

**ITSS 4370 Information Technology
Infrastructure Management
Section 0U1**

Professor Tony Fuller

Term Summer 2019

Meetings ITSS 4370.0U1 – Tuesday, 1:00pm –5:00pm
JSOM 11.210

Office Hours By Appointment

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Professor’s Contact Information

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The instructor will respond to all student inquiries (emails, voice messages, etc.) within 48 hours (excluding holidays and weekends). Please include your course number and section number in all email correspondence. Please understand that only mail from your UTDallas account can be responded to.

About the Instructor

Tony Fuller is an industry-recognized technology executive with 30 plus years of experience leading successful business initiatives, ventures, and strategies. Is proficient at providing expertise in aligning technology services with business strategy; has demonstrated ability to capitalize on emerging technologies that increase competitive advantage and maximize shareholder return; has expertise in establishing and growing international business and operations in diverse multicultural environments. An educational background in knowledge management and learning technologies coupled with industry experience make him a leading industry executive; not only as a practitioner but as an educator. Recognized by Computerworld as a “Premier 100 IT Leader,” and listed among “Top 500 CIOs” in the United States by ExecRank, and “500 Masters of Technology” by Information Week.

General Course Information

ABOUT THIS CLASS	Managing the Information Technology function in an enterprise requires substantive business knowledge, technical knowledge, problem solving, and communications skills. On-going changes in business models and technology require CIO’s to continually refresh
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	<p>their skills and develop new capabilities to work effectively in a global environment. Additionally, they must be able to select and apply technologies to meet business needs and to support the functioning of the IT organization. They must effectively plan for, manage and deploy their IT infrastructure to meet the strategic and operational needs of the organization.</p> <p>Students will be introduced to key issues and management approaches relating to managing IT infrastructure in global enterprises. Through individual and team based activities (cases, discussions, presentations, research), students will explore alternatives, perform analysis and ultimately develop a high-level strategy for an IT organization.</p> <p>In addition to the text, cases and assignments will be used to reinforce understanding of the concepts, and provide an opportunity for enhancing communications skills (oral and written).</p> <p>Classroom sessions will consist of lectures, open seminar type discussions, and small case examples. Students are expected to participate actively in class discussions, perform research and analysis, and present their work and findings to the instructor and their peers.</p> <p>Open, direct, and informed discussion is expected from all participants in the class. This requires each student to have read the textbook, completed the necessary assignments, participated effectively in group assignments, and conducted additional research as required.</p>
Pre-requisites	ITSS 3300 and (MATH 1326 or MATH 2414 or MATH 2419) and (MATH 2333 or OPRE 3333 or MATH 2418 or MATH 2415 or CS 2305).
Course Description	Management of the information technology within an organization is a critical activity. Students will be introduced to key issues relating to managing IT resources and IT projects. Topics include IT infrastructure, IT investment, management of IT, and planning and management of projects related to IT infrastructure.
Student Learning Objectives/Outcomes	<ol style="list-style-type: none"> 1. Explain current trends in information and communication technology (ICT) infrastructure and their impacts on ICT infrastructure management. 2. Analyze current ICT infrastructure plans and practice, and assess their degree of alignment with organization business and strategic goals (Describe how effective IT Infrastructure Management requires strategic planning and alignment from both the IT and business perspectives in an organization). 3. Demonstrate an understanding of the need for achievement of interoperability in enterprise-wide ICT infrastructures. 4. Describe the business value and processes of ICT services in an organization and apply that knowledge and skill to a workplace scenario.

<p style="text-align: center;">Required Texts & Materials</p>	<p>Scott D. Lowe, James Green and David Davis (2016). <i>Building a Modern Data Center: Principles and Strategies of Design</i>. Available at: http://www.actualtechmedia.com/wp-content/uploads/2016/05/Building-a-Modern-Data-Center-ebook.pdf</p> <ul style="list-style-type: none"> • Notes: LGD text is available online in eLearning <i>With thanks for Atlantis for permission to distribute to students.</i> <p>Schiesser, Rich (2010). <i>IT systems management</i> (2nd ed.). Upper Saddle River, N.J.: Prentice Hall. ISBN or ISSN: ISBN: 9780137025060 (hardcover: alk. paper); ISBN: 0137025068 (hardcover: alk. paper); ISBN: 9780136123521; ISBN: 013612352X</p> <p>Gilani, Zafar.; Salam, Abdul.; Ul Haq, Salman. (2015). <i>Deploying and managing a cloud infrastructure: real world skills for the CompTIA Cloud+ Certification and beyond</i>. Indianapolis: Wiley-Sybex. 978-1-118-87510-0</p> <p>Cases (https://hbsp.harvard.edu/import/632773):</p> <ol style="list-style-type: none"> 1. Derrick Neufeld & Liliana Lopez Jimenez. 1-888-JUNK-VAN, Richard Ivey School of Business, University of Western Ontario, W11145-PDF-ENG 2. Mark Jeffery, Joseph F. Norton & Derek Yung. MDCM, Inc. (B): <i>Strategic IT Portfolio Management</i>, 2006, Kellogg School of Management KEL172-PDF-ENG 3. Robert D. Austin & Jeremy C. Short. IPREMIER (A): <i>Denial of Service Attack (Graphic Novel Version)</i>, 2009, Harvard Business School 609092-PDF-ENG
<p style="text-align: center;">Enrichment</p>	<p>I will post a variety of other resources as readings or supplemental references in the Readings and Resources pages in eLearning.</p>

Assignments and Schedule

(expect changes in the schedule - see eLearning for changes to Schedule)

Week	DESCRIPTION
1 May 28	<p>PART 1 - Introduction to IT Infrastructure</p> <p>Session 1 Introduction</p> <p>Session 2 Trends in IT Management Exercise: Top IT Trends Videos Introduction to Group Projects - Assign Groups</p> <p>Readings:</p> <ul style="list-style-type: none">• Lowe, Green & Davis [LGD], Chapter 1 <p>Session 3 IT Capability Maturity Framework (IT-CMF)</p> <p>Readings:</p> <ul style="list-style-type: none">• Executive Overview: IT Capability Maturity Framework• Schiesser, Chapter 3• Schiesser, Organizing for Systems Management
2 Jun 4	<p>Session 4 Data Centers</p> <p>Readings:</p> <ul style="list-style-type: none">• LGD, Chapter 2• BCS Foundation Certificate in Data Centre Infrastructure Syllabus (Version 1.3, Dec 2016)• Schiesser, Chap 18 <p>Session 5 Data Centers (Continued)</p> <p>Readings:</p> <ul style="list-style-type: none">• LGD, Chapter 3• BCS Foundation Certificate in Data Centre Infrastructure Syllabus (Version 1.3, Dec 2016)• Schiesser, Chap 18

Week	DESCRIPTION
	<p>PART 2 - IT Management and Governance</p> <p>Session 6 Managing IT Like A Business</p> <p>Readings:</p> <ul style="list-style-type: none"> • LGD, Chapter 4 • Schiesser, Chap 4 • Schiesser, Chap 15 <p>Assignment #1 (Individual) – Skills Assessment Due: Friday, Jun 7th, 11:59 PM</p>
<p>3 Jun 11</p>	<p>Session 7 Managing IT Like A Business (continued)</p> <p>Session 8 Managing the IT Budget Managing IT for Business Value</p> <p>Session 9 Managing the IT Capability</p> <p>Readings</p> <ul style="list-style-type: none"> • LGD, Chapter 5 • Schiesser, Chap 3 • Peter Weill and Jeanne Ross, "IT Governance on One Page"
<p>4 Jun 18</p>	<p>Session 10 Managing the IT Capability (continued)</p> <p>Session 11 Process Frameworks Overview</p> <p>Readings:</p> <ul style="list-style-type: none"> • Chapters 2 and 3, IT Governance Using COBIT® And VAL IT™: Student Book, 2nd Edition <p>Session 12 ITIL - IT Systems Management Governance</p> <p>Readings:</p> <ul style="list-style-type: none"> • ITIL®: The Basics • Cross-Reference ITIL® V3 and MOF 4.0

Week	DESCRIPTION
	<ul style="list-style-type: none"> • Schiesser, Chap 6 • 2014 Campbell Case Study (http://ibit.temple.edu/wp-content/uploads/2014/11/IBITReport_CampbellSoup.pdf) <p>Review for Exam 1</p> <p>Assignment #2 (Group) - Portfolio Prioritization Due: Friday, Jun 21st, 11:59 PM</p>
<p style="text-align: center;">5</p> <p>Jun 25</p>	<p>TEST 1 – Jun 25th, material through week 6, session 11.</p>
<p style="text-align: center;">6</p> <p>Jul 2</p>	<p>PART 3 – Managing the IT Infrastructure Session 13 & 14 Cloud Concepts and Models</p> <p>Readings:</p> <ul style="list-style-type: none"> • LGD, Chapter 6 • NIST, The NIST Definition of Cloud Computing, Special Publication 800-145 • Krishnun Sansurooah. An Overview of Cloud Computing Challenges and Its Security Concerns (http://ro.ecu.edu.au/cgi/viewcontent.cgi?article=1143&context=ecuworks2012) • Practical Guide to Cloud Computing (http://www.cloud-council.org/PG2CC_v2.pdf) • Conway, The IVI Cloud Computing Life Cycle • Salam et al, Chapters 1, 12, 10 • Schiesser, chap 22 <p>Sessions 15 & 16 Virtualization</p> <p>Readings</p> <ul style="list-style-type: none"> • LGD, Chapters 6, 7 • Salam Chapters 2, 7 • Virtualization: Benefits and Challenges (An ISACA Emerging Technology White Paper, Oct 2010) <p>Assignment #3 (Individual) – Process Framework Due: Saturday, Jul 6th, 11:59 PM</p>
<p style="text-align: center;">7</p>	<p>Sessions 17 & 18 - Infrastructure</p>

Week	DESCRIPTION
Jul 9	<p>Readings:</p> <ul style="list-style-type: none"> • LGD, Chapter 8 • Schiesser, chap 13 • Schiesser, chap 12 • Salam et al chapters 7, 8, 9 <p>Sessions 19 & 20 - Resource Management</p> <p>Readings:</p> <ul style="list-style-type: none"> • LGD, Chapter 9 • Salam et al, Chapters 4, 8, 7, 10 <p>Assignment #4 (Individual) – Cloud Data Management Due: Friday, Jul 12th, 11:59 PM</p>
8 Jul 16	<p>Sessions 21 & 22 Systems Management</p> <p>Readings:</p> <ul style="list-style-type: none"> • LGD, Chapter 10 • Schiesser, Chap 9 • DevOps Overview (ISACA) • Schiesser, Chap 10 • Schiesser, Chap 14 <p>Assignment #5 (Group) – Case: 1-888-JUNK-VAN Due: Friday, Jul 19th, 11:59 PM</p>
9 Jul 23	<p>Session 23 & 24 Systems Management (continued)</p> <p>Readings:</p> <ul style="list-style-type: none"> • Salam et al, Chapter 4 • Schiesser, Chap 8 <p>Session 25 Security, Availability, Privacy and Compliance</p> <p>Readings:</p> <ul style="list-style-type: none"> • Schiesser, Chap 7, 16 • Salam et al, Chapter 11 <p>Assignment #6 (Individual) – Big Box Company Due: Friday, Jul 26th, 11:59 PM</p>

Week	DESCRIPTION
<p>10 Jul 30</p>	<p>Session 26 Security, Availability, Privacy and Compliance (continued)</p> <p>Session 27 Business Continuity/Disaster Recovery</p> <p>Readings:</p> <ul style="list-style-type: none"> • Schiesser, Chap 17 • Salam et al, Chapter 12 <p>Session 28 Process Management & Exam Review</p> <p>Readings</p> <ul style="list-style-type: none"> • Schiesser, Chap 19, 21 • LGD, Chapter 11 <p>Assignment #7 (Group) - iPremier (A): Denial of Service Attack Group report due – Consulting Recommendations Due: Friday, Aug 2nd, 11:59 PM</p>
<p>Finals Aug 6</p>	<p>EXAM 2 – (Comprehensive, emphasizing chapters & material covered since Exam 1).</p>

Course and Instructor Policies

<p>Grading</p>	<p>This class assumes the student is working in a business environment. Considerable attention (and grading premium) will be given to following directions (both written and in class). All assignments will be graded based upon the appropriateness of its presentation, as well as on its content.</p> <p>Grade Components</p>
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Assignment 1 – Skills Assessment	Individual	50 points
Assignment 2 – Portfolio Prioritization	Group	100 points
Assignment 3 – Process Framework	Individual	100 points
Assignment 4 – Cloud Data Management	Individual	100 points
Assignment 5 - 1-888-JUNK-VAN	Group	100 points
Assignment 6 – Big Box Company	Individual	100 points
Assignment 7 - iPremier	Group	100 points
Exam 1	Individual	100 points
Exam 2	Individual	100 points
Engagement: Attendance / Participation	Individual	100 points
Total		950 points

Final letter grades are assigned based on the following scale:

Grading Scale

A+ ≥ 96.7%	B+ ≥ 86.7%	C+ ≥ 76.7%	D+ ≥ 66.7%
A ≥ 93.3%	B ≥ 83.3%	C ≥ 73.3%	D ≥ 63.3%
A- ≥ 90.0%	B- ≥ 80.0%	C- ≥ 70.0%	D- ≥ 60.0%
			F < 60.0%

eLearning	<p>eLearning will be used extensively throughout the course. Please make sure you are able to access and use eLearning effectively. For more details, please visit the eLearning Tutorials webpage for video demonstrations on numerous tools in eLearning.</p> <p>eLearning will be used for class content (e.g., class slides and assignment descriptions) and the recording of grades. Slides will be posted in eLearning before class is held. Class announcements (e.g., change in assignment dates) will be sent to the student email on record in eLearning. It is the students' responsibility to regularly check their UT Dallas email accounts.</p>
Email and Instructor Response Policy	<p>The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. All official student email correspondence will be sent only to a student's UT Dallas email address and your instructor and the UT Dallas will only consider email requests originating from an official UT Dallas student email account. This allows the University to maintain a high degree of confidence in the identity of each individual's corresponding via email and the security of the transmitted information.</p> <p>The instructor will respond to all student inquiries (emails, voice</p>

	messages, etc.) within 48 hours (excluding holidays and weekends).
Changes	The course will be very dynamic, so EXPECT changes. Any changes in assignments or schedules will be posted on eLearning.
Assignments	<p>All assignments, unless specifically marked as a Group Assignment, and all exams are to be individual efforts. You are not to collaborate with other students or to discuss individual assignments with other students prior to submission. Copying of homework, project assignments, or exams, in whole or in part, from other students or from assignments from previous semesters will be considered to be an act of academic dishonesty. Copying of materials for use in homework, programming assignments, or exams, in whole or in part and without proper use of citations, will be considered to be an act of academic dishonesty.</p> <p>All assignments will be submitted through eLearning. Submission of assignments by e-mail is <i>not</i> acceptable unless prior permission of instructor is obtained. Students are expected to submit all assignments on time. Assignments are due on the day and time noted in eLearning.</p>
Group Assignments	<p>This course will have group assignments where you will have to work as part of an assigned group to complete the assignment. Peer evaluations at the end of each group project will be collected to make grading more equitable. Students will be allowed to quit a group or fire a member from the group with the knowledge that the student must find a new group. If this situation arises, the instructor must be notified before the assignment is due; preferably, as soon as possible.</p>
Make-up exams, Extra Credit and Late Work	<p>Makeup exams may be given in the case of student's illness, family emergency, or religious holidays only. Please notify the instructor 1 week prior to the exam if you require a make-up exam and include a reason why a make-up exam is necessary. The student must make every effort to contact the professor prior to the exam if they cannot take the exam at its scheduled time. Class assignments cannot be made up.</p> <p>Opportunities to earn extra credit will not be provided.</p> <p>Assignments submitted after the deadline will be considered late. I do not accept late assignments unless prior arrangements have been made with the instructor. If you find that an assignment may be late, please inform the instructor in advance of when it is due, and negotiate any accommodations with the instructor.</p>
Grade Changes	<p>Grades can't be changed just because of student preference. Students must wait 24 hours after receiving a grade before discussing it with the professor, and then you have 7 days to question it. If you have a concern, I will regrade the assignment. After seven days, grades stand as they were posted, and I only change grades if I've made a mistake.</p>
Engagement:	Attendance is extremely important. Students are expected to attend all

<p>Class Participation and Attendance</p>	<p>classes in order to achieve maximum success. Students are required to participate in class discussions. Please inform the instructor and your team mates in advance of your absence.</p> <p>Attendance will be taken and used in consideration for the course grade; however, this grade will also reflect the instructor’s judgment of the value of contributions to class discussion. There is no makeup for missed in-class assignments. Points will be deducted from your final grade for poor attendance and poor participation.</p> <p>Meaningful Class Participation: You are expected to actively participate in the discussion of readings, contribute to the learning experience of the class, and meaningfully contribute to all group project work. Peer evaluations will be performed to assess group project participation.</p> <p>Active, consistent participation in class is an essential part of the learning experience. Meaningful participation in the class discussion is valued and needed. Meaningful participation means making a contribution to our discussion, not merely talking, and it does not mean repeating facts in the readings or simply agreeing with what others have said. Nor does it mean making a point here or there. Our interest is not in "right" or "wrong," it is whether you have made a contribution to the development of the issues under study; whether you have moved the class forward. One clear way of making a contribution is to critically evaluate the comments of your classmates where needed; it is not the instructor's duty alone to decide whether a remark is of value. Failure to participate and contribute penalizes you and the class in many ways: (1) you lose incentive to prepare the readings and case properly; (2) you lose the chance to further develop your oral communication skills; (3) you deprive all of us of your insights; (4) your ideas do not get scrutinized and evaluated by others.</p>
<p>Classroom Citizenship</p>	<p>Respect and Dignity: At UT Dallas, we appreciate and foster the many advantages that come from working in a diverse community where everyone is treated equitably, with dignity and respect. The University of Texas at Dallas is committed to providing an educational, living and working environment that is welcoming, respectful and inclusive of all members of the university community. An environment that is free of discrimination and harassment allows members of the university community to excel in their academic and professional careers. To that end, to the extent provided by applicable federal and state law, the University prohibits unlawful discrimination against a person because of their race, color, religion, sex (including pregnancy), national origin, age, disability, genetic information, or veteran status. The University’s commitment to equal opportunity extends its nondiscrimination protections to include sexual orientation, gender expression and gender identity.</p> <p>Students are expected to recognize and respect a diversity of backgrounds and opinions among their fellow students. They should demonstrate respect for all students as an individual, recognizing that students may bring differing backgrounds, opinions and insights into the classroom.</p>

<p>Scholastic Honesty</p>	<p>The University is committed to academic excellence and expects academic honesty from all members of the University community and believes that it is essential for academic excellence and integrity. Academic honesty includes adherence to guidelines established by the instructor in a particular course for both individual and group work. It prohibits representing the work of others to be one’s own (plagiarism); receiving unauthorized aid on an assignment (cheating); and using similar papers or other work products to fulfill the obligations of different classes without the instructor’s permission. Penalties for academic dishonesty may include a grade of “F” on the work in question or for the course. In addition, any student engaged in academic dishonesty will be subject to disciplinary action. Please refer to the UT Dallas Syllabus Policies and Procedures website (see below) for detailed information pertaining to academic dishonesty, including procedures for determining disciplinary action.</p> <p>All students are expected to maintain a high level of responsibility with respect to academic honesty. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced.</p>
<p>Course Evaluation</p>	<p>As required by UTD academic regulations, every student must complete an evaluation for each enrolled course at the end of the semester. An online instructional assessment form will be made available for your confidential use. A link to an online instructional assessment form will be emailed to you for your confidential use.</p>
<p>Comet Creed</p>	<p><i>This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:</i></p> <p><i>“As a Comet, I pledge honesty, integrity, and service in all that I do.”</i></p>
<p>UT Dallas Syllabus Policies and Procedures</p>	<p><i>The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus. Please see http://go.utdallas.edu/syllabus-policies for these policies. The information contained in this link (http://go.utdallas.edu/syllabus-policies) are included in this course syllabus. These topics include:</i></p> <ul style="list-style-type: none"> ▪ Sharing Confidential Information ▪ Campus Carry ▪ Technical Support ▪ Field Trip Policies, Off-Campus Instruction and Course Activities

- Student Conduct and Discipline
- Academic Integrity
- Copyright Notice
- Email Use
- Class Attendance
- Withdrawal from Class
- Student Grievance Procedures
- Incomplete Grade Policy
- Accessibility Services
- Religious Holy Days
- Resources to Help You Succeed

Campus Carry - The University's concealed handgun policy is posted on the campus carry website:

<http://www.utdallas.edu/campuscarry/files/UT-Dallas-Campus-Carry-Policy.pdf>

False Threats: Making a false threat at any Texas higher education institution is considered a **State Jail Felony**, not a Class A misdemeanor, according to a law passed by the Texas Legislature. This legislation was enacted in response to several threats in years past at several universities across the U.S. that disrupted classes and prompted evacuation of campus property, even though the reports turned out to be a hoax. This law relates to the offense of making or causing a false alarm or report involving a public or private institution of higher education. A person commits an offense under Section 42.06, Texas Penal Code, if he or she knowingly initiates, communicates or circulates a report of a present, past, or future bombing, fire, offense, or other emergency that he or she knows is false or baseless and that would ordinarily:

1. Cause action by an official or volunteer agency organized to deal with emergencies;
2. Place a person in fear of imminent serious bodily injury; or
3. Prevent or interrupt the occupation of a building, room, place of assembly, place to which the public has access, or aircraft, automobile, or other mode of conveyance.

An individual adjudged guilty of a state jail felony shall be punished by confinement in a state jail for any term of not more than two years or less than 180 days and, in addition to confinement, may be punished by a fine not to exceed \$10,000.

UT Dallas students should be aware that the State of Texas takes these

	threats seriously, and the legal consequences, which are severe, go beyond anything that the University's disciplinary committee can address.
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The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.