

## **BREWING AND FERMENTATION PRODUCTION TECHNOLOGY PROGRAM TRANSCRIPT:**

S1: This is a need that exists in our community and nobody's meeting it. You can't go out into any of our communities, which is fortunate, without seeing a local craft brewery where the communities are now coming together.

S2: I think especially in Georgia and in the craft beer industry in general, you know, practical experience is very important for folks who are interested in brewing. They would often go work at a brewery, work their way up through the ranks, learn on site. But what was missing was that, you know, technical education aspect.

S3: I think you're going to learn a lot and it'll set you up. If you want to be a brewer in the brewing industry, then it's certainly the way to go.

S1: And the brew industry is just sprawling everywhere you go.

S4: I'd say to flip the switch.

S1: I'm at a place in my life where I can change careers and I'm changing from selling food on a national level to working in a brewery and going to school for brewing fermentation.

S4: It's really designed for anybody that wants to get into the brewing industry or start their own brewery themselves. And it'll teach you everything you need to know from operating all the equipment, writing and designing recipes, brewing those recipes and doing all the testing involved to make sure that beer is of utmost quality.

S5: 98.7 Chatt Tech where 98.7% of our students earn a career. In today's episode, we're going to take a look at the Brewing and fermentation production technology program at Chattahoochee Technical College. Yeah, that's right. The entire reason I signed up for this job, we're talking about creating that amazing beverage that soothes the soul and lowers inhibitions. Delicious cold beer. We'll talk with one of the first students enrolled in the only program of its kind in the state of Georgia. We'll learn about the goals of the program from the associate dean of the program and the lead instructor, or the high king of hops. We'll also talk industry insight from a local brewery owner and the head of the Georgia Craft Brewers Guild. So keep up with your tasting glass. And let's start with our very own Willy Wonka. Francis Carlson, the associate dean of Business and Technical Studies program. Tell us about the program.

S1: Our Brewing and Fermentation Production Technology program, which is brand new, is not only brand new to Chattahoochee Tech, but brand new to the state of Georgia. It will be the first postsecondary college program of its kind, which makes it quite unique. It will allow students who join it to become brewers when they graduate from the program. They will have brewed beer for almost a year. They'll know how to brew it. They'll know how to ferment it. They'll know how to test it for quality control. They'll know how to keg it or can it and distribute it. They'll also be introduced to some brewery maintenance that's important in craft breweries to be able to troubleshoot what happened to your chiller or troubleshoot what happened to your bright tank or understand why your key washer was not working or why your canner is throwing cans off the assembly line so that you can immediately solve that problem, get right back to work. We anticipate that that's what our graduates will be able to do. There's also an internship at the end which will give students at that point an opportunity to mimic more of a full time capacity in a local craft brewery with the hopes that they will have such skill that they'll be employed, which we hope for all of our internship students. This is a need that exist in our community and nobody's meeting it. You can't go out into any of our communities, which is fortunate without seeing a local craft brewery where the communities are now coming together, coming to eat, to host baby showers, wedding receptions, retirement parties, birthday parties. And it's been a great community builder. It's a burgeoning opportunity for economic development in Georgia. So we saw it as an opportunity. What we do is prepare people to work in our communities and support all of that economic development. And we're so happy. By the end of December 2023, we'll have 24 brand new brewers ready to go to work.

S5: Is this a program for the beer hobbyists of the states who are messing around in their basement? Or is this a thriving career opportunity in the state following recent Georgia legislation like the law allowing 3000 barrels a year for sale at the breweries?

S1: Our program is primarily designed for students who perhaps already have a career in the brewing industry. But they want to be promoted, they seek advancement, or perhaps their own brewery, and they know that having our associate degree would enable them to do that because it's a cohort program, which means all the students start together in August and then move as one group through the whole program. It is designed for people who want to be professional brewers primarily. What we think will happen, though, as the program grows and expands, is that we will have people who currently homebrew or maybe they dabble a little bit in beer and they want to learn about the brewing science part or they want to learn about safety and sanitation and some of the quality control that they will be able at a later date to come and take some courses as opposed to completing the whole longer program. We also hope to offer continuing education through our economic development. Non-credit. Arm of the college for people who possibly are currently working in a brewery, but they need to improve their sensory evaluation skills or they need to improve their quality control, or maybe they're interested in more sustainable packaging and want to come for a day long seminar just to kind of hone in on a specific skill related to a brewery. And we've already gotten a lot of inquiry about whether or not we will offer that. And I will say, yes, we absolutely will. It's the when that we really need this program to get started and then get it going and then we can see what expansion looks like.

S5: I'm a fan of visiting the breweries. I'm also a little envious of the genius who came up with this idea. How did it start?

S1: When we began researching in 2018, the viability of our brewing program, we reached out to a lot of the craft brewers who were in our service area and from that point on worked closely with Red Hare Brewery, Schoolhouse Reformation, Dry County and Burnt Hickory. Through those brewer owners who gave us tremendous insight into what this industry looks like and just continued to kind of reiterate to us what our graduates need to know and know how to do. Really enabled us to build the program that we had built and have it approved by the state. Nick Downs particularly, he's one of the co-founders of Reformation. He worked probably the most closely with us over the past four years. He advised us tremendously on equipment, on horse delivery, really hone in on specific skills that it's important for students to know.

S5: Well, don't you worry, I'll be making my way to the Reformation sampling tent soon. I mean, representative, to give me knowledge, not that I'm drinking on the job or anything, but what were the biggest points the advisory committee brought to the table?

S1: The safety and sanitation part, which we knew would come up over and over again, has of course, this is a food product, so people don't necessarily think of beer as a food product with all the safety and sanitation required in that equipment. But it is. They also talked about the importance of being able to recognize that the beer is good or bad and why, if it's an off flavor, what's off about it? The variation of flavor that you get from different types of hops or flavors that you may add. They really drove home the part about needing to be kind of a jack of all trades because once brewing production is started, if something tears up or goes out, you can't really shut it down for two days while you're waiting for somebody outside to come in and fix it. Very, very important that somebody in your brewery know how to fix that equipment on the spot. It's a very physical job. That's something stressed to us that we have also stressed in our orientation sessions with our new students. This is very labor intensive in a pretty hot, humid environment. So if you think Georgia is hot and humid now, welcome to the brewery where it's hot and humid all the time.

S5: Thank you, Francis. Speaking of lead instructor, here's the high king of hops himself. You take the mike. I'm just going to refill my water glass here.

S4: All right. So my name's Steve Anderson, the lead instructor for the Brewing and Fermentation Production Technology Program, at Chattahoochee Technical College. And I've been in the brewing industry for over ten years.

S5: So, Steve, tell me what students will learn in the program.

S4: Well, we start off the first semester learning a lot about the four main elements of beer, which are malt, water, yeast and hops. They're not only the science about them, all the different chemical interactions. And we also learn how to taste and analyze and then later on incorporate them into recipes to make the beer. And that's really what adds all of the colors, flavors and aromas of the first beer. They all have an impact.

S5: Okay, I'll ask it. That means a ton of sampling, right?

S4: Yeah. It's some of the suffering required in the program. Just like being a culinary program you can't analyze food you have cooked if you haven't tasted it. So we're not sitting around drinking beer all day and enjoying pints together. We are certainly sampling individual samples of world class beers to learn about the styles and sampling of the beers that we make in the program as well to analyze them and see how good they are, if they fit the accomplishments of what the recipe designer wanted to set out to do. And then check for any kind of off flavors is made during production.

S5: Becoming the lead instructor for the only program like this in the state. And I gotta tell you, it seems like a dream come true. Tell us about how you got here. Well, I get some more water.

S4: I started off homebrewing as a hobby, thought it was pretty fun. Made my first beer and then once I fermented it and drank it and it worked. It was pretty fun to do, so I kind of kept it down. Eventually turned a hobby into a job, working at a home brewery store, answering questions. We were selling all over the country online, so I would get emails from everywhere and everybody asking all sorts of questions. I had to learn a lot. It was just something that always intrigued me. So I just kept reading and learning and eventually got a job at a local craft brewery here in Atlanta. I stayed there for about five years, then continued on to Dry County and Kennesaw Brewery. I was the brewmaster from 2017 to 2022, and then this position opened up. Thought it would be pretty neat to teach some brewing. And this is a very hands on technical program and that was the side of the industry I really enjoy. So I applied for this job. Got it. And I haven't looked back since.

S5: Earlier we heard that students will be brewing beer for a full year by the time they graduate. How many different styles of beer is that? Like one a week once you're in the lab?

S4: Sort of like that. So you learn the basics of what goes into designing a recipe. All the ingredients work, and then we work in small teams using some of our we have six pilot systems to brew on those and design beer recipe for beer. It's a lot of hurry up and waiting. So a minimum of 14 days through a

batch start to finish, sometimes much longer. You don't get to brew a different beer every week for sure, but you go through the whole process of designing the recipe brewing the beer. We work on the conditioning and packaging of the beer, and then with all these analytical testing tests for things like color, ibus, the density of the final product, things like that.

S5: Now, besides being a fan of drinking beer, what else does an ideal brewing student need to have.

S4: Somebody that's motivated to want to learn a lot about brewing? There's a lot to learn, and somebody that's really interested in the process is going on. But if you have a more of a scientific take to it, that definitely helps in understanding how to troubleshoot things because things are always coming up during the process. And there's definitely a lot of troubleshooting. Scientific method involved throughout everything you do in brewing. Knowing a little bit of math definitely helps too.

S5: And since this program is being run by someone with as many connections as yourself, I'm going to go out on a limb and say there are lots of internship opportunities.

S4: Yeah, absolutely. We have a ton of internship opportunities around here, and every brewery I've talked to is interested in taking students on. So we're going to focus really on trying to get people into the right brewery for their needs and they're trying to say open up a brewpub. We would talk to some of the brewers and try and get them working at a place similar to what they're trying to start or if they want to work in a larger production facility. You know, we could talk to somebody like Sweetwater or New Realm and try and get them a position there so they can learn the practices and methods that are happening in those type of facilities that potentially they go in there and do a good job, you know, carry that all into an immediate hire.

S5: Lead instructor Steve Anderson, thank you, sir. Let's move to the Georgia Craft Brewers Guild executive director. If you don't mind, sir, introduce yourself and tell us about your amazing organization.

S2: My name is Joseph Cortez and I'm the executive director of the Georgia Craft Brewers Guild, which is the 501c6 trade association for Georgia's licensed craft brewing industry. So our organization as a trade association serves largely as the main advocacy organization for the craft brewing industry. We lobby for better beer laws, better beer regulations. We're very engaged in the legislative process. Our organization, we like to say, stands for advocacy, education and awareness. So on top of that advocacy piece, we also work to educate the public, to help educate our own industry with different events throughout the year, including an annual conference and then awareness, also bringing awareness to the industry, trying to build the brand of Georgia craft beer. Beer Tourism. Helping promote our members collectively.

S5: What are some of the benefits of this program? Not just for students, but for the industry in Georgia as a whole?

S2: You know, practical experience is very important to folks who are interested in brewing. They would often go work at a brewery, work their way up through the ranks, learn on site. But what was missing was that, you know, technical education aspect, particularly in Georgia, we have not had an actual academic program of study for any sort of brewing science fermentation as it exists at Chattahoochee Tech. Had to go out of state to do that at any level. What this program is providing is just an opportunity for students in state to actually get those credentials and that academic experience that might be missing. Just working your way up at a brewery and a practical experience, which is a very important part of it, and I know this program provides that as well. The practical experience is invaluable. That's a huge central part of becoming a brewer or becoming, you know, working in production at a brewery.

S5: Is this program right in line for the growth of craft beer in Georgia? Are we oversaturated in breweries?

S2: The market is fairly strong in Georgia. I think that we're still on an upward trajectory. We probably have 30 to 40, if not more, across the state breweries and planning folks that are planning on opening a brewery and they're all going to need trained, educated folks working in production in their facilities. So the craft beer industry, I should say, does ebb and flow a little bit with the economy. But we've been on an upward trajectory for, you know, 30 years. We're still, I believe as of last year, 46 out of 50 per capita. Newberry licenses.

S5: 46. Wow. Opportunities like this can help us climb the ranks. What's the one thing you'd say to those that are looking to learn more?

S2: You want to be as best prepared as you can to be a successful brewer or production staff. I think the program at Chattahoochee Tech is going to help you do just that, and it's going to help you have the experience, the know how, that you need to be a successful professional in a great industry and a great profession, which is, you know, brewing a product and working in a space that people love and that provides community.

S5: Thank you, Joseph. My tasting glass has gone dry, so it's time to meet our friends at Reformation Brewery. Hey there. Can you introduce yourself while I go and get a refill?

S3: My name is Nick Downs, and I'm with Reformation Brewery.

S5: How would you describe the ideal candidate for brewing?

S3: It's an interesting lot. I think there's a lot of pilots. There's a lot of engineers. It's people that have decent attention to detail, but also have some aspect of creativity because you got to be able to imagine the beer you want and design it, taste it and adapt it. So it's somebody like that.

S5: Now tell me more about the common career progression while I'll go get another flight.

S3: Typically for us would be a keg washer working on the packaging line and then if you show interest, you'd move to cellaring. But typically somebody that has this degree would go right into cellaring at the very least. And the cellarman's the guy that takes the beer that's in the fermenter. Once the brewer gets it in there and takes care of it, ensures temperatures are right, takes gravity's figures out when it's done fermenting, cools it down, transfers it maybe through a filter, maybe through a centrifuge over to the bright tank carbonates it the cellarman moves the beer all around. Usually in that process there'll be a day when you might be a little slow. So you'll go up on the brewhouse and you'll spend the day with the brewer. We have three locations. One of them has a pilot brew system. And so you'll spend time down there and we'll be able to try out a few your own recipes. And it's relatively inexpensive to make mistakes of that size. So we're happy to let people kind of exercise some creativity there. And it's actually it becomes fun. And then from there, you would move up to Brewer. The size of the brewery really drives the compensation. I would imagine a brewer at Monday nights or at Budweiser or at Sweetwater makes more than a brewer that's going to be at a brew pub or just a place that has a single tasting room. But that's generally the progression. And then if you want to go on to lab and, you know, count cells and harvest yeast and do that kind of stuff, you know, that's another avenue you can do. There's a lots of things you can do.

S5: You were instrumental in getting this program started, right?

S3: Francis came to us way back when they were looking at curriculum, and we kind of helped them with designing a curriculum, what things were important to us and what we wanted. Once they were ready to set the whole system up, they actually had me come in and identify the equipment they needed, lay out the brewery and where the drains have to go, where the fermenters should go, you know, size the chiller. And then once they hired Steve Anderson, who was going to run the show, he kind of took over from there. So that was my role. I was early on. I helped figure out what they needed and how to set it up.

S5: Can you tell us why this program is a better option than learning online.

S3: Theoretical You see it in a video or something, and it's not quite the same as what kind of valve is he talking about? What does it look like when the pressure gets up to what they're saying it does? And how does that chiller work again? And when you're there, you work on the cold room, you work on the fermenters, you're clean, you change gaskets, you do all that stuff that you're really watching TV. It's like if you had to watch a video on how to drive a car, the first few miles would be pretty sketchy.

S5: Thanks, Nick. Let's talk with one of the first students on the program before we wrap up here, Craig. Tell us a little bit about your experience so far. My name's Craig Snyder. I started with Chattahoochee Tech on the Brewing Fermentation degree of science recently this August. I started when I was 15 cooking and I was always around food. And as I grew up and got older in the food business, I learned more and more about beers and so forth. And I always had an idea about how beer would be working on the Brewers side. But back when I was a kid, brewers didn't make any money. Now jump forward, you know 30 years and the brew industry is just sprawling everywhere you go.

S5: Thanks, Craig. Now, how much liquid courage did it take to shift gears and join a brand new program on brewing?

S1: I decided just, I'd say, to flip the switch. I have a food service degree and science associates degree, similar to what this degree is. I'm at a place in my life where I can change careers and I'm changing from selling food on a national level to working in a brewery and going to school for brewing fermentation it's a big life step.

S5: This opens so many doors not only for students, but I feel like it could give a big boost to the industry here in the state. What's the rest of your class like? Describe a day in the life of a student for us.

S1: We have a mixed bag of individuals in the class. We have different ages, different walks of life, people like myself that have been in profession and in the private sector and career for such a long time and are trying something new. Everybody is very in tune to everything that's going on. There's so many applications that we're learning about. We're taking four different classes. They're all fallen right into what we're doing for myself in the industry. But then also it's amazing how everyone's going to have a chance to learn as everything comes. But soon we'll be brewing. It'll be fun.

S5: You know what? Let's raise a glass and say cheers To all the current and future students of Chattahoochee Tech's Brewing and Fermentation Production Technology program. To learn more, visit [Chattahoochee Tech Dot EDU](http://Chattahoochee Tech Dot EDU). Thanks for listening to 98 seven Chatt Tech where 98.7% of our students earn a career.