CS160 Orientation to Computer Science

Instructor Information

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Office Hours: by appointment (via Zoom)

Course Information

CRN: 16600
Number of credits: 4

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.

Course Outcomes

Upon successful completion of this course, you will be able to:

- 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; *digital access*. The fee for the book has already been added to the tuition cost of the class. Paying this fee gives you lifetime access to the book—it's yours to keep forever. While I strongly discourage it, you can opt out of the textbook if you choose. You should see an option to do so 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 – "Practical programming for total beginners." 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 install the free Python programming language on your computer. Instructions for doing so can be found in Automate the Boring Stuff. That book also discusses a free program called Mu which is a simple editor for beginning Python programmers. I recommend you install it as well.
- A minimum 8GB USB thumb drive *or* cloud storage to save your work to.
- An LBCC-provided email account.
- A Zoom account. See the liked document for information of setting up your free Zoom account.
- Access to a computer or virtual machine running Windows 7, Windows 8.1, or Windows 10.
- We will be using Moodle in the course. If you are unfamiliar with Moodle, please watch this short Moodle orientation video. I suggest you visit the course Moodle shell before our first class and check it frequently for updated information. Before logging into Moodle for the first time you will have to claim your account at identity.linnbenton.edu (this is a one-time process). If you have any problems claiming your account or logging into Moodle please contact the Student Help Desk at 541-917-4630 or student.helpdesk@linnbenton.edu.

Student Technology Recommendations

Our class is being delivered fully online this quarter. Additionally, it is possible that LBCC campuses will need to be closed to the public at times during this or future terms, depending on public health directives. In this event classes will be delivered fully remotely and will not be able to meet face-to-face. Therefore, LBCC has developed the following recommendations to help enable you to be as prepared as possible online courses by encouraging you to obtain the equipment you will need in order to be successful in *any* modality. Please see the recommended list of equipment below. Students who cannot afford these resources can contact the Roadrunner Resource Center about funding.

Standard
- Broadband internet.
- A computer with 256g SSD, 8G RAM, i5 6th gen processor (or equivalent functionality).
- Device with a microphone and speakers.
- Headphones.
- Device with a camera.

Minimum
- A Wi-Fi hotspot.
- A computer with 128g SSD, 4G RAM, i3 6th gen processor (or equivalent functionality).
- Device with a microphone and speakers.
- Headphones.
- Device with a camera.

Class Policies

You will be held accountable to the Student Code of Conduct (SCC), which outlines expectations pertaining to academic honesty (including cheating and plagiarism), classroom conduct, and general conduct. Take a moment now to follow the link above and familiarize yourself with the SCC.

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.

Guidelines for Communications

Communicating with Your Instructor

Please do not call me. I will not be checking my office voicemail this term. You will not get a response.
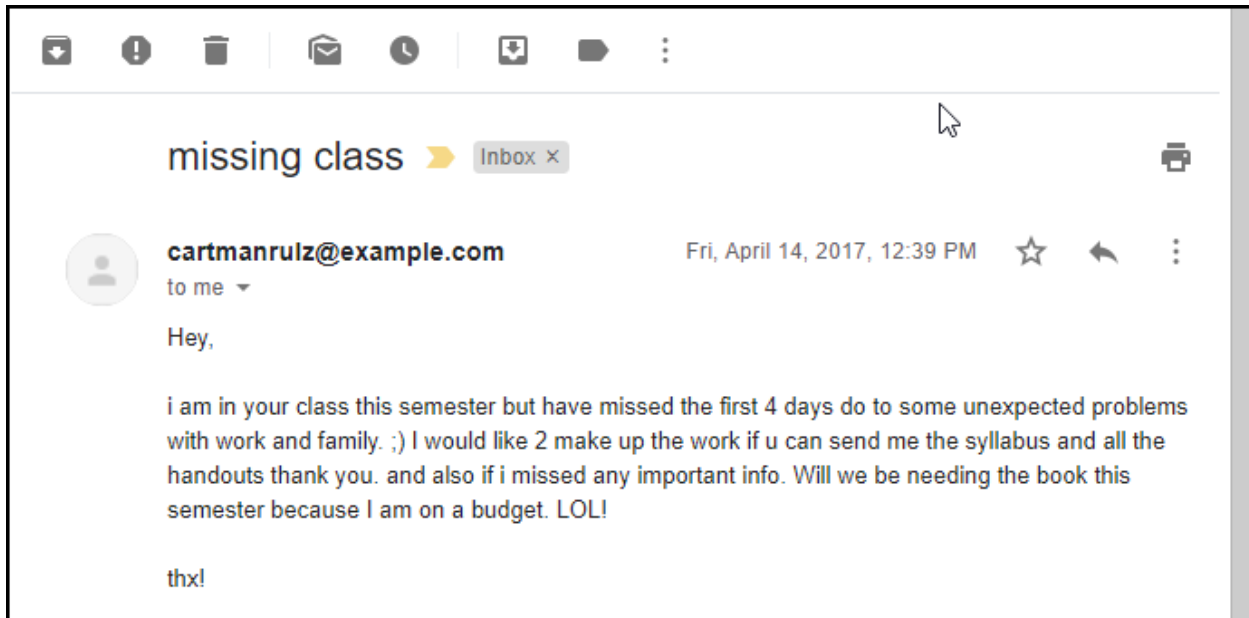
Please do not use Moodle's built-in messaging. Again, you will likely not get a response.

The *best* way to reach your instructor is by email. You should normally expect a response within 1—2 business days of sending your email.
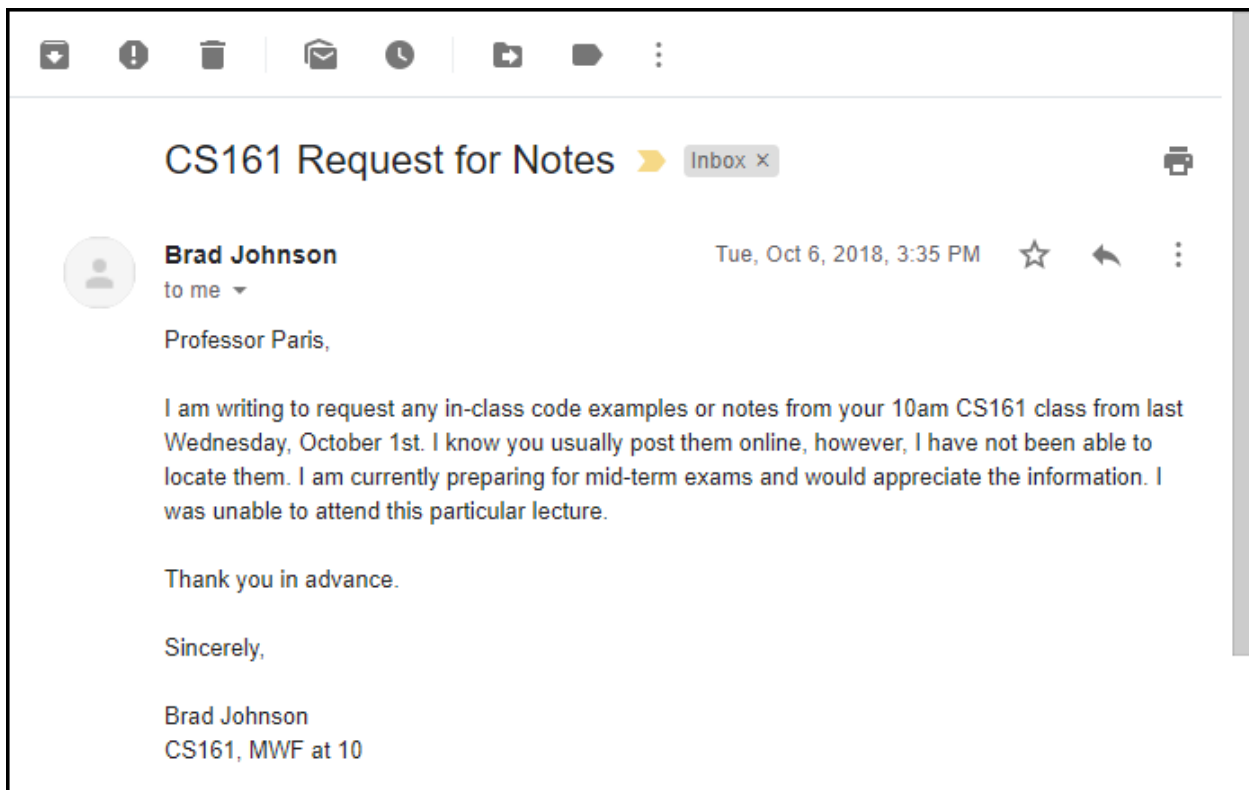
Use your LBCC email to contact me. I do not respond to messages from non-LBCC email addresses as this is a violation of the Federal Family Educational Rights and Privacy Act (FERPA).

While they need not be strictly formal your emails should be concise, list necessary details, and written in a manner that would be appropriate for communicating with, for example, your boss.

Below is an example of a poorly written email. Yes, this is a real email. The names have been changed to protect the guilty.

missing class — Inbox ×

cartmanrulz@example.com   Fri, April 14, 2017, 12:39 PM
to me

Hey,

i am in your class this semester but have missed the first 4 days do to some unexpected problems with work and family. ;) I would like 2 make up the work if u can send me the syllabus and all the handouts thank you. and also if i missed any important info. Will we be needing the book this semester because I am on a budget. LOL!

thx!

And here is an example of a much more appropriate email.

CS161 Request for Notes — Inbox ×

Brad Johnson   Tue, Oct 6, 2018, 3:35 PM
to me

Professor Paris,

I am writing to request any in-class code examples or notes from your 10am CS161 class from last Wednesday, October 1st. I know you usually post them online, however, I have not been able to locate them. I am currently preparing for mid-term exams and would appreciate the information. I was unable to attend this particular lecture.

Thank you in advance.

Sincerely,

Brad Johnson
CS161, MWF at 10

[7 Mistakes to Avoid When Emailing Professors](#) offers some excellent advice for written communication with your instructors and I strongly encourage you to read it. [How to Email a Professor](#) and [How to Email Your Professor (without being annoying AF)](#) are also excellent resources.

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 (a.k.a 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 emai, chat messages, or forum posts.
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

In case of absence from class, students are responsible for announcements made and materials covered. These will be available via Moodle.

Course Work

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

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

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

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 text documents are Microsoft Word (.docx or .doc), a rich text file (.rtf, can be made with most word processors), a plain text file (.txt, can be made with Notepad, TextEdit, or many others), or a PDF file (most word processors can make these as well).

Graphical images should be embedded in a word-processor file. Note: image files cannot be embedded in a plain text 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. After uploading a file (of an allowable type) 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 also your responsibility to address any technical issues you are having in a timely fashion with technical support. See the information about the Student Help Desk below.

Late work will not be accepted. No exceptions.

Assignments and Quizzes

Assignments and 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 will only have one opportunity to take each quiz. Once you begin the quiz you will have exactly 20 minutes to complete it. You *can not* pause a quiz once you have started it.

Social Issue Discussions

There will be a total of five social issue discussions that will be held via forums on Moodle throughout the term.

For each discussion you will be presented with one or more prompts. You will be asked to select one of these prompts to which you will write a three to five paragraph essay stating and supporting your position on the question posed. You are expected to have this essay written and posted *no later than Wednesday* of the week the discussion is assigned. Once you have posted your essay you will be able to proceed to the next portion of the discussion.

Next, read what your classmates have written in their essays. Choose *at least two* of these responses *from two different students* and write a one or two paragraph reply to each either agreeing or disagreeing with them. Be respectful in your response, even if you disagree with the original poster. NO FLAME WARS. NO NAME CALLING. NO INSULTS. As before, your reply needs to be written in complete paragraphs with five to seven sentences each and using proper punctuation, spelling, grammar, etc.

Final 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
10 Quizzes (the lowest score will be dropped)	30%
10 Assignments (the lowest score will be dropped)	30%
5 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

Note: A grade of "C" or better is considered passing.

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. A close second may be the FAQS for students page.

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 provide assistance to anyone using library equipment such as the college's 3D printer, scanners, photocopiers, etc. The Student Help Desk's contact information can be found here.

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.

Roadrunner Resource Center

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, who lacks a safe and stable place to live, or can no longer afford to pay for things like rent, utilities, food, textbooks or other school necessities is urged to contact the Roadrunner Resource Center (RRC) for support via email at resources@linnbenton.edu or visit them on the web at www.linnbenton.edu/RRC. The RRC can help you get connected to resources to help. Please notify your instructor if you are comfortable in doing so yourself.

College Policies

LBCC Email and Course Communications

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

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 failing grade/grades to removal/suspension/expulsion. 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. For a definition of

plagiarism and Academic Integrity, please see [Student Rights, Responsibilities and Conduct](). Additional information can be found in our [Board Policies and Administrative Rules]().

A Special note on Plagiarism

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.

Disability and Access Statement

You should meet with your instructor during the first week of class if:

1. You have a documented disability and need accommodations.
2. Your instructor needs to know 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.

Changes to the Syllabus

I reserve the right to change the contents of this syllabus due to unforeseen circumstances. You will be given notice of relevant changes in class, through an announcement in the course Moodle shell, or through LBCC email.

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.

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 you-tube video word for word without understanding a word of what you wrote is still plagiarism.

Booked vacations *are not* a reason for an excused absence.

Do not buy tickets for *anything* before the final exam.

Class Calendar

Week	Activity	Due
Week 1 June 29	Welcome, introduction, scope & set clear expectations Data Storage • Read Chapter 1.1–1.4 in Brookshear • Week 1 quiz • Week 1 assignment • Social Issue Discussion 1	July 5 @ 11:55 pm
Week 2 July 6	Data Storage Continued • Read Chapter 1.5–1.7 in Brookshear • Read Chapter 0 of Automate the Boring Stuff (hereafter known as ATBS) • Install Python on your computer as described in Chapter 0 of ATBS • **OPTIONAL:** you may install Mu as discussed in Chapter 0 of ATBS if you like; I will most likely use both it and IDLE for demonstrations • Week 2 quiz • Week 2 assignment	July 12 @ 11:55 pm
Week 3 July 13	Data Manipulation • Read Chapter 2.1–2.7 in Brookshear • Week 3 quiz • Week 3 assignment • Social Issue Discussion 2	July 19 @ 11:55 pm
Week 4 July 20	Operating Systems • Read Chapter 3.1–3.3, 3.5 in Brookshear • Read Chapter 1 in ATBS • Week 4 quiz • Week 4 assignment	July 26 @ 11:55 pm
Week 5 July 27	Networking and the Internet • Read Chapter 4.1–4.4, 4.6 in Brookshear • Week 5 quiz • Week 5 assignment • Social Issue Discussion 3	Aug. 2 @ 11:55 pm

Week	Activity	Due
Week 6 Aug. 3	Algorithms • Read Chapter 5.1–5.6 in Brookshear • Read Chapter 2 in ATBS • Week 6 quiz • Week 6 assignment •	Aug. 9 @ 11:55 pm
Week 7 Aug. 10	• Read Chapter 6.1–6.5 in Brookshear • Week 7 quiz • Week 7 assignment • Social Issue Discussion 4	Aug. 16 @ 11:55 pm
Week 8 Aug. 17	• Read Chapter 3 & 4 in ATBS • Week 8 quiz • Week 8 assignment	Aug. 23 @ 11:55 pm
Week 9 Aug. 24	• Read Chapter 6 in ATBS • Week 9 quiz • Week 9 assignment • Social Issue Discussion 5	Aug. 30 @ 11:55 pm
Week 10 Aug. 31	• Python Project handed out	
Week 11 Sept. 7	**Finals Week** **Python Project due Wednesday, Sept. 9 @ 11:55 pm**	