

## CNT1613: Routing and Switching Essentials

**Catalog Description:** Describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. Students will learn to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.

**Course Type:** Lecture/Lab

**Instructor Name:**

**Office:**

**Office Phone:**

**Email:**

**Office Hours:**

### Department Information

Course Department:

Academic Department:

Academic Coordinator:

Email:

Associate Dean:

Associate Dean Contact Number:

Email:

### Materials: Required and Optional

Required Text:

1. Cisco Networking Academy: *Routing and Switching Essentials*. Cisco Press. ISBN-10: 1-58713-427-6; ISBN-13: 978-1-58713-427-2.

Required Material:

ASUN Campus Email and —My ASUN Portal Username and Password (same for email and Portal)

### Institutional Learning Outcomes

Upon graduating from ASU-Newport with any Associate Degree, a student will be proficient in the following:

#### ILO1: Communication

Goal: Students will express ideas, knowledge, and concepts in a clear and concise manner.

- a) Written
- b) Verbal
- c) Interpersonal

#### ILO2: Reasoning

Goal: Students will apply reasoning skills in a variety of environments, which demonstrate problem-solving and applied knowledge.

- a) Explore
- b) Locate
- c) Interpret
- d) Evaluate
- e) Apply

### **ILO3: Responsibility**

Goal: Students will participate in service activities that instill in them a sense of social responsibility.

- a) Civic
- b) Academic
- c) Financial

### **Institutional Grading Scale**

Grading Scale:

- A: 90-100
- B: 80-89
- C: 70-79
- D: 60-69
- F: 0-59
- S: Satisfactory
- U: Unsatisfactory

### **Americans with Disabilities Act Compliance**

In order to obtain appropriate disability related accommodations and services to which they are entitled, students with documented disabilities should voluntarily and confidentially provide the Office of Disability Services (870-512-7838 or [disabilityservices@asun.edu](mailto:disabilityservices@asun.edu)) with appropriate medical documentation regarding the nature and extent of their disability, make their needs known to this Office and follow established procedures for acquiring needed services and accommodations in the classroom or online.

### **Information Technology Services**

If you experience any problems or issues with Canvas, MyCampus, or other equipment, please contact ITS at 870-512-7783 or <http://its.asun.edu>. Canvas also has a 24/7 live chat. This is a valuable resource for those late-night tests or assignments that just do not seem to work properly.

ASU-Newport provides a number of different services to assist students in areas that directly impact their academic success. The following direct websites will help you get in touch with those services that may be needed during your time as an ASUN student:

Academic Support Center: <http://academicsupport.asun.edu>

Financial Aid: <http://financialaid.asun.edu>

Career Pathways: <http://pathways.asun.edu>

University Police: <http://cpd.asun.edu>

Information Technology Services: 512-7783 or [its@asun.edu](mailto:its@asun.edu)

Disability Services: [http://www.asun.edu/disability\\_services](http://www.asun.edu/disability_services)

Admissions: <http://admissions.asun.edu>

### **Academic Dishonesty** (as stated in the Student Handbook)

ASU-Newport enthusiastically promotes academic integrity and professional ethics among all members of the ASU-Newport academic community. Violations of this policy are considered serious misconduct and may result in disciplinary action and severe penalties. Cheating in any form-including plagiarism, turning in assignments prepared by others, unauthorized possession of exams - may result in the student being dropped from the class with an “F” and/or being suspended from the College. Students who feel they have been unfairly accused of cheating may appeal to the Associate Dean of General Education.

### **Campus Safety Information**

What to know and do to be prepared for emergencies at ASUN:

- Opt-in to receive ASUN’s School Messenger notifications regarding weather closings, emergencies, and other important notifications. All currently enrolled students will receive an email within the first two weeks of the semester prompting them to Opt-in to the messaging system.
- Know the safe evacuation route from each of your classrooms. Emergency evacuation routes are posted in on-campus classrooms.
- Listen for and follow instructions from your instructor or other designated authorities.
- For additional emergency information see the ASUN Emergency Response Guide in the Portal under “More” then select “Department of Safety”.

- Know the emergency phone number for ASUN Campus Police or dial 911.
- Report suspicious activities and objects found on campus.
- Keep your permanent address and emergency contact information current in My Campus.

**Inclement Weather**

In the event of inclement weather, class cancelation is left to the discretion of the Chancellor. You will be notified of class cancelation on the university website, through news media, and through our school messaging system.

**Children in the Classroom:**

ASUN classroom policy requires that the learning environment should be free of distraction in order to provide the highest learning opportunity for all students. In this light, students should not bring children to the classroom. If you must bring a child on campus, please have your child properly supervised in the public gathering areas.

**Course Learning Outcomes:**

Upon successful completion of this course, students will be able to:

Course Learning Outcomes	Assessment
Describe the importance of addressing and naming schemes at various layers of data networks in IPv4 and IPv6 environments	Ch. 8 Exam, Ch. 8 Skills Based Assessments & Master Summative Assessment
Design, calculate, and apply subnet masks and addresses to fulfill given requirements in IPv4 and IPv6 network	Ch. 9 Exam, Ch. 9 Skills Based Assessments & Master Summative Assessment
Build a simple Ethernet network using routers and switches	Ch. 11 Exam, Ch. 11 Skills Based Assessments & Master Summative Assessment
Use Cisco command-line interface (CLI) commands to perform basic router and switch configurations	Ch. 1-11 Exams, Ch. 1-11 Skills Based Assessments & Master Summative Assessment

**Course Policies and Procedures**

**Academic Calendar**

**Disclaimer**

This syllabus and all documents associated with the syllabus are considered a contract between the student and the instructor. Students are expected to carefully read and review the syllabus and all associated documents in order to be familiar with course expectations and policies. This syllabus is subject to change at the discretion of the instructor, who will inform students of any changes. Students are responsible for keeping up with any changes.