IS 685 Enterprise Architecture & Integration
Spring 2017

Course Description:

An enterprise is a collection of organizations that share a common set of goals and objectives. An enterprise can be a business unit, an entire corporation, government agency or a collection of businesses joined in partnership. Each enterprise has requirements for the right technology, software engineering methods, and software architecture style to create a good IT and IS infra-structure. This course will provide students with a theoretical and practical understanding of the subject areas related to EA. Special emphasis is placed on the emerging technologies such as SDN, M2M, and cloud computing. To appreciate the foundations and decision making framework of EA some time will be devoted to understand the business processes and strategies.

Required Background: Student is expected to have basic understanding of corporate structure, financial statements, operations, strategy, system analysis and design. Familiarity with technological evolution in wearables, communications, web services and cloud is essential to fully benefit from this course.
Link to catalog for more details http://catalog.njit.edu/graduate/computing-sciences/information-systems/#coursestext

Contact Information

Professor: Todd Will
Office Hours: Wednesday 5 to 6 PM in GITC5100; Thursday 6 to 9PM via Skype
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Class Location: CKB (Central King Building) # 206
Class Meeting Day & Time: Wednesday 6 to 9PM

Course Materials

1. (Required) Enterprise Systems For Management, 2nd Ed, by Luvai Motiwalla & Jeffrey Thompson. ISBN-10: 0132145766
2. (Optional) Practical Guide to Enterprise Architecture, by James McGovern, Scott Ambler, Michael Stevens, James Linn, Vikas Sharan, Elias Jo: ISBN-10: 0131412752
3. (Optional) Modern Systems Analysis and Design, 8th edition by Joseph Valacich and Joey George: ISBN-13: 978-0134204925

I will be distributing the class notes / assignments via Moodle.

Your grade is calculated based on:

2 Quizzes	5%
Midterm Exam	30%
Final Exam	30%
Project Midterm Deliverable	5%
Final Project Deliverable	20%
Final Project Presentation	5%
Class Participation / Attendance	5%
Total	100 points

Grading Scale

Final grades (A, B+, B, C+, C, F) **will be relative;** and will closely follow the spread shown here.

GRADE	GPA	SIGNIFICANCE	Overall Score
A	4.0	Excellent	90% +
B+	3.5	Good	85-89%
B	3.0	Acceptable	80-84%
C+	2.5	Marginal Performance	70-79%
C	2.0	Minimum Performance	60-69%
F	0	Failure	0-59%

Grading Issues:

Occasionally, grading errors occur and/or students have legitimate concerns/complaints about graded materials. All grading questions/concerns must be initiated within seven days of the date the material was returned. Otherwise, you forfeit your right to dispute the grade at a later date. For example, if the material was returned on September 8th, you must submit your concern in an email to the instructor no later than September 15th. No Whining, No crying and No grade negotiation.

Description of Requirements

1. **Projects:** You must work on the project in groups. Discuss and debate with your classmates to gain deeper understanding of the material.
2. **Exams:** You are expected to be on time for all exams, and extra time will not be allocated to any student who arrives late.

Quizzes, Midterm, Final: Closed book and notes for all quizzes and midterm exam. You are NOT permitted to use cell phone / laptop / tablet etc. during the exam. You may bring a regular non-scientific calculator, but you do not need a calculator to complete the exams. The final is a take-home exam, where you are permitted to use the book and any class resources, but not allowed to use your friend or Google to answer questions. Students who are registered with Disability Services and who may need individual arrangements should schedule a meeting with the instructor to work out the details. No student will be excused from taking any exam, except for valid documented medical reasons, or family emergency, and any of those situations should be attested to by a medical practitioner or other suitably qualified professional. The assignment schedule is available at the beginning of the term so make your work/vacation/travel plans accordingly.

Group Project. You should form your own groups of 2-3 members to complete the group project; if you cannot find a group member, then I will assign groups. For your project, you are expected to meet periodically, split the work, do the research, do internal review and then make presentations; if we finish early during a class session, you can use the extra time to meet with your group. I am looking for your overall understanding of the business needs, understanding of strategy, and familiarity with the technology. This project should result in a presentation that could be given to senior management whether you suggest adoption of the new technology. You will get to choose the topic from one of the following, assigned on a first-come, first-served basis:

a. Patterns in EA
b. Role of EA in business decision making
c. Quantitative and Qualitative Biases in business decisions
d. Internet of Things
e. Cloud Computing
f. Identity & Access Management
g. Data Security
h. Software Defined Network & NFV
i. Big Data & Analytics
j. Six Sigma & EA
k. UX Emerging Patterns
l. Anything else that is equally interesting and challenging (check with me first)

Your project deliverables consist of 3 main parts. You should prepare a midterm project status report, which will consist of a 5 minute presentation after the midterm exam; this should contain your topic and group member names, an overview of the technology, 1 advantage, 1 disadvantage, and do you recommend adoption of the technology. This presentation should be no more than 5-6 slides and about 5 minutes long. The final presentation should be about 30 minutes long and given during the last 2 weeks of the class; this should be a professional presentation to be given to senior management, which means business casual attire (no sweat pants or jeans). You will also write a report on your technology, which should describe your presentation in more detail; this report should be 25 pages single-spaced, size 12 font, and in a binder, to be handed to me on the first day of presentations.

Secure Testing:

Once the first student leaves the exam – no further late students will be permitted into the exam, and their exam will not be rescheduled and they will receive a zero. No student will be permitted to leave the testing room during their exam time – this includes using the restroom. **Cell phones and other communication devices are to be stored securely out of sight.** NO ear pieces are to be permitted during the exam (iPods etc.). No sharing of items (pens, pencils, calculators, erasers etc.) during the exam.

Professionalism Policy

Laptops, phones, PDA's, and similar electronic devices are allowed in class for note-taking, but please turn the sound down so as to not disturb your fellow students. No email, texting, tweeting, et al, or web surfing will be allowed in this class out of respect for others. There is no need to use a laptop in this class; your brain is the most useful "computer" you can bring with you to class!

Attendance is expected and required. It will be your responsibility to obtain class notes and/or handouts from blackboard, your classmates or me. All resources are posted in Moodle, if you need to miss a class during the semester.

Students arrive on time. On time, arrival ensures that classes are able to start and finish at the scheduled time. On time arrival shows respect for both fellow students and faculty and it enhances learning by reducing avoidable distractions.

Students are fully prepared for each class. Much of the learning takes place during classroom discussions. When students are not prepared, they cannot contribute to the overall learning process. This affects not only the individual, but their peers who count on them, as well.

Written assignments are due on the date indicated unless prior approval has been granted. Late assignments will receive a **minimum of a one-grade reduction**.

Students are conscientious both in giving feedback to the professor and other students through discussions or emails as well as adjusting their attitudes and behaviors in response to others' opinions. Students should review the *Student Code of Conduct*, as it discusses expectations of appropriate conduct in the classroom:

You are responsible for timely reading of and conformance with all administrative announcements.

No extra-credit projects will be given at anytime during the semester.

Academic Integrity

Integrity is important in the "real world" and the classroom alike. When doing your written graded assignments for this class, you are not permitted to copy material from assignments done by you in another class or assignments of other students who have taken this class or other classes in the past. Individual assignments are to be done individually, without collaborating with other students. Cooperation between teams in preparing team assignments is also prohibited. It is also a violation of academic integrity to sign in on an attendance sheet for someone who is absent from class, or to otherwise misrepresent one's lack of attendance at class.

Clearly, activities such as sharing class notes or discussing in-class materials outside of class are not honor code violations. Indeed, such interactions are encouraged because it enhances learning. You are strongly encouraged to read the full policy at: http://www.njit.edu/academics/integrity.php

Incomplete Grades

Incomplete grades are granted under the conditioned described in the Department / University policies.

Email Use

The university encourages all official student email correspondence be sent only to a student's NJIT email address. Email from students is considered official only if it originates from a NJIT email account. This is to address concerns regarding security and the identity of each individual in an email exchange. You may forward your NJIT email to other accounts if necessary by entering the required information in 'settings' of your NJIT email.

Tentative Schedule/Topic Coverage-This will be updated and circulated periodically

Week	Day	Topics	Readings	Assignments
1	1/18	Intro	Ch1	
2	1/25	Systems Integration Enterprise Systems Architecture	Ch2 Ch3	Select project topic & group members
3	2/1	Development Life Cycle	Ch4	Quiz 1, Chs 1-3
4	2/8	Implementation Stages Software and Vendor Selection	Ch5 Ch6	
5	2/15	Operational and Post-Implementation Program and Project Management	Ch7 Ch8	
6	2/22	Business Process Re-Engineering	Ch9	Meet in groups to prepare midterm-presentation
7	3/1	Global Ethics / Security Management	Ch10	
8	3/8	Midterm exam and project presentations		
9	3/15	Spring Break – No Class this week!		
10	3/22	Supply Chain Management Customer Relationship Management	Ch 11 Ch 12	
11	3/29	Requirements Gathering	My Notes	Quiz 2 (Chs 10-12)
12	4/5	VSM Metrics	My Notes	
13	4/12	Web Services	My Notes	
14	4/19	Project presentations Day 1 (all written reports due today)		
15	4/26	Project presentations Day 2		
16	5/10	Take-home final exam – no on-campus class this week		