

APPLIED TECHNOLOGY (APTC)

APTC 301. INTRODUCTION TO ROUTING AND SWITCHING. 4 Credits.

Notes: this class prepares students to take the following exam(s): Interconnecting Cisco Networking Devices, Part 1 (ICND1).

Pre-requisites: a two year A.A.S or A.A.T Transfer Degree in IT or equivalent or permission of instructor.

This course provides students the knowledge and skills related to network fundamentals, LAN switching technologies, routing technologies, infrastructure services and infrastructure maintenance.

APTC 302. NETWORK SERVER CONFIGURATION. 4 Credits.

Notes: preparation for DCICN and DCICT Cisco exams.

Pre-requisites: APTC 301 ≥C or passing score for Cisco CCENT exam (within three years of the quarter of the class offering.)

This course provides students the knowledge of data center infrastructure, data center networking concepts and data center storage networking. Students will also learn about fundamental data center technologies including unified computing, data center network virtualization, Cisco data center networking technologies, data center automation and orchestration and Application Centric Infrastructure.

APTC 303. NETWORK ADMINISTRATION. 4 Credits.

Notes: preparation to take the following exam(s): Interconnecting Cisco Networking Devices: Accelerated (CCNAX).

Pre-requisites: APTC 301 ≥C.

This course provides students with the knowledge and skills related to network fundamentals, LAN switching technologies, IPv4 and IPv6 routing technologies, WAN technologies, infrastructure security and infrastructure management.

APTC 399. DIRECTED STUDY. 1-5 Credits.

Cross-listed: CMTC 399, DNTC 399, MNTC 399, TECH 399.

Pre-requisites: permission of the instructor, department chair and college dean.

Directed Study.

APTC 401. NETWORK DIAGNOSIS AND MAINTENANCE I. 4 Credits.

Notes: preparation for the DCUCI, DCII, and DCVAI Cisco exams.

Pre-requisites: APTC 302 ≥C.

This course provides students the knowledge of implementing Cisco data center technologies including unified computing, unified computing maintenance and operations, automation, unified computing security and unified computing storage. Knowledge of implementing Cisco data center infrastructure including key protocols, routing and switching protocols, maintenance, management, operations, security and storage is included.

APTC 402. NETWORK DIAGNOSIS AND MAINTENANCE II. 4 Credits.

Notes: preparation to take the following exam(s): Designing Cisco Data Center Infrastructure (DCID) and Troubleshooting Cisco Data Center Infrastructure (DCIT).

Pre-requisites: APTC 401 ≥C.

This course provides students the knowledge of Cisco data center infrastructure design pertaining to deployment requirements and options for network connectivity, infrastructure, storage network, compute connectivity and compute resource parameters. A focus on troubleshooting of Cisco data center infrastructure is included.

APTC 403. ADVANCED ROUTING AND SWITCHING. 4 Credits.

Notes: preparation for the ROUTE, SWITCH, and TSHOOT Cisco exams.

Pre-requisites: APTC 303 ≥C.

This course enables students to learn advanced IP addressing and routing in implementing scalable and highly secure Cisco routers that are connected to LANs, WANs and IPv6. Students learn how to plan, configure and verify implementation of enterprise switching solutions that use the Cisco Enterprise Campus Architecture. Topics on maintenance and troubleshooting are covered in this course.

APTC 421. NETWORK SECURITY PROTOCOLS. 4 Credits.

Notes: preparation for the IINS Cisco exam.

Pre-requisites: APTC 303 ≥C.

This course provides students the knowledge of secure network infrastructure, understanding core security concepts, managing secure access, VPN encryption, firewalls, intrusion prevention, web and email content security and endpoint security. A focus on installation, troubleshooting, and monitoring of a secure network utilizing technologies Cisco uses to maintain integrity, confidentiality and availability of data and devices is included.

APTC 439. TOPICS IN APPLIED TECHNOLOGY. 6 Credits.

Notes: An authorized elective substitution for APTC 495. This 6 credit course is only offered during the summer quarter.

Pre-requisites: TECH 331, TECH 462: all with grades ≥C, and junior standing.

This course explores topics in applied technology that are beyond the scope of the regular program course curriculum. It allows for a more in-depth coverage through lecture, discussion, research, and explorations of applied technology in the world as students prepare to enter the work force.

APTC 490. SENIOR CAPSTONE: PRODUCTION LAB. 4 Credits.

Cross-listed: TECH 490, CMTC 490, DNTC 490, MNTC 490.

Notes: the course will simulate a real world design team concept by utilizing a design group that contains members of different program majors.

Pre-requisites: senior standing.

Satisfies: a university graduation requirement—senior capstone.

The course simulates the real world situation that graduates face. Students will work in teams to apply techniques of production management, product design/development, plant layout, scheduling, cost accounting, assembly, inspection and quality control to produce a product. Learning to deal with the team dynamics is a valuable learning process. Each student team produces a new product and a final written report to demonstrate how the process and goals of the course have been realized.

APTC 491. SENIOR PROJECT. 4-6 Credits.

Cross-listed: TECH 491, CMTC 491, DNTC 491, MNTC 491.

Pre-requisites: senior standing.

Independent and/or group study and implementation of a design and development project. (variable time).

APTC 495. INTERNSHIP. 1-15 Credits.

Cross-listed: TECH 495, CMTC 495, DNTC 495, MNTC 495.

Notes: Graded Pass/Fail. This course may be repeated.

Pre-requisites: junior or senior status and permission of the instructor, department chair and dean.

A maximum of 5 credits may be earned toward electives for a Technology major. Students considering electives for a Technology minor should consult with their departmental advisor.

APTC 496. EXPERIMENTAL COURSE. 1-6 Credits.

Cross-listed: TECH 496, CMTC 496, DNTC 496, MNTC 496.
Experimental Course.

APTC 497. WORKSHOP, SHORT COURSE, CONFERENCE, SEMINAR. 1-6 Credits.

Cross-listed: TECH 497, CMTC 497, DNTC 497, MNTC 497.
Workshop, short course, conference, or seminar.

APTC 498. SEMINAR. 1-6 Credits.

Cross-listed: TECH 498, CMTC 498, DNTC 498, MNTC 498.
Seminar.

APTC 499. DIRECTED STUDY. 1-5 Credits.

Cross-listed: TECH 499, CMTC 499, DNTC 499, MNTC 499.

Pre-requisites: permission of the instructor, department chair and college dean.

Designed for students wanting to pursue a subject beyond the scope of regular courses.