ACU College of Business Administration
School of Information Technology & Computing
Course Syllabus, Spring 2010
Enterprise Architectures and Systems (IT 640.01)
TR 9:30 – 10:50 AM

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Course Section/Location: CRN: 15566 Mabee Business Building (COBA) - MBB 302

The mission of the School of Information Technology and Computing is to provide students with the highest quality education possible in the ever changing high-tech arena, and to establish within them a foundation of faith from which they can lead and serve in world-changing ways.

Course Description: *Enterprise Architectures and Systems* examines the processes and models that drive continuous organizational and technology alignment to optimize workflows, resource sharing, and access to services. The course focuses on the supporting role of IT infrastructures in business process management. Additional topics include standards and best practices, service oriented architectures, global supply chains, and virtual technologies.

Competencies and Measurements:

	Competency	Measurement Instrument	Performance Indicator
1	Knowledge/Comprehension - Students will articulate the enterprise architecture life cycle, enumerate, and properly apply the key architectural inputs at the enterprise and system levels.	Tests over lecture and reading content from textbook and other assigned reading articles.	Test grade.
2	Application – Students will identify the fundamental enterprise architecture themes and concepts, and relate them to business process management at the enterprise and system levels.	Software assignments done in the lab to execute these processes.	Grade based on compliance with specific instructions given with each assignment.
3	Application – Students will discuss the role of enterprise architecture in achieving organizational agility	Theme paper assignments over content from textbook and other readings.	Grade based on compliance with specific instructions given with each assignment.
4	Analysis - Students will interpret design diagrams, analyze business needs, and diagram solution approaches utilizing	Software assignments done in lab, including business process flow models using Visio	Grade based on compliance with specific

	software related to enterprise architecture planning.	software, and project plans using Microsoft Project software.	instructions given with each assignment.
5	Analysis, Synthesis and Evaluation - Students will demonstrate understanding of key architectural design techniques by analyzing and investigating challenges in enterprise architecting and constructing a basic service-oriented architecture.	A project and written summary articulating the issues and proposing possible options to redesign a business process and introduce a basic SOA.	Grade based on project outcomes and clarity and content of the paper.
6	Extended Application – Students will postulate the future of enterprise architectures and their impact on organizational efficiency.	Research paper that extends project findings using relevant IT/IS theory.	Grade based on clarity and content of the paper.

Prerequisites: Admission to the graduate program in Global IT Leadership or permission of the instructor and the Director of the School of Information Technology and Computing.

Format: Course material will be delivered through a mix of standard lecture presentations, assigned readings, case reviews, and student presentations. Some presentations will also be made at the facilities of practicing professionals who are currently serving in senior and executive leadership positions.

Grade Composition: Your grade will be computed on the following basis

Component	Value	Completion or Due Date
Class Participation & Professionalism	10%	Assessed throughout the semester
Homework – Chapter Notes	10%	As assigned
Technical Briefs	10%	As assigned
Projects (4)	10%	As assigned
Team Design Project/Presentation (15/5)	20%	Last week of classes
Midterm	20%	Thursday, March XX
Final Exam (or SpringBoard Competition)	20%	Late April or May

Homework: Homework will be assigned on a regular basis. Students should be prepared to complete homework assignments covering each major topic in the course. Homework may consist of chapter summaries, short essays in response to specific questions, Internet research about which oral answers in class may be requested, preparation of budgetary plans or policy statements, preparation of charts, diagrams, or tables, or other tasks.

Cases: Students will individually complete two written case analyses on topics/organizations assigned by the instructor. Each student will evaluate the same three cases. Case analyses are expected to summarize key issues and facts, address operational questions, propose solutions and recommendations, and summarize applications that can be made to other situations or similar scenarios. Additional instructions for preparing the case write-ups will be provided at a later date.

Technical Briefs: Students will individually prepare three short technical briefs on current topics about enterprise architecture in the news. Topics will be assigned by the instructor, and all students will address the same topics. Each brief must be a minimum of three, and no more than five, pages long. Additional instructions for preparing the case write-ups will be provided at a later date.

Term Paper: Each student will prepare and submit a term paper based on research about an actual organization or enterprise. The paper is expected to be a minimum of 10 double-spaced pages in length using 12-point Times New Roman font, plus appendices that contain additional explanatory material such as charts, tables, and architecture diagrams. The paper will discuss relevant issues, challenges, strategies, and solutions. Additional instructions will be provided at a later date. A short summary of the paper must be presented orally in class.

Team Design Project: In response to a structured problem setting, teams of students will design and construct a service-oriented architecture (SOA), complete with appropriate drawings, flow charts, tables, and graphs. Students will be assigned different situations to work on. The deliverable for this project is a document much like a business plan that identifies some of the technical details and describes how the architecture facilitates organizational efficiency and business process management. An oral presentation of the design is required.

Midterm Assessment/Exam: There will be one mid-term assessment or exam during the semester. The midterm exam may consist of short-answer questions and short essay questions. An alternative assessment would be a paper assigned on a related research topic.

Final Exam: The final exam is comprehensive and will be given on **Friday, May 7, 8:00-9:45** pm. No student will be allowed to take the final exam at an earlier or later time.

Class Participation: Classroom participation is an essential ingredient to successful completion of the course. Students must be prepared at all times to participate in classroom discussion. Regular attendance, creative thinking, insightful questions, and demonstrated enthusiasm for the material are all parts of classroom participation.

Grading System: Each component (exam, case, etc.) will be graded on the basis of 100%. Weighted averages will be computed at the end of the semester. The grading system for the course is given in the accompanying table. There is no pre-established quota of As, Bs, Cs, etc.

Letter Grade	Semester Combined Average
A	90 or above
B	80 – 89.9
C	70 – 79.9
D	60 – 69.9
F	Below 60

Late Assignments: Unless otherwise specified, all assignments are due at the beginning of class on the due date. No late work will be accepted.

Attendance Policy: In professional environments, employees who are often absent from, or tardy to, work do not enjoy long-term employment, regular pay increases, or good reputations. In this class you will be learning to address problems and situations similar to those you will encounter in actual settings, and the consistency with which you attend class reflects your commitment to your career. You will be dropped from the course if you miss 15% of the class meetings, and you will be assigned a grade of WF. For Tuesday/Thursday classes, this translates into 5 absences. You are late to class if you arrive five minutes after the scheduled start time. Every three late arrivals will be counted as one absence.

If you plan to miss class to participate in a University-sponsored activity, you must provide your instructor a written notice signed by your sponsor seven (7) days in advance. These are approved absences that are not counted towards your absence accumulation. Absences due to illness with a doctor's signed excuse will also not be

counted.

In any case, you will still be responsible for all notes and information missed as the result of your absence. Your instructor will not hand out course materials more than once, so you should plan to obtain these from your classmates. In most cases, assignments and class notes will be available via Blackboard.

Academic Integrity: Students are expected to abide by the University's policies and principles of academic integrity as outlined at the following web site: www.acu.edu/campusoffices/campuslife/acad_integrity.html. Students who cheat on exams or class assignments can expect to be harshly penalized. Cheating includes, but is not limited to, copying answers on exams, plagiarism, inappropriate or fraudulent citation of the work of others, "borrowing" other students data/information and submitting/representing it as your own, unauthorized copying of computer files, and unauthorized use of electronic media to transmit information and communicate with other students at test time (email, instant messaging, use of chat rooms, etc.). At a minimum, students who cheat will receive "no credit" (a score of zero) on the assignment in question; but students may also be dismissed from the course and automatically assigned a grade of F. In addition, any suspected evidence of cheating will be referred to the Dean of the student's college. To promote academic integrity, all students are strongly encouraged to familiarize themselves with these policies.

Classroom Management: In order to maintain decorum and to optimize the learning environment for all members of the class, certain classroom management policies must be adhered to:

- If you sleep in class/lab you will be asked to leave and you will be counted absent.
- If you walk out of class/lab without returning, you will be counted absent (obviously, exceptions will be made if you become ill or have made a prior arrangement with the instructor).
- Disruptive behavior will not be tolerated. The use of cell phones in any way is not allowed in class.

You are encouraged to bring your laptop and/or mobile devices to class for purposes of research and note-taking. However, you will not be allowed to send or received email messages or surf the Internet during class time.

Communications: To facilitate consistency in communications of courses requirements, assignments, and general information, and to make the course as paperless as possible, your instructor will regularly communicate with you via email using your ACU email address. You are encouraged to check your ACU email everyday for messages from your instructor. In addition, announcements and course materials will be posted to the course web site (Blackboard) on a regular basis, and you are also encouraged to check that facility often.

Students with Disabilities: Abilene Christian University is committed to providing a learning atmosphere which reasonably accommodates qualified persons with disabilities. If you feel you have a disability which may impair your capacity to successfully complete this course, please contact Student Disability Services (674-2750) in the Learning Enhancement Center. Student Disability Services assists students with disabilities in obtaining appropriate academic accommodations.

Texts and Supplements

Required Text and Resource Book:

1. **Enterprise Architecture: Creating Value by Informed Governance** (Martin Op't Land, Erik Proper, Maarten Waage, Jeroen Cloo, and Claudia Steghuis, Springer –Verlag, (Publisher) 2009, ISBN 978-3-540-85231-5
2. **Enterprise Architecture at Work** (Marc Lankhorst et al., Springer –Verlag, (Publisher) 2009, ISBN 978-3-642-01309-6

Note: You can visit the author's site for electronic versions of the texts and versions in other languages. If interested, electronic versions of each chapter from the Enterprise Architecture at Work (EAW) text can be

purchased at http://www.archimate.org/

Recommended Supplement:
Applied SOA: Service-Oriented Architecture and Design Strategies (Michael Rosen, Boris Lublinsky, Kevin Smith, and Mark Balcer, Wiley Publishing Inc., 2008, ISBN 978-0-470-22365-9)

Additional Reading Resources:

From Enterprise Architecture to IT Governance: Elements of Effective IT Management (Klaus Niemann, Friedr, Vieweg, and Sohn Verlag, 2006)

"Service Oriented Architecture: An Enabler of the Agile Enterprise in State Government," Research Brief, National Association of State Chief Information Officers, 2006 (http://enterprise-architecture.info/Images/Documents/NASCIO_SOA_Research_Brief_2006.pdf)

"Understanding Service Oriented Architecture," David Sprott and Lawrence Wilkes, Microsoft Architect Journal, 2004 (http://msdn.microsoft.com/en-us/library/aa480021.aspx)

"A Practical Guide to Federal Enterprise Architecture," Chief Information Officer Council, 2001 (http://www.gao.gov/bestpractices/bpeaguide.pdf)

Enterprise Architecture as Strategy (Jeanne Ross, Peter Weill, and David Robertson, Harvard Business School Press, 2006)

Service-Oriented Architecture: SOA Strategy, Methodology, and Technology (James Lawler and H. Howell-Barber, Auerbach Publications, 2008). Includes an extensive list of cases.

Enterprise Architecture Good Practices Guide: How to Manage the Enterprise Architecture Practice (Jaap Scheckerman, Trafford Publishing, 2008)

Research Resources:
A list of recommended resources can be found on the course Blackboard site.

Strategy for Success: The students who are most successful in this course are those who:

- are self-motivated and maintain a positive, success-driven attitude;
- do not miss class/lab or sleep in class/lab;
- are knowledgeable of the syllabus, course requirements, and instructor's expectations;
- consistently and thoroughly read their textbooks and consult other library materials;
- are well organized and take good notes;
- communicate with their instructor and seek help on a regular basis;
- turn in all assignments on time;
- actively participate in the class discussion; and,
- commit sufficient study resources to the course and do not fall behind.

Other Important Planning Dates: Please note the following additional dates when planning your semester schedule:

- MLK Holiday — Monday, January 18 (no classes)
- Spring Break — Monday - Friday, March 15-19
- Easter Holiday — Friday, April 2
- Last day to drop a class — Friday, April 2

- Dead Day Monday, May 3

IT640 - Course Schedule

Updated 1/10/10

Week	Topics	Chapters
1	Introduction & Motivation for Enterprise Architecture	EA1, EA2
2	Foundations of Enterprise Architecture: Usage, Governance, Management	EA3, EAW1
3	Benefits of Enterprise Architecture: Efficiency, Effectiveness, Security	EA4, EAW2
4	Enterprise Architecting: Processes and Frameworks	EA5, EAW3
5	Enterprise Architecture Life Cycle: Planning, Learning, Organizing Activities	EA5
6	Enterprise Architecture Modeling: Business, Software, Systems, Applications	EAW5, EAW6
7	Evaluating Enterprise Architecture: Coverage, Complexity, Conformity, Costs	EA5
8	The Enterprise Architect: Essential Competencies	EA6, EAW4
9	Implementation: Translating Strategy into Operational Reality	EAW7
10	Enterprise Architecture: Research Challenges	EA7, Supplemental Readings
11	Service Oriented Architecture	EAW9 & 10 sections as assigned, Supplemental Readings
12	Vendor Perspectives: SAP, ArchiMate, and others	Assigned Readings
13	Standards, Design, and Best Practices	Assigned Readings
14	Design Topics	Assigned Readings
15	Final Project Presentations	
16	Dead Day, May 3rd; Final Exam, May 7th, 8:00 AM	