**Meeting Minuets for the first meeting of the Citrus College UAS Degree Program Advisory Council**

Thursday, March 28th, 2024 10:00 am

Zoom meeting ID: 860 5770 8965

**Welcome (Ryan Woolford)**

**Introductions of each member**

Tommy Reyes

00:01:31

Right. So I'm Professor Tom Hayes. I teach architecture and drafting here at Citrus College.

been in the architecture game for over 20 years. And we're starting to see a trend of using drones and architecture, specifically for monitoring like construction as well as

identifying potential parts of a structure to rehabilitate, or maybe even replace. And so

I think drones must be part of Citrus College, and that's why I'm here.

Henry Reardon

00:02:25

Yeah, absolutely. Thanks and thanks for this opportunity. Ryan, I appreciate being asked to be a part of this. So my name is Henry Reardon. I work with drone deploy. We are a drone mapping and really greater reality. Capture software tool. If you don't have familiar familiarity with drone deploy happy to. If you reach out directly to me. I can kind of show you the ropes, but I've worked with Ryan and one of his other courses. Along with Rebecca Lehman from our team, who is on here as well. I think

I have a background from the construction industry, working in industrial construction before drone deploy as well. So kind of have both sides of the construction coin. So

and I remember from school that our program had a similar advisory council like this that really kept the course content up to date and relevant. So I was. I was excited to be a part of this. So thanks again. Good to meet everybody.

Miguel Cabanas - City of Azusa

00:03:32

Sure. Good morning, everyone. My name is Miguel Cabanas. I work for the city of Azuza. I manage the engineering division.

I was happy when Ryan asked me to participate in this committee. Because.

I I've done a lot of work with drones, but I've never been the pilot of a drone so I'm currently working on getting my 107 licenses. But I am a civil engineer by trade.

I also passed the land surveyor test by so last year. So again, I'm a surveyor professional engineer background in land development and design. I'm currently employed at the city of Baza, and I manage the engineering division.

marshall

00:04:26

Yeah. So I currently teach at Mount San Antonio College. I was teaching basics us now. Teaching advanced teaching with Ryan alongside. I come from industry mainly so worked at DJI and worked at air map. worked at drone up so I'll leave it at that. Leave some time for others.

Terry Adams

00:04:51

Hello! I'm Terry Adams. I work for Citrus College, and I work with Ryan. I manage career technical education, grants, Perkins, and a strong workforce.

Robert Goodman

00:05:10

Hey, everybody! My name is Robert Goodman. Everybody calls me Bobby.

I teach the Wildland Resources and forestry program here at Citrus College, along with the natural history and a bunch of other bio stuff.

A lot of my students who go through this program

are utilizing drone technology when they go out in the fields to do assessments, wildlife plants, whatever.

I think this is the way of the future, and I am excited to be part of this advisory committee. And hopefully, once this thing gets credited, I may include one of those classes in my certificate. So

there's a little bit of bias on my side because I want to get forestry connected with this.

Manny Guerrero

00:05:53

Hi! Good morning.

So my name is Manny Guerrero. I'm with Citrus College. I'm there. It supports Level 3. I handled their networking on campus. I have been flying for almost about 10 years now I got my 107 license. About a year ago I went through the drone program entirely.

but I have my own it business as well, and I included Drone flying with it. I've been doing a lot of surveying with it. I usually go to sites. Do a lot of surveying with it, and

all the skills that have become necessary are essential to this. So seeing this grow to the college is essential. Being part of this development is essential for the students. This is a developing field. Happy to be here.

Rosemary Carvajal

00:06:48

Sure. My name's Rosemary Carba Hall. I'm a GIS. Supervisor. I use drone deliverables in my work. And I've taken several courses at Citrus with Ryan.

Stephen Meyer

00:07:23

Yeah. Steve Meyer.

I'm a police sergeant where for the city of Irvine Police Department, down in Orange County.

and Drone team leader for the UAS team. doing all the things that a first responder agency would do with drones. My personal. drone niche is forensic mapping. So accident scenes, crime scenes. although we do well in fire response with Orange County Fire Authority and some land movement stuff volumetric amount analysis for our Gis and Public Works, Orange County. I'm also up in the private sector and an accredited accident reconstructionist.

So I provide the deliverables for the forensic diagrams for traffic collisions being litigated in the private sector.

Alicia Lopez

00:08:14

Hi! Sorry! Yes, I am. I am using my mobile so I couldn't find the button at the bottom to mute myself. But,

Alicia Lopez. I am a career pathway specialist. I manage Cte Heights articulation. So my hope for this is, once we have this up and going we can track some, or I'm sorry. Map some pathways from the K. 12 to this degree. Thank you.

Rebecca Lehman

00:09:13

Sure. Yeah. Just joined this call. Support our education program. And Henry's taking the lead on our construction programming specifically, but yeah, nice to meet everyone.

Jon Gin-Monterey Park Fire

00:09:29

Yeah, I'm here. Sorry about the delay. Yeah. Good morning, guys. John Jen Monterey Park fire. Captain there drone pilot 107 since it first came out. Heavily involved with our user urban search and rescue, and also a part-time faculty at Rio Hondo Fire Academy and Verdun Fire Academy.

Nick Paulson

00:09:56

Hey, everybody? Oh, lighting! It's going to be impossible for you to see me. I'm back late. But Hi! I'm Nick. I teach real estate and business here at Citrus College on a panel with Ryan and Tommy this last week. So as far as my experience, my personal experience with drones. Not a whole lot, though. I will say we've done some appraisals, especially during Covid. We saw that appraisals started being done using drones a lot more than desktop appraisals where the appraisers aren't going to the property. But they're able to get pictures of the inside and take their look over the top of them, and get enough information to effectively do appraisals more so on the commercial side from the residential side. But it just seems like COVID-19 sped everything up. The trends that were already happening just got accelerated. And it seems like drones are. I'm going to be utilized there. I mean real estate agents using drones for pictures over top. And I'm getting a different angle for selling properties. But I see the application on the appraisal side. Pretty gonna be pretty prominent moving forward again. What Covid did was it accelerated it? Now there's no need to go back. We all got used to that as the standard so it saves people. Time saves people money, and all of a sudden appraisers can have a much larger reach on the places they could go and appraise. So I see that being a pretty big part of the business moving forward, and I just love cte doing stuff I just like to see and have programs happen where you know, kids were like, I don't know if call just for me can start saying, Oh, here's a program for me to be able to go out, make some money doing something interesting to me. So love to be a part of it. Usually, I think Timothy Durfield's going to be the one on these calls. But he couldn't make it today. So I'm filling in for that. So Hi, everybody.

**Attendees**

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| --- |
| Robert Goodman rgoodman@citruscollege.edu |
| Manny Guerrero mguerrero@citruscollege.edu  |
| Adams, Terry tadams@citruscollege.edu |
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| Alicia Lopez alilopez@citruscollege.edu  |
| Nick Paulson  |
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| Rosemary Carvajal rosemary.carvajal7@gmail.com  |

**Overview of Degree Program**

Discussion on the success of non-credit and the reason for developing the degree program

Discussion on the progress of the curriculum

Review on curriculum, software, technology, and industry focus

**Advisory Members Input Questions**

Projections for jobs in the industry (What do you see in the next year, two years, and five years for jobs in their field?)

Perspectives on needs from industry and internship possibilities

Need for field trip, guest speakers

Sources of funding

Collaborations with community

Collaborations with industry

Ideas for new courses

Have you explored adding \_\_\_\_\_\_\_\_ to your curriculum/lessons?

Are you including \_\_\_\_\_ in any of the courses offered?

Additional other courses to explore? Industry trends? Events?

Other areas we should explore

Terry Adams

00:22:17

I just had a question about the comment you made when you were describing UAS 102 as not a standalone class, and I just was a little confused about what that meant.

Ryan Woolford

00:22:31

Yeah, so. I would say, not at Citrus College, but at other colleges, you would find a GIS class, usually in a geography department, a geology department, or potentially, even, you know, engineering. But GIS on its own is typically how it's offered. It is a standalone class working with, you know, typically Arc, Gis, or Arcmap software we would likely want to be specific to drone operations for GIS, and drone data collection and not go too much into all the other applications of Gis that could be a semester themselves. In in in content. I would want it to be very focused on GIS with drones in mind. So I think that would be the only difference between a typical GIS class and one that I would hope to offer in this drone program.

Terry Adams

00:23:37

And if this is not the time for you to answer it, cause you're going into it. That's fine, too. So given that, 102 is not a standalone class, but it is covering GIS operations. Would a student have to take a GIS class first, to be able to, as a prerequisite, get into 102?

Ryan Woolford

00:24:03

I don't know if we have a standard local GIS class. I know we have one in our. I believe it's so, Robert, you would know better than I would if it is specific to while in firefighting. or whether it is a standalone GIS class. I don't believe it's a standalone.

Robert Goodman

00:24:28

It is a standalone class. Anybody with interest in GIS can take the GIS, and he has currently offered on every semester, fall and spring

Monday and Wednesday evenings. What I'm looking at is it's one of the classes that is required for the certificate of achievement and well in resources and forestry and the associate's degree.

What I'm looking at is maybe selecting one of these classes to be one where they take the 6 Forestry classes, and then they have the option of doing the GIS and or the drone class.

But I like this 102, where they can get both the drone and some GIS components to it.

Rosemary Carvajal

00:25:10

Ryan.

yeah. speaking from a GIS background, and then my education in GIS. I would have a

a prerequisite of taking a GIS basic class just for any understanding.

Ryan Woolford

00:25:25

Yeah, no, I agree, Rosemary, I agree, Robert. So now that I know that that's a stand-alone that we offer at Citrix. I would, I would agree. I would say that that's something that I wanna include as a either prerequisite or as a

a part of the degree itself. so that a student would have to take the standalone gis along with the you know the core, the core units, you know, of the us classes. so either we could have it

where were they required to take it before, or they're required to take it at some point during the degree. But since we have it, then there's no, there's nothing I see about having a standalone GIS class in this program since we already have one. So it would be perfect to just say. let's include it. So I agree. Yeah, thank you. Rosemary.

Alicia Lopez

00:26:22

Ryan. I have a question.

Ryan Woolford

00:26:23

Yeah.

Alicia Lopez

00:26:24

So for the near course, this is similar to what the station department does. Yeah. The program has that they are. The student could enroll as not credited for 8 weeks, and then, if they continued to need to become credit, is that correct?

Ryan Woolford

00:26:42

Yes, I believe so. So. What I've

talked with Yvonne as well as Dean Matthews about the possibility that this could be a class. That is both. you know, NC. 107, and the one on one class at the same time. because if we can write it as a mirrored course, then a student could potentially take it as a non-credit and get a non-credit pass. No pass. or they could take it as credit and receive a grade. There would be some different components to them in terms of, you know. writing requirements, maybe the amount of time outside the handouts that they would have to complete and curriculum-wise.

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Alicia Lopez

00:27:47

And the last question, I see the 1 50, the drone lab. Will there be prerequisites to take? That? Would that be like the last course in the certificate or something?

Ryan Woolford

00:27:58

What do I foresee cause? That's a great question. It could be that we have a lab class that is repeatable where students use that class as a way as a method to get logged flight hours. Because that's a really important thing for their industries is that they have a record of their flight hours and that lab class would be perfect for them to train, and get logged. Hours

have some time behind the drone controller and hone their skills.

It could be that it's something that they work up to. It could also be something that if we don't intend to mirror the 107. We could mirror that with another noncredit class as well. So there are a few options there. there's definitely. you know, not a solid decision on my part as to what we're gonna do with that drone lab, because we could have students bring their drones in

and have it worked out to where that's a time that you know, people can come in with their drones and train and utilize the facility that we have.

or we could have it set up with the noncredit classes to where they will, you know, basically be using the same kind of drones the noncredit classes use. So it's open-ended.

Alicia Lopez

00:29:18

Thank you.

Ryan Woolford

00:29:22

Alright, so I have a couple more slides please let me know. Go ahead.

Tommy Reyes

00:29:26

Right. I think this is a great start. I think there might be a demand for drone repair. Maybe that's something that could be considered down the line. because. you know, drones hit trees, and you know they crash now and then, and if the student is prepared to know how to prepare repair them right away.

 I think that'd be super useful especially if they're gonna start their own. you know, entrepreneurial ventures. and you could probably even team up with Priscilla's pet as well

in terms of creating parts and stuff like that on their own. So there's great potential to kind of expand, too.

Ryan Woolford

00:30:23

Definitely. I would say that we could do it in a couple of ways, because I agree with you that drone repair is very valuable in terms of having a class, and as a skill for them.

We. We've also got the bonus that the FAA offers grants that are specific to any drone program that has a drone repair component and that's only because the FAA does not give out grants just to drone classes. They give out grants to aircraft and airframe maintenance classes. So if it is a drone repair class, then we have the option. We have the possibility of FAA funding. What we could do is we could have that as a component of the US 30 which you know, drone regulations, ethics, crew, research management we could add a a title component of maintenance and repair, or we could have a separate class that is only for maintenance and repair.

I see a hand up, Miguel.

Miguel Cabanas - City of Azusa

00:31:25

Yes, I think. Robert had his first.

Robert Goodman

00:31:30

You can go ahead, Miguel.

Miguel Cabanas - City of Azusa

00:31:32

Okay? Alright, 2 questions. The first question is. is the number of classes set right? Now we have 1, 2, 3, 4, 5, or can the curriculum brew.

Ryan Woolford

00:31:46

Right now we don't have the number of classes set. I'm hoping that after this meeting we can start to see more evolution of what the classes are gonna look like. And we can also. Yes, we could. We could add potential classes. We can consider classes that might be better in terms of title. Better in terms of curriculum. So yeah, there's some, some ability to change things.

Miguel Cabanas - City of Azusa

00:32:13

Okay? And the second comment or question is similar to how we all took college courses. For instance, chemistry right? You will have your lecture in your lab, is there? Would it be too much to ask to add a lab for the pertinent classes that require a lab, and not just one dedicated lab.

Ryan Woolford

00:32:37

So are we talking about lab, class, or lab, facility?

Miguel Cabanas - City of Azusa

00:32:43

Lab class. So could we say, for instance, do one on one class and then designate a one-unit course for one on one lab is that is? I mean, is that out of the picture?

Ryan Woolford

00:32:57

That's a possibility. We could have the 150 repeatable so that if you took the 101 class, you can take the 1 50 the first time. Then you could take it again when you take the 102, so it's possible that we could have it as a one-unit repeatable course. But yes, we could have a component where each class has a lecture and a lab component. So perhaps you know, instead of being a 3 unit course, we could have a 4 unit course that is very similar to what Mount San Antonio College has, where a 4 unit course, is broken down into a 3 unit lecture and a one year lab. That's definitely an option. And so is the possibility that a 150 would be a repeatable class for the lab purpose.

Miguel Cabanas - City of Azusa

00:33:44

Got it. And the last comment is in terms of the mapping component. the capability of drones, I believe. That would be covered inside the 103. Class, right. the application scenario. or where would the student learn to skill, say for mapping or surveying.

Ryan Woolford

00:34:08

I would say the 102 would be the majority of the class very specific to drone mapping. and one or 3 we could definitely look at drone mapping and in terms of applications. But I would say the majority of 102 would be drone mapping.

Miguel Cabanas - City of Azusa

00:34:30

Got it.

Ryan Woolford

00:34:31

Okay, Robert, and then I'll go to Nick after that, because, Nick, I see your question as well.

Robert Goodman

00:34:36

Okay? Just a couple of questions. The first one is, is, can these students take any of these classes in any order.

Ryan Woolford

00:34:45

I would hope so. I would hope that we don't have a specific order but that might be required. So there might be a progression that is required. That I'm not sure about yet. To be honest with you.

Robert Goodman

00:34:57

I've arranged my while in the resources and forestry program, where students can start at any level it I've got it to where and this is something for you to think about, and you don't have to. But I've got it to where a student can actually start and finish the program with the 7 classes within 3 semesters.

Ryan Woolford

00:35:16

Okay.

Robert Goodman

00:35:17

Okay, and I'll be more than happy to share with you. I've even set up my schedule till 2036. That's apparently when I'm going to retire. to where they can start, and finishing within 3 semesters. And you know 4 semesters to complete the associates of Science Degree. If they decide to do in that direction. Okay, I really like Miguel's comment about a lab I would love to see like your one on one where they learn the aerial systems, but also get the flight time right? Which then could be the thing that sucks them into not only going for the forestry certificate. They could also go for the drone certificate or degree, and vice versa. Okay? But yeah. You know, maybe you and I, we can meet next week or sometime, and I can show you my flyers program flyers, all that good stuff to give you an idea of what I think would really help your program.

Ryan Woolford

00:36:12

Thank you. Thank you. I appreciate that.

Okay, Nick. I'll go to you next.

Nick Paulson

00:36:19

Yeah. So I first got I still no light thought I turned the light on it would help. My first question is just the certification process to be in this career? Is there a sort of standardized certification process? Do they have to take a class? Or is there multiple classes. And sort of how does that work? Does that tee up? My next follow-up questions.

Ryan Woolford

00:36:41

So right now for commercial use of a drone the Federal Government would require. A pilot. Get

the 107 certificate, which is a pilot's license is similar to a pilot's license. But it's specific to remote operations beyond that.

We don't have a standard yet. We really don't have a statewide or a night nationwide curriculum to speak of, because every community, college, every online school, every university, is gonna be offering a different version of what they would consider a drone program. And like, I've discovered, you know, community colleges around us. Sometimes they're focused on geography. Sometimes they're focused on aeronautics and photography. Sometimes they're focused in very different directions. But ultimately they're they're teaching, be, you know, relatively the same basic courses. They just might have a different emphasis or theme when it comes to the kind of software and goals of what the students gonna be doing. For this. I would say that. I'm trying to have it vocationally focused to where students can obtain work. And what I'm hearing from a lot of people is that the job market right now? It. It has a lot of people with a 107 certificate but they don't have a lot of people who have shown light skills and have shown that they've gone above and beyond that, that basic certificate to getting some other kind of credential certificate or even degree. So something that shows on their resume as advanced skills log light hours goes a long way to to get them into a job, and I think that a degree program would do even more in in terms of, you know, landing them in the industry that they want.

Nick Paulson

00:38:35

Okay? So then, to follow up with that. So I'm in real estate. We have 5 certificates. 4 of our certificates are only 3 classes. And the reason why we set it up that way is because we were thinking about sort of this, this constant pathways. And if you're a student who doesn't feel like colleges for you. You're looking under certificate. It's 5 classes, or maybe even 6 classes. It's like that's kind of daunting. So what I wonder is, can you cut this to go like, you know, drone certificate, one drone certificate, 2. So you have 2 certificates, which now is 2 things that's gonna show up on their transcripts. And can you make it stackable like that? I think that might be valuable. And honestly, you could have your Nc. 107 plus be in both certificates. You know. Cause that's obviously important. And then, if you do have these different areas for the students who want to go into this type of drone stuff. You could have a separate, you know, so you could sort of split up the certificates. I think there might be value value doing that just because the smaller you make it, that for the students who don't feel like colleges for them, it's now more accessible. It's now more like, Oh, I could do 3 classes, and then my.

Nick Paulson

00:39:45

Right outside of thought about the just. So are these supposed to be 16 week fully in-person classes?

Ryan Woolford

00:39:51

These would be yeah. I would say, to answer your question, to have students that are, let's say, nontraditional in terms of major or not really committed yet to a degree, you know, and and to getting something with like you were saying multiple semesters requirements. What I think, is the best option for them would be to complete the existing noncredit certificate so they could take 3 classes that are 8 weeks long and complete that in just 2 semesters, and they could have a certificate on their resume for drone applications or drone technology. So those certificates exist now, and they offer the students a free community based, you know. No tuition cost no textbook cost option to get that certificate on their resume right now What? What I'm hoping the degree degree program would kind of serve them is the next step and the next level, because, you know. making another short-term certificate would almost be the exact copy of the existing non-credit certificate.

Nick Paulson

00:42:03

Yeah, I'm I'm not super familiar with non credit. We we don't have noncredit on our end. we have like couple of HR classes and stuff like that. But it's it's really not. It's not a big part of our program. But we have our our sales certificate. If they want to be an agent, 3 classes. And then our broker certificate is those 3 classes plus 5 more. And then our degree is basically that plus General Ed. And so it's sort of stacks like that. But I hear what you're saying because you already have a lot of this sort of built out. So what I'm saying might not totally apply and then.

Nick Paulson

00:42:34

Why he does. My initial thought in the flight hours was depending on how much content you could just put it into the class itself. But I think I'm wrong on that because you want it to show up as a separate thing, so they can say, look, I took this class. That was a drone lab class because you're saying employers want to see that specified that I've got these hours. So I had another thought, but I defeated my thought. So, okay, I'm all set.

Ryan Woolford

00:42:58

Well, I definitely, think we could do it both ways. We could have a lecture lab component.

 Let me take this off for just one moment so we can do a lecture lab component where each class has the lecture, and each class has a lab, that can show up on their transcript.

You make a good point that if you have a specific lab class that is just flight hours that'll show up a little bit differently. So there are benefits to both. And I'm not sure what direction you know would be best to go in. So I'm leaving both options on the table. In the short term what I think we might do is have some way of, you know, repeating a lab class, no matter what, or since we already have the noncredit classes, we could have students that want additional flight hours beyond their, you know, courses in this degree program. We could have them take the free noncredit repeatable classes just to simply get more logged hours, too.

So that's an option

Tommy Reyes

00:47:21

Yeah, I think the inspections are going to be popping up pretty soon. Especially with that bridge collapse over in Baltimore. We've got over 45,000 bridges across the United States that need inspecting and drones can do the job. And so I think you'll see some job growth through inspections, at least from the construction

 a portion of it.

Henry Reardon

00:47:50

Yeah, I. We certainly see that across our customer base. So for drone deployment, we kind of have 3 pillars of customers. We have architecture, engineering, and construction. We have

 oil and gas energy sector with renewables included in that as well. And then agriculture is the third. So really, all 3. There's there's sort of 2 pathways. I would say there's being employed by a construction company or architecture firm. And then we see a whole network, and we work with a whole network of independent drone contractor types as well to provide what we sell to our customers as flight services where they can buy credits. And basically by the hour document, we help them document, whatever it is that they're trying to document. So

I think everybody's right that has. I. I don't know if I necessarily have any figures, at least at the top of my head, for projections on growth, but I think there is certainly an ever-expanding growth as technology becomes more accessible and less expensive.

Tommy Reyes

00:49:02

And sources for funding. I know there's a NSA. Grant. There is a conference that we can attend. It's called High Tech. I can throw it in the chat and

they train you how to write up this grant for whatever you need. Ryan, so I'll go and toss it in the chat.

Robert Goodman

00:49:35

I recommend that. You may look into some of the biological consulting firms that do wildland assessment. They use a drawn technology as well, so maybe bring on one or 2 consulting firms, local consulting firms that can be additional advisors to this committee. I can also recommend some of my former students, who are in the industry that may want to participate.

Terry Adams

00:50:06

So actually, Bobby kind of nailed what I was about to bring up, which is, I think, an invitation to employers would be a good move. to have some employers on this advisory. They might be able to give a really valuable perspective in terms of how they're using join drone operators in positions that currently exist. So I mean outside of job projections for people who are pursuing their drone licenses. I know that there are people within. for instance, cities or architecture firms who are doing drone work kind of as an add-on. So I'm just interested in that perspective, and wondering if that would be helpful. As you build your curriculum.

Miguel Cabanas - City of Azusa

00:51:13

Sure. With regards to what additional courses could be added again. If this is a

a wish list, I think that tying the workflow for drones. Photography. it's important. What I mean by that is perhaps adding Autocad, a basic course in Autocad, or any other computer-aided drafting software that essentially would be used to map an area into the method. So again, tying in the workflow would be valuable, because again, once as some pilots, we would, have the ability to fly, but when you can connect it to the workflow. Say of the industry that you would be involved in my case. Land surveying just adds another layer of it making it way more attractive for an employer. If you have both components, the cat and the pilot.

Ryan Woolford

00:52:22

Yeah, thank you for all those suggestions.

 I appreciate all of them because I think they're going to be very valuable.

with that in mind, like ideas for new courses. Does anybody have any suggestions? for any edits or changes to what courses would be on the proposal?

And then

 what about any suggestions for adding different types of curriculum?

Tommy Reyes

00:52:54

I think there is

There's a way where we can set this up to where kind of touching on what Nick said earlier, where you can stack certificates. But maybe in such a way that where different programs kind of like can go to you for a certain certificate. But it also leads to their major as well. So whether it be forestry or architecture. We can tie in a bunch of different majors into your program and your program will go quickly.

Ryan Woolford

00:53:43

Okay, Nick, I see a question. Are most people in the field? Independent contractors are looking for employers. I would say, we have both. We have people who are looking to be independent freelancers. We also have a multitude of jobs that have an internal need to hire drone pilots. For example, Southern California. Edison was formally using contractors from all over the country. Now they are internally hiring for their drone program. So there's definitely both going on all over. Terry. I see your hand up.

Terry Adams

00:54:17

So for individuals that would be pursuing Drone Pilot as a business of of their own, you might include it in the larger degree. Some small business entrepreneurial courses. And I know we have. I. I know we have, like 2 levels. I want to say certificates currently at Citrus.

Ryan Woolford

00:54:46

Yeah, yeah. okay, before I start losing people because of obligations outside this hour, I want to consider that we're going to be looking at 3 things to make an initial vote on voting in terms of what I've presented today. Yes, changes could be made in the future for other meetings, but in terms of what is, you know there right now, as a proposal, whether we want to vote to approve, or whether we don't want to approve of it would be the question at hand. So any last comments regarding additions, changes, or edits to the classes that we would be proposing today before we go into voting? because I don't want to go too much over time.

Terry Adams

00:55:45

I'm sorry I didn't understand the question, Ryan.

Ryan Woolford

00:55:48

So any. So let me go back to the proposed curriculum as it stands today. Does anybody have any edits, suggestions for removal, or suggestions, for, addition to the curriculum?

Nick Paulson

00:56:08

Just clarification is this for a certificate or a degree?

Ryan Woolford

00:56:14

This would be for a proposed degree program.

Nick Paulson

00:56:16

Okay? And can we have degrees with only 5? I don't know how. What's the what's the cutoff for that?

Ryan Woolford

00:56:22

So these would be the core, the core units. We would also have prerequisites. We would also have corequisites. You know, corequisites could be from, you know, different related industries. But as we've discussed, we could have small business classes we could have. Cad classes. We could have. Computer science classes. Wildland firefighting. We have a multitude of classes that could be corequisites.

Nick Paulson

00:56:49

Gotcha and you can use electives, and then that kind of gives you the.

Nick Paulson

00:56:52

Freedom to say, Okay, you want to be an entrepreneur. We got this class. You could use your elected yeah, perfect. Okay? Cool. Understood.

ready to vote.

Terry Adams

00:57:00

Okay? And so as a clarification, then you're asking us if we are voting to agree to move this forward. Is this the course curriculum as it stands? Or were you asking, if was there anything to be added?

Ryan Woolford

00:57:16

Yeah, before we vote to move it forward. I do wanna just check to make sure that everybody's okay with how it's written right now.

Terry Adams

00:57:23

Okay? Because I heard during our discussion questions about adding lab portions to the first 4 classes. And so I wanna make sure that's incorporated.

Ryan Woolford

00:57:36

Yeah. So as it stands right now, it would be a separate lab class. We would potentially have that changed. And we would vote, you know, in in a future meeting, if if the lab is changed to a a lecture lab style for each. But as it would stand today with a 1 50-drone lab. You know. That's what I would be, you know, asking to vote for approval on today.

**Motions (Voting for Approval)**

* Course Curriculum (As they are or with modifications)

Approved Unanimously

* Degree Path Curriculum (As it is now or with modifications)

Approved Unanimously

* Use of Technology in the curriculum (Inside and outside the classroom)

Approved Unanimously

Ryan Woolford

00:58:00

Alright. So I'm starting to lose some people because of obligations, and I apologize. I don't wanna go too far over the 1 h. So as it stands today. can we have a vote to approve

 the course curriculum as they are now, with the possibility, with the possibility of modifications for future meetings to approve.

Terry Adams

00:58:24

Motion, too.

Tommy Reyes

00:58:25

First

Tommy Reyes

00:58:29

Second.

Tommy Reyes

00:58:43

Aye.

Rosemary Carvajal

00:58:44

Aye.

Miguel Cabanas - City of Azusa

00:58:46

Aye.

Henry Reardon

00:58:46

Aye.

Robert Goodman

00:58:47

I.

Nick Paulson

00:58:48

Aye.

Stephen Meyer

00:58:49

Aye

Terry Adams

00:58:50

Aye.

Manny Guerrero

00:58:52

I.

Ryan Woolford

00:58:55

Alright, and any of those that would not vote to approve. So day, nay. and any that would object from voting today that we're abstained from voting today. Okay. alright. So next up would be. unless there are any comments. Let me check. Okay? as to the degree path curriculum as it stands today, so in terms of the degree being the goal separate from the existing non-credit. and there is a core curriculum of drone courses with an addition of electives. prerequisites, corequisites that would get students towards a career path in drones.

Can we vote on approval for that?

Tommy Reyes

00:59:59

Motion to approve.

Second.

Ryan Woolford

01:00:01

Okay. So with your mics off, can we get Eddie?

 Eyes on voting to approve the current degree path.

Tommy Reyes

01:00:13

Aye.

Henry Reardon

01:00:15

Aye.

Robert Goodman

01:00:16

I.

Miguel Cabanas - City of Azusa

01:00:17

Aye.

Alicia Lopez

01:00:18

I

Terry Adams

01:00:18

I

Nick Paulson

01:00:19

I.

Ryan Woolford

01:00:22

Any that would vote against approval with a nay. and any that would abstain from voting today. Okay? And as to the use of technology in the curriculum. So both inside the classroom.

you know, drone, experience with regulations. Simulation software, that kind of thing, and the use of outside-the-classroom drone flight time experience with hands-on, you know, scenario-based training. So that kind of use of technology where we have both an inside component and an outside component can excuse me. Can we have a vote to approve that technology?

Tommy Reyes

01:01:17

Motion to proof.

I second.

Ryan Woolford

01:01:20

Thank you.

 So with your Microsoft, can we get an And I for the approval of the use of technology as it stands today?

Tommy Reyes

01:01:29

aye,

Ryan Woolford

01:01:37

And any that would not vote to approve, but have a nay, on the approval.

and any that would abstain from voting today.

Okay, so thank you so much. I appreciate everyone's participation in this before I end because I know that you all have busy schedules. You have places to go things to do, any questions or comments.

Miguel Cabanas - City of Azusa

01:02:11

When is the next meeting?

Ryan Woolford

01:02:13

So I'm going to schedule the next meeting hopefully for either the end of April or the beginning of May. That's my intention. So about a month from now is what I'm hoping. and we can have more of a set-in term of what the curriculum is going to look like. I will go through the process of kind of, you know, making any adjustments based on this conversation we've had today and trying to include some of the suggestions, the edits that that we've talked about that were, you know, absolutely great ideas from today.

1. **Conclusion**

1. Ryan will schedule the next meeting for the end of April or the beginning of May to discuss the finalized curriculum and make any necessary adjustments based on the feedback received.

 2. Ryan will review and consider the suggestions for adding lab portions to the first 4 classes, changing the lab to a lecture lab style for each class, and incorporating Terry's suggestion of adding a small business class, computer science classes, and wildland firefighting classes as corequisites.

3. Ryan will review and consider the suggestions for adding a drone photography course, a course on tying the workflow for drone photography, and a course on drone mapping.

4. Ryan will review and consider the suggestion for adding a course on drone inspection.