CSC120-T11 – Computer Science II (CRN:15091)

Instructor: F. Graham

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Office: B3041 Office Hours: Mon - Thurs, 3:30P.M. - 4:30P.M.

Prerequisite:

At least a C in CSC 104 (previously CMP 104) or at least a C in MAT 111 or permission of Department. Student must have satisfied all MAT, ENG 001 and RDG 001 remediation requirements prior to starting the course.

Catalog Description:

This course is an introduction to computer programming and algorithmic problem solving using an object-oriented, high level programming language. Emphasis is placed on problem solving strategies that utilize multiple classes and methods. This course will focus on the following concepts: algorithm implementation, modular development, documentation, abstraction and coding along with problem solving strategies. Includes a supervised hands-on component.

Computer Center Requirement:

As part of this course, students should avail themselves of further study and/or educational assistance available in the Computer Learning Center B225. Use of the resources in the Computer Learning Center is deemed an integral part of the course and will help the student master necessary knowledge and skills.

Disability Statement:

If you have a physical, psychological, medical, or learning disability that may have an impact on your ability to carry out the assigned coursework, I urge you to contact the staff at the Center for Students with Disabilities (CSD), Building U,(516 572-7241), TTY (516) 572-7617. The counselors at CSD will review your concerns and determine to what reasonable accommodations you are entitled as covered by the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. All information and documentation pertaining to personal disabilities will be kept confidential.

Attendance:

You are expected to attend all classes, to arrive on time, and remain for the full duration. You will not pass the course if you have unexcused absences in excess of 10% of the total class meetings. However, absences due to illness or other acceptable documented reasons may be excused at my discretion. It is your responsibility to make up all work missed. http://collegecatalog.ncc.edu/current/index.pdf#page=70

Withdrawal Policy: November 11, 2016 is the last day for an automatic "W".

- To withdraw from the course, you must officially withdraw using MyNCC when available or by filing a completed Drop/Add Form with the Office of the Registrar.
- After the 3rd week of classes my signature on the form is required. However, before the 10th week, if I am unavailable, the department chairperson may sign the form.
- After November 11, my signature is required, and I will give it only at my discretion.
- If you stop attending class without officially withdrawing, you will receive a "UW" -Unofficial Withdrawal - grade for the course.
  Note: Grades of "UW" are included in calculating your GPA and count as an "F".

For more information, please see pages 33-34 of the Nassau Community College Catalog

Meetings:

Time: Monday and Wednesday, 5:35pm to 8:20pm
Location: B109

Textbook:

Title: **Java Software Solutions: Foundations of Program Design, 8E**
Author: Lewis, J. & Loftus, W
Publisher: Pearson
ISBN: 978-0-13-359495-9

Website: https://www.pearsonhighered.com/program/Lewis-Java-Software-Solutions-plus-My-Programming-Lab-with-Pearson-e-Text-Access-Card-Package-8th-Edition/PGM50831.html

Note: The bookstore sells a less-expensive custom edition that covers chapters 1 to 7.

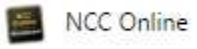
Bookstore: http://ncc.bncollege.com/webapp/wcs/stores/servlet/TBWizardView?catalogId=10001&langId=-1&storeId=51058

Web Page:

http://matcmp.ncc.edu/grahamf/csc120.html

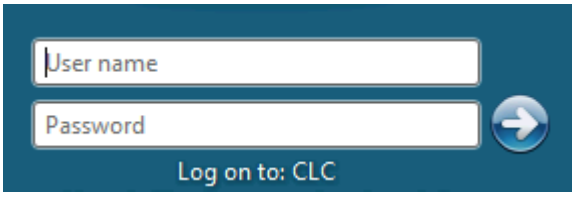
Assignments and other information pertaining to the course will be posted on Blackboard and the course web site.

Blackboard:



Log on to the NCC Portal, then click the NCC Online tag on the left side of the screen.

To Login to the computers in B Cluster:



Enter your user name and password at the logon prompt.
Use your **NCC ID number** for both your **username** and **password**. The '**N**' must be capitalized.

To Change Your Password:

Press and hold the Ctrl and Alt key, then tap the Delete key. Select Change Password from the list of choices.

Exams:

There will be 2 exams and a final. **Each exam** will count for **20%** of your grade. If a scheduled exam conflicts with your religious observances, please notify me at least a week in advance so that I can change the scheduled date. Generally, make-up exams will not be given, but consideration will be given to those students who contact me before the exam (via e-mail or phone) and provide a valid, documented reason for missing the exam. Note that a make-up exam might be more difficult than the original exam.

Projects, Labs and Quizzes:

- There will be 5 programming assignments (projects) and about 12 in-class assignments (labs).
- **Projects** will count for **25%** of your final grade (5% each), and **labs** will count for **12%** (1% each).
- **Quizzes** will count for the remainder of your grade and will be given at random times throughout the semester. Each quiz will be worth 1%. If we complete12 labs, there will be **3** quizzes, otherwise there will be a quiz for each lab that we miss.
- All lab assignments must be submitted via Blackboard or emailed to me **by 11:59 pm** of the last day of the week (**Saturday**).
- **All assignments must be well-documented and submitted on time; you will lose considerable points if you submit assignments after the due date. See lab 0 for documentation style.**
- You are also required to submit programs that compile, are well-documented, and produce some output, even if the output is incorrect.
- Collaboration is encouraged for lab assignments, as you'll be paired with another student. **However, you are expected to complete each project assignment on your own.**
- **You will receive 0, if you submit any Java programs with compile errors.**
- For each assignment, attach your ***exported Eclipse project*** and submit it via **Blackboard** or **email**.
- I will only accept assignments sent to my e-mail address from your **NCC e-mail account.**

Grading:

Grades will be assigned based on the grading system specified in the NCC catalog.

Percentage	Equivalent Grade	Quality of Achievement	Quality Points
90-100%	A	Excellent	4.0
85-89	B+		3.5
80-84	B	Very Good	3.0
75-79	C+		2.5
70-74	C	Average	2.0
65-69	D+		1.5
60-64	D	Minimum Passing	1.0
0-59	F	Failure	0
	UW	Unofficial Withdrawal	0
	INC	Incomplete	
	NA	Never Attended	
	W	Withdrawal	

Software (Free and available for Windows, Mac, and Linux):

The Oracle Java **JDK** (Java SE Development Kit) will be required.
Oracle Java SE: http://www.oracle.com/technetwork/java/javase/downloads/index.html

We will also use the Eclipse IDE (Integrated Development Environment)
Eclipse IDE for Java Developers https://eclipse.org/downloads/packages/release/Mars/2

Objectives:

General

To provide the student with a comprehensive introduction to computer programming using an object-oriented language using an objects-early approach. Emphasis is placed on the design and coding of structured programs using a modern structured language.

Specific

a) To analyze a problem and describe its solution in terms of interrelated steps. Problems will cover a wide variety of fields in the natural and social sciences, mathematics, and business.
b) To translate a problem's solution into syntactically correct structured program code.
c) To gain an understanding of the main issues of computer science, including history of the discipline, ethics, security and privacy, principles of programming languages, compilers and interpreters, and operating systems.
d) To teach students how to implement solutions to various problems by writing syntactically correct programs. Programming specific terminology will be emphasized.
e) To gain an understanding of how to design, test, and debug a program.
f) To emphasize the object-oriented nature of programming using multiple classes and objects throughout the course.

Outline:

The following is intended to provide you with an outline of the topics covered in the course.

Topic / Subtopic	Detail	Custom Text Chapter(s)	Original Text Chapter(s)	~ # Lecture Meetings	~ # Laboratory Meetings
1. Programming Basics					
a) Syntax vs. semantics b) Data types c) Declarations d) Assignment statements and expressions e) output statements f) OOP terminology g) Comments	 i. int ii. double iii. char iv. boolean JavaDoc (optional)	1 (p. 2-4,26-48), 2 (p.61-73, 75-87)	1 (p. 2–4, 26-48), 2 (p. 57-69, 71-83)	2.0	1.0
2. Classes & Objects					
a) Built-in classes b) Programmer defined classes c) Driver/Application programs	String, Math	3 (p. 123-135), 4 (p. 174-188)	3 (p. 113-125), 4 (p. 159-172)	10.0	2.0
3. Input/Output					
a) Screen output b) Keyboard input		2 (p. 91-95)	2 (p. 87-91)	1.0	1.0
4. Methods					
a) Using built-in & programmer-defined methods b) Designing methods c) Parameters & return values d) Scope of variables e) Class (static) methods vs. instance methods	 this.	3 (p. 128-131), 4 (p. 188-198)	3 (p. 118-121), 4 (p. 172-182)	7.0	2.0
5. Control structures					
a) Logical expressions b) If statements c) For loops d) While loops		5 (p. 229-261), 6 (p.306-309)	5 (p. 207-239), 6 (p. 279-282)	5.0	2.0
6. Arrays					
a) One dimensional array of primitive data types b) One dimensional array of objects c) Access and manipulation algorithms		7 (p. 329-350)	8 (p. 379-401)	6.0	4.0
7. Array-based lists (not using pre-defined classes)					
Unordered lists a) Insert (at end) b) Delete c) Linear Search	emphasis on how the list itself is modified			9.0	3.0
8. Testing and Debugging				1.0	
3 days have been allowed for testing				3.0	