

Ruth Springer



ELECTRICAL TRADES TECHNOLOGY

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June 16, 1993
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ELECTRICAL TRADES TECHNOLOGY/ELECTRONICS TECHNOLOGY

ADVISORY COMMITTEE MEETING

June 14, 1993

Present: Sue Barratt, Counselor, OCC
Elaine Chapman-Moore, General Motors
Richard Collins, Oakland Tech Center - Northeast
Patrick Dean, Paraprofessional, OCC
Jan Harp, Career Education Specialist, OCC
John Leonowicz, General Motors
William Maholick, Ford ELD
Stephen Makushik, Oakland County Road Commission
Brent Meyers, Faculty, OCC
Jack Myers, P & H Harnischfeger
Tim Pepper, CLCD Pontiac Operations
Robert Powell, Faculty, OCC
Bill Rose, Dean, Academic Services, OCC
Willard Rush, Faculty, OCC
Ruth Springer, Secretary, OCC
Richard White, Oakland Tech Center Southeast
Ray Williams, Chrysler Corporation
Ken Wyatt, Twelve Oaks Mall

1. Welcome and Introductions

Dr. Bill Rose welcomed the group and thanked them for coming. He then asked members to introduce themselves. Mr. Robert Powell and Mr. Willard Rush gave a brief history of the Electronics program and asked for guidance from committee members as to the direction which the program should take in the future.

2. Need for Hands-On Experience

In providing a history of the Electrical Trades program, Mr. Brent Meyers explained that there has been a change in the type of student enrolled in this program. In the past, many students have come to OCC as part of apprentice programs in which they were receiving on-the-job experience at their companies while taking classes at OCC. Today, more students are coming in with no on-the-job experience. In addition to being taught theory, they need more hands-on experience than we are currently providing.

Mr. Meyers asked for assistance from the group in answering such questions as: Should we have more lab activities? What kind of lab activities are needed? What tasks are required of entry level and re-entry level employees in the electrical, electronics, and facilities management fields? How should the electrical and electronics programs approach the current need for multiple skills? Does the electrical/electronics program need to focus on certificate, two-year, or four-year programs for entry level employees? What kind of degree is required for re-entry employees and career advancement?

3. Problem of Five-Contact-Hour Classes

Mr. Meyers also mentioned the problem of classes which must meet for five contact hours per week, stating that this seems excessive for a working student in a single class. He asked the group whether they thought it would be beneficial to break up course content so as to have more classes which meet for fewer contact hours.

4. Need for Co-op and Internship Opportunities

Mr. Meyers requested assistance from the members of the advisory committee in locating or providing co-op opportunities for students in these programs.

5. Need for New Curriculum to Prepare Electronics Technicians for Automotive Manufacturing Industry

Mr. Ray Williams referred to a letter he had presented at the recent Microprocessor Technology Advisory Committee meeting regarding what Chrysler needs in an electronics technician (see attachment). He stated that adequate preparation would include training that is currently included in four different OCC programs: Microprocessor Technology, Electrical Trades Technology, Electronics Technology, and Robotics/Automated Systems Technology. Mr. Bill Maholick agreed, stating that few of our graduates would be qualified to walk in and work in the labs at Ford. There is a need to include more advanced, "high tech" training.

They expressed the opinion that it would be better to cut back on the general education component of the associate degree in order to provide the student with more of the specific training needed to work as an electronics technician. If that is not possible,

perhaps there is a need for a three-year degree program that could include all the needed material.

Mr. Powell noted that reform is necessary relative to curricular development in the Electronics area, rather than "patching" the existing programs.

6. Need for Technology Based General Education Courses

The group suggested that it would be beneficial if the general education courses required of students in technical programs could be directly related to the technical aspects of their programs. For example, rather than taking a general English or Speech class, technical students should take classes in which the writing and speaking requirements are directly related to the technical area in which the student will be working. Mr. Meyers mentioned that a good example of this is ENG 056, English for Problem Solving, in which the instructor asks the students to bring in and work on reading and problems from their technical classes.

The group also suggested that at least one required class should be team based, so that students learn the important skill of working as part of a team.

7. Need for Cross-Training

It was pointed out that the current trend is toward a blending of the knowledge needed by people in the electrical trades and electronics industries. For example, in the past electronics people have not been exposed to training in AC. However, with the emphasis today on developing an electric vehicle, electronics technicians now need to be educated and be able to work with AC as well as DC. This means that there is a need for instructors and students to be cross-trained in both AC and DC. Additional experience in facilities management, energy utilization, and welding is also needed to allow students to transfer their college training to the workplace.

8. Need for Systems Approach to Instruction

Mr. Richard White stated that this points to the need for a systems approach to instruction. For example, rather than teaching a class in DC and then later a class in AC, a systems approach could be used, teaching a principle and showing how to apply it in various areas.

Mr. Powell mentioned that this is the idea behind the new Principles of Technology classes which are in the preparation stages and will soon be taught at OCC.

9. Need for Tech Prep

The group emphasized the importance of Tech Prep programs. There is a need for better communication between the high school, the community college, and the workplace, so that students can begin to learn in high school those things that will prepare them to continue their studies in community college and eventually have the skills needed in the workplace.

Mr. Powell informed the group that a number of articulation agreements have been established with local high schools and technical centers. The course descriptions in the college catalog for the Electrical Trades, Electronics, and Microprocessor programs include reference to the possibility of students receiving advanced placement by passing an electronics test given by the college.

10. Value of Hands-On Training

The group complimented the college on its provision of hands-on training in electronics/electricity. Often people with four-year degrees in engineering come to OCC to get the hands-on educational experience they need to augment the theory they learned in earning their engineering degree.

11. Other Curriculum Needs

It was pointed out that, in addition to providing training for the electronics technician, as mentioned above, there are other types of workers who need to be considered in our curriculum planning. These include industrial electricians, construction electricians, and facilities managers. Today there is a need for multi-skilled people who have a knowledge of such fields as electrical, plumbing, and heating and cooling in order to work in the field of building maintenance. The college should consider creating a curriculum designed to prepare this type of worker.

Mr. Jack Myers mentioned that technicians at his company need training in the electronics and electrical fields, as well as a knowledge of electrical and safety codes. They also need good communications skills.

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The group agreed that there is a need to break down the walls between traditional programs in order to provide people with the training they need, for example, from such areas as Robotics, Welding, Heating and Cooling, and Facilities Management. Mr. Brent Meyers will develop a list of courses currently offered at OCC that could be utilized within the electrical/electronics programs.

12. Follow-Up

The group will meet again approximately the second week in August to do more detailed work on needed curriculum changes. The following materials will be prepared and faxed to members as soon as possible, so that they can be studied in preparation for the meeting:

Industrial outlook - two viewpoints:

Bill Maholick and Ray Williams

John Leonowicz, Stephen Makushik, Jack Myers, and Ken Wyatt

Job description: To be provided by each member

Principles of Technology class outlines: Robert Powell

Prerequisites needed before taking classes: Bill Maholick

Current OCC courses from other program areas which could be utilized within the electrical/electronics programs: Brent Meyers

The group agreed that the goal will be to create new curricula based on the current needs of industry, rather than to try to patch up the old curricula.

Submitted


Ruth Springer