Spring 2013
Tuesday and Thursday, 5:30-8:00pm
Place - Alter Hall, Room 745

Instructor
Vasant Kumar
Adjunct Assistant Professor, MIS
Office – Speakman Hall 209J
Email: vasant.kumar@temple.edu
Office Phone: 215-204-9563
Cell Phone: 215-432-2432

Regular Office hours: Mondays, 5:00pm to 5:30pm & 8:00pm to 8:30pm
On-Demand Office Hours: Please contact by Email/Cell Phone for an appointment

Course Description
This is the 2nd course related to how information systems are acquired, developed and implemented. The course will focus on three areas: (1) IT Controls and Auditor’s role, (2) Understanding of Business Applications, (3) Audit case studies providing deeper understanding of systems and infrastructure life-cycle management. The learner will understand various controls used throughout the SDLC phases along with the role of the Auditor. The learner will get an understanding of various mainstream Business Applications and can provide assurance that the practices for the acquisition, development, testing and implementation of information systems meet the enterprise’s strategies and objectives.

Pre-requisite
MIS5203 – Implementing Systems Projects

Course Objectives
This is the 2nd course related to Systems & Infrastructure Lifecycle Management covering advance topics related to how information systems are acquired, developed and implemented.

The course starts with a review of MIS 5203 contents across business case development, project management practices, project reviews, development controls, information systems implementation and migration, and post-implementation reviews is covered next. A good amount of time is spent on understanding various Business Applications, the functionality they support, and controls important to those applications. Finally, the course would cover a number of case studies ranging from current state of Application Development to case studies specific to IT Audit. The detail of the course is outline below:
• Evaluate Application Controls including input, output, and processing controls.
• Develop understanding of and controls associated with mainstream Business Applications through four major application types: e-Commerce, Internet Banking, ERP, and Mobile computing. In addition, get a basic understanding of other Business applications such as EDI, Electronic Finance, EFT, CRM, BI, DSS.
• Review the Case Studies related to the current state of Software Development, Auditing Software Development, and Auditing pre-packaged systems.
• Understand the metrics and KPIs used during the SDLC.

**Required Textbook and Materials**


Reference to other materials, articles, case studies would be provided in the class or on the class blog.

**The Learning Environment**

Your contributions directly impact the value you and your fellow students gain from this course. You can contribute to a supportive learning environment by meeting these expectations:

• Arrive on time and stay until the end of class.
• Turn off cell phones, pagers and alarms while in class.
• Limit the use of electronic devices (e.g., laptop, tablet computer) to class-related usage such as taking notes. Restrict the use of an Internet connection (e.g., checking email, Internet browsing, sending instant messages) to before class, during class breaks, or after class.
• During class time speak to the entire class (or breakout group) and let each person “take their turn.”
• Be fully present and remain present for the entirety of each class meeting.

The learning environment extends beyond our weekly class meeting. In addition, you are expected to:

• Provide substantive comments on the class blog.
• Extend online discussions by reading and commenting on other students blog entries.
• Fulfill commitments to group members to successfully complete group projects.

**Evaluation and Grading**

This course offers students multiple opportunities to demonstrate learning and achievement. Grading is based on the following criteria:
A- or A
The assignment consistently exceeds expectations. It demonstrates originality of thought and creativity throughout. Beyond completing all of the required elements, new concepts and ideas are detailed that transcend general discussions along similar topic areas. There are few mechanical, grammatical or organizational issues that detract from the presented ideas.

B-, B, B+
The assignment consistently meets expectations. It contains all the information prescribed for the assignment and demonstrates a command of the subject matter. There is sufficient detail to cover the subject completely but not too much as to be distracting. There may be some procedural issues, such as grammar or organizational challenges, but these do not significantly detract from the intended assignment goals.

C-, C, C+
The assignment fails to consistently meet expectations. That is, the assignment is complete but contains problems that detract from the intended goals. These issues may be relating to content detail, be grammatical, or be a general lack of clarity. Other problems might include not fully following assignment directions.

Below C
The assignment constantly fails to meet expectations. It is incomplete or in some other way consistently fails to demonstrate a firm grasp of the assigned material.

The five major components of the course grade are:

**Deliverable Percentage**
- Participation (class and blog) ........................................... 10%
- Quiz (2) ................................................................. 15%
- Individual project reports / case studies (2).......................... 20%
- Group project reports (3) .............................................. 30%
- Final exam ................................................................. 25%

Total.................................................................................. 100%

**MIS Community Site and Announcements**
Class materials (notes, presentations, projects, in-class exercises and examples) are located on the MIS Community Site. The URL for the course is

http://community.mis.temple.edu/mis5204sec011spr13/

You are responsible for checking the site daily for updates and announcements. **You should check the announcements area several times a week.**

**Attendance Policy**
Attendance may be checked randomly throughout the semester. There are obvious benefits of regularly attending class. Students are encouraged to attend the classes.
Class Participation
Class participation will account for a small percentage of the grade. Participation requires reading the assigned materials before each class session, being engaged in class discussions, and actively participating in group activities and class blog.

Quizzes
There will be 2 quizzes. The quizzes are multiple choice questions and reflect the CISA exam questions.

Individual Project Reports / Case Studies
Individual projects would focus on the case studies and examples based on class discussion.

Group Project Reports and Presentation
Group projects would include self-study and presentation of Business Application and Controls, auditing your PC as an example of hardware related auditing, and auditing a fictitious application system BooksForAll.

Final Exam
The final exam will be multiple choice questions and reflect the CISA exam questions. Missed final exam cannot be generally made up.

Plagiarism and Academic Dishonesty
Plagiarism and academic dishonesty can take many forms. The most obvious is copying from another student’s exam, but the following are also forms of this:
- Copying material directly, word-for-word, from a source (including the Internet)
- Using material from a source without a proper citation
- Turning in an assignment from a previous semester as if it were your own
- Having someone else complete your homework or project and submitting it as if it were your own
- Using material from another student’s assignment in your own assignment

Plagiarism and cheating are serious offenses. Penalties for such can range from a failing grade for the individual assignment, to a failing grade for the entire course, to expulsion from the program.

If you have questions about what constitutes acceptable behavior, please feel free to discuss with me.

For more information, refer to the Temple University student code of conduct, available at http://www.temple.edu/assistance/udc/coc.htm.

Student and Faculty Academic Rights and Responsibilities
The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed through the following link: http://policies.temple.edu/getdoc.asp?policy_no=03.70.02.

General Policies
Students who are performing poorly will not be given additional work to improve their grades during the class. For any extra help outside the class, please contact me.
Submission of Projects/ Case Studies

Projects should be submitted electronically. Please follow the instructions in the assignments for submission. Be sure to print and retain the receipt page. This page can be used to demonstrate on time submission of your project.

A project is considered late if it is turned in after the start of class the day it is due. No late projects will be accepted without penalty. Projects will be assessed a 10% penalty each day they are late. No credit will be given for projects turned in more than a week late. Late projects will not be accepted after last regular class session. To avoid any delay due to equipment, network, other technology failures, or Septa service issues, please plan ahead.

Projects will not be accepted after the last class meeting. Once a project has been graded, additional project materials will not be accepted.

Acknowledgements
I thank Prof. Flanagan and Mandviwalla who offered great advice and guidance in putting this course together in the compressed timeframe.

Schedule for MIS5204 – Business Application Controls (with a focus on Information Systems Acquisition, Development and Implementation)

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<thead>
<tr>
<th>Week Section</th>
<th>Topics</th>
<th>Notes/Reading</th>
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<tr>
<td></td>
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<td>(Reading info to be provided in the previous class)</td>
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<tr>
<td>Week 1 (1/28)</td>
<td>Overview of Information Systems Acquisition, Development, and Implementation</td>
<td>Reading/Review: CISA Review Manual - section 3.2, 3.3, 3.4, 3.5, 1.6</td>
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<td></td>
<td>Phases of SDLC related to Acquisition, Development, and Implementation</td>
<td>Reading/Review: Class Presentation of MIS 5203 – Systems and Lifecycle Management 1</td>
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<td>Feasibility and Business Case Development</td>
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<td>Project and portfolio management techniques, and governance</td>
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<td>Requirements, Design/Selection, Development/Configuration, Implementation, Post-Implementation</td>
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<td>Week 2 (2/4)</td>
<td>Overview of IT Auditing</td>
<td>Reading/Review: Davis et. al Chapter 2</td>
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<td>Audit and Control Steps</td>
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<td>Risk-based Auditing</td>
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<td>Stages of Audit</td>
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<td>Application Audit Components</td>
<td>Reading: Auditnet Application Audit template Example: <a href="http://www.auditnet.org/docs/00-">http://www.auditnet.org/docs/00-</a></td>
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<td>Week</td>
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<td>Application Controls</td>
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<td>Input / Output Controls</td>
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<td>Processing Controls Details including Data Validation Edits and Data File Controls</td>
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<td>Auditing Feasibility, Business Cases, Project Management, Requirements</td>
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<td>Auditing Design, Acquisition, Coding, Testing, SDLC Processes, Implementation, and Post Implementation</td>
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<td>Data Integrity Testing</td>
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<td>Testing Application Systems</td>
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<td>Continuous Online Auditing</td>
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Week 7 (3/18)
Business Application Systems
Understanding of and controls associated with mainstream Business Applications:
Retail Application B2C e-Commerce (Group 1 presentation and discussion)
Brief summary of other Retail Applications: EDI, Point of Sales, CRM, Interactive Voice Response, etc.

Reading/Review: CISA Review Manual section 3.6.1, 3.6.2, 3.6.3, 3.6.4, 3.6.6, 3.6.17
Reading/Review: Davis et. al Chapter 8
Reading/Review: ISACA Auditing Guideline for B2C e-Commerce Application

Group Project 1 Due:
(Understanding of and controls associated with mainstream Business Applications: Group 1 - Retail Application B2C e-Commerce
Group 2 – Online Banking Application
Group 3 – ERP Application
Group 4 – Mobile Application)

Week 8 (3/25)
Business Application Systems
Understanding of and controls associated with mainstream Business Applications
Finance Application Internet Banking (Group Project 1 - Group 2 presentation and discussion)
Brief summary of other Finance Applications: Electronic Finance, Payment System, EFT, ATM, etc.

Reading/Review: CISA Review Manual section 3.6.7, 3.6.8, 3.6.9, 3.6.11, 3.6.15
Reading/Review: Davis et. al Chapter 8
Reading/Review: ISACA Auditing Guideline for Internet Banking Application
http://www.isaca.org/Knowledge-Center/Standards/Documents/Gx24InternetBanking.pdf

Week 9 (4/1)
Business Application Systems
Understanding of and controls associated with mainstream Business Applications
ERP Application (Group Project 1 - Group 3

Reading: Phillip Dawson and
<table>
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<th>Week 10 (4/8) Business Application Systems</th>
<th>Understanding of and controls associated with mainstream Business Applications</th>
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<td>Mobile Application (Group Project 1 - Group 4 presentation and discussion)</td>
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<td>Brief summary of some other Business Applications: Business Intelligence, Decision Support System, etc.</td>
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| Individual Project 2 Due (Australian Government Case Study) |

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<tr>
<th>Week 11 (4/15) IT Auditing Case Study Customization</th>
<th>Case Study 3</th>
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<td>An IT Audit Case Study involving an ERP system</td>
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| Reading: Davis et. al Chapter 12 |
| Quiz 2 Due |

| Group Project 2 (Audit your PC) Due |
| Week 12 (4/22) IT Auditing Case Study Customization | Case Study 4 Detailed Audit Recommendation of ABCDXYZ Corporation | Reading: John Kyriazoglou. “IT Strategic and Operational Control,” Section 10.6 IT Audit Assignment for Organization ABCDXYZ, 2010, IT Governance Ltd. [Access through books24x7]
Reading: More Info TBD. |
|---|---|---|
| Week 13 (4/29) Best Practices | KPIs across SDLC phases KPIs and Best Practices across software development and acquisition including those used during feasibility and business case, requirements, design, development, and implementation | Reading: Kurt Potter and Simon Minga. “Successful IT Performance Management for IT Shared Services: Relevant Key Performance Indicators,” Feb 2012, Gartner.
Group Project 3 (Audit BooksForAll Information Systems Due) |
| Week 14 (5/6) | Open Area of Interest for Information Systems Acquisition, Development, and Implementation | |
| Week 15 (5/13) | | Final Exam |