WASHINGTON TECH PREP

NEWTEC

COMMUNITY COLLEGES OF SPOKANE

PROGRAM ARTICULATION AGREEMENT

College Program: Network Design and Administration **CIP: 11.1002**
Career Pathway: Network Systems
Career Cluster: Information Technology

The purpose of this agreement is to grant college credit to high school students who have achieved the level of knowledge and skill required for the college-equivalent entry-level course(s) identified in this agreement. Upon successful completion of the identified course competencies with a grade of 'B' (3.0) or higher and the high school teacher's endorsement that the competency requirements have been met, students will be qualified to receive college credit.

The following Spokane Community College course(s) have been approved for Tech Prep articulation with Cheney School District high school course(s) as listed below:

High School / Course Title	College / Course Title	Credits
Cheney HS IT Essentials – A+ Certification *(two semesters)*	SCC CIS 201 IT Essentials – A+	5
CISCO – Intro to Networks *(two semesters)*	CIS 250 Cisco I Introduction to Networks	5
CISCO – Routing & Switching Essentials *(two semesters)*	CIS 251 Cisco II Routing and Switching Essentials	5

see attached list(s) of competencies for articulated courses

Student Articulation Procedure:

1. Be enrolled in the required high school class.
2. Register for Tech Prep/Dual Credit articulated course during the same academic year the high school class is completed. If a series of courses are involved in the articulation, students register for credit during the same academic year the last course in the series is completed.
3. Earn a grade of 'B' (3.0) or better in all courses required under the articulation agreement.
4. Complete all required skills as identified on the competency profile.
5. If an exam or review of completed work is required under the terms of this agreement, students must receive a passing score (determined by college or industry certification) to earn college credit (*see competency list for requirements*).
6. Within seven years of completing the articulated class, enroll at SCC or SFCC and submit the SERS Tech Prep Registration Confirmation to the Transcript Office. Articulation requirements will be reviewed and verified by the appropriate office or department. Credit will be awarded to qualifying students.

High School Instructors:

1. Ensure all students receive a copy of the course syllabus outlining information about Tech Prep, the college course competencies and the process required to earn college credit.
2. Hold students accountable for the same competency standard and course expectations as required by the college-equivalent course (*see competency list attached*).
3. If required for articulation, ensure students are prepared to take industry certification exams, complete a professional portfolio documenting their work, or take a final exam to measure their level of skill and competence in the coursework.
4. Submit final grades for all students registered to earn Tech Prep college credit no later than June of the current academic year.
5. Attend scheduled meetings, workshops or in-service activities that enhance the high school/college partnership & support implementation of the Tech Prep articulated program.

Articulation Review and Renewal:
The designated program facilitators, college administrators and/or instructors and high school faculty will meet regularly to revise or discuss the articulation agreement. Agreements must be reviewed/updated and re-signed by college faculty/deans and CTE directors/HS teachers on a schedule, not to exceed a three (3) year rotation, or as deemed necessary due to changes in HS/college course content or structure. Individual teacher verification forms must be signed and submitted annually. Minor revisions can be made via phone calls, correspondence or e-mail.

PROGRAM ARTICULATION AGREEMENT
Network Design and Administration

PARTICIPATING INSTITUTIONS
Cheney School District and Spokane Community College

We the undersigned representatives of the Northeast Washington Technical Education Consortium (NEWTEC), agree to all provisions of the articulation program/course agreement, have reviewed the course competencies, and understand the process to which students may be granted college credit through the Tech Prep program. We commit staff time and resources to ensure successful program implementation.

Allen Skoog — 2/27/17
Allen Skoog, Date
Cheney SD CTE Director

Laura Kier — 2-14-17
Laura Kier, Date
SCC Faculty

Adam Smith — 2-28-17
Adam Smith, Date
Cheney HS Teacher

2-16-17
Jeff Brown, Date
SCC Program Dean

3/10/17
Kevin Brockbank, Date
Vice Provost for Strategic Partnerships

Original March 2002; Renewed/Modified November 2008; Revised December 2010; Renewed/Modified September 2013; Renewed/Modified 2016-17

Course Objectives/Course Outline
Spokane Community College

Course Title:	**IT Essentials – A+**
Prefix and Course Number:	**CIS 201**

Course Learning Outcomes:

By the end of this course, a student should be able to:

Upon completion of the IT Essentials course, students should be able to perform the following tasks:

- Define information technology (IT) and describe the components of a personal computer
- Describe how to protect people, equipment, and the environment from accidents, damage, and contamination
- Perform a step-by-step disassembly and assembly of a desktop computer
- Explain the purpose of preventive maintenance and identify the elements of the troubleshooting process
- Install and navigate an operating system
- Configure computers to connect to a network
- Upgrade or replace components of a laptop based on customer needs
- Describe the features and characteristics of mobile devices
- Install and share a printer
- Implement basic hardware and software security principles
- Apply good communications skills and demonstrate professional behavior while working with customers
- Perform preventive maintenance and basic troubleshooting
- Assess customer needs, analyze possible configurations, and
- provide solutions or recommendations for hardware, operating
- systems, networking, and security

Course Outline:

I. Introduction to the Personal Computer
II. Lab Procedures and Tool Use
III. Computer Assembly
IV. Overview of Preventive Maintenance and Troubleshooting
V. Operating Systems
VI. Networks
VII. Laptops
VIII. Mobile Devices
IX. Printers
X. Security
XI. The IT Professional
XII. Advanced Troubleshooting

Course Objectives/Course Outline
Spokane Community College

Course Title: Cisco I Introduction to Networks
Prefix and Course Number: CIS 250

Course Learning Outcomes:
By the end of this course, a student should be able to:

- Understand and describe the devices and services used to support communications in data networks and the Internet
- Understand and describe the role of protocol layers in data networks
- Understand and describe the importance of addressing and naming schemes at various layers of data networks in IPv4 and IPv6 environments
- Design, calculate, and apply subnet masks and addresses to fulfill given requirements in IPv4 and IPv6 networks
- Explain fundamental Ethernet concepts such as media, services, and operations
- Build a simple Ethernet network using routers and switches
- Use Cisco command-line interface (CLI) commands to perform basic router and switch configurations
- Utilize common network utilities to verify small network operations and analyze data traffic

Course Outline

I. Exploring the Network
II. Configuring a Network Operating System
III. Network Protocols and Communications
IV. Network Access
V. Ethernet
VI. Network Layer
VII. Transport Layer
VIII. IP Addressing
IX. Subnetting IP Networks
X. Application Layer
XI. It's a Network

Course Objectives/Course Outline
Spokane Community College

Course Title:	**Cisco II Routing and Switching Essentials**
Prefix and Course Number:	**CIS 251**

Course Learning Outcomes:
By the end of this course, a student should be able to:

- Understand and describe basic switching concepts and the operation of Cisco switches
- Understand and describe the purpose, nature, and operations of a router, routing tables, and the route lookup process
- Understand and describe how VLANs create logically separate networks and how routing occurs between them
- Understand and describe dynamic routing protocols, distance vector routing protocols, and link-state routing protocols
- Configure and troubleshoot static routing and default routing (RIP and RIPng)
- Configure and troubleshoot an Open Shortest Path First (OSPF) network
- Understand, configure, and troubleshoot access control lists (ACLs) for IPv4 and IPv6 networks
- Understand, configure, and troubleshoot Dynamic Host Configuration Protocol (DHCP) for IPv4 and IPv6 networks
- Understand, configure, and troubleshoot Network Address Translation (NAT) operations

Course Outline

I. Introduction to Switched Networks
II. Basic Switching Concepts and Configuration
III. VLANs
IV. Routing Concepts
V. Inter-VLAN Routing
VI. Static Routing
VII. Routing Dynamically
VIII. Single-Area OSPF
IX. Access Control Lists
X. DHCP
XI. Network Access Translation (NAT) for IPv4