Course Syllabus

ŰĮD	Course Course Title Professor Term Meetings	ITSS 4370.501 Information Technology Infrastructure Ismat Zareen Spring 2023 Tuesday, 7:00pm - 9:45pm JSOM 2.803		
Professor Conta	ct Informatio	n		
Office Phone		096		
Other Phone		×.		
Office Location Email Address				
Teaching Assistant		en@utdallas.edu		
Office Hours	TA Office H Face-Face Thursday appointme phone. Offi adherence t E-mail is red using the <u>L</u> Using your to security a	 Teffy Annie George <u>TeffyAnnie.George.utdallas.edu</u> TA Office Hours: Tues/Thu 2-3.30 PM over Microsoft Teams or by Face-Face upon appointment request. Thursday 7:00-8:00PM in person or Microsoft Teams by appointment. Office hours will be held in person, or Teams or by phone. Office hours will require Comet Cards to verify identity in adherence to FERPA. E-mail is recommended for ALL communications during the semester, using the <u>UTD email system</u> for incoming and outgoing messages. Using your personal email address is STRONGLY discouraged, due to security and spam blocking concerns. eLearning will be used to post announcements, assignments, and grades. 		
	class, since Learning. P	required to bring your web-enabled computing device to a some of the in-class activities and tests will utilize e- lease see the instructor as soon as possible if you do not s to the required type of device.		

Course Pre-requisites, Co-requisites, and/or Other Restrictions

(including required prior knowledge or skills) ITSS 3300 and (MATH 1326 or MATH 2414 or MATH 2419 or OPRE 3340) and (CS 2305 or MATH 2333 or MATH 2418 or OPRE 3333) and ITSS 4330.

Course Description

ITSS 4370 Information Technology Infrastructure 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

- 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 enterprisewide 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.

Required Textbooks and Materials

Required Texts

 Scott D. Lowe, James Green and David Davis (2016). Building a Modern Data Center: Principles and Strategies of Design.

Available at: <u>http://www.actualtechmedia.com/wp-</u> <u>content/uploads/2016/05/Building-a-Modern-Data-Center-ebook.pdf</u> Note: This text is also available online in eLearning. THERE IS NO NEED TO PURCHASE THIS BOOK, with thanks to Atlantis for permission to distribute this book to students.

Required Materials

Cases (See eLearning for link to purchase. Cost is \$11.12):

1. Mark Jeffery, Joseph F. Norton & Derek Yung. MDCM, Inc. (B): Strategic IT Portfolio Management, 2006, Kellogg School of Management KEL172-PDF-ENG

2. Robert D. Austin & Jeremy C. Short. IPREMIER (A): Denial of Service Attack (Graphic Novel Version), 2009, Harvard Business School 609092-PDF-ENG

Books:

 Schiesser, Rich (2010). *IT systems management (2nd ed.)*. Upper Saddle River, N.J. : Prentice Hall. ISBN: 9780137025060, ISBN: 0137025068, ISBN: 9780136123521; ISBN: 013612352X Notes: Available online in Safari through the Library. NO NEED TO PURCHASE THIS BOOK.

Vanderburg, Eric. (2021). *CompTIA Cloud+ Certification All-in-One Exam Guide (Exam CV0-003)*, 1st Edition. McGraw-Hill Education. ISBN: 978-1264264872 Notes: Available online through the Library. NO NEED TO PURCHASE THIS BOOK.

Suggested Course Materials

Suggested Readings/Texts

None

Suggested Materials

I will post a variety of other resources as readings or supplemental references in the Readings and Resources pages in eLearning.

These could include links such as

http://media.wiley.com/assets/7338/48/9781119062981_DCIM_For_Dummies _Nlyte_2e.pdf, or to LinkedIn Learning for courses such as the Prepare for the CompTIA Cloud+ (CV0-003) Certification course (<u>https://www.linkedin.com/learning/paths/prepare-for-the-comptia-cloud-pluscv0-003-exam</u>)

Textbooks and some other bookstore materials can be found in eLearning or the McDermott library e-books or through the URLs provided. They may also be ordered online or purchased at the <u>UT Dallas Bookstore</u>, although access to them are provided in eLearning.

Assignments & Academic Calendar

(Topics, Reading Assignments, Due Dates, Exam Dates)

Week	DESCRIPTION
	PART 1 - Introduction to IT Infrastructure
1	Topic 1 - Introduction
TUES	Topic 2 - Trends in IT Management
Jan 17	Exercise: Top IT Trends Videos Introduction to Group Projects
	Readings: • Lowe, Green & Davis [LGD], Chapter 1
	Begin Class 1 – Introductions Part 1 and 2 Due: Monday, Jan 24, 11:45 PM
2	Data Centers
TUES Jan 24	 Readings: LGD, Chapter 2, 3, 11 BCS Foundation Certificate in Data Centre Infrastructure Syllabus (Version 1.3, Dec 2016) Schiesser, Chap 18

Week	DESCRIPTION
	Begin Assignment #1 (Individual) – Skills Assessment Due: Monday, February 6 th , 11:45 PM
3	PART 2 - IT Management and Governance
TUES	Topic 1 - IT Capability Maturity Framework (IT-CMF)
Jan 31	 Readings: Executive Overview: IT Capability Maturity Framework Schiesser, Chapter 3 Schiesser, Organizing for Systems Management
	Topic 2 – IT-CMF Critical Capabilities in these Macro Capabilities Managing IT Like A Business Managing the IT Budget Managing IT for Business Value
	Readings: • LGD, Chapter 4 • Schiesser, Chap 4 • Schiesser, Chap 15
	Begin Assignment #2 (Group) - Portfolio Prioritization Due: Monday, February 20th, 11:45 PM
4	Assignment #1 (Individual) – Skills Assessment Due: Monday, February 6 th , 11:45 PM
TUES Feb 7	IT-CMF Critical Capabilities in these Macro Capabilities Managing the IT Capability
	 Readings: LGD, Chapter 5 Schiesser, Chap 3 Peter Weill and Jeanne Ross, "IT Governance on One Page"
5	Process Frameworks Overview
TUES Feb 14	 Readings: Chapters 2 and 3, IT Governance Using COBIT[®] And VAL ITtm: Student Book, 2nd Edition
	ITIL - IT Systems Management Governance

Week	DESCRIPTION
	 Readings: ITIL®: The Basics Cross-Reference ITIL® V3 and MOF 4.0 Schiesser, Chap 6 2014 Campbell Case Study (http://ibit.temple.edu/wp-content/uploads/2014/11/IBITReport_CampbellSoup.pdf) Begin Assignment #3 (Individual) – Process Framework Due: Monday, February 27th, 11:45 PM
6	Assignment #2 (Group) - Portfolio Prioritization Due: Monday, February 20, 11:45 PM
TUES Feb 21	PART 3 – Managing the IT Infrastructure
	Cloud Concepts and Models
	 Readings: LGD, Chapter 6 NIST, The NIST Definition of Cloud Computing, Special Publication 800-145 (https://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication80 0-145.pdf) Vanderberg, Chapter 1 Krishnun Sansurooah. An Overview of Cloud Computing Challenges and Its Security Concerns (http://ro.ecu.edu.au/cgi/viewcontent.cgi?article=1143&context=ecuw orks2012) Practical Guide to Cloud Computing (https://www.omg.org/cloud/deliverables/CSCC-Practical-Guide-to- Cloud-Computing.pdf) Conway, The IVI Cloud Computing Life Cycle (http://www.edwardcurry.org/publications/Conway_IVILifecycle.pdf) Schiesser, chap 22
7	Assignment #3 (Individual) – Process Framework Due: Monday, February 27 th , 11:45 PM
TUES	Virtualization
Feb 28	 Readings LGD, Chapters 6, 7, 8 Vanderberg Chapters 5, 6 Virtualization: Benefits and Challenges (An ISACA Emerging Technology White Paper)
	Review for Exam 1

Week	DESCRIPTION
	Begin Assignment #4 (Individual) – Cloud Data Management Due: Monday, March 27th, 11:45 PM
8 TUES March 7	EXAM 1 Exam 1 – March 7 th – 9 th – see schedule posted in eLearning March 7 th is the tentative date. See eLearning for Exam date.
No Class Mar 13-19	Spring Break
9 TUES March 21	Resource Management Readings: • LGD, Chapter 9 • Vanderberg, Chapter 7 • Schiesser, chapters 12, 13 (optional reading)
10 TUES March 28	Assignment #4 (Individual) – Cloud Data Management Due: Monday, March 27th, 11:45 PM Systems Management: Change Management, Production Acceptance, Agile and DEVOPS Readings: • LGD, Chapter 10 • Schiesser, Chap 9 • DevOps Overview (ISACA) • Vanderberg, Chapter 8 and 10 • Schiesser, Chap 10 • Schiesser, Chap 14 Begin Assignment #5 (Individual) – Production Release Processes Due: Monday, April 10th, 11:45 PM

Week	DESCRIPTION
11 TUES April 4	Systems Management: Availability and Reliability Readings: • Vanderberg, Chapters 9 Schiesser, Chapter 8 Begin Assignment #6 Due: Monday, April 24 th , 11:45 PM
12 TUES April 11	Assignment #5 (Individual) – Production Release Processes Due: Monday, April 10th , 11:45 PM Security, Availability, Privacy and Compliance Readings: • Vanderberg, Chapters 11 and 12 • Schiesser, Chapters 7, 16 Begin Assignment #7 (Group) – TBD Consulting Recommendations due Due: <i>May 2nd</i> , 11:45 PM
13 TUES April 18	Business Continuity/Disaster Recovery Readings: • Vanderberg, Chapter 13 • Schiesser, Chap 17
14 TUES April 25	Assignment #6 (Individual) – Cloud Due: Monday, April 24th, 11:45 PM Assignment #7 (Group) – TBD Consulting Recommendations due Due: May 2nd, 11:45 PM Review for Exam 2 Group Project
15 May 2	EXAM 2 – Comprehensive, but emphasizing the chapters & material covered since Exam 1 Assignment #7 Due: <i>May 2nd</i> , 11:45 PM See eLearning for Exam date.

Week	DESCRIPTION
16 May 9	EXAM 2 Week

¹ Any changes to this schedule will be announced in class or through eLearning and it is the student's responsibility to keep track of them.

² Specific topics and due dates for individual assignments will described as each is posted in eLearning.

Grading Policy

(including percentages for assignments, grade scale, etc.)

This course will feature a mix of activities and written assignments that may be in class or on campus. Homework will include readings from research materials, assignments, and activities that usually require the student to complete some type of task. Projects will also require outside research. The instructor will provide detailed instructions as well as the grading criteria for each assignment. Pleaseconsult the course schedule for deadlines.

Grading Policy

This class assumes the student is working in a business environment. It is understood that our business environment has changed in numerous ways in recent months, such as telecommuting, working from home, and social distancing. 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. All grades will be posted as available, in eLearning throughout the term.

Grade changes - Grades can't be changed just because of student preference. You are encouraged to ask questions, raise issues, and make observations about homework; pleasebe advised that if you have a question or issue with your assignment grade, your entire assignment is subject to re-review (re-grading) which may or may not result in additional point deductions. Any concerns about grading must be documented in email to the instructor within 7 days of the grade being posted to eLearning. Students must wait 24 hours after receiving a grade before discussing it with the professor, and then you have 7 days to question it. After seven days, grades stand as they were posted, and I only change grades if I've made a mistake.

Grade Components

The grade components for the course are listed in the table below.

Grade Component	Individual/ Group	Points
Assignment 1 – Skills Assessment	Individual	50
Assignment 2 – Portfolio Prioritization	Group	100
Assignment 3 – Process Framework	Individual	100
Assignment 4 – Cloud Data	Individual	100
Management		
Assignment 5 – Production Release	Individual	100
Processes		
Assignment 6 – Cloud Lab	Individual	100

Assignment 7 - TBD	Group	250
Two Exams	Individual	250 each (250x2) = 500
Attendance	Individual	150
Discussion Post	Individual	30 each (30x5) = 150
Extra Credit: Relevant professional certification completed	Individual	(up to +75)
Total (without extra credit)		1,600

Course Grade

Final letter grades are assigned based on the following grading scale.

Grading Scale

A+ ≥ 96.7%	B+ <u>≥</u> 86.7%	C+ <u>></u> 76.7%	D+ <u>≥</u> 66.7%
A <u>></u> 93.0%	B <u>></u> 83.0%	C <u>></u> 73.0%	D <u>></u> 63.0%
A- <u>></u> 89.5%	B- <u>></u> 79.5%	C- <u>></u> 69.5%	D- <u>></u> 60.0%
			F < 60.0%

Course & Instructor Policies

(make-up exams, extra credit, late work, special assignments, class attendance, classroom citizenship, etc.)

	All assignments will be submitted through eLearning. Submission of assignments by e-mail is not 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.
Assignments	Individual Work: 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.
	Group Work: 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.
	Exams are scheduled well in advance. Missing an exam result in a score of zero. Make-up exams will be given only for justified situations; discuss it with the instructor BEFORE the scheduled exam. If you contact the instructor after the exam, it is considered missing the exam, and no credit will be given for missed exams.
	Exams may be proctored, in which case specific instructions will be provided.
Exams	As your course has a proctored exam requirement, please see the <u>UTD</u> <u>Testing Center</u> webpage to make arrangements. If your exam is scheduled at the Testing Center, you must reserve your seat online through RegisterBlast (exam scheduling tool) no later than 72 hours prior to the exam time. i.e., if you are taking an exam on Monday, September 6th @ 1:00 P.M., you should have completed your registration before/by Friday, September 3rd @ 12:59 P.M.
	If you try registering after the cutoff deadline, instead of being able to select a time to test you will only see the error message "All Times are Full". If you do not have an appointment you will need to contact your professor directly to make other testing arrangements.
	NOTE: THE TESTING CENTER DOES NOT ALLOW WALK-IN APPOINTMENTS, <u>NO EXCEPTIONS</u> . So, please plan ahead and reserve your seat early and in advance.
Make-up Exams	No make-up exams will be given, without an emergency situation or advance coordination with the professor. If you have questions, please ask.

Academic Honesty	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 entire 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. All students are expected to maintain a high level of responsibility with respect to academic honesty. Students who violate University rules on academic honesty 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. DO NOT CHEAT and DO NOT PLAGIARIZE. All individual assignments and exams are to be individual efforts. You may collaborate with other students, or to discuss homework or assignments with other students, or to discuss homework on publicweb sites is also considered an act of academic dishonesty. Copying of homework, project assignments, or exams, in whole or in part, from other students or from assignments from previous semesters, or will be considered to be an act of academic dishonesty. Copying of materials for use in homework, project assignments, or exams, in whole or in part and wit
Extra Credit	One opportunity to earn extra credit will be provided. Completion of a relevant professional certification, Cloud+ (CV0-003) Certification or other relevant professional certification, completed and uploaded into eLearning before December 5 will receive up to 75 (seventy-five) extra credit points. Please check with the instructor about other certifications, such as ITIL Foundation, Scrum Foundation, Security+, etc.

Late Work	Students are required to submit all assignments on time by the deadline specified in eLearning. Assignments submitted after the due date will be considered late. Without exception, late work (or work that is submitted, but did not follow the provided instructions) will result in a reduced score or a score of zero (0). You may not submit late or incomplete work 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. I will work with you if there are legitimate issues that arise. NEITHER LATE SUBMISSIONS NOR HOMEWORK ASSIGNMENTS SENT BY EMAIL WILL BE ACCEPTED AND THUS WILL NOT BE GRADED unless prior arrangements are made and verified with the instructor. There will be no make-up assignments, nor considerations for last-minute technical difficulties preventing submissions to eLearning, so plan ahead. Students may submit (and resubmit, as it is before the due date) interim work into eLearning, to ensure their work will be graded.
Special Assignments	There are no special assignments.

Class Materials

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the <u>Student Code of Conduct</u>.

Class Attendance

The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.

Class Participation

Regular class participation is expected. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the <u>Student</u> <u>Code of Conduct</u>.

eLearning

eLearning will be used for all class content (e.g., class slides and assignment descriptions), exams, and the recording of grades. Slides will be posted before class is held. Class announcements (e.g., change in assignment dates) will be posted in eLearning.

It is the students' responsibility to regularly check their UTD email accounts and the eLearning site for this course.

This course can be accessed using your UT Dallas NetID account on the eLearning website. Please see the course access and navigation section of the Getting Started with eLearning webpage for more information. To become familiar with the eLearning tool, please see the Student eLearning Tutorials webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The eLearning Support Center includes a toll-free telephone number for immediate assistance: (1-866-588-3192), email request service, and an online chat service.

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the <u>Student Code of Conduct</u>.

NOTE: if the instructor records any part of the course, then the instructor will need to add the following syllabus statement:

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

Off-campus Instruction and Course Activities

(Below is a description of any travel and/or risk-related activity associated with this course.)

None.

Comet Creed

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:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

Academic Support Resources

The information contained in the following link lists the University's academic support resources for all students.

Please see http://go.utdallas.edu/academic-support-resources.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please review the catalog sections regarding the <u>credit/no credit</u> or <u>pass/fail</u> grading option and withdrawal from class.

Please go to <u>http://go.utdallas.edu/syllabus-policies</u> for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.