

# CS 1030: Fundamentals of Programming

## Fall 2021 Syllabus

Introductory course for students in Computer Science and Computer and Information Technologies programs or having general interest in computer programming. This course will instruct students in structured programming techniques and teach the syntax of a suitable high level programming language. Students will be required to complete programming projects of increasing difficulty.

### Prerequisites

None

### Fees

**Computer lab fee:** \$20, used to assist in maintaining computing infrastructure.

### Instructors

- [Carol Stander](#)
- In-person and Virtual Office Hours: MW 10-12pm, or by appointment
- Virtual Office Hour: Friday 10-11am

### Sections

| CRN   | Meeting Times | Room      | Instructor | Final Exam                         |
|-------|---------------|-----------|------------|------------------------------------|
| 41042 | MW 1:30 PM    | Smith 109 | Stander    | 1-2:50pm on Dec 6th (Mon)          |
| 43101 | Online        |           | Stander    | Completed before Wednesday Dec 8th |

## Course Requirements

### Texts

There is one required text for this course.

- *BLOWN to BITS, Your Life, Liberty, and Happiness after the Digital Explosion* by Hal Abelson, Ken Ledeen, and Harry Lewis, ISBN: 0137135599
- FREE for download from <http://www.bitsbook.com/excerpts/> under a Creative Commons License.

### Prerequisite Technology Skills

You need to know how to navigate the internet and have basic typing skills (if you don't have good typing skills plan on extra time to complete assignments).

### Computers

You are required to bring a laptop to class every day with a charged, working battery. If you don't have one, you can check one out from the Smith building lab with your student ID for use during the class period. Outside of class, you can use the computers in the Smith Building Lab. There will be lab assistants available to help you. Check the lab schedule for times. You may also use any other computer you wish. These computers require a valid CIT username and password. If you have not activated your CIT login, visit <http://cit.dixie.edu/facilities/passwd/passwd.php> to activate it, or ask a lab assistant to help you sign up for one.

### Course Materials

This course is managed through Canvas. You are responsible for announcements, the schedule, and other resources posted there.

## Course learning outcomes

| By the end of this course, you will be able to...               | Achievement of this outcome is measured through... |
|---|--|
| 1) Read and write small computer programs and a simple web page | Programming Assignments                            |

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|--|--|
| 1) Read and write small computer programs and a simple web page (CS/SE PLO #1, #2)                       | Programming Assignments, Projects, Quizzes |
| 2) Communicate through discussion and writing about data and its effect on daily life (CS/SE PLO #3, #5) | Discussions                                |
| 3) Work with peers in creating, writing, and evaluating computer programs (CS/SE PLO #4)                 | Activities                                 |

## Assignments and Exams

### *Reading and Discussion*

There are required readings from the text and other online material. There will be class discussions on the reading. Scoring is in the discussion rubric.

### *Activities*

When in a F2F class the activities will be done in small groups, otherwise they can be done online. Activities focus on decomposing problems, looking for patterns, generalizing patterns, and designing algorithms.

### *Programming Assignments*

Most weeks will require a homework assignment to be completed. These will mostly be hands on coding problems. You will submit them in Canvas. Programs will be graded according to a rubric in Canvas.

### *Quizzes*

There are weekly quizzes, a midterm quiz, and a final quiz.

### *Midterm Project*

Students will choose the type and subject matter of the project. The project must meet the technical guidelines given in Canvas.

### *Final Project*

Students will build on the midterm project. The project must meet the technical guidelines given in Canvas.

## Instructor Interaction

The best way to contact the instructor is through email. The instructor commits to answering emails within 24 hours on weekdays. The instructor will grade materials within one week. Intensive feedback will be given on the Midterm Part I and the Final Part I that will assist the student in successfully completing the midterm and final project.

## Schedule

For important University-wide dates see: <https://calendar.dixie.edu/>

| Week | Topic   |
|------|---|
| 1    | Introduction  |
| 2    | Design Tools and Animation  |
| 3    | Input, Output, Storing Data   |
| 4    | Games   |
| 5    | Functions, Parameters, and PenTool Art                                    |
| 6    | Object Oriented Programming and Input Validation                          |
| 7    | Randomization and Midterm   |
| 8    | Linux and Midterm   |
| 9    | Introducing Python with Turtle  |
| 10   | Input & Output with strings and lists                                     |
| 11   | Functions, Sending and Receiving Data from Functions, String Manipulation |
| 12   | Incrementation, While loops, Random, and Input Validation                 |
| 13   | HTML, CSS, Web Pages, and the Internet                                    |
| 14   | Review, Final Project   |
| 15   | Finals Week   |

# Grading

Your course point total will be calculated using:

| Course Work             |     |
|-------------------------|-----|
| Programming Assignments | 20% |
| Activities              | 20% |
| Discussions             | 15% |
| Quizzes                 | 15% |
| Midterm Project         | 10% |
| Final Project           | 20% |

Your final grade will be calculated using this scale:

| Minimum Percentage | Letter Grade |
|--------------------|--------------|
| 93                 | A            |
| 90                 | A-           |
| 87                 | B+           |
| 83                 | B            |
| 80                 | B-           |
| 77                 | C+           |
| 73                 | C            |
| 70                 | C-           |
| 67                 | D+           |
| 63                 | D            |
| 60                 | D-           |
| 0                  | F            |

## Course Policies

### Distractions in class

Electronics—including laptops—in class have been demonstrated to have a negative impact on student learning (see [Shriram Krishnamurthi's writeup for background](#)). This class has a NO DISTRACTIONS policy, with a few exceptions:

1. When I ask you to use your laptop (or phone) for a specific activity in class. In this case you are permitted to use it for the duration of the activity, but not during the rest of the class.
2. If you need a laptop to accommodate a disability. If this is the case, please talk to me in advance and please visit the Disability Resource Center to document your need. To help other students in the class, please sit near one of the edges so your laptop does not distract other students more than necessary.

This policy extends to phones, tablets, and other electronic devices. I encourage you to pay full attention to class and take notes on paper.

### Attendance

Students are responsible for material covered and announcements made in class. School-related absences may be made up only if prior arrangements are made. The schedule in Canvas is approximate. The instructor reserves the right to modify the schedule according to class needs. Changes will be announced in class and posted to Canvas. Exams and quizzes cannot be made up unless arrangements are made *prior* to the scheduled time.

### Time Commitment

This class will require about 90 hours of work on the part of the student to achieve a passing grade, which is approximately 6 hours per week. If you do not have the time to spend on this course, you should probably rethink your schedule.

### Late work

Assignments and drills are due on the date specified in the schedule.

Late work will be subject to penalties as determined by the individual instructor. This may include receiving zero credit.

Work including quizzes can only be made up if arrangements are made in advance.

## Cheating and Collaboration

Limited collaboration with other students in the course is permitted. Students may seek help learning concepts and developing programming skills from whatever sources they have available, and are encouraged to do so. Collaboration on assignments, however, must be confined to course instructors, lab assistants, and other students in the course. Students are free to discuss strategies for solving programming assignments with each other, but this must not extend to the level of programming code. Each student must code his/her own solution to each assignment. See the section on cheating.

Cheating will not be tolerated, and will result in a failing grade for the students involved as well as possible disciplinary action from the college. Cheating includes, but is not limited to, turning in homework assignments that are not the student's own work. It is okay to seek help from others and from reference materials, but only if you learn the material. As a general rule, if you cannot delete your assignment, start over, and re-create it successfully without further help, then your homework is not considered your own work.

You are encouraged to work in groups while studying for tests, discussing class lectures, discussing algorithms for homework solutions, and helping each other identify errors in your homework solutions. If you are unsure if collaboration is appropriate, contact the instructor. Also, note exactly what you did. If your actions are determined to be inappropriate, the response will be much more favorable if you are honest and complete in your disclosure.

Where collaboration is permitted, each student must still create and type in his/her own solution. Any kind of copying and pasting is *not* okay. If you need help understanding concepts, get it from the instructor or fellow classmates, but never copy another's code or written work, either electronically or visually. The line between collaborating and cheating is generally one of language: talking about solutions in English or other natural languages is usually okay, while discussions that take place in programming languages are usually not okay. It is a good idea to wait at least 30 minutes after any discussion to start your independent write-up. This will help you commit what you have learned to long-term memory as well as help to avoid crossing the line to cheating.

## DSU Support & Policies

See <https://academics.dixie.edu/syllabus/> for comprehensive information on the Semester Dates, the Final Exam Schedule, University resources such as the library, Disability Resource Center, IT Student Help Desk, Online Writing Lab, Testing Center, Tutoring Center, Wellness Center and Writing Center. In addition, please review DSU policies and statements with regards to Academic Integrity, Disruptive Behavior and Absences related to university functions.

## Helpful Links

| Name   | Service  |
|--|--|
| <a href="#">Academic Advisement</a>                      | Helps students make decisions about their courses and degree path.   |
| <a href="#">Academic Performance and Tutoring Center</a> | Offers one-on-one tutoring, study hall, and online tutoring to help students in many subjects ranging from Math to Foreign Language.   |
| <a href="#">Career Services</a>                          | Assists students with career exploration, choosing a major, writing a resume, and getting a job.   |
| <a href="#">Disability Resource Center</a>               | Serves students with disabilities by providing equal access to academic programs, non-academic activities, and campus facilities   |
| <a href="#">DRC Accessibility</a>                        | A list of DRC services including exam accommodations, ASL interpreting, materials in alternative format, and more.   |
| <a href="#">Health and Counseling Center</a>             | Provides acute health care, referral services, health education, and brief mental health services.   |
| <a href="#">Help Desk</a>                                | Provides assistance for Canvas, Dmail, Student Services, Trailblazers wireless configuration, laptop assistance, and any other technical troubleshooting you may need help with. |
| <a href="#">Library</a>                                  | Provides the resources necessary to facilitate research and enhance university curriculum and programs.  |

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|--|---|
| <a href="#">Multicultural and Inclusion Center</a> | Increases diversity through scholarship opportunities, community outreach, academic advisement, and diversity club participation.   |
| <a href="#">Student Life</a>                       | The Dixie State University Student Association (DSUSA) offers a variety of ways to get involved socially at the university.   |
| <a href="#">Student Support Services</a>           | Provides a variety of free services to help first-generation, low-income, or students with disabilities to complete an associate degree and move on to a bachelor degree. |
| <a href="#">Testing Center</a>                     | Provides all proctored exams on campus and can make accommodations for remotely proctored exams.  |
| <a href="#">Writing Center</a>                     | Offers students personalized attention from tutors for writing.   |

## Privacy

It is your responsibility to protect your data and privacy online. Be careful and use discretion when using any of the course technologies to complete required learning activities. If you are unsure about how to protect your data and privacy online, please use the resources provided to understand your responsibility.

- [101 Data Protection Tips: How To Keep Your Passwords, Financial, and Personal Information Safe](#)
- Harper, E. (2018). [9 Simple Ways To Protect Your Privacy](#). Retrieved from: <https://www.techlicious.com/tip/simple-ways-to-protect-your-privacy/>
- [Canvas Privacy Policy](#)
- [Google Privacy Policy](#)
- [YouTube Policies](#)
- [Vimeo Privacy Policy](#)

## DSU Policies

- [Code of Student Rights and Responsibilities](#) (Academic dishonesty / academic integrity policy, student academic conduct policy)
- [Financial Aid](#)
- [Registration](#)
- [Student Association](#)
- [Sexual Harassment](#)

## Disability Statement

DSU strive to make learning materials and experiences accessible for all students so If you are a student with a medical, psychological, or learning disability or anticipate physical or academic barriers based on disability, you are welcome to let me know so we can discuss options. Students with documented disabilities are required to contact the Disability Resource Center located in the North Plaza Building, Next to the Testing Center (435-652-7516) to explore eligibility process and reasonable accommodations related to disability.

## Title IX Statement

DSU seeks to provide an environment that is free of bias, discrimination, and harassment. If you have been the victim of sexual harassment/misconduct/assault we encourage you to report this to the college's Title IX Director, (435) 652-7731, [titleix@dixie.edu](mailto:titleix@dixie.edu). If you report to a faculty member, she or he must notify the Title IX Director about the basic facts of the incident.

## Dmail Disclaimer

You are required to frequently check your Dmail account. Important class and university information will be sent to your Dmail account, including DSU bills, nancial aid/scholarship notices, notices of cancelled classes, reminders of important dates and deadlines, and other information critical to your success at DSU and in your courses. To access your Dmail account, visit [dmail.dixie.edu](http://dmail.dixie.edu). Your Dmail username is your DixieID (e.g., D00111111) If you have forgotten your PIN, visit [my.dixie.edu](http://my.dixie.edu) and click the Forgot Pin button.

## Non-Student

Non-student in the classroom and other designated study areas: It is expected that only bona fide students as defined and classified by the Dixie State University catalog, will attend classes, unless specific prior permission for guests has been obtained from the instructor.

## Academic Guidelines Regarding Covid-19

For [DSU's up-to-date COVID-19 Emergency Response Plan](#), please visit the university website.