# CTN287 - Cloud Computing

Document Type: District Master Course Outline
Proposal Type: New Course
Requester(s): Carol Koepke David Herman
College: South
Origination Approved: 08/21/2012 - 9:09 AM

## BASIC INFORMATION

**Requester(s):** Carol Koepke
David Herman
**College:** South Seattle Community College
**Division/Dept:** Professional Technical
**Dean:** Duncan G Burgess
**Peer Reviewer(s):** Cortney Marabetta

## COURSE INFORMATION

**Proposed Course Number:**
Prefix: **CTN** Number: **287**

☐ Request a new Prefix
☐ This will be a common course

**Full Title:** Cloud Computing

**Abbreviated Title:** Cloud Computing

**Catalog Course Description:**
Cloud server course in which students will build a server using Microsoft products (Hyper-V, SharePoint, and Azure) to understand the interactions of each and the advantages, the complexities, security issues, disadvantages and seamless appearance from the users' view of the Cloud. Prereq: CTN 276 (2.0 or better) or work experience equivalent.

**Course Length:** 11 Weeks ☐ Request an Exception

**Course Prerequisite(s):**
CTN 276 (2.0 or better) or work experience equivalent

**Topical Outline:**

| TOPICS | HOURS |
|---|---|
| I. Building the Host System<br>A. Determine the purposes and traffic and guest needs<br>B. Choosing the Correct hosting operating systems<br>C. Hardware concerns<br>D. Get the right hardware for the job<br>E. Calculate hardware needs for each guest and all guests | 10 |

| | |
|---|---|
| F. Networking and related security concerns | |
| | |
| II. Server roles and apps<br>A. Install and configure Hyper-V<br>B. Install and configure SharePoint<br>C. Install and configure Azure<br>D. Set up local and remote admin with appropriate rights/permissions | 25 |
| | |
| III. Guests<br>A. Create and configure guests<br>B. Add OS and applications<br>C. Set up users for each guest with appropriate rights/permissions<br>D. Put it all together and test | 20 |
| **TOTAL HOURS** | **55** |

COURSE CODING

**Funding Source:** 1.....State

**Institutional Intent:** 22.....Vocational Supplemental

This Course is a requirement for the following program(s):

(No Programs Selected)

☑ My Course Proposal is a requirement for a program not on this list

Program Title/Description/Notes:

Virtualization Certificate /New certificate submitted with this course proprosal

**Will this course transfer to a 4-year university?** **No**

**Is this course designed for Limited English Proficiency?** **No**

**Is this course designed for Academic Disadvantaged?** **No**

**Does this course have a Workplace Training component?** **No**

**CIP Code:** 11.0901 ☐ Request Specific CIP Code

**EPC Code:** 527 ☐ Request Specific EPC Code

**Credits:**

**Will this course be offered as Variable Credit?** **No**

**List Course Contact Hours**

Lecture (11 Contact Hours : 1 Credit) 55

Lab (22 Contact Hours : 1 Credit) 0

Clinical Work (33 Contact Hours : 1 Credit) 0

Other (55 Contact Hours : 1 Credit)

| | |
|---|---|
| | 0 |
| Total Contact Hours | 55 |
| Total Credits | 5 |

## COLLEGE SUPPLEMENTAL

**Proposed Quarter of Implementation:** Summer 2013 ☐ Request Provisional Exception

**Class Capacity:** 24

**Modes of Delivery:** (Check all that apply)

- ☑ Fully On Campus
- ☐ Fully Online
- ☐ Hybrid
- ☐ Other Explanation:

**Student Learning Outcomes:**

**Communication**

Read and listen actively to learn and communicate

The end user will not be able to convey most of the technical set that will be required by the specialist to produce results correctly for the customer. An astute ear is very helpful.

Speak and write effectively for personal, academic, and career purposes

The technical and support side of Cloud computing requires constant communication among the It staff and with the customers. Also, there is an immense amount of documentation that needs to be created or updated.

**Computation**

Use arithmetic and other basic mathematical operations as required by program of study

The specialists must calculate CPU usage, RAM use and allocations, throughput, load distributions, properly assign host addresses, calculate the actual costs of running a cloud and much more.

**Human Relations**

Use social interactive skills to work in groups effectively

Recognize the diversity of cultural influences and values

**Critical Thinking and Problem-Solving**

Think critically in evaluating information, solving problems, and making decisions

This is a complex build providing many opportunities for problem solving.

**Technology**

Select and use appropriate technological tools for personal, academic, and career tasks

**Personal Responsibility**

Be motivated and able to continue learning and adapt to change

Value one's own skills, abilities, ideas and art

Take pride in one's work

**Information Literacy**

Access and evaluate information from a variety of sources and contexts, including technology

Solutions must be found quickly and they need to be accurate.

**Program Outcomes:**

- Identify hardware and operating system components and explain functions.
- Install and properly configure PC hardware devices and operating systems.
- Build, configure, and prepare a network server for a given role.
- Be able to install, configure, and use various Microsoft, Novell, and open source operating systems.
- Select, implement appropriate troubleshooting tools and methods for problem solving.
- Be able to analyze and troubleshoot various Microsoft, Novell, and open source operating systems
- Troubleshoot and solve problems occurring at any level of the OSI layers in a network.
- Correctly add/remove/change users and computers, sites, and domains in a network.
- Make use of software applications for utilitarian or presentation purposes.
- Use critical thinking for analysis of hardware, OS, or network problems.
- Access information efficiently and accurately to resolve computer problems.
- Work effectively with others to accomplish complex tasks.
- Develop logical thinking skills.
- Develop effective communication skills.
- Be able to explain and communicate problems accurately and the related solutions effectively.
- Use safety precautions while working in and around computers and people.

**Course Outcomes/Objectives:**

- Understand common technical complexities of Cloud computing.
- Understand the interactions of the operating system, specialized server roles and the advantages/disadvantages related to the final usage and maintenance.
- Gain experience building and working with popular Microsoft Cloud tools such as SharePoint and Azure.
- Be able to set permissions at the correct parental/child level for a user's requirements.
- Be able to use many computing technology skill sets previously learned in one computer build.
- Be able to accurately discuss Cloud model's features and use from a technical point of view.

**Explain the student demand for the course and potential enrollment:**

Students are eager to learn all that they can about the Cloud, Cloud technologies and products. A handful of our advanced students have tried to accomplish this build in the classroom but found it to be a daunting task. They've asked for a course that would cover these topics. We expect the enrollment in this course to be at least 16 students.

**Explain why this course is being created:**

Microsoft's SharePoint Server is often listed as a required or preferred skill in job advertisements.

Experience with Azure and Hyper-V are showing up more often as required or preferred than last year. Gartner Group and InfoWorld and other IT watchdogs are reporting the Hyper-V is gaining popularity in the virtualization industry. It is one of the top three products. We want to teach these elements to our students, but no single product would serve our students well. We can offer them training in four products at the same time because the four work together and are frequently installed in this manner. (Windows 2008r2, Hyper-V SharePoint, and Azure).

**What challenges, if any, do you foresee in offering this course:**

We do not anticipate any challenges in offering this course.

**This is to certify that the above criteria have all been met and all statements are accurate to the best of my knowledge.**

Faculty involved in originating this program:

| Print Name | Signature | Date |
|---|---|---|
| Carol Koepke | Carol Koepke | 8/15/2012 |
| David Herman | David Herman | 8/15/2012 |

Dean:

| Print Name | Signature | Date |
|---|---|---|
| Duncan G Burgess | Duncan G Burgess | 8/20/2012 |

**Results of SSCC Curriculum Coordinating Council Findings**

**Participating Faculty Response and Remarks**

- [ ] Recommended for approval
- [ ] Not recommended for approval
- [X] This course did not go through Committee Review

Chairman, Curriculum Coordinating Council:

| Print Name | Signature | Date |
|---|---|---|
| | | |

Vice President for Instruction:

| Print Name | Signature | Date |
|---|---|---|
| Donna Miller-Parker | Donna Miller-Parker | 8/21/2012 |