UNIVERSITY OF LOUISVILLE®

COLLEGE OF BUSINESS

INFRASTRUCTURE TECHNOLOGIES CIS 350-01-4208 Fall 2020

I. Professor / Instructor	
Instructor	Dr. J. Zurada, Professor of CIS, Computer Information Systems, College of Business
Contact information	Cell phone: +1 502 417 1253 via WhatsApp, Viber, or directly Skype: jozef.zurada Email: jozef.zurada@louisville.edu
Proposed virtual meetings/office hours via MS Teams	Selected Tuesdays and/or Thursdays: 11a.m. to 12:15p.m. US Eastern Time. These meeting dates are proposed only and they do not imply your mandatory attendance. I will send an advance notice via MS Teams or email about the dates and times of meetings. Meetings by appointment are also available. Please contact me via e-mail, Skype, WhatsApp, Viber, or directly, to set up an individual or a small group meeting via MS Teams at a mutually convenient time. Due to the coronavirus and family situation (my wife's illness), I am temporarily in Poland and will be teaching this course from here. The time difference is +6 hours here. Thus, the most convenient time for me for meetings would be Tue through Thu between 6a.m. and 5p.m US Eastern Time. However, I will make myself available at other times in extenuating circumstances. Please send me e-mails from your U of L email account, not from your private account, to set up a meeting. The email sent from your private account may end up in my spam folder and I may miss it.

II. Course Information	
Class delivery via Panopto, MS Teams, and Blackboard	• This class is offered online with 100% digital instruction and no designated meeting times. The lectures, lab demos, guest speaking events (if any) and other topics will be recorded offline on Panopto.

	However, I would like to meet as many of you as possible via MS Teams at the mentioned days and times. Your participation in meetings is voluntary. During meetings, I will typically answer your questions and may discuss excerpts of my recordings on Panopto, practice tests, tests, homeworks, small group activities, labs as well as solutions. Meetings do not have to last 1 hour and 15 minutes. If we do not have items to discuss, we will adjourn. As mentioned individual and/or group meetings by appointment are also available. Most of the meetings will be recorded so that you can listen to their content if you miss them. Guest speaking events, if any, will be delivered via MS Teams. All course materials will be posted on Blackboard.
Required text	• *The Architecture of Computer Hardware, Systems Software & Networking: An Information Technology Approach*, I. Englander, Wiley, 5th ed., 2014, ISBN: 978-1-118-32263-5. or • *The Architecture of Computer Hardware, Systems Software & Networking: An Information Technology Approach*, I. Englander, Wiley, 5th ed., December 2014, ISBN: 978-1-118-80312-7. (E-text) http://www.wiley.com/WileyCDA/WileyTitle/productCd-EHEP002899.html#purchase • Other materials will be posted on Blackboard.
Reference text	• *Systems Architecture,* S. D. Burd, Cengage Learning, 2016, 7the ed., ISBN-13: 978-1-305-38953-3. • *IT Infrastructure Architecture: Infrastructure Building Blocks and Concepts*, 3rd ed., S. Laan, Lulu Press, Inc., 2017, ISBN: 978-1-326-91297-0.
Course description	This course provides an introduction to IT infrastructure issues and covers topics related to computer and systems architecture and communication networks, with an overall focus on the services and capabilities that IT infrastructure solutions enable in an organizational context. It gives students the knowledge and skills that they need for communicating effectively with professionals whose special focus is on hardware and systems software technology and for designing processes and solutions that require in-depth understanding of the IT infrastructure capabilities and limitations. It also prepares students for interaction with external vendors of IT infrastructure components and solutions.
Prerequisites	CIS 199

Learning objectives	• To provide the fundamental concepts relating data representation and data formats; computer hardware, architecture, and networks; operating systems; and data communications. • To provide some experience with different operating systems such as UNIX/Linux. • To introduce students to systems concepts as well as client/server and web-based computing and applications.
Teaching / Learning Pedagogy/Groups	• Topics noted in the "Tentative Course Outline" section of the syllabus will be covered through a combination of lectures and lab demos recorded on Panopto as well as homeworks, labs, and small group activities. To earn credit for small group activities you need to work on the assigned problems with your group. I have created 8 groups at random, each consisting 4 or 5 students. A link to Groups appears in the content area in Blackboard (https://blackboard.louisville.edu/webapps/login). You can identify your group number, the names of students assigned to your group, and the tools such as Blackboard Collaborate Ultra, Discussion forum, and/or E-mail you can use to communicate with your group. If you wish to change your current group and be in a group with classmates you know, please let me know via e-mail. I will try to accommodate your request. After sometime, say 2 weeks after we start the course, I will assume that the group compositions are permanent for the entire semester. • Small group activities cannot be made up after the submission deadline elapses. Two lowest grades for small group activities will be dropped. For example, if you miss up to two small group activities and get a 0, it will not impact your final grade. Due dates for tests, homeworks, small group activities, and labs will be posted on Blackboard. It is your responsibility to check Blackboard frequently and be aware of the deadlines for the assignments and materials covered during a given week. I will send you e-mail at least once a week to remind you about the materials covered and assignments due. • Using Panopto I will follow and discuss the lecture notes in Word/pdf posted on Blackboard and/or use PowerPoint (PP) presentations. The lecture notes provide a thorough summary of the textbook chapters

	for most chapters. You should also read all required chapters from the textbook, except chapters 3 and 5. • The class materials including the course syllabus and schedule, instructor's professional profile, PP presentations of lectures, lecture notes, assignments (labs, homeworks, and small group activities), solutions, practice tests, and tests will be posted on Blackboard. Your assignments should be submitted for grading via Blackboard only. Tests will also be administered via Blackboard. You need to read and review the course materials regularly and start working on the assignments early, a few days before the deadline, not at the last moment. If you ask me questions about assignments a few hours before the deadline, I may not be able to help you.
Final drop date	See: http://louisville.edu/calendars/academic/undergrad-grad
Expectations of outside time required for class	To be successful you should allow at least 7.5 hours for reading, homeworks and labs, research and study time each week.
Scantron sheets	Will not be needed.

III. Evaluation			
Grading scale	A+ = 97 to 100% B+ = 87 to 89.99% C+ = 77 to 79.99% D+ = 67 to 69.99% Below 60% = F	A = 93 to 96.99% B = 83 to 86.99% C = 73 to 76.99% D = 63 to 66.99%	A- = 90 to 92.99% B- = 80 to 82.99% C- = 70 to 72.99% D- = 60 to 62.99%
Grading scheme	Grading component		Weighted grading percentage
	4 Tests online via Blackboard		65%*
	Assignments: (Homeworks, Small Group Activities, and Labs) via Blackboard		35%
	Total		100%

*You must get at least 60% total average (a D- grade) on the 4 tests to pass the course.

IV. Tentative Schedule			
Week	**Date**	**Topic**	**Readings**
1	Aug 17 – Aug 23	Syllabus and Course Schedule, Course Administration, The Course Topics and Instructor's Profile.	Read the materials posted on Blackboard in the Course Information folder, and pp. 2-3 from the textbook.

		Computers and Systems	Chapter 1 (Sections 1.0-1.6), pp. 4-37.
	Aug 17 – Aug 23	An Introduction to Systems Concepts and Systems Architecture	Chapter 2 (Sections 2.0-2.2), pp. 38-69.
		Number Systems	The lecture is based on the lecture notes (LN) only. Do not need to read Chapter 3 (pp. 70-99).
2	Aug 24 – Aug 30	Number Systems	The lecture is based on LN only. Do not need to read Chapter 3 (pp. 70-99).
	Aug 24 – Aug 30	Representing Numerical Data	The lecture is based on LN only. Do not need to read Chapter 5 (pp. 136-175).
		Data Formats	Chapter 4 (Sections 4.0-4.7), pp. 100-135.
3	Aug 31 – Sep 6	The Little Man Computer	Chapter 6 (Sections 6.0-6.6), pp. 176-193.
4	Sep 7 – Sep 13	The CPU and Memory	Chapter 7 (Sections 7.0-7.6), pp. 194-224. Sections 7.7-7.8 on pp. 224-233 are covered very superficially.
5	Sep 14 – Sep 20	CPU and Memory: Design, Enhancements and Implementation	Chapter 8 (Sections 8.0-8.6), pp. 234-265.
	Sep 14 – Sep 20	**Test 1**: **Chapters 1-6 and LN** (to the extent it was covered on Panopto, textbook chapters, and any extra materials assigned for reading), small group activities, and homeworks. Work Sample Test 1 posted on BB.	Test 1 will be posted on BB. The test is open book and open notes. You will work Test 1 and submit it via BB.
6	Sep 21 – Sep 27	Input/Output	Chapter 9 (Sections 9.0-9.5), pp. 266-293.
	Sep 21 – Sep 27	Computer Peripherals	Chapter 10 (Sections 10.0-10.9), pp. 294-331.

7	Sep 28 – Oct 4	Computer Peripherals	Chapter 10 (Sections 10.0-10.9), pp. 294-331.
		Modern Computer Systems – Read on your own. It will not be recorded on Panopto.	Chapter 11
	Sep 28 – Oct 4	**<u>Guest Speaking Event</u>**. Speaker to be announced. The date of the event may change.	
8	Oct 5 – Oct 11	**Fall Break – Mon –Tue (Oct 5 – Oct 6)**	
	Oct 5 – Oct 11	Operating Systems: An Overview	Chapter 15 (Sections 15.0-15.5), pp. 474-509.
9	Oct 12 – Oct 18	**Test 2** – **Chapters 7-11 and LN** (to the extent it was covered in Panopto, textbook chapters, and any extra materials assigned for reading), small group activities, and homeworks. Work Sample Test 2 posted on BB.	Test 2 will be posted on BB. Test 2 is open book and open notes. You work Test 1 and submit it via BB.
	Oct 12 – Oct 18	The User View of Operating Systems	Chapter 16 (Sections 16.0-16.6), pp. 510-543.
		Windows Command Prompt	Labs 1 & 2
10	Oct 19 – Oct 25	Unix/Linux	LN
	Oct 19 – Oct 25	Unix/Linux Command Prompt Read the chapter on Virtualization	Labs 3, 4, and 5 See Blackboard
11	Oct 26 – Nov 1	File Management	Chapter 17 (Sections 17.0-17.10), pp. 544-585.
		The Internal Operating System	Chapter 18 (Sections 18.0-18.11), pp. 586-657.
12	Nov 2 – Nov 8	Election Day – Tue, Nov 3	
	Nov 2 – Nov 8	Networks and Data Communications	Chapter 12 (Sections 12.0-12.5), pp. 358-399.
13	Nov 9 – Nov 15	**Test 3** – **Chapters 15-18 and LN** (to the extent it was covered in Panopto, textbook chapters, and any extra materials assigned for reading), small	Test 3 will be posted on BB. It is open book and open notes.

		group activities, and labs. Work Sample Test 3 posted on BB.	You will work Test 1 and submit it via BB.
	Nov 9 – Nov 15	Ethernet and TCP/IP Networking	Chapter 13 (Sections 13.0-13.10), pp. 400-441.
14	Nov 16 – Nov 22	Ethernet and TCP/IP Networking	Chapter 13 (Sections 13.0-13.10), pp. 400-441.
	Nov 16 – Nov 22	**Guest Speaking Event**. Speaker to be announced. The date of the event may change.	
15	Nov 23 – Nov 29	**Thanksgiving break – (Wed – Sun), Nov 25 – Nov 29**	
	Nov 23 – Nov 29	Communication Channel Technology	Chapter 14 (Sections 14.0-14.4), pp. 442-473.
16	Dec 1 (Last day of classes)	Course Review. Practice Test #4	
	Thu, Dec 3, between 12.00AM – 11:59PM. Test time to be determined, typically 75-80 minutes.	**Test 4 - Chapters 12-14 and LN** (to the extent it was recorded on Panopto, textbook chapters, and any extra materials assigned for reading), and homeworks. Work Sample Test 4 posted on Blackboard See: http://louisville.edu/registrar/registration-information/final-exam-schedules	Test 4 will be posted on BB. It is open book and open notes. You will work Test 1 and submit it via BB.

V. Additional Work Details	
Grades on Blackboard	Posting and correction of grades. Grades will be posted on the course website (Blackboard) and students need to check them periodically. If a posted grade is incorrect, please dispute within one week after it is posted by calling me or sending e-mail. No grades will be changed one week after the posting.
Participation and class contribution	• I strongly encourage you to listen to the lectures recorded on Panopto, participate in online meetings via MS Teams if you can, and read the lecture notes and the textbook. If you cannot participate in the meetings at the proposed days and times, listen to the recordings of the meetings. • The chapters from the textbook will be covered very selectively. Not every section in every chapter will be covered. The student will be fully responsible for all materials covered in

	the recorded lectures and recorded meetings and the work assigned. • It is your responsibility to take online tests and turn assignments on time. The deadline for assignments is given in US Eastern Time Zone. If you have questions, which require longer answers, about any assigned problems (homeworks, small group activities, labs, sample tests, tests, etc.) or the materials covered, please contact me via e-mail, phone, WhatsApp, Skype, or ask to set up an individual or a small group meeting via MS Teams. • Demonstrate professionalism and proper etiquette in online discussions and while working on all learning activities and speak only for yourself.
Changes in the syllabus	Any changes to the syllabus and course schedule will be announced in class and posted on Blackboard.

V1. Student Responsibilities / College and University Issues	
University of Louisville student conduct and responsibilities	This course will abide by University of Louisville student conduct and responsibilities with regards to ethics and related issues: http://louisville.edu/dos/students/studentrightsandrespsonsibilities
College of Business student conduct and responsibilities	This course will abide by College of Business student conduct and responsibilities with regards to ethics and related issues: https://business.louisville.edu/current-student-resources/student-rights-policies/
Religious holiday conflict policy	http://louisville.edu/diversity/diversity-resources-for-students
University policy on equal access	http://louisville.edu/disability
Title IX/Clery Act Notification concerning sexual misconduct	http://louisville.edu/delphi/resources/syllabus/samples Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies. Students experiencing such behavior may obtain confidential support from the PEACC Program (852-2663), Counseling Center (852-6585), and Campus Health Services (852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (852-5787) or University of Louisville Police (852-6111). Disclosure to University faculty or instructors of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a

	campus visitor or University student or employee (whether current or former) is not confidential under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University's Title IX officer.
Policy regarding assignments and student conduct	• Everything submitted for grading must reflect your own work. Your solutions to the assignments (homeworks, small group activities, and labs in the pdf or Word format should be submitted via Blackboard on or before the due date US Eastern Time. Make sure that you are submitting the correct documents. With multiple submissions, the last submission will be graded. No late assignments will be accepted. Solutions to assignments will be posted on Blackboard. Prior permission is needed for make-up examinations. "No shows" on test day will automatically receive a "zero" for that test. • You may use the group and/or class discussion forum to discuss and ask questions about your homework, small group activity, sample test, and lab problems, but submitted solutions should reflect your individual work. Labs and tests are individual work. Most homeworks you can do in groups of 2 students maximum. Small group activities are done in the designated groups of 4 or 5 students. For group work one submission only is needed.

COVID Policy	**COVID-19 Guidelines**
	As a Community of Care, all Cardinals are expected to abide by public health guidelines and regulations as published by the University. For Fall 2020, this includes:
	• Wearing of cloth/paper masks (covering nose and mouth) when in shared indoor spaces like classrooms, or when appropriate physical distancing cannot be maintained. (Per the Code of Student Conduct, a student who refuses to follow these guidelines may be asked to leave a classroom)
	• Staying home when sick—any UofL community member experiencing fever, consistent dry cough, or other symptoms of contagious disease should remain at home until symptoms subside or advised that it is safe to return by a medical professional.
	• Practicing good hygiene and responsibility for one's own surrounding.
	    o Cover sneezes and coughs
	    o Wash hands frequently with soap and water when possible, use hand sanitizer when soap and water are not available
	    o Wipe down frequently touched surfaces
	    o Maintain 6 feet physical distancing when possible
	
	Faculty have the responsibility to help students meet these recommendations by:

	- Allowing for remote participation in class when necessary and practicable
- Allowing students absent for reason of illness to make up missed work and not penalize students for these absences
- Not requiring doctor's notes for absences of less than the equivalent of two weeks of class. If the absences occur on the day of a scheduled assessment, the student may be asked to provide documentation for the absence
- Notifying Physical Plant when classrooms are not adequately stocked with cleaning supplies and arranging classroom furniture or seating charts to maximize physical distancing where possible.

VII. Other Notes
Please keep in mind that I have a **hearing disability** which severely impairs the hearing in my right ear and reduces the hearing in my left ear. This condition cannot be easily remedied with the hearing aids I am wearing. To allow me to answer your questions please ask your questions loudly and clearly. If necessary, I will ask you to repeat the question.