

I&C & ELEC/TELCOM Advisory Committee Meeting – April 9, 2018

9:30 a.m. – 12:00 p.m.

Career Academy 217 A & B

Attendees: Jason Batke, Jerome Bauer, Ethan Vaagene, Jesse Schumaker, Dave Owens, Stephen Kopyy, Kim Jackson, Ryan Olson, Cameron Fleck, Calvin Aberle, David Moum, Chad Betz, and Mark Stein (phone)

BSC Attendees: Vance Vesey, Carla Hixson, Alicia Uhde, Jerame Novak, Bruce Emmil, Bob Arso, Jim Guerard, Scott Harris, Ken Busch, Byron Paul, Mike Holman, and Courtney Reiswig

BPS Attendees: Cory Mitzel, Dale Hoerauf, and Laura Henkelman

Call to Order and Introductions – Bob Arso called the meeting to order at 9:38. The group introduced themselves. Bob asked the group if they would like to add anything to the presented agenda and discuss. No additions/changes to the agenda were made.

Approval of Fall 2017 Minutes

Ethan Vaagene made a motion to approve the minutes from the Fall 2017 meeting. Stephen Kopyy made a second motion. All were in favor and the motion carried.

BPS Program Report – Cory Mitzel shared next year’s numbers for the electronics program:

1st year electronics student enrollment for Fall 2018- 27 students, 8 from Mandan and 19 from BSC.

2nd year electronics student enrollment for fall 2018 – 15 students.

3rd year electronics student enrollment for Fall 2018 – 11 students.

IT Fall 2018 enrollments:

25 students for Networking

59 students for software

64 students for PC hardware.

Mitzel stated that the numbers are up significantly from last year for IT classes.

Next year, Lee Gullingsrud is going to have his students help fix the Chromebooks used at each of the high schools as a part of the PC Hardware class.

Bismarck Public Schools is still using the “Career Ready” scores.

Dale Hoerauf mentioned that the numbers in the electronics are going down. BPS have changed some things in their schedule with hopes to give more students the ability to take classes at the Career Academy. There isn’t a lack of students, there is just a lack of students signing up so they will continue working on that with career advisors.

Hoerauf also stated that the number of students in the career academy next year will be up by about 200 students up to 1700 students.

Hoerauf also stated that Robotic challenges is the way things are heading as far as student interests.

BSC Enrollment Report – There are currently 10 students signed up for fall as well as 6 more in the queue.

First Year Electronics Program Report – Byron Paul shared an electronics enrollment numbers handout. Numbers have been pretty constant. All students who successfully complete first year received certificate in electronics technology. This helps both BSC (with funding) and the students. Articulation students do not receive a certificate of completion for several reasons:

1. To get the certificate, students need to complete 15 credits of course work.
2. The articulation of credits does not take place until they have received a credit for at least one class they have enrolled in.

11 students are enrolled for fall 2018: 5 Electronics/Telecommunication and 6 Instrumentation and Control.

10 students will articulate: 8 to Electronics/Telecommunications and 2 to Instrumentation and Control.

Mike Holman stated that the number of online students has grown so we now are offering 2 sections of all first year online courses.

Alicia Uhde stated that this year we are seeing an increase of students that are going to take additional courses after completing the first degree. Students who were enrolled in Electronics/Telecommunication are now enrolling in the I&C program. Arso stated that this year, 6 students will be moving from Electronics/Telecommunications to I&C.

Telecommunications Technology Program Report – Room 217

Committee member term updates:

Chad Betz will continue as advisory member.

Pete Fettig not present.

Steve Kopy will continue as advisory member.

Doug Niessen not present.

Ryan Olson will continue as advisory member.

Dan Schilla will continue as advisory member.

Mark Stein will continue as advisory member.

Tom Steinolfson will no longer be on committee. He has moved.

Jason Batke will replace Jerome Bauer.

Arso led a discussion about the Electronics/Telecommunications program objectives from each course. First and second year course objectives were presented.

Kopy agrees that hands on aspect of the course work is needed as it is important. Troubleshooting and equipment are also important parts of all of the lab courses.

Kopy stated that RLC circuits are needed to understand and troubleshoot Switching Power Supplies.

Kopyy stated that if you were to shave off something to expand on something else, shave off some time on Op amps, and add more to power supplies.

Ryan Olson stated that it is important to have a good understanding of basic DC theory for troubleshooting.

Arso gave a tour of our labs to show new equipment and answer questions about our labs.

Instrumentation & Control Technology Program Report – Room 262

Alicia Uhde went over the ICTL enrollment numbers.

BSC has recently signed agreements with USBR, City of Springfield Light and Power, and Wolverine Power. They are all using our ICTL program for their apprenticeship program and, with the exception of Wolverine, will be doing labs on site at their facilities. This is our first run-through with this. We have given them workbooks similar to what we use for Power/Process/Water job shadowing portions. We recommend for them to start right away in May which would give them about a year – with hopes to complete it by April so we can review for those who would like to graduate with a degree. Wolverine does not use the workbook yet – a certificate can be earned without doing the lab portion.

6 online students are slated to graduate this spring or come to campus for summer labs.

ISA Competition – Held just this past weekend in New Richmond, WI. Had another great trip and our teams took 1st and 5th places. The NDSCS team which included one BSC student (alternate) got 3rd place. The competition was a little smaller this year. Faculty get to meet and discuss things while there.

Vance Vesey has been working on making the ISA club an official BSC student organization. Tomorrow will be their first regional ISA meeting.

Vesey and Scott Harris are brainstorming about doing some kind of competition with students and industry at the Energy Generation Conference.

Review 4th Semester course objectives –

- a. **ICTL 235 – Motors and Controllers** – 3 phase motor control course – AC power. Theory and control. Use Amatrol trainers for base theory. End of semester, starting into VFD's. Talking with Siemen's about their smart structure for MCC's. Students do a lot of drawing. Troubleshooting is also a large component. Jesse Schumaker mentioned that BSC is doing a good job creating a well-rounded student/employee.

- b. **ICTL 245 (Controls) and ICTL 255 (Automation Overview)** – Jim Guerard teaches the theory side on campus. Harris teaches the lab side. Focus mostly on Allen Bradley's. Take it from top to bottom. Installation/creation, heavy programming, etc. A little bit of crossover between 245 and 255. Just finished working on Ethernet and now on to analogs. Harris mentioned that a student going through the interview process asked why they spend so much time on P&ID. Vaagene said they like their employees to understand the hardware side of it and then they teach them the processes. Schumaker mentioned that they look closely at personality traits rather than degree level. Dave Owens agreed - most of their interviewing is behavioral based, with trust in the program.

During the third semester, we really push students to get their resumes and cover letters prepared, and to do as many interviews as they can. Vance said less than half the students actually do it.

Calvin Aberle asked if any students have any jobs lined up yet. Typically students that intern start getting hired around this time of year if they did a good job at those companies. Scott said he was surprised at the number of internships offered compared to student that actually accepted the positions.

We are looking for P&IDs and loop sheets to use in class. Things like this would be kept confidential. Vesey asked the group again to consider providing some of those things.

This came up at ISA – instrumentation and control programs are starting to change labs over so that they are based off work orders. Students would start with a work order for the lab and then complete it accordingly. Vesey wanted to see if we could get some examples of work orders that industry folks' facilities are using. We don't want to reinvent the wheel – we'd like to see some things that are actually from industry. This also plays in to creating more of a work flow and that on-the-job consistency. Bruce Emmil mentioned that we can make those types of documents generic and redact any sensitive information.

Date for next meeting: Uhde suggested starting with lunch and having an afternoon meeting – maybe starting at 11:30. That way we could still have some class in the mornings. Uhde made a motion to have the meetings on Monday starting at around noon. Arso made a second motion. The group was all in favor. The motion carried.

For the Fall 2018 meeting we will look at hosting on October 1 starting with lunch at noon and the meeting to follow.

Elect/Vote New Chairs: Stephen Kopyy volunteered to be the chair for the ELECT/TELCOM side.

Ethan Vaagene volunteered to be the ICTL committee chair.

Program Continuance: CTE requires us to vote to continue our programs. Arso motioned to continue the ICTL, ELEC/TELCOM, and BPS programs. Ethan Vaagene seconded the motion to continue the programs. All were in favor. The motion carried to continue all three programs.

Meeting was adjourned at 12:00. Lunch and networking followed.