	Course	CS/CE 6390 – 001
UTD	**Professor**	Dr. Kamil Sarac
	Term	Fall 2016
	Meetings	Monday/Wednesday 1pm to 2:15pm in ECSS 2.201

Professor's Contact Information

Office Phone	972 883 2337
Other Phone	n/a
Office Location	ECS South 4.207
Email Address	ksarac@utdallas.edu
Office Hours	Monday/Wednesday 11:30am to 12:30pm or by appointment at other times
Other Information	Course web page: http://www.utdallas.edu/~ksarac/acn/

Teaching Assistant Contact Information

Teaching Assistant	TBA
Phone	n/a
Email Address	TBA
Office Hours	TBA

General Course Information

Pre-requisites, Co-requisites, & other restrictions	CS 4390 or CS5390 or equivalent; C/C++ or Java programming skills; working knowledge of a UNIX-based operating system
Course Description	In this course, we will cover both the classical/fundamental topics in computer networks and a number of current/recent research topics related to modern computer networks. Most of the advanced research topics are relevant to Internet related research topics and they are mostly in Layer 3 and above (we will not be looking at problems in DLL or in physical layer). Most of the classical topics will be covered following the Peterson and Davie book. The research topics will be covered by reading/following the research papers (I will provide a list of papers with pointers to soft copies). Most of the class will be on Network Layer, Transport Layer and Application Layer issues. We will follow the order in the text book and use relevant research papers to cover fundamentals and important details. Toward the end of the semester, we will cover a number of recent and current networking research areas by reading several relevant research papers. The main goal in this part will be to expose students to several ongoing active research areas in networking.
Learning Outcomes	Internet inter-domain routing Internet multicast Congestion control Quality of service scheduling Mobile computing Peer-to-peer systems Network programming
Required/Recommended Texts & Materials	• Computer Networks, A Systems Approach, 5th Ed., by Peterson and Davie, Publisher: Morgan Kaufmann (RECOMMENDED) • A number of research papers will be available from the course web page
Suggested Texts, Readings, & Materials	References: o M. Donahoo and K. Calvert, "Pocket Guide to TCP/IP Sockets (C

	Version)", Morgan Kaufmann, 1st edition.
	o M. Donahoo and K. Calvert, "TCP/IP Sockets in Java: Practical Guide for Programmers", Morgan Kaufmann, 1st edition. o W. R. Stevens, "UNIX Network Programming, Volume 1: Networking APIs -- Sockets and XTI", 2nd edition. o C. Huitema, "Routing in the Internet", Prentice Hall, 2nd edition. o R. Perlman, "Interconnections, Bridges, Routers, Switches, and Internetworking Protocols", Addison Wesley, 2nd edition.

Assignments & Academic Calendar

October 12	Exam 1
December 8 to 10	Project demos
TBA	Exam 2
Please see the course schedule page at www.utdallas.edu/~ksarac/acn/Schedule.htm for more details	

Course Policies

Grading (credit) Criteria	Exam 1 & 2: 30% each Homework Assignments: 25% total (6%, 7%, 7%, 5% for HW 1, 2, 3, 4 respectively) Programming Project: 15% - *Mandatory to complete & turn in for a pass grade*
Make-up Exams	No make-up exams unless in case of an emergency situation such as health emergency or similar un-avoid-able situations and you need to provide convincing documentation for it.
Extra Credit	n/a
Late Work	No late homework is accepted. All work should be turned in on time.
Class Attendance	**The below stated CS Department policy applies:** Three consecutive absences lead to one letter grade drop. Four consecutive absences lead to an F
Classroom Citizenship	Class participation in terms of asking questions is highly encouraged. Please do not hesitate to ask questions no matter how simple you might think the answer could be. This type of interaction helps improve the effectiveness of the class and breaks the monotony.
UT Dallas Syllabus Policies and Procedures	**Sharing Confidential Information** Students considering sharing personal information in email, in person, or within assignments or exams should be aware that faculty members and teaching/research assistants are required by UT Dallas policy to report information about sexual misconduct to the UT Dallas Title IX Coordinator. Per university policy, faculty have been informed that they must identify the student to the UT Dallas Title IX Coordinator. Students who wish to have confidential discussions of incidents related to sexual harassment or sexual misconduct should contact the Student Counseling Center (972-883-2527 or after hours 972-UTD-TALK or 972-883-8255), the Women's Center (972-883-8255), a health care provider in the Student Health Center (972-883-2747), the clergyperson (or other legally recognized religious advisor) of their choice, or an off-campus resource (i.e., rape crisis center, doctor, psychologist). Students who are sexually assaulted, harassed, or victims of sexual misconduct, domestic violence, or stalking, are encouraged to directly report these incidents to the UT Dallas Police Department at 972-883-2222 or to the Title IX Coordinator at 972-883-2218. Additional information and resources may be found at http://www.utdallas.edu/oiec/title-ix/resources. **Technical Support** If you experience any issues with your UT Dallas account, contact the UT Dallas Information Resources Help Desk: assist@utdallas.edu or call 972-883-2911. UT Dallas provides eLearning technical support 24 hours a day/7 days a week. The

services include a toll free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service. Please use this link to access the UTD eLearning Support Center: http://www.utdallas.edu/elearninghelp.

Field Trip Policies, Off-Campus Instruction and Course Activities

Off-campus, out-of-state, foreign instruction/travel, and course-related field trip activities are subject to state law and University policies and procedures regarding travel and risk-related activities.

Detailed information regarding this policy, in accordance to *Texas Education Code*, Section 51.950, can be accessed at the UT Dallas Policy Navigator,http://policy.utdallas.edu/utdbp3023, and at http://www.utdallas.edu/administration/insurance/travel. Additional information is available from the office of the school dean.

Student Conduct and Discipline

The University of Texas System (Regents' Rule 50101) and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UT Dallas online catalogs (http://catalog.utdallas.edu).

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the Student Discipline and Conduct, UTDSP5003 (http://policy.utdallas.edu/utdsp5003). Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SSB 4.400, 972-883-6391) and online athttp://www.utdallas.edu/deanofstudents.

A student at the University neither loses their rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating its standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

Academic Dishonesty: The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrates a high standard of individual honor in his or her scholastic work.

Academic dishonesty can occur in relation to any type of work submitted for academic credit or as a requirement for a class. It can include individual work or a group project. Academic dishonesty includes, plagiarism, cheating, fabrication and collaboration/collusion. In order to avoid academic dishonesty, it is important for students to fully understand the expectations of their professors. This is best accomplished through asking clarifying questions if an individual does not completely understand the requirements of an assignment.

Additional information related to academic dishonesty and tips on how to avoid dishonesty may be found here: http://www.utdallas.edu/deanofstudents/maintain.

Copyright Notice

It is the policy of the University of Texas at Dallas to adhere to the requirements of

the United States Copyright Law of 1976, as amended, (*Title 17, United States Code*), including ensuring that the restrictions that apply to the reproduction of software are adhered to and that the bounds of copying permissible under the fair use doctrine are not exceeded. Copying, displaying, reproducing, or distributing copyrighted material may infringe upon the copyright owner's rights. Unauthorized distribution of copyrighted material, including unauthorized peer-to-peer file sharing, may subject students to appropriate disciplinary action as well as civil and criminal penalties. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act. For more information about the fair use exemption, see http://copyright.lib.utexas.edu/copypol2.html. As a UT Dallas student, you are required to follow UT Dallas' copyright policy (UTDPP1043 at http://policy.utdallas.edu/utdpp1043) and the UT System's policy athttp://www.utsystem.edu/ogc/intellectualproperty/copyrighthome.htm.

Email Use

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 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. The University of Texas at Dallas furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources provides a method for students to have their UT Dallas mail forwarded to other email accounts. To activate a student UT Dallas computer account and forward email to another account, go to http://netid.utdallas.edu.

Class Attendance

Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. Absences may lower a student's grade where class attendance and class participation are deemed essential by the instructor. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.

Withdrawal from Class

The administration at UT Dallas has established deadlines for withdrawal from any course. These dates and times are published in the Comet Calendar (http://www.utdallas.edu/calendar) and in the Academic Calendar http://www.utdallas.edu/academiccalendar). It is the student's responsibility to handle withdrawal requirements from any class. In other words, a professor or other instructor cannot drop or withdraw any student unless there is an administrative drop such as the following:

- Have not met the prerequisites for a specific course
- Have not satisfied the academic probationary requirements resulting in suspension
- Judicial affairs request
- Have not made appropriate tuition and fee payments
- Enrollment is in violation of academic policy
- Was not admitted for the term in which they registered

It is the student's responsibility to complete and submit the appropriate forms to the Registrar's Office and ensure that he or she will not receive a final grade of "F" in a

course if he or she chooses not to attend the class after being enrolled.

Student Grievance Procedures

Procedures for student grievances are found in university policy UTDSP5005 (http://policy.utdallas.edu/utdsp5005). In attempting to resolve any student grievance regarding disputes over grades, application of degree plan, graduation/degree program requirements, and thesis/and dissertation committee, advisor actions and/or decisions, evaluations, and/or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originated.

Incomplete Grade Policy

As per university policy, incomplete grades may be given, at the discretion of the instructor of record for a course, when a student has completed at least 70% of the required course material but cannot complete all requirements by the end of the semester. An incomplete course grade (grade of 'I') must be resolved completed within the time period specified by the instructor, not to exceed eight (8) weeks from the first day of the subsequent long semester. Upon completion of the required work, the symbol 'I' may be converted into a letter grade (A through F). If the grade of Incomplete is not removed by the end of the specified period, it will automatically be changed to F.

AccessAbility Services

It is the policy and practice of The University of Texas at Dallas to make reasonable disability-related accommodations and/or services for students with documented disabilities. However, written notification from the Office of Student AccessAbility (OSA) is required (see http://www.utdallas.edu/studentaccess). If you are eligible to receive disability-related accommodations and/or services and to ensure accommodations will be in place when the academic semester begins, students are encouraged to submit documentation four to six weeks in advance. Students who have questions about receiving accommodations, or those who have, or think they may have, a disability (mobility, sensory, health, psychological, learning, etc.) are invited to contact the Office of Student AccessAbility for a confidential discussion. The Office of Student AccessAbility provides:
1. Academic accommodations for eligible students with a documented permanent physical, mental or sensory disability
2. Facilitation of non-academic and environmental accommodations and services
3. Resources and referral information, and advocacy support as necessary and appropriate.

OSA is located in the Student Services Building, suite 3.200. They can be reached by phone at 972-883-2098, or by email at studentaccess@utdallas.edu.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities, including examinations and travel time for the observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, of the *Texas Tax Code*.

Students are encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment.

Excused students will be allowed to take missed exams or complete assignments within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who

fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the President of UT Dallas or from the President's designee. The chief executive officer or designee must take into account the legislative intent of *Texas Education Code 51.911(b)*, and the student and instructor will abide by the decision of the chief executive officer or designee.

Resources to Help You Succeed

The Office of Student Success operates the Student Success Center (SSC, http://www.utdallas.edu/studentsuccess), which offers assistance to students in the areas of writing, mathematics, communication, multiple science fields, reading, study skills, and other academic disciplines. These services are available through individual and small group appointments, workshops, short courses, and a variety of online and instructional technologies. All students enrolled at UT Dallas are eligible for these services.

The **Math Lab** gives short-term and semester long support for a variety of introductory and advanced mathematics courses. Students may drop in to visit with a math tutor on a regular basis. Comet card is required.

The **Writing Center** offers a collaborative learning environment for one-to-one and small group assistance with general and advanced writing assignments and overall writing skills. Scheduling an appointment is strongly recommended, but walk in appointments are possible if a tutor is available.

The **Peer Tutoring** program offers free tutoring assistance in multiple locations for many of the historically challenging undergraduate subjects at UT Dallas. Tutoring sessions, offered every weekday on a drop-in basis, are one-on-one or in a small group format. The sessions are designed to meet students' individual questions and needs related to course/subject concepts. All peer tutors are current UT Dallas students who made an A- or better in the course and have a strong faculty/staff recommendation. Students should check the Student Success Center website each semester for subject offerings and session times.

The **Peer-Led Team Learning (PLTL)** program provides an active, engaged learning experience for students who meet in small groups once a week with a Peer Leader who helps guide them through potentially difficult gateway course. Students that attend sessions regularly typically earn a half to a whole letter grade higher than students that do not participate in the PLTL program.

Supplemental Instruction (SI) provides free, peer-facilitated weekly study sessions for students taking historically difficult courses. SI sessions encourage active, collaborative learning based on critical thinking and transferable study skills. SI leaders attend lectures, take notes, and read assigned material just like the enrolled students. Students should check the SSC website for subject and session times.

The **Communication Lab (CommLab)** offers one-on-one and group consultations where you will gain practical feedback for improving oral and group presentations.

Success Coaches are available for individual student appointments to discuss study skills, time management, note taking, test taking and preparation, and other success strategies.

The Student Success Center's main office is located in the McDermott Library Building and can be contacted by calling 972-883-6707 or by sending an email to ssc@utdallas.edu.

These descriptions and timelines are subject to change at the discretion of the Professor.