Fayetteville State University
College of Arts and Sciences
Department of Mathematics and Computer Science
CSC 202-01: Introduction to Programming in C++
Fall 2016

I. Locator Information:

Instructor: Dr. Chekad Sarami
Course # and Name: CSC 202 Introduction to Programming in C++ Office Location: SCITEC 118
Semester Credit Hours: 3
Office hours: MWF 1:50PM-3:00PM, 4:50PM-6:00PM and *W: 6:00PM-7:00PM*
Day and Time Class Meets: MWF 3:00 pm-3:50 pm Office Phone: 672-1129
Total Contact Hours for Class: 42
Email address: csarami@uncfsu.edu MyProgrammingLab(**MPL**) Course ID: FAYE-25672-XCWY-30

FSU Policy on Electronic Mail: Fayetteville State University provides to each student, free of charge, an electronic mail account (username@uncfsu.edu) that is easily accessible via the Internet. The university has established FSU email as the primary mode of correspondence between university officials and enrolled students. Inquiries and requests from students pertaining to academic records, grades, bills, financial aid, and other matters of a confidential nature must be submitted via FSU email. Inquiries or requests from personal email accounts are not assured a response. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail.

Rules and regulations governing the use of FSU email may be found at
http://catalog.uncfsu.edu/documents/policy/general/FSUE-mailFINAL.pdf

II. Course Description: This course focuses on advanced programming and software development strategies in C/C++ programming language. Materials include syntax and semantics of C/C++ and Standard Template Libraries (STL), memory management, file processing, and network programming. Directed projects in C/C++ are an integral part of the course. Prerequisite: CSC130.

III. Disabled Student Services: In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ACA) of 1990, if you have a disability or think you have a disability to please contact the Center for Personal Development in the Spaulding Building, Room 155 (1st Floor); 910-672-1203.

IV. Title IX – Sexual Misconduct

Fayetteville State University (University) is committed to fostering a safe campus environment where sexual misconduct — including sexual harassment, domestic and dating violence, sexual assault, and stalking - is unacceptable and is not tolerated. The University encourages students who may have experienced sexual misconduct to speak with someone at the University so that the University can provide the support that is needed and respond appropriately. The Sexual Misconduct policy can be found at the following link: http://www.uncfsu.edu/Documents/Policy/students/SexualMisconduct.pdf

Consulting with a Health Care Professional - A student who wishes to confidentially speak about an incident of sexual misconduct should contact either of the following individuals who are required to maintain confidentiality:

Ms. Dionne Hall
Licensed Professional Counselor
Spaulding Building, Room 167
(910) 672-2167
dhall9@uncfsu.edu

Ms. Linda Melvin
Director, Student Health Services
Spaulding Building, Room 121
(910) 672-1454
lmelvi10@uncfsu.edu

Reporting an Incident of Sexual Misconduct - The University encourages students to **report** incidents of sexual misconduct. A student who wishes to **report** sexual misconduct or has questions about University policies and procedures regarding sexual misconduct should contact the following individual:

Title IX Coordinator
Barber Building, Room 242

(910) 672-1141

Unlike the Licensed Professional Counselor or the Director of Student Health Services, the Deputy Title IX Coordinator is legally obligated to investigate reports of sexual misconduct, and therefore cannot guarantee confidentiality, but a request for confidentiality will be considered and respected to the extent possible.

Students are also encouraged to report incidents of sexual misconduct to the University's Police and Public Safety Department at (910) 672-1911.

V. Textbook and other materials:

1. (Required) Absolute C++, 5/E, Walter Savitch, Kenrick Mock, ISBN-10: 013283071X • ISBN-13: 9780132830713 ©2013 • Pearson • Paper, 984 pp
2. (Required) MyProgrammingLab without Pearson eText -- Instant Access -- for Absolute C++, 5/E
   Pearson Education & Mock
   ISBN-10: 0132846551 • ISBN-13: 9780132846554
   Online purchase price: $43.00
   NOTE: You may purchase it from bookstore or order it online at www.myprogramminglab.com

VI. Student Learning Outcomes –

Upon completion of this course, students will:

- Students will demonstrate an understanding of procedural programming in C and object-oriented programming features in C++
- Students will understand flows of control and skillfully use them in C/C++ programming
- Students will demonstrate knowledge of functions, the correspondence and overloading of arguments and parameters, and the way in which functions are invoked and values are returned
- Students will be able to create algorithms to implement a variety of operations on arrays
- Students will be understand structures and classes and be able to define constructors
- Students will demonstrate knowledge of using strings and string functions
- Students will understand pointers and dynamic arrays in C++ programs
- Students will understand the concepts of recursion and be able to write recursive programs in C++
- Students will understand the concepts of templates and the standard template libraries (STL)

VII. Course Requirements and Evaluation Criteria -

a. Grading Scale -

Grade	Total point range	Credit Hours	Quality Points	Meaning
A	90% – 100%	Hours attempted and earned	4 per credit hour;	Exceptionally high
B	80% – 89.99%	Hours attempted and earned	3 per credit hour	Good
C	65% – 79.99%	Hours attempted and earned	2 per credit hour	Satisfactory
D	55% – 64.99%	Hours attempted and earned	1 per credit hour	Marginally passing
F	below 55%	Hours attempted – Not earned	0 per credit hour	Failing
FN		Hours attempted – Not earned	0 per credit hour	Failing due to non-attendance. (Student registered, but never attended.)
W		Hours attempted – Not earned	No impact on GPA	Class withdrawal prior to deadline (see Academic Calendar)
P		Hours attempted and earned	No impact on GPA	Satisfactory - Assigned only in classes specified as Pass/Fail
WU		Hours attempted – Not earned	No impact on GPA	Withdrawal from all classes for semester or term
AU		Hours attempted – Not earned	No impact on GPA	Auditing

b. Attendance Requirements – Students are expected to attend all class meetings, laboratories, and other instructional sessions for this course. Students are also expected to arrive to class on time and remain in class for the entire scheduled period. When students must miss class(es) for unavoidable reasons, i.e., illness, family emergencies, or participation in official university sponsored activities – they are responsible for informing faculty of the reasons for the absences, in advance if possible. Missed assignments, labs, quizzes and exams can only be made up for by explicit permission from the instructor. In order to receive this permission the student has to provide convincing evidence (e.g. doctor's note) that the absence was due to an unavoidable reason. During the first half of the semester/term, faculty will assign an interim grade of "EA," Excessive Absences, for students whose class absences exceed 10% of the total contact hours for the class. Students who receive EA interim grades must either withdraw from the class or resume attendance. Students who resume attendance must consult with the instructor about completion of missed assignments. The EA is not a final grade, so students who are assigned an interim grade of EA, but do not withdraw from the class, will receive a final grade based on the evaluation criteria for the class. **Note: in case FSU must close for an emergency during the semester, instruction will continue using Blackboard.**

c. Graded Assignments and Value of Each Assignment –
    - Chapter HWs (8-12, myprogramminglab.com): 25%
    - Final Exam: 20%
    - Programming Projects (3-5): 30%
        - Please note that project MUST be submitted on BOTH Canvas and MyProgrammingLab.
    - Midterm Tests (2 tests) : 20%
    - Class participation and attendance: 5%

d. Policy on Missed or Late Assignments - tests and quizzes missed due to an unavoidable reason can be made up only with the instructor's permission. In order to receive this permission the student has to provide convincing evidence (e.g. doctor's note) that the absence was due to an unavoidable reason. There is a penalty of 5% for each day a project is overdue. Project submissions that are more than a week overdue will not be accepted for grading. All work in this course must be INDIVIDUAL effort unless otherwise specified.

e. Dishonesty in academic affairs – Acts of dishonesty in any work constitute academic misconduct. Such acts include cheating, plagiarism, misrepresentation, fabrication of information, and abetting any of the above. Plagiarism in particular presents pitfalls to be avoided: failure to document any words, ideas, or other contributions that do not originate with the author constitutes plagiarism. Widespread use of the World Wide Web (Internet) requires particular attention to proper documentation practices. Individual course syllabi offer additional clarification about requirements for proper documentation. Actions outlined in the Fayetteville State University Student Handbook under Disciplinary System and Procedures will be followed for incidents of academic misconduct. The handbook may be obtained from the Office of Student Affairs located in the Collins Administration Building. Non-disclosure or misrepresentation on applications and other university records will make students liable for disciplinary action, including possible expulsion from the university.

Please note: If these evaluation criteria must be revised because of extraordinary circumstances, the instructor will distribute a written amendment to the syllabus.

FSU Policy on Disruptive Behavior in the Classroom

The *Code of the University of North Carolina* (of which FSU is a constituent institution) and the *FSU Code of Student Conduct* affirm that all students have the right to receive instruction without interference from other students who disrupt classes.
FSU Core Curriculum Learning Outcome under Ethics and Civic Engagement (6.03): All students will "prepare themselves for responsible citizenship by fulfilling roles and responsibilities associated with membership in various organizations." Each classroom is a mini-community. Students learn and demonstrate responsible citizenship by abiding by the rules of classroom behavior and respecting the rights all members of the class.
The FSU Policy on Disruptive Behavior (see FSU website for complete policy) identifies the following behaviors as disruptive:

1. Failure to respect the rights of other students to express their viewpoints by behaviors such as repeatedly interrupting others while they speak, using profanity and/or disrespectful names or labels for others, ridiculing others for their viewpoints, and other similar behaviors;
2. Excessive talking to other students while the faculty member or other students are presenting information or expressing their viewpoints.
3. Use of cell phones and other electronic devices
4. Overt inattentiveness (sleeping, reading newspapers)
5. Eating in class (except as permitted by the faculty member)
6. Threats or statements that jeopardize the safety of the student and others
7. Failure to follow reasonable requests of faculty members
8. Entering class late or leaving class early on regular basis
9. Others as specified by the instructor.

The instructor may take the following actions in response to disruptive behavior. Students should recognize that refusing to comply with reasonable requests from the faculty member is another incidence of disruptive behavior.

1. Direct student to cease disruptive behavior.
2. Direct student to change seating locations.
3. Require student to have individual conference with faculty member. At his meeting the faculty member will explain the consequences of continued disruptive behavior.
4. Dismiss class for the remainder of the period. (Must be reported to department chair.)
5. Lower the student's final exam by a maximum of one-letter grade.
6. File a complaint with the Dean of Students for more severe disciplinary action.

Students who believe the faculty member has unfairly applied the policy to them may make an appeal with the faculty member's department chair.

VIII. Academic Support Resources – This course uses FSU Blackboard for online dissemination. Students will find most materials online within the Blackboard module for this course. Project submissions and most tests will be implemented through Blackboard so students are required to check the Blackboard course website and their email at least once a day.

IX. Course Outline and Assignment Schedule (Tentative)-

WEEK	LECTURE TOPICS FROM TEXTBOOK
FIRST DATES: 08/15 – 08/19	Syllabus Eclipse C++ compiler walkthrough Chapter 1: C++ Basics
SECOND DATES: 08/22 – 08/26	Chapter 1 Chapter 2: Flow of Control Deadline for X (no show) grades
THIRD DATES: 08/29 – 09/02	Chapter 2 Chapter 3: Function Basics
FOURTH DATES: 09/05 – 09/09	9/5: Monday: Labor Day Holiday (no classes) Chapter 3
FIFTH DATES: 09/12 – 09/16	Chapter 4: Parameters and Overloading

SIXTH DATES: 09/19 – 09/23	Chapter 4: Chapter 5: Arrays
SEVENTH DATES: 09/26 – 09/30	Chapter 5 Chapter 6: Structures and Classes
EIGHTTH DATES: 10/03 – 10/07	Chapter 6 Midterm Exam 1
NINTH DATES: 10/10 – 10/14	Chapter 7: Constructors and Other Tools 10/16: Midterm grades due MID TERM EXAMS 10/04 – 10/10 MID TERM BREAK 10/13 – 10/16
TENTH DATES: 10/17 – 10/21	CHAPTER 7
ELEVENTH DATES: 10/24 – 10/28	Chapter 8: Operator Overloading, Friends and References
TWELFTH DATES: 10/31 – 11/04	Chapter 10: Pointers and Dynamic Arrays
THIRTEENTH DATES: 11/07 – 11/11	11/11(Fri): Veteran's Day (no classes) Section 11.1 & Chapter 12: Streams and File I/O
FOURTEENTH DATES: 11/14 – 11/18	Chapter 14: Inheritance Midterm Exam 2
FIFTEENTH DATES: 11/21 – 11/25	Chapter 16: Templates 11/26 - 27: Thanksgiving Holiday (no classes)
SIXTEENTH DATES: 11/28 – 12/02	Chapter 18: Exception Handling LAST DAY OF CLASSES 12/02
FINAL EXAM: Wednesday, December 7, 2:00 p.m. - 3:50 p.m.	

X. Teaching Strategies – This course has both lecture and lab sessions that will be held in the same class room. Lab sessions are mostly discussion oriented, interactive problem solving sessions. Lecture, while also discussion oriented will provide theoretical knowledge that supports the lab sessions and project work. This course is about programming, so timely and successful completion of programming projects is of the highest importance.

XI. Bibliography -

- C++ Primer (Stanley Lippman, Josée Lajoie, and Barbara E. Moo) (updated for C++11)
- A Tour of C++ (Bjarne Stroustrup) (EBOOK) The "tour" is a quick (about 180 pages and 14 chapters) tutorial overview of all of standard C++ (language and standard library, and using C++11) at a moderately high level for people who already know C++ or at least are experienced programmers.
- Accelerated C++ (Andrew Koenig and Barbara Moo) This basically covers the same ground as the C++ Primer
- Thinking in C++ (Bruce Eckel) Two volumes; is a tutorial style free set of intro level books.