

## Chippewa Valley Technical College

152-101 Programming Fundamentals with JavaScript

### Instructor and Class Information

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|  | Instructor Name | Steven Gago |
|  | Email | sgago@cvtc.edu |
|  | Phone | 715-858-1881 |
|  | Office Location | Eau Claire Business Center (BEC)  BEC 163  620 W. Clairemont Ave  Eau Claire, WI 54701 |
|  | Instructor Office Hours | My office hours are posted in my profile on E360. |
|  | Section Number | 10550 |
|  | Start Date | 10/24/2016 |
|  | End Date | 12/19/2016 |
|  | Meeting Times | This is an eight week course. Each week the course offers six hours in class and two hours of online training. The student is responsible for all eight hours of material each week.  All work must be completed and submitted by the end of the course. No extensions are granted for this course. In other words, no extra time is allowed after the end date. |
|  | Meeting Location | This class meets for three hours on Mondays and Wednesdays from 9 a.m. until 11:55 a.m. at BEC room 176.  Students will also interact via E360 and are expected to participate in online discussions, view presentations, take quizzes, submit all assignments, etc. on E360. In order to do well, students must log into the class in E360, check email often, read assigned material, and participate in course activities and meet deadlines as posted on E360. |
|  | Additional Class Information | |
|  | Prerequisites - Basic computer and Internet knowledge. - Ability to read and send emails, download files, and use file management. - Daily access to a computer with permissions to install software. - Access to Microsoft World or a program that can create files in Microsoft's .docx format. - Access to a text editor like Notepad, Notepad++, TextWrangler, Visual Studio Code, Atom, or Vim. - Access to the Firefox Web browser. | |

### Course Information

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|  | Course Number | 152-101 |
|  | Course Title | Programming Fundamentals with JavaScript |
|  | Course Description | |
|  | This course is designed to be a student's first programming course. It provides an introduction to fundamental computer programming concepts including: input-processing-output, if- then-else logic, for loops, while loops, and array processing. With an emphasis on hands-on activities, students use pseudocode and flowcharting tools to build problem-solving skills. Programming concepts and problem-solving skills are synergized and applied through the completion of a variety of programming exercises using the JavaScript programming language | |
|  | Total Credits | 3.00 |
|  | Total Hours | 64.00 |

Target Population

This course is designed for the student who has little or no programming experience. The course is required for first-semester IT Software Developer and IT Mobile Developer students, but would be extremely useful for students in any field that requires computer use.

Textbook

There is no textbook required for this course.

Learner Supplies

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| Learners will require   * USB Storage Device (external hard or flash drive with a minimum of 4GB of free space) |
| * Ability to create and modify plain text documents |
| * Ability to install software downloaded from the Internet |
| * Ability to read and send emails, download files, zip folders of files, and use file management like Windows Explorer. |
| * Ability to solve algebraic and logic problems |
| * Basic HTML skills |
| * Basic Internet and Windows, Mac, or Linux knowledge |
| * Daily access to E360 and your student email |

### Core Abilities

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| 1. | Models Integrity |
| 2. | Thinks Critically |

### Program Outcomes

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| --- | --- |
| 1. | Design software systems |
| 2. | Develop technical documentation |

### Course Competencies

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| --- | --- |
| 1. | Explain the process of application development |
| 2. | Apply logic and problem-solving tools |
| 3. | Use development tools for program design, development, and debugging. |
| 4. | Demonstrate the correct use of variables and operators |
| 5. | Develop decision programming code guided by tests. |
| 6. | Develop repeat programming code guided by tests. |
| 7. | Incorporate data structures and functions to improve program maintainability and readability |
| 8. | Demonstrate Business Professionalism |

Guidelines

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| **Course Technology** | |
|  | 1. Storage Device like a USB Drive is strongly recommended. 2. Access to a computer with high speed Internet connection to access the Edvance360 (E360) learning management system, view training videos, and upload homework. 3. A simple text editor, Microsoft Word 4. As a student in the Information Technology – Software Developer program, you are required to have access to a modern PC-based system that will allow you to perform all your Online and homework requirements for the course. Below is a list of the minimum recommended hardware and operating system requirements:  * Operating System: Windows 7 Professional x64 SP1 * System Type: X86-based PC Intel® Core 2 Quad CPU 3.0 GHz * 4 GB RAM 250 GB Hard Drive * 128 MB or higher video card memory * Three-button mouse with mouse driver software * DVD-ROM drive |
| **Course Delivery** | |
|  | This is an eight-week hybrid course.  Each week the course offers six hours of in-class and two hours of online training on E360.  The student is responsible for all eight hours of material each week. |
| **Course Grading Policy** | |
|  | This is a competency-based course.  A competency is a skill or knowledge that must be practiced and attained in a course.  A list of competencies is included for this course.  When assessed, each competency is divided into a series of learning objectives to provide a more detailed description.  A student must prove to be competent in order to pass the course.    Each competency will be assessed and assigned the grade A, B, C, D, or F.  All competencies must receive a C or better to pass the course.  The instructor reserves the right to record a zero for any late assignment. All assignments and assessments will be graded after the due date.  **Course Grade**  The course is comprised of Assignments, Assessments Labs, and Assessment Vocabulary graded items.  The final grade percentage is calculated by dividing the total points earned by the total points possible for the class.  Example: 450 earned points / 500 possible points = .90 or 90% The Grade Scale is as follows:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | A+ | 100% | C+ | 77% - 79.9% | | | A | 93% - 99.9% | C | 73% - 76.9% | | | A- | 90% - 92.9% | C- | 70% - 72.9% | | | B+ | 87% - 89.9% | D+ | 69% - 69.9% | | B | 83% - 86.9% | D | 68% - 68.9% | | | B- | 80% - 82.9% | D- | 67% - 67.9% | | |  |  | F | 66.9% or Below | |   **Monitor Grade**  E360 provides the Gradebook - a method of viewing your grades at any time. (See the Gradebook link in the left navigation area in E360.) Since all activities earn points, you can divide your earned points by the number of Total Points available to provide a percentage that can be applied to the Grading Scale for this course. The points you earn for each activity will display in the grade book. Please note that quiz grades display immediately after you complete and submit the quiz; whereas, other learning activity grades will not display until the instructor has graded them.   You are always encouraged to check your grades often, and email your instructor if you have questions or concerns.   Please note that the student is responsible for checking that each assignment/quiz has been successfully submitted in E360. For example, when submitting work via the dropbox a student should verify the contents of the document (or zipped assignment folder) and then save a back-up copy of the assignment in the E360 repository before each submission. Any problem with submission of an assignment or quiz must be reported to the instructor BEFORE the respective due date, giving the student the opportunity to resubmit BEFORE the due date expires to avoid the late penalty or zero score.   **Clean Code**  This class will lay the foundation for you as a professional Software Developer.  In the workforce you’ll be expected to adhere to coding standards so that others can read and understand your code.  I will carefully inspect your code not only for correctness but also for quality. Do not rush through your assignments – your grade will be affected for turning in code that does not meet the class quality standards. We will cover code quality in the course, but these guidelines are listed here for your reference.  1)      Code must be correctly indented and formatted using spaces, not tabs  2)      Code must include proper comments when necessary  3)      Spelling counts, as does grammar and punctuation. Even in comments.  4)      Code must be well-formed and must validate.   1. You will lose significant points for code that’s not following the class coding standards. In some situations, even if your program works, you can still receive a failing grade. 2. We will cover all of these things in class and you’ll have many opportunities to practice before you are graded on these areas. |
| **No Show Policy** | |
|  | Course attendance is a key factor in your academic success, and verification of such attendance ensures that the College is distributing financial aid to individuals who have begun to attend classes according to federal financial aid Title IV legislation. If you do not attend classes or begin the course by the end of the first week of the semester, you are reported to the Registrar's office by your instructor as a "no show" and you are canceled from the course. As a "no show", you will receive an 80% refund. "No show" status will also impact your financial aid. For more information and policy details for each class type (online, hybrid, etc.), please see your Student Handbook.  In the case of extenuating circumstances, for all class types, you must notify the instructor in writing (email or letter) if unable to attend class in week one as defined above. Without exception, when your extenuating circumstances prevent you from attending in week one, you must begin the course no later than Friday of week two. If you do not attend by the extended date, you will be reported as a "no show" even if a prior written contact was made. |
| **Attendance** | |
|  | Communicate - Participate - Don't be Late!   **Communicate**  Check E360 and CVTC email multiple times per week.  Connect with other students in your class...email them...strike up conversations. You are NOT in this alone!  Contact your instructor anytime you have questions! Email anytime... Just be sure to ASK if you have a question...the sooner, the better!  Do not suffer in silence.  **Participate**  Complete all of the learning activities. You must be an ACTIVE LEARNER in class. Complete your activities with the goal of LEARNING...not just to "get it done as fast as you can".  Contribute all that you can. Share your tips and tricks...and help other students if they ask for it.  Do the best you can. Don't be discouraged if you miss a deadline, or mess up and submit something that's not perfect. Just learn from your mistake, move forward, and you'll do better next time. "Work"...is just that - work. It's not always easy, but it helps you LEARN.  **Don’t be Late!**  Complete and submit your work on time! Deadlines are there to help you pace yourself and to make sure you can complete all of the work in the course by the end of the semester.  Exercise your TIME MANAGEMENT skills! Set aside specific time-frames each week to work on your online course. And, then stick to your schedule. Nothing is more stressful than waiting until the last minute (or worse - until it's too late) to complete your work. The quality of work that has been submitted late is almost never as good as the work submitted on time. And, you won't learn as much if you have to hurry! |
| **Academic Honesty** | |
|  | The following behaviors will be subject to disciplinary action:   1. Plagiarism - presenting someone else's words, ideas, or data as your own work. 2. Fabrication - using invented information or the falsifying research of others’ findings. 3. Academic Misconduct - other academically dishonest acts such as tampering with grades, taking part in obtaining or distributing any part of an assessment, or selling or buying products such as papers, research, projects or other artifacts that document achievement of learning outcomes. 4. Cheating - misleading others to believe you have mastered competencies or other learning outcomes that you have not mastered.  Examples include, but are not limited to:  * Copying from another learner's work * Allowing another learner to copy from your work * Using resource materials or information to complete an assessment without permission from your instructor * Collaborating on an assessment (graded assignment or test) without permission from the instructor * Taking a test for someone else or permitting someone else to take a test for you |
| **Responsibilities** | |
|  | **Learner's Role and Responsibilities**   You are an adult learner and as such you are responsible for your own learning. No one else can be a "stand in" for you in the learning process. You will be held accountable for completing all assigned activities by their respective due dates. You matter and what you do makes a difference. You will have an opportunity to share your unique ideas and experiences with your student peers and instructor. This is training for employment. Therefore, a professional and respectful demeanor is required at all times. The form and content of your participation will determine the level of achievement, satisfaction, and enjoyment that you experience.   **Instructor's Role and Responsibilities**   As your instructor, I am responsible for providing an environment in which an opportunity for learning exists. I will work with you and assist you in your quest for understanding. I cannot make you learn anything, but I can help you become a successful active learner. As a resource person and facilitator, I will organize the course, schedule learning activities, and evaluate the short-run "products" of your learning process. I will monitor emails and make every attempt to respond to questions within 48 hours (usually sooner) and evaluate and return your graded work within two weeks after its submission. I will be giving your work, as well as that of your fellow learners, careful consideration and evaluating it according to an objective scale. |
| **Communications & Etiquette Expectations** | |
|  | **Discussions**  Throughout the course of the semester, you may be asked to participate in this course via the Discussion.  The Discussions in E360 provides an excellent opportunity for you to communicate, discuss issues, and share information with classmates and your instructor.   In addition, you will improve critical thinking skills and practice your ability to communicate.  Those skills rank as some of the top skills demanded by employers today! Each Discussion has a subject. You add your comment to the post, and you can reply to other students' comments as well. Feel free to strike up an online conversation with others in our class throughout the semester. To access the Discussion Post you can always click the Discussions link in the navigation bar to the left.  However, the best way to get you the Discussion Post is to go through the appropriate Lesson Folder. In that folder you'll find an item specifically linked to the correct Discussion Post, and you'll find instructions and the correct due date.  **Discussion Etiquette**  Remember that we all get to read what everyone writes. Please refrain from using any language, images, or other content that could be offensive to your classmates. Use good judgment and be respectful of yourself, your classmates, and your instructor.  **Email**  You are required to check your email account early and often - DAILY would be best! E360 Email and alerts (announcements in E360) will be the two most common ways you'll communicate with your instructor. To use the email feature in E360 scroll up to the navigation buttons at the top of the window and click the Mailbox button. You can easily send an email by selecting the "+ New Message" option. Just a reminder, using CVTC email is a privilege for CVTC students, and you are expected to use it with respect.  The following is an extract from our Acceptable Use Policy with some specific information that you should know as we start this semester:  The use of the College Internet/e-mail is a privilege, not a right; and the College maintains the right to limit access.  E-mail is NOT guaranteed to be private.  The Chief Information Officer (CIO) or his/her designee has the right to monitor and track Internet usage and access information stored in any user directory, on the current user screen, or in e-mail.  The CIO or his/her designee may deny, revoke, or suspend specific user accounts. You can always use email in E360 to communicate with classmates and your instructor, but you should get in the habit of logging into your CVTC student email account as well.  For example, information about registration or inclement weather would be more likely sent via CVTC email. For questions regarding CVTC email, click the following link to access the CVTC website Email Step-by-Step Guides and Tutorials:  ​ [Technology-Help.aspx](https://mycvtc.cvtc.edu/site/student/Pages/Technology-Help.aspx)   (right-click to open in a new tab or window) |
| **Technology Issues** | |
|  | The CVTC Help Desk is your resource for technical help. Can't log into MyCVTC? Can't get the CVTC web site to display? E360 is not working? Citrix not cooperating? Those types of questions should be directed to the Help Desk. You can always call the help desk (toll-free, 24-7) at the following numbers:  From CVTC Phone . . . 5555 Local. . . . .     715-830-5555     You can also chat with a Help Desk Rep at https://help.cvtc.edu/TechSupport/default.aspx. There are additional methods of contacting the help desk if you have access to MyCVTC. Just click on the PC with the question mark in the upper right corner of the MyCVTC window and follow the instructions provided.     The CVTC IT Department makes every effort to keep all computer systems up and running for the convenience of students and staff. But, occasionally outages occur. Work very hard at managing your time with a goal of completing your work a day or so BEFORE the deadline in case the computer system you need is unavailable for a short time during the week. But, if a significant outage occurs and causes serious delays, contact your instructor immediately. Your instructor may choose to delay the due date and provide extra time for your work to be completed.     You are responsible for maintaining your computer and your home Internet connection. Hard drive failures, computer crashes, or other technical issues with your personal computer are your responsibility to troubleshoot or fix. Your computer is your tool, and you need to keep it in good working order to complete this course.  In our industry, technical problems happen all the time. Prevent them from taking you down too by starting early and planning ahead. |
| **ADA Statement** | |
|  | As your instructor, I wish to fully include persons with disabilities in this course. Please let me know if you need any special accommodations in the curriculum, instruction, or assessments of this course to enable you to fully participate. I will maintain the confidentiality of the information you share with me.    In your E360 course you will find current information regarding CVTC Student Rights, Disability Services, the Student Handbook, and much more! Just click the Resources link on the left, and then select CVTC Documents or CVTC Links to review a wealth of information. |
| **Alteration Rule** | |
|  | This syllabus and schedule is subject to change at the instructor’s discretion. |

**Tentative Class Schedule**

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| Date/Session | Competencies | Activities |
| Week 1 | Explain the process of application development Demonstrate Business Professionalism | * + Get to know your instructor and fellow classmates   + Read course syllabus and send confirmation email   + Explore the basics of computing   + Set up tools for JavaScript development   + Write a simple JavaScript program   + Explore the basics of computer programming   + Explore the software development process   + Participate in introductory discussion   + Participate in JavaScript Resources discussion   + Submit "Experience" assignment   + Complete the Type This Code assignment |
| Week 2 | Apply logic and problem-solving tools Demonstrate Business Professionalism | * + Participate in class discussions   + Discuss pseudocode   + Use pseudocode to explain processes   + Explore the first learning unit   + Discuss flowcharting   + Develop flowcharts to model processes   + Complete the Written Instructions discussion   + Complete the Attendance flowchart   + Read Learning Unit 1 and do exercises   + Complete Learning Unit 1 labs |
| Week 3 | Apply logic and problem-solving tools Use development tools for program design, development, and debugging. Demonstrate the correct use of variables and operators Demonstrate Business Professionalism | * + Participate in class discussions   + Review HTML and introduce JavaScript   + Work with variables   + Write programs that build strings   + Discuss data types   + Explore more use of variables, numbers, and strings   + Read Learning Unit 2 and complete exercises   + Complete Learning Unit 2 labs |
| Week 4 | Apply logic and problem-solving tools Demonstrate the correct use of variables and operators Demonstrate Business Professionalism | * + Participate in class discussions   + Bring article to class to discuss   + Practice breaking problems into algorithms   + Quiz on data types and type systems   + Bring article to class to discuss   + More practice breaking problems into algorithms   + Debugging practice   + Read Learning Unit 3 and complete exercises   + Complete Learning Unit 3 labs |
| Week 5 | Demonstrate the correct use of variables and operators Demonstrate Business Professionalism | * + Participate in class discussions   + Explore operators and expressions   + More practice breaking problems into algorithms   + Programming Assessment   + Read Learning Unit 4 and complete exercises   + Complete Learning Unit 4 labs |
| Week 6 | Develop decision programming code guided by tests. Incorporate data structures and functions to improve program maintainability and readability Demonstrate Business Professionalism | * + Participate in class discussions   + Write software using IF statements and other decision structures   + More practice breaking problems into algorithms   + More decision structures, arrays, and dictionaries   + Intro to functions   + Read Learning Unit 5 and complete exercises   + Complete Learning Unit 5 labs |
| Week 7 | Develop repeat programming code guided by tests. Incorporate data structures and functions to improve program maintainability and readability Demonstrate Business Professionalism | * + Participate in class discussions   + Counted loops   + Uncounted loops   + Refactoring   + More practice breaking problems into algorithms   + More decision structures, arrays, and dictionaries   + More repeat programming   + Using functions effectively   + Read Learning Unit 6 and complete exercises   + Complete Learning Unit 6 labs |
| Week 8 | Explain the process of application development Apply logic and problem-solving tools Use development tools for program design, development, and debugging. Demonstrate the correct use of variables and operators Develop decision programming code guided by tests. Develop repeat programming code guided by tests. Incorporate data structures and functions to improve program maintainability and readability Demonstrate Business Professionalism | * + Participate in class discussions   + Intro to object-oriented programming   + Intro to Git   + Assessment: Final Program   + Submit Final Project |