Spring 2024

CS 115-002: Introduction to Computer Science in C++

Jertishta Qerimaj

CS 115 - Introduction to Computer Science I in C++
Course Syllabus, Spring 2024

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Sections 002:

Class location and time – CKB 223 – Monday, Thursday 11:30 am – 12:50 pm

Overview
Fundamentals of computer science are introduced, with emphasis on programming methodology and problem solving. Topics include basic concepts of computer systems, software engineering, algorithm design, programming languages and data abstraction, with applications. The high-level language C++ is fully discussed and serves as the vehicle to illustrate many of the concepts.

Textbook/ Course Materials
1. **zyBooks**
    a. Sign in or create an account at https://learn.zybooks.com
    b. Enter zyBook code: NJITCS115QerimajSpring2024
    c. Subscribe
2. Lecture notes
3. Visual Studio
4. https://replit.com/

Course Policies
Attendance is mandatory. A student who misses more than 5 classes will be dropped, without credit.

Course Communication
Canvas (canvas.njit.edu) will be used to post lecture notes, to submit homework and for course discussion. You may also email instructors and classroom assistants.

Homework & Lab
All assignments must be submitted via Canvas and/ or zyBooks on the due date. All submitted work (including exams) must include your name and student ID. It will not be accepted late except for special circumstances (such as jury duty or medical problem), for which you must provide documentation approved by Dean of Students.
Weekly announcements on Canvas will include details for each assignment.

Plagiarism will result in zero credit for the assignment and/or an XF grade in the course.
Cell phones must be turned off during class.
Students will be informed of any modifications of the syllabus during the semester.

Material covered

- Introduction to C++
- Variables/ Assignments
- Flow of Control – Conditionals
- Flow of Control - Loops
- Arrays/ Vectors
- Function Basics
- Parameters and Overloading
- Input/ Output Streams and Files
- Structures and Classes
- Constructors
- Operator Overloading
- Recursion
- Inheritance and Polymorphism
- Exception Handling
- Pointers

Evaluation

The evaluation will be based on the following course requirements:

- Homework/Lab 35%
- Midterm Exam 25%
- Final Exam 30%
- Attendance 5 %
- Miscellaneous 5%

The letter grade is based on the overall course score.

Grade Formula						
Grade	**A**	**B+**	**B**	**C+**	**C**	**D**
Overall Course Score Cutoff	90	85	80	75	70	60

Exam Policies

Midterm – March 7th, 11:30 am – 12:50 pm @ CKB 223. Final exam TBD.

You must bring a photo ID to all exams. Students with special needs are advised to plan with OARS.

There are no makeup exams. If you miss an exam because of a documented special circumstance you may receive an imputed grade based on the other exam.

If you believe that you deserve more credit than you have been awarded on a particular exam problem, you may request, within 48 hours of the exam being returned, that it be regraded. Your entire exam will be regraded, which may result in points being added or subtracted.

Exams require to bring your own computer. Any other electronic devices, such as cell phones, smart watches, or calculators must be put away and turned off during the exam.

University Code on Academic Integrity

"Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. ***Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.*** *If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu"*

Tentative Weekly Coverage of Material

The following table shows approximately how much time may be devoted to each topic and the corresponding reading from the suggested textbook.

Week #	Subject	Read
1	C++ Basics	Ch. 1
2	Variables and assignments	Ch. 2
3	Flow control - conditionals	Ch. 3
4	Flow control - loops	Ch. 4
5	Arrays/ Vectors	Ch. 5
6	**Midterm Exam**	Ch. 1-5
7	User-defined functions	Ch. 6
8	Parameters and overloading	Ch. 6
9	Input/ output streams	Ch. 7
10	Objects and Classes	Ch. 8
11	Constructors and Operator overloading	Ch. 8
12	Inheritance and Polymorphism	Ch. 9
13	Recursion	Ch. 10
14	Exception Handling	Ch. 11
14	Pointers	Ch. 12
15	**Final Exam Review**	