INSTRUCTOR NAME: Justin Revelstoke

EMAIL: Use Canvas Email

OFFICE: See in class

DEPT/COURSE #:IT/IT121

PHONE: 360-961-1397

QTR/YEAR: Winter/2018

MEETING TIMES/DAYS:M/W 1:20pm-2:35pm

CREDITS: 5

Theory Hours: 44 Guided Practice Hours: 22 Field Based Experience Hours: 0

## COURSE TITLE:

Introduction To Programming

## COURSE DESCRIPTION:

This course introduces students to the fundamentals of good program design, coding, testing, and documentation. Students will learn to employ good user interface design, standardization and variable naming, decision operators, looping mechanisms, and error handling as they build their own programs. Python will be the programming platform for this course.

## COURSE PREREQUISITE:

## None

## LEARNING OUTCOMES

At the end of this course, the student should be able to:

| Learning Outcomes | Methods of Assessment |
| --- | --- |
| Demonstrate the following programming concepts: variables, data types, assignments, conditional and control structures, iterative constructs, and student-created functions. | Face-to-face demonstration and explanation of programs built by student. Essay questions on in-class exams. |
| Construct programs utilizing lists and maps. | Face-to-face demonstration and explanation of programs built by student. Essay questions on in-class exams. |
| Draw shapes to demonstrate the use of conditional and control structures and student-created functions. | Face-to-face demonstration and explanation of programs built by student. Essay questions on in-class exams. |
| Create, test and debug simple programs. | Face-to-face demonstration and explanation of programs built by student. Essay questions on in-class exams. |

## COURSE OUTLINE:

Using the development interface

Calculations, variables, and input

String formatting

Lists and maps

Turtle graphics

IF statements

For loops

While loops

Functions

Classes and objects

Basic graphical game project

## COURSE SCHEDULE:

|  |  |  |
| --- | --- | --- |
| Dates | Reading & Homework | Special Activity |
| Jan 03 | W- First Day Intro | Install python/git |
| Jan 08  Jan 10 | M- Ch 1 Hello World  W- Ch 2 Calculations, Variables, Input | Ch 1 Hello World Lab  Ch 2 Multiplier Lab |
| Jan 15  Jan 17 | M- Martin Luther King Jr. Day (No class)  W- Ch 3a Strings | Ch 3a String Formatting Lab |
| Jan 22  Jan 24 | M- Ch 3b Lists, Tuples, Maps    W- Ch 4 Turtle Graphics | Ch 3b Phonebook Lab  Ch4 Initials Lab |
| Jan 29  Jan 31 | M- Ch 5 IF, ELIF, ELSE  W- (continue) | Ch 5 Shape Drawer Lab |
| Feb 05  Feb 07 | M- Study Day (attendance optional)  W- Midterm Exam Ch. 1-5 |  |
| Feb 12  Feb 14 | M- Ch 6a FOR Loops  W- (continue) | Ch 6a Multiple Shape Drawer Lab |
| Feb 19  Feb 21 | M- Ch 6b WHILE Loops    W- (continue) |  |
| Feb 26  Feb 28 | M- Ch 7 Functions    W- (continue) | Ch 6b Mult Shape Drawer in Loop  Ch 7 Shapes Drawn w/Functions |
| Mar 05  Mar 07 | M- Ch 8 Classes and Objects  W- Ch 12-14 Star Game I | Ch 8 Employee Classes Lab |
| Mar 12  Mar 14 | M- Ch 12-14 Star Game II  W- Ch 12-14 Star Game III | Ch 12-14 Star Game Modify Lab |
| Mar 19 | M- Final Exam | All labs due Wednesday, 03/21 |

METHODS OF INSTRUCTION: **(check all that apply)**

Lecture

Lab

Discussion

Small Group Work

Workplace Experience

## REQUIRED STUDENT TEXT(S), SUPPLIES, AND MATERIALS:

## Text: Briggs, Jason R. (2013) Python for Kids. No Starch Press

## STUDENT REQUIREMENTS/EXPECTATIONS:

## Read independently, practice concepts introduced and demonstrated in class, write programs that you can demonstrate and modify and explain line-by-line during in-class lab check-offs, participate in class discussions, and pass in-class exams.

## ASSIGNMENTS, EVALUATION, AND GRADING STANDARDS:

Students will be assigned a letter grade based on their performance on quizzes, two tests and numerous lab/homework assignments. Letter grades will be assigned using the standard 10 point scale with 90-100 A, 80-89 B, etc. Plus or minus grade designations may be also used at the discretion of the instructor.

| Element | Weight |
| --- | --- |
| Class Attendance and Participation | 10% |
| Homework and Lab Assignments | 50% |
| Midterm Examination | 20% |
| Final Examination | 20% |
|  | 100% |

Attendance will be recorded for all classroom activities. Poor attendance will reduce the course grade in accordance with the IT attendance policy. Restating for emphasis: those who do well in class arrive on time, are awake, are eager to learn and are ready to help others when they can. Points for late assignments are typically reduced by 50%.

## ADDITIONAL STUDENT RESOURCES:

Accessibility: BTC and your instructor are committed to the principle of universal learning. This means that our classroom, our virtual spaces, our practices, and our interactions be as inclusive as possible. Mutual respect, civility, and the ability to listen and observe others carefully are crucial to universal learning.

If you have difficulty reading, hearing or seeing content, or any other difficulties that might negatively impact your potential to succeed in this course, you may be eligible to receive help from our Accessibility Resources Office. If you feel you may benefit from an accommodation, contact Accessibility Resources ideally at the start of the quarter. (You may contact them at any time during the quarter.) This office is located in the **Admissions and Student Resource Center, Room 106. Call 360-752-8450 or email** [**ar@btc.edu**](mailto:ar@btc.edu). If you qualify for academic accommodations, the Accessibility Resources Office will forward a letter of accommodation to your instructor, who will, with you, work out the details of any accommodations needed for this course.

Campus Emergencies: If an emergency arises, your instructor may inform you of actions to follow. You are responsible for knowing emergency evacuation routes from your classroom. If police or university officials order you to evacuate, do so calmly and assist those needing help. You may receive emergency information alerts via the building enunciation system, text message, email, or BTC’s webpage, Facebook and Twitter. Refer to the emergency flipchart in your room for more information on specific types of emergencies.

Tutoring:Drop-in tutoring is available at no cost to students when classes are in session. Tutors are recruited in all subjects where tutoring assistance is requested. The Tutoring Center is located in Building H, Rooms 9 and 15. To request tutoring or to apply to be a tutor, please contact the Tutoring Center at 360.752.8499 or visit [www.btc.edu/tutoring](http://www.btc.edu/CurrentStudents/TutoringCenter/indexTutoringCenter.aspx)for additional information and to access the Tutoring Request Form and the current drop-in tutoring schedule.

Advising & Career Services:Academic & Career Advisors are available to assist with: Exploring and choosing the career that fits you best; Developing an educational plan and selecting the courses to get you started and progress toward your goals; Assistance with academic success strategies; Job and internship searching resources including resume and cover letter development, mock interviews and more; Connecting with employers to explore job opportunities. This office is located in the Admissions and Student Resource Center, Room 106. Call 360-752-8345 or email [advising@btc.edu](mailto:advising@btc.edu).

Financial Aid: Students seeking Financial Aid should begin by completing a FAFSA at [FAFSA.ed.gov](file:///\\btc-nas1.bellingham-tech.edu\sleibrant\Syllabi%20Project\Syllabus%20Template%2016-17\FAFSA.ed.gov). Students who have completed a FAFSA can check their status by logging in to their student Financial Aid Portal on the BTC website. Visit the Financial Aid office in CSB 101, call at 360-752-8351, or email at [finaid@btc.edu](mailto:finaid@btc.edu) for assistance or additional resources. You may also qualify for additional funding support through Workforce Funding & Student Support. Apply at [http://www.btc.edu/workforcefunding](http://www.btc.edu/CurrentStudents/FinancialResources/WorkForceFunding.aspx)or stop by Campus Services, Room 102 for more information.

Library:The BTC Library is located on the third floor of the Campus Center Building with an inviting atmosphere that includes a view of Bellingham Bay. The Library offers a variety of services and technology to meet the educational needs of students by providing professional, high-quality service and assistance.

The Library houses a physical collection of 12,000 books and media as well as online resources that include access to 120,000 eBooks and 20+ databases (8,000 full-text online journals) to use for research in prerequisite classes and specific programs; one-on-one assistance is offered for reference and research needs. The Library also is the open computer lab on campus and consists of 80 computers with 40+ software programs. A variety of equipment is available for check out that includes laptops and iPads. Assistance is offered with hardware and software questions, online learning and any technology-related question during all open hours; there is also a HelpDesk with specific hours to help with technology needs. Media-enhanced rooms are available for group study.

Contact the Library by phone at 360.752.8383 or via email at [Library@btc.edu](mailto:Library@btc.edu), or visit the website: [www.btc.edu/library](http://www.btc.edu/CurrentStudents/Library/indexLibrary.aspx).