Michael Eure Show – Episode 47: Career Opportunities in IT

INTRODUCTION: Hello, this is Michael Eure, and I'd like to invite you to the Michael Eure Show, featuring student hosts and very special guests talking about our variety of interesting topics. You can find us on the Eagle Stream YouTube channel.

MICHAEL EURE: Good afternoon, and welcome to the Michael Eure Show. We have a very special group here with us today, and they're gonna briefly introduce themselves. And we're gonna start with our student, Jerry Greene, and then we're gonna go to Miss Norene Kemp and then Al Leaston and finally Rene Daughtry, since you are the guest from off the campus. Just briefly introduce yourself.

JERRY GREENE: Hi, my name is Jerry Greene. I'm a Cybersecurity major here at Wake Tech, and I've been participating in these Wake Tech virtual mixers as a student success, student success outreach ambassador, along with Michael Eure here.

NORENE KEMP: Hey everyone. I'm Norene Kemp. I'm the department head for Programming and Information Sciences.

AL LEASTON: Hello, my name is Al Leaston. I'm the program director for the Network Management Department here at Wake Tech, in the IT Division.

RTENE DAUGHTRY: And good afternoon. I call myself "Coach Rene Daughtry" from Cisco. Been at Cisco for 26 years. I'm an engineer and now, for the Solution Validation Services, lead program project management. Thank you.

EURE: All right, we're gonna kinda go over to the side, and Sarah's gonna pull up the link for Student Success Coaches, and then we're gonna do a brief video clip from Rene Daughtry from when he was on the show a couple of years ago.

So, we can scroll down Student Success Coaches. We always just want students to know this is who we are, this is what we do. This is the main piece right here – stop. Resources, this is where you can find out about the ILC; the libraries; Career and Employment Resources; Academic Success Centers, which is the STEM Center, REAL Center, all of those; Wellness Services; Student Advocacy and Support, which is where you get emergency funds, is where The Nest is; Disability Support; and Academic Advising. And that really is all I want you to see.

So, we're finished with the Success Coach page for now, and then we wanna go through the clip with Rene, but, because he said something, and then we're going to follow up with Norene and Al. So, we can do that clip from when he was on the show a couple of years ago. Sarah? Yes? Enough? OK, well, if we can't do it right now, we're gonna start. OK. Oh no, let's do it. Let's do it. Thank you.

VIDEO: So, working with colleges in this area, Jesus, I worked with ECPI, Wake Tech, Durham Tech, North Carolina Central, ECU, North Carolina A&T and other named colleges in this area. I'm bringing, bringing to the students and to the school the importance of technology and the importance of a Cisco Network Academy. Right. Now, tell us a little bit about the Cisco Network Academy because we do have one at Wake Tech, maybe two. Tell us a little bit. I will, which I helped start here. OK. To, me when I was working with colleges and, and institutions, I noticed that we had a certain discipline of study. It was all academic, which is fine. As the world changed and as I see from my own personal experiences and what these companies are looking for, I found more about the certifications. Degrees are really good to have. Right. But those certifications at least tells these different, these different companies and, and career centers that you have a specialty in a certain discipline. OK. And the Cisco Network Academy, with this technology explosion that's happening around us, that certification at least gives students a leg up on knowing the latest and greatest technologies, being certified in it and then graduating.

EURE: All right, so that was just gonna lead us into some questions that we have for Al and Norene. So, Jerry, if you're ready, we can ask that first question.

GREENE: For Norene and Al, can you please describe the degrees and certifications offered in your areas? And what type of real-world experience, such as Work-Based Learning, are integrated into your programs?

LEASTON: Noreen, you can start.

KEMP: All right. Degrees under my department, I have three, and that includes Business Analytics, Computer Programming and Development and Data Science Programming and Support Services. Under the Business Analytics program, we have five certificates. Those include Business Intelligence, Business Analysis, Marketing Analysis, Logistics and Financial Analysis. Under Computer Programming and Development, we have three certificate options. That includes C++ Programming, Java Programming and Programming

Fundamentals. All three of our programs have Work-Based Learning opportunities as a project elective in the fifth semester of the curriculum.

EURE: OK. Al?

LEASTON: All right. Well, Coach Renee Daughtry summed up a lot of what I do, and our relationship has been really, got a lot closer because of his involvement in the Cisco Academy and us being a Cisco Academy. So, again, like I said, my name is Al Leaston, and I am the program director for the Network Management Department. Within that department, we do offer a Network Management AAS Degree, a Cisco Network Associate degree, a Cisco Network Professional degree. Excuse me, certificate. I said degree, but it should be certificate. We also offer security, a Cisco Security Certificate and a Wireless Certificate. So, within that, within our degree track and program, we do offer WBL, like Noreen mentioned, which is Work-Based Learning opportunities. They could also be seen as internships. So, a lot of people think of those internships. Everyone's not familiar with that terminology, Work-Based Learning. But we do have various partners throughout the Triangle area that we work with consistently to try to get our students opportunities in those Work-Based Learning positions such as, again, Cisco Systems, Lenovo, Net App. I know one who I work closely with is MCNC, which handles all the support, network support, for the state of North Carolina. So, it's definitely some good opportunities in the Network Management degree department for Work-Based Learning and internships.

EURE: All right. Thanks. And now, Jerry, we're gonna ask Rene a question, but I did wanna say thank you, Rene. When you were in that video clip, we were at the RTP Campus of Wake Tech. So, are you ready, Jerry, to ask him? OK.

GREENE: I'm ready. It's a little bit of a mouthful, but I know you're very instrumental setting up Cisco Academies at various colleges and universities. Can you briefly outline for us the types of opportunities at Cisco for various IT majors, particularly those with two-year Associate in Applied Science degrees for those who have such, those who have certifications?

DAUGHTRY: I think I got the gist of that. And let me explain very quickly, and the reason why I call myself Coach, just so we can level the playing field, is because I tell people and students, "I'm here to coach you to be the best that you can be in your mind and your spirit." That's why I consider myself a coach.

The Cisco Network Academy and ICT opportunities – information, communications and technology – so I kind of change that IT a little bit. And I wanna make sure students understand that certification, again, is very important. It proves to corporations that you're, in the latest technology, you have a certification. I'm gonna use myself as a prime example. I just finished my Agile Scrum Master' Certification. I'm a certified scrum master. The industry now knows I'm certified in this particular discipline. That's so important, so important. But I also want the students to understand it's not just Cisco and Lenovo and Red Hat. It's John Deere, Fidelity, Biogen, Merck. These customers all have networks, so I need the skills to really start to open up and take a look at these other corporations because everybody has a network.

We're in the fourth industrial revolution where COVID has pushed us into technology and everybody is in, involved in technology. Cybersecurity is going through the roof. Network security is going through the roof. But it's at every company you can possibly think of. So, I've gotta work with my students more and more and go, "If you see an opportunity at maybe Fidelity or Merck, and you go, 'Well, that's not for me because that's investments or Merck is, you know, the drug industry.' No, no, no. There's a network there." So, that certification that you're getting is gonna open up, it will open up the doors to more opportunity that you don't even, that you're totally unaware of.

EURE: OK. And we have a, a question in the chat, and so, thank you. Can you do that, Jerry? That's from Dr. Chris O'Riordan-Adjah, the department head for Engineering at Wake Tech.

GREENE: He says, "Al and Norene, great to have you all here. What are the math requirements for the IT program? And what are the opportunities in IT for engineering students?

KEMP: Well, I'll take that first. The math requirements for our three different programs, each one is different. We do have what we call a "pick list" of math courses that each of programs' students could choose from, and it could be anything from MATH-121 to math, to statistics. Students can do calculus, Calc 1, Calc 2. But to come into the program, they have to be at least MATH-121 ready.

And as far as opportunities for your Engineering students, well, I know you all have some electives that your Engineering students need to take. Our courses in Computer Programming and Development that are transferable would be our Java class, which is CSC-151 and our C++ class, which is CSC-134. We also have two other general computing

courses that are now transferable, and that's CSC-120, which is Computer Fundamentals I, and CSC-130, which is Computer Fundamentals II.

EURE: I think that, that's it for that. OK, so are we ready to go with some more questions, Jerry? And audience, if you have any questions, please ask them in the chat.

GREENE: This is a question for all of our guests here. What advice would you give someone who thinks they may be interested in IT, in a career in IT, but is unaware of the many pathways to gain employment? And I guess we could start with Norene.

KEMP: Sure, I'll go first. The first thing, the, the biggest piece of advice that I could give a student is find your passion, and then, whatever you're passionate about, ask, "How does IT relate? How does IT work within this area?" And then do your research. Do your homework and be willing to be a lifelong learner. That's what you need to be to be a part of the IT industry.

EURE: Good.

DAUGHTRY: Just trying to, oh, I'm sorry, Mike. I just want to chime in very quickly to answer what Norene has just said. The opportunities that data in, technology has created this wealth of opportunity in, just in data because things are being collected: metadata, physical data. So, think about your IT passion, but think about that data portion. That data has to be analyzed, managed. So, that's a big opportunity just in that data management arena, and, and being able to analyze that and come back with, come up with, really, I would say, positive conclusions and solutions to some of that data that you'll be analyzing.

KEMP: Absolutely, Coach Daughtry. We have an amazing program for both data analytics on the front end and data analytics on the back end. Whether you wanna be able to collect the data and clean the data or scrape the data from the internet, working with databases, to the front end, working with SAS, Tableau, Power BI, R, all of those different applications to then analyze that data. This is a hot, growing topic within the IT industry, and it doesn't matter what your passion is, whether it's banking, whether it's in human resources, whether it's in marketing, data is collected everywhere. And you can incorporate this passion into all of those other industries.

EURE: All right, thank you. Do you have anything, Al?

LEASTON: I always have a little something. Just to echo a lot of the sentiments people have

already said. Just to give everybody a little background, before I came into academia, I worked as a network engineer for 15 years. And one thing I can say, when I was in industry, at IBM, at Cisco for a short time, if you were in networking, it was hardware based. You know, you had to learn a lot of hardware. As years have progressed and as technology has changed, software, automation, that's kind of merged with hardware, right? So, everything in networking is now being automated. So, one, one thing I could say, you know, previously, if you were in networking, you might have just learned networking skills, but now that Python course and things like that will really help you in networking.

So, to echo Norene's sentiments, follow your passion. And also I tell everybody, get a mentor. Get a mentor. Talk to people because I always say you learn, students learn from two things, so everybody learns from two things: mentors and mistakes. So, you wanna make sure you have a mentor to prevent those mistakes.

EURE: Thank you, brother Eminem. All right, we have another question. Jerry? This is from Michael.

GREENE: Michael says, "How do you overcome the experience issue? Right now, I'm searching for a job and IT. I keep seeing entry-level jobs requiring three to five years' experience. How do I overcome this?

KEMP: Apply, apply, apply, apply. Don't let that be a barrier. Apply anyway.

DAUGHTRY: One thought process that I've had, and I've coached a lot of students to do this, is to volunteer. Volunteer at your church, volunteer at a nonprofit to work with their network. Because you know what? That volunteer experience, you put that volunteer hours on your resume, so think about that as well. You may not get paid up front, but you're going to get paid in the long run. That's what I did. I volunteered to do things at different agencies and different churches, and it sharpened my expertise.

EURE: All right, thank you. And now we have another question, Jerry, and you can, not in the chat. I don't think we have another question in the chat. No. Jerry, you can ask a question, I think that is very important for Norene and Al to answer, because a lot of students are just not aware and a lot of people are not aware. So, go ahead.

GREENE: Do any of the Wake Tech IT programs transfer to four-year universities? For Al and Norene.

KEMP: Al, I'll let you go first.

LEASTON: Well, thank you, Norene, thank you. Me and Norenw actually just answered some of these questions in Advising Week a couple of weeks ago, so we work good in tandem. But I could say the, speaking for the Network Management Department, we specifically do have articulation agreements that, and that simply means we have worked with specific colleges to make sure we know exactly how many credit hours transfer when a student comes to us and says they want the transfer. So, a lot of students that come to me in Network Management and say, "Hey, naturally, hey, I wanna go to [North Carolina] State." Everybody wants to go to State. I went to State. I love N.C. State. But if you're getting a Network Management degree, I can't tell you exactly how many hours will transfer until you go through that process.

Now, with East Carolina University, we have worked out an articulation agreement, so I can tell you exactly how many hours will transfer, which is quite a lot. We just worked out an articulation agreement with North Carolina A&T [State University] two years ago, which I'm pretty excited about, where several, if not all, your credits will transfer. It's simply because ECU and North Carolina A&T have similar networking-type programs. So, they see a lot of our course and say, "You know what, these courses are really similar to what we're doing, so we can use them all. We can use a lot more." So, our biggest kind of feeders or transfers would be ECU, North Carolina A&T and probably Western Governors University.

KEMP: And I'm gonna echo that. Those colleges, we also, in all three of my programs, Business Analytics, Computer Programming and Development and Data Science, we have articulation agreements with all of those colleges that Mr. Leaston has mentioned. In our Computer Programming and Development, we have other articulation agreements with UNC-Charlotte, Northeastern University, also North Carolina Central [University], North Carolina A&T and Western Governors University. In our Data Science, again, we have an articulation agreement that, with Northeastern University and UNC-Charlotte, particularly in their new data science.

I'm happy to say we are in the talks with an articulation agreement with N.C. State, with their new data science and, program that they've got started, and also Mount Olive [University] and ECU, with their software engineering program. So, those are things that are coming here, hopefully, before the end of the academic year.

LEASTON: And one thing I wanna echo real quick is that, when I talked to a parent, actually, a couple weeks ago about this, but there has been this conception that AS [Associate in Science] degrees are transfer degrees and AAS [Associate in Applied Science] degrees are not. And that's not really the case anymore, right? So, like, even though we're talking about AAS degrees, they still, you're still able to get into these degrees and transfer, again, to the number of schools we'll be talking about. So, that kind of mindset, you know, we, we, a lot of people have thought that in the past that, you know, these degrees were, and they are, working degrees. You know, in the past, like, people say, "I'm going to get my AAS so I can get a job immediately." That is an option, but we want everybody to know you also have the option to transfer to specific four-year schools.

EURE: And I, I'm glad you brought that up. I echo it because a lot of students need to work. They don't have all this luxury to just spend six years getting a degree. So, if you can graduate in two years and work, and usually, the company would help you get the four-year degree. So, I think it's important. I had a student who graduated Cybersecurity, started off making $60,000-plus, and his company paid for him to get his four-year degree. So, I think it is very sad that our students do not know we have more than one pathway to get to four-year schools.

So, we're gonna ask Jerry ask one last question. Then we have a couple of questions in the chat. Go ahead, Jerry.

GREENE: All right. This question's for Coach Rene Daughtry. What sort of programs are you spearheading in the community to help get young people ready for IT careers? And is there a way to involve Wake Tech students with those efforts?

DAUGHTRY: All right, Mike Eure's known me a long time. I always tell people careful what you ask me for, I'm gonna make it happen. What I'm doing in the community, my own company, Asymmetry LLC, is a STEEM-related company – science, technology, engineering, e-learning and math. We're doing LEGO Robotics as far as robotics, Game Design and Coding, Principles of Electricity. I'm also working with a young man, Coach Anthony, who's doing Dynamics of Flight to instruct and teach about, about aerodynamics and drone, and drone technology and get some of our students on the path of drone licenses. And working with some young men out of New Orleans, I love saying New Orleans, who are, did not go to college, who got into software development program. And they're very excellent and interesting ethical hackers. So, they're putting together a workshop for me called "Hack the World" for my middle schoolers and my high schoolers to get them prepared, again, for all of this opportunity out there.

So, we're doing some things without, right here in Durham, North Carolina, with our young men and women preparing our students and our young ones for a lot of this explosion of technology. So, if I've got Wake Tech students that wanna help, I put my email address in, you know, in the chat and kind of con, contact me, and we could probably work together on some of these efforts exposing our youth to technology and the fun of technology.

EURE: And this is a good chance, before we ask the questions, if I can get Norene, Al and Coach Daughtry to give us your email addresses, if the audience wants to get in touch with you. And we can start with the ladies first, Norene, and then Al and then Rene. Just briefly say it, and then Sarah will put it up under your name.

KEMP: All right, my email address is nckemp@waketech.edu.

EURE: All right, Al.

GREENE: Al, you mic is muted.

LEASTON: You would think after a year and a half of, of calls, I, I would get past that. But it is jaleaston@waketech.edu.

EURE: Thank you. Rene?

DAUGHTRY: rdaughtr@cisco.com.

EURE: Thank you. And Sarah will probably put these in the, in the chat for the audience, as well as some other links that we have for you. Thank you. All right, we ready for the questions for the, from the audience? Lelah Jones, Jerry?

GREENE: Lelah Jones says, "What volunteer opportunities would be available for someone in the Programming and Development major?

KEMP: Well, I think I'll take this one. One of the greatest things that we just announced last week is our Programming Club, and I know you're a part of that. So, that's gonna be one of the best ways to get some volunteering hours. Also, just reaching out to some local organizations to say, "Hey, I'm a Wake Tech student, and this is what I can do. Is there anything that I can do for you?" And start there.

EURE: Anybody else wanna add? No. Anybody else? No. OK. Lelah again.

GREENE: All right. Lelah says, “Do any of the schools have online-only programs?”

KEMP: I know in Computer Programming and Development, the articulation agreements that I have with Northeastern University, that is completely online. I believe all of the other ones have opportunity to take online classes, but the program is not completely online.

LEASTON: If I, if I am not, if I am not mistaken, I know ECU is the, the, with what would be called the BSIT degree. Because I always mention this to a lot of our students, again, with one of our partners, MCNC, we work with really closely. What they oftentimes do, if you intern with them and if you’re, if you’re brought on as a full-time student, they actually pay for you to graduate from ECU. So, the great thing about this is you would get a job, you work for MCNC in Raleigh, and then you graduate and they pay for you to get your four-year degree at ECU, which is an awesome opportunity that they, they offer.

And if I’m not mistaken, the degree at North Carolina A&T is online as well for that articulation agreement.

EURE: And I, I think that was the next question about A&T. Oh, Michael got a lot of questions.

GREENE: Michael says, “To phrase my question, I was thinking to, I was thinking to transfer to A&T. Can I complete the remainder of the four-year online?

LEASTON: Yes, you can. Yes, you can with, with that, with that transfer articulation agreement.

EURE: OK, well, we have only, oh, go ahead. This is from Rex, Rex Xum. Jerry?

GREENE: Rex Xum says, “I think an IT person fixes computers. Is that right?

LEASTON: Everybody’s shaking their heads. I, I would say that’s, that’s a piece. That’s a piece. That’s a piece. The, the, the thing about the IT Division and from everybody on the outside looking in is that, when people say IT, that’s kind of what we think – break fixed, breaking computers. But IT is extremely vast. There are so many different degrees. I think we may have a list of all the degrees, maybe, but we have several degrees in our

department. Every, you know, so it's, it's, it is break fixed. I don't want you to think it's not break fixed because there are careers in break fixed. But that really is a small piece of the puzzle when you talk about programming, data analytics, networking, cybersecurity, cloud technology, simulation, game development. Like, there's so much more, right? So much more to IT.

KEMP: I'd like to share the it@waketech.edu email address as well. That's where you can go and find all 13 degree programs that are in the IT Division.

EURE: And Sarah ...

DAUGHTRY: I'm sorry. Something I throw in real quick: IT engineering. I wanna make sure people understand that word engineering just means problem solving. That's what I am. We're problem solvers. So, that IT arena is wide open, but critical thinkers and problem solving, that's, that's the mission. That's the goal.

EURE: Thank you, Rene. And Rene will be back next week, and we'll be talk, talking about career opportunities in engineering and technology. So, it's the same time, same place. Hope you'll make it.

We're gonna kind of go over to the side, if Sarah doesn't mind, we can share the IT degrees very quickly. I think she has that on a link, but I know we've been having some problems with the video. Sarah?

DAUGHTRY: And if ...

EURE: Go ahead.

DAUGHTRY: Mike, while you're, while you're waiting to do that, just one word and words of wisdom to leave to everyone. We're still in this COVID-19 arena. I want you to think about and think about these words. I want everyone to realize, to embrace an agile hybrid state of mind and spirit because this is the way it's going to be going forward. So, embrace that, all right everyone? And I think you'll be fine. An agile state of mind, agile, hybrid state of mind and spirit.

EURE: OK. This is it@waketech, and this was from the virtual open house. So, we're gonna scroll down, and Al and Norene, if you wanna just kind of look at these, and these are all in IT. This is under Computer Programming and Information, Advertising and Graphic Design,

Business Analytics, Computer Programming and Development, Data Science and Programming, Support Services, Simulation and Game Development, Web Developer and Web Design.

So, that's part, and then we got Network and Computer Technologies. Cloud Infrastructure, Cybersecurity – that's you, Jerry – IT Service and Support and Network Management.

These next two, I don't think people think of those IT, but they are. Medical Office Administration and Office Administration. And as Norene said, you can find out all of that by just going to the IT website.

And now, we're almost finished, and I'm gonna ask everybody to do a closing statement. Whatever you want to share, and I know you've done one Rene, but you get a chance to do another one, OK? Norene?

KEMP: Hey everyone, don't be scared. If you don't have IT in your background but you really wanna get into it, this is a great way to do it. We don't expect anything as far as experience. We will teach you everything that you need to know. But find your passion and then work within the IT department and the IT Division, and we'll help you get to where it is that you want to be.

EURE: OK. Al?

LEASTON: Yeah, I echo Norene's sentiments. Just really reach out to people. Ask questions. I work in the IT Division. Most of program directors and department heads I work with are extremely open and can really save you a lot of time and effort, really, by, by contacting these program directors and department heads asking questions. "Hey, what's the difference between this, this degree program and this degree program?" Or even more specifically, "What does this person do day to day?" Right? When people ask me, "What does a network engineer do? What does am entry-level networking person do?" And sometimes I say, "Hey, do you like shift work?" Right? Sometimes it involves shift work. You know, if, if that's not what you do and what you like, you might wanna look at something else.

You know, there are small nuances to every career that you wanna find out about previously. A lot of times, me, myself, I work in a, a network operations center, right? So, they said, "Well, hey, you're on the phone all the time." And I said, "Well, not for long." Because, if you increase, the more, the more you know, the higher you go up, the further

you get away from the phone. So, I think, toward the end of my career, I still work in the network operations center, but I was a product engineer. So, I just, people will come to me with questions and things like that, but I wasn't taking a lot of calls. So, it's really important to ask people about specific careers and just try to find out as much information as possible.

EURE: Before we go to Rene, Jerry, I'm sorry. I always let Jerry have some final comments. Do yours first, and then Rene. Go ahead.

GREENE: I'd like to say, but I was glad to be part of this conversation here as somebody who's not in the industry or career yet. You know, all three of you guys, and I'm saying y'all, y'all got big fish to me. So, I'm glad I was able to be here and hear everything you had to say.

DAUGHTRY: All right, and thank you. I did share something, but something I wanna share very quickly. Internships. Internships. Internships. Internships. That gives you an idea of what the, how that company operates. Gives you the opportunity to be known at that company. And one other little caution: That internship just may show you what you don't want to do. So, think about both sides of that, OK? Very interesting, but those internships are so important. Thank you.

EURE: And thank you, and we look forward to seeing you next week. And next month is National Career Development Month, and we're working with the Office of Career Services at Wake Tech, and we will be having you talking about careers in engineering and technology with Dr. Chris O'Riodan-Adjah, who you just heard make a comment. And then, on the 17th, we will have careers at the North Carolina Museum of Science, Natural Science.

So, thank you, and everybody, we look forward to seeing you next week. And everybody can say goodbye. Thank you, Sarah.