Bristol Community College
CIS 120   Programming: Logic, Design and Implementation

Spring 2020 Syllabus **- Course Outline**

BRISTOL
COMMUNITY COLLEGE

Instructor: Rose Ferro
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Website: www.rferro.com
Office Hours (Additional meetings available upon request. Please don't hesitate to stop by.)
    Tuesdays 1PM – 2PM (K218 – Fall River Campus)
    Thursdays 12:30PM – 1:30PM (Online)

Course Schedule: Tuesdays & Thursdays 3:15 PM - 4:30 PM Room: K102 (Fall River campus)

Course Description: This course teaches the fundamentals of programming logic, design and implementation. Students learn to think logically and design programs. Examples are implemented in several languages giving students an understanding of how languages work to implement the programmer's logic and design. Students with no programming background are strongly encouraged to take this course before pursuing other languages. Three class hours per week.

Course Objectives: The primary objective of this course, as the course description states, is to teach the fundamentals of programming logic, design, and implementation. In order to be able to write programs successfully, these fundamentals must be mastered. In addition to these skills, students will be challenged to use critical thinking as part of their learning process. Upon completion of this course, students should be expected to understand the following:

- Logic development
- The basic structure of a program including sequence, decisions and looping
- How to design a program to solve a problem
- The basics of a variety of programming languages (including the similarities and differences between languages)
- The concept of what it means to write a program and the responsibilities of a programmer
- How to design and develop a web site and make it available on a server
- Know how to collaborate and work with others with the facilitation of technology

Course Methodology: This course is presented in both a lecture and hands-on format. In addition to attending classes regularly, students are expected to communicate with the instructor on a weekly basis. Communication includes email, online discussions/post, as well as online (or in person) office hours/help sessions. Other methods of online communications may also be used.

Student Commitment: For each course credit hour, you should plan to put in 2 to 3 hours toward your studies for that course on a weekly basis. That means that if you are enrolled in a 3 credit course, such as this, you should be spending (2x3 or 3x3 = 6 to 9 hours per week dedicated to this course). You need to recognize that commitment and include it in your planning.

Attendance: Students are required to attend classes regularly. Students who miss class are responsible for checking their course resources for topics covered as well as upcoming assignments.

Student Withdrawal Policy: If the student feels as though he/she is unable to meet the course requirements and/or comply with the attendance policy for any reason, it is recommended that they contact the instructor immediately and/or withdraw from the course based on the withdrawal policy of the college.

Withdrawal Policy: Students are responsible for withdrawing officially if they stop attending any or all classes. Faculty no longer have the ability to withdraw a student from a class. A grade of "F" will be assigned to any student who stops attending a course but does not officially withdraw. Students are encouraged to meet with their instructor and/or an advisor before making any changes to their schedule. Withdrawals effect Satisfactory Academic Progress and can place the student at risk for academic probation or dismissal. Students who use financial aid and who subsequently withdraw may be required to return some or all funds received. Withdrawals are accepted until the tenth week of classes (reference the Academic Calendar for the specific withdrawal deadline). Students may withdraw online in accessBCC, in person at any Enrollment Center, or via their college email to enrollmentservices@bristolcc.edu. *Email requests must come from the student's Bristol college email address and must include the student's name, Bristol student ID number, and course information (CRN, course and section number).* **Email from non-college accounts will not be accepted.** If a student officially withdraws after the third week of classes, there will be no tuition or college fee refunds. For more information, see the College Catalog at: http://bristolcc.smartcatalogiq.com/en/2017-2018/Catalog/Academic-Information/Withdrawal-Policy-and-Procedure. Students with questions should contact Enrollment Services via any of the methods mentioned above or at 774-357-2590.

Communication Policy: Mutual respect is expected in this course as it is in any other academic environment. Acts of incivility will not be tolerated and will be brought to the attention of the Division Dean and/or college Administration. The student handbook sections on Conduct Statement for Students at Massachusetts Community Colleges, Disciplinary Due Process and Disciplinary Offenses are applicable to this course.

Grading Policy/Requirements: Suggested and/or required readings must be completed prior to class to allow students to have a better understanding of the topic(s) at hand, be able to participate in in-class discussions, and ask relevant questions.

All homework assignments are due, via email, to the instructor by midnight of the day before the class is scheduled to meet, unless otherwise specified. Late assignments will be deducted 10% for the first day, 20% the second day, 30% the third day, and anything over four days will be deducted at least 40%. Assignment submissions must meet all required criteria in order to be eligible to obtain full credit.

Students are responsible for completing and submitting all assigned tests and exercises. Missed tests may be made up with the permission of the instructor. Only one test/quiz may be made up per semester.

At times, hardcopies may be requested for submission. Failure to turn either a hard or soft copy prior/during class will be penalized as a late assignment. Should a hard copy be requested, it must be submitted in a presentable and professional format (stapled, hole punched, etc.) in advance.

All assignments (hard and soft copies) must include the student's first and last name, course, and a brief description. The filename must also reference this format such as *FirstNameLastName_*CIS120*_BriefDescription*. Note: All filename spaces should be replaced with and underscore "_" and NO SLASHES are included in the date format. All assignments must be completed individually. Those assignments that closely resemble other individual's work will be penalized. All emails must include a subject which follows the format above, with the exception of the underscore. Email subjects SHOULD contain spaces such as *FirstName LastName* CIS120 *Brief Description*.

Semester Grades*:

80%   Homework, programs, code and quizzes

10%   Attendance, in class assignments, class participation

10%   Final Exam

*There may be opportunities for extra credit, if requested.

Evaluation: Assignments and programs are graded using either number grades or letter grades based on the following A=(90-100), B=(80-89), C=(70-79), D=(60-69), F=(below 60). The students' grade for the course will use the same scale and will be based on the percentages indicated above. Plus and minus grades will be assigned as the final course grade and will be based off of the grading system provided by the college.

Course Material/Requirements:

Required: Just Enough Programming Logic and Design, 2nd edition Joyce Farrell,
ISBN 9781111825959, Course Technology
Note: Much of the material covered in this course will be available at the website or on the web and will require outside reading and research.

Academic Honesty: All assignments must be completed individually and must abide by the college's Honesty/Integrity policy. No assignments will be accepted if they 1) too closely resemble any submissions submitted by another student or 2) is copied from any other source (not created by you) and submitted without appropriate references. To learn more about the college academic honesty policy, go to
http://www.bristolcc.edu/students/studentlife/studenthandbook/campuspoliciesandprocedures/.

Course Outline/Topics: Course related readings, assignments, projects, etc. will allow students to have a better understanding of the topics indicated below. The topics and order in which they are presented may change with the aim to accommodate the needs of the students as we progress through the semester. All reading requirements, assignments, quizzes and/or quiz announcements, etc. will be posted the course website: www.rferro.com. Students are expected to check the course website frequently for updates. They are also expected to check their Bristol email accounts as it is often used as an additional form of communication with the class. In order to be successful in this course, students are expected to check the website frequently and complete/submit assignments on time.

Week #	Topic(s)	HW/Related Material
1	• Web site/portfolio development • HTML - create and install pages • Portfolio content	Intro Webpage
2	• Relational Databases • Design, develop, maintain	Databases
3	• Logical and critical analysis • Analyzing problems	Flowcharts
4	• Databases cont. • Flowcharts cont.	Databases & Flowcharts
5	• Queries • SQL	MS Access
6	• Loops • IF Statements	Chapter 4

7	• Looping cont.	Chapter 4
8	• Developing solutions using a variety of tools "Play • computer" - step through logic	Career and Mentor Report Extra Credit: StarLogo
9	• Practicing the application of logic • Objects, programming logic	Playing Computer Intro
10	• Loops / Looping • IF / Else • ANDs	Playing Computer
11	• Algorithms Process • Intro to Programming JavaScript	JavaScript #1
12	• JavaScript cont.	JavaScript #2
13	• Logic and Modularization	Chapter 5
14	• Programming cont. • Visual Basic	VB HW #1
15	• Visual Basic cont. • Numbering Systems	VB HW #2 Final Exam

Additional Topics

- Programming
- Programming process
- Programming structures - emphasis Procedural
- Design and development
- Development tools
- Programming languages
- Writing programs
- Testing and debugging
- Similarities and differences
- Overview of Object-oriented vs Procedural
- Data analysis and presentation
- Information gathering and research
- Analysis
- Employability and success skills
- Success in college
- Careers in computing
- Employability skills in computing
- Problem solving foundational skills
- Using software to effectively solve problems

Software and applications that are embedded and is used to complement the study of the concepts:
- Databases including Access
- Query language including SQL
- Basic use of office applications in doing the work of the course
- Logic development/programming tools such as LOGO, Alice and/or Game Maker

- Working with program development tools such as flowcharting and pseudocode
- Working with programming languages such as JavaScript and Visual Basic
- HTML introduction including developing a web portfolio and installing on server
- Collaborative projects
- Other topics as time permits

Additional Recommendations: It is highly recommended that students purchase a flash drive for this course as well as have access to high speed internet (i.e. DSL, cable). Note: Students who do not have access to the software required for this course should check the Bristol lab schedule and/or purchase/download the software in a timely fashion to ensure that they have ample time to complete all assignments.

Disability Accommodations: If you are a student who would normally seek accommodations in a traditional, face to face classroom, please speak to me and the Office of Disability Services as soon as possible. You may contact the Office of Disability Services to arrange for appropriate accommodations by calling 508-678-2811--Fall River, ext. 2955; Attleboro, ext. 2996; New Bedford, ext. 4011) or by stopping by L109. You may also contact the Office of Disability Services online at http://www.bristolcc.edu/students/disabilityservices/

Bristol Emergency Notification System (requires pre-registration)
Students that have not already done so, they are suggested to register with BeNotified. As a member of the Bristol community, whether you're a student, or a faculty or staff member, you can sign up for BeNotified, Bristol's notification system. BeNotified will quickly distribute information to your electronic devices via text messages as well as other forms of communication. To receive text messages, community members must opt-in manually. The College offers BeNotified free of charge. However, you are responsible for any text message or per-minute charges from your service provider.

To sign up, add or change contact information:
1. Sign in to accessBCC and click on the BeNotified tab.
2. Click on the Sign Up For BeNotified link and sign in using your accessBCC sign in information.
3. Verify your mobile phone carrier and confirm your mobile number (a text confirmation code will be sent to your mobile device).

For more information contact Information Technology Services at 508.678.2811, ext. 2134.