

LAST REVIEW:

(i.e. 2003-2004)

NEXT REVIEW: 2014-15

(i.e. 2008-2009)

STATUS: A

(A, I, D)

COURSE TITLE: Cisco CCNP II – Switching

COMMON COURSE NUMBER: CET2627C

CREDIT HOURS: 4

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS:

(Voc. Course ONLY)

Lecture: **48** Lab: **16**

Clinic: **0** Other: **0**

PREREQUISITE(S): CET2625C (with a grade of C or higher)

COREQUISITE(S):

PRE/COREQUISITE(S):

COURSE DESCRIPTION *(750 characters, maximum):*

This course provides students the with knowledge and skills necessary to plan, configure and verify the implementation of complex enterprise switching solutions using Cisco's Campus Enterprise Architecture. The skills developed by students completing this course will help prepare them for the Cisco Switch Exam.

General Education Requirements – Associate of Arts Degree (AA), meets Area(s): Area

General Education Requirements – Associate in Science Degree (AS), meets Area(s): Area

General Education Requirements – Associate in Applied Science Degree (AAS), meets Area(s): Area

UNIT TITLES

1. Implement VLAN based solution, given a network design and a set of requirements
2. Implement a Security Extension of a Layer 2 solution, given a network design and a set of requirements
3. Implement Switch based Layer 3 services, given a network design and a set of requirements
4. Prepare infrastructure to support advanced services
5. Implement High Availability, given a network design and a set of requirements

EVALUATION:

Please provide a brief description (250 characters maximum) that details how students will be evaluated on the course outcomes.

Evaluation instruments will include written and/or skills-based examinations and individual in-class and/or take-home assignments. Evaluation methods may also include group in-class and/or take-home assignments.

Common Course Number: CET2627C

UNITS

Unit 1

General Outcome:

1.0 The student shall: be able to Implement VLAN based solution.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1 Determine network resources needed for implementing a VLAN based solution on a network
- 1.2 Create a VLAN based implementation plan
- 1.3 Create a VLAN based verification plan
- 1.4 Configure switch-to-switch connectivity for the VLAN based solution
- 1.5 Configure loop prevention for the VLAN based solution
- 1.6 Configure Access Ports for the VLAN based solution
- 1.7 Verify the VLAN based solution was implemented properly using show and debug commands
- 1.8 Document results of VLAN implementation and verification

Common Course Number: CET2627C

Unit 2

General Outcome:

2.0 The student shall: be able to implement a Security Extension of a Layer 2 solution.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1 Determine network resources needed for implementing a Security solution
- 2.2 Create a implementation plan for the Security solution
- 2.3 Create a verification plan for the Security solution
- 2.4 Configure port security features
- 2.5 Configure general switch security features
- 2.6 Configure private VLANs Configure VACL and PACL
- 2.7 Verify the Security based solution was implemented properly using show and debug commands
- 2.8 Document results of Security implementation and verification

Common Course Number: CET2627C

Unit 3

General Outcome:

3.0 The student shall: be able to implement Switch based Layer 3 services.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 3.1 Determine network resources needed for implementing a Switch based Layer 3 solution
- 3.2 Create an implementation plan for the Switch based Layer 3 solution
- 3.3 Create a verification plan for the Switch based Layer 3 solution
- 3.4 Configure routing interfaces Configure Layer 3 Security
- 3.5 Verify the Switch based Layer 3 solution was implemented properly using show and debug commands
- 3.6 Document results of Switch based Layer 3 implementation and verification

Common Course Number: CET2627C

Unit 4

General Outcome:

4.0 The student shall: be able to prepare infrastructure to support advanced services.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1 Implement a Wireless Extension of a Layer 2 solution
- 4.2 Implement a VoIP support solution
- 4.3 Implement video support solution

Common Course Number: CET2627C

Unit 5

General Outcome:

5.0 The student shall: be able to implement high availability.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1 Determine network resources needed for implementing High Availability on a network
- 5.2 Create a High Availability implementation plan
- 5.3 Create a High Availability verification plan
- 5.4 Implement first hop redundancy protocols
- 5.5 Implement switch supervisor redundancy
- 5.6 Verify High Availability solution was implemented properly using show and debug commands
- 5.7 Document results of High Availability implementation and verification