New Spring 2022 Edition

Quick Start Guide

Computer Systems

for success

Welcome!

No matter which flavor; 15-213, 18-213, 15-513, 14-513, or 18-613; this course is a hallmark part of the Carnegie Mellon, shared by more than two decades of graduates of SCS, ECE, and INI, students, bachelor's and master's alike.

This isn't just a course where we teach you *about* computer systems. It is *the* course where you develop the foundational tools to *reason* about computer systems. Although this course covers aspects of architecture, parallel computing, operating systems, concurrency control, and networking, it isn't presented from the perspective of those who develop those resources for others. It is presented for those who need a deep understanding to use them to build software systems, from systems software to high performance, to scalable and resilient applications.

This *Quick Start Guide* is designed to help you dive right in and get the most out of the course.

How We Support You

You are the reason that we are here. We offer a *ton* of ways to learn. Some are required parts of the course. But, others are there to enable you to tailor the course support for your preferences, situation, and needs. The trick is to do what works for you – and to ask us for help any time you even think you might want it. We're here for you!

Pro Tip!
Do what works for you – and to ask us for help any time you even think you might want it. We're here for you!

Continued on next page.

Lectures

Our goal in lecture is to help you understand what we want you to learn, why we want you to learn it, how it can empower you, and how to know when you've mastered it. As much as anything, we hope you'll leave lecture with perspective and motivation. The rest can come as you work through the homework and do the labs.

Relax, stay focused (off of email, chat, the Web, etc), and raise your hand (and yell out if needed) to your instructors if you've got any questions or uncertainties. We're here to help!

Pro Tip!
Just try to relax, stay focused, and raise your hand (or yell out) to your instructors if you've got any questions or uncertainties. We're here to help!

Please keep your camera on and microphone muted (except when speaking) during lecture.

Can't Make Lecture?

Please do attend lecture, if you can. The interaction will really help you learn better. But, if you can't, watch them as soon as possible after the lecture. The videos can be found on *Canvas* under the *Panopto* tab. The usually are processed and uploaded overnight and are ready for watching in the morning. Please let us know if ever one isn't available within 16 hours.

If you can't attend lecture, try to watch the video during any of our office hours. This way, just like a real lecture, you can ask the course staff questions. Just pause the lecture and hit us up. By watching the video during office hours, you get interactive lecture – on your schedule. And, no one will every be concerned about what time class is supposed to end!

Pro Tip!
By watching the video during office hours, you get interactive lecture – on your schedule. And, no one will every be concerned about what time class is supposed to end!

The same strategy works if you want to rewatch a lecture, too!

Small Student Groups

Small student groups are a *mandatory* part of the course. We'll facilitate the formation of groups of not more than 5 students who can meet together at the same time at least once each week for at least one hour. Attendance at the one hour meeting we arrange each week is mandatory and attendance and quality of participation is tracked by peer or leader review. The group may choose to meet more often, and while such additional meetings are encouraged, they are not mandatory.

Each group is assigned a TA mentor who will attend each of the mandatory weekly meetings, as well as additional meetings, as requested by your group. The TA isn't intended to be the group leader, but is intended to be a resource for the group, both during group meetings and more generally.

Group meetings are a great time to compare answers to homework (not lab) answers and sample test problems, talk through the lab environment, and do activities to learn about and master tools used for debugging, such as gdb. They are also a great time to talk about lab requirements, and the lab framework and test drivers (but not lab solutions).

Your group and your TA mentor will be in communication throughout the week. Your priorities drive the group meetings, but your TA will periodically offer you materials and activities and suggest and support timely ways of engaging the course. If you've got specific concerns, you may want to give your TA a heads up. You may want to create a slack channel or email lists and include your TA to stay in communication throughout the week.

Pro Tip!
Your group may want to create slack channels or email lists to stay in communication throughout the week.

Piazza

Piazza is definitely a student favorite! It is a great way to get all sorts of help. Public questions are a great way to discuss old test questions, lab requirements, the starter code, and the test sets with your peers. Private posts are a great way to get help with your specific solutions or personal concerns privately from the course staff – as well as to request one-on-one appointments. I am often amazed about how fast questions are asked and answered! Just be careful not to discuss your solutions to the labs or homework assignments in public Piazza posts, as an extreme example, you should never post your code!

Pro Tip!
Piazza is a great way to get all sorts of help. Public questions are a great way to discuss old test questions, lab requirements, the starter code, and the test sets with your peers. Private posts are a great way to get help with your specific solutions or personal concerns privately from the course staff – as well as to request one-on-one appointments.

Office Hours

We've got nearly about a dozen enthusiastic TAs – and one very excited instructor! The instructor's office hours and Zoom information are on the course home page. Drop in! I'm here to help!

The TA office hours are a great "convenience store" time to ask questions about homework problems, sample test questions, lab requirements, and development and debugging strategies. If you need timely help, or focused attention to dive into something

Pro Tip!
If you need timely help…it often makes sense to ask *immediately* on Piazza rather than waiting for office hours. If that doesn't work out, asking for an appointment is a great strategy.

particularly vexing, it often makes sense to ask *immediately* on Piazza rather than waiting for office hours. And, if that doesn't work out, asking for an appointment is a great strategy

Logistically, we use an appointment system for office hours. Beginning in the morning, you can pick out a timeslot and we'll be waiting for you (Not the other way around!)

Appointments are generally very available, so please do not "opportunistically" make appointments you don't need. Also, you can only have one outstanding appointment at a time. You can however make another appointment as soon as you finish one. We had at least one student each of the last two semesters who had more than 200 appointments each! There isn't a shortage. We just want to make sure that we can take turns among those who need help so no one has to wait to make progress.

Special Sessions

During the semester we'll offer a few special sessions, possibilities include a *Linux/CMU-Computing Boot Camp*, a *C Boot Camp*, and preview sessions for the exams. It is best if you can attend them. But, if not, try to make sure someone in your study group can attend. And, just like lectures, you can create your very own virtual interactive sessions by watching the videos during office hours and pausing them to ask us your questions.

Pro Tip!
If you can't attend a special session try to coordinate so someone in your group does. And, just like lectures, you can create your very own interactive virtual sessions by watching the videos during office hours and pausing them to ask us questions in real time!

Your Instructor

Remember, in addition to the team of teaching assistant, the instructor is at your service. He is always happy to help! You are the reason he is here. Check the course home page for more information. Reach out *anytime!*

Pro Tip!
The instructor is at your service…You are the reason he is here. Check the course home page for more information. Reach out *anytime!*

The end. Time for the good stuff! Labs 0 and 1!