TELECOMMUNICATIONS
(EG) {TCOM}

601. Advanced Networking Modeling and Analysis. (M) Prerequisite(s): TCOM 501.

Traffic management and call admission: traffic characterization traffic shaping, admission control, statistical multiplexing, effective bandwidth. Scheduling: fair queuing, rate-controlled service disciplines. Buffer management: pushout, threshold, random early detection, sharing mechanisms (complete partitioning, complete sharing, hybrids), coupling buffer management and scheduling. Markov decision process and application in resource allocation (memory, badwidth allocation). Switching: input queuing, output queuing, shared memory, combined input/output queuing. Maximum throughout in input queued switches, emulating output queuing with input queuing via speedup. Building larger switches: CIOS networks, banyan netowrks, etc. TCP modeling.

SM 770. TCOM Seminar. (M)