

Electrical Technology Advisory Board Meeting 11/12/25

Transcript

Video #1:

ET Advisory 11.12.25#1

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ET Advisory 11.12.25#1

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(0:00) Alright, so, you know, we're just going to kind of go through these questions. (0:07) I'll go back over, you know, the books that I use, talk a little bit about the curriculum, (0:14) and make sure that there's no new thing that we can think of that I should be implementing. (0:23) So, I guess I'll start just as a reminder that I'm using these two resources from NCCER, (0:34) the core curriculum and the electrical one.

(0:39) And the reason why is because those are what the state has asked us to use for our Tier 1 and Tier 2 IRCs. (0:49) So, if you remember, the IRCs are the industry-related credentials,

(0:55) and that's what the students kind of earn as they go through the program. (1:01) And the core is kind of like job site safety and workplace... (1:10) What's the word I'm trying to think of? (1:13) Like employability skills.

(1:15) And then the Electrical 1 book kind of covers more in-depth electrical stuff. (1:21) Now, it's Electrical 1 or the Vermont State Year 1 Apprenticeship Test. (1:28) Those two things are a choice, and basically what I'm doing is I'm trying to push the Electrical 1 (1:34) because we can do it here in class, and I think I can teach to it better.

(1:41) But I do have all of the students take the Apprenticeship Test at the end of the year, (1:45) hoping that they pass that as well because that they can take on. (1:50) So, Greg teaches the Year 1 Apprenticeship Class for the state. (1:55) My program, what I teach here, is essentially the same thing that he's teaching.

(1:59) We use different textbooks, but the theory stuff is all the same. (2:03) Residential wiring and kind of the introduction to electricity. (2:08) And so we have OSHA 10 and CPR AED training as our Tier 1 IRCs, (2:17) and then the Core, and then Electrical 1 or the Vermont Apprenticeship Test as our Tier 2s.

(2:24) And as I said, I like to do Electrical 1 and the state (2:30) just because one student might be more successful at the other, (2:34) and at least that way they're getting both of those IRCs. (2:39) As a junior, so that as they come back for their senior year, (2:44) they're just all ready to go out on their co-op placement. (2:51) Both exams are multiple choice? (2:55) Yeah, the NCCER one is multiple choice.

(2:59) That one's done on the computer. (3:01) I suppose I can actually print out paper, but it's like a whole proctoring thing (3:06) where I have a proctoring site that I go to. (3:11) But yes, it's all multiple choice.

(3:17) Again, as I mentioned earlier, I have 15 students. (3:26) One of those students is a female. (3:28) The rest are all male, so that's good.

(3:29) Every year I seem to have one or two female students. (3:34) And I would say three, six, seven, (3:40) eight of those students are from the Central Vermont District. (3:45) So they've come here because the spots weren't full, (3:48) or the spots were full for them there.

(3:51) The rest of them are from Randolph. (3:55) I don't have any. (3:56) And two are from Northfield.

(3:59) So RUHS Northfield didn't have anybody from Williamstown this year (4:03) or the White River Valley School District. (4:06) But we are in open enrollment, and I've already got, I think, 14 applicants, (4:13) some of which are for next year, (4:15) some of which are already my current juniors who will be coming back as seniors. (4:20) I think there's seven of them.

(4:24) So as long as they all get accepted back, I'll have them. (4:29) What made Central Vermont have such a large crop of people that wanted in? (4:35) That's way more than population. (4:37) I don't think they're that much bigger, are they? (4:40) Well, they have Montpelier High School, U32, Spalding, Cabot.

(4:49) They just have bigger schools. (4:51) They have bigger schools. (4:52) I mean, I know one of my students actually lives in Middlesex, Worcester.

(4:55) So, I mean, they're from much farther out. (4:58) So I do think they have a larger pool. (5:00) And as we were talking earlier about, (5:04) there's just more interest in the trades all of a sudden too, I think.

(5:10) Are those students bussed too? (5:11) They are. (5:12) So our director organized a special bus that picks them up every day (5:18) and brings them back. (5:20) So as long as they can get to Spalding High School, (5:24) they all meet there.

(5:29) So they're not bussing from different locations, it's all from Spalding? (5:33) I believe that's where they meet from, yeah. (5:35) It's either Spalding or U32. (5:41) So there's two buses? (5:42) No, I don't know what the actual location is that the bus goes to.

(5:47) I think it's Spalding High School, but it could be U32 High School (5:50) and they all meet there. (5:52) It's one bus from that region. (5:54) But I know I have a student from Montpelier (5:58) and the rest of them are all U32.

(6:03) And they're great students. (6:06) I'm happy to have a full program, so that's been nice. (6:12) So out of those 15, I've got my three returning juniors from last year, (6:17) or they're seniors this year.

(6:18) They went out on co-op right off the bat, (6:20) and they're with Cypher Electric. (6:24) So Derek, he was on the advisory board. (6:27) And I have one at Benoit Electric, (6:32) and I have one with Rob Stubbins Electric over at Rutland.

(6:36) Robby Stubbins. (6:37) And he's actually the electrical teacher at the Stafford Technical Center, (6:43) which is the tech center at Rutland. (6:45) And that's actually, if I could get more students to go that direction, (6:48) that would be a great thing for me, (6:50) because he can't hire his students as a conflict of interest.

(6:53) So it worked out great that I had this one student from Stockbridge (6:57) who was actually closer for him to go to Rutland for a job (7:02) than up to the very Montpelier area. (7:06) And then I had one student from the U32 group (7:10) who was out with Norway and Sons. (7:13) And then three seniors from U32 were new to my program this year, (7:19) and our rule is that they have to be with us for one semester (7:22) before they can go out on co-op.

(7:25) So they're trying to wrap up the core in electrical one (7:29) so that they don't have to worry about that in the second half of the year. (7:34) And two of them are from the construction program, (7:37) and they wanted to do electrical (7:39) because their plans are to go to VTC next year (7:43) in the construction management program. (7:46) And they wanted to... (7:46) They recognized that they could stay in construction (7:50) and go right out on co-op, (7:52) but they wanted that extra education on electrical (7:56) before they went up to VTC.

(7:59) So they were going to tough it out here until mid-January (8:04) and then go out and try and get a co-op job. (8:06) So they're very academically good students. (8:13) And so they're going to be... (8:15) Do you think they can handle the math, the college math? (8:17) One of them will be able to for sure.

(8:19) The other one, he has the determination and the patience. (8:25) He may not... (8:27) I don't know. (8:29) He's one of those students who, like, he'll sit down and amaze me.

(8:33) Don't feel like he's getting it, (8:34) and then all of a sudden, it's like, bam, you know, (8:36) he's talking the language. (8:37) So I think for him, it'll just be maybe just a little extra help (8:42) or just for him to take his time and to get through it. (8:49) I'm not a good math person, (8:51) and I survived the first year of math up there.

(8:54) So I think they can do it. (8:56) Good. (8:57) Yep.

(8:58) Well, I'd be glad to have them. (9:00) Yeah. (9:02) So that's kind of the rundown on our demographics (9:07) and kind of, you know, the stuff that I'm teaching.

(9:10) I also do the Mike Holt stuff, (9:13) which that is just the guy who put together (9:19) all of the wonderful stuff from the codebook (9:23) that basically takes all of the... (9:28) What was the code graphic again? (9:39) So what I spend a lot of time doing (9:41) is going through these presentations (9:47) a little bit at a time, (9:50) and basically it's just... (9:54) Each article of the codebook has these slides, (9:59) and we just go through these. (10:02) And so... (10:03) Oops. (10:05) Where am I going? (10:06) You know, so it'll talk about, you know, what the definition is.

(10:10) It's basically following how the codebook is laid out, (10:15) but it puts pictures to the words. (10:18) You know, a lot of students have a hard time reading the codebook. (10:21) It's because it's just all words.

(10:23) And so they've done a really good job (10:25) at putting pictures with the words (10:27) and just kind of breaking down, (10:30) taking out all the wordy stuff (10:32) and just letting you know exactly what you need. (10:35) So, for example, you know, here's a picture. (10:45) This article's on overcurrent protection, (10:48) and here's all the different types of overcurrent protection you might find.

(10:52) So I find that this is really helpful for the students (10:56) because sometimes I don't always have the props to show them, you know, (11:01) and a lot of these students are hands-on visual learners. (11:04) So this has been a really great tool for me. (11:10) And then when we do a section of these, (11:15) I put together a... (11:19) I call them knowledge checks, (11:22) and basically it's just questions out of that section, (11:30) and these are questions that you would find on any journeyman or master test.

(11:35) And so they'll go through, (11:37) and, of course, all these tests are open book (11:39) because when you take your journeyman's and master's test, (11:42) you can use the code book, the Ugly's book. (11:45) Not the Ugly's book. (11:47) The code book and the Vermont State Safety Rules, (11:50) but none of these questions pertain to that.

(11:52) So because I'm the teacher, it tells me what the correct answers are. (11:57) They don't see this until after they've submitted the questions. (12:03) So, you know, I don't put a lot of weight on (12:08) how well they do these, per se, (12:10) because they're learning the material, you know, (12:12) and I don't feel like it's fair to grade them on stuff they're learning.

(12:16) But as we do a lot of these, you know, every few weeks, (12:19) I'll put together, like, a larger packet of questions, (12:22) and I'll kind of test them on that. (12:25) Really what this is for, in my mind, (12:28) is for them to get used to using the code book as a reference (12:32) and learning how to navigate through, (12:35) how to search information, how to look it up to answer the questions. (12:40) Because sometimes you can find the same answer in multiple places, (12:45) or the word comes up in multiple places, (12:48) but there's only one correct place that you need to find it.

(12:51) And when you do find it, it's 99% of the time, (12:56) it's word for word, right out of, like, (12:57) these questions are word for word out of the book. (13:01) So that's a little bit about that. (13:07) So some of the questions that we have are, (13:10) how can we better train our students to meet our industry needs? (13:16) What are the employment projections for the region (13:18) in regards to our occupational area? (13:21) You know, this is always, you know, really good or really high.

(13:25) There's lots of jobs available. (13:28) What can make the program better? (13:32) This is one I always am trying to answer myself. (13:38) One of the things I would like to do better, I think, (13:41) is just to get them out into the real world a little more as juniors.

(13:46) I don't spend a lot of time with my juniors doing, like, job shadows, (13:50) a one- or two-day job experience, (13:53) and I feel like that might be more beneficial (13:56) for them to see kinds of the stuff that's out there, (13:59) because there's a lot more to the industry (14:03) than running conduit and pulling wire. (14:05) There's renewable energy, and there's batteries, (14:08) and there's off-grid, and there's fire alarms, security systems. (14:12) You know, there's a whole range of electrical stuff (14:18) that they can get involved with.

(14:23) We do have cooperative education opportunities. (14:28) You know, I'll fill that in. (14:34) Estate proficiencies.

(14:37) Now, let's see if this is still... (14:38) So this is... Basically, this is what I'm teaching them. (14:42) So we cover workplace hazards and personal safety. (14:46) So that's identifying hazards, developing task plans.

(14:53) In the electrical theory and electrical circuits, (14:56) this is kind of where we're at right now. (14:59) We're going to learn about what voltage and current (15:02) and resistance and power are. (15:04) Ohm's law.

(15:06) We're learning how to basically figure out (15:08) the difference between series and parallel circuits (15:11) and calculating loads (15:16) and looking at how these things are measured. (15:20) You know, we're always working on explaining (15:24) the role of the National Electric Code. (15:27) And then kind of after Christmas, (15:29) I dive into more of the building stuff.

(15:35) Although we do... You know, before we leave here, (15:38) we can take a peek at the shop (15:41) because I've got a ginormous structure in there now. (15:45) But basically, we're looking at explaining (15:49) grounding requirements, calculating. (15:52) I don't know.

This, to me... (15:54) This one, I'm not... (15:57) I'm not a huge fan of (16:01) because my class is supposed to be teaching (16:03) residential electricity. (16:05) And for us, we have 100 amp (16:07) and we have 200 amp services. (16:09) So although we go through the painstaking process (16:11) of doing this, which is a good process, (16:13) I don't feel like a lot of master electricians (16:16) are sitting down doing these calculations.

(16:19) They're like, is this a small house? (16:21) Okay, you'll get a 100 amp service. (16:23) Is it going to be a big house? (16:24) You'll get a 200 amp service. (16:26) But the theory is important.

(16:28) The theory is important. (16:29) And then selecting proper wiring methods, (16:36) certain rules on, you know, (16:38) ranges and hot tubs, this kind of stuff. (16:41) Explaining how devices are selected.

(16:47) Identifying and describing various loads and controls. (16:51) And then we get into, like, (16:53) reading and interpreting blueprints. (16:57) Making sure we're using the right tools.

(17:00) Using hand bending equipment. (17:03) Discuss the types and purposes of the grounding conductor. (17:07) Some of this stuff, you know, I'm always going over.

(17:10) So this isn't necessarily, you know, (17:13) in any one particular place. (17:17) Explain the purpose and appropriate usage of ground faults, (17:22) arc faults, sizing boxes. (17:26) Describe the installation control of lighting fixtures.

(17:30) Install a basic electrical system. (17:34) And then we kind of get into the more of the soft skills, (17:39) as we call them. (17:41) Verbal and written communication.

(17:44) Seeing how they work independently or as a group. (17:48) Talking about professional and ethical standards. (17:52) We love to discuss the ethical standards.

(17:55) You show up at somebody's house, (17:57) and you find this rat's nest, you know, (18:00) and you cover it up and go about your business, (18:03) or do you tell them it's going to be 3,000 more dollars, (18:07) and you take care of it because that's the right thing to do. (18:09) You know, we talk about those scenarios all the time. (18:14) Most of them seem to want to do the right thing.

(18:20) And then finally, you know, I do this at the beginning of the year, (18:24) but I have them get into groups. (18:26) They explore all the different types of electrical jobs. (18:30) Then they pick one that they like the most, (18:32) and they kind of do a deep dive.

(18:34) Have them write like a one-page paper. (18:36) They get up in front of the class, do a presentation. (18:38) Kind of teaches everybody.

(18:41) Although I find that most people pick master electrician and lineman. (18:45) Those are like the two big things that multiple people will always do, (18:49) and I maybe should have more of a list for them to pick from. (18:55) But, you know, sometimes I'll get somebody (18:57) who wants to be a wind turbine installer (19:00) or something that you've never heard of.

(19:05) And so this is basically what the state has set out (19:08) for me to teach my students. (19:12) Do you see anything in there that you would argue with (19:17) or add or subtract from? (19:20) No. (19:21) Yeah, I think this is all good.

(19:22) One thing that I'm trying to figure out, (19:24) and perhaps you can help me with this, Peter, (19:27) I'm trying to figure out how this plays into (19:31) the overall education of high school students in general. (19:35) And I guess there's a couple aspects of it. (19:40) One is how do the students select or get selected (19:46) for this or similar types of programs? (19:51) And, you know, it seems like you're kind of (19:54) segregating the students for two years.

(19:57) Is there a different option where they can only do it (20:00) for one year, or is it always, you know, (20:03) go through your program with a classroom for one year (20:05) and a co-op for one year? (20:07) Because it seems to me that that co-op year, (20:12) you're kind of giving up a lot of the educational opportunity, (20:16) you know, to allow the student to go, you know, and work. (20:21) And if you're trying to go into college, (20:24) it may be limiting you, (20:26) and you're not taking the English classes (20:28) or the math classes that might be very helpful (20:31) for, you know, a college education. (20:35) So to start with, you know, (20:37) to come to a tech center in Vermont, (20:40) you have to apply and be accepted.

(20:45) And, you know, there's been various debates (20:49) on what the best way to do that. (20:51) Basically, we've been told that we can't base (20:56) somebody's acceptance based off of, like, (20:58) their behavior record or their grades or anything like that. (21:03) So it's really just... (21:04) Who wants to be here.

(21:05) Who wants to be here. (21:06) And so these students have decided (21:08) that they want to be in the trades (21:10) or digital films or whatever their program is. (21:14) That's what they want to pursue.

(21:16) And so they've probably, most of them have decided (21:19) they're not going to go to college. (21:22) And so they come here as juniors (21:25) and they are learning their program trade (21:29) while also attending math and ELA (21:32) to satisfy their graduation requirements. (21:36) GED stuff, yeah.

(21:37) And so... (21:39) I'm sorry, the ELA is... (21:41) English. (21:42) Okay. (21:45) So their English requirements... (21:46) So they have the math and the English.

(21:48) So that's like... (21:52) They have to be a part of that. (21:56) Unless for some reason they've already met the requirements (22:00) for their sending school's graduation requirements. (22:03) We don't require any... (22:06) We don't have any requirements here.

(22:08) We just facilitate making sure (22:10) that they have the requirements they need for graduation (22:13) from their sending school. (22:14) Students don't actually graduate from here. (22:16) You get like a certificate of completion.

(22:19) But students are graduating from high school (22:21) from the high school that they come from. (22:23) So then you come here as a junior (22:27) and you complete all this stuff. (22:29) And then, as you said, the co-op piece.

(22:32) Now, to be able to go out on co-op, (22:34) you have to have all your graduation requirements. (22:37) That's the first thing that you have to have. (22:40) So if you're a senior and you've completed my program, (22:42) but you are still missing 2 ½ credits for English, let's say, (22:51) you can't go out on co-op.

(22:52) You have to stay here and you have to get those done. (22:55) That doesn't mean that you can't do any co-op. (22:57) It just may mean you can't go out full-time.

(23:00) And full-time co-op for our students (23:02) means that they have to be in the school (23:05) at least one half day a week. (23:07) What that really turns out to be is one full day (23:10) because electricians get in their trucks at 7 in the morning (23:13) and they're off for the day. (23:15) So nobody's going to go there at noon.

(23:19) I did have some students work at Catamount Solar, (23:21) and they could go and work in the shop in the afternoon (23:24) organizing tools or whatever. (23:26) So that worked for them. (23:27) But generally, everybody comes in for a full day.

(23:31) And so it's not like, I would say, (23:33) that they're missing out on education that they need. (23:39) I should be careful how I say this (23:41) because we all need education. (23:42) But I mean for graduation.

(23:45) And so these students, especially the ones who go into co-op, (23:52) they've more than likely passed the first-year apprenticeship test, (23:56) which means now they're just trying to get their hours (24:00) because they're in it to be into the electrician's apprenticeship. (24:03) So they've passed the schooling part. (24:07) In fact, all of my seniors are enrolled (24:11) in the second-year apprenticeship classes (24:14) through their employers currently.

(24:16) So they've made the choice not to go to college. (24:20) Now those other two that I've talked about, (24:23) that is something that they need to consider (24:25) is honing in on their academic skills (24:28) if they're going to be successful at VTC. (24:30) And I'm glad you brought that up (24:31) because I hadn't really thought of that until now, (24:34) that maybe they do want to stick around and get some more... (24:38) So do they have that option to take like a geometry class or... (24:44) They will have taken geometry before they've come here.

(24:47) So generally, Algebra 1, Geometry, and Algebra 2, (24:54) at least Algebra 1 and Geometry (24:56) have been taken care of at their home sending schools. (25:00) I can't remember exactly what we're calling our math class now, (25:04) but I'm sure it's something, some variation of Algebra 2. (25:10) Some seniors have to take personal finance (25:13) as a graduation requirement, (25:14) so we offer a personal finance class. (25:17) Yeah, and trigonometry? (25:19) Don't think that we get to that level of math here.

(25:24) And the other thing too is if we have somebody (25:27) who wants to go to college, (25:29) who's coming here to, let's say, (25:32) they want to learn something about electrical (25:34) before going on to VTSU Randolph (25:37) for electrical engineering technology like I did, (25:42) we can support them. (25:43) They get vouchers for Fast Forward, (25:51) Dual Moment, I get them all confused. (25:53) CCV.

(25:54) Yeah, the CCV classes. (25:55) They get two vouchers so they can take up to two CCV classes. (26:00) Yeah, it might be called Early College now.

(26:02) I don't know. (26:03) They've changed it. (26:03) It used to be VAST, but they kind of closed VAST down.

(26:07) I know that all high school... (26:08) Having some students show up as seniors, (26:11) you know, taking Early College. (26:13) Yeah. (26:14) All high school students in Vermont (26:15) have access to two college classes, (26:21) either in their junior or senior year.

(26:23) So we do have ways to support students (26:25) who want to do that. (26:26) But generally, my experience in the past four years (26:30) is that we don't have a lot of students (26:31) who are coming here and then going off to college. (26:34) A few, but not... (26:36) Generally, the students that we have here (26:38) are headed into the workforce.

(26:40) Yeah, and I understand that. (26:41) But yeah, there are a few that end up in my classes. (26:46) And some of them have struggled (26:48) because they weren't quite prepared.

(26:50) They have a lot of great hands-on skills. (26:53) Yeah. (26:54) Some of them are great machinists, (26:57) but really struggled with the English class.

(27:00) Or they just... (27:02) Even the math. (27:03) I mean, we have students coming to us all the time (27:08) that are struggling. (27:09) They're at a fourth or fifth grade math level.

(27:13) And it's hard for us to catch them up (27:15) in their last year of school. (27:16) They look down on the CTE centers as like, (27:20) oh, how come your kids are so far behind in math? (27:23) Well, it probably started in second grade (27:26) and it just worked its way up through. (27:29) It is something that we spend a lot of time talking about.

(27:32) I think that the issue is probably pre-junior. (27:36) Yeah. (27:37) And I think that... (27:39) Middle school.

(27:39) Yeah, and I think kids start having (27:43) somewhat recent child come through the school. (27:45) And I think it's pretty common. (27:47) I remember when I was a kid, (27:48) you kind of start to track already.

(27:51) And I think that the general math requirements (27:54) might be part of the issue (27:55) because you can go the general route (27:59) and miss all those things you're talking about (28:00) for the most part. (28:01) And then you come here (28:02) and you might have some challenges, (28:04) but it might be completely adequate (28:06) for those students from the trade perspective, (28:10) and it might fit their own learning. (28:13) But the challenge is that those kids (28:15) that you're talking about... (28:17) Yeah, there's a certain percentage (28:18) you need a little bit more.

(28:19) Yeah, it's hard. (28:20) And it's hard to, like, I think, (28:23) for like Randolph, (28:25) some of those classes that you're talking about (28:27) might be during the RTCC time. (28:29) Yeah.

(28:30) And they do like a waterfall schedule now, (28:32) which does not align very well with our schedule. (28:35) Oh, what is a waterfall schedule? (28:37) So the first two classes are the same (28:40) Monday through Friday, (28:42) but the third class would be... (28:45) Maybe the

third class on Monday, (28:46) but on Tuesday it'll be in the afternoon maybe. (28:51) And, you know, it's... (28:52) So it stays staggered.

(28:54) It's like the sixth block, (28:55) and then the fifth block, (28:56) and the fourth block, (28:57) you know, as it goes through the week. (28:58) Okay. (28:59) So it makes it hard to have that consistency (29:01) for a tech center kid... (29:03) Yeah.

(29:04) ...to be able to pick up those classes. (29:06) Where, you know, our students get here at 9. (29:10) The first bell rings at 9.20, (29:12) and they have some academic from 9.20 till 10.10. (29:16) And then it's 10.10 to 11. (29:19) And those are two academic periods in the morning, (29:22) and then 11.30 to 12.20, you know.

(29:26) So it's easy for us to accommodate schedules (29:29) because we just have these 55-minute blocks all day long. (29:33) They're the same blocks every day. (29:36) But... (29:37) Yeah, I'm thinking about Vicki teaches AP Physics... (29:40) Yeah.

(29:40) ...things like that. (29:41) So we do have those higher-level classes at the high school, (29:44) but they're not really available (29:46) to the kids in the tech center so much. (29:49) Yeah, and I think, like, Vicki Johnson, (29:51) I mean, I think some of the challenges there, too, (29:53) are, no offense to those two college classes, (29:56) but a lot of kids...

Video #2

ET Advisory 11.12.25#2

Nov 13, 2025, 1:32 PM

ET Advisory 11.12.25#2

Play

00:00

26:06

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Settings

(0:00) She's good. Great. I'll know you're recording.

Right on. (0:05) I've been out on paternity leave. My wife had a baby for a family who (0:10) couldn't have a baby, so (0:13) she's, I've been, I haven't been here.

This is my first day back or night. I didn't come to school today. Tomorrow's my first day back, so (0:22) Yeah, anyway.

(0:24) What were you saying about number two? (0:25) Oh, former students. Yeah. Yeah, the ones that I see around town, you know, I still have two students working at Catamount.

(0:35) The one student that I asked to be on my advisory board (0:38) co-op at Brookfield Service, they came and visited today by the looks. I have a hat on my desk. (0:44) And he's staying with them, and he's enrolled in the apprenticeship.

(0:47) Nice. (0:52) I have a (0:54) former student still at Benoît Electric, so I feel like recently, (0:59) not so much from my first year or two of teaching, but my (1:02) third and this year's students, I believe they're all going to stay in the trades. (1:09) I do get a letter once in a while from a student who went into the Army and became a, (1:15) I can't remember what they called it, but he's like a (1:18) general (1:21) carpentry (1:22) electrician.

He learned electrician work in the Army, so if he gets deployed, (1:27) they'll go out and build a base, and he does all the wiring and the masonry and stuff. So yeah, I think (1:34) for the most part, I think that from what I hear, the students are staying in the trade. (1:40) Yeah.

(1:45) And that's one of the, so we have to put together this document called the CLNA. (1:50) And it's basically, it's just all of the data from the school, and we're working on that now. (1:55) And one of the things to do is to reach out to former students.

(1:59) So that would be, that should be something that I do talk about. (2:04) Do you need those questions answered there? (2:08) Yeah, we could take a minute. I mean, I think that we, (2:11) so

(2:13) how can we better train our students to meet our industry needs? (2:18) And I know that just (2:21) from what I know of our students, that our academic skills, (2:28) like ELA and math, (2:33) can always use work.

(2:37) Do you survey like Derek or, you know, people that the co-op? Well, I was hoping to tonight. (2:44) But I mean, maybe like a formal survey? What I can show you is, (2:53) we do give out these (3:04) rubrics. (3:09) It's a work in progress, but we give these to the (3:14) employers once a quarter.

(3:17) And they go through and kind of assess where our students are at. (3:23) And so that is one way that we are doing it. (3:29) Yeah, I would just say like if you were to answer that like on an ongoing basis, (3:35) one thing would be just an open-ended question, right, to (3:39) everyone that has one of your students.

What could we do better to meet your needs? And then that's like a direct line (3:48) feedback. Right. Yeah.

I (3:52) mean, the rubric is good, but you're asking about the things you're asking. You're getting feedback on the things you're asking (3:59) specifically on (4:00) versus a more open-ended. (4:18) From (4:19) employers, yeah.

(4:22) We do get a lot of feedback and oftentimes what they say when they, (4:32) because we have a guy who kind of runs our (4:37) career development. And basically what they have been telling him is, we don't care if they know how to strip a wire or (4:45) mount a box. (4:46) We just need them to show up to work every day and not be on their cell phones and be ready to work when they (4:51) get there.

(4:53) So that's the feedback we've been getting so far. (4:57) So work ethic is what they're looking for. (5:03) That's not always easy to teach, (5:06) but it's something I certainly work at.

I would totally agree with that. (5:11) I think that's really something that's lacking in (5:14) society today with our young people. I can just say for the people that we've let go.

(5:19) We haven't let go. We haven't hired any of yours, but the people we've let go in the apprentice program, (5:24) it's work ethic. People that people are waiting for (5:27) somebody to show up, and they don't show up.

So like one person's dragging the whole team down (5:33) repeatedly. Right. That's work ethic.

(5:37) I mean, the employment projections are high for our area. (5:44) Although, you know, one thing I do worry about, and I haven't gotten a great sense of it, is that, you know, I'm gonna have (5:52) six or seven students from U32 (5:56) in my program next year looking for co-op jobs. (6:00) I'm gonna have (6:02) five or eight (6:03) students from Central Vermont Career Center all trying to get jobs in that area.

(6:11) And I (6:12) don't know all the electricians in Montpelier, you know, and is there enough (6:16) open jobs for 16 new students every year? (6:21) So that is something that I would like to learn more about (6:24) when competing with other tech centers. (6:40) I mean, they always have that statistic that the average age of electrician in Vermont's (6:45) 55 years old or whatever. So I know that there's (6:49) there's room for workers out there.

What can make the program better? (6:57) You know, we talk about the academics. (7:01) Electrician math in itself is not that difficult. You know, it's, there are some basic (7:07) equations, but for the most part, it's adding and subtracting and knowing how to work with fractions.

So I don't feel like, (7:15) for what I teach, it's a (7:19) way, it's not that far off. (7:21) You know, it's when they go to the next level, like go up to see Dan, when that's where the struggle lies. (7:28) But your program's, no offense to Dan, is not to place people in (7:33) VTC or wherever.

It's to put people into the trades. (7:37) Yeah, and so that's my point, is that when I, what the people that I'm putting out there can do the math (7:44) that is required of that particular job. (7:49) Ohm's law.

(7:50) Yeah, Ohm's law, you know, (7:53) recognizing that when you cut four feet off a ten-foot stick of conduit that you're left with, you know. (8:00) So that kind of stuff. (8:03) I'm not sure what can make the program better.

(8:06) I feel like I have a pretty good program, honestly. (8:09) Yeah, I agree. (8:11) Students, they're excelling, they're sticking with it.

(8:17) You know, based on what you told me, it also sounds like consistency, you know. (8:21) So you've been doing this now for four years, and it seems like you've really gotten into a groove. (8:27) I have.

(8:28) So I think that's something that makes the program better, is (8:34) you know, (8:36) incrementalizing and, you know, NEC code and that stuff doesn't change radically every other year. (8:43) So you need to upend everything. (8:46) So I guess the plug would be to make sure that (8:50) RTC management or whatever doesn't, like, (8:52) oh, and we're also going to put some diversified ag students in this program too, because that'll help expose them.

(8:59) And I'm getting that feedback from parents when I conduct parent-teacher conferences, is that their (9:06) students are coming home talking about (9:08) the stuff we do in the shop and how they learn how to wire three-way and how great that is. (9:12) So I think, you know, not only is the content that I have, but I've also (9:18) figured out how to develop relationships with my students so that they're comfortable coming here, and they can be themselves, and (9:25) where maybe in other (9:27) academic (9:29) classes they haven't been able to do that. (9:31) It's also a little different because they're stuck with me for five and a half hours a day, so they have no other choice to learn.

(9:40) But yeah, I feel like (9:41) you know, I'm not sure how to answer this. (9:45) Are you full? (9:47) I have 15 students, so 16 is the cutoff before they would need to hire a para, (9:53) which I was told there was no money for this year, so it was... So you're essentially full? I am essentially full, yes. (9:59) Okay, so that's another... I think, yeah, I'm not hearing anything (10:05) saying that there are any deficiencies that we can point out.

(10:08) Keeping consistency and keeping the class full. (10:13) So I do think that having a full class, (10:17) within reason obviously, if you had 50 kids and just you, that would not be great, but (10:23) more people probably helps to some extent. (10:29) The other thing I mentioned earlier was just having more job shadow experiences for juniors.

(10:35) I feel like (10:38) hearing about all the electrical stuff and all that is great, but (10:42) actually getting them out there to see it is also good. (10:45) Yeah, last year you came to (10:48) the Randolph campus (10:50) for, I think, Tri-Major Day. We did.

Something like that. Yeah. It'd be nice to continue doing that.

(10:56) Yeah. Is that already scheduled for this year? I'm not sure exactly. They've changed things a bit, and I'm not sure exactly how it's working out, (11:05) but I'll let you know.

I'll follow up on that. Yeah. (11:12) There's a lot of opportunities.

We said that looks good. (11:17) The curriculum is up to date. I mean, I'm teaching all the right things, I think.

You know, this is a list. (11:23) So I do the Introduction to Electrical Careers, (11:27) National and State Electrical Codes, (11:29) Principles, Fundamentals of Electricity, (11:32) and then I cover, I do little units on smoke detectors and motors and generators, (11:38) residential construction, which is like how you rough in a house, (11:43) how you put the outlets in, doing a service, working a little bit with renewable energy. (11:49) My hobby is amateur radio, and I have a station here, (11:52) so we play around with that a little bit for fun and just kind of learning.

There's some physics there. (11:57) We do conduit bending. (12:01) This is a new one that I'm still trying to learn more about myself, but just load monitoring.

(12:10) We do OSHA and job site safety training, the AED, first aid. (12:16) TV, telephone, and Ethernet, you know, this was one that I inherited from the previous instructor. (12:22) We don't do a lot of TV and telephone stuff in houses anymore.

(12:27) It's all smart stuff, but so kind of what I've turned this into is just understanding how a (12:34) basic internet setup is installed in a house, you know, what (12:39) more about like what fiber optics are, (12:42) what an internet service provider is. I think that's smart. We talked a little bit about transformers.

(12:49) I myself love doing transformer calculations. It's like literally the most fun thing ever, and I make them do them, so. (12:57) And then we do like resume, cover letters, job interviewing.

(13:05) How can we get the advisory committee to get more involved with our students? (13:10) This could be field trips and guest speakers, which (13:14) Derrick is always happy to do. I just haven't reached out to him. (13:21) I (13:22) don't know if this is necessarily a fair question because not everybody on my advisory board has things to offer for (13:30) students, but I know

you've also said reach out to Norwich Technology, (13:35) and you can find me a solar field somewhere to go look at.

In Randolph, even. Yeah, so there's plenty of opportunities. (13:44) The other one in there to throw up above on six, (13:48) just because lots of people are doing it now, it's a retrofit, but it's installing level two EV chargers.

(13:56) It's a residential service, (13:58) and it basically is you got to get a, I don't know my plugs, J (14:02) something or other. (14:06) Yeah, exactly. (14:09) But it's like, I think a lot of homeowners probably don't feel comfortable (14:15) doing it.

Right, it's just a 50 amp circuit with a plug. Yeah. Yeah, it's pretty simple.

(14:22) Yeah, I would like to get, do that and a heat pump installation. (14:27) I have just buy a couple of kits and just have my students (14:31) fit them up as though they were building them. (14:34) You might not actually ever power them up or charge up the refrigerant, but just (14:39) getting their hands on the pieces and parts and seeing how it goes together (14:42) I think would be a fun thing.

(14:46) Yeah, I mean both of those are something that most everybody's going to have at some point in time. (14:50) Yeah, also in terms of (14:53) smart home (14:55) devices, (14:58) we just had a renovation in a building and (15:02) none of the light switches actually switch on the electricity. (15:06) It's all (15:07) wirelessly communicating to an LED light in the room based on motion sensors and stuff.

(15:15) It's not working that well, so I have a feeling that not everybody knows exactly how to install these things. (15:23) Anyway, it might be something that the students are going to come across more and more nowadays. (15:30) Smart smart devices, so to speak, smart lighting.

(15:35) There's programming involved. (15:37) Yeah, they're still doing a lot of programming. Yeah, the lights wouldn't turn off at first ever and then (15:44) they also did the HVAC controls and they have thermostats wired into their central controller, but (15:54) they didn't (15:55) note the locations when they ran the wires, so now they're just (15:59) turning off zones to see which area gets freezing cold.

So they're all in our winter coats in our lab today. (16:07) We've got to get that worked out. Before I came here, I was working in the Facilities Department at Gifford (16:13) and that's what they were doing is they were tying the lights (16:16) into the HVAC system.

So in the conference room, for example, (16:22) if they detected no motion, the lights would shut off and the air handler would change the amount of air (16:28) changes to save energy. Yeah, and we took a visit there because I'm still friends with them. (16:37) And that was one of the things I talked to them about is the world of control technologies is so vast and there's, (16:44) to me, I think that's a whole really neat niche of (16:48) electrical that doesn't get anywhere the justice that it deserves.

(16:53) But that's what it's all coming down to is how smart we can make these buildings. Yeah, so anyway, it would be good to cover some of that. (17:02) Yeah, I mean, as I've said, there's lots of field trip guest speaker opportunities.

Tomorrow, (17:08) we're going, I'm taking them to the Green Mountain Power Truck Garage in Royalton (17:12) to do a little talk there. We have Brookfield service here. (17:17) I do a lot with the construction program.

So we had somebody come from Cover, (17:24) a non-profit in White River. (17:27) And we go to like Huntington Homes and (17:32) PC construction. We do a big thing with them.

Is that the one in (17:37) like in (17:39) in Berry? Huntington Homes? (17:42) East Montpelier. Yeah, it's like, yeah. Oh, yeah, it's on Route 14 there.

Okay. High-end efficiency homes. Yep.

Modular. Yep. (17:50) Built inside a factory, so it's always (17:53) comfortable, never snows.

Yeah, I've heard that that's a really interesting place. (17:59) It is a very interesting place. They're very efficient at what they're doing.

A lot of their houses go to Nantucket. (18:05) Oh, really? Yeah. They're actually pretty high-end houses.

They are, yeah. (18:10) Not any, it definitely would not save you any money to like build a conventional house. I mean, they are (18:18) several hundred dollars a square foot.

Yeah, they're not cheap, but they're very efficient. (18:22) Yeah. And they look nice and they got a lot of different configurations.

(18:26) They can build them basically from the inside out, so like (18:30) or the outside in. (18:32) So like stuff can get spray foamed from the outside because they're not putting the sheeting on right away. (18:38) You know, just the way it's built is so much tighter.

(18:44) Speculate about what the future holds for this occupational area. I mean, it's (18:51) area you represent, I think. (18:54) What we talked about is just (18:59) the, what do we call it, the smart devices? Smart devices.

(19:06) And the use of (19:11) energy-saving (19:15) devices. (19:17) I would also say there's a lot of old people. (19:20) That's, that's something that I think that question say, please speculate what the future holds in the (19:27) occupational area you represent.

There's a lot of old people doing trades. (19:43) Are there any new trends? How do we ensure staff is trained and knowledgeable? (19:48) I mean, I do my code update class every three years, so (20:01) updating my license. (20:09) Advisory board meetings.

(20:17) Yeah, I think it would be helpful if you could get (20:21) an electrician from Montelier, since you're pulling students from that area. (20:25) Yeah, or some advisory board members as well, so you have some connections with those. (20:31) I should ask Benoist Electric if one of their foremen, who actually has been involved with some of my students, (20:39) would be willing to come down and talk to see what they (20:42) have to say.

Benoist is Barrie, right? (20:46) Burlingham, they're up right by the airport. Okay, and then Norway's? Is it downtown Barrie? Yeah. (20:51) And then Brookfield Service is right in Northfield.

Yeah, so (20:58) Yeah, I was really hoping to get, and I'll send these questions out to the people who didn't come tonight (21:03) to see what their answers are, but I feel like everybody's kind of on the same page. (21:11) Using Brookfield as an example, they have one master electrician. (21:17) Brookfield, or you know, most companies.

Yeah, I do, I think they have one master electrician. (21:22) He might be in his, I'm just guessing, 60s, you know? No, he's actually young. I think he's like 34 or 33.

(21:30) But a lot of companies that have one master, who's in their, you know, if they're in their 60s, (21:36) when they retire, you know, the company can't exist anymore. You know, it doesn't have a master. (21:43) So you're doing great, you know, bringing apprentices in.

Right. (21:47) We've got to make sure that they come journeyman and masters too. Yeah.

(21:51) Yeah. (21:54) You know, one to throw on there too is Suncommon and Waterbury. So Suncommon has an apprenticeship program and (22:03) we actually have, we took a journeyman from there, and he's now one of our master electricians.

(22:14) How about UC Fiber? (22:17) I've done field trips with them. They've been very generous. (22:21) They'll bring us on for a couple hours, and they'll have somebody from each department do a little presentation on what they do.

(22:27) Although, I'm not sure now. They just sold out to a large (22:31) national company. I'm not sure (22:33) where they're at, but (22:36) yeah, that's another good one.

I'm going to put them on there. (22:39) And also the state was putting together a (22:42) fiber optic training course (22:45) similar to the electricians apprenticeship that was like an 18-month (22:50) thing, and I don't know if that ever got off the ground or not. Have you heard anything about that? (22:55) I mean, it makes a lot of sense.

(22:56) Yeah, it was like you get a job with UC Fiber, and then you, (23:00) one weekend a month, you would go to this school, and you would learn the fiber optic stuff. (23:05) And then when you were done, you were basically like a certified fiber installer. It's like an apprenticeship program.

(23:10) But it was like 18 months. It wasn't four years. Yeah, being an electrician.

Yeah, hopefully fiber is safer than (23:17) three phase. (23:19) All right, well, I mean, we've been about an hour, (23:25) so I would like to kind of wrap things up if anybody has anything else that they want to throw out there. (23:31) I would just say maybe somebody from Green Mountain Power (23:35) might be helpful.

(23:36) You know, when I was setting up this field trip, (23:45) I used to just call directly down to the guy who oversaw the day-to-day operations in Royalton, (23:52) and he said he's no longer allowed to talk to me. Specifically, I have to go through Green Mountain Power's HR department. (23:59) And what the lady told me was that (24:01) there are so many people applying for Green Mountain Power jobs, and (24:06) the amount of jobs that are open.

(24:10) She basically was like, we are discouraging tech centers from telling their students to become linemen, because (24:17) for the two job openings they get a year, there's a hundred and twenty applicants. So I was a little disappointed with (24:25) Green Mountain Power in that aspect. (24:28) But, I mean, if you could put down that, I mean, whack.

(24:34) Yep. Washington Electric. That's a good idea.

(24:38) If you're doing central Vermont, then that's a good idea. (24:40) I do actually have a former student who did the linemen school in (24:45) New York somewhere. Somewhere outside of New York City.

(24:49) Remember Finn? Yeah, he went and did that. (24:52) And he's waiting to get a linemen job, and he got a job working for Eustis Cable to get experience (24:57) working on poles. So he's (25:00) working with the trade that he went to school for, but he's not a linemen yet.

Yeah. (25:06) For those students who want to move out of Vermont, (25:09) I think there would be a lot more jobs in the linemen industry in the South, (25:14) the West. (25:16) But it seems like a lot of people just want to stay here, which is good.

(25:22) Okay, anyway, I just thought that would be another option for advisory board members. (25:30) That's good. (25:31) Okay, so yeah, I just want to say, I think you're doing a great job.

(25:36) I think the program's in really good shape here. Yeah. (25:39) So thanks for that work.

Yeah, I appreciate it. (25:42) Well, it's also having you guys come in and help guide me and make suggestions. (25:47) I also think they shouldn't take this room away from you.

(25:50) Seriously. Yeah, I mean to be able to like let that be the (25:55) build room, and this to actually be a little more (26:00) Let's just take a quick walk over there, and then I'll let you all get going home. (26:05) Please fill a plate.

