CS160 Orientation to Computer Science

Instructor Information

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Student Hours: Friday 10:00 am–2:00 pm in Zoom (starting in week two of the term), or by appointment.

Course Information

Section Number: 01
CRN: 20938
Number of credits: 4
Scheduled time/days: Monday & Wednesday, 10:00 am–11:50 am in Zoom

Course Description

Introduces the field of computer science and programming for students interested in careers in related fields. Covers digital logic, binary and hexadecimal encoding of data, computer organization, operating systems, algorithms, control structures, and an overview of programming languages and pseudo-code. Computing's impact on culture and society is a recurring theme throughout this course.

Prerequisites

MTH 075 Variables and Linear Equations with a grade of “C” or better.

Course Outcomes

- Demonstrate an understanding of the differences between data types.
- Perform conversions from decimal to two's complement and floating-point notations.
- Write and interpret short machine code instructions to perform simple arithmetic computations.
- Describe algorithms in pseudo-code and implement an algorithm in a programming language.
- Demonstrate an understanding of the concept of abstraction
- Describe the difference between syntax and semantics.
- Summarize the duties and functions of an operating system.
- Demonstrate an awareness of social issues associated with the increased use of computing technology in modern society.

Required Course Materials

- *Computer Science: An Overview*, Brookshear and Brylow Direct Digital Access. The price of the book was added to the tuition of the course giving you lifetime access to it. While I strongly advise against it, you will be given the opportunity to opt out of the textbook the first time you log into the course Moodle shell. Please be aware that if you choose to opt out of the electronic book you will need to get your own copy of the text as it is required for the course. We will in fact be using it almost every day throughout the term.

- *Automate the Boring Stuff with Python*, A completely free online text that starts by teaching you the basics of Python and beyond. (Scroll towards the bottom of the page to find the table of contents and links to each individual chapter.)
- You will need to claim your LB Single Sign-On account. If you have any problems claiming your account please contact the Student Help Desk.
- We will be using Moodle in this course. You are not required to visit your Moodle shell before our first class, but it is highly recommended. If you have any problems logging into Moodle please contact the Student Help Desk before the beginning of the term.
- Internet access.
- An LBCC-provided email account.
- A Zoom account. See the linked document for information on setting up your free Zoom account.

Student Technology Recommendations

LBCC has developed the following recommendations to help enable you to be as prepared as possible for online courses, please see the recommended list of equipment below. Students who need financial assistance to purchase these resources should contact the Roadrunner Resource Center.

- Broadband internet.
- A computer with 256GB SSD, 8G RAM, an Intel i5 6th gen processor (or equivalent functionality) and running one of the following operating systems:
  - Windows 7, Windows 8.1, or Windows 10.
  - macOS X 10.9 or later.
  - Ubuntu 12.04 or higher, Mint 17.1 or higher, Red Hat Enterprise Linux 6.4 or higher, Oracle Linux 6.4 or higher, CentOS 6.4 or higher, Fedora 21 or higher, OpenSUSE 13.2 or higher, or Arch Linux (64-bit only).
- A webcam, HD preferred.
- Headphones or speakers.

Class Policies

Pedagogy (or How the Course is Taught)

A “normal” class generally asks you to read pages from your textbook(s), then attend a lecture where I would cover that same material before giving you an assignment that you are expected to complete on your own time. This class will be different, utilizing a flipped classroom approach to learning. Instead of the traditional model above you will still be given reading assignments to do outside of class and class time will largely be devoted to working on various projects to reinforce what you have learned. Because of this it is crucial that you complete any assigned reading or videos before class begins.

Instead of hours of lecture my role is to facilitate your work as you do it in class. Further discussion or demonstration will be given for any material that needs it followed by an assignment which you will begin working on, in class, while you have access to both your myself and your peers. Some of these assignments will be individual, some will be small group, many will be collaborative.

Behavior and Expectations

You will be held accountable to the college's Student Rights, Responsibilities, and Conduct policies.

Academic Integrity

LBCC embraces Excellence. We aspire to the highest ideal with honesty and integrity. LBCC does not tolerate any form of cheating, dishonesty, fraud, forgery, copyright violations or plagiarism. Students charged and found responsible for violating these policies will have serious consequences, from a failing grade on an assignment or in the course to suspension or expulsion from the college.

LBCC expects student to maintain honesty and integrity in all work, communications, and interactions. This means that we show respect for the ideas and expressions of others, respecting their right to own their research and their words. Students are expected to do their own work in class. In classes where group work is permitted/encouraged, students are urged to request clear guidance on what work may be done in group and what work is done only by the individual.

All material submitted for a grade must be your own independent work; this includes quizzes, projects, homework, and exams. If you get help on an assignment from anyone other than college staff (professors or tutors, for example) you must acknowledge their contribution on your submitted work, or you will be guilty of academic misconduct. This includes help from non-course tutors and websites, such as Chegg, Course Hero, and even StackOverflow. Your grade will be based on your understanding of the material; you will receive partial or zero credit for work done by others, depending on the circumstances. If you acknowledge the source of your work, you won't be guilty of plagiarism and will not be reported for academic misconduct although your grade will be reduced accordingly. Your only chance to make this acknowledgment is by citation or note in your work when you submit it.

How can you tell the difference between help on an assignment and generic help understanding the materials presented in class? If you got the help before seeing the assignment, it's clearly OK. Help from standard documentation (e.g., assigned readings and viewings, python.org documentation, etc.) is also fine. Beyond that, acknowledge any help you got and let me make the call. It's always safer to be honest.

Note, Administrative Rule No: 7030-01 defines academic dishonesty to include "cheating, academic dishonesty, plagiarism, aiding or abetting cheating or plagiarism…" I interpret this as posting or answering questions, homework assignments, quizzes, or exams, in part or in whole, to sites such as Chegg, Course Hero, StackOverflow, or any of the many other such solution sites.

A Special Note on Plagiarism and Cheating

Put simply, plagiarism is the representation of another person's ideas, thoughts, language, or expressions as your own original work. Plagiarism is considered academic dishonesty, can be grounds for being fired from your job, and even make you subject to a lawsuit, as well as ruin your reputation.

Take a few minutes now to read What is Plagiarism as well as the two related articles it links to, Is it Plagiarism? My Teacher and I Don't Agree and The Turnitin Plagiarism Spectrum. You may want

to bookmark the plagiarism.org website as it is a great resource for understanding and avoiding plagiarism.

Students at LBCC are expected to behave honestly. Acts of academic dishonesty, including plagiarism or cheating, are serious offenses. I have the right to issue an “F” grade for the course when a student has been found to have cheated or plagiarized. Students may appeal this decision following the process outlined in the Student Rights, Responsibilities, and Conduct handbook. Additionally, I am required to report all acts of dishonesty to the Dean of Student Development.

Guidelines for Communicating with Your Professor

Please do not call me. I will not be checking my office voicemail this term. You will not get a response.

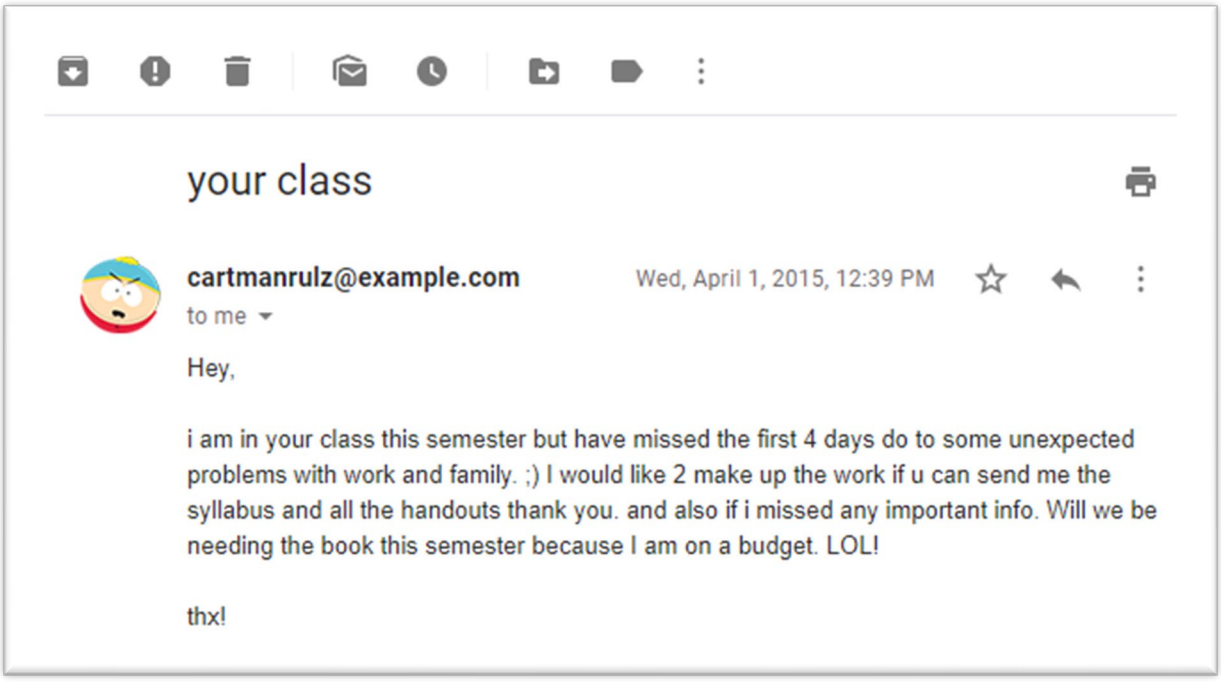
The best way to reach your me is by email. You should normally expect a response within 1–2 business days of sending your email.

Use your LBCC email to contact me. I do not respond to messages from non-LBCC email addresses as this is a violation of the Federal Family Educational Rights and Privacy Act (FERPA).

The University of British Columbia offers some excellent suggestions for emailing your professor on their page Inbox (1): How to email your profs effectively.

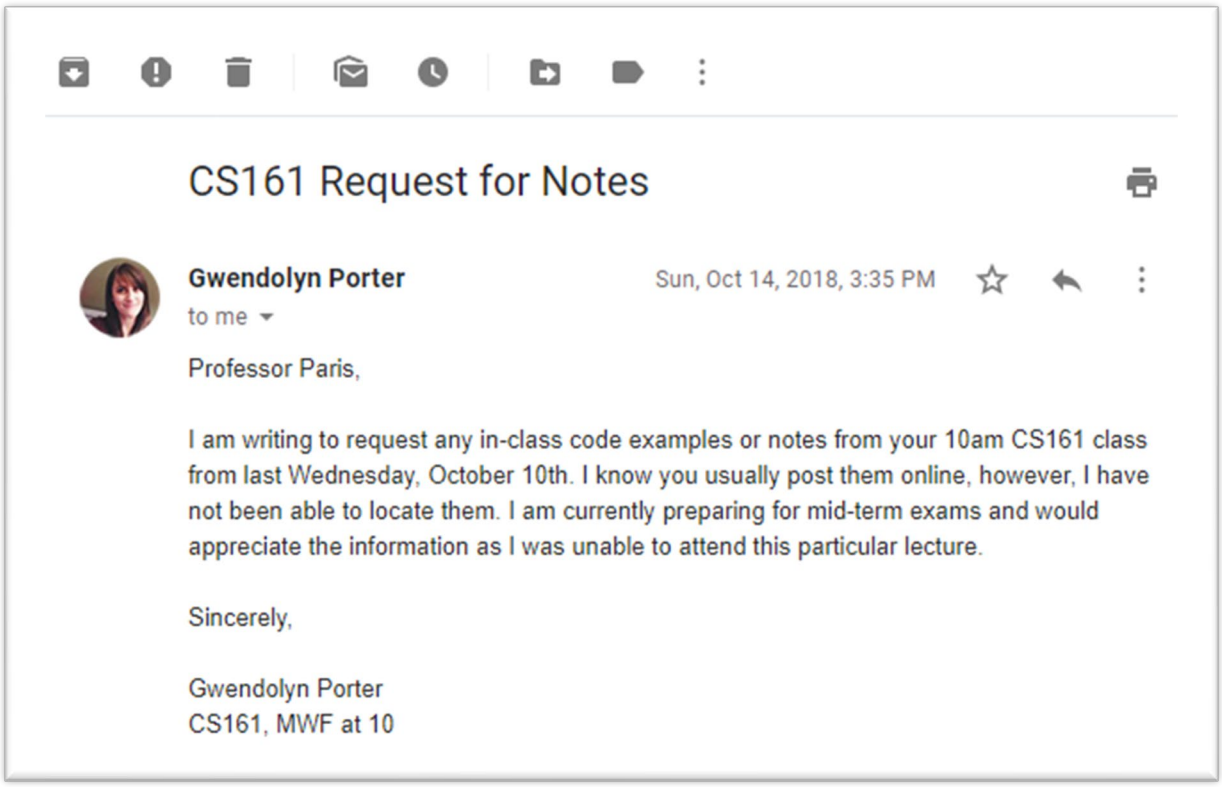
Feel free to address me as either “Joe” or “Professor Paris.”

An example of a poorly written email:



(details changed to protect the student’s identity)

An example of a more appropriate email:



(student name and image created by the randomuser.me mock data generator)

Guidelines for Communicating with Each Other

Meaningful and constructive dialogue is encouraged in this class and requires a degree of mutual respect, willingness to listen, and tolerance of opposing points of view. Respect for individual differences and alternative viewpoints will be maintained at all times in this class. Your choice of words and use of language should be temperate and within acceptable bounds of civility and decency.

Netiquette

Netiquette is short for “Internet etiquette.” Just like etiquette is a code of polite behavior in society, netiquette is a code of good behavior on the internet. This includes several aspects of the Internet, such as email, social media, online chat, web forums, website comments, multiplayer gaming, and other types of online communication[1].

Below are some examples of good netiquette:

1. Avoid posting inflammatory or offensive comments online (aka flaming).
2. Respect others' privacy by not sharing personal information, photos, or videos that another person may not want published online.
3. Never spam others by sending large amounts of unsolicited email, chat messages, or forum posts.

[1] https://techterms.com/definition/netiquette

4. Don't troll people in web forums or website comments by repeatedly nagging or annoying them.
5. Stick to the topic when posting in online forums or when commenting on photos or videos, such as YouTube or Facebook comments.
6. Don't swear or use offensive language.
7. Avoid replying to negative comments with more negative comments. Instead, break the cycle with a positive post.
8. If someone asks a question and you know the answer, offer to help.
9. Thank others who help you online.

See these 10 Netiquette Guidelines Online Students Need to Know from Rasmussen College for additional information.

Discussion posts that do not follow the rules of netiquette will result in a score of 0 for the assignment.

Missed Classes

Again, you are strongly encouraged to attend every class meeting. If you do miss a class, you are responsible for any announcements made and materials covered in the missed class. These will generally be made available in Moodle. You can get notes from your classmates; I encourage this.

Additionally, class meetings will be recorded and made available in the Moodle shell.

Course Work

All work, unless specifically stated otherwise, is to be submitted via Moodle. Assignments may not be submitted via email.

Late assignments will not be accepted. No exceptions.

All work, unless specifically stated otherwise, must also be produced electronically. This means submitting word-processed files. If you an illustration of some kind, use a graphics program to create it. Do not submit pictures of hand-drawn or hand-written work. They will not be graded and as a result you will earn a score of 0 on the assignment.

Acceptable file formats for documents are Microsoft Word (.docx or .doc), rich text file (.rtf, can be made with most word processors), or a PDF file (most word processors can make these as well). Graphical images should be embedded in a word-processor file.

Python programs must be submitted as a plain text document with a .py extension.

It is your responsibility to ensure that you submit a readable document. Extensions will not be given for corrupted files or files submitted in a format other than those listed above. After uploading a file check your submission in Moodle to make sure it was uploaded correctly. If, when I attempt to grade your work, I cannot open/read the document, you will receive a score of zero on the assignment.

It is your responsibility to address any technical problems you are having in a timely fashion with technical support. The Student Help Desk is available to help you with these issues.

Quizzes

Quizzes will become available at 12:00 am Monday of the week they are given. They will be due no later than 11:55 pm the following Sunday. You may take each quiz up to three (3) times. Only the best score of all your attempts will be kept. Once you begin a quiz attempt you will have 20 consecutive minutes to complete it. You cannot pause a quiz once you have started it.

You must pass the quiz with a 70% or better to unlock the week's assignment. If after three attempts you still have not achieved a score of 70% or better, please contact me and we will schedule a time to meet to discuss the material, after which I will unlock the assignment for you.

The single lowest quiz score will be dropped from your final grade calculation.

Social Issue Discussions

One of the outcomes of this course is that you will be able to demonstrate an awareness of social issues associated with the increased use of computing technology in modern society. Part of our regular course work will include discussions centered around various prompts.

Final Exam/Project

In lieu of a final exam in we will all be writing a non-trivial program in Python. Don't worry, even if you have never programmed before the project is designed so that you will be able to complete it. We will be looking at and learning Python as we move through the term. Also note that you do not have to complete the project in order to get a passing grade on it. More details will be announced in class.

Grading

Assignments will be graded within seven business days of the date upon which they are due.

Questions or concerns regarding grades must be raised within seven business days of the grade being posted.

When I am preparing final grades, I automatically review the work of any student who is within 1% of the next higher letter grade to determine if there are any possible additional points that could make a difference. By time you see your final grade in the course any and all possible adjustments have already been made. Other than errors in calculations grades are final as posted.

Category	Weight
Quizzes (the lowest score will be dropped)	30%
Assignments (the lowest score will be dropped)	30%
Social Issues Online Discussions	10%
Python Project	30%

Letter Grade	Percentage	Performance
A	90%–100%	Excellent Work
B	80%–89.9%	Good Work
C	70%–79.9%	Average Work
D	60%–69.9%	Poor Work
F	0%–59.9%	Failing Work

Campus Resources

Resources and Information for COVID-19

Quite possibly the most important resource for us all this term will be LBCC's Coronavirus/COVID-19 information page followed closely by the FAQs for Students.

The Roadrunner Resource Center

The Roadrunner Resource Center is intended for students who are facing difficulties like the loss of a job, childcare demands, healthcare expenses, or other strains on your finances or who can no longer afford to pay for things like rent, utilities, food, textbooks or other school necessities.

Student Help Desk

The Student Help Desk assists students with most computer software-related issues and other technology problems or questions, from login problems related to LBCC's online systems to questions about course-related instructional software. They also check out laptops and help anyone using library equipment such as the college's 3D printer, scanners, photocopiers, and more.

Tutoring

As an LBCC student you are eligible for up to three free tutoring sessions per week in a any of a wide variety of subjects. See the Tutoring Center web page for more information.

The Writing Center

Writing assistants are available to help you with any class in which writing is assigned and at any stage of the writing process, from brainstorming to a final draft. They also assist students with non-academic writing like scholarship essays, resumes, and creative writing. See more at the Writing Center web page.

College Policies

LBCC Email and Course Communications

You are responsible for all communications sent via Moodle and to your LBCC email account. College policy requires that you use your LBCC provided email account for all email communications at the college.

Disability and Access Statement

You and I should meet during the first week of class if:

1. You have a documented disability and need accommodations.
2. I need to know specific medical information about you.
3. You need special arrangements in the event of an emergency.

If you have documented your disability, remember that you must make your request for accommodations through the Center for Accessibility Resources (CFAR) Online Services webpage every term in order to receive accommodations. If you believe you may need accommodations but are not yet registered with CFAR, please visit the CFAR Website for steps on how to apply for services or call (541) 917-4789.

Statement of Inclusion

To promote academic excellence and learning environments that encourage multiple perspectives and the free exchange of ideas, all courses at LBCC will provide students the

opportunity to interact with values, opinions, and/or beliefs different than their own in safe, positive and nurturing learning environments. LBCC is committed to producing culturally literate individuals capable of interacting, collaborating and problem-solving in an ever-changing community and diverse workforce.

Title IX Reporting Policy

If you or another student are the victim of any form of sexual misconduct (including dating/domestic violence, stalking, sexual harassment), or any form of gender discrimination, LBCC can assist you. You can report a violation of our sexual misconduct policy directly to our Title IX Coordinator. You may also report the issue to a faculty member, who is required to notify the Coordinator, or you may make an appointment to speak confidentially to our Advising and Career Center by calling 541-917-4780.

Public Safety/Campus Security/Emergency Resources

The LBCC Safety & Loss Prevention Office exists to promote a safe environment where members of the LBCC community can study, work, and engage with each other and our communities.

Public Safety is also responsible for lost and found.

In an emergency, call 911. Also, call LBCC Campus Security/Public Safety at 541-926-6855 and 541-917-4440.

From any LBCC phone, you may alternatively dial extension 411 or 4440. LBCC has a public safety app available for free. We encourage people to download it to their cell phones. Public Safety also is the home for LBCC's Lost & Found. They provide escorts for safety when needed. Visit them to learn more.

Filed under, "I Can't Believe I Have to Say This, But..."

- I will not grade any quiz, exam, or assignment if it has or appears to have blood, mucus, or any other bodily fluid on it.
- All assigned problems must be completed in order for you to receive full credit. If you only answer one question out of ten but you answer that question perfectly it does not mean you get 100% for the whole assignment. Scores are based on the total number of points possible, not the number of points you attempt.
- I will not pre-grade your assignment before the due date.
- If you write two answers, I will grade the one that is wrong.
- No, you can't retake the final exam because you did poorly.
- Yes, copying stuff that someone said in a YouTube video word for word without understanding a word of what you wrote is still plagiarism. So is re-using an assignment you did for another class (or another section of this class).
- Booked vacations are not a reason for an excused absence.
- Do not buy tickets for anything before the final exam.

Changes to the Syllabus

I reserve the right to change the contents of this syllabus. You will be given notice of any such changes and the current version of the syllabus will always be available in Moodle.

Class Calendar

Week	Activities	Due
1 Sept. 28	Course Introduction • Syllabus • Syllabus quiz (must be completed with a score of 100% before moving on) Data Storage • History of Computing video • Read Chapter 1.1–1.4 in Brookshear & Brylow • Week 1 quiz • Week 1 assignment • Social Issue Discussion 1	Oct. 4 @ 11:55 pm
2 Oct. 5	Data Storage Continued • Read Chapter 1.5–1.7 in Brookshear & Brylow • Week 2 quiz • Week 2 assignment	Oct. 11 @ 11:55 pm
3 Oct. 12	Data Manipulation • Read Chapter 2.1–2.7 in Brookshear & Brylow • Week 3 quiz • Week 3 assignment • Social Issue Discussion 2	Oct. 18 @ 11:55 pm
4 Oct. 19	Operating Systems and Introduction to Python • Read Chapter 3.1–3.3, 3.5 in Brookshear & Brylow • Read Chapter 0 and Chapter 1 of Automate the Boring Stuff with Python (hereafter known as ATBS). Install Muv on your computer as described in Chapter 0 of ATBS. Contrary to what the book implies you do not need to install Python separately as Mu includes its own installation. • Week 4 quiz • Week 4 assignment	Oct. 25 @ 11:55 pm
5 Oct. 26	Networking and the Internet and Python Basics • Read Chapter 4.1–4.4 in Brookshear & Brylow • Read Chapter 2 of ATBS • Week 5 quiz • Week 5 assignment • Social Issue Discussion 3	Nov. 1 @ 11:55 pm

Week	Activities	Due
6 Nov. 2	Algorithms • Read Chapter 5.1–5.6 in Brookshear & Brylow • Read Chapter 3 of ATBS • Week 6 quiz • Week 6 assignment	Nov. 8 @ 11:55 pm
7 Nov. 9	Programming Languages • Read Chapter 6.1–6.5 in Brookshear & Brylow • Read Chapter 4 of ATBS • Week 7 quiz • Week 7 assignment • Social Issue Discussion 4	Nov. 15 @ 11:55 pm
8 Nov. 16	Software Engineering • Read Chapter 7.1–7.3 in Brookshear & Brylow • Read Chapter 5 of ATBS • Week 8 quiz • Week 8 assignment	Nov. 22 @ 11:55 pm
9 Nov. 23	Data Abstractions • Read Chapter8.1–8.2 in Brookshear & Brylow • Read Chapter 6 of ATBS • Week 9 Quiz • Week 9 Assignment	Nov. 29 @ 11:55 pm
10 Nov. 30	• Python Project available	
11 Dec. 7	**Finals Week** **Python Project due Wednesday, Dec. 9 at 11:55 pm**	