



## Course Number and Title: CNE 284 Cloud Computing

**Campus Location:**

Georgetown, Dover, Wilmington

**Effective Date:**

2018-51

**Prerequisite:**

CNE 215, CNE 216

**Co-Requisites:**

None

**Course Credits and Hours:**

3.00 credits

2.00 lecture hours/week

2.00 lab hours/week

**Course Description:**

This course introduces cloud computing technology and its practical applications in today's business environments. Topics include an introduction to cloud computing's service models and deployment models and to the way cloud environments are provisioned in public or private clouds.

**Required Text(s):**

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

**Additional Materials:**

Amazon Web Services (AWS) account

**Schedule Type:**

Classroom Course

Online Course

**Disclaimer:**

None

**Core Course Performance Objectives (CCPOs):**

1. Differentiate between cloud-based and premise-based computing technology. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 6)
2. Identify service models of cloud computing. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 6)
3. Examine deployment models of cloud computing. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 6)
4. Demonstrate provisioning of cloud resources. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 6)
5. Design and build a cloud-based web application. (CCC 2, 3, 4, 5, 6; PGC 1, 2, 4, 5, 6)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

**Measurable Performance Objectives (MPOs):**

Upon completion of this course, the student will:

1. Differentiate between cloud-based and premise-based computing technology.
  1. Explain the benefits of cloud-based architecture.
  2. Identify the essential characteristics of cloud-based architecture.
  3. Compare and contrast cloud-based architecture with traditional on-premise systems.
2. Identify service models of cloud computing.
  1. Describe service models offered by commercial vendors.
  2. Compare and contrast cloud-based service models.
  3. Identify quality management issues unique to each service model.
3. Examine deployment models of cloud computing.
  1. Describe deployment models of cloud computing.
  2. Compare and contrast cloud-based deployment models.
  3. Identify the challenges and risks of implementing a system within a given deployment model.
4. Demonstrate provisioning of cloud resources.
  1. Install and configure a sample cloud-based application.
  2. Practice configuration of computer and storage resources in a cloud environment.
  3. Interpret cloud service level agreement (SLA) documentation.
5. Design and build a cloud-based web application.
  1. Compare and contrast commercial cloud offerings using a standard cloud computing reference architecture.
  2. Explain the factors to consider when migrating from on-premise to cloud-based environments.
  3. Create a plan to implement a cloud-based solution.
  4. Deploy a cloud-based web application.

**Evaluation Criteria/Policies:**

Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the Delaware Tech grading system:

92	-	100	=	A
83	-	91	=	B
75	-	82	=	C
0	-	74	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

**Core Curriculum Competencies (CCCs are the competencies every graduate will develop):**

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

**Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):**

1. Apply techniques, skills and usage of the modern tools of a Computer Network Engineering Technician.
2. Apply analysis tools and problem-solving methods learned in the mathematics, computer, and electrical/electronic courses to troubleshoot network problems.
3. Diagnose and resolve network issues.
4. Install, configure, administer and troubleshoot network services for file access and storage, web-content hosting, network communications, network gateways and proxies, and security services on networking servers.
5. Design, install, configure and operate Wide Area Networks (WAN) and Local Area Networks (LAN).
6. Explain the functions and the workings of common communications protocols, and how such protocols are developed by standards organizations.

**Disabilities Support Statement:**

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.