CYBERSECURITY TRANSCRIPT

00:00:03

Stephanie O'Donoghue, Assoc. Dean: Everything is digital these days. So that means we have so much data and personal information that is vulnerable because we can't just keep it in a safe. You know, Cyber Security is so crucial because it safeguards all types of data against theft and loss.

00:00:19

Mark Williams, Instructor: It's the thrill of the hunt every day. It's what can I apply to what I'm doing day in and day out to make me a better professional so that I can protect the company?

00:00:29

Taryn Sikes, student: There isn't a business in this world that's not going to get hacked. There isn't a business in this world that isn't going to fall prey to people.

00:00:39

Narrator: 98.7 Chatt Tech where 98.7% of our students earn a career. Today, we're going to comb the data of the Cybersecurity program at Chattahoochee Tech. We'll jump into the Matrix and look towards the future of the industry with the Dean of the program. We'll learn what it takes to be a cyber cop and get an educated opinion on the possibilities of Skynet from instructors. Then we'll speak to a student joining the Crusade for Information safety on their experience in the classroom. Now it's everywhere, all around us. Even in this very room, it's the Associate Dean of the program, Stephanie O'Donohue.

00:01:09

Stephanie O'Donoghue, Assoc. Dean: My name is Stephanie O'Donohue. I'm the associate dean of Computers, Manufacturing and Engineering. I have been in this role for six months now. Prior to this role, I've been at Chatt Tech for nine years.

00:01:23

Narrator: Thanks for joining us. Can you tell us a little about Chatt Tech's cybersecurity program?

00:01:26

Stephanie O'Donoghue, Assoc. Dean: Most people should be aware of Cybersecurity in a general sense just because we experience it every day just as normal US citizens. It's all about keeping your computer system and networks secure. At Chatt Tech, we have different routes into that career. There is an associate's degree, which is Cybersecurity. That is a 70 to 72 credit hour associate's degree, right? So you get into a lot of aspects of cyber as well as networking, because what a lot of people don't understand is like you really have to have a good understanding of networking and the networks in order to do a good job in Cybersecurity. For the associate's degree, you have your occupational courses, which are your foundation material, and then you have your specializations. This is the degree. Now for those who aren't interested in a degree, maybe they already have a background in computer science information systems and they just want to get some specific information on cyber itself, we have a diploma. It's quite a bit shorter and it still has the specializations. But basically the difference between an associate's degree and a diploma is in the diploma. You're going to cut out a lot of that general education coursework that you may have already gotten if you already have a degree. Say you don't even want that level of information. We have what we call technical certificates of credit. TCC So these are certificates where you can go in and you can take about four classes and get some information that you need about cyber. So one of our certificates is just called the Cyber Security Certificate. That's a 26 credit hour certificate. We have computer forensics and investigation specialists. That certificate has nine courses. So this certificate was created for people who are interested in criminal justice, but where it intersects with cyber security. And then the last certificate we have is called Cybersecurity fundamentals. It has five courses. So you get a basic introduction.

00:03:30

Narrator: So there's more than one different path in this profession. Can you tell me what qualities, besides seeing nothing but ones and zeros, makes for a good student in this program?

00:03:38

Stephanie O'Donoghue, Assoc. Dean: Problem solving is number one. Curiosity. We have that ethical hacking class. Not only do you want to figure out how to keep criminals out, but you want to think like a criminal and try to hack into systems and see if you can get into them. Because if you can do that, then you can be a better designer of a cyber security system that's going to keep people out. Of course, time management, computer networking, like I said before, you need to be interested in that because it's the networks are so important to know before you can go further and keep them all safe. You do have to be a person who likes to sit at a computer.

00:04:16

Narrator: Stephanie I feel like most don't understand the importance of this industry.

00:04:19

Stephanie O'Donoghue, Assoc. Dean: You know, there's been several revolutions in the United States, right? We had like the Agricultural Revolution, we had the Industrial Revolution, and now we're at the Digital Revolution. Everything is digital these days. We've always had a need to send information privately so that we know it and the person we're sending it to knows it. In between - No one knows it. Right? And so it's been around for a long time, but it's changing the way it looks because of technology. So that means we have so much data and personal information that is vulnerable.

00:04:55

Narrator: Thanks, Stephanie. We'll take the red pill from here on out. Now, come with me if you want to live.

00:05:00

Narrator: As we speak to one of the Cyber Security Instructor Charles Chapman. Tell us about yourself, please.

00:05:07

Charles Chapman, Instructor: My name is Charles Chapman. I am a Cyber Security instructor here at Chattahoochee Technical College. I've been doing this for about six years now. Before I was an instructor, I was working for a consulting company which involved just traveling to various job sites all over the country and just doing various projects. Most of them were cyber security related. I found those are all good experiences that I could bring to the classroom.

00:05:29

Narrator: Why did you become an instructor?

00:05:30

Charles Chapman, Instructor: A lot of it was due to the Great Recession of 2008 2009. The economy had basically ground to a halt, and so the work wasn't exactly rolling in. So I was just basically doing like a lot of other people and looking for, you know, what they call a side hustle. Education had always been in my wheelhouse, something I'd always planned on doing. I thought that at some point I would retire from consulting and see about teaching part time. There was a slot open at Chattahoochee Tech for a math lab assistant. I thought, Well, that was kind of interesting. My undergraduate degree had something to do with mathematics, and so I thought, Well, why don't I give that a try? I was hired, and so I was doing some math tutoring and then an adjunct or a part time position in cybersecurity opened up and hey, that's what my degree was in. So I got that position and I really enjoyed it. It was really a lot more satisfying than my former consultancy work. And then when a full time position opened up, I

decided to go for it. To be quite honest, it didn't pay nearly as much as a cybersecurity consultancy, but I just enjoyed the work so much that I decided to go for it. No regrets? Well, to be honest, the real regret is I didn't look at this sooner.

00:06:45

Narrator: Why is this a good time to get into the field?

00:06:47

Charles Chapman, Instructor: We still set up a computer and a computer network. And fundamentally, the same way, some of the approaches to cybersecurity are evolving and changing. So when I started off, the emphasis was basically on something known as perimeter security. You have a computer network and you shored up the boundaries of that network against outside intrusion that was once known as the M&M approach, the candy that has a hard candy shell and the soft inside.

00:07:16

Narrator: Ooh, I love those kind of M&Ms.

00:07:18

Charles Chapman, Instructor: That landscape is really changed a lot, especially with mobile computing, with people bringing their own devices. You can never really be too sure about what's coming in and out of your network. And so the approach to that had to change. The other major change is an emphasis on something known as social engineering. And I'm sure everybody has gotten that email message before where somebody who claims to be from your bank wants you to click something and enter in your bank account information. And most major breaches today are done like that. At one time you could just be a computer expert, network expert, and you were good to go. But now there are so many different facets you need to be aware of and it's continuously evolving. I think it's going to be interesting in the coming years when we bring in more artificial intelligence AI into the picture and we use AI methodologies to help us come up with defenses, because you can be sure that on the other side that the attackers and the so-called bad actors are going to be using AI to help them.

00:08:16

Narrator: What does the future of this job market look like?

00:08:18

Charles Chapman, Instructor: The cybersecurity field is pretty wide open. A lot of people think of the hacking that they see in television and movies, and some of that is accurate and most of it's not. But on the other hand, there is a huge field in compliance and regulatory management where certain industries are regulated, For example, health care, patient privacy and security for their health care records is a big thing. So someone who isn't necessarily technically inclined but, you know, understands the big picture about it, they understand the regulations, they understand compliance. And they could serve as an auditor helping companies prepare for a formal audit for regulatory compliance. And so that's a big field. And there are certifications that go along with that. An auditing position, compliance, penetration testing, vulnerability management, threat prevention strategies and the list just goes on and on.

00:09:13

Narrator: Thank you, Charles. Now we have a Chatt Tech instructor, Mark Williams. Tell us a bit about yourself.

00:09:17

Mark Williams, Instructor: My name is Mark Williams. I have been an adjunct instructor at Chattahoochee Tech in the Cybersecurity program for a little bit over five years. Apart from that, I am the Director for Security Operations at Wellstar Health System. One of the things that I do in the 1601 class is I asked the question of all my students, Are you in here because you saw something really cool about how somebody can hack into a network or do some penetration testing into a network and they just turn a laptop on five minutes later, they're into the network and they're able to exfiltrate all this data. And nine times out of ten, most of the class raises their hand because that is the image that, you know, a lot of people have of cybersecurity. One thing that I try to tell my students and instill in my students is. Want you to realize that, yes, that is a part of it. But the main goal with cybersecurity is how do I protect the confidentiality, integrity and availability of a company's assets and data sources? And there are so many facets to that. How do you architect and engineer solutions that will give you security telemetry that will help you figure out when something is definitely wrong? I think when you open students eyes like that and be able to show them the full picture, it gets to be a little bit more interesting and they can see various spaces where they might be able to fit and tailor their interests.

00:10:36

Narrator: Mark I'm not sure if you can tell, but the glazed look on my face means you may have to break it down a bit more for me.

00:10:42

Mark Williams, Instructor: How do you look at the various risks to your organization and then how do you mitigate those risks? If risk happens, how much will that affect my company and therefore, how

much investment do I need to protect my company from that particular risk? If we want to boil it down to something that's simple. Does that make sense?

00:11:02

Narrator: Okay. Got it. So what sort of companies need more security.

00:11:06

Mark Williams, Instructor: With small and medium sized businesses? That is a huge growth vertical within the cybersecurity space. I've noticed that a lot of those small and medium sized businesses, they don't have the budget for IT or even IT security. So a lot of stuff they outsource. If you don't protect your data, even in small to medium sized businesses, you're opening yourself up for liability because customers will be like, Well, how come you didn't protect my data? You get enough customers that are upset because of a data breach that would definitely shut down a small to medium sized business. So being aware of security and being aware of the products that are available to you in the cybersecurity space I think is extremely important.

00:11:45

Narrator: Why is it better to get an education from Chatt Tech?

00:11:48

Mark Williams, Instructor: I think one of the other good things about Chattahoochee Tech and being able to interact with your instructor and especially in my classes, is I want people to ask me questions outside of the text. I've had several students come up and say, Why is this important? Why do I need to learn this? I've been known to take classes completely off schedule and say, okay, let's talk about this topic because it's very important to be able to interact with with your instructor and be able to understand the real world applications as opposed to you're looking at, say, a YouTube video. There's not a whole lot of interaction there. I mean, yes, you can maybe post a question in the comment section, but you're not going to maybe immediately get a reply back or have that discussion. So, yes, the technical ability to be able to do the stuff, but also be able to interact with your instructors who have been in the space for a fairly long time, I think is one of the differentiators between YouTube and coming in and sitting in the class at Chat Tech.

00:12:42

Narrator: Once the student graduates, can they refer to themselves as a cyber cop?

00:12:46

Mark Williams, Instructor: I don't know if you want to call yourself a cyber cop yet. One of the things that I've told my students in the past is this is going to give you a very solid foundation to be able to become a security analyst. At least you can use this degree to springboard into what it is that you want to do. Now, will your first job be exciting? Maybe not, but I would say using this degree will be able to springboard you into other educational opportunities and also other career opportunities as well.

00:13:15

Narrator: You're also an employer of cybersecurity professionals. Why does this degree help applicants stand out from the stack?

00:13:21

Mark Williams, Instructor: I like to be able to see that someone has had the, as my dad used to say, the stick to itiveness to go through an entire degree program, whether it would take 2 or 3 years as opposed to someone who just took a quick bootcamp and they're looking for the quick turnaround and hopefully the quick dollar. I tend to look for students who have done an associate's or bachelor's degree because I know that they have the patience and the long term outlook to be able to be successful in this space.

00:13:47

Narrator: Thank you, Mark. Let's get a student perspective now. Taryn, tell us who you are and when you graduate, please.

00:13:53

Taryn Sikes, student: My name is Taryn Sikes and I graduate May of next year. I'm going from hardware to cybersecurity.

00:14:00

Narrator: Why did you choose Cybersecurity?

00:14:02

Taryn Sikes, student: Cybersecurity is booming. Having just had a person I know very closely get hacked and having to do cleanup, it's been really godsend, like being able to draw on that knowledge and use that to clean up the pieces. Really?

00:14:18

Narrator: How'd you know it would be a good fit?

00:14:20

Taryn Sikes, student: I am very good at puzzles, figuring out how things work and the cause and getting to the root problem and then being able to piece it together. It's really fascinating. And it's also keeps my mind active.

00:14:34

Narrator: Where could someone apply this education?

00:14:36

Taryn Sikes, student: Cybersecurity is really broad. Taking all of the classes and piecing together where you think that you fit is going to be the biggest trial. It can be anywhere from networking security to hardware security to forensics.

00:14:51

Narrator: Where do you see the biggest opportunity for cybersecurity professionals?

00:14:54

Taryn Sikes, student: I think the big one is small business. They don't think about when they. Think about, Oh, I'm small, nothing can happen to me. For example, I went to a tattoo studio. Their hardware was all out in the open. Every piece of like their server and their routers. Everything was right by the bathroom. Literally. It would have taken me no time to get hold of everything that was happening in their environment. And to me that is huge. To be able to bring that information to these small businesses and be able to protect them is kind of where my heart is.

00:15:37

Narrator: So, Taryn, you're saying it's kind of wide open? That has to be exciting.

00:15:42

Taryn Sikes, student: To be honest, I'm actually excited, but it's more trepidation. Being able to bring this information to people in a way that they're going to be receptive to and not kind of pounded into them that there are so many vulnerabilities. It's really hard to be able to break this information down so it's acceptable and palatable to these small businesses because it is a ginormous expense. But people are going out of business because of this. And it is incredibly crucial that we get this information to them so they can protect themselves. The vulnerabilities are just massive, and bringing that to people is going to be hard for these small businesses to be able to say, hey, yes, I need to put money into this before anything happens, because after something happens, it's pretty much impossible for them to be able to recover from that.

00:16:38

Narrator: You're just a new age cybersecurity crusader, aren't you?

00:16:40

Taryn Sikes, student: I try to be. I am here to make this accessible to people.

00:16:46

Narrator: Thanks, Taryn. For more information about the Cyber Security program at Chattahoochee Technical College it's Chattahoochee Tech. Edu. Thanks for listening to 98.7 Chatt Tech where 98.7% of our students earn a career.