- [Kent Darr] Hi everyone, this is Kent Darr with the Office of E-Learning and you are listening to the Flyer ED Podcast. On this episode of the podcast I chat with Sid Gunasekaran. A faculty member in the Mechanical and Aerospace Engineering program to discuss his experience teaching in the studio in open format collaborative learning space litigate. Located right here in the LTC. We discuss the technology enhanced learning activities, the studio allows and we also touched on the impact of a comfortable atmosphere on the students motivation to learn. So without further ado, here's my interview with Sid Gunasekaran. Well Sid, thanks for being here, for joining us at the Flyer ED-Podcast. I really appreciate your time today.

- [Sid Gunasekaran] No problem, I'm glad to be here.

- [Kent Darr] Yeah, and Sid can you, kind of give me an idea today of what you teach.

- [Sid Gunasekaran] So I teach aerospace related classes. All the way from sophomore to graduate levels, classes. So subjects like Intro to Flight, Aerodynamics, Compressible Flow, Experimental Air Dynamics. So anything and everything related to airplanes, wind tunnels, flows basically. That's what I teach.

- [Kent Darr] That's awesome. Yeah, and what got you interested in that initially? Like why did, why aerospace?

- [Sid Gunasekaran] So, I think, I always been interested in aerospace. Growing up I wanted to be a fighter pilot back in India.

- Oh, wow.

- [Sid Gunasekaran] So I joined a military school, who train students right from sixth grade through 12th grade and they train you like what they do in a military school. And then by the end of the 12th grade you get to take an exam and a medical and a physical and then you get to join the military forces. So I joined that school in sixth grade, And then by the time I got to 12th grade, my eye sight was poor, practically blind without my glasses. I couldn't join the Air Force. I could have gone with Navy or Army. Now that's not a school that's a joining the Air Force. So I decided to do the next best thing. If I can't fly one, I'll make-em.

- [Kent Darr] Wow, very cool.

- [Sid Gunasekaran] So, yeah.

- [Kent Darr] So, even though you're not flying it sounds like your kind of working in your dream job.

- [Sid Gunasekaran] Yep, yep, yeah definitely I would say so.

- [Kent Darr] Very cool. Okay well, let's talk today about your experience in the studio and the learning teaching center. So you've taught there before.

- [Sid Gunasekaran] Yes, I taught there last semester.

- [Kent Darr] Okay you taught there last semester and what class did you teach there?

- [Sid Gunasekaran] I teach or I taught aerodynamics.

- [Kent Darr] Aerodynamics, okay.

- [Sid Gunasekaran] Aerodynamics for senior, or no. So it's for a grad student. It's a grad class, it's a 500 level class, Aerodynamics. Yeah, I spent a semester there and I loved it. And I enjoyed being there.

- [Kent Darr] That's awesome. Can you briefly describe for our listeners, what this studio is, if they haven't seen it before.

- [Sid Gunasekaran] So the studio is a very open environment where you go in and then you have glass walls and you have a, you have 10 feet white boards all around on other two sides, and the other side, you have a 15 feet, touchscreen. Basically it will allow you to interface, directly and physically it's a touchscreen. So students can go and interact with the canvas and also they can share their screens. So whenever we do a group discussion or something like that, they can type notes on their computer and then it'll actually show up on the canvas.

- [Kent Darr] Wow.

- [Sid Gunasekaran] And what is more interesting also is that you can, hook up your PowerPoint presentation, if we have slide shows and, and it'll show up in the 15 feet screen. Now I had a blast creating a, 15 feet power point presentation and that's a, yeah.

- That's pretty fun. Yeah.

- I never created, I never done that before and that was awesome. That was really cool.

- [Kent Darr] Very cool.

- [Sid Gunasekaran] And having the ability to actually have side by side, visualizations is, pretty, it's pretty affective because on a regular slide show or concepts, you can just do one slide after the other but here, in comparing two things, you can have one either a video or picture or something on one end and then you have on the other side. And you can draw parables and draw comparisons between these two things.

- [Kent Darr] Wow. And that was very affective as for now but it's, that's, that's, you know,

- [Kent Darr] Yeah.

- [Sid Gunasekaran] That's what I liked about the space.

- Yeah, I see. It sounds like the technology in there really enhances,

- [Sid Gunasekaran] Right. the ability to teach in dynamic and new ways.

- [Sid Gunasekaran] Right exactly.

- [Kent Darr] Can you like kind of describe some of the opportunities, you kind of did that already ...

- [Sid Gunasekaran] Right.

- [Kent Darr] But kind of describe some of the opportunities that this studio presents you for your classes.

- [Sid Gunasekaran] Right, so I can give a good, an example where I had the students direct with the cameras directly.

- [Kent Darr] Okay.

- [Sid Gunasekaran] So, we covered our topic in Aerodynamics called vorticity and then, and total pressure lost. So I put a diagram of the wind tunnel our, the wind tunnel that we have with the University of Dayton. So an entire 15 feet, 15 foot screen and what I have the students, divide into groups of two. So I had about 10 students. So it was not a big class. I had 10 students and I divided them into groups of, two so there are like five groups and I asked them to go to the screen and actually shade or point or draw the areas where they expected total pressure loss to happen. So when the students actually ... I have a video of that as well, I could ...

- [Kent Darr] Yeah. I'm happy to share that with you.

- [Kent Darr] Okay.

- [Sid Gunasekaran] So when they go to the screen and then they sorta of interact, they talk to each other and then they can a draw, or maybe it's over here not around the inlet or around the collector, or here, maybe along the walls, there's a bound layer growth. So, it allowed them to think big, or think broadly, or think out load.

- [Kent Darr] Yeah. That, it's a good interactive tool, where they can interact, draw where the vorticity will happen, draw where the total pressure loss will also happen. I guess it, it provided a more wishful and more interactive way for them to understand the drawing.

- [Kent Darr] Yeah.

- [Sid Gunasekaran] Once they do that then I know I, I have them standing around the screen and then I talk to them. Okay we'll go over the regions that they shaded and we talk about, okay why do you think

there is a lot of pressure lost, why do you think there is a, there's a production of vorticity there and what we can do to avoid it. What happens if you change this design this way?

- [Kent Darr] Yeah.

- [Sid Gunasekaran] So that, in all that will allow them to, to understand not just in a paper drawing but in a more big broader way that, okay, this is what is happening.

- [Kent Darr] Yeah.

- [Sid Gunasekaran] Right.

- [Kent Darr] Yeah, it almost allowed you to show them

- Right.

- [Kent Darr] in a more true to life way what

- Right, exactly

- [Kent Darr] the challenge is that they would be, encountering would be.

- [Sid Gunasekaran] Right, right. On the other example, when I ... I do a lot of group discussion in my classes.

- [Kent Darr] Okay. Sort of get them thinking about the topics that I'm gonna talk about. So I don't just go in and start speaking. I always set some context to what I'm teaching, and the best way to set context, to let students think about what the concept is and let them share what their understanding is in the beginning and then build on from there. So when I had, I'll have some group discussions in the class, I ask everybody to share their screens on the,

- [Kent Darr] Okay.

- [Sid Gunasekaran] On the canvas, and whenever they talk in groups I ask them to type it and then they can see the points on the screen.

- [Kent Darr] Oh, cool.

- [Sid Gunasekaran] So they can whatever, it's a screen mirroring so, when students, click share screen, they share their entire desktop screen on the big canvas. It's wireless so ...

- [Kent Darr] Oh wow yeah.

- [Sid Gunasekaran] They can share it over there. So I have ...

- [Kent Darr] They can share multiple screens at once.

- [Sid Gunasekaran] They can share multiple screens. So I have five student groups and then, I have five

- five screens. Wow so there's a lot of power there.

- [Sid Gunasekaran] Right, right, right, right. You can share screens and, when they type, I can see them typing. I can see them go through and discussing, and gather points and all that. And what was, what I also did is that I also ... The class involved a lot of programming and coding as well. So in class I asked them to code some few things, just to get them started, on something, on this code. So students were struggling with the, a little bit parts of the coding and they didn't know how to, how to construct, the program. So I asked them to share the screens again. So I got five screens and then, well I think this time I ... They might have shared in their individual screens because I remember seeing a lot of their screens.

- [Kent Darr] Oh wow.

- [Sid Gunasekaran] You can share many screens as you want.

- [Kent Darr] Wow.

- [Sid Gunasekaran] Yeah, and then, so what it allowed them to do is not only it allowed them to see their screen on the big screen, or the big canvas, it allowed them to see what the other students also did as well.

- [Kent Darr] So it almost sounds like, it's not like you're doing anything unique.

- [Sid Gunasekaran] No.

- [Kent Darr] In the sense that, if you were in a regular classroom, you could do the same thing.

- [Sid Gunasekaran] Right.

- [Kent Darr] You just wouldn't, have the ability

- Ability to cast.

- [Kent Darr] to cast the the screens up there.

- [Sid Gunasekaran] Right, right.

- [Kent Darr] That allows for, some more relevant and real time ...

- [Sid Gunasekaran] Well think about it, right. What is the, what is the best way to have, 10 screens, have people look at 10 different screens without any crowding or table without crowding.

- Right.

- [Sid Gunasekaran] Or in a, each other, right. So it's hard to do in a conventional classroom, especially the way the classrooms are structured.

- [Kent Darr] Right exactly.

- [Sid Gunasekaran] If you enter a, regular conventional classroom, you have big tables right, going, running along and then, you have the projector, you got the screen, there is very little space for students to move. But here, you got the glass wall that's really thin, to see outside if they are, if it's too much, if, student is a, it's a person, it's a human being, they all have feelings and emotions and they have another life outside right, so.

- [Kent Darr] Yeah.

- [Sid Gunasekaran] And they bring all that into the classroom. So it's not just like they gonna shed them off the door when they enter the classroom right. So it's a lot of these feels, the classroom feels more open and there's a coffee shop near by, it's ... The entire atmosphere is sort of like, relaxed atmosphere.

- [Kent Darr] Mm, Yeah.

- [Sid Gunasekaran] It's open, it's, high ceiling, right. So the classroom atmosphere there are a lot of literature which actually shows a comfortable classroom will go, a long way in actually

- Wow.

- [Sid Gunasekaran] making students understanding. And makes students learn a lot. That way it was very, I say the studio that ... those are some of the really positive points of the studio. I think students really appreciate it.

- [Kent Darr] Well very cool. Thanks Sid.

- Oh no problem.

- [Kent Darr] I appreciate you stopping by and thanks for your time today.

- [Sid Gunasekaran] No problem, thank you very much.

- [Kent Darr] Great, you have a good one.

- [Sid Gunasekaran] Thanks.

- [Kent Darr] Well that's it for this episode of The Flyer ED Pod Cast. I want to thank Sid Gunasekaran for taking time out of his busy week to sit down with me. It was really interesting to hear how he saw the studio as a dynamic learning space for both, its technological enhancements and its aesthetic appeal to the learners sense of comfort and space. If you or any of your colleges are interested in participating in the Studio Fellows program, please contact David Wright at dwright1@udayton.edu. The background chat for this episode, was California Lullabye by Josh Woodward. If you'd like to here this song or more like it, be sure to visit joshwoodward.com. This pod cast has been a production of the Office of E-Learning. If you would like to learn more, send feedback, or schedule an appointment you can reach out by emailing us at elearning@udayton.edu. Thanks for listening and until next time go Flyers.