

Long Beach City College
Computer and Office Studies – Technical Advisory Committee
Fall 2018 Meeting

Date: November 15, 2018

Location: Room AA 201C

Attendees: Mark Haws, SEO Savvy; Bob Gill, Port of Long Beach; Scott Weaver, Schema; Asher Medelez, Eze Castle Integration; Steve Rosenberg, Lakeshore Learning; Lindsey Heisser, LA Chamber of Commerce; Linh Pham, Viant; Brandon Giron, Simple-Green; Hac Le, Kuwait Cultural Office of LA; Harry Meas, Aeontg; Dylan Pierce, Taco Bell Corporate; John Matlock, Aeontg; Alonso Curiel, Department of Defense; Nyariana Maiko, Port of Long Beach; Drew Schneider, Port of Long Beach; Anthony Pagan, LBCC; Al Hassan, LBCC; Kyle Muldrow, LBCC; John Craig, LBCC; Miriam Lynch, LBCC; Zoila Rosillo, LBCC; Dena Laney, LBCC; Garrett Whelan, LBCC; Clarissa Leiva, LBCC; Dana Friez, LBCC; Mike Estruch, Current Student

Phone Attendees: Marie Smith, Data 360 Solutions; George Lerdsuwanrut, Dalton Investments

1. Welcome and Introductions: G. Whelan welcomed the members of the advisory committee and thanked everyone for their support. He provided an overview of some accomplishments of the last year, including LBCC receiving the designation of Center of Academic Excellence (CAE) in Cyber Operations and our national Cyber Patriot win. G. Whelan also told the Committee that we are a SoCal host for the California Cyber Hub's Mayor's Cup, a cyber security city-to-city competition.

G. Whelan also informed the Committee about the computer studies clubs on campus, including the CodeVikings, a coding club; CyberSecurity, which competes twice a year; and Women in Information Technology, which is hosting a Techquity Panel on 12/6/18 to which the Committee members are invited.

G. Whelan also let the Committee know that LBCC is currently running a coding bootcamp, instructed by faculty member Kim Davis. It runs on Saturdays and the participating high school kids have attended the Women in Tech conference. We are looking for guest speakers and field trip options for the bootcamp.

2. Student Presentation: Current student Mike Estruch, who is also an officer in the coding student club, delivered a presentation. He discussed that he came to LBCC for a career change as a Cyber Security student and, in addition, wanted to learn front and back end web development. He showed the Committee his portfolio website, which he created to demonstrate his coding and web development skills. D. Laney explained to the Committee that student assignments include the development of a portfolio website in each class that students can use to prove skills during job search.

3. Computer Security and Networking – G. Whelan informed the Committee that the Department is proposing an A.S. Degree, and Certificate of Achievement, for Computer Security and Networking.

G. Whelan provided handouts that showed the current degree and certificate, alongside the new proposed degree and certificate. The changes included removing BCOM 15 as a requirement and adding it to the choice of electives. It also included adding a new class, COSN 260 to the degree and certificate. The degree and certificate changes are meant to bring the curriculum and structure more in line with National Cyber Watch's model curriculum.

New Class: COSN 260 is a Scripting Fundamentals class that was requested by students who are now currently in the field, and who said it would have been useful to have. It is being proposed as a new class.

Course Adjustments: In addition to the new class, G. Whelan also proposed updating the modalities for all classes in the degree and certificate so they can be taught in any format. The Committee requested clarification about what that meant and G. Whelan explained that classes have specifically approved delivery methods, and that other types of delivery are possible only with new approvals. For example, a class approved as online only can't be taught in person or as a hybrid class. Committee members expressed concern that an all online program would cause students to lose interaction opportunities that develop necessary skills and G. Whelan clarified that the intent was not to deliver all classes on line, but have the option for varying delivery methods as needed.

Further discussions about these proposed changes occurred. D. Schneider (Port of Long Beach) wondered where the people skills were, especially for online. He said he sees a lot of people in tech who have a hard time talking to people. G. Whelan explained which classes have these skills, through activities like presentations and group projects, and went into detail on a capstone project that covers a lot of those skills. Students also enter competitions in groups.

S. Rosenberg (Lakeshore) asked if outcomes were consistent across modalities and if there are significant differences. G. Whelan said there wasn't an appreciable difference, and that the student outcomes are the same in both, with completion rates slightly higher in face to face and hybrid classes. D. Laney said the difference in successful completion of online was about 5% difference. N. Maiko (POLB) said her experience is that many tech people can't communicate to non-technical people and it limits growth.

A. Curiel (Department of Defense) said he did his master's in San Bernardino, and didn't take the communications class. There they had Project Friday, where students were forced to present. He said LBCC does well in creating clubs to get students to do that, as well. Students have to break out of shells and be uncomfortable. Projects and competitions help but they can get too familiar with people in program/classes.

Further Outlining of Changes to Certificate – After the first round of discussion wrapped, G. Whelan continued speaking to the changes in the certificate. It was adjusted to insert stackable credentials. G. Whelan explained the details of the certification, including how the classes map to credentials, and how classes for credentials lead up to the next level of credential. G. Whelan reviewed the outlines for each option, and D. Laney explained how BA students come back for credentials, and that this structure means would be easier for them to achieve.

Reduction of Units – G. Whelan, as part of the revamping of the program, also proposed reducing the number of units in COSN 10 Networking Fundamentals from 4 to 3 to put it in line with the other COMPTIA credential classes.

C. Taylor (Guided Compass) asked for clarification on what the Job Search class included in the program was. G. Whelan explained that it helps students learn how to do search, and provides an opportunity to participate in mock interviews (need industry people to do this).

D. Pierce (Taco Bell) commented that IOT devices are not included, and neither is software defined network. G. Whelan clarified that IOT is covered in one class, and that software defined VM will be added to cloud program that would be discussed later in the meeting.

G. Whelan asked for further input or questions on the proposed new class, course modality changes, degree and certificate. None were forthcoming and so votes were held as follows.

4. Voting for Computer Security and Networking

Vote to approve a new course COSN 260 (Scripting Fundamentals) – All voted in favor. None abstained. None voted against.

Vote to approve update all classes in the Computer Security and Networking certificate and degree to be delivered in all modalities – All voted in favor. None abstained. None voted against.

Vote to approve reducing COSN 10 from 4 units to 3 units - All voted in favor. None abstained. None voted against.

Vote to approve restructuring of the Computer Security and Networking Certificate of Achievement to support stackable credentials/certificates - All voted in favor. None abstained. None voted against.

Vote to approve changes to the AS and Certificate of Achievement course requirements and electives - All voted in favor. None abstained. None voted against.

5. **Web Development** – D. Laney spoke to the Committee about the Web Development program and the fact that it requires constant updates to stay current. She discussed that the program has been growing considerably in the past two years. She told the Committee that LBCC often has CSULB students who pursue our Web Development Certificate because they feel that CSULB doesn't offer enough hands on experience. She went on to say that students in the web development program create portfolios—like the one seen in the student presentation—to use on job search. D. Laney then outlined proposed changes to the Web Development classes, degree and certificate.

Course Adjustments – COSW 230 (Ruby on Rails) is a course that pre-dates D. Laney, as she explained, and is outdated. She proposed changing it to an advanced web framework course, and that a particular framework would not be named so that the course could focus on the most in-demand framework of the year and remain evergreen from a curriculum approval standpoint. D. Laney also proposed changing the units from 3 units to 4 units to keep it in line with the other programming courses. She stated that programming courses are too challenging to complete in just 3 units. D. Laney presented a chart that showed the popularity of Ruby on Rails, compared to other frameworks including React.js, Vue.js, and Angular.js. Ruby on Rails was very low compared to the other three frameworks.

Discussion: H. Lee (Kuwait Cultural Office of LA) supported not focusing on a framework and said that if students know JavaScript well they can transfer the skills to other frameworks.

H. Meas (Aeontg) said that he felt Ruby on Rails teaches MVC which is good for server side coding. He asked if there will be another class to teach that and D. Laney said that we can consider including that, and that we can potentially use the coding club to start introducing new topics to students.

Other Class Changes: D. Laney proposed updating all COWS classes to be taught in all modalities including traditional face-to-face, online, hybrid, and hybrid with irregular meetings. No discussions arose from this.

Discussion: L. Pham (Vian) commented that the focus he was hearing was mostly front end and wondered if there were any API development courses. D. Laney said that there isn't in depth API development because we don't have as many students interested in back end development at this point. As the program enrollment continues to grow, she hopes to be able to add in an additional back end course.

C. Taylor (Guided Compass) commented that APIs are important and crucial. He then asked why we teach an intro to content management systems class. D. Laney said that it's a good course for entry level developers to get jobs and start with. C. Taylor still felt APIs might be more beneficial, as it opens up a world of possibilities about how the web works and feeds into database and front end skills. D. Laney asked if they would need an entire class or if API content could be embedded in other classes. C. Taylor said he thought it could fit into DB programming, but thinks it's worth its own class. D. Laney said this would be researched

and explored. Later in the meeting, C. Taylor says he takes back his comment about the content management class and understands how it serves its purpose.

D. Laney asked for further input or questions on the proposed changes to COSW 230 content and unit changes, and course modality changes. None were forthcoming and so votes were held as follows.

6. Voting for Web Development

Vote to approve to change COSW 230 from Ruby on Rails to JS Frameworks and change the number of units from 3 to 4 – All voted in favor. None abstained. None voted against.

Vote to approve update all classes in the Web Development certificate and degree to be delivered in all modalities – All voted in favor. None abstained. None voted against.

7. Database Administration – J. Craig spoke to the Committee to outline proposed changes to the degree and certificate for Database Administration, including the deactivation of some courses.

Course Removal and Deactivation – J. Craig proposed removing COSP 238 (Database Cloud Technologies) and COSP 236 (Microsoft SQL & T SQL) from the degree and certificate of achievement, and also deactivating them. J. Craig said that COSP 236 doesn't generate much interest, but COSP 237 (Introduction to Oracle SQL & PL/SQL) does.

Course Modification – J. Craig proposed modifying COSP 237 (Introduction to Oracle SQL & PL/SQL) to combine elements of COSP 236 and COSP 238 (recommended for deactivation as outlined above) and renaming it Introduction to SQL. This new class would have intermediate content.

Degree Changes – J. Craig provided a breakdown of classes in the Database Administration degree. A committee member asked if COSP 250 (Introduction to Cloud Computing) would remain the same, as his organization is using VMWare. D. Laney suggesting renaming COSP 237 to Introduction to SQL *Programming*. J. Craig said that we do some complementary work in other classes, and asked the Committee if taking out Introduction would scare people away. C. Taylor (Guided Compass) said it would do the opposite.

S. Rosenberg (Lakeshore Learning Materials) said that COS 25 (Microsoft Access for Windows) could be combined with COSP 38 (Database Concepts). Access is not used as an enterprise level tool but is great for small businesses. J. Craig told the Committee that we buy vouchers for the Access MOS certification exams and that students can get full credit for the final exam by earning the certification.

S. Rosenberg said that VMWare would belong more than Access would. He asked if there were any pre-requisites. J. Craig said that there are no pre-requisites. The classes are stand alone and designed in workshop style with less homework and more in class work.

S. Rosenberg asked if we had pre-requisites for any classes. J. Craig said it was up to the individual program, but that we also want to accommodate current industry workers who come to LBCC for additional certifications to expand skill sets. Pre-requisites would push them away. He clarified that some classes have wording in course descriptions to strongly recommend taking a certain other class before this one.

J. Craig then added that he was also proposing to reduce the number of units from 4 to 3 for this class.

Database Management Degree and Certificate of Achievement Changes – J. Craig also proposed changes to the Database Management Associate’s Degree and Certificate of Achievement. He explained the difference between a Certificate of Achievement and a Certificate of Accomplishment, which comes down to the number of units.

J. Craig provided a handout and reviewed the proposed changes, which include removal of BCOM 15 (Business Communications), COSA 2 (Critical Thinking Using Computers), COSN 250 (Introduction to Cloud Computing), COSP 236 (Introduction to Microsoft SQL & T-SQL) and COSP 238 (Database Cloud Technologies), and the addition of the proposed COSP 237 (SQL Programming).

Certificate of Accomplishment Cancellation – J. Craig also proposed cancelling two Certificates of Accomplishment: Database Administration Specialist, and SQL Programmer Specialist. There was no discussion or questions regarding this proposal.

8. Voting for Database Management

Vote to approve to remove COSP 236 (Introduction to Microsoft SQL and T-SQL) and COSP 238 (Database Cloud technologies) from the program – All voted in favor. None abstained. None voted against.

Vote to rename COSP 237 to SQL Fundamentals, update content as discussed, and increase it to 4 units – All voted in favor. None abstained. None voted against.

Vote to approve changes in the Database Management Degree and Certificate of Achievement – All voted in favor. None abstained. None voted against.

Vote to Cancel Certificates of Accomplishment for Database Administration Specialist, and SQL Programmer Specialist – All voted in favor. None abstained. None voted against.

- 9. Cloud Computing** – J. Craig told the Committee that Santa Monica and about 19 other Community Colleges want to develop cloud computing programs using the same curriculum and structure. Amazon is working with this Consortium of colleges on this project. LBCC wants to participate and is proposing the creation of a Certificate of Achievement. J. Craig clarified that while the agenda lists that we are seeking approval of a Degree, the Department is not ready to put that forward yet and will not be proposing or voting on it.

New Certificate of Achievement – J. Craig provided an outline of the proposed Certificate of Achievement for Cloud Computing with AWS, which includes four classes: COSN 250 (Introduction to Cloud Computing), COSN 251 (Database Essentials in Amazon Web Services), COSN 252 (Compute Engines in Amazon Web Services), and COSN 253 (Security in Amazon Web Services). An AWS certification is possible in each area. The Committee had no questions or major discussion on this Certification.

10. Voting for Cloud Computing

Vote to approve the creation of a new Certificate of Achievement for Cloud Computing with AWS – All voted in favor. None abstained. None voted against.

- 11. Discussion on Industry Trends** - G. Whelan opened the floor to the Committee to share information on trends and technology information. He reminded the Committee that our focus is on entry-level preparation, and asked the Committee about what kind of skills they're having a hard time finding. The following is a list of items that were mentioned.

- Cyber security needs; always looking for people with lots of experience and difficult to find the right fit of people. They get people who are high end architects, but the need is for mid-level and 6-10 years of predominantly hands on experience.
- 10-point protection; forensic tools
- The Port of Long Beach said that some of the most desirable skills are highly paid and as a public agency the Port can't compete with public sector salaries. They are looking for basic skills so they can grow them.
- The Port also stressed that the ability for tech people to talk to non-tech people are severely lacking; they can't articulate concepts in ways that are understandable to non-tech people.
- Networking and security – need for entry level positions. These will be help desk, and they need communication skills, as callers probably won't be tech savvy if they're calling help desk.
- Data engineering/data science, business intelligence – This is a gap. Huge trend. From Facebook to google to AI startups. Understand APIs and review, clean data. Working with data beyond database work. Business intelligence tools, the skill of taking a large data set, manipulating it, looking for trends/anomalies. Business and technical side, can lend to a quick hit curriculum. Make sense of data – critical thinking. Big salaries in big data.

- Project and program management – Retirements coming. Take technical sides and turn into RFP; manage projects from beginning to end. \$110K for entry level. PMI Cert on the Tech. PMP fundamentals – how to scope something, introduce concepts, etc.
- IOT – Big push going forward, and tying to data analytics. Figuring out how to onboard devices, manage certificates; connect to cloud securely. Cyber security is tied to it as part of secure cloud connection. Cloud data analytics also a component.
- Application focus – Not writing brand new code, but super user or understanding warehouse technology. Logistics section.
- Writing skills – have to write well. Clear and concise. Important skill.
- GIS – new push for GIS. Partner maybe with geography. Connects to data analytics, heat maps, analysis (situational, threat, etc).
- Python programming (mentioned by many and stressed by many) – it’s not going any way. Connects to GIS.
- Augmented Reality and Virtual Reality
- Cloud Computing – what we saw earlier is remedial with how things are going. Really big. Business applications.
- Web/Mobile – User experience classes. Connect with students from different departments to also practice working with/talking to non-tech people.

12. Closing remarks – G. Whelan thanked everyone for their time, and asked everyone to take a flier about the upcoming Techquity Event. D. Friez told the Committee that they will hear from her department regarding their interest in participating in Work Based Learning activities, and engaging with interns or hiring.