Department of Computer & Information Science
IUPUI
CSCI 53200/49000 Cloud Computing Systems
Spring 2022
Tentative Syllabus

Instructor Information

Instructor: Arjan Durresi

Office: Online on zoom or email

Office hours: Tuesday, Thursday 2:00-3:00 P.M., online, by appointment online.

Phone: 274-8942

Email: adurresi@iupui.edu

TA Information

TA: Davinder Kaur,

Email: davikaur@iu.edu

Office: Online on zoom or email

Office hours: Tuesday and Thursday: 12 p.m. -1 p.m. and by appointments

Objective

This course has the following five general objectives:

1. Communication and Quantitative Skills
2. Critical Thinking
3. Integration & Application of Knowledge
4. Instinctual Depth, Breadth and Adaptiveness
5. Values and Ethics

Most of these principles will be integrated in various parts of the course such as homework, exams, and projects.

More specifically, the course specific topics cover the architectural aspects of modern networking, by exploring the potentials of future mobile and cloud computing and their interplay. The course builds on students' prerequisite knowledge from studies in computer

networks, operating systems and computer architecture. Material covered in the class will include some concepts from several textbooks and research papers. The course is highly interactive, based on class discussions. Important part of the course will be dedicated to improve the research skills, such as writing papers and preparing presentations. Please pay attention to the class discussion and lecture. Some topics to be covered are together with a tentative schedule are:

Date	Topic
	Course Overview
	Networking and Computing Trends
	Data Center Networking
	Data Center Networking, Data Center Ethernet
	Network Topologies for Cloud, Network Disaggregation
	Network Operating Systems
	Routing Protocols for Cloud, Network Virtualization
	Inter Cloud Networking, Micro Clouds
	Server Virtualization, Containers
	Storage Virtualization
	Cloud Computing Case Studies
	Quantum Computing in Cloud
	Project Submission

Besides the technical content the instructor will cover other aspects of research activities, such as how to select a research topic, how write research papers, and how to present research results.

Textbook

No textbook is required.

Research Papers

Students will read and review several research papers, which will cover important topics in networking. The reports based on the review of research papers are part of homework.

Presentations

Students will present reviews of research papers.

Project

An important component of the course will be the project. The projects can be individual or in teams, after the instructor approval. The topics of the projects will be decided in collaboration with the instructor. The report of the project will be in the form of a research paper.

Online Communication

The canvas will be used in this class for online communications, electronic handouts, grade information, etc. You will need your IUPUI network id to access canvas. When you officially register for the course, you will have access to the class material automatically.

Grading Information

There will be a number of papers' reviews. Students will also accomplish a project and write a project report in the form of a research paper.

The breakdown of the percentages on the final grade is as follows:

Activity in the class, involvement in class discussion and presentations 5%

Three quizzes, two best grades 60%

Project 35%

The grades will be kept as numerical values throughout the semester and the instructor will assign a letter grade for the class at the very end based on the total weighted course score as described above. The letter grade assignment will be curved and will be based on the ranked values of the total weighted scores computed for the course. The letter grade thresholds will be determined based on the distribution of these total course scores.

We will not use the Canvas grading system.

Academic Honesty and Student Responsibilities

Students are responsible for getting their work done in time, working independently, attending class, checking canvas and email for new announcements and assignments. They are responsible not only for the reading material from the textbook and research papers, but also all the material covered in lectures, including material not covered in textbook or research papers. Your work in this class must be your own and cheating is not tolerated. The Academic Integrity of IUPUI standard will be followed.

If a student does not abide by this policy then, for the first violation, he/she will receive zero points for the component of the course on which academic misconduct occurred and will be

reported to the Department Chairperson. If the violation is not related to a specific assignment or exam, the course instructor reserves the right to impose the zero-point penalty to any component of the course.

For a second violation of academic integrity (occurring anywhere in the graduate or undergraduate curriculum, in the same or a different semester, in the same or a different course), the student will receive a failing grade for the course where the second violation occurred, as enforced by the Department Chair and the School of Science Dean's Office, and, in addition, an official reporting process will be initiated by the Department Chair as per IUPUI's Student Conduct Policies: http://studentaffairs.iupui.edu/student-rights/student-code/.

For a third violation, the department will initiate dismissal request from the program in which the student is enrolled.

In all cases of academic integrity violation, the involved student will be notified in writing at the time the offense is observed and acknowledge the receipt of such notice in writing.

This is the minimal policy and the department reserves the right to impose more severe penalties for the first and/or second offense of academic misconduct.

The student will have opportunities to file appeals at the department, the school, and the university levels, to contest the academic dishonesty finding and/or the imposed penalty.

At the department level, any appeal will be made to the department's graduate or undergraduate committees respectively, depending on whether the student is a graduate or an undergraduate student. The graduate or undergraduate committee chair will substitute any committee members involved in the penalty imposition process with other faculty members with no conflicts of interest before processing the appeal. If desired, a student can pursue a further appeal to the School of Science Appeals Committee. Finally, the student can also submit an appeal to the IUPUI Appeals Committee.

Adaptive Educational Services

Every attempt will be made to accommodate students with disabilities (e.g. mental health, learning, chronic health, physical, hearing, vision, neurological, etc.). You must have established your eligibility for support services through the Adaptive Educational Services office that serves students with disabilities. Note that the services are confidential, may take time to put into place and are not retroactive; Captions and alternate media for print materials may take three or more weeks to get produced. Please contact AES office as soon as possible if accommodations are needed, AES is located in room 100 Taylor Hall, 317-274-3241.