

Foothill College Geospatial Technology Advisory Board Meeting

April 27, 2018, Foothill College Sunnyvale Center, room 126

Attending: Marshall Ballard, VTA; Anna Costanza, Foothill student; Christine Hansell, Foothill faculty; Seth Hiatt, Santa Clara County Parks; Casey Hiatt, Mid Peninsula Open Space Reserve; Kurt Hueg, Dean of Business & Social Sciences Division; Mary McMahon, San Jose Water Company; David Mederios, Stanford libraries; Allison Lenkeit Meezan, Foothill faculty; Cristina Milesi, CropSnap; Tobias Nava, Foothill EOPS; Thuy Nguyen, President of Foothill College; Teresa Ong Foothill College VP of Workforce; Steve Rodriguez, City of Mountain View; Erik Savage, Foothill student; Cindy Schmidt, NASA Ames; Amber Wittner, USGS; Eric Wittner, ESRI

The meeting commenced at 12:05 pm. Allison began the meeting by acknowledging it was a difficult year for the GIS department due to declining enrollment, cancelled classes, and the internship program being cancelled. This was followed by Thuy Nguyen, Foothill College President, wanting to learn more about this wonderful program, and mentioning our community college ranking by Washington Monthly (3rd in the country, 1st in California) and how the community has supported our school and corresponding bond measures. She then passed out a survey to provide feedback on what Foothill can do to help enrollment.

Christine Hansell commented that the GIS department is amazing, and also voiced her disappointment in cancelling the internship program.

Allison then gave an overview of our programs in comparison to other schools' programs, and noted that we are the only comprehensive program in the area. Diablo Valley College, San Francisco State University and City College of San Francisco also offer programs and we do work with these schools so that our program doesn't overlap/compete with them. Allison also informed everyone about us being low-cost, with high job placement rates. Apple hires from our program, with starting wages at \$30 to \$38/hr. However, declining enrollment is an issue and we need to market this program more. Most students already have a BA, and many of our students already have a connection to Foothill. Our classed need a minimum of 20 students, and ideally should be 30.

Allison then asked for feedback on offering hybrid or online classes or any other ideas to boost enrollment. Steve Rodrigues inquired on other GIS programs having declining enrollment, which was confirmed. Amber Wittner supported the idea of online classes as it should increase enrollment, and Cindy Schmidt confirmed that online classes are a good idea and also recommended doing webinars since she offers webinars with success. Amber supported more webinars as well. Allison did mention that Foothill uses Canvas and demonstrated the Friday webinar that she gives for her Physical Geography class as a model for the GIST classes. The webinar is recorded so students can watch it later if

they cannot attend live. Casey Hiatt and Steve Rodriguez further confirmed that online/webinar technology is modernizing the way in which students learn.

The discussion turned to our current curriculum. Allison explained we have GIST 11, which is a good introduction class, is considered a General Education class for transfer, and is now all online. There is also a CS1A /CSBA class that is now required for earning a certificate and requires knowledge of Python, R, R-shine, and java. The advisory board members commented that java could be eliminated.

Dave Mederios emphasized base-level value whereby Python is more applicable, but student should at least be comfortable in any computer language to be successful. Marshall Ballard suggested adding C+ as an elective language, and Casey suggested incorporating R into existing classes. Amber then recommended Adobe Illustrator knowledge and Casey mentioned that drone experience is important. Dave Mederios shared that R may not have a direct connection to GIS, that Stanford has a drone club that may be a good way to draw students into our classes should Foothill start a club, and also suggested creating hybrid classes that split into different directions.

Steve Rodriguez questioned the benefits of doing an entire class sequence for earning a certificate. Some students may elect to take just a few classes to advance their career, and Kurt Hueg supported having stackable classes since degrees may not be a high priority for students. Allison noted that any certificates must be at least 18 units. Anna Costanza mentioned that she stopped taking classes once she could self-teach herself. Steve confirmed that all classes aren't necessarily needed, and that some students take 1 or 2 classes and then get out. Marshall suggested targeting industries for different educational tracks, and Amber added that having a "GIS specialist" certificate isn't enough, and having a Web-API class would be of some benefit.

For marketing, Allison stated there are 2 groups of students: those in the 25-55 age range, already with a Bachelor's degree, that aren't comfortable with online/self-teaching methods (dubbed 'Sue Student'), and those in the 18-25 age range that are supplementing their Associates degree (Sid Student). We need to add a third group (Sam Student) that are upskilling computer professionals that prefer self-teaching. Also Allison needed ideas on reaching high school students. Dual Enrollment was suggested, where we go to the high schools and teach there, or the students come to us. Also, GIST 11 could be advertised as a "teaser" class to hook high school students. Amber suggested better marketing by showing/creating videos of the GIS career using high school students and Mary McMahon suggested showing the connection between GIS-related work and apps that use this technology like Pokemon-Go. Tobias Nava added that we should make these classes IGETC for transfer, and try and use GIS classes as electives for other programs. Marshall liked the idea of developing "public agencies packets" for specific careers.

For GIS 54A, Allison noted this class could be used for guest speakers to explain different careers, and also record this class for future broadcasts. Amber recommended revamping our GIS website and opening a Twitter account that could be integrated with the website. Marshall also recommended having a LinkedIn account, but Kurt warned that too much social media could drown each other out.

The last part of the meeting turned to various software needed. Suggestions were to keep ArcGISPro, QGIS, and other programs, adding GIS-Earth, but not using GeoMedia Pro. Amber mentioned that she prefers Pro and Google servers to incorporate all platforms, but noted that Pro is a processor hog.

Finally, Program Learning Outcomes were discussed, with the only changes being that we should change URISA-defined standards to something more generic and changing "GIS" to "Geo-Spatial" to better reflect the program. Also, it was noted that our student enrollment was very diverse in that classes were about 50% male/female despite the fact that the profession is about 75% male. Outreach to special populations was discussed with Allison noting several presentations last year to EOPS and OTI groups. It was suggested that a greater connection could be made with the Veterans Resource Center on campus to capture veterans who have experience with geospatial technology from their time in the military.