# Transcript: C958 Overview, Strategies and Tips For Success with Stephenie Bozdogan and Nick Meyer

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Speaker #1 (Narrator):

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Speaker #2 (Stephenie Bozdogan):

Welcome to our IT Audio Series. My name is Stephenie Bozdogan and I've been with WGU since 2018. We will be talking about strategies for success in the C958 calculus course. On our episode today we have one of our amazing math course instructors, Nick Meyer for the mathematics course instructor group. He's here today to share his insights and tips for success in calculus. Because here at WGU our mission is to break down barriers and guide our students to success. Welcome Nick, it's great to have you here.

Speaker #3 (Nick Meyer):

Hello, My name is Nick Meyer, and I'm from the St. Louis area and I've been here at WGU since 2015. Being from St. Louis, I'm a big fan of the St. Louis Cardinals and St. Louis Blues, I watch a lot of baseball and hockey. I think I have a pretty unique ability to connect with students who find math to be difficult. I don't have a great memory and I've had test anxiety in the past, especially with math courses. I've had to work really hard outside of class as an undergrad and graduate students to be successful. I remember a really tough linear algebra exam that I took as an undergraduate and I absolutely bombed. It was a nightmare and I thought that my academic career was over. I just remember getting back to my car and just sitting there in horror in the parking lot for half hour wondering what I was going to do. But I got over that and through determination and hard work, I was able to claw my way back into the class and ultimately be successful. It really did take all that I had and I learned to value what my grandpa used to tell me and that was that nothing worth having is ever easy. Oftentimes, I needed help as a grad student too. I'd spend nearly every day in my teacher's office hours. I share these stories with students because even those with PhDs in math need a lot of help along the way. Math is not like some special gift that only can be conquered by the select view, it is something that can be mastered by anyone given patience and determination.

Speaker #2 (Stephenie Bozdogan):

Most definitely, I appreciate you sharing that. It's great to have you here to get to know you a little bit better, and find some insider tips for success in calculus. You mentioned test anxiety. Can you provide any tips regarding test anxiety? Any perspectives, things that you share with students.

Speaker #3 (Nick Meyer):

Speaker #3 (Nick Meyer):

My experience of test anxiety that I had as student would always result from my constant fear of failure. It's like this self fulfilling prophecy. In days leading up to a math test, I dwell on the possibility and consequences of failure. But over the years I learned the power of positive thinking and to blackout all those negative thoughts whenever they arise. It took a lot of work at first to recognize when I subconsciously have those fears come to the surface. But I learned to block those thoughts out and I think of something positive. For example, like old family barbecues or happy memories from baseball games. I also learned in those instances that like deep breathing techniques are really helpful. It took some work on my end but I was able to manage and conquer my fears in those days leading up to a test. Positive thinking, it allows for clear thinking and confidence which is a huge part. When you go to take an exam, confidence is absolutely key. I'm by no means an expert on the topic, but feel free to reach out to your course instructor for other tips or maybe possible webinars on the subject.

Speaker #2 (Stephenie Bozdogan):

Thank you for sharing that experience. I think that's something that a lot of students and everyone in general can relate to. I know several of my students attend a cohort for math anxiety, even in conversations with their course instructor. It just really helps them to feel understood and allow them to implement strategies in the course. Like procrastination too, there's just so many of us that experience test anxiety, and I find that students procrastinate often in this course due to feel of failure or other reasons. Do you have any tips for that?

Speaker #3 (Nick Meyer):

Yeah, in addition to the power of positive thinking, I'd say connect with your course instructor early and meet with them often. I've many times as the student telling me after meeting with them, they may have gone several weeks through the course without having met of course instructor and then they get to a point where they absolutely need help. Then usually what they'll say is that they wish they would have done it sooner. Why not just get on it right away even if you don't have any questions, connect with us, set up an appointment to meet with us because you never know, you'll probably may have questions pretty soon. Since you've already established that initial meeting, it'll be that much easier just to get into the groove of meeting with us. We can screen share and demonstrate best way to solve problems during our meetings. We can even quiz you over the phone if you're looking to gauge your readiness for an exam, and this can help build confidence. Again, a big part of test taking.

Speaker #2 (Stephenie Bozdogan):

I hear that too from students. "Oh, I wish I would have met with the course instructor sooner." That was a great tip to point out. As a follow up question leading into more math anxiety, I do speak with students that they've not been in school for several years or they feel like they're out of the math groove, or they're fearful and they would like to push this course off. I communicate to them that it's important to take this course early in the program because it will help them to master the art of problem solving and critical thinking skills that are required in the computer science field, and for future courses in the program and definitely the future math courses. What is your perspective on that?

Speaker #3 (Nick Meyer):

I think that is a excellent response to that inquiry there. You're right on the mark. I agree with you. Getting in the course done early will be best as our math courses. They give you the logic and reasoning skills that are going to be beneficial throughout the program.

Speaker #2 (Stephenie Bozdogan):

Let's move on to a little bit about the course. Can you tell me some information about the course, the pre-assessment, objective assessment, and anything else that you would think is important.

Speaker #3 (Nick Meyer):

Calculus, it's four competency unit course. It covers four main areas, or four competencies; limits, derivatives, integrals, and differential equations. The differential equations, we don't get too deep into that, but we do some of it. Just what is a differential equation, separable differential equations, and a little bit of application. The assessment is an objective assessment and it is timed, and it's multiple choice.

Speaker #2 (Stephenie Bozdogan):

Hey, are there any prerequisites for the course?

Speaker #3 (Nick Meyer):

Yes, technically, the answer to that would be to demonstrate math readiness through completion of precalc from a WGU approved third party provider, or completion of precalc calculus, or higher course than calc from post secondary academic institution.

Speaker #2 (Stephenie Bozdogan):

Most definitely yes, I share with my students how important it is to build that solid foundation of algebra, those precalc and trig skills so they can focus on the calculus. What would you say to an IT student who was a little apprehensive about how this course relates to their degree program?

Speaker #3 (Nick Meyer):

We get that question quite a bit with calculus. A few specific examples if you want to try to tie calculus to future in computer science, a few specific examples could be modeling, optimization, and the graphics involved in gaming. Those are all specific examples that require calculus directly. But more generally though, calculus helps to build and sharpen logic and reasoning skills necessary to be successful in discrete math and computer science.

Speaker #2 (Stephenie Bozdogan):

That is a great perspective. What excites you about this course? I know you're passionate about math. What is it about this course?

Speaker #3 (Nick Meyer):

Calculus many times it's viewed as it's very tough math course. Most of the courses often spent talking about just two topics, derivatives and integrals. Limits too but derivative is the limit and an integral is a limit too. Actually when you think about it, it is really one topic, it's limits. But these topics anyway, derivatives and integrals are related to one another. Derivatives and integrals are related in this strikingly simple way as you find out from the fundamental theorem of calculus. Let's say I enjoy the fact that it is beautiful in its simplicity, even though it's, like I said viewed as this really complex thing.

Speaker #2 (Stephenie Bozdogan):

Yes. What are some common barriers students may run into in the course?

Speaker #3 (Nick Meyer):

Unit 3 is really long and the book takes a while to introduce rules of derivatives. I think this is unfortunate since these rules for derivatives they make calculations of derivatives much faster. What I'm trying to say is that the book in Unit 3 it'll expect the student to use the definition of a derivative for many lessons and it just goes on for awhile and it's really tedious to do derivatives through the definition. We created a little recommended path through Unit 3 that I think will make some of those early lessons go by faster. We link that Unit 3 guide into the pacing guide. If you're interested in that, which I would definitely recommend, check out the pacing guide and be sure to look out for that Unit 3 guide. Follow the lessons of Unit 3 in the order recommended there.

Speaker #2 (Stephenie Bozdogan):

Thanks for pointing that out. Yes, I've heard so many students using that alternative path and they have found it to be extremely helpful. You did mention the link to the Unit 3 guide. What are some other key resources that are used in this course that you think have an impact on student success?

Speaker #3 (Nick Meyer):

Live instructor support is a resource where students can connect right away to an instructor and get help. It's basically like an on-demand resource for student appointments. I'd encourage students to check out those hours when we're open for the live instructor support. The hours that we're open are in the course of study and just call in whenever you have questions. I think it's really nice that that exists. We have pretty extensive hours too, so I think students will find that really helpful. I think they'll absolutely find a need to use it and find it to be really convenient.

Speaker #2 (Stephenie Bozdogan):

Most definitely, I wish I had that when I was in school. An on-demand. What is the best route to getting through this course efficiently?

Speaker #3 (Nick Meyer):

The first step will be to take the course planning tool along with the self-assessment. Those are two separate things. It's important to make that distinction. We get questions a lot from students wondering or they mix those two up. But those two are different things. You want to take the course planning tool and then you want to take the self-assessment. Now the self-assessment after you take it and course instructor for our team. Again, this is before you start the course. Course instructor after you take the self-assessment is going to send you an email and it's going to give you the next steps after taking the self-assessment. Basically it's gauging your readiness for just begin the calculus course. Depending on the results of that self-assessment you might be asked to do some units out of resource called EdReady. It's to help build your foundational material so that you can be better prepared to jump into calculus. From there, we use the learning resource called zyBooks. After you've done those EdReady portions, if necessary, you might take the self-assessment and be great and not need that EdReady and it'll just say jump into Unit 2 of calculus. But if you do need EdReady, go ahead and do that. Then from there you can jump into zyBooks and work Units 2 through 5. We say two through five because Unit 1 is a lot of precalc algebra stuff. The idea is that if you've gone through EdReady, you won't need that first unit there and if you've done well on the self-assessment you don't need that first unit anyway. Either way, you want to jump through to Unit 2 and work all the way through Unit 5, including all participation activities lesson exercises. That's going to be the best way to prepare for the pre-assessment. Then after the pre-assessment, of course, connect with your instructor to see if you need to go back and do any further study prior to taking the objective assessment. As you're working through the course, be sure to use resources like I mentioned, live instructor support, one-on-one appointments, texting inscribe, inscribe it's like this learning community. It's pretty nice because you can type questions in there and we can type a response in LITEC, which is math typesetting program that makes it easy to communicate math, basically. Email too, reach out to us through email. We offer a weekly cohort too. As you're working through zyBooks, be sure to print off the formula guide. The formula guides in the course of study and have it next to you as you're working through zyBooks. This can help you to learn how to apply different formulas as you work through zyBooks.

Speaker #2 (Stephenie Bozdogan):

This is a lot of great information. Thank you for pointing all these out.

Speaker #3 (Nick Meyer):

No problem.

Speaker #2 (Stephenie Bozdogan):

I've heard so many just positive stories from other students with every single one of these resources you mentioned. What is a topic in this course that students typically ask about?

Speaker #3 (Nick Meyer):

We have a lot of students that want to talk through related rates. Related rates are word problems. Students a lot of times think they can't do word problems because they aren't sure where to start. But I think students are usually pleasantly surprised that a lot of these related rate problems share similarities so they can be solved in a pretty systematic way most of the time.

Speaker #2 (Stephenie Bozdogan):

What type of information would be covered if a student books some time with you?

Speaker #3 (Nick Meyer):

We can cover any questions students have with zyBooks as they're working along through the lessons. We can also practice questions over the phone. We can even quiz students too. Students sometimes feel nervous or overwhelmed about quizzing over the phone, but I always remind them that there's no pressure in quizzing with me over the phone because it's a learning opportunity after all mistakes. There are good thing, it means making a mistake. It means we have an opportunity to identify those mistakes and to learn from them. Other times, we help students with any questions they may have had on the pre-assessment. Some students are unsure about what to ask during an appointment, but I'd say don't worry about that. There's always something to talk about in calculus because it's such a big course. Once we start working together over the phone here, those questions will arise.

Speaker #2 (Stephenie Bozdogan):

I think I have to remind myself of this and even students, it's okay not to know. We're all learning and that we're lifelong learners.

Speaker #3 (Nick Meyer):

Or they could feel intimidated by meeting with the instructor. But I always remind the student that there's no need to be worried at all talking to me. I'm just another human being. I have made many mistakes in math. I was never naturally gifted at this stuff, so I had to work really hard. I was in your spot some point, so no need to worry about being intimidated or anything like that. I think I'm pretty nice guy.

Speaker #2 (Stephenie Bozdogan):

You definitely are and I hear so many wonderful things about you and how you help students.

Speaker #3 (Nick Meyer):

Thank you.

Speaker #2 (Stephenie Bozdogan):

Appreciate you sharing that. Do you have any tips for taking the OA, the objective assessment?

Speaker #3 (Nick Meyer):

You'll have the formula sheet, it's in the course of study and it will be electronically attached to both the pre-assessment and the objective assessment. We get that question a lot. It's like, that formula sheet that was on the PA, is it going to be on the OA too? Yeah. It will be. It'll be on both of them. There is an option to take a break during the exam, but please understand that when you return from a break, you won't be able to revisit any questions that you had already opened up prior to the breaks. Make sure that you have a fresh marker going into an exam too. You don't want to have a marker run out of ink during the exam. Some calculator tricks too can be really helpful in a multiple choice environments. We can talk about that further during an appointment if you like. Feel free to set up those.

Speaker #2 (Stephenie Bozdogan):

All the serious stuff aside. Before we go, are there any jokes or funny or interesting stories that you can share related to math?

Speaker #3 (Nick Meyer):

I don't know any great jokes about math, but I can share a famous story that is relevant to current events and with the whole pandemic thing. Back in the 1600s, the bubonic plague caused all the destruction and unfortunately death and stuff. It also caused the closure of Cambridge University. That's where Isaac Newton was at the time, Cambridge University. The closure of that school led Newton to retire from his work there. The story goes that Isaac Newton would then make a lot of discoveries that led to the invention of calculus during time in quarantine. I think it's pretty amazing to have that dedication towards math the skill involved in all that. To invent calculus during a pandemic is crazy to me. I can't really say that my own productivity or in our coronavirus pandemic can come close to that. But yes, that was interesting, but yeah. Anyways, thank you so much for having me and be sure to reach out to us for help. We'll always be happy to help.

Speaker #2 (Stephenie Bozdogan):

Thank you for sharing your insights, your overview, and strategies for success in this C958 calculus course. I encourage students to check out the tips, announcements, cohorts, and schedule a meeting with the course instructor. All the math CIs are absolutely amazing. Thanks again everyone for tuning in. Take care, study hard, and keep that goal of graduation on the forefront.

Speaker #1 (Narrator):

Schedule time with your instructor to explore more deeply. WGU, a new kind of you.