

# **CST450 Programming for Application Development**

## **(3 credit hours)**

### **Course Syllabus**

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### **Course Description**

This course explores the latest programming methodologies, particularly the newest programming languages in use today. The development environment and programming language utilized is chosen by the instructor. The purpose is to give the student experience in another programming language different from the beginning course work. The level of programming for the student will be driven to where they can design complicated and sophisticated software using advance coding. Projects will include bridging between basic computer concepts identified in previous coursework and designing standard and mobile applications. This course will qualify a student to sit for several certification exams, depending on the language utilized. Certifications could include the Microsoft 70-483 Programming in C# or the Microsoft 98-338 Introduction to Programming using JAVA certification exam through the Microsoft Corporation to obtain a Microsoft Technology Associate (MTA) certification or other comparable certification.

### **Course Learning Outcomes**

By the end of this course, you will be able to:

1. Examine the syntax of another programming language.
2. Design and implement applications in the programming language.
3. Identify and investigate object-oriented programming concepts, such as objects, classes and subclasses.
4. Design and implement self-contained, reusable user interface elements that meet or exceed the design criteria of existing industry standard user interface libraries.
5. Investigate the beginning concept of mobile design.

### **Prerequisites/Corequisites**

CST301 and at least junior standing

### **Required Textbook(s) and Resources**

For this course you will need to obtain the following materials:

Farrell , J. (2017). Microsoft Visual C#: An introduction to object-oriented programming (7th Ed.). Cengage.

Be sure to also review the weekly **Explore** sections for additional library or web resources. For access to databases, research help, and writing tips, visit the [Tiffin University Library](#). You might consider registering for one of the library's many webinars on library research, source evaluation, copyright, and other topics, at the [Library Events - Upcoming Events](#) web page. For further assistance email a librarian, at: [library@tiffin.edu](mailto:library@tiffin.edu).

## Time Commitment

Effective time management is possibly the single most critical element to your academic success. To do well in this online class you should plan your time wisely to maximize your learning through the completion of readings, discussions, and assignments. Because of our accelerated, seven-week term, TU online courses are designed with the expectation that you dedicate a little over **six (6)** hours per credit hour to course activities and preparation **each week**. For example, for successful completion of a three-credit, seven-week online course you should reserve roughly **twenty (20) hours per week**.

To help plan your time and keep on track toward successful course completion, note the distinctive rhythm of assignment due dates:

6. All times assume Eastern Time (GMT-4).
7. Weeks begin at 12:00 a.m. ET on Monday and end at 11:55 p.m. ET on Sunday.
8. Unless otherwise noted, initial assignments or discussion posts are due by **11:55 p.m. ET on Wednesdays**.
9. Additional assignments or follow-up discussion posts are due by **11:55 p.m. ET on Saturdays, and**
10. Major assignments and reflections are typically due by **11:55 p.m. ET on Sundays**.

## Learning Activities

Assessment for CST450 consists of one or two activities each week. In the first week you will engage in a non-graded introductory forum discussion and take a quiz to assess your current knowledge of programming languages. In weeks 2-7 you will write a variety of small programs in C#, and in the final week you will additionally prepare a final project. To prepare for the latter, you will engage in a discussion and peer critique in Week 5 to help develop ideas.

## Grading

The chart below identifies the individual contributions from each type of activity, per week.

Activity	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Total
Discussion	0	--	--	--	100	--	--	100
Quiz	100	--	--	--	--	--	--	100
Coding Applications	--	100	100	100	100	100	100	600
Final Project	--	--	--	--	--	--	200	200
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>	<b>300</b>	<b>1000</b>

### Grading Scale

Grade	Percentage
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	< 60%

Please see the [Academic Bulletin](#) for grade appeal information.

### Course Outline and Weekly Checklist

Topic	Learning Activities (Due by 11:55 p.m. ET on day designated)
Start Here	<input type="checkbox"/> MON: Activity 1.1: Driving Force (introductory Forum)
Week 1: Introduction to C# Programming Language	<input type="checkbox"/> WED: Optional Responses to Activity 1.1 <input type="checkbox"/> SUN: Activity 1.2: Quiz
Week 2: Using GUI objects and the Visual Studio IDE	<input type="checkbox"/> WED: Preview Activity 2.1 (nothing to complete or submit) <input type="checkbox"/> SUN: Activity 2.1: Coding Application

<b>Topic</b>	<b>Learning Activities (Due by 11:55 p.m. ET on day designated)</b>
Week 3: Making Decisions	<input type="checkbox"/> WED: Preview Activity 3.1 (nothing to complete or submit) <input type="checkbox"/> SUN: Activity 3.1: Coding Application
Week 4: Looping	<input type="checkbox"/> WED: Preview Activity 4.1 (nothing to complete or submit) <input type="checkbox"/> SUN: Activity 4.1: Coding Application
Week 5: Using Arrays	<input type="checkbox"/> WED: Activity 5.1 (Forum): Ideas on Final Project <input type="checkbox"/> WED: Preview Activity 5.2 (nothing to complete or submit) <input type="checkbox"/> SAT: Activity 5.1: Ideas on Final Project - Secondary Posts <input type="checkbox"/> SUN: Activity 5.2: Coding Application
Week 6: Using Methods	<input type="checkbox"/> WED: Preview Activity 6.1 (nothing to complete or submit) <input type="checkbox"/> SUN: Activity 6.1: Coding Application
Week 7: Using Controls	<input type="checkbox"/> MON: Preview Activities 7.1 & 7.2 (nothing to complete/submit) <input type="checkbox"/> THU: Activity 7.1: Coding Application <input type="checkbox"/> SUN: Activity 7.2: Final Project

## Tips for Success

Online learning requires self-discipline and self-direction. As seekers of the truth, we should be willing to challenge one another's academic work in a spirit of respectful comradery. Your course is a place for you to grow as you benefit from the expertise, experience, and diverse perspectives of your instructor and peers. Constructive feedback will challenge you to stretch your own thinking, thereby expanding your knowledge and understanding.

To get the most out of your learning experience, you should actively engage (participate) in **ALL** course activities. Course elements are arranged chronologically. To complete a week, simply work your way "down the page" through all of the course materials and activities.

## Your Instructor Will Expect You to:

- Thoroughly review orientation materials (Start Here) within the first 48 hours of the term.
- Monitor your TU email account **daily** for important updates and announcements.
- Take ownership of your learning experience and act in a proactive, self-directed manner. That means:
  - Fully participate in all learning activities.
  - Complete assignments as described in rubrics or other instructions.

- Submit all work on time and in the specified format (e.g. APA format for citations).
- Utilize and incorporate instructor provided feedback to improve your work.
- Ask questions so you can better understand course material or assignments.
- Use the highest standards of intellectual honesty and integrity. For more information, see the TU Library guide: [Digital Literacy: Netiquette and Internet Safety](#).
- Treat others respectfully and demonstrate "netiquette" (online politeness and respectfulness) at all times. TU celebrates cultural uniqueness and expects all students to be considerate and thoughtful throughout their learning experiences.

### **You Should Expect Your Instructors to:**

- Post an introductory announcement/email at the beginning of each week to provide updates and help you prepare for the week's activities.
- Maintain an active and engaged presence in all course activities and throughout the course.
- Respond to your emailed questions within 48 hours, if not sooner.
- Clearly communicate any absences or expected non-participation due to extenuating circumstances. For example, "I will be traveling to attend a funeral this week and may not be able to respond to questions or participate in forums for a couple of days."
- When grading your work:
  - clearly indicate their grading approach (what they like to see in submitted work as well as what types of errors they tend to penalize more harshly),
  - thoroughly review and evaluate your submissions in a timely manner (in less than 5 days for most assignments), and
  - provide constructive feedback that indicates the strengths and weaknesses of your work and provides suggestions on how you can improve your performance on future assignments.
- Advocate for your success as a learner and help guide you toward successful completion of the course activities and most importantly, attainment of the course learning outcomes.

### **Accommodations (Disability Services)**

The Office of Disability Services supports the institutional commitment to diversity by providing educational opportunities for qualified individuals with disabilities through accessible programs and services in compliance with Section 504 of the Rehabilitation Act of 1973 and Title III of the Americans with Disabilities Act (ADA) of 1990. If you need reasonable

accommodations due to a documented disability, contact the Office for Equity, Access, & Opportunity via email at [disabilityservices@tiffin.edu](mailto:disabilityservices@tiffin.edu) or by calling 419-448-3021.

## Technical Support

For Moodle support, either email [moodlesupport@tiffin.edu](mailto:moodlesupport@tiffin.edu) or call the 24/7 Technical Support Call Center at 855-664-1200 (3430, Option 2, from on-campus). For non-Moodle support, contact the Tiffin University ITS helpdesk at the number above or submit a [support ticket](#).

## Veterans

The Veteran and Military Resource Center assists veterans, active Military, and spouses of current service members in utilizing their education benefits. VMRC provides information regarding benefit processes and procedures, as well as support in navigating the transition from military to academic life by facilitating connections with the appropriate support services on campus. More information can be found on the Veteran and Military Resource Center website, at <http://www.tiffin.edu/va>.

## Additional Support

If you need to consult an academic advisor refer to TU's [Meet the Team](#) page. For information about TU's peer tutoring program see the Murphy Center's [Tutoring Policies and Procedures](#) page.

## Comments or Concerns

TU's online programs are designed to be student *driven*: to empower you with a voice and stake in your learning. Our courses feature multiple and varied ways that you can share feedback, and we invite you to become an active voice and help drive our improvement efforts. In addition to providing in-course feedback, we encourage you to submit questions or comments directly to the online team at [online@tiffin.edu](mailto:online@tiffin.edu).