

UNIVERSITY OF REGINA
Computer Science 110: Programming and Problem Solving
Syllabus for Winter 2020

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Lectures: MWF 11:30 AM - 12:20 PM, Classroom Building 112 (CL 112). Attendance is mandatory.

Labs: You must be registered in one lab section between 092-099. These compulsory labs are held in CL 135.4 or CL 136 and are two hours per week. A detailed schedule can be found on the laboratory website www.cs.uregina.ca/Links/class-info/110/. You can read ahead and complete the material in advance.

Where can I find help? You can receive individual help from Dr. Butz during his office hours in LB 221.

Instructor Office Hours in LB 221: By appointment, or
Tuesday 10:00 AM - 11:30 AM
Thursday 10:00 AM - 11:30 AM

- and from the CS lab instructors Alex Clarke, Guili Liu, Nova Scheidt, and Catherine Song in CL119.

CS Lab Instructor Office Hours in CL 119: www.cs.uregina.ca/Dept/OfficeHours/c119.html

Contact Information: The best way to contact me is by email using the address above. Note that I will deal *only* with email sent from the University server, i.e., use your uregina.ca account. You can assume that all email from gmail, hotmail, access, etc. will end up in my spam folder and never be read.

Textbook: N. Daniel Liang, Introduction to Programming with C++, 4th ed., Pearson, 2018. We will cover chapters 1-7, 10, 11, and 13. Instructions for obtaining Revel access are given below.

Two copies of the textbook (an older version) will be on 2-hour reserve in the main library. Assignment (and examination) questions may be given from the textbook. While you may use an older version of the textbook, you are responsible for difference between your copy and the current version.

Marking Scheme:	Assignments (4)	20%
	Labs	10%
	Midterm examination	20%
	Final examination	50%
	Instructor Discretion	+/- 5%

Policies and Procedures:

1. Please read the sections of the University of Regina Undergraduate Calendar (see www.uregina.ca/gencal/ugcal) dealing with attendance, evaluation, discipline and appeals, especially those regulations regarding academic integrity and plagiarism. Cheating will not be tolerated. Co-operation on programming assignments is generally encouraged, but it must be limited to verbal discussion of concepts; not program code or any other written documentation that is submitted for grading. Copying of assignments or previous solution keys is plagiarism. Knowingly allowing an assignment to be copied will also be treated as plagiarism. The consequence of plagiarism or any other form of cheating (such as copying on a quiz or examination) may range from a zero grade, to failure in the class, to expulsion from the University. Please note that the Dean of your faculty will be notified of any such incident, as per University regulations.
2. Article 5.13.1.1 in the Undergraduate Calendar stipulates that students are to conduct themselves responsibly and with propriety both in their studies and in their general behaviour. Misconduct, which may be in general behaviour, is subject to disciplinary action. **Any student disturbing the class lecture will be asked to leave the room immediately.**
3. If you have any concerns regarding a class mark, then take the following two steps: (i) clearly explain your concerns in an email; (ii) send the email to the class instructor. You must email me your concern about a class mark within one week after the return date.
4. There are no make-up quizzes or exams. Students who miss any of the quizzes or lab final must provide a valid excuse with documentation. In such cases, marks for the missed quiz or examination will be reallocated to the final examination.
5. You must **pass** the final examination in order to **pass** the class. That is, if your final examination grade is X, where $X < 50$, then your CS110 grade will be X. It should also be noted that the final examination is comprehensive.
6. Deferred final examinations can only be granted by the Associate Dean (Academic) (for Faculty of Science students), or by the Deans (and/or Associate/Assistant Deans) of other Faculties or Federated Colleges. Deferred final examinations cannot be granted by the course instructor.

Special needs: Students in this course who, because of a disability, may have need for specialized accommodations, should please discuss these accommodations with the class and lab instructors, and should also contact the Centre for Student Accessibility/Disability Resource Office (Riddell Centre, Room 251.15, 585-4631).

Health, Safety & Emergency information: www.uregina.ca/hr/hse

Important Dates:

Jan. 6th	First day of lectures
Week of Jan. 13th	CS110 labs begin
Week of Feb. 17th	No classes
Mar. 9th	Midterm
Apr. 9th	Last day of lectures
Apr. 17th	Final examination (9:00 AM - 12:00 PM, Room TBA)

UR Courses

Material pertaining to the class will be posted on the Computer Science 110 UR Courses Website. To read this material follow these steps.

1. Go to the University of Regina homepage www.uregina.ca
2. Click on "UR Courses" on the top of the homepage
3. Click on "Login to UR Courses"
4. Enter your username and password
5. Click on "CS110 Programming and Problem Solving"

Powerpoint Slides: PowerPoint slides made by the authors of the textbook will be posted on UR Courses. The class instructor will not give out his slides.

Assignments

1. Assignments will be posted on UR Courses.
2. Your solutions will be submitted electronically via UR Courses.
3. For each C++ programming question, you will submit a file with an extension of **.cpp**. This file is the source code of your C++ program.
4. **Do not submit a file with an extension of .sln.**
5. To prove that your code works correctly, you will also submit a file with an extension of **.png** (or **.jpg**, etc.). This file is a screenshot of the output of your program.
6. Assignments must be uploaded before the electronic cutoff time.
7. A medical certificate is required in the case of illness.
8. Submit incomplete work for partial marks.

University of Regina Student Success Centre

The Student Success Centre is part of the University of Regina's Office of Student Affairs. The Student Success Centre offers a wide variety of services, including workshops (e.g. time management and academic writing), the UR Guarantee Program, and tutoring services. This is another resource for students and additional information can be found on their website www.uregina.ca/student/ssc.

University of Regina Counselling Services

Counselling Services is also part of the University of Regina's Office of Student Affairs. Counselling Services offers a wide variety of workshops (e.g. exam study strategies and skills), counselling and other services, including personal counselling, group counselling, educational and career planning, assessment inventories, career explorer (online), portfolio development, strategies and skills for academic excellence. This is a valuable resource for students and even more information can be found on their website www.uregina.ca/counselling/.

Lecture Outline:

The following is an *approximate* lecture schedule. Items in **boldface** are fixed.

Date	Chapter	Topic
Jan. 6	1	Types of programming languages
Jan. 8	1	Input/Output and header files
Jan. 10	2	Data types, expressions, precedence rules
Jan. 13	2	Binary, octal, numeric data types
Jan. 15	2	Type coercion and type casting
Jan. 17	3	Selection control structure
Jan. 20	3	Nested ifs, dangling else problem
Jan. 22	3	Avoiding common errors
Jan. 24	3	Switch control structure
Jan. 27	4,10.2	String data type and string operations
Jan. 29	4	Simple file input and output
Jan. 31	4	More input operations: get, getline, ignore
Feb. 3	4	Formatting output
Feb. 5	4	Documentation
Feb. 7	4	Documentation
Feb. 10	4	Simple file input and output
Feb. 12	5	Count-controlled loops
Feb. 14	5	Sentinel-controlled loops
Feb. 17,19,21	-	No class
Feb. 24	5	End-of-file loops and flag-controlled loops
Feb. 26	5	Nested while loops
Feb. 28	6	Void and Value-returning functions
Mar. 2	6	Pass-by-value and pass-by-reference
Mar. 4	6	Scope rules
Mar. 6	6	Lifetimes of variables
Mar. 9	-	Midterm
Mar. 11	6	Modular programming and refactoring
Mar. 13	-	Bioinformatics
Mar. 16	-	CS Gizmos and Gadgets
Mar. 18	7	One-Dimensional arrays
Mar. 20	7	Passing 1D arrays to sub-functions
Mar. 23	7	Constant and arrays
Mar. 25	7	More examples with arrays
Mar. 27	5	Floating-point representation and errors I
Mar. 30	5	Floating-point representation and errors II
Apr. 1	4	Math functions
Apr. 3	3	Conditional expressions
Apr. 6	11.3	Typedef
Apr. 8	-	Question and answer

Revel: Student Registration Instructions

The following course materials are available in order to give you the best learning experience possible.

Required course material(s):

Text:

Author:

The following purchasing options are available for this material:

\$ 95.00 Revel* Access Code Card (ISBN: 9780134669854)

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<https://console.pearson.com/enrollment/g2oh0i>
2. **Enter the Course Invite Link** in your web browser. Please use a recommended browser: Google Chrome, Firefox, or Safari.
3. **If you have a Pearson account, enter your username and password. Otherwise, create a new account.** If you create an account, you will need to confirm your email address from a message that will be sent to the email you specify.
 - a. **Note:** *If you are also registering for a Pearson MyLab this term, you must register for the MyLab first, in order to use the same username and password for REVEL.*
4. **From your “My Courses” page, choose how you would like to access the course materials:** redeem a pre-purchased access code, buy access using a credit card or PayPal account, or choose Temporary Access if you're waiting on financial aid.
5. **If available for your product, you can choose to purchase a loose-leaf, print version of the textbook** at this time, or purchase it later from a link in your confirmation email.
6. That's all! To access REVEL throughout the semester, please log in from <http://console.pearson.com>

Need Help? Visit our 24/7 Pearson Support site: <https://support.pearson.com/getsupport/s/>

Find FAQ and Revel support at: <https://www.pearsonhighered.com/revel/students/support/>