Owens Community College

Biomedical Electronics Technology Advisory Meeting
Date: Friday, March, 21, 2014
Location: Rm. 130 - IET building, Toledo Campus
Industrial Attendees: Steve Hanenkrath, Greg Allegrette, Al Noller, Jason Rogers, Nathan Miles, Dave Thompson, Roger Phillips, Jake Morrison
Student Attendees: none
Owens Attendees: Paul Svatik, Mike Sparks, Diana Stachowiak, Randy Wharton, Jacey Parks, Janice Skaggs

Topic	Discussion/Rationale	Recommendation/Decision/Action
Call to Order and Review of Previous Minutes	• Diana called the meeting to order at 12:27 p.m. and welcomed everyone for coming. The School of STEM includes six different degrees. Recently added were- Networking and Information Systems Technology and System Security and Information Assurance Support. • Introductions were made.	• Minutes of the previous spring were reviewed and approved. .
Enrollment and Retention Report	• School of STEM 2013 enrollment was 5515 students compared to 5018 in 2014. • Biomed enrollment was 62 students in 2013 and 54 students in 2014. That means a loss of 8 students which is 12.9%. Advisory members were asked for suggestions on how to build up and retain students. • Due to a decline in population, there will be fewer high school graduates in the area which will most likely result in a drop in enrollment. The College needs to be prepared for this.	• The committee agreed that keeping the Friday open lab hours, where students can come into the lab and get help, should continue and that Paul Svatik's encouragement of classroom discussion should aid retention in the Biomed program. • Owens faculty, staff, and administrators are actively looking for ways to retain students.
Faculty Report	• Paul Svatik said that he has 14 students in internships and that he is having a meeting next week with possible biomed interns for next year. • Mike Sparks appreciated the alumni in attendance. There are currently 12 active internship students because two students left between semesters. It is unusual to lose students at that point. He also thanked Paul Svatik for being the glue of the program. • Dean Wharton also said it was nice to see the success of the program indicated by the graduates of the program in attendance. He thanked them for their help in guiding the program. • The state of Ohio is pushing to get the Biomed degree changed from 73 credits to 60. Maintaining accreditation is important, but it will be hard to trim it down that much. A minimum of 15 credits is required for general education. In order to trim down, Comp II and Physics will be dropped.	• It was agreed by the committee that the retention of the program is very much due to the attention that the students get from Paul Svatik and Mike Sparks and that this should continue. • Paul Svatik mentioned that we will need to find yet another person to help shepherd the Biomed students. Finding this person will take time and they will need to be trained. • Adjusting the courses in the program should also help with the retention of students. • ENG112 (Composition II) will be removed from the degree to help reduce the number of credit hours. • BIO121 (Human Anatomy and Physiology) is going to replace BIO211 (Anatomy and Physiology I). BIO121 is geared more toward anatomy and physiology. • PHY151 (Industrial Physics-Mechanics) and PHY152 (Industrial Physics-Heat, Light, Sound) will replace

	According to ATMAE, only three credits of science are needed. Chemistry and the new biology course will be retained. It is hoped to be able to re-classify some classes to basic education to protect the technical nature of the degree. All math, chemistry and biology courses will be safe. • Jake Morrison asked if the EET281 (Network Fundamentals) class was still safe. Diana said yes it is. Nathan Miles also commented on this and asked about the Cisco course. • Paul Svatik talked about 200 level & 100 level courses. • Jake Morrison inquired about a Biomed Security Seminar he took a while back. • Nathan Miles said there are challenges to get the CCNT certification. • Greg Allegrette said the ENT certification is not too in-depth; he questioned why the state of Ohio changed the degree to 60 credits. He is trying to understand how you can drop from73 to 60. • Paul mentioned BIO121and questioned if they really needed a lab.	PHY115(Physical Science for Technology). All of the students in engineering and transportation that take physics will take PHY151 and PHY152. This will be good insurance that the physics sections will run. • The Biomed students will have EET282 (Routing Protocols and Concepts) put into their curriculum and EET212 (Electronic Systems) taken out. Advising staff will encourage the students who wish to take more courses to take EET283 and EET284 (courses to get the CCNA CISCO certification). • Dean Wharton stated that dropping the number of required program credit hours to 60 is due to the Governor of Ohio wanting to get more people through school faster. Diana Stachowiak explained that it's a sticky situation between what the state wants and what accreditation wants; it should be what's best for the students because when they go out into the workplace they are not always prepared. She is trying to fight for 1st year courses to be general education.
Student Report	• The student invited was unable to make the meeting. • The student at the last meeting thought a different biology class for the program should be investigated because the current one is more for nursing students.	• Paul Svatik reviewed the text and syllabus for BIO121 (Human Anatomy and Physiology) and found that it would be a better fit. Diana Stachowiak has completed the curriculum paperwork to get the biology class switched to BIO 121.
Outcomes Assessment Status Report	• Diana Stachowiak referred members to the fall 2012 Biomedical Electronics Student Learning Outcomes sheet. She explained that there are 3-5 things that students should be able to do when completing each course. She is working more closely with the advising team and they are using flow charts that have been created for each program because too many students were self-advising. They also created an "early alert" system -- instructors are to alert advisors about students in trouble so that they may follow up. • EET 101 & 102 (Circuit Analysis I and II) is where we are losing students; good instructors need to be teaching these classes to try to reduce drop-outs and retain students.	• Jake Morrison said that he thinks Network Security firewalls are greatly needed. • Paul Svatik suggested electives that might advance employability. • Al Noller believes wireless pump systems are very important. It could be added to EET211 (Electronics II). • Jason Rogers said he would rather see Networking than VB because Networking is huge. • Jake Morrison agreed about VB and then suggested electronic systems, but the systems course would need to be modernized – would need to discuss small motors vs. large scale motors currently covered in the course. Paul Svatik agreed and suggested Electronics I or

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	• The equipment was updated in the EET201 (Digital Circuits) course. • It was discovered that students were in EET201 with no programming experience. This is being corrected by adding a class. She asked for questions or suggestions from everyone attending. • Diana Stachowiak agreed with the suggestions made but said that as all things evolve and change; if you add something you have to take something out and asked what members would suggest? • Diana Stachowiak said that a taste of microprocessors has been moved to EET 201 (Digital Circuits).	II to have shorter learning on large scale motors and more time on simple motors. • Jake Morrison feels that EET 201 (Digital Circuits) needs to stay because it is very important. • Could eliminate EET212 (Electronic Systems) and have students take EET282 (Routing Protocols and Concepts), which would increase the student's knowledge of network security and reduce the number of credit hours for the degree. • Diana Stachowiak will work with the faculty to try to get security classes into the program but it takes time and might not happen until a year from now. She will have the advisors suggest to current students to take more security electives to make themselves more marketable. She will work with computer networking people to try to get something started in the fall.
Outcomes Competency Validation	• Department Chair Diana Stachowiak reviewed the results of the collection of information from the "student learning outcome spreadsheets". These spreadsheets allow the instructors to collect data on how the students are doing in every section of the courses in the department. Courses that the Biomed students take that were collected from are as follows: EET101, EET102, EET110, EET119, EET130, EET201, EET211, EET212, EET250, EET251, and EET281.	• Members of the committee agreed that the data collection is good and are looking forward to next year's results after the program changes are implemented. • Results will come in for spring of 2014 and will be noted in the Student Learning Assessment Report for spring of 2015, the results of which will be shared at the spring 2015 Biomed. Advisory meeting. • Based on student outcome results and on Biomed Technician duties, it was agreed that EET212 (Electronics Systems) will be removed from the degree and that students will take EET118 (CProgramming) instead of EET119 (VB Programming) to support the expanding need for network security knowledge.
Professional Development, Partnerships and Articulation	• A number of faculty members are re-certifying their CISCO certifications.	• Full time staff member Brian Garza just received his CCNA and staff member Lynn Kendall is studying to renew her CCNA.
Program and Curriculum Enhancements	• The College is moving toward technology degrees with no more than 60 credit hours. 30 credits in basic and general education and 30 more credits in technology.	• The suggestions of the Advisory Committee members will be implemented to reduce the credits in the degree by Fall of 2014.
Equipment, Facilities, and Staffing	• Resmi Krishnankuttyrema may not be returning. The College has generally not been replacing employees that leave. Diana Stachowiak is already looking around in case that happens and we get permission to replace, but she is not confident there will be a full-time biomed instructor.	• If Resmi Krishnankuttyrema does not return the department will start the search for another full time faculty candidate for the program and in the meantime, Paul Svatik will coordinate the program and the internships with the help of Mike Sparks.

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Accreditation Status	• The Electrical/Electronic programs are currently accredited by ATMAE and are in the process of collecting students' work. The accreditation team will be visit campus next spring to look at the work.	• Collection of accreditation materials for the Biomedical Electronics degree is currently ongoing.
Other	• Dave Thompson asked whether the college makes allowances for students that have disabilities. • Jason Rogers asked if Owens helps students with preparing for interviews when they are coming out of school. He recently interviewed candidates that clearly had no idea how to prepare for an interview. • The Internet isn't helping as today's learners learn more through electronics and are, unfortunately, losing their social skills. • Meeting adjourned at 1:37 p.m.	• Jacey Parks responded that based on the student's needs, they work with Disability Services. The student still needs to be able to master the same concepts but on a different playing field to level it out. • Career Services was disassembled so HR is now doing mock interviews and giving resume help to students, but they have to ask for the help.