

University of Lethbridge
Department of Mathematics and Computer Science

Computer Science 1620 – Fundamentals of Programming I
Course Outline – SPRING 2023

TIME & LOCATION: 10:30 am Tue and Thr in LINC L1060

INSTRUCTORS: Robert Benkoczi (office C556)
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TEXT/RESOURCES:

- *Programming in C++* by Frank Vahid and Roman Lysecky (required), zyBook ISBN: 978-1-394-07741-0.
To access (cost 65 CDN):
 1. Sign in or create an account at learn.zybooks.com
 2. Enter zyBook code: **ULETHCPSC1620BenkocziFall2022**
 3. SubscribePlease enter your valid UofL student ID number on the registration page so that your work can be correctly assigned for the final grade calculation.
- cpreference.com: use for reference, (recommended).
- https://www.cs.uleth.ca/libcommon/Online_Resources/: help to set-up your programming environment at home.

GRADING SCHEME:	Participation activities (PA in your text)	5%
	Challenge activities (CA in your text)	5%
	Programming assignments (approx 8)	50%
	Tests (best 4 out of 5)	40%

GRADE DISTRIBUTION: This information is provided as a guideline only and may be revised in this offering. Minimum percentages for each letter grade are:

A+	95	B+	80	C+	68	D+	55
A	90	B	76	C	64	D	50
A-	84	B-	72	C-	60	F	< 50

SCHEDULE:

(as time permits):

- 1) Introduction to C++, hello world, basic output (2 lect).
- 2) Branches (4 lect)
- 3) Loops (4 lect)
- 4) Arrays and vectors (2 lect)
- 5) User defined functions (2 lect)
- 6) Objects and classes (1 lect)
- 7) Input, output, files, and string streams (2 lect)
- 8) Recursive functions (2 lect)
- 9) Various containers: list, pair, map. (1 lect)
- 10) last 3 lectures chosen based on student interest. Possible topics: sorting, structs, multiple arrays, command line arguments, makefiles, etc.

HOW TO STUDY:

- Most of your work (except for the tests and some of the assignments) will be carried out on the zyBooks platform. You will need a browser and Internet access. No other setup will be needed, so you can focus on learning C++ for the first couple of weeks.
- Read the corresponding sections and complete the practice activities (PAs) assigned for each lecture, preferably before the lecture.
- Complete the Challenge activities (CAs) from the zyBook, by the end of the week. PAs and CAs will not be assigned deadlines on zyBooks. Please observe the schedule posted on Moodle.
- Complete the Assignments comprising zyBook lab activities. These will be due usually on Wednesdays. ZyBook assignments with appropriate due dates will be given.
- Every effort will be made to stream lectures on MSTeams after face to face classes resume. During lectures on MSTeams, your instructor will answer any questions you may have about the topics assigned from the zyBook. We will also discuss additional examples using jupyter notebooks with the CLing C++ kernel. See jupyter.org. Setting up your own jupyter server will not be necessary.
- No slides will be available but the lectures will be recorded on Teams when possible.

COMMENTS:

- Students who do not purchase the zyBook will submit the same programming assignments on Moodle. The fraction of the grade reserved for practice and challenge activities will be assigned the grade obtained from the programming assignments.
- Tests are given in the first 30 min of a Thursday's lecture time. Tests are taken in class.

- Work must be submitted at the scheduled time; no provision is made for make-up tests or late assignments, except for medical reasons or emergencies. Missed assignments receive 0 points.
- Requests for remarking tests and assignments are accepted only in writing *no later than one week from the date your graded work was returned*. On the request: identify the assignment, briefly explain why you believe the mark is incorrect, date and sign. Note that if your work is remarked, your grade may go up, down, or remain unchanged.
- Plagiarism can lead to severe penalties – please consult the calendar.

LINKS

- Moodle: <http://moodle.uleth.ca/>
- Instructor's page including contact information: <http://www.cs.uleth.ca/~benkoczi/>