

CTE Course Description and Standards Crosswalk

Course Information

Course Name	Networking 2 – Cisco Academy
Course Number	83620
Number of High School Credits	1
Sequence or CTEPS (You must first have the Sequence or CTEPS entered into the EED-CTE system.)	Network Technician
Date of district Course Revision	Spring 2016

Career & Technical Student Organization (CTSO)

CTSO embedded in this sequence	BPA
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Occupational Standards

Source of Occupational Standards	States Career Cluster Initiative (SCCI), National Business Education Association (NBEA), International Society for Technology in Education (ISTE)
Names/Numbers of Occupational Standards	SCCI: Network Systems Pathway (ITPA), Information Support and Services Pathway (ITPB); NBEA: Career Development (CD), Computation (COMP), Information Technology (IT); ISTE: 1-6

Registration Information

Course Description (brief paragraph – as shown in your student handbook or course list)	Networking 2 (<i>CISCO Academy</i>) is the second of four semesters designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the information technology field. Instruction includes beginning router configurations, Cisco IOS Software management, routing protocol configuration, TCP/IP and access control lists. This course is designed to prepare students for the Cisco Certified Network Association Certification. Sample job possibilities include tech desk, network technician, network analyst, and network support specialist.
Instructional Topic Headings (please separate each heading by a semi-colon)	The Internet and Its Uses; Help Desk; Planning a Network Upgrade; Planning the Addressing Structure; Configuring Network Devices; Routing; ISP Services; ISP Responsibility; Troubleshooting; Course Summary: Putting it all together; Safety; Career & Technical Student Organizations (CTSO)s; Entrepreneurship; Ethics

Summative Assessments and Standards

Technical Skills Assessment (TSA)	CISCO
Course addresses:	Routers and Routing Basics
New Alaska ELA and Math Standards	Yes
Alaska Cultural Standards	Yes
All Aspects of Industry (AAI)	Yes
Core Technical Standards	Yes
Employability Standards	Yes

Employability Standards

DISTRICT NAME: Mat-Su Borough School District

Source of Employability Standards	State of Alaska
Tech Prep	
Current Tech Prep Articulation Agreement? (Y/N)	Yes
Date of Current Agreement	May 2015
Postsecondary Institution Name	UAA Mat Su College
Postsecondary Course Name	Router Fundamentals & Protocols
Postsecondary Course Number	CNT A261
# of Postsecondary Credits	4

Source/Organization /Agency	Acronym	Website or Location of Information	Section, Chapters, etc. referenced in Performance Standards	Date of Edition or Version
States Career Cluster Initiative	SCCI	www.careerclusters.org	Information Technology: Foundation, Network Systems, and Information Support and Services	2008
National Business Education Association	NBEA	www.nbea.org	Career Development, Computation, and Information Technology,	2013
International Society for Technology in Education	ISTE	www.iste.org	NETS for students	2007

Additional CTE Course Information

Author	
Course developed by	Trish Zugg
Course adapted from	Previous MSBSD Course
Date of previous course revision	May 2008
Course Delivery Model	
Is the course brokered through another institution or agency? (Y/N)	No

Standards Alignment

Student Performance Standards (Learner Outcomes or Knowledge & Skill Statements)	Specific Occupational Skills Standard	Common Technical Core Standards	New Alaska ENG/LA Standards	New Alaska Math Standards	Alaska Cultural Standards	Employability/Career Readiness Standards	All Aspects of Industry/Systems	Assessment
Describe the structure of the Internet and how communication occurs between hosts	NBEA IT IV, XI, XIII SCCI ITC 10 ISTE4,6	IT-NET 2,3,4,5	SL.11-12.1 L.11-12.6 RST.11-12.4,10	MP 1,5, 6	B2,4	A2	Technology Technical Skills	Module Assessment, Final Exam, and CCENT Exam
Install, configure, and troubleshoot Cisco IOS devices for Internet and server connectivity	NBEA IT IV, XI, XIII SCCI ITC 03.02,10; ITPA1.06; ITPB01.01 ISTE4,6	IT-NET 2,3,4,5	SL.11-12.1 L.11-12.6 RST.11-12.4,10	MP 1,5,6	B2,4	A2	Technology Technical Skills	Module Assessment, Final Exam, and CCENT Exam
Plan a basic wired infrastructure to support network traffic	NBEA IT XI, XIII, XIV SCCI ITC 10; ITPA1 ISTE3,4,6	IT-NET 2,3,4,5	SL.11-12.1 L.11-12.6 RST.11-12.4,10	MP 5,6	B2,4	A2	Technology Technical Skills	Module Assessment, Final Exam, and CCENT Exam

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Student Performance Standards (Learner Outcomes or Knowledge & Skill Statements)	Specific Occupational Skills Standard	Common Technical Core Standards	New Alaska ENG/LA Standards	New Alaska Math Standards	Alaska Cultural Standards	Employability/ Career Readiness Standards	All Aspects of Industry/ Systems	Assessment
Configure a server to share resources and provide common Web services	NBEA IT XIII SCCI ITC 10; ISTE4,6	IT-NET 2,3,4,5	SL.11-12.1 L.11-12.6 RST.11-12.4,10	MP 5,6	B2,4	A2	Technology Technical Skills	Module Assessment, Final Exam, and CCENT Exam
Implement basic WAN connectivity using Telco services	NBEA IT XIII SCCI ITC 10; ITPA1 ISTE4,6	IT-NET 2,3,4,5	SL.11-12.1 L.11-12.6 RST.11-12.4,10	MP 5,6	B2,4	A2	Technology Technical Skills	Module Assessment, Final Exam, and CCENT Exam
Demonstrate proper disaster recovery procedures and perform server backups	NBEA IT X,XIII SCCI ITC 10; ITPA1.06 ISTE4,6	IT-NET 2,3,4,5	SL.11-12.1 L.11-12.6 RST.11-12.4,10	MP 1,5,6	B2,4	A2	Technology Technical Skills	Module Assessment, Final Exam, and CCENT Exam
Monitor network performance and isolate failures	NBEA IT XIII SCCI ITC 10; ITPA1; ITPB01 ISTE4,6	IT-NET 2,3,4,5	SL.11-12.1 L.11-12.6 RST.11-12.4,10	MP 1,5,6	B2,4	A2	Technology Technical Skills	Module Assessment, Final Exam, and CCENT Exam
Troubleshoot problems using an organized, layered procedure	NBEA IT XIII, XVI SCCI ITC 10; ITPA1.06; ITPB01.01 ISTE4,6	IT-NET 2,3,4,5	SL.11-12.1 L.11-12.6 RST.11-12.4,10	MP 1	B2,4	A2	Technology Technical Skills	Module Assessment, Final Exam, and CCENT Exam
Describe the OSI model and the process of encapsulation	NBEA IT XIII SCCI ITC 10 ISTE4,6	IT-NET 2,3,4,5	SL.11-12.1 L.11-12.6 RST.11-12.4,10	MP 5,6	B2,4	A2	Technology Technical Skills	

DISTRICT NAME: Mat-Su Borough School District

Student Performance Standards (Learner Outcomes or Knowledge & Skill Statements)	Specific Occupational Skills Standard	Common Technical Core Standards	New Alaska ENG/LA Standards	New Alaska Math Standards	Alaska Cultural Standards	Employability/ Career Readiness Standards	All Aspects of Industry/ Systems	Assessment
Recognize entrepreneurship opportunities and the role of employer vs. employee.	NBEA IT XVIII SCCI ESS 07,09 ISTE 1	CRP 10	SL.11-12.1.a-d L.11-12.6 RST.11-12.4	MP 1	B 2,3,4	A2,5,7	Technical Skills Labor	BPA Workplace Skills Assessment
Encourage CTSO involvement.	NBEA IT XVIII SCCI ESS 07,09 ISTE 2,4	IT 3	SL.11-12.1.a-d L.11-12.6 RST.11-12.4	MP 1	B 1,2,3,4	A1-7 B1-5	Technology Technical Skills Work Habits Planning	BPA Workplace Skills Assessment
Research career opportunities in the Business/IT career area.	NBEA IT XVIII SCCI ESS 07,09 ISTE 3,4	CRP 10	SL.11-12.1.a-d L.11-12.6 RST.11-12.4	MP 1	B 2,3,4	A2,5 B1,2,3,4,5	Technical Skills Work Habits Planning Labor	Portfolio
Demonstrate safe use of tools and equipment, cyber safety and ergonomic safety in the workplace.	NBEA IT XV SCCI ESS 06 ISTE 5	IT 4,8, 10	SL.11-12.1.a-d L.11-12.6 RST.11-12.4	MP 1	B 2,3,4	A1,2,6	Technology Technical Skills Work Habits Health/ Safety	AK EED Safety Manual for Bus & Info. Systems
Practice and promote ethics and ethical behavior in the workplace.	NBEA IT III SCCI ESS 08 ISTE 5	IT 4,8, 10	SL.11-12.1.a-d L.11-12.6 RST.11-12.4	MP 1	B 2,3,4	A1,2,6	Technology Technical Skills Work Habits	CTSO Participation

Instructional Resources

List the major instructional resources used for this course: (websites, textbooks, essential equipment, reference materials, supplies)

Recommended Text:

- Cisco Networking Academy On-line Interactive Curriculum (cisco.netacad.net): Discovery - Working at a Small-to-Medium Business or ISP (or) Exploration - Routing Protocols and Concepts
- CCNA2 Companion Guide: Routers and Routing Basics