



JOINT INSTITUTE
交大密西根学院

Course Syllabus

Ve586

Advanced Computer Networks

Fall 2021

Course Description:

This is a graduate level course on computer networking, which will cover topics including network protocols, network measurement, network security, wireless networks, etc. For each topic, we will first learn the fundamentals and then read related research papers. Students will work on assignments to practice what they have learned, and present and review several selected papers. Meanwhile, students will form groups to work on a research project related to computer networks and report their progresses in the form of presentations and technical papers.

Instructor:

Name: Yibo Pi

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Phone: 021-34206765 Ext. 4171

Office: Room 417

Office hour: 10am-11am on Tuesdays and Thursdays

Textbook (Author, Book Title, Publisher, Publication Year, ISBN):

This course has no required textbook.

Recommended textbook: Kurose and Ross, Computer Networking: A Top-Down Approach, 6th. or earlier editions, Pearson, 2012. ISBN 978-0132856201.

Course Prerequisites:

No prerequisites for graduate students

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Grading Policy (Assignments %, Project, Exams, etc.):

Participation: 10%

Assignment: 20%

Paper review: 10%

Final project: 60%

- Proposal 15%
- Midterm presentation 10%
- Final presentation 10%
- Final report 25%

Honor Code Policy:

All assignments must be completed individually. You are encouraged to discuss ideas with others but must not look at or copy solutions from other students. You must not solicit help or copy of old assignments, exams, or solutions. You are also forbidden to give help or copy of assignments, exams, or solutions to other students.

Any violation of the above honor code policies will be reported to the Honor Council.

Teaching Schedule:

Week	NO.	lectures and Exams	Presenter
1	1	Introduction	Yibo Pi
	2	HTTP and the Web	Yibo Pi
2	3	DNS and Content Delivery Networks	Yibo Pi
	4	More on CDNs: Video on Demand and Live Streaming	Yibo Pi
3	5	Transport Layer Protocols	Yibo Pi
	6		Yibo Pi
4	7	Datacenter Networking	Yibo Pi
	8		
5	9	Datacenter Networking	Yibo Pi
	10		
6	11	Internet Routing	Yibo Pi
	12		
7	13	Midterm Presentation	Students
	14	Network Measurement	Yibo Pi
8	15	Network Measurement	Yibo Pi
	16		



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9	17	Network Security	Yibo Pi
	18		
10	19	Software-defined Networking	Yibo Pi
	20		
11	21	Software-defined Networking	Yibo Pi
	22		
12	23	Wireless Networking	Yibo Pi
	24		
13	25	Wireless Networking	Yibo Pi
	26		
14	27	Final Presentations	Students
	28		



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