ABOUT THE PROGRAM

The program curriculum focuses on using game and simulation development to help students learn programming principles, web application development, integration of web marketing and website design, database administration, mobile device development, and freelance and contract employment.

PROGRAM OUTCOMES

- Develop, build, and configure a dynamic and interactive Web site or application.
- Design, model, and implement a database for Web site or application use.
- Demonstrate proficiency in basic Web server maintenance, including configuration, troubleshooting, and maintenance.
- Lead a team or project using basic principles of project management.
- Create basic computer games and computer simulations.
- Convert logic concepts into object oriented programming code.
- Communicate and work effectively in a team environment.
- Communicate information effectively and accurately in systems-related documentation.
- Manage version control, change control, quality assurance testing, user acceptance policies, system deployment, and system maintenance.
- Analyze and define the specifications of a system based on user requirements.
- Develop mobile applications.
- Implement secure coding practices to ensure secure and safe Web sites.
- Explore and employ new Web technologies and tools.
- Ensure Web applications comply with W3C validation standards and Section 508 Accessibility standards.
- Explore the relationship between web design, web development, and web marketing.

ADMISSIONS STEPS

- Work with Admissions Specialist to:
 - Submit application and $30 fee.
 - Complete an assessment for placement (Accuplacer or ACT).
 - Submit official transcripts (high school and other colleges).
- Meet with program advisor/counselor to discuss program details.

APPROXIMATE COSTS

- $132 per credit (resident)
- $198 per credit (out-of-state resident)
- Other fees vary by program (books, supplies, materials, tools, uniforms, health-related exams, etc.) Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

PLACEMENT SCORES

Accuplacer/ACT scores will be used to develop your educational plan. Contact your program advisor/counselor for details.

SPECIAL NOTE

Students must purchase a 250GB external hard drive; have minimum home computer system/laptop requirements including a 2 Ghz processor, 4 GB of RAM, and a 250 GB hard drive; have a home PC with a web cam; and have a computer microphone with headset. Students are strongly encouraged to take Written Communications during the summer before program start, General Education courses during summer break allowing concentrated time during semesters for core program courses, and College Mathematics in the first semester.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

CONTACT

Tanya Boettcher, Admissions Specialist
920.693.1280 • tanya.boettcher@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10152111	Emerging Web Trends	1
10152196	Web Development 1	3
10152120	Programming 1	1
10152121	Programming 2	3
10154121	Database Concepts	2
10804107	College Mathematics	3
		13
Term 2		
10152199	Web Development 2	4
10152187	Web Development 3	4
10201106	CSS for Advanced Web Design	3
10801195	Written Communication OR 10801136 English Composion 1	3
10809195	Economics	3
		17
Term 3		
10152123	Mobile Device Development 1	3
10152106	Integrated Web Concepts	4
10152107	Game Development	3
10806112	Principles of Sustainability OR 10809122 Introduction to American Government	3
10809196	Introduction to Sociology	3
		16
Term 4		
10152112	Web Development 4	4
10152114	Mobile Device Development 2	3
10152192	Web and Software Developer-Capstone Project	3
10152115	Internship - Web and Software Developer	1
10152119	Portfolio Assessment-Web and Software Dev	1
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
		18
	TOTAL	**64**

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor/counselor for details.

The **Hire** in
HIGHER EDUCATION

2015-16

COLLEGE MATHEMATICS…is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. PREREQUISITE: 10834109 Pre-Algebra or equivalent

CSS FOR ADVANCED WEB DESIGN…further explores the range of design methods made possible by Cascading Style Sheets (CSS) and how it can be used for creating progressive and contemporary Website designs. The course will cover imagery, typography, effects, and themes as they relate to CSS and Website design. PREREQUISITE: 10152196 Web Development 1

DATABASE CONCEPTS…prepares the learner to differentiate among the primary DBMS components; determine the difference in data models; use Query By Example and relational algebra; develop SQL statements; apply principles of database integrity, security and normalization; reconstruct poorly designed table structures; develop a relational database design using data requirement analysis and specification methods; and examine additional DBMS functions.

ECONOMICS…provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems. growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro Reading and Study Skills or equivalent

EMERGING WEB TRENDS…introduces students to the most current developments in the Web. Using resources and tools for staying current in relation to new technologies and trends related to Web design, development and marketing, students will assess current Web trends as they apply to their chosen profession.

GAME DEVELOPMENT…introduces students to the Java programming language and object-oriented programming (OOP) concepts. Students will use the Java programming language and OOP to create basic 2D games or other applications utilizing similar OOP concepts. PREREQUISITES: 10152121 Programming 2

INTEGRATED WEB CONCEPTS…introduces the student to the three major components of the Web -- design, development, and marketing. A common course among Graphic and Web Design, Web and Software Developer, and Marketing, students from each program will be responsible for working in teams and to coordinate projects and present their industry to students from the other programs. PREREQUISITE: 10104102 Prin of Mktg and 10152187 Web Dev 3 and COREQUISITE: 10201106 CSS for Adv Web Design and CONDITION: 101527 Web & Software Developer or 102012 Graphic & Web Design or 101043 Mktg prog requirements met

INTERNSHIP-WEB AND SOFTWARE DEVELOPER…requires students to complete 72 hours of performing work in a business/industrial service setting related to their program objectives. Students are responsible for seeking and obtaining the internship workstation position. Course requirements including maintaining a log of work activities, identifying and receiving approval from the job supervisor and instructor, completing a work-related project, and an assessment of the student's portfolio. Students meet periodically at LTC. PREREQUISITE: 10152187 Web Development 3 and 10152106 Integrated Web Concepts and CONDITION: 101527 Web and Software Developer program requirements met

INTRODUCTION TO PSYCHOLOGY…introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. COREQUISITE: 10838105 Intro Reading and Study Skills or equivalent

INTRODUCTION TO SOCIOLOGY…introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro Reading and Study Skills or equivalent

MOBILE DEVICE DEVELOPMENT 1…introduces students to building hybrid mobile applications using HTML, CSS, and JavaScript, specifically the jQTouch and JQuery mobile frameworks. Students will create applications for Google Play and the Apple Store using the PhoneGap framework. PREREQUISITES: 10152199 Web Development 2, 10152187 Web Development 3, and 10201106 CSS for Advanced Web Design

MOBILE DEVICE DEVELOPMENT 2…introduces the student to designing and building native mobile applications using Google's Android open-source platform. The course explains what Android is and how it compares to other mobile environments, configuration of Eclipse-based development tools, the Android SDK, all essential features, as well as the advanced capabilities and APIs such as background services, accelerometers, graphics, and GPS. PREREQUISITE:10152123 Mobile Device Development 1

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or equivalent

PORTFOLIO ASSESSMENT - WEB AND SOFTWARE DEVELOPER...assesses what the student has learned through the Web and Software Developer degree. The course will focus on the continued development of their electronic career portfolio, the freelance/contract software development market, the analysis of the achievement of their core abilities and program outcomes, and job search topics such as resumes, cover letters, and interview skills. PREREQUISITES: 10152123 Mobile Device Dev 1 and 10152106 Integrated Web Concepts and CONDITION: 101527 Web and Software Developer admissions requirements met

PRINCIPLES OF SUSTAINABILITY...prepares the student to develop sustainable literacy, analyze interconnections among physical and biological sciences and environmental systems, summarize effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal/recycling in the U.S., and analyze approaches used by your community.

PROGRAMMING 1…introduces students to the concepts of programming with no coding. Using flowcharts, students will learn about the concepts of variables, data types, decision, loops, and arrays.

PROGRAMMING 2...builds on the concepts mastered in Programming 1 by introducing coding techniques using the JavaScript scripting language. Students will learn how to write code using variables, data types, decisions, loops, and arrays. COREQUISITE: 10152120 Programming 1

WEB AND SOFTWARE DEVELOPER-CAPSTONE PROJECT...reinforces all program content by requiring students to plan, design, analyze, and develop a piece of software of their choice. Students will learn about concepts related to systems analysis and design, including business cases, project management, requirements modeling, user interface design, and systems implementation. Students will study entrepreneurial concepts to determine feasibility of the product. PREREQUISITE: 10152199 Web Dev 2, 10152187 Web Dev 3, 10152123 Mobile Device Dev 1, and 10152106 Integrated Web Concepts

WEB DEVELOPMENT 1...introduces the students to web page design principles and proceeds to teach students how to create their own visually appealing designs for the web. Students will have hands-on experience using current versions of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) to code and format accessible, valid, and optimized web sits. Websites will be published live on the web using FTP.

WEB DEVELOPMENT 2…introduces the student to the JQuery JavaScript framework for developing dynamic client-side Web pages. PREREQUISITE: 10152196 Web Development 1 and 10152121 Programming 2

WEB DEVELOPMENT 3…introduces the learner to PHP, MySQL, PHP frameworks, content-managed Web sites, and Web server architecture. Topics covered include an introduction to the Apache Web server, server-side scripting, PHP control logic and functions, controlling state using sessions and cookies, querying database content and population to an HTML Web page, MySQL relational database administration, and processing form information and populating it to a MySQL database. PREREQUISITES: 10152121 Programming 2 and 10152196 Web Development 1 and 10154121 Database Concepts

WEB DEVELOPMENT 4…introductes the learner to Microsoft's .NET platform, .NET frameworks, content-managed Web sites, and Web server architecture.Students will develop interactive and dynamic web applications using the Microsoft ASP.NET, MVC architecture, and ADO.NET components to access data and data services through the creation of data-driven ASP.NET web pages, configuration of an ASP.NET application, the deployment of an ASP.NET application and the creation of XML web services. Microsoft SQL Server is used. PREREQUISITE: 1015287 Web Development 3 and 10152107 Game Development

WRITTEN COMMUNICATION…teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or equivalent