**Department/Program Review Summary**

**2016-17**

**Department:** Electronic Technology / Automation & Control Technology /

 Advanced Technical Intelligence (EET/ACT/ATI)

**Date of Review:** April 7, 2017

**Review Team Members and Titles:**

Lori Zakel, Associate Provost

Karen Blake, Senior Academic Advisor, Academic Advising

April Carpenter, Associate Professor, Management

David Clark, Chair/Assistant Professor, Dietetics

Jared Cutler, Assistant Provost of Accreditation and Assessment

Dustin Engle, Alumnus, Sinclair Community College

Larraine Kapka, Division Assessment Coordinator, Science, Math and Engineering

David Krasofsky, Assistant Director, IT Systems

Sally Lahmon, Professor, English

Beth Maurice, Senior Analyst, Research, Analytics & Reporting

Heidi McGohan, Program Director, Occupational Therapy Assistant

Erin Neff, Electronics Technician, 3dB Labs

Shari Rethman, Dean, Liberal Arts, Communication and Social Sciences

**Department Members Present:**

Larraine Kapka, Assistant Dean, Science, Math and Engineering

Paul Lawrence, Chair/Associate Professor, Electronic Technology / Automation & Control

 Technology / Advanced Technical Intelligence (EET/ACT/ATI)

Faculty and Staff:

Jake Fullard

Fathi Mohammed

Nick Reeder

Tillie Watts-Brown

**COMMENDATIONS:**

* The Review Team was extremely impressed with what this department has accomplished given that it is not a large department, and is one that has faced unexpected personnel challenges in the past year. This is true of both the Electronics Engineering Technology (EET) and Automation and Control Technology with Robotics (ACT) components of the department. The chairperson does a phenomenal job of overseeing both components, and both he and the faculty deserve a tremendous amount of credit for keeping the department moving forward in the face of these challenges.
* The department’s focus on students really stood out during the meeting with the Review Team – many members felt that from the self-study alone it wasn't clear the extent to which faculty in the department go above and beyond for students. It is truly a student-centered department. It was said that once students get past the introductory courses in the program, they stay in the program, and the support they receive from faculty is a strong factor contributing to this. It appears that students in the EET and ACT programs get personalized support and attention from faculty in the department, which goes a long way towards retaining and eventually graduating these students.
* Even though the department is relatively small, they do a tremendous amount of work attempting to recruit students to their programs. Their outreach to local high schools deserves special mention – while it entails a great deal of time and effort on their part, it speaks well of their determination to attract more students to their programs. The department can point to an extensive list of local high schools that they have cultivated relationships with. This is particularly important given the prevailing misconception that there are no longer jobs in manufacturing – outreach to high school students helps combat this misconception in time for high school students to realize that manufacturing is a viable career path with the right education.
* The department is in touch with local employers, and know what they need. The self-study specifically references how Advisory Board meetings have been used to assess how well the department is meeting the needs of the community. The fact that they get so many requests from local employers for our graduates speaks to the quality education and high level of preparation that students receive in the program. With such a strong demand for workers with the skills that this department provides in both EET and ACT, the region is fortunate that the department is so strongly committed to attempting to help meet those needs. The department deserves high praise for being so aware of trends in industry needs.
* This department also deserves a great deal of credit for being so proactive in getting internship opportunities for their students, which often lead to employment. There is no better way for Sinclair students to get a foot in the door for employment than internship opportunities, and students benefit immensely from the department’s focus on internships.
* The department also deserves commendations for the work they have put into developing courses at Courseview Campus, attempting to meet industry needs in that area. The Industrial Maintenance certificate has the potential to bring in a great deal of enrollment in the area, and the same is true of many of the department’s other offerings. The department’s work with Festo in the Mason area is also highly praiseworthy. The department is doing some exciting things in Warren County.
* The Review Team was very impressed by the analysis of proficiency exam results for EET students that was provided in the Appendix. The department took the time to review scores and thoughtfully analyze what the results meant in terms of opportunities to improve student learning and future areas of focus in instruction. This is the kind of analysis that all departments should engage in when reviewing exam scores.
* The department was very candid and forthright in discussing opportunities for improvement, which the Review Team really appreciated. For example, while reviewing course success rates in the self-study document, the department frankly admitted that “the department needs to improve the completion percentage…an increase in individual course success rates in the lower level courses is really needed.” This self-honesty allows the department to clearly see what its best opportunities for improvement are, and where it can best help students improve their learning outcomes.
* The well-equipped labs are a real strength of the department. The EET Resource Center in particular provides the opportunity for students to receive additional help.

**RECOMMENDATIONS FOR ACTION:**

In making these recommendations, the Review Team would like the department to know that what it is already accomplishing is very impressive given the size of the department and the personnel challenges experienced over the past year. The overarching advice would be for the department to prioritize the recommendations that follow, and focus on two or three of them first, rather than attempting to work on all of them simultaneously and running the risk of overwhelming faculty who are already extremely busy. The department is encouraged to be thoughtful and strategic in meeting the recommendations that follow, and avoid being stretched too thin.

* During the meeting with the Review Team, the possibility of an orientation of some kind for students at the beginning of these programs was discussed, to help them better understand the expectations of the programs and what will be required on their part to be successful. Any orientation that is developed needs not be longer than a couple of hours, and hopefully would not be too resource-intensive for the department to accomplish. The department is strongly encouraged to explore the possibility of orientation meetings associated with these programs. Consider using the Psychology Department’s orientation as a reference or a template, or contact another department on campus that currently utilizes an oritentation for degree program students.
* In the meeting with the Review Team, there was a great deal of discussion regarding confusion surrounding the subject codes associated with courses in the EET, ACT, and other programs that use EET and EGR courses. The department is strongly encouraged to work with the Manager of Curriculum, Transfer, and Articulation, along with appropriate representatives from Academic Advising and the division dean’s office, to revise subject codes for courses such that they better align with the programs for which they are included in the curriculum, and to reduce student confusion.
* For several of the General Education and program outcomes, statements were made such as “No data at this time – will review for the 16-17 year.” For other outcomes, it appeared that assessment work was just beginning. The department is strongly encouraged to continue its work to improve assessment of General Education and program outcomes, such that there will be multiple years of data to report for each outcome in the next Program Review in five years.
* Automation and Control Technology with Robotics may not be the most descriptive title for the program in terms of helping potential students understand the jobs it can prepare them for. The department is encouraged to consider a name change for the program to something more descriptive and intuitive.
* It is not likely that there will be increases in marketing resources for individual departments in the near future: given the need to attract more students to the EET and ACT programs to meet local employer need, the department is encouraged to attempt to develop its own marketing approaches, particularly in terms of utilization of social media. Some institutional supports exist for this, and the department is encouraged to explore utilizing these supports. The department should also explore recruitment efforts of similar programs at other institutions – are there approaches being used by other colleges that we could adopt?
* Finally, the outcome assessment that was reported was clearly better for the EET program than the ACT program in the self-study, due in large measure to the fact that EET is ABET accredited, and ACT is not. The Review Team recommends that the department thoughtfully and honestly weigh the pros and cons of pursuing ABET accreditation for the ACT program, particularly in terms of the impact on students, and develop a rationale to justify its decision that can be included in future Annual Update submissions and the next Program Review.

**OVERALL ASSESSMENT OF DEPARTMENT’S PROGRESS AND GOALS:**

For a relatively small department to accomplish so many things, to invest so much time in outreach to area high schools, to provide such personalized and individualized attention to its students, to position itself to move into the Mason area and open a new market for providing much-needed skills – this is nothing short of remarkable. The department should feel justifiably proud of the exceptional work it is doing, and for the difference it is making in the future careers of its students. The demand for its graduates speaks volumes regarding how its high level of quality is recognized by local employers.

Getting more students into its programs and then out to area employers should be a priority for Sinclair. However, in a time of limited marketing resources that must meet the needs of many different departments across campus, departments will need to rely more on their own efforts. This department already does a great deal in this regard, forging strong relationships with area high schools and investing a great deal of time and effort in recruitment. It is hoped that it will be able to seek and receive assistance from the institution in employing social media and other approaches to enhance these ongoing efforts at recruitment.

Students in this program are in excellent hands – under the watchful eye of faculty who go above and beyond to help them achieve their goals, providing guidance, mentoring, and advising one-on-one. The department serves as an example of how a supportive, caring, individualized approach can make a real difference in the educational outcomes of our students.

**INSTITUTIONAL OR RESOURCE BARRIERS TO THE DEPARTMENT’S ABILITY TO ACCOMPLISH ITS GOALS, IF ANY:**

* Marketing remains a challenge for many departments at Sinclair. The institution will need to provide more guidance in the future to help departments learn to self-market, leveraging social media and exploring new approaches to marketing that do not involve expensive ad campaigns and costly printed materials. How can Sinclair help departments develop their own comprehensive marketing strategies?
* This department is not alone in needing to combat misconceptions in the region regarding careers in manufacturing, and changing these misconceptions is not something that the department can accomplish on its own. What can Sinclair do to help combat these misconceptions? Could partnerships with the Dayton Development Coalition and other local organizations help the general public see the opportunities that exist in manufacturing?
* Could Sinclair provide support for getting more high school students and their parents on campus to see the excellent facilities and equipment used in programs such as these? How can we support tours and other approaches that provide more opportunities for the public to see what Sinclair has to offer in these programs? Would summer programs perhaps be a way for more high school and even middle school students to have the opportunity to learn about what programs such as EET and ACT have to offer? Is additional outreach to school counselors a possibility in this regard?