CLASS (CECS 327), Introduction to Networks and Distributed Computing, Spring 2022

Instructor:

Name	Email	Office Hours	Office
Malik Luti	Malik.luti@csulb.edu	Friday 2:00 PM or by appointment	Zoom Link will be available on Beachboard
Student Assistant	Sarah Lum sarah.lum@student.csulb.edu		

Lectures:

Class	Title	Date and Time	Room
CECS 327-01	Seminar	Tu 7:00PM - 9:30 PM	Online / ECS 105
CECS 327-02	Seminar	We 4:00PM - 6:30PM	Online / COB 139A

Course Description (copy from the course catalogue):

Computer network architectures and protocol layers, including LANs, MANs, and WANs; OSI protocol TCP/IP, routing, congestion, and flow control; data compression; interface between the network and the program (e.g., sockets, ports, mailboxes), distributed file systems, remote procedure calls, and cloud computing.

Units (copy from the course catalogue):

Prerequisite (copy from the course catalogue): CECS 326 with a grade of "C" or better.

Required Textbook:

1. Distributed Systems: Concepts and Design. George Coulouris, Jean Dol-limore, Tim Kindberg and Gordon Blair. Fifth Edition, Pearson, 2012.
2. Computer Networks, Fifth Edition: A Systems Approach (The Morgan Kaufmann Series in Networking).

ABET Student Outcomes:

The course satisfies following ABET student outcomes:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed

judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Course Objectives

- Understand computer networking fundamentals.
- Gain knowledge of current choices in media, topologies, architectures, protocols and standards in computer networks.
- Understand the basic concepts of routing.
- Understand the key principles behind retransmission protocols, congestion control algorithms, and TCP/UDP.
- Explain Internet addressing and naming.
- Gain knowledge of how applications run on the internet.
- Understand cloud computing concepts including:
    - Infrastructure As A Service (IAAS)
    - Platform As A Service (PAAS)
    - Software As A Service (SAAS)

Course Structure and Delivery Mode

This course is conducted entirely online(or in the hybrid format) . You will access the course material and activities on BeachBoard and are required to participate in synchronous class meetings via Zoom.
If you need technical assistance at any time during the course or need to report a problem with BeachBoard, please contact the Technology Help Desk using their online form, by phone at (562) 985-4959.

Course Communication

We will use BeachBoard to **make announcements,** communicate information, post assignments and corresponding due dates, and discuss course-related topics. **Please note, it is your responsibility to check** BeachBoard's dashboard **regularly, as** it will contain **important information about upcoming class assignments, activities, or concerns.**
Add additional info as needed.

Tentative Course Schedule

Week	Topics	Work Due

1	Course logistics Overview of computer networking Definition, Types, Connectivity	Read the syllabus and chose research topic
2	Switched Networks Resource Sharing Layering and protocols	Upload the research papers to Beachboard
3	Performance metrics Network Tools	Assignment 1
4	Network Devices	Assignment 2
5	Routing	Assignment 3
6	IP Addressing Subnetting	
7	Subnetting	
8	Subnetting Midterm Review	Assignment 4
9	Midterm	
10	Fragmentation	
11	Network programming Transport Protocols (TCP/UDP Congestion Control, TCP/UDP Reliability and Implementation Issues)	Assignment 5
12	Introduction to cloud computing	
13	Google Cloud	Assignment 6
14	Google Cloud	
15	Review	

Course Policies

Grading Policy

GRADING SCALE

LETTER GRADE	PERCENTAGE
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	59% and below

Evaluation Components and their Percentages

Evaluation Components	Weight
Assignments	30%
Presentation/Paper	20%
Pop Quizzes	10%
Midterm Exam	20
Final Exam	20
Total	100%
Extra Credit	12%

Evaluation Components

Late Assignments: Late homework and lab reports will not be accepted.
Exams/Quizzes: No makeup exams/quizzes will be given.

How to Contact the Instructor:

The instructor can be reached through email or during the office hours that were provided earlier in this document.

Virtual Office Hours

The office hour will be held virtually every Friday at 2:00 PM PST. If you feel that you want to have an office hour then you need to coordinate that with the instructor. Different office hours on different days may be offered during the week under certain circumstances and it needs to be coordinated with the instructor.

Plagiarism/Academic Integrity Policy

The following is a sample statement about cheating and plagiarism that may be used in your syllabi. Please feel free to copy and modify this statement to meet your needs:

*There is **zero tolerance** for cheating, plagiarism, or any other act of violation of Academic Integrity policy. Work that you submit is assumed to be original unless your source material is documented appropriately, using proper citation. Using the ideas or words of another person, even a peer, or a web site, as if it were your own, is plagiarism. Any individual or group caught cheating on homework, lab assignments, or any exam/quiz will be subjected to full extent of academic actions allowed under University regulations. At a minimum, any student caught violating Academic Integrity Policy will receive no credit for the work concerned and one grade lower letter grade. To learn more about the University policy on Cheating and Plagiarism, visit:*

Academic Information and Regulations-Cheating and Plagiarism

University Withdrawal Policy

Class withdrawals during the final 3 weeks of instruction are not permitted except for a very serious and compelling reason such as accident or serious injury that is clearly beyond the student's control and the assignment of an Incomplete grade is inappropriate (see Grades). Application for withdrawal from CSULB or from a class must be filed by the student online whether the student has ever attended the class or not; otherwise, the student will receive a grade of "WU" (unauthorized withdrawal) in the course. More information regarding the University guidelines on Dropping and Withdrawing at:
Dropping and Withdrawal

Attendance and Participation Policy

Attendance (joining the online class) and Participation (being alert and available if inquired by the instructor in contrast to being just online but unresponsive) are essential to your success in this class. In distance education courses you are required to attend and participate just as if you were in a face-to-face course.

Student Grievance Policy

Please check CSULB grievance policy and procedure at:

Student Grievance Procedures

Special Needs Accommodations

Online courses are required to meet ADA accessibility guidelines. Students with a disability or medical restriction who are requesting a classroom accommodation should contact the Bob Murphy Access Center (BMAC) and also notify the instructor. BMAC personnel will work with the student to identify a reasonable accommodation in partnership with appropriate academic offices and medical providers. Only approved BMAC petitions will be accommodated.

Any student who is facing academic or personal challenges due to difficulty in affording groceries/food and/or lacking a safe and stable living environment is urged to contact the CSULB Student Emergency Intervention & Wellness Program. Additional resources are available via Basic Needs Program. The students can also email supportingstudents@csulb.edu, call (562)985-2038, or if comfortable, reach out to the instructors as they may be able to identify additional resources. For mental health assistance please check out CSULB Counseling and Psychological Services (CAPS).

http://web.csulb.edu/divisions/students/caps/

Disclaimer

In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.

Additional Information

BeachBoard Access

To access this course on BeachBoard you will need access to the Internet and a supported web browser (Please note: The preferred web browser to use when accessing information in this course is Google Chrome. Google Chrome minimizes technical issues and responds well to the technology used in this course.).
You may access BeachBoard directly at https://bbcsulb.desire2learn.com/d2l/login and log in with your CSULB campus ID and password. You may also access it via Single-Sign-On page at https://csulb.okta.com/. Once logged in, you will see the course listed under "My Courses". Click on the title to access the course page.

Technology Requirements

- **Computer with decent speed**
- **Software and tools**: You will need to have an up-to-date browser, operating system and some additional software (GNS3, Java) on your computer to take this class. Some of the documents in this course will be available to you in PDF form. If you do not have Adobe Acrobat Reader software on your computer, you can download it by going to Adobe Acrobat Reader
- **Virtual Lab:** Please see the Virtual Lab chiclet available in your MyCSULB login page.

Please contact the department if you need support with access to the Internet, electronic devices, or any other issues related to remotely accessing your course.

Netiquette (Optional)

You are training to be a professional. Consequently, we expect you to behave like a professional. A professional engineer is polite, considerate, and respectful of others. When posting on the discussion boards and chat rooms it is important to understand how to interact with one another online, ***netiquette.*** Please read more about the rules of netiquette.

Tutoring

Take advantage of free peer tutoring (virtual) provided by Engineering Student Success Center (ESSC): Engineering Tutoring

Additional Resources

There are many services on campus to help you achieve success in your courses. Links to the following services are also available in BeachBoard course homepage under "CSULB Student Resources":

- Counseling and Phychological (CAPS)
- Disabled Student Services
- Enrollment Services
- Financial Aid
- Learning Assistance Center

- Student Health Services
- Tutoring at CSULB
- University Library
- Writers Resource Lab

Student Feedback about the Course (Optional up to the instructor)

*Student Feedback is highly encouraged. Please feel free to contact the instructor to share any concern or opinion about the course throughout the semester and participate in the **anonymous survey** (via BeachBoard). Early Feedback will provide the instructor the opportunity to address your concern and implement required modifications in a timely manner.*

Personal Assistance

Any student who is facing academic or personal challenges due to difficulty in affording groceries/food and/or lacking a safe and stable living environment is urged to contact the CSULB Student Emergency Intervention & Wellness Program. Additional resources are available via Basic Needs Program. The students can also email supportingstudents@csulb.edu, call (562)985-2038, or if comfortable, reach out to the instructors as they may be able to identify additional resources