



OAKLAND
COMMUNITY
COLLEGE

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ENVIRONMENTAL SYSTEMS TECHNOLOGY
ADVISORY COMMITTEE MEETING

October 17, 1996

Present: Richard Buchanan, Village Green Companies
Linda Casenhiser, Manufacturing & Technological Services, OCC
Matthew R. Daly, Maintenance Systems Supervisor, OCC
Rob Featherstone, Paraprofessional, OCC
Mark Findora, Premium Air Systems
E. John Geist, Honeywell, Inc.
Fred M. Gerow, SunSpace Energy Systems
Keith Gibson, Village Green Companies
James A. Gibbons, St. Joseph Mercy Hospital
James Michael Hudgins, Student, OCC
John Hutek, Consumers Power
Shelley Kaye, Workforce Preparation Services, OCC
John P. Keesling, Colombiere Center
Verna Love, Counselor, OCC
Brad Mortz, Mortz Bros. Corporation
Dr. Carlos Olivarez, Dean, Academic and Student Services, OCC
Larry Pennefather, Faculty, OCC
Jesse Riojas, Oakland Technical Center Northwest
Dr. Debra Rowe, Faculty, OCC
Ruth Springer, Secretary, OCC
David J. Tetreau, Landis & Staefa

1. Welcome and Introductions

Dr. Carlos Olivarez welcomed the group and thanked them for their participation as members of the advisory committee. He asked those present to introduce themselves.

2. Employment of Students

Mr. Larry Pennefather gave a brief overview of the type of instruction offered in the Environmental Systems Technology Program. He then asked the group what type of employees they are seeking to hire.

Mr. David Tetreau responded that, at Landis & Staefa, they are looking for someone who can work as a "systems specialist," someone with an understanding of different types of mechanical systems. They look for someone with a two-year degree or four years of experience. They prefer to hire someone with an associate degree, but that is not a requirement, because they do their own training.

A question was raised about the functioning of OCC's Placement Office. It was explained that a printout of job openings is available in the Placement Office. Currently, job openings are also taped on the wall of the Environmental Systems Lab. It was suggested that a bulletin board be placed in the lab to be used for posting job openings. It was also suggested that, when the Placement Office receives a job posting in the area of Environmental Systems, a copy be sent to Mr. Pennefather to be posted in the lab.

A suggestion was made that employers be invited into the classroom to present job openings to the students.

Mr. Richard Buchanan commented that he would be glad to provide brochures about Village Green Companies to be distributed to students to make them aware of possible job openings. He has hired OCC students in the past who have eventually been promoted to supervisor. Mr. Pennefather responded that he would pass out the Village Green brochures in the class that would be meeting that evening.

Mr. Buchanan pointed out that his company sends representatives regularly to job fairs held at the Orchard Ridge Campus. They are looking for employees in maintenance and building repair, but students from the Auburn Hills Campus do not seem to attend the job fairs at Orchard Ridge. He wondered whether Auburn Hills students are not informed about the job fairs, or whether the company representatives need to come to Auburn Hills as well.

It was suggested that the Auburn Hills Campus consider hosting a career fair.

Dr. Olivarez mentioned that OCC's Placement Office has companies come in to meet with students. They post information around the campus as to when a particular company is coming, and they make appointments for students to meet with company representatives while they are here. Companies

represented on the advisory committee could do the same thing by contacting Mr. Willie Lloyd or Ms. Sally Kalsen in the Placement Office.

It was suggested that there is a need for a mailing budget for the program, so that a mailing could be sent to companies once a semester. The mailing could include information about the Environmental Systems Program, as well as a brochure with information about how to post job openings and a form that the company could return with job information. That information should then be posted in the Environmental Systems Lab, and in the Alternate Energies Lab at the Royal Oak Campus.

A comment was made that it is hard to go through the job listings in the Placement Office, because there are hundreds of jobs, and it is not easy to find those that are related to the Environmental Systems field. It was suggested that a Rolodex with the names of companies and how to contact them be made available for students to check during their breaks from classes.

3. Marketing of the Program

The group agreed that there is a need to market the program more effectively. Mr. Pennefather is working with OCC's Design & Marketing Development Office to create a brochure which could be used to market the program.

It was suggested that students are the best advertisement for the college. Program graduates who have become successful in the field should be brought in to speak to the students, so students are aware that there are good jobs available in the field.

It was suggested that a mailing be done on a regular basis to employers, including information on the program and the possibility of sending employees to OCC for retraining.

4. Cooperative Education

Mr. Fred Gerow asked about the possibility of including an internship as part of the Environmental Systems Program. He explained that, at Ferris State University, an internship is included in the third and fourth year of studies. Companies hire students for the summer. Companies are anxious to hire the Ferris interns, because they know they will be getting good employees. This also provides a good opportunity to get feedback from employers on what skills the students may still need to learn.

Dr. Debra Rowe and Mr. Pennefather agreed that it would be good to include a co-op class in the program. The Auburn Hills Campus now has a Coordinator of Cooperative Education, Ms. Sally Kalsen, who would be happy to work with the instructors to develop co-ops for their program. Ms.

Kalson finds job situations and sets up interviews for students, so that instructors need only evaluate the students' performance on the job and assign a grade for the co-op class. Dr. Rowe and Mr. Pennefather said they would get in touch with Ms. Kalson to pursue the development of a co-op class for the Environmental Systems Program.

It was suggested that an internship could be made a part of the program by having an affiliation agreement with a large company, such as OCC's medical programs have with hospitals. In that way, everyone who comes through the program would have a chance for a job.

5. Need for Training on High Tech Systems

Mr. Gerow pointed out that more technological buildings are being built which require more sophisticated systems to solve mechanical problems. There is a need for people to be trained on these high tech systems.

Mr. John Geist stated that at Honeywell, Inc., they do not use OCC as a source for hiring. They find that OCC graduates are strong in the area of temperature control, but weak in personal computer literacy and Direct Digital Controls (DDC).

Mr. Pennefather responded that the curriculum includes AET 251, Direct Digital Controls, but that it is impossible to teach the class without the required hardware and software. TER 180, Advanced Controls, deals with some of this material, but students need DDC as well. Mr. Pennefather stated that he has requested the necessary equipment in the past through the College budget process, but the requests have not been approved.

Mr. Gerow commented that the people on the advisory committee seem to be interested in the OCC students. Perhaps OCC could partner with companies in order to obtain the equipment. If companies are interested in hiring employees with these advanced skills, then they may be willing to help put the program and equipment together. Mr. Gerow reported that Ferris State has obtained equipment in that way.

Mr. Matthew Daly reported that TER 141, Air Conditioning Systems Testing, Adjustment and Balancing, is listed in the College Catalog, but it has never been offered. He has been waiting two years to graduate from the Advanced Heating, Ventilation, Air Conditioning and Refrigeration Technician Option, but has been unable to do so because this course is not offered. Other students are in the same situation. The group agreed that this training is essential.

Dr. Rowe suggested that Mr. Pennefather should be given release time to develop curriculum and also to contact companies in regard to obtaining the necessary equipment.

Mr. Jesse Riojas mentioned that, as an instructor at Oakland Technical Center Northwest, he attends workshops to stay current in the field. He has not seen OCC represented at these workshops. He believes Mr. Pennefather should also be granted release time to take training in these advanced systems.

Mr. Rob Featherstone pointed out that there is a need for more space in the lab in order to have somewhere to put the new equipment when it is obtained. Mr. Daly mentioned that there is millage money available now for program development. Perhaps funds could be requested to add additional balcony space to the lab.

6. Presentation from Placement Office

Ms. Susan Mamros, secretary in OCC's Placement Office, was asked to give a presentation regarding the work of that office. She explained that their office can take job information over the phone, or employers can fax the information to them, using a form provided by the Placement Office. Information from employers is typed into the computer, and printouts of job postings are distributed to all five OCC campuses. Jobs are classified according to the Michigan Occupational Information System (MOIS) codes. All technology jobs are listed under code 10. Job openings are posted for 30 days and can be renewed at the employer's request.

Ms. Mamros explained the process for setting up on-campus recruiting for employers. There is a job hotline which lists what employers are coming to the college in the future. Many employers use this service and find it effective.

It was suggested that the jobs and categories be put on e-mail so students could access them using certain computers. Ms. Verna Love mentioned that OCC's Office of Information & Telecommunications Systems is developing a web page for the College. Perhaps they could do the same for Placement Services.

It was suggested that the jobs currently included under MOIS code 10 be divided into sub-categories to make it easier for students to find jobs in their specific field.

Dr. Rowe requested that, when the Placement Office receives a posting for a job in the fields of energy management or heating and cooling, a copy of the job information form be sent to Mr. Pennefather for posting in the Environmental Systems Lab. Mr. Pennefather will work with Ms. Mamros on what job titles should be included among those sent to him.

7. Review of Lab Equipment

Following a tour of the Environmental Systems Lab, the group was asked for their opinion of the equipment and facility.

Mr. James Gibbons pointed out that there is a need for new equipment in the lab. Students should have training and experience with the systems they will find on the job. Often people already working for a company will not teach a new person the system because they are afraid of losing their own jobs. Companies are looking for people who have experience in a number of areas and systems. It was suggested that OCC attempt to find possible instructors from industry to teach the most advanced classes, such as AET 251 and TER 141. Dr. Olivarez responded that Mr. Pennefather will work on that possibility.

Mr. Daly reported that OCC is beginning to introduce DDC into the college buildings. There are plans to eventually convert all OCC buildings to DDC. OCC's maintenance people need to be trained, but OCC has no DDC class. It is imperative that this be addressed soon.

It was suggested that OCC attempt to arrange for clinicals, such as are used in the nursing field, in which an entire class could go into the field and use the equipment.

It was pointed out that conditions in the lab are tight. If we want to increase enrollment, there is no place to put additional students. Also, does OCC have sufficient instructor time for teaching as well as marketing and other activities needed to support a larger student base?

A question was raised as to whether there is still a need to teach oil-based equipment. The group agreed that students should still be trained on oil-based equipment because they will continue to be confronted with these older systems out in the field.

A question was raised about how much the program is working with the new refrigerants. Mr. Pennefather responded that Mr. Riojas gives the refrigerant recovery certification test twice a year.

Mr. Pennefather asked the group whether they felt the program should include a sheet metal course. The group agreed that such a class should be included in the curriculum.

Mr. Daly suggested that space is needed to expand the lab. A facility is needed just to address Environmental Systems. There is plenty of land, but money would need to be allocated for a building. Dr. Rowe agreed that this would be the time to request a new building, which could be used as a balancing lab. Mr. Daly pointed out that the Auburn Hills Campus is currently going through a master planning stage. This would be a good time to request a new building for the Environmental Systems Program.

It was suggested that OCC attempt to become involved in revenue producing programs, such as offering professional development seminars. The College could seek to become a certification test site, through the Air Conditioning Contractors Association (ACCA) and other organizations. OCC could also make itself available as a site for meetings of the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE). This would help employers to become aware of the College and, hopefully, send their employees here for further training.

8. Curriculum Review

Following a brief review of the curriculum, Dr. Olivarez asked the group for feedback on the program.

Mr. Brad Mortz commented that students often register for an Environmental Systems course without having the necessary basic skills in math, English, and technical support. Dr. Rowe responded that, if we insist that they take English first, many students will get discouraged and drop out before ever taking any technical courses. However, if students take the beginning technical courses, they can be given a feeling of success in those courses, which will encourage them to feel they can also succeed in the English and math classes they may need.

Ms. Love commented that, as a counselor, her job is to see what will be motivating for the student. If she sees that students' reading skills are low, she encourages them to register for a basic technical course she feels is appropriate for the students' current reading and writing level. She stated that hands-on lab courses appear to be helpful for that type of student.

Mr. Mortz pointed out that it is important that students be required to acquire these basic math and English skills at some point in their program. Without those skills, they will be unable to succeed in the higher level courses. Students must have the reading skills necessary to be able to understand the service manuals they will need to use on the job.

Mr. Keith Gibson commented that most other colleges have ductwork as an essential part of the program for HVAC technicians. Without this training, OCC is sending people into the job market without being totally prepared.

The group agreed that courses in energy management and air quality are important for all students in the program.

Mr. Gerow suggested that students should take a Geometry/Algebra course before entering the Environmental Systems Program. They could get a taste for the program by taking courses that do not require strong math and science background, but they should eventually get this background by

taking such courses, which could be considered prerequisites for the program, rather than part of the program itself.

Ms. Love suggested that students could be required to pass a proficiency test to show they had these skills. They could either show they had college credit for those classes or pass an entrance test. If they did not have the required skills, they could take the needed math classes outside of the program.

It was suggested that students should be required to take a Business Communication class so that they will be able to write reports and communicate clearly in writing on the job. Students also need interpersonal skills to be able to deal with people in a service situation and handle adversarial complaints. Mr. Gerow pointed out the need for service technicians to be able to communicate with people who do not have a technical background. Dr. Olivarez responded that he plans to meet with English instructors to introduce some of these topics, which have also been mentioned in other advisory committee meetings.

Mr. Pennefather suggested that there is a need for a course in problem solving, as well as for instruction in the area of customer relations. There are chapters in the Environmental Systems textbooks on customer relations, but when he tries to teach on those subjects, students complain that they signed up for a technical class, but are being taught psychology.

9. Conclusion

Dr. Olivarez stated that the advisory committee will have its next meeting during the Winter or Spring term, 1997. If members are interested, a subcommittee meeting could be set up to deal with certain issues. Members should let Dr. Olivarez or Ms. Ruth Springer know if they would be interested in such a meeting.

Dr. Olivarez pointed out that each member's packet includes a copy of OCC's new statement of Mission and purposes. This document will be reviewed at the next advisory committee meeting.

Committee Recommendations

1. That a co-op class be developed for inclusion in the Environmental Systems Program. Another possible way of providing students with on-the-job experience could be through an affiliation agreement with a large company, such as OCC's medical programs have with hospitals.
2. That OCC obtain the necessary equipment to teach AET 251, Direct Digital Controls.

3. That OCC take the necessary steps to offer TER 141, Air Conditioning Systems Testing, Adjustment and Balancing.
4. That OCC seek to obtain the high tech lab equipment needed by the program through partnerships with companies.
5. That Mr. Pennefather be given release time to develop curriculum, contact companies about obtaining equipment, and take training in the advanced systems which need to be taught.
6. That Mr. Pennefather attempt to find possible instructors from industry to teach the most advanced classes, such as AET 251 and TER 141.
7. That OCC attempt to arrange for clinicals, such as are used in the nursing field, in which an entire class could go into the field and use the equipment.
8. That OCC continue to train students on oil-based equipment.
9. That a sheet metal/ductwork course be included in the curriculum.
10. That OCC take steps to expand the Environmental Systems Lab to have more space for needed equipment. That this expansion be made a part of the master plan currently being created for the Auburn Hills Campus. That a new building be requested for the Environmental Systems Program. If it is not possible to have a new building, that additional balcony space be added to the lab.
11. That OCC attempt to become involved in revenue producing programs and other activities which might also make employers more aware of the College, such as: offering professional development seminars; becoming a certification test site through ACCA; becoming a site for meetings of ASHRAE.
12. That any needed curriculum adjustments be made to ensure that students have the basic skills in math, English, and technical support which they need to be successful in the Environmental Systems Program. This could include requiring students to pass a proficiency test or take the needed classes outside the program requirements.
13. That OCC update staff and curriculum to address the need for instruction in air quality, building automation, and energy management control strategies.
14. That steps be taken to include in the curriculum instruction in Business Communication.

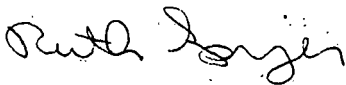
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15. That steps be taken to include in the curriculum instruction in interpersonal skills, problem solving, and customer relations.
16. That a bulletin board be placed in the Environmental Systems Lab to be used for posting job openings.
17. That, when the Placement Office receives a job posting in the area of Environmental Systems, a copy be sent to Mr. Pennefather to be posted in the Environmental Systems Lab and to Dr. Rowe to be posted in the Alternate Energies Lab at the Royal Oak Campus. That Mr. Pennefather work with Ms. Mamros on what job titles should be included among those sent to him.
18. That the jobs currently included under MOIS code 10 in the Placement Office job postings be divided into sub-categories to make it easier for students to find jobs in their specific field.
19. That the Placement Office put job postings on e-mail so students would be able to access them using designated computers.
20. That employers be invited into the classroom to present Environmental Systems job openings to the students.
21. That the Auburn Hills Campus consider hosting a career fair.
22. That a mailing be sent to companies once a semester including information about the Environmental Systems Program and the possibility of sending employees to OCC for retraining. Information should also be included about how to post job openings, with a form the company could return with job information.
23. That a Rolodex with the names of companies and how to contact them be made available to students in the Environmental Systems Lab.
24. That Environmental Systems Program graduates who have become successful in the field be brought in to speak to students, so students are aware that there are good jobs available in the field.

Respectfully submitted,



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