Advanced Topics In IP Networks

Lecturer:

Prof. Anat Bremler-Barr  bremler@idc.ac.il
Dr. Yotam Harchol  harcholyotam@idc.ac.il

Teaching Assistant:

Dr. Yotam Harchol  harcholyotam@idc.ac.il
Mr. Peleg Yair  Peleg.Yair@post.idc.ac.il

Course Requirements:

Final Paper

Prerequisites:

Prerequisite:

52 - Calculus I
53 - Calculus II
54 - Linear Algebra I
55 - Linear Algebra II
56 - Discrete Mathematics
59 - Data Structures
69 - Logic And Set Theory
417 - Introduction To Computer Science
Course Description

This is a graduate level course on computer networking.

Course Goals

The course covers the following state of the art works in the following topics: Internet Routing (BGP), Internet topology, Network Algorithmics, Software-Defined Networking (SDN), Network Function Virtualization (NFV), Peer-to-Peer & Blockchain, Cloud, Kubernetes, Edge, Network Security, Internet of Things (IoT), Distributed Denial of Service attacks, DNS security.

Grading

Grading is based on exercises result (25%) and project (75%).

Reading List

- Papers form the top networking conferences: SIGCOMM, INFOCOM, IMC, SIGMETRICS, NSDI, DSN, CoNext