CS 240: Course Overview Transcript

[00:00:00] Hello and welcome to CS 240.

[00:00:02] Um In this video, I'll give you a brief overview of the course and um I'll tell you about the structure of the course and how, how the course will work.

[00:00:13] So this course is all about learning how to build large programs.

[00:00:18] And we'll do this using a few different technologies. We, we will program in Java, we will use relational databases and we will create a web API one thing you should be aware of right off the bat is that programming is hard and you're going to, you're going to be building larger programs in this course than you have in any previous course.

Start visual description. The professor demonstrates how to program in Java, use relational databases, and create a web API. End visual description.

[00:00:39] So if you think about how many times have you, maybe in a previous programming course, spent hours and hours trying to find a bug or have you ever done an all nighter or close to an all nighter when you're programming? Probably most of you have.

[00:00:53] And that's going to be more likely in CS 240 because we are going to build larger programs than what you have built before.

[00:01:00] So one thing I want to point out is nobody's trying to make CS 240 hard.

Start visual description. The professor explains that the course is project-based, with almost all credit-related activities tied to the project, which will be completed in phases using Java. End visual description.

[00:01:04] In fact, we've done a lot of things over the last several years to try to make it easier.

[00:01:08] But programming is hard and when you, when you do something large, it's even harder, you're more likely to run into bugs or problems on unpredictable things.

[00:01:20] And so this means that you will struggle sometimes.

[00:01:23] Um, but that struggle doesn't mean you can't do it.

[00:01:25] It doesn't mean you shouldn't do it.

[00:01:27] What it really is going to mean is that you're learning.

[00:01:29] So you should just expect that and you should plan um time, you should be starting projects early. I'll say more about that. But um but I just want to point out that that since you're going to be building something large, um you're going to spend a significant amount of time on it.

[00:01:46] So as I mentioned, this is a project based course, almost everything that you do for credit in CS 240 will be related to the project that you're going to do and you'll complete the project of it's divided into different phases and you'll complete that in Java.

[00:02:01] Um It's very important that you, that you do the assigned reading before you come to class.

[00:02:07] And for online students, you should do the reading before you watch the lecture videos.

[00:02:11] The lectures will really focus on reinforcing the concepts required for the projects.

[00:02:20] So there's, there's one textbook for the course and this is it, it's core Java for the Impatient.

Start visual description. The professor shows the textbook "Core Java for the Impatient" and mentions that it is available for free through the BYU library's O'Reilly Books online subscription. End visual description.

[00:02:25] Um you can buy this book, but it is available for free from the, from the BYU library through the O'Reilly Books online subscription that used to be called the Safari Books online, but they've changed it to O'Reilly Books online.

[00:02:38] So you don't need to purchase a textbook, but you definitely need, will need to read from the textbook.

[00:02:45] So um most of the course materials in addition to the textbook, most of the course materials, all of the lecture materials, the code examples.

[00:02:55] Um Basically everything that um that will aid you in learning will be available on the course GitHub site and here's the URL for that. So, it's github.com/software Construction 240.

[00:03:07] So I'll have a, a separate video where I do kind of an overview of that site, but that's where you'll spend a lot of time there in that site.

[00:03:18] Um Some things are on canvas though.

[00:03:20] So the course policies and assignment, submission pages.

[00:03:24] So where you go to actually submit assignments is on canvas and grades will be posted on canvas.

[00:03:30] So everything else will be on the GitHub site here is the structure of the course. So, whether you're taking this in person or online, we have um reading that you're expected to do before the lecture or the lecture videos.

[00:03:46] Um There are programming projects, and all of the projects are related.

Start visual description. The professor outlines the structure of the course, including reading assignments, programming projects, and the development of an online chess game. End visual description.

[00:03:52] So in this course, you're going to build an online chess game. So, you're going to build a chess server and a chess client.

[00:04:00] So you'll know more about what a server and a client is as we get more into the course.

Start visual description. The professor describes the project of building an online chess game, including a chess server and a chess client, which can support multiple games simultaneously. End visual description.

[00:04:04] But you'll end up building this program that can um allow people to play chess online and it can actually support multiple games of chess at the same time.

[00:04:14] So that's what you'll build.

[00:04:16] Um And that's going to be a big part of what you do in the course will be building that project in smaller phases.

[00:04:22] So the lectures will prepare you for the um you'll have a set of lectures that will prepare you for the next phase of building that project that you need to do.

[00:04:32] Um the first four programming projects um are and maybe it's five depending on how you count it because we divided the first, the first project into a phase zero and a phase one.

[00:04:44] But anyway, the first, the first several projects are completely passed off with an auto grader.

[00:04:49] So you will just submit your work to the auto grader, and it will give you a score.

[00:04:55] Um The last two are a combination of being passed off with an auto grader and uh with a T A in person.

[00:05:03] So when you get to the end of the project, you, you really need to see how your, how your chess game works when you actually play it.

Start visual description. The professor discusses the two exams in the course: the programming exam and the final exam, emphasizing the importance of passing the programming exam to pass the course. End visual description.

[00:05:11] And so the TAS will, will do that as they are passing you off on those last phases, there are two exams in the course.

[00:05:20] The first one is what we call the programming exam, and I'll talk in a little bit more detail about that in a minute.

[00:05:27] But the programming exam is kind of a kind of a different exam, probably different than any exam that you've taken before.

[00:05:34] And you have to be able to pass, you have to pass the programming exam in order to pass the course.

[00:05:39] So it's not really worth a large percentage of the total points of the course.

[00:05:44] But you get three attempts to pass it. And if you don't pass it by the third attempt, you will not be able to pass the course. So, you'll end up needing to retake the course.

[00:05:54] Um There is also a final exam, but the final exam is not a big deal.

[00:05:59] It's not intended to be a big deal.

[00:06:01] Um It's just on the last few topics. This is the last um a actually says the last few.

[00:06:07] So it's on the last two or three topics um that we cover in the course.

[00:06:11] The reason we even have a program programming exam is because you need time to build your project.

[00:06:19] And so as we do the lectures, you'll be incorporating things that you learn in lecture into the project.

[00:06:25] But for the last few lecture days, you won't have time to incorporate those things into the project.

[00:06:30] And so they're not part of the project but we also understand that if we have some topics that we cover, that you're not graded on or that you're not responsible for a pretty high percentage of students will focus on everything else and maybe skip those lectures and this is important material.

[00:06:45] So what we, what we do is that the for the last few topics that we'll cover, um, you, you won't build those into your project.

[00:06:53] They're not part of the project, but you'll be responsible for them on the final exam.

[00:06:56] So the final exam just covers a few, a few topics at the end.

[00:07:01] It is a true false multiple choice. Um Basically canvas quiz that's not worth a large percentage of your grade.

[00:07:08] So it's not really a big deal.

[00:07:09] But um it's the way we hold you accountable for the last topics that we cover in class.

[00:07:16] Ok. So now to say a little bit more about the programming exam.

[00:07:19] So the programming exam, the purpose of the programming exam is to make sure that you are that you have the skills required to succeed in later computer science courses.

Start visual description. The professor explains the purpose and format of the programming exam, which involves re-implementing a project under time constraints without external help. End visual description.

[00:07:31] So it is the way it works is you'll do your first project, your first programming project.

[00:07:38] We call that phase zero of the chess project, and you'll do that for credit, you'll turn that in, you'll have some amount of time to do it a week or two.

[00:07:47] to complete that assignment, check the schedule to make sure you know exactly how long you have, but you'll have a significant amount of time to, to do that project and you'll have access to the TAS to, to get help with that.

[00:07:59] You'll have access to the instructors as needed.

[00:08:02] And so you could complete that project and turn it in, having gotten a lot of help and, and maybe not be fully capable of doing that work on your own.

[00:08:12] But we want to know that you got to a point where you were able to do that on your own without help, without, um, looking things up on the internet without having help from the TAS or the instructor.

[00:08:24] And so for the programming exam, you will rele that, that phase zero project, but you'll do it under time constraints. So, you'll do it.

[00:08:33] Um, you won't be allowed to get t a help for that.

[00:08:36] You won't be able to look things up online except for the spec and a few other things, um, that you'll learn about later.

[00:08:42] And so it's a, it's a timed reim implementation of a project you will have already done.

[00:08:47] And as I said before, you can take it up to three times the, the credit that you get for it reduces each time.

[00:08:53] Um I think if you, if you pass it on the, what we call the first retake, so the second time you take it, I think you get 80% of the total points that you could have gotten for it.

[00:09:02] And if you pass it on the third time, you get 60% and if you don't pass it on the third time, you won't be able to pass the course.

[00:09:09] So that's the point where you should withdraw from the course.

[00:09:13] Um I'll have, there will be a separate video that goes into a little bit more detail about the programming exam.

[00:09:18] But one thing that you should be aware of is that it will be um taken on your computer in your apartment or wherever you have a good internet connection, and it will be monitored by exam.

Start visual description. The professor details the requirements for taking the programming exam, including a reliable internet connection, a working video camera, a microphone, and the Chrome web browser. End visual description.

[00:09:29] And there are a few requirements for that that you need to be aware of.

[00:09:32] First of all, you need to have a reliable internet connection, a working video camera because examining will record um will record you while you're taking it a working microphone and a recent version of the Chrome web browser doesn't necessarily have to be the most recent version.

[00:09:48] But if it's a really old one, it might not work.

[00:09:50] Um And you, you have to have Chrome, you can't use any other browser.

[00:09:55] You need to have only one monitor.

[00:09:56] So if you have a setup where you have multiple monitors, you'll have to unplug all of them.

[00:10:00] But one and you need to be somewhere where you can do this without distractions.

[00:10:06] Um Some people do that in their apartments, but some people realize they don't have a very reliable internet connection in their apartment.

[00:10:12] So they'll do it in a more public place, maybe the library or something like that.

[00:10:15] But you just need to find a place where you won't be distracted, and people won't be interrupting you.

[00:10:20] Ok.

[00:10:21] So I'll have more to say about some of the specifics of the programming exam, but those, that's kind of a high-level overview.

[00:10:27] Um And that's, that's kind of it for the overview of the course in a separate video though I'll talk about course policies and how to succeed in the course.