some assignments may entail software that you most likely have not encountered before and you should expect a bit of a learning curve. Expect these assignments to challenge you.

- Some assignments will be done in class as part of the discussion and exploration of topics. Some of these are mini-case studies.
- You will also complete in-depth case studies primarily outside of class time. The instructors will introduce the case studies in class prior to the due date. Case studies may be completed and turned in prior to the due dates.

To receive credit for an assignment you must complete the assignment in the proper format and submit the assignment **before** the deadline. **Failure to do so results in a zero on the assignment.**
Late assignments will NOT be accepted for grading.

You must complete all assignments in a professional manner. That is, the physical appearance is neat and orderly, the assignment is complete and your thoughts are organized in a logical sequence. All references and quotes must be cited. The same policy applies to presentations to the class. Visual aids should be organized, easily viewed, neat in appearance and cited. Spelling and grammar count. Unless otherwise indicated, handwritten documents are unacceptable. Follow assignment instructions carefully to maximize your grade.

**Presentation**

You will be placed in teams of three (3) to four (4) students to present and lead class discussion on an IT topic chosen from the list below. Your team will work together to give a 60 minute PowerPoint or Prezi presentation on your chosen topic. All team members should become ‘experts’ in the chosen topic (i.e., this should not merely be a ‘divide and conquer’ exercise). Presentations must consist of the following:

- Topic Overview (10 min)
- Key Area Deep Dives (20-25 min)
- Class Exercises (15-20 min)
- Q&A Class Discussion (10 min)

Handouts are required for these presentations to aid in class exercises and/or guide general discussion. The presentations have already been scheduled so you need to be ready to present your topic at the scheduled time (see the proposed schedule below). If you have a different topic that you would like to present, or if there is a time conflict, please contact the instructors as soon as possible (before the third week). Do NOT use the class reference materials as your only source of data. Go outside of the classroom for information on your topic. A detailed outline of your presentation will be due for review two (2) weeks prior to your group’s scheduled presentation date with your group’s final outline due with your final presentation materials.

- **Presentation 1:** IT Governance & Risk Management
- **Presentation 2:** IT Security & Access Management
- **Presentation 3:** Program Development & Change Management
- **Presentation 4:** Business Continuity Management & Disaster Recovery
- **Presentation 5:** Third-Party & SaaS Management (Cloud Computing)
- **Presentation 6:** Cybersecurity & Data Privacy
- **Presentation 7:** Big Data & Continuous Auditing
- **Presentation 8:** Digital & Mobile Risk

You will also be asked to evaluate the other groups’ presentations based on a rubric.

**ISACA**

ISACA is the professional organization for IT audit thought leadership and audit professionals. Membership is required and the reduced cost will be subsidized by the local San Diego chapter. In addition, you are strongly encouraged to attend one of the local monthly meetings. More details will be provided during class.
Class Meetings, Attendance, and Participation

Regular attendance is expected. If you do have to miss a class, you are responsible for finding out what occurred during the missed class meeting.

This course is intended to encourage collaborative learning, particularly during class sessions. The reading and class presentations should cover most of the topics required to meet course objectives. The case studies will enforce those concepts. We may have a guest speaker or two. Conscientious discussion is encouraged at all times.

Because this is an interactive course and we may need more or less than the originally scheduled time to discuss a topic, the class meeting schedule may change. Any changes to this schedule will be announced in BlackBoard and/or in class.

Grading Policies

Course grades will be determined by your percentage of the total points earned based on a standard grading scale. The following breakdown is approximate as activities may be added, modified, or deleted:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation (90 + 10 evals)</td>
<td>100</td>
<td>Refer to the “Presentation” section above</td>
</tr>
<tr>
<td>Thought Leadership (8 x 10)</td>
<td>80</td>
<td>1-2 page write-up summarizing and providing your thoughts on a recent (less than 1 year old) thought leadership article</td>
</tr>
<tr>
<td>Case Studies (3 x 50 points)</td>
<td>150</td>
<td>Three (3) COBIT/IDEA case studies and related questions/activities</td>
</tr>
<tr>
<td>In-class Caselets (3 x 20 points)</td>
<td>60</td>
<td>Three (3) in-class case studies and related questions</td>
</tr>
<tr>
<td>Professional Organization Event</td>
<td>10</td>
<td>Attend a professional organization event of your choosing (e.g., ISACA or IIA) and write-up a 1-2 page summary with your thoughts on the topic as well as the name/company/job title of 3-5 professionals you met</td>
</tr>
</tbody>
</table>

Total 400

Other Student Responsibilities

Your first responsibility is to read and understand this syllabus and the class schedule. If you have questions, ask them now.

It is your responsibility to come to class prepared. Read assigned material before attending class. This will increase your comprehension of the material and will allow you to contribute to the class in a meaningful way. You may also wish to do your own research into topics so that you can contribute to the class discussion.

You are also responsible for checking BlackBoard on a regular basis. Announcements, due dates, changes to the syllabus or schedule, additional activities and other communications will be posted on the site and failure to access it could mean that you miss out on important information.
and any associated remuneration. Report any grade discrepancies you find in the BlackBoard grade book within two weeks of posting. You should also retain any returned assignments for the duration of the semester to compare against the grade book.

You are expected to behave professionally at all times during class sessions:

- Regularly attend class,
- Arrive in class on time,
- Do not leave class until the class period is complete,
- Come prepared for class – this means that you have completed the required readings and assignments prior to class,
- Pay attention during class – this means that you will not talk to other students during class unless the conversation is about a class topic and then is not disruptive to the other students,
- Do not do other work or other tasks not related to the class during the class:
  - Do not use computers, tablets, cell phones or other devices for non-class work during class. For example, this means that you will not surf the Internet, play computer games, text message, or send emails during class,
- Respect your classmates by being a productive, non-disruptive, member of the class.

Unprofessional behavior may result in your dismissal from class and could adversely affect your grade.

Lastly, you need to be well organized and use your time wisely. So, do not expect faculty sympathy:

- If you should lose your work for any reason including a media failure
- If you are unable to print or post your assignment for any number of reasons
- If you are not able to complete an assignment because you put a higher priority on another part of your life
- If computer facilities are not available during some of the time you are working on an assignment.

These are normal occurrences in a business environment and should be taken into consideration when scheduling your work.

**Academic Integrity**

Students are expected to behave ethically in all aspects of this course. When in doubt, ask your instructors. Cheating of any kind is an unacceptable behavior and will not be tolerated. Some of the more common types of academic dishonesty relate to the following:

- Plagiarism - Do not use published and/or unpublished material without acknowledging the source.
- Cheating on assignments or projects – Do not collaborate with other students unless it is specifically stated by the instructor that working with others is allowed (e.g., a team project).
- Cheating on exams – Do not acquire from, or give information to, other students about exams. Do not use materials or resources during exams that are not expressly permitted by the instructors.
- For additional information on plagiarism and cheating, refer to [http://www.sa.sdsu.edu/srr/cheating-plagiarism.html](http://www.sa.sdsu.edu/srr/cheating-plagiarism.html).

With the exception of specifically designated group work, the assignments, and of course, the exams each need to represent your own independent, individual effort. Cite all sources of information. **In those cases where collaboration is allowed, list specifically those individuals with whom you may have collaborated.**

Any observed or reported instance of academic dishonesty, as defined in the San Diego State University Student Handbook, will be prosecuted to the fullest extent possible. During any stage of the semester, if you deviate from the standards of academic integrity you will at minimum receive a zero on the assignment and may receive a grade of F for the course. In addition, the instructors may report the event to the Department and the University. The University may decide to apply additional penalties.

Please refer to San Diego State University Academic Integrity Policy for Student Discipline - Rights and Responsibilities at [http://www.sa.sdsu.edu/srr/conduct1.html](http://www.sa.sdsu.edu/srr/conduct1.html).

**Students with Disabilities**

Upon identifying themselves to the instructors and the university, students with verified disabilities will receive reasonable accommodation for learning and evaluation. If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact Student Disability Services at (619) 594-6473. To avoid any delay in the receipt of your accommodations, you should contact Student Disability Services as soon as possible. Please note that accommodations are not retroactive, and that the instructors cannot provide accommodations based upon disability until an accommodation letter from Student Disability Services is sent to the instructors. For more information, go to the Disabilities Services website at [http://go.sdsu.edu/student_affairs/sds/Default.aspx](http://go.sdsu.edu/student_affairs/sds/Default.aspx) or call (619)594-6473.

**Proposed Course Schedule**

The course schedule that follows, gives you a week-by-week description of the course activities. It includes the planned topics, readings, assignments, and due dates.

*Note: it is impossible to predict the precise flow of the course and the activities and dates may have to be adjusted slightly from time to time. Modifications to the schedule and changes in course requirements will be announced in class and/or through BlackBoard.*
<table>
<thead>
<tr>
<th>Week</th>
<th>Class Date</th>
<th>Class Activity &amp; Discussion Topics</th>
<th>Assignment(s) Due</th>
</tr>
</thead>
</table>
| 1    | 1-Sep      | • Course Overview  
  o Class introductions  
  o Class objectives discussion  
  • Technology & Audit  
  • Career Opportunities  
  • Professional Certifications  
  • Flow Charting Basics |                                                                                  |
| 2    | 8-Sep      | • IT Governance  
  • IT Risk, IT Audit Standards, ISACA, COBIT, COSO, ITIL, etc.  
  • Input, processing & output controls review  
  • Flow Charting w/ REA & DFD | • Reading: a) IT Audit & Assurance Based on COBIT5 Student Book  
  • Reading: b) Student Book Using COBIT5 for InfoSec |
| 3    | 15-Sep     | • Group research and discussion on selected presentation topics  
  • Working Session: Caselet #1 | • Caselet #1  
  • High-level Draft Outline: ALL Presentations (due 9/19 by noon)  
  • Reading: c) Basic Foundational Concepts Student Book |
| 4    | 22-Sep     | • Risk Management  
  o IT Risk Management & Assessment  
  o Enterprise Risk Management (ERM) | • Reading: d) Risk Management Student Book |
| 5    | 29-Sep     | • Overview of IT Environment  
  • Audit Planning  
  o Risk, Timing, & Frequency  
  o Project Management  
  • Audit Process  
  o Walkthroughs (Design Assessment)  
  o Testing (Operating Effectiveness)  
  • Overview of IT Audit Universe:  
  o IT Entity-level Controls  
  o IT General Controls  
  o Application Controls  
  ▪ Automated vs. Manual  
  ▪ System-generated Data | • Detailed Outline: Presentation 1  
  • Reading: e) IT Governance Using COBIT and ValIT |
| 6    | 6-Oct      | • Working Session: Case Study #1 (COBIT) | • Detailed Outline: Presentation 2 |
| 7    | 13-Oct     | • Presentation 1: IT Governance & Risk Management  
  • Working Session: Caselet #2 | • Case Study #1 (COBIT)  
  • Thought Leadership Write-up #1  
  • Detailed Outline: Presentation 3  
  • Caselet #2 |
| 8    | 20-Oct     | • Presentation 2: IT Security & Access Management  
  • Passwords & 2-Factor Authentication  
  • Principle of Least Privileges | • Thought Leadership Write-up #2  
  • Detailed Outline: Presentation 4 |
<table>
<thead>
<tr>
<th>Week</th>
<th>Class Date</th>
<th>Class Activity &amp; Discussion Topics</th>
<th>Assignment(s) Due</th>
</tr>
</thead>
</table>
| 9    | 27-Oct     | • Segregation of Duties (SoD)    | • Thought Leadership Write-up #3  
|      |            | • Generic or Shared User IDs     | • Detailed Outline: Presentation 5  
|      |            | • Administrative & Super User Access | • Caselet #3 |
|      |            | • Re-cap: Case Study #1 (COBIT)  | |
|      |            | • Presentation 3: Program Development & Change Management | |
|      |            | • Program Development vs. Change Management | |
|      |            | • Program Development            | |
|      |            | o Overview of SDLC               | |
|      |            | • Change Management              | |
|      |            | o Development vs. Configurations | |
|      |            | o Unit vs. User Acceptance Testing | |
|      |            | o Request vs. Migration Approvals | |
|      |            | o SoD in Change Management       | |
|      |            | • Working Session: Caselet #3    | |
| 10   | 3-Nov      | • Presentation 4: Business Continuity Management & Disaster Recovery | • Thought Leadership Write-up #4  
|      |            | • Disaster Recovery Planning     | • Detailed Outline: Presentation 6  
|      |            | • Threat Analysis                | |
|      |            | o BCM Risk Assessment            | |
|      |            | o Disruption Consequences        | |
|      |            | o Disaster Readiness             | |
|      |            | • Back-up Site (Hot vs. Warm vs. Cold) | |
|      |            | • Working Session: Case Study #2 | |
| 11   | 10-Nov     | • Presentation 5: Third Party & SaaS Management (Cloud Computing) | • Thought Leadership Write-up #5  
|      |            | • Working Session: Case Study #2 (COBIT) | • Detailed Outline: Presentation 7  
|      |            | (COBIT)                          | |
| 12   | 17-Nov     | • Presentation 6: Cybersecurity & Data Privacy | • Case Study #2 (COBIT)  
|      |            | • Speaker: Chad Neale (PwC)      | • Thought Leadership Write-up #6  
|      |            | • Re-cap: Case Study #2 (COBIT)  | • Detailed Outline: Presentation 8  
| 13   | 1-Dec      | • Presentation 7: Big Data & Continuous Auditing | • Thought Leadership Write-up #7  
|      |            | • CAATs                          | |
|      |            | • Continuous Auditing (vs. Monitoring) | |
|      |            | • Speaker: Tim Smith (KPMG)      | |
| 14   | 8-Dec      | • Presentation 8: Digital & Mobile Risk | • Case Study #3 (IDEA) due 12/12  
|      |            | • Working Session: Case Study #3 (IDEA) | • Thought Leadership Write-up #8  
| 15   | 15-Dec     | • Re-cap: Case Study #3 (IDEA)    | |
|      |            | • ISACA Code of Ethics           | |
|      |            | • Other special topics           | |