

# NETWORKING (NET)

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## **NET 302. PC Troubleshooting & Construction. (3 Credits)**

I, II. Prerequisite: TEC 161 or (INF 104 or higher) or (CSC 140 or higher) or (CIS 212 or higher). Construction, operation and troubleshooting microprocessors, system memory, computer architecture, video types, monitors, hard drives, mice, cabling, notebook computers and printers modern operating systems, and application programs. Building computer systems to specific requirements. 2 Lec/2 Lab.

## **NET 303. LANs & PC Communications. (3 Credits)**

I, II. Formerly EET 303. Prerequisite: TEC 161 or (INF 104 or higher) or (CSC 140 or higher) or (CIS 212 or higher) and (a grade of at least "C" in MAT 095 or a minimum math ACT score of 18 or a minimum SAT math score of 490). Installing, configuring, managing, and troubleshooting network and computer systems communications hardware and software. 2 Lec/2 Lab.

## **NET 343. Network Switches & Routers. (3 Credits)**

A. Formerly EET 343. Prerequisite: NET 303 or EET 303 or CIS 375. Cisco internetworking, switching, IOS, routing, VLAN's, access lists, and WAN protocols are covered in a combination of lecture, demonstration, and laboratory. 2 Lec/2 Lab.

## **NET 344. Advanced Network Devices. (3 Credits)**

A. Prerequisite: NET 343. Configure and troubleshoot network-aware devices/objects in small- to mid-sized LANs. Principles of network device/object startup, configuration and management, VLAN, advanced network communications and security. 2 Lec/2 Lab.

## **NET 349. Applied Learning in NET. (0.5-8 Credits)**

I, II. Prerequisite: departmental approval, Sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors.

## **NET 349A. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349B. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349C. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349D. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349E. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349F. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349G. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349H. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349I. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349J. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349K. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

## **NET 349L. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

**NET 349M. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

**NET 349N. Cooperative Study: CET/CEN. (0.5-8 Credits)**

I, II. Formerly EET 349 A-N. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies. 1-8 credit hours semester. Transfer students must have completed at least 12 hours of coursework at ECU. Minimum 80 hours work required per credit hour.

**NET 354. Microcomputer & Network Security. (3 Credits)**

I, II. Formerly EET 354. Prerequisite: NET 303 or EET 303 or CIS 375. Security considerations in computer systems and networks using appropriate hardware and software. Topics include malware, encryption, VPNs, ACLs, firewalls, Wi-Fi, and secure protocols. Testing configuring, managing and troubleshooting security in network systems. 2 Lec/2 Lab.

**NET 361. Cloud Technology Foundations. (3 Credits)**

A. Prerequisite: NET 303 or CIS 375. Cloud computing configurations and deployments. Definition, models, characteristics, testing, security, and management, business cases, and emerging technologies from the perspective of a cloud practitioner. Case studies of cloud computing across various industries. 2 Lec/2 Lab.

**NET 367A. Exit Exam for AAS in Tech, with Computer Electronics. (0 Credits)**

(0) A. Prerequisite: Consent of Advisor. Registration in NET 367A is required of all undergraduate A.A.S. students in the Technology program specializing in Computer Electronics program for the term in which they wish to take their comprehensive examination.

**NET 367B. Exit Exam for Minor in Computer Electronics Technology. (0 Credits)**

(0) A. Prerequisite: Consent of Advisor. Registration in NET 367B is required of all undergraduate students in the Minor for Computer Electronics Technology program for the term in which they wish to take their comprehensive examination.

**NET 367C. Exit Exam for University Certificate in Cyber Systems and Network Security. (0 Credits)**

A. Prerequisite: A minimum of 9 semester hours of NET courses completed, and EET 252. Registration in NET 367c is required of all students in the Cyber Systems and Network Security Technology university certificate, for the semester in which they wish to take their comprehensive exit examination.

**NET 385. Advanced Switches & Routers. (3 Credits)**

(3) A. Prerequisite: NET 343. Configure and troubleshoot small to mid-sized switched LANs. Principles of switch and router startup, configuration and management, VLAN, trunking, STP, advanced routing, WAN, scaling IP address space. Configure, apply and verify Access Control Lists. 2 Lec/2 Lab.

**NET 395. Special Topics in NET. (2-3 Credits)**

A. Formerly EET 395. Prerequisite: 30 credit hours or more completed, and (EET 252 or NET 303). Emerging technologies in the area of Network security and electronics (NET). May be retaken up to a maximum of 9 hours provided subject matter differs each time. Lec/Lab.

**NET 399. Associate Degree Capstone. (3 Credits)**

II. Formerly EET 399. Prerequisite: 30 credit hours or more completed, with a minimum of 9 semester hours of NET coursework completed, and a minimum of 6 semester hours of EET coursework completed. A project and research oriented course which serves as a capstone experience at the Associate Degree level. Design, implementation, analysis, and troubleshooting of electronic and computer technology related systems, and managing a technical.

**NET 403. Advanced LANSs and PC Communication. (3 Credits)**

A. Formerly EET 403. Prerequisite: NET 303 or EET 303 or CIS 375. This course will cover installation, configuration, troubleshooting and maintaining common server platforms. The participants will be given the opportunity to setup and manage network hardware, operating systems and applications. 2 Lec/2 Lab.

**NET 440. Wired/Wireless Communications. (3 Credits)**

A. Prerequisite: EET 257; MAT 112B or higher and PHY 101. Principles of communication over fiber and other wired/wireless media; digital and analog data transmission; modulation and multiplexing of data. Communication system components, safety, testing and troubleshooting. 2 Lec/2 Lab.

**NET 454. Wireless/WAN Security. (3 Credits)**

A. Prerequisites: ((NET 303 or CIS 375) and NET 354) or CSC 338. Security considerations in wireless and WANs. Wi-Fi, 802.11x, WPA, RADIUS, encryption, VPNs, VLANs, AAA authentication, Network Security Appliances, and secure protocols. Laboratory based configuration and security testing of WAPs, appliances and servers. 2 Lec/2 Lab.

**NET 467. Exit Exam for BS in NET. (0 Credits)**

(0) A. Prerequisite: Consent to advisor. Registration in NET 467 is required of all undergraduate B.S. (NET) students for the term in which they wish to take their comprehensive examination, including the exit exam and advisor approved certification or license.

**NET 499. Senior Capstone. (3 Credits)**

II. Formerly EET 499. Prerequisite: 90 credit hours or more completed, with a minimum of 18 semester hours of NET coursework completed, and a minimum of 9 semester hours of EET coursework completed, and AEM 310W. A project and research oriented course which serves as a capstone experience at the Bachelor Degree level. Design, implementation, analysis, and troubleshooting of networking, computers and electronics technology related systems, and managing a technical project.