**Intro:**

Ladies and gentlemen boys and girls welcome to the class act that Kauai Community College the show that highlights camp is happening that goes deeper with its professors and students so you can hear why this is where you want to be it's that time let's get it on.

**Teak:**

Well it's another beautiful day here at Kauai Community College I can tell you

the sun is shining outside been a pretty The warm day another great day for another

incredible episode and today I have the incredible pleasure of Sidney sitting down with Emily Broderick she is the biology and marine sciences professor here Kauai Community College thank you for joining me now I'm gonna probably refer to you as Professor Broderick I

don't know what you prefer do you have a preference is it always professor? cool?

**Emily:**

You know, I think it's a funny local culture there's so much within auntie and uncle and you know especially when I was in high school now I graduated in 2004 but it's funny because at that time

it sure was Miss or Mrs. or Mr. that was all it was and it's fun because now since I've started back in college here Kauai Community College at 2018 it is so odd if I don't refer to somebody as Professor you know I feel so interesting

**Teak:**

So, I just want to make sure I get that clear so you teach biology and marine

sciences now you're gonna have to kind of walk me through this one because I'm not the greatest student and that's great because you have a lot to tell me and I want to talk about what specifically is all the things that you teach what is marine science because

that's a big one

**Emily:**

Yeah, I mean there's a lot of different ways we can go in that but tell me what marine science is kind of encompass so start you know just sort of start marine science is using the power of our observation and knowledge and humans and how we explore our marine

environment interesting yeah and just at its most basic check out what's going on under the water and when we say marine we specifically mean you know saltwater ocean water so right we're looking at the organisms they interact with each other and their environment in that watery world that we have a lot of opportunities to check out here right on Kauai very so

that's really what we do and we like to use the scientific method to

understand and ask questions about and explore it and look at it very cool

**Teak:**

Ya know, this might be a funny odd question and I will ask a ton of those but let's talk about does marine biology specifically correlate into what would be the air above?

**Emily:**

Oh in a way specifically definition wise no I think the whole reason we have this

subcategory of marine biology as you're specifying we're gonna be looking at the science and study of life okay in a marine environment nice of course everything is interconnected right from

from a chemical to cellular to you know larger ecosystem-level so you couldn't have life in the ocean if it weren't for the air so yeah that's important to remember that all environments do interconnects on our huge you know earth yes yeah yeah for sure but I think that term we use specifically to talk about hey we're gonna check out life in the ocean right yeah so now I want to talk about your specific classes with what you teach is it safe to say that you guys are going beyond the four walls of a classroom because I assume that marine biology you kind of have to get away from the classroom so yeah so tell me what you take me through a day or a

great day within yours yeah so I'm currently the biology majors just natural science majors would if you're you can be a biology major or you could be a marine science major and you would still currently at KCC take the same course and we do something called cross-listing so you would come in and you would take my bio majors 171 which is like cellular molecular biology and then you would continue if you completed that course to biology 172 now if you're a marine science major you would take that same series because obviously, you have to

stand any level of cellular organization to understand even life in the ocean so we call it Mar or marine science 171 and then you continue to 172 so right now the way that we've dealt with that is you would be sitting with the same group of students that are nonmarine science majors because currently, we don't know what's going on on this island but we don't have people signing up for just marine science so this is one way we've solved the problem if we cross listed it I hope that we can uncross licitly and I can run just a marine science course because we've got plenty to do currently a typical day in my environmental organismal and ecosystem 172 class you're a marine science major or you're a biology major I because marine biology and understanding it is one of my favorite passions but we have so many other cool ecosystems on this island right and like I said it's all interconnected so I kind of will look at even if you're marine science we're gonna do a whole unit out in the intertidal zones out snorkeling on the reef but we're also gonna take you hiking up into ko ka and make you do that PK a trail out to the Ala ke swamp and we're gonna talk about well it's all interconnected so it's kind of a win-win because the marine biology students get to look at how the Lance related to the ocean and then the you know terrestrial or more general biology students will find ways to integrate looking at the intertidal and marine environments and how they integrate into our terrestrial ecosystems so typical day just I think it was last two weeks ago now we did our biodiversity survey in the tide pools down at Salt Pond so my students meet on lab day out there during a scheduled lap time and of course they sign up for and we go out and we survey the different number of species that occur and tide pools as well as how frequently they occur so one way to look at biodiversity in to kind of assess at to not just look at species richness which is the number of different species in a given area but also how frequent they are cuz you could have like twelve species but there might be you know one dominating the area where the other ten there's only like one or two right two of those species are dominating and taking over and that's really going to set how those species interact with each other and their environment so we kind of talked about that and break that up and one of the big things is here in the wine islands especially in Kauai we don't have a lot of information on our intertidal zone so this is an opportunity for students not just to walk out and learn about biodiversity and see our cool unique creatures in one of our great environments here around the islands but also collect data that is needed and we currently am sort of working with DAR the division of aquatic resources and we're talking about ways to integrate the classroom while providing data that can actually serve our county and our school so you know one of the cool things about the community college is we're filling needs and we're learning in the process so it's pretty exciting stuff

**Teak:**

Yeah that sounds incredible I gotta say that my eyes have been open to a lot just in this short little time I think that I might I would love to give it a try but you know I was gonna ask about this what level of prerequisites do students have to have

because I'm not gonna because when you talk about me specifically if you talk to anyone of my professors they're gonna say you know he's a tough one yeah you know I'm one of those special cases that I don't I've never done well in the classroom and it's an incredible miracle that I'm here in college today so I don't know how I would fare but I do want to know how or what specific prerequisites or what should somebody be expected to have

or at least be abreast of when they are thinking about coming into your program?

**Emily:**

Those are really full two things come to mind first of all this is what many colleges for you can be a non-traditional student you can come back after taking 20 years off there you go that you can be an adult you can be someone straight out of high school you could still be in high school we are here for the community and you can try stuff out you could have clear certificate goals or diploma goals and you know transfer on to a four-year college and continue academically your career in research science or in nonsense or you can just take a class because you're interested so you know you're allowed to come in and take my biology or marine science classes and check it up see if you like it see if you don't write it is not this this we're really here for the community at any stage of your learning and depending what really your goals are I'm here to help and I'm here to fill that out and at the very least hopefully you get to learnsomething about biology and the cool life that we have on this planet and particularly on this island but the second part of that is if you're a natural science major or ace in any of the stem major fields which is science engineering technology and math feels which really are intensive science cohorts in that case you know if you're in my 171 and 172 which other two-part series I just talked about being cross listed together you do have to have a co-rec you don't need any prereqs so if you signed up for that class we would also require that you were currently taking a chemistry class okay that makes sense yeah so those you know either way even if it's not really something you don't really like being in the classroom you don't like hard science that's okay you can give it a try right again that's why we're here and you can you know and check that out without feeling like the weight of the worlds on your shoulder hopefully, you come in prepared you do well and then you can decide if you want to continue on or not my favorite things to do is convert people or get them excited you know they come in sort of going oh I haven't taken biology I can't believe I'm doing this or science and saying hey you can do this right so this is a place for you to practice and learn skills and not everybody's good at everything and I tell you what my journey has not been a typical one either into the science so I I feel you and part of the reason I came back to teach at the community college level is because I was a very non-traditional student nice but it was always my passion for understanding life and how it worked in the biological sciences as a biologist but I really came to it in sort of a back-back way so that's what got me into science and learning is biology and marine biology but what keeps me in it is the passion and you know the continual learning and the passion of my students and watching those lights go on as we learn new things and ask me questions

about the world around this so.

**Teak:**

I think there's there's a lot of to address different you know levels and opportunities it's like that's that's why we're here right the science of life biology if it's in the marine environment it's there's always something to learn always impressing us and you know things are constantly evolving it's not an end game we didn't get there and stop it's still going right so it's like it's pretty cool to look at the ways of that manifests and it's that's what keeps me in it for sure absolutely phenomenal yeah I want to touch on something else and not to put you on the spot so don't feel odd if this question kind of gets you a little bit but I do want to know as a person myself with a disability and your classes being so hands-on and so unnecessarily unorthodox but in in going beyond the four walls of the classroom if someone has any limitations so to speak are we able to work with that to some degree I mean obviously because it is marine biology you have to be able to get in the element so to speak but have you do is there ways that you work around different challenges that people may have and so on and so forth

**Emily:**

Yeah that's a really good question and I think it is pertinent when we're

dealing with broader community okay definitely and so when I designed my labs it's really up to the student to say hey I don't feel comfortable doing that let me know and I

always let anybody opt out I am NOT gonna make you go I'm not gonna like you know tie you up and rope you and me what do they do here I went to the rodeo in Waimea I'm not going to mug you and tie and throw you in the water you know I you know when you said take your class I thought all right I you know I I got the humpback whale thing down in the ocean then I can kind of you but if you're gonna try and get my big butt up to alec is WAMP not to say that I wouldn't be so inclined to try, yeah but it might take a little bit more than that right decimal which is what I love about it it's challenging you to get dirty you get muddy and you walk into

many different eco Cline's and climates I was just gonna say going into a place like say the Alec I swamp or even all of the many trails that income is kök' itself it must be pretty incredible especially from a scientists level to see all the different ecosystems that are within I mean you should have seen the fungal diversity last time I was up in Kok alike the mushrooms there's

these bright yellow-orange walk now most look like Belgian waffles mushrooms growing and decomposing all of this like decomposing oh here's that have fallen you know just cool so what we really cover all the major kingdoms and organisms and so it's cool because part

of the advantage of going out as in the study of life is you get to go see it in action and show you the way that it manifests so part of the reason I do think it's important to run do that hard trail is that we get an opportunity to see these unique organisms I mean we have rare species of ferns forest birds you know and then we look at how those nutrients move down

into the reef and we get to see some cool local species of fish and corals that we have here my class just last week Sunday captain Andy's sailing excursions gifted my bio majors and 172 and marine science majors in that class trip so they offered it to us I got to take out the whole class then we did a snorkel and whale watch and we ended up I don't know what was going on but I have done years of snorkeling swimming scuba diving and normally people have

this vision of saying oh there's pots of dolphins I'm gonna go swim with the dolphin’s right dolphins don't care about us right they're not interested in us and if anything they're a little

A bit like let me get out of your way right I don't know what these funny naked primates are right, okay but we were in the water snorkeling over some beautiful reef off of ko ka okay um kind of actually off of Kekaha area so underneath go K that that area of the island great offshore reef over there and all sudden we hear the whistles of the dolphins underwater and a mother and calf move damn close to us in our snorkel group and one of my students jove down and almost was like swimming with the survey the mother and calf dolphins so we do have these unique opportunities when we're out and about and that hasn't happened in 25 years and

there's been times I've done 30 times a day in research studying coral reefs around in the Caribbean and stuff where dolphins you can hear them but they ignore us and these dolphins were curious so that was kind of a fun exciting thing plus captain Andy's gifted us the whole thing so incredibly it's pretty cool that if you come here to this small community college that you have these opportunities those trips are incredibly expensive that people pay for so you know I think part of the unique thing here is you could do something like that with your disability right but I did have students that just didn't feel comfortable getting in the water right they weren't my marine biology majors they were in the biology cohort so cool I let them opt out right but I did want them to do a species interaction lab where they look at the interaction types of two different species on the reef so I said you can you can choose I gave them the lab they can go make the points and they chose to go back to the intertidal zone and sit there and watch this it's a very accessible zone right so there's always ways that we can work with any kind of

disability but that doesn't mean that you have to not experience the unique cool life

we have and learn about it just because you know you don't fit the normal mold

and what you think you should be and that is honestly one of the great things about community colleges we have the flexibility to accommodate that in ways that larger institutions don't well all.

**Teak:**

I got to say is I love it I love Professor Emily Broderick biology and marine science here Kauai Community College it's been a sincere pleasure to sit down with you we'll see you soon all right yes

**Outro:**

Thank you for listening to The Class Act at Kauai Community College the views and opinions shared by the host of any guests are solely theirs and do not reflect the feelings or opinions of Kauai Community College as an institution if you enjoyed listening to this podcast with our professors check out the other episodes with different professors. Aloha.