



Course Number and Title: ITN 264 Web App Development

Campus Location:

Georgetown, Dover, Stanton, Wilmington

Effective Date:

2020-51

Prerequisite:

ITN 261

Co-Requisites:

None

Course Credits and Hours:

3.00 credits

2.00 lecture hours/week

2.00 lab hours/week

Course Description:

This course explores the use of languages for contemporary web development, in-depth concepts of database implementation, and information organization. Students develop web-enabled database solutions and implement a web-based framework integrating user interface and user experience elements, including content and presentation in a responsive design.

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:

Access to high-speed Internet and 250MB of free disk space.

Schedule Type:

Classroom Course

Video Conferencing

Web Conferencing

Hybrid Course

Online Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Explain the fundamentals of web development and web-enabled languages. (CCC 1, 2, 5; PGC 1, 2, 4, 5)
2. Design and develop a user-centered experience using a web framework. (CCC 1, 2, 3, 4, 6; PGC 1, 3, 4)
3. Develop problem-based solutions using web-enabled language. (CCC 2, 3, 4, 6; PGC 1, 3, 4)
4. Test and debug web-enabled database solutions and web-based framework. (CCC 2, 3, 4; PGC 1, 3, 4)

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. Explain the fundamentals of web development and web-enabled languages.
 1. Discuss the syntax and capabilities of web-enabled languages.
 2. Compare and contrast the syntactical differences between various web-enabled languages.
 3. Identify the characteristics and importance of a user-centered design.
 4. Explain the interaction between web browsers and web servers.
2. Design and develop a user-centered experience using a web framework.
 1. Design a user interface/user experience (UI/UX) based on accessibility guidelines and standards.
 2. Create wireframes and sitemaps as part of the design process.
 3. Use secure file transfer utilities to move files between the web server and the development environment.
 4. Document the application using proper techniques.
 5. Implement UI/UX elements using a web framework.
3. Develop problem-based solutions using web-enabled language.
 1. Create securely coded solutions that account for input validation, query injection, and cross-site scripting vulnerabilities.
 2. Establish database connectivity using a data object library.
 3. Generate dynamic content based on user supplied input or selection criteria.
4. Apply debugging techniques to identify, analyze, and repair web-enabled database solutions and web-based frameworks.
 1. Evaluate application code and database queries.
 2. Evaluate web pages for usability and functionality.
 3. Implement performance solutions.

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. Solve technology-related problems using critical thinking and troubleshooting skills.
2. Articulate the role of the technology professional in organizations to support the ethical use of information technology.
3. Apply fundamental security concepts and strategies for maintaining and securing information technology.
4. Read and interpret technical information and effectively communicate to a wide range of audiences using oral, print, and multimedia strategies.
5. Demonstrate the importance of lifelong learning that empowers personal and professional growth.

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.