

West Hills College Lemoore

Program Title: Network Fundamentals Certificate of Achievement

Title of proposed program: Network Fundamentals Certificate of Achievement

Contact Person: James Preston

Title: Dean of Educational Services

Phone number: 559-925-3146

Email address: jamespreston@whccd.edu

Projected start date: Fall 2016

Type of change requested: Add new Major or Area of Emphasis

Projected annual completers: 25

Units for degree major or area of emphasis: 17-20

Total units for certificate: 17-20

Criteria A: Appropriateness to Mission

1. Program Goals and Objectives

The Network Fundamentals program prepares students for the industry recognized CompTIA Network+ certification exam and validates the knowledge and skills of networking professionals. The Network+ certification exam is an international, vendor-neutral certification that recognizes a technician's ability to describe the features and functions of networking components and to install, configure and troubleshoot basic networking hardware, protocols, and services. Although not a prerequisite, it is recommended that CompTIA Network+ candidates have at least nine months of experience in network support or administration or adequate academic training, along with a CompTIA A+ certification. Upon successful completion of the program, students will be able to:

- take the CompTIA Network+ certification exam.
- configure networking on systems and workstations.
- understand and setup TCP/IP networks and subnets.
- maintain physical and wireless network connections and equipment.

2. Catalog Description

The Network Fundamentals Certificate focuses on CompTIA A+/Network+ curriculum that provides the entry-level knowledge, skills and experience required for employment in the field of computer systems and network support. Students who complete the certificate will be able to install, configure, upgrade, diagnose and troubleshoot typical PC hardware and software; identify and respond to the needs of networked PC users; and address PC network connection problems, security issues and other infrastructural challenges. Credits earned may be applied toward Information Communication Technology (ICT) and Computer Information Systems (CIS) degrees at the college.

3. Program Requirements

Core Courses	Course Title	Units
CIS 5A	Information and Communication Technology Essentials	4.0
CIS 5B	Computer Network+ Fundamentals	3.0
CIS 5C	Routing and Switching Essentials	3.0
CIS 5D	System and Network Administration	3.0
CIS 42	System Design and Analysis	3.0
WE 15XX or CIS 15XX	General or Occupational Work Experience	1.0-3.0
	Total Units	17.0-20.0

4. Background and Rationale

This Networking Fundamentals Certificate is for professionals looking to pursue a career installing, managing and troubleshooting different networks over a variety of platforms. The core of this certificate is based on CompTIA certification program(s). CompTIA is a top vendor-neutral certification that is recognized as a leader in the industry today. This certificate provides the training to install networking components, comprehend various functionalities and configure, as well as troubleshoot, basic networking hardware, services, and protocols. The certificate is part of a group of certificates that are being developed at the college and the region to meet the demands of the Information and Communications Technology (ICT) sector. The courses in the certificate program will be offered in an academy format allowing students to complete the certificate in one year by taking evening and online classes. The academy also includes a work experience component so that students gain industry experience and have a chance to apply their networking skills in a real world setting.

Criteria B. Need for Program

5. Enrollment and Completer Projections

Learning Area	Course Title	Year 1		Year 2	
		Annual Sections	Annual Enrollment Total	Annual Sections	Annual Enrollment Total
CTE	CIS 5A: Information & Communication Technology Essentials	1	25	1	25
CTE	CIS 5B: Computer Network+ Fundamentals	1	25	1	25
CTE	CIS 5C: Routing and Switching Essentials	1	25	1	25
CTE	CIS 5D: System & Network Administration	1	25	1	25
CTE	CIS 42: System Design and Analysis	1	25	1	25
CTE	CWEE	1	25	1	25

6. Place of Program in Curriculum/Similar Programs

The college currently has an A.S. degree in Computer Information Systems with a variety of certificates. The new Networking Fundamentals certificate is part of a series of certificates of achievement that are being developed within the Information and Communication Technology (ICT) fields to match industry needs. In addition to the Networking Fundamentals certificate, the college is developing certificates in the areas of Programming and Security+ certificates. The Network Fundamentals Certificate has the support of the local CTE advisory committee and meets growing demand for networking technicians in the college's service area and across California.

7. Similar Programs at Other Colleges in Service Area

The Networking Fundamentals certificate is offered in various formats at numerous colleges in the region. Colleges in the Central/Motherlode region such as Fresno City College, West Hills College Coalinga, College of the Sequoias (COS), Delta College, and Modesto College have been working the Deputy Sector Navigator to align programs. Although there are other similar programs in the region, the labor market data in the region and the ability to use the skills acquired in this certificate program outside of the region make it a needed and marketable certificate.

8. Labor Market Information and Analysis (CTE only)

Attachment Required: Labor Market Information & Analysis (CTE only)

ONet Online (<http://www.onetonline.org>) reports that 47 percent of Computer Network Support Specialists in California have a bachelor's degree, 22 percent have an associate's degree, and 14 percent have some college, but no degree. Sample of reported job titles related to Computer Network Support Specialist are: Computer Network Specialist, IT Consultant (Information Technology Consultant), Network Engineer, Network Specialist, Network Support Specialist, Network Technical Analyst, Network Technician, Personal Computer Network Analyst, Senior IT Assistant (Senior Information Technology Assistant), and Systems Specialist.

Median California wage for Computer Network Support Specialist (2014), reported by ONet, is \$29.72/hour or \$61,830/year.

Salary Surfer (salarysurfer.cccco.edu/salaries.aspx) reports that the median annual salary for Computer Networking with "certificate" award type is: \$40,343 (2 years before certificate), \$53,287 (2 years after certificate), and \$58,978 (5 years after certificate).

The State of California, Employment Development Department (www.labormarketinfo.edd) reports a mean hourly wage of \$27.43/hour for Computer Networking Support Specialist (SOC Code: 15-1152) in Fresno County. Occupational projections of employment (outlook or demand) for Computer Networking Support Specialist in Fresno County (2012-2022) are 220 estimated, and 200 projected. This is a 9.1 percent decrease with 3 annual job openings for the ten-year period.

California EDD also reports the top three industries employing computer network support specialists in Fresno County as:

- 1) Accounting and Bookkeeping Services (561 employers)
- 2) Management & Technical Consulting Services (513 employers)
- 3) Elementary and Secondary Schools (489 employers)

California EDD reports the top three industries employing computer network support specialists in Kings County as:

- 1) Elementary and Secondary Schools (97 employers)
- 2) Accounting and Bookkeeping Services (46 employers)
- 3) Management & Technical Consulting Services (33 employers)

9. Employer Survey (CTE only)

Attachment Required: Employer Survey (CTE only)

Faculty does not believe a survey is needed as labor market data indicates a high demand for employees with these skill sets. Conversations with the Deputy Sector Navigator (DSN), local employers and members of the advisory committee have provided valuable insight into the necessary skills to succeed in this field and the job demand in the region.

10. Explanation of Employer Relationship (CTE only)

The Network Fundamentals Certificate of Achievement follows Title 5, section 51006 requirements and is not designed exclusively for individuals already employed by a particular employer or in a particular industry. This program is available to all interested students who are not already employed in that industry to obtain entry-level employment.

11. List of Members of Advisory Committee (CTE only)

- April Betterson-West Hills College Lemoore-CTE Academic Advisor
- David Rengh-West Hills College Lemoore-CIS Instructor
- Jonathon Giles-Lemoore Police Department
- Michelle Arenas-MSA- Employment Training
- Maribel Guzman-MSA- Employment Training
- Bobby Bossarte-CDRC- Information Technology
- Roxana Bojorge-Farmer Boys- Shift Leader
- Dan Beeler-HRCM- Adjunct Catering Supervisor
- Debbie Muro-LUHSD- Superintendent
- Loren Kelly-West Hills College Lemoore- Business Adjunct
- Diana Schartz-SI Leader- Business
- Wendy Denney-West Hills College Lemoore- Adjunct Counselor
- Brian Kron-West Hills College Lemoore-Business/CIS Instructor
- Reagan Roach-Harris Ranch- Executive Chef
- Angela Barginear-West Hills College Lemoore- Career Tech
- Jennifer Solis-FAST Credit Union- Vice President
- Jeff Garner-Kings County Action Organization- Director
- Margie Newton-Kings County Office of Education- Program Director
- Terry Davis-West Hills College Lemoore AOJ Instructor
- Monte Paden- West Hills College Lemoore Business/Entrepreneurship Instructor
- James Preston-West Hills College Lemoore- Dean of Educational Services

12. Recommendation of Advisory Committee (CTE only)

Attachment Required: CTE Advisory Committee Approval Meeting Minutes (CTE only)

During the CTE learning center’s advisory committee meeting in October 2015 the Networking Fundamentals Certificate of Achievement was discussed and met a positive response. This certificate will be beneficial to the students because it will give the credibility when applying for beginner position employment and at the same time they will be able to continue with their studies to achieve higher level certificates.

Criteria C. Curriculum Standards**13. Display of Proposed Sequence**

First Semester	Units
CIS 5A- 1 st 9 Weeks	4.0
CIS 5B- 2 nd 9 Weeks	3.0
CIS 42- Online- 2 nd 9 Weeks	3.0
Total	10.0

Second Semester	Units
CIS 5C- 1 st 9 Weeks	3.0
CIS 5D- 2 nd 9 Weeks	3.0
CWEE or CIS 15XX	1.0-3.0
Total	7.0-10.0

14. Transfer Applicability (if applicable)

N/A

Criteria D. Adequate Resources**15. Library and Learning Resources Plan**

No additional resources will be required beyond the college’s current resources. This includes: library and learning resources.

16. Facilities and Equipment Plan

CTE Enhancement Funds have been appropriated to purchase initial equipment needed to start the program. The college will work with other colleges in the region as part of a CTE Enhancement Regional Project to identify equipment and facility needs.

17. Financial Support Plan

No additional resources will be required beyond the enhancement funds to start the program and college's current resources to sustain the program.

18. Faculty Qualifications and Availability

No new faculty will be needed, and no additional costs will be incurred. All of the faculty that will teach in this program meet the State minimum qualifications and possess knowledge and experience in this program area. Additional professional development is being provided through the CTE Enhancement Regional project to ensure that faculty are up-to-date with the latest changes and technology in the industry.

Criteria E. Compliance

19. Based on Model Curriculum (if applicable)

N/A

20. Licensing or Accreditation Standards

There are no licensing or accrediting standards that apply to this program. Students who complete the Networking Fundamentals Certificate will be prepared to take the CompTIA A+ certification exam and the CompTIA Network+ certification exam that are instrumental to success and employability in the industry. No additional student selection criteria is required, this program complies with California Code of Regulations, title 5 section 55201 and 58106.

21. Student Selection and Fees

There are no additional fees required beyond those identified in California Education Code section 76300.

West Hills College Lemoore CTE Advisory Committee Meeting
West Hills College Lemoore- Room 256
Monday, October 5th, 2015

Members present:

- April Betterson-West Hills College Lemoore-CTE Academic Advisor
- David Rengh-West Hills College Lemoore-CIS Instructor
- Jonathon Giles-Lemoore Police Department
- Michelle Arenas-MSA- Employment Training
- Maribel Guzman-MSA- Employment Training
- Bobby Bossarte-CDRC- Information Technology
- Roxana Bojorge-Farmer Boys- Shift Leader
- Dan Beeler-HRCM- Adjunct Catering Supervisor
- Debbie Muro-LUHSD- Superintendent
- Loren Kelly-West Hills College Lemoore- Business Adjunct
- Diana Schartz-SI Leader- Business
- Wendy Denney-West Hills College Lemoore- Adjunct Counselor
- Brian Kron-West Hills College Lemoore-Business/CIS Instructor
- Reagan Roach-Harris Ranch- Executive Chef
- Angela Barginear-West Hills College Lemoore- Career Tech
- Jennifer Solis-FAST Credit Union- Vice President
- Jeff Garner-Kings County Action Organization- Director
- Margie Newton-Kings County Office of Education- Program Director
- Terry Davis-West Hills College Lemoore AOJ Instructor
- Monte Paden- West Hills College Lemoore Business/Entrepreneurship Instructor
- James Preston-West Hills College Lemoore- Dean of Educational Services

Minutes by: Sheryl Shortnacy- West Hills College Lemoore- Senior Secretary

1. Call to Order

J. Preston called the meeting to order at 5:31 p.m.

2. Additions to the Agenda

There were no additions or changes to the agenda.

3. Introduction of members

J. Preston asked everyone to introduce themselves

4. JP Updates

a. Campus Updates (President, Student Center, CTE Enhancement Funds, Eagle Express)

J. Preston reported that Don Warkentin will be retiring in December and the new president Dr. Kristian Clark will take over in January. The student center is under construction and is planned to be completed in October 2016. West Hills College Lemoore has received local and regional CTE Enhancement funds. Some of the funds will be used for a new CTE Center on campus. Eagle Express is our mobile food kiosk that is open to everyone to purchase food items. The kiosk is run by WHCL culinary and business students and is a VTEA-funded project.

b. CTE Advisory Committee Member Responsibilities

J. Preston asked all CTE Advisory Committee members to attend 3 meetings a year, review all documents and give input.

c. CTE 2015-16 Mission

J. Preston reported on what the mission is for CTE learning area 2015-2016.

i. New Certificates

J. Preston reported that new certificates are being developed this year with a goal of completing 6 or more.

ii. CTE Academy Model

J. Preston reported on the CTE Academy that has started this year. There are 26 students in the new programming academy that is funded through the IDRC grant and the students will complete the program in one year. The students received free textbooks for the academy. This is a pilot program.

iii. CTE Center

J. Preston reported that a new CTE Center is in the process of being created. One key element will be internship development and placement.

5. New Business/Action Items- presentation, input, discussion, consideration of approval

D. Rengh gave a presentation on Programming, Networking and Security proposed certificate programs which included program objectives and a timeline for development.

a. ICT/CIS Certificates

i. Programming

D. Rengh shared the curriculum and program information for a proposed certificate in programming. He reported that the Programming academy started in the 2015 Fall

semester and filled up right away. D. Rengh asked for input and suggestions on the certificate and discussion followed.

ii. Networking

D. Rengh shared the curriculum and program information for a proposed certificate in networking. He reported that the Networking academy is planned to start in the 2016 Fall semester. D. Rengh asked for input and suggestions on the certificate and discussion followed.

iii. Security

D. Rengh shared the curriculum and program information for a proposed certificate in security. He reported that the Security academy is planned to start in the 2017 Fall semester. D. Rengh asked for input and suggestions on the certificate and discussion followed.

After the presentation on proposed ICT certificates a motion was made to approve them by Debbie Muro-LUHSD Superintendent and seconded by Jeff Garner-Kings County Action Organization-Director. A vote was called for and the motion passes unanimously, no abstentions.

b. Business Certificates

B. Kron reported on Business Certificate programs and handed out a pamphlet that outlined the courses needed for Business Management/Entrepreneurship, Business Information Worker and Accounting Information Worker.

i. Bookkeeping

B. Kron shared the curriculum and program information for a proposed certificate in Bookkeeping/Accounting Information Worker. B. Kron asked for input and suggestions on the certificate and discussion followed.

ii. Business Information Worker/Office Tech

B. Kron shared the curriculum and program information for a proposed certificate in Business Information Worker/Office Tech. B. Kron asked for input and suggestions on the certificate and discussion followed.

iii. Entrepreneurship

B. Kron shared the curriculum and program information for a proposed certificate in Entrepreneurship. B. Kron asked for input and suggestions on the certificate and discussion followed.

After the presentation on the proposed Business Certificate programs a motion was made to approve them by Jennifer Solis-FAST Credit Union VP and seconded by Reagan Roach-Harris Ranch Executive Chef. A vote was called for and the motion passes unanimously, no abstentions.

6. Suggestions and Input from CTE Advisory Committee

J. Preston asked for input from the CTE Advisory Committee. One suggestion was to invite guest speakers from businesses to come and present to their students. Another suggestion was to change the meeting time to 9:00-11:30am or 2:00-5:00pm.

7. Agenda Items for Future Meetings and Upcoming Events

J. Preston went over future agenda items and asked for input. A suggestion was made to add E. Guest Speakers. The following items will be on the agenda for the next advisory committee meeting.

- a. Labor Market Data**
- b. New Certificates (Commercial Energy Auditing, Project Management)**
- c. CTE Outcomes Survey Results**
- d. Guest Speakers**

8. Adjourn

Meeting adjourned at 7:01 p.m.