

Temple University
Fox School of Business
MS Auditing and Cyber Security Program

MIS5203 – Systems & Infrastructure Lifecycle Management 1 (Section 401)

SYLLABUS

Spring 2016
Thursdays, 5:30pm - 8:00pm
Place – TUCC (TUCC 1515 Market St), Room 220

Instructor

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

Regular Office hours: Thursdays, 8:00pm to 8:30pm after the class, or
On-Demand Office Hours: Please contact by Email/Cell Phone for an appointment in evenings

Course Description

The course introduces how information systems are acquired, developed and implemented. The learner will understand and can provide assurance that the practices for the acquisition, development, testing and implementation of information systems meet the enterprise's strategies and objectives. Topics covered include business case development, project management practices, project reviews, development controls, information systems implementation and migration, and post-implementation reviews.

Course Objectives

The course recognizes that the CISA candidate must understand how an organization evaluates, develops, implements, maintains and disposes its IT systems and related components. S/he must be able to identify which elements may represent the greatest risk and which controls are most effective at mitigating this risk. Key objectives are as follows:

- Evaluate the business case for proposed investments in information systems acquisition, development, maintenance and subsequent retirement to determine whether it meets business objectives.
- Evaluate the project management practices and controls to determine whether business requirements are achieved in a cost-effective manner while managing risk to the enterprise.
- Conduct reviews to determine whether a project is progressing in accordance with project plans, is adequately supported by documentation and status reporting is accurate.

- Evaluate controls for information systems during the requirements, acquisition, development and testing phases for compliance with the enterprise's policies, standards, procedures and applicable external requirements.
- Evaluate the readiness of information systems for implementation and migration into production to determine whether project deliverables, controls and the enterprise's requirements are met.
- Conduct post-implementation reviews of systems to determine whether project deliverables, controls and the enterprise's requirements are met.

In addition, the course will emphasize the basic understanding of full systems development life-cycle (SDLC), so that the students can correlate the Auditing and Control needs during systems development and implementation.

Required Textbook and Materials

- (1) ISACA: Certified Information Systems Auditor, CISA Review Manual 26th Edition, ISBN: 978-1-60420-367-7 (or ISACA: Certified Information Systems Auditor, CISA Review Manual 2015, ISBN: 978-1-60420-500-8; or ISACA: Certified Information Systems Auditor, CISA Review Manual 2014, ISBN: 978-1-60420-400-1)
- (2) Cascarino, Richard: Auditor's Guide to IT Auditing, 2nd Edition, 2012, John Wiley and Sons, ISBN: 978-1-118-14761-0

Reference to other materials, articles, case studies (most available on the internet or through library) 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)	20%
Individual project reports / case studies (2).....	15%
Group project reports and presentation (3)	25%
Note: 3 rd group project will be pass/fail with 5% weightage	
Final exam	30%

Total.....	100%

MIS Community Site and Announcements

Class materials (notes, presentations, projects, in-class exercises and examples) are located on the following MIS Community Site:

<http://community.mis.temple.edu/mis5203spring2016/>

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 modeled after the CISA exam questions.

Individual Project Reports / Case Studies

Specifics to be provided in the class

Group Project Reports and Presentation

Specifics to be provided in the class

Final Exam

The final exam will be multiple choice questions and modeled after 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.

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.

Schedule for MIS5203 - Systems and Infrastructure Lifecycle Management 1 (with a focus on Information Systems Acquisition, Development and Implementation)

Week Section	Topics	Notes/Reading (Reading info to be provided in the previous class)
Week 1 (1/14) Business case development	Introduction to the course, syllabus, quiz, assignments, grading Benefits realization techniques (total cost of ownership [TCO], return on investment [ROI]) Feasibility Study Business Case Request For Information (RFI) Request for Proposal (RFP) Statement of Work (SOW) Assignment: Feasibility Study (Individual Case Study 1 – “BesToy”)	Introduce business case and RFP artifact <i>Reading : CISA Review - section 3.2, 3.5.2</i> <i>Reading: Cascarino – Chapter 21, 22</i> Feasibility Study Template & Case Study of ABC Co.: http://www.projectmanagementdocs.com/templates/feasibility-study-template.html Business Case Template and Case Study: http://www.projectmanagementdocs.com/templates/business-case-template.html RFP Template and Case Study: http://www.projectmanagementdocs.com/project-documents/request-for-proposal.html SOW Template and Case Study: http://www.projectmanagementdocs.com/templates/statement-of-

		work-template.html
Week 2 (1/21) Project management practices	<p>Business Case / Feasibility contd.</p> <p>Project and portfolio management techniques</p> <p>Project governance mechanisms</p> <p>Project control frameworks, practices and tools</p>	<p><i>Reading : CISA Review - section 3.3, 3.4, 3.5.3, 3.14.2</i></p> <p><i>Reading: Cascarino – Chapter 16</i></p> <p>Project Management Areas: http://en.wikipedia.org/wiki/Project_Management_Professional</p> <p>PMP Outline (pages 3-12): http://www.pmi.org/Certification/Project-Management-Professional-PMP/~media/PDF/Certifications/MP%20Examination%20Content%20Outline_2010.ashx</p>
Week 3 (1/28) Project reviews	<p>Project control frameworks, practices and tools contd.</p> <p>Project success factors and risk</p> <p>Project risk management practices as it relates to Software Development</p> <p>Announcement: Quiz 1 Upcoming</p> <p>Assignment: Business case and RFP (Group Project 1)</p>	<p><i>Reading – CISA Review - section 3.5.4, 2.9, 3.14.1</i></p> <p>WBS Template Example http://www.projectmanagementdocs.com/templates/work-breakdown-structure-wbs.html</p> <p>Sample Project Plan (For Better Viewing) http://community.mis.temple.edu/mis5203spring2016/files/2016/01/Sample-Project-Plan-viewing.pdf</p> <p>Risk Management Template Example http://www.projectmanagementdocs.com/templates/risk-management-plan.html</p> <p>Feasibility Study due (Individual Case Study 1 – “BesToy”)</p>

<p>Week 4 (2/4) Develop project controls</p>	<p>Understanding SDLC phases related to project management</p> <p>Traditional SDLC Phases</p> <p>Requirement Phase</p> <p>Requirements analysis and management practices (e.g., requirements verification, traceability, Use Cases, gap analysis vulnerability management, security requirements)</p>	<p><i>Reading – CISA Review - section 3.5 (Requirements), 3.5.1, 3,14.3</i> <i>Reading: Cascarino – Chapter 18</i></p> <p>Sample Project Plan (For Printing) http://community.mis.temple.edu/mis5203spring2016/files/2016/01/Sample-Project-Plan.pdf</p> <p>Use Case http://www.agilemodeling.com/artifacts/systemUseCase.htm</p>
<p>Week 5 (2/11) Develop project Controls</p>	<p>IT architecture and Design related to data, applications and technology (e.g., distributed applications, web-based applications, web services, n-tier applications)</p> <p>Assignment: Systems Requirements and Use Case (Individual Case Study 2)</p>	<p><i>Reading – CISA Review - section 3.5 (Requirements and Design),3.6.1, 3.6.2, 3.8, 3.14.5</i></p> <p><i>Reading: Cascarino – Chapter 18, 20</i></p> <p>Quiz 1</p>
<p>Week 6 (2/18) Develop project Controls</p>	<p>Business Case and RFP Group Presentation</p> <p>e-Commerce and EDI systems</p> <p>Acquisition practices</p> <p>Introduce how requirements tie to RFP, analysis (i.e., logical system), and design (i.e., physical system)</p> <p>Announcement: Quiz 2 Upcoming</p>	<p><i>Reading – CISA Review - section 3.5 (Acquisition and Development), 3.11.3, 3.14.4</i></p> <p><i>Reading: Cascarino – Chapter 16, 18, 21</i></p> <p>Business case and RFP due (Group Project 1)</p>
<p>Week 7 (2/25) Develop project Controls</p>	<p>Acquisition practices contd.</p> <p>Software Development Method and Tools (Programming Language, IDE, Debugging,</p>	<p><i>Reading – CISA Review - section 3.5 (Acquisition and Development), 3.11.3, 3.14.4</i></p> <p><i>Reading: Cascarino – Chapter 16, 18, 21</i></p>

	<p>Program Design)</p> <p>Assignment: Requirements (Group Project 2)</p>	
<p>SPRING BREAK 2/29 to 3/6</p>	<p>NO CLASS</p>	<p>Enjoy the week off!</p>
<p>Week 8 (3/10) Develop project controls</p>	<p>Testing methodologies and practices related to information systems. Test cases and Execution Artifacts</p> <p>Quality Assurance</p>	<p><i>Reading – CISA Review - section 3.5 (Testing), 3.14.6</i></p> <p><i>Reading: Cascarino – Chapter 18</i></p> <p>Systems Requirements and Use Case Due (Individual Case Study 2)</p>
<p>Week 9 (3/17) Develop project Controls & Software Implementation</p>	<p>Control objectives and techniques that ensure completeness, validity, accuracy and authorization of transactions and data</p> <p>Process, Quality CMM, Maturity, COBIT, Business Process Reengineering</p>	<p><i>Reading – CISA Review - section 3.5 (Data Conversion), 3.11,3.12</i></p> <p>Quiz 2</p>
<p>Week 10 (3/24) Develop project Controls</p>	<p>Requirements Group Presentation</p> <p>Systems development methodologies and tools including their strengths and weaknesses (e.g., agile development practices, prototyping, rapid application development [RAD], object-oriented design techniques)</p>	<p><i>Reading – CISA Review - section 3.7, 3.8</i></p> <p>Requirements due (Group Project 2)</p>
<p>Week 11 (3/31) Develop project Controls</p>	<p>Systems development methodologies and tools contd.</p> <p>Alternative Development Methods including Data-</p>	<p><i>Reading – CISA Review - section 3.7, 3.8</i></p>

	oriented development, object-oriented development, and component-based development	
Week 12 (4/7) Develop project Controls Information systems implementation and migration	Systems migration and infrastructure deployment practices and data conversion tools, techniques and procedures Change Management concept and best practices Configuration management Release Management Monitoring and Incident Management	<i>Reading – CISA Review - section 3.5 (Implementation), 3.9, 4.2.6, 4.2.7, 3.14.7, 3.14.9</i>
Week 13 (4/14) Develop project Controls Post-implementation reviews	Test Plan Group presentation Post-implementation review objectives and practices (e.g., project closure, control implementation, benefits realization and performance measurement) Business Application Systems	<i>Reading – CISA Review - section 3.5 (Post-Implementation), 3.14.8</i> <i>Reading – CISA Review Familiarity with Business Application Systems: section 3.6</i> <i>Reading – Post Implementation Review</i> http://blog.method123.com/2007/01/01/post-implementation-review/ <i>ITIL Library</i> http://wiki.en.it-processmaps.com/index.php/Checklist_Post_Implementation_Review_%28PIR%29
Week 14 (4/21)	Business Application Systems contd. Open Area of Interest	<i>Reading – CISA Review Familiarity with Business Application Systems: section 3.6</i>
Week 15 (4/28)		Final Exam

