

# Bergen Community College

## Course Syllabus Information Technology

**Course Title:**

INF-221 C/C++ Programming

**Credits/Hours:**

3 credits / 2-hour lecture, 2-hour lab

**Prerequisite:**

INF-103 Introduction to Programming

**Course Description:**

This course provides the foundations for programming in the C and C++ programming languages, building on the concepts presented in Introduction to Programming. Students code programs applying C/C++ operators, constructs, and functions. Topics covered include language version differences; definition of variables; math, relational, and logical operators; decisions; while and for loops; C/C++ functions, user written functions, and scope and passing values. Prerequisite: INF-103 Introduction to Programming or permission of Department Chair. Lecture [2.00], Laboratory [2.00]

**Textbooks and Supplies:**

See course outline

Student Learning Objectives	Assessment Measures
1. Code, test, and execute C/C++ programs.	Lab Activity
2. Convert a word problem into C/C++ code.	Lab Activity Exam
3. Select appropriate data types.	Lab Activity Exam
4. Write programs that use functions.	Lab Activity Exam
5. Write structured code using sequence, selection, and repetition statements.	Lab Activity Exam
6. Read a given C/C++ program and list the input required, output produced, and changes occurring in RAM as it executes.	Exam

College Competencies:	Student Learning Objective:
1. Critical Thinking – Students will actively reflect on, reason about, and form independent judgments on a variety of ideas and information, and use these skills to guide their beliefs and actions.	3, 6
2. Quantitative Reasoning – Students will correctly apply and reason about mathematical and formal concepts and operations, and will correctly interpret and analyze numerical data.	2

3. Technological and Information Literacy – Students will demonstrate computer literacy, and will be able to retrieve, organize, and analyze information using both technological and traditional means.	1 - 6
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**Course Content:**

See course outline

**Assessment:**

An average of 60% from combined assessment measures is required to demonstrate proficiency in course material.

Three Examinations 60%

Lab Work:

- Lab assignments 20%
- Final Project (Required) 20%

Bonus Points:

- Several unannounced quizzes, worth 10 points each
- Student Participation

**Quizzes:**

There may be several quizzes, each worth 10 points, given at the beginning of random or pre-selected classes. The quiz material will be based upon the prior lectures and labs and/or the reading assignments. At the end of the semester, the quiz points may be used to calculate “bonus” points. These “bonus” points would then be used to increase the student’s exam average. A quiz cannot be made up if missed. A student entering class late, after a quiz has begun, will not be entitled to extra time to complete the quiz. Students entering class after a quiz is completed will not be permitted to take the quiz.

**Testing:**

Students **are required** to take examinations on the day and time they are scheduled. If special circumstances require a test schedule adjustment, this must be **worked out in advance** with the instructor. If a student misses an exam (except for prearranged circumstances with the instructor) a zero grade will be assigned.

The instructor can be reached by **telephone** (see course outline for appropriate phone number), **e-mail, or written note** left in the Divisional Office (during the day) A-306C or the Evening Office L-113. If there are extreme circumstances (documentation may be required) that prevent a student from taking a test according to the published schedule, use one of the above options to contact the instructor before the next class. An arrangement for a special testing schedule is solely at the **discretion of the instructor**. A student who waits for the next class session to speak with the instructor will not be accommodated with a special test schedule.

**Final Project:**

Each student will be responsible for a final project. If the project is not fully working, credit will be allocated according to inclusion of the items listed on the project handout. There will be no credit awarded if the program does not compile and execute. The student must be able to appropriately respond to questions regarding the technical details of the code. Late projects are not accepted. **When required, submission of a working project and ability to answer technical questions about the project are required to pass the course.**

**Laboratory Work:**

Laboratory assignments are hands-on productions that show the instructor that the student can competently use specified software. It is important that the student attend all lab sessions.

It is anticipated that students will spend at least four hours per week in the free-time computer room perfecting their skills and completing their lab assignments. The lab assignments are required for grading. They must be submitted on the assignment due date, and **cannot be handed in late**. Acceptance of late laboratory assignments is solely at the **discretion of the instructor**.

### **Homework:**

In addition to any homework assignment given during class, it is a **standing assignment** that the student read each chapter of the book prior to its discussion. Following the class discussion, the student should reread the material and work with the exercises throughout the text. It is anticipated that students will spend at least 4-hours per week reading the text and working with the exercises and supplemental resources.

### **Statement on Accommodations for Disabilities:**

Bergen Community College aims to create inclusive learning environments where all students have maximum opportunities for success. Any student who feels he or she may need an accommodation based on the impact of a disability should contact the Office of Specialized Services at 201-612-5269 or via email at [ossinfo@bergen.edu](mailto:ossinfo@bergen.edu) for assistance.

### **BCC Attendance Policy:**

All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor for each section of each course. These will be established in writing on the individual course outline. Attendance will be kept by the instructor for administrative and counseling purposes.

### **Policies:**

- Lateness (*on campus sections*) – The roll will be taken at the beginning of class. If the student is not in attendance at that time, he/she will be carried in the roll book as being absent unless the instructor is notified immediately after class. Attendance sheets cannot be adjusted at following class meetings.
- The student must adhere to all college policies. Due to the nature of this course, it is recommended that the student review the policy titled “*Acceptable Information Technology Use at Bergen Community College*”.
- *On campus sections*: The use of portable electronic devices such as pagers and cell phones is not permitted while class is in session. Please be sure to silence electronic devices before entering class.
- The use of audio CD or tape players, radios, and college computers to play music during class is prohibited.
- All electronic correspondence with the instructor must be in paragraph form using proper sentence structure.
- Postings to the course discussion forum must be in paragraph form using proper sentence structure.
- Students are expected to demonstrate listening, reading, note taking, and writing skills. The student will need to take notes during class discussions and understand and follow verbal and written directions.
- The subject line of all e-mail correspondence to the instructor must contain the course number and section and student’s name. Any e-mail received without this information will not be opened.
- Plagiarism in any form will be treated as a failure to complete an assignment. All work submitted should reflect individual effort by the student. Any instance of plagiarism is subject to College policies regarding such behavior which provide for disciplinary action up to and including dismissal from the College with a failing grade in the relevant course(s).
- In borderline cases that arise in almost every class each semester a student’s attendance, class participation, attitude, and observed effort will be considered in helping to determine the student’s final grade.

If the instructor does not appear after 20 minutes following the scheduled starting time, students should generate an attendance list. One volunteer member need deliver the list, containing the course title, date, and instructor's name, to the Evening Office L-113 or to the Divisional Office (during the day) A-306A.

**Additional policy and assessment information may be distributed by individual instructors.**