Lahore University of Management Sciences

CS 682 – Topics in Computer and Network Security
Fall 2023

COURSE DESCRIPTION
This is a research topics course in Computer and network Security - Biased by interests of the faculty - Fairly wide coverage of topics - Course project The project will be graded on the following: (a) Complexity and the amount of the work carried out. (b) Your understanding of the subject of the report. (c) Organization and writing. (d) Comprehensiveness of the survey, originality of the ideas in experimental projects. Grading emphasis may change based on the nature of the report: survey or experimentation or measurement or implementation.

Course Distribution	
Core	No
Elective	Yes
Open for Student Category	
Close for Student Category	

COURSE PREREQUISITE(S)	
	Network Security or Instructor's consent

Course Offering Details				
Credit Hours	3			
Lecture(s)	Nbr of Lec(s) Per Week	2	Duration	75 mins
Recitation/Lab (per week)	Nbr of Lec(s) Per Week	None	Duration	None
Tutorial (per week)	Nbr of Lec(s) Per Week	None	Duration	None

Instructor	Dr. Muhammad Fareed Zaffar
Room No.	SSE 9-G19A
Office Hours	TBA
Email	Fareed.zaffar@lums.edu.pk
Telephone	8193
Secretary/TA	Ishtiaq A Bhatti/TBA
TA Office Hours	TBD
Course URL (if any)	TBD

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Course Teaching Methodology
• Synchronous • Papers will be available beforehand.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)	
PEO-01	Demonstrate excellence in profession through in-depth knowledge and skills in the field of Computing.
PEO-02	Engage in continuous professional development and exhibit quest for learning.
PEO-03	Show professional integrity and commitment to societal responsibilities.

COURSE OBJECTIVES	
	Exposure to a select list of research topics and active research in the network and computer security field
	Hands-on research experience
	Exposure to state of the art-security research

COURSE LEARNING OUTCOMES (CLOs)	
	After taking the course the student will be able to;
CLO1	Demonstrate in-depth knowledge in a particular area of specialization in network security as dictated by their projects.
CLO2	Demonstrate familiarity with the state of the art research on broad range of topics in network and computer security.
CLO3	Critically analyze state of the art security research papers

Grading Breakup and Policy

Assessment	Weight (%)
Class Participation	
Paper reviews	
Class Presentations	
Mid Project	
Final Project	

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COURSE OVERVIEW			
Weeks	Topics	Recommended Readings	Objectives /
1.	Introduction		
2.	Provenance		
3.	Risk Management		
4.	Application security		
5.	Program Analysis		
6.	Program Analysis		
7.	Data Center Security		
8.	Data Center Security		
9.	Privacy preserving systems		
10.	Web security and privacy		
11.	Intrusion detection system		
12.	Cryptography		
13.	Forensics Investigation		
14.	Special topics (based on interest)		

Textbook(s)/Supplementary Readings
Textbook: TBA Reading material for each lecture will be sent in advance

Academic Honesty
The principles of truth and honesty are recognized as fundamental to a community of teachers and students. This means that all academic work will be done by the student to whom it is assigned without unauthorized aid of any kind. Plagiarism, cheating and other forms of academic dishonesty are prohibited. Any instances of academic dishonesty in this course will be forwarded to the CS Department Disciplinary Committee. For further information, students should make themselves familiar with the relevant section of the LUMS student handbook.

Harassment Policy

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SSE, LUMS and particularly this class, is a harassment free zone. There is absolutely zero tolerance for any behavior that is intended, or has the expected result of making anyone uncomfortable and negatively impacts the class environment, or any individual's ability to work to the best of their potential.

In case a differently-abled student requires accommodations for fully participating in the course, students are advised to contact the instructor so that they can be facilitated accordingly.

If you think that you may be a victim of harassment, or if you have observed any harassment occurring in the purview of this class, please reach out and speak to me. If you are a victim, I strongly encourage you to reach out to the Office of Accessibility and Inclusion at oai@lums.edu.pk or the sexual harassment inquiry committee at harassment@lums.edu.pk for any queries, clarifications, or advice. You may choose to file an informal or a formal complaint to put an end of offending behavior. You can find more details regarding the LUMS sexual harassment policy here.

To file a complaint, please write to harassment@lums.edu.pk.

SSE Council on Equity and Belonging

In addition to LUMS resources, SSE's **Council on Belonging and Equity** is committed to devising ways to provide a safe, inclusive and respectful learning environment for students, faculty and staff. To seek counsel related to any issues, please feel free to approach either a member of the council or email at cbe.sse@lums.edu.pk