



OAKLAND
COMMUNITY
COLLEGE

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ENVIRONMENTAL SYSTEMS TECHNOLOGY

ADVISORY COMMITTEE

February 5, 1999

Members Present:

Matthew R. Daly, Oakland Community College
Prof. James Dundas, Macomb Community College
E. John Geist, Honeywell, Inc.
Fred M. Gerow, SunSpace Energy Systems
Michael D. Portwood, Consumers Energy
Mark Riley, City of Troy

OCC Ex Officio Members Present:

Dr. Sharon L. Blackman, Dean of Technology
Phillip Crockett, Workforce Development Services
Rob Featherstone, Paraprofessional
Verna Love, Counselor
Larry Pennefather, Faculty
Dr. Debra Rowe, Faculty
Ruth Springer, Secretary

Proposed Curriculum Revision

Dr. Sharon Blackman reported that the proposed curriculum revision has been presented to and approved by the Campus and College Curriculum Committees. It is now awaiting approval by the College Academic Senate. Three new certificates are being proposed, as well as changes to the associate degree program options.

Dr. Debra Rowe presented a quick overview of the revised curriculum. She reported that everything the advisory committee recommended was included in the curriculum proposal. It has all been approved by the Curriculum Committees and is scheduled to be presented to the Academic Senate for its approval at the end of February. The curriculum revisions include

Troubleshooting Air Conditioning and Sheet Metal Layout and Fabrication courses, as well as a course which emphasizes customer service, all of which were requested by the advisory committee. The programs have the same number of credit requirements as in the past, although more content has been added.

Mr. Fred Gerow expressed concern about the fact that there is no math requirement in the certificates. Mr. Larry Pennefather responded that, if students see a difficult math requirement in the certificates, they will be likely to drop out and not complete them. Dr. Rowe added that the math which students need is embedded into the other course requirements. Students must use simple math in AET 240, Energy Management. Dr. Rowe normally spends one tutoring session with those who are having trouble with the math in this course. By the time they get to TER 131, Heating, Ventilation, Air Conditioning and Refrigeration Design I, which requires more advanced math, they are able to do it.

Several members pointed out that the important thing is for students to be able to apply the needed math to relevant work situations. Dr. Rowe agreed, reminding the group that there was an extensive discussion regarding math requirements at the last advisory committee meeting, and the group's recommendations were taken into consideration in preparing the curriculum revisions. Mr. Pennefather reported that a great deal of math is done in TER 180, Advanced Controls. Students are involved in hands-on activities, so they understand the application of the mathematical principles they are learning.

Dr. Blackman suggested that there is a need to provide the advisory committee with the competencies for all the courses in the curriculum. If math is being integrated into the courses, that needs to be documented in the list of competencies that are expected to be taught in each course.

Prof. James Dundas reported that in the past at Macomb Community College, students were required to take all their academic courses before taking their technical courses. They lost a third of their students, because students said they didn't come to school to take liberal arts courses, but to get job-related training. Mr. Dundas was able to persuade administration to reverse the policy and allow people to take climate control courses if that was all they wanted to take. It is true that students need a little math, but if we insist that they take a lot of math right away, we will lose students.

Dr. Blackman commented that industry often tells us they want students to have skills in thinking, computing, and communicating, but they also want them to have the technical skills. It is difficult for colleges to know how to include the other types of courses when students want to focus on gaining technical skills.

Mr. Dundas responded that you need to first get them interested by enrolling them in technical courses. As they succeed in those courses, they will be building their study skills and gaining confidence. Then they can be encouraged to continue to take liberal arts classes in order to obtain a better job.

Mr. Michael Portwood agreed, stating that he started working at Consumers Energy as a janitor. When he was able to get into the gas service area, he knew he needed to go back to school and get more education in order to succeed on the job. He came to OCC at 40 years of age. He has now advanced on the job to become a supervisor. He agrees that if students are able to take some heating and cooling courses and get a job in the field, they will then be more willing to go on and take other courses in order to do better and advance on the job.

Dr. Blackman suggested that there should not necessarily be separate courses to teach liberal arts subject areas. It should be possible to get English credit while taking Environmental Systems courses, by including an emphasis on writing skills such as those needed to write up an order or a report. Dr. Blackman hears the same types of things at every advisory committee meeting. Everyone is looking for more workers. We need to focus on developing quality programs that will put people into the workplace quickly with the skills needed by industry. The current curriculum revision includes revisions of the four associate degree programs, as well as three new certificates. We know that our students take a few classes and then stop out. The certificates will offer them the opportunity to leave with a certificate that shows what they have accomplished up to that point. After they have worked a few months, they can come back to take more classes and complete the associate degree. We are counting on the advisory committee to tell us what we need to continue to do so that our graduates are acceptable in the industry.

Mr. Dundas stated that he has seen the program as it was before the revision, and he thinks the revision is excellent. The certificates are good. He believes an outstanding job has been done on this curriculum revision.

Review of Minutes of Follow-up Meeting

Dr. Blackman referred to the minutes of the follow-up meeting of OCC staff members which was held following the last advisory committee meeting. She suggested that, rather than go through the minutes one by one, members feel free to ask questions about specific items they would like to have addressed.

15. **That steps be taken to include in the curriculum instruction in interpersonal skills, problem solving, and customer relations.**
26. **That instructors inject into every course the concept of being nice to the customer. That OCC consider doing a staff development initiative for all Technology Department instructors to teach them how to introduce this concept into their classes.**

Mr. John Geist asked how the customer relations issues were being incorporated into the revised curriculum. Dr. Rowe responded that a new course has been included, ENG 145, Writing and Reading for Problem Solving. This course has been developed by Ms. Suba Subbarao to include an emphasis on customer relations. Dr. Rowe and Mr. Pennefather have also talked about doing a professional development seminar with all the adjuncts to cover how to integrate an emphasis on customer relations into all the courses.

Dr. Rowe recommended that a list of customer service competencies be prepared and brought back to the advisory committee for review. Then it can be determined how to divide the competencies among the classes, and how to train the adjuncts to incorporate them into the classes.

Ms. Verna Love mentioned that SPE 129, Interpersonal Communication, deals with such things as body language and addresses each student's background in industry.

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.**
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.**

These recommendations have been completed. In the proposed curriculum revision, IND 140.4, Cooperative Internship, has been included in all four options as a recommended elective.

3. **That OCC take the necessary steps to offer TER 141, Air Conditioning Systems Testing, Adjustment and Balancing.**

It was reported that Mr. Tony DeAlbuquerque is willing to develop an air balancing module which can be included as part of another course, rather than offering a separate course, TER 141.

Mr. Pennefather reported that the Michigan Environmental Balancing Bureau, an offshoot of the National Environmental Balancing Bureau, would like to provide OCC with air balancing equipment. Mr. Gerow mentioned that he has a list of air balancing equipment that is used in other schools.

Dr. Rowe pointed out that we need funding to pay Mr. DeAlbuquerque to develop this module. In the past when Dean Carlos Olivarez was responsible for the Technology Department, money was committed to do this. However, the new curriculum was not ready at that time. Now we need to set up a timetable with Mr. DeAlbuquerque to get this module developed.

9. That a sheet metal/ductwork course be included in the curriculum.

Dr. Rowe mentioned that money had been set aside for Mr. Jesse Riojas to develop the Sheet Metal Layout and Fabrication course. We need to get this done now, so the course can be offered. Dr. Blackman agreed that, now that the curriculum has been approved, it is time for course development.

Mr. Dundas stated that he has the course development for all 15 climate control courses he wrote for use at Macomb Community College, including a sheet metal course. He would be happy to share that information with OCC. The group agreed that it would be beneficial to have this course information.

2. That OCC obtain the necessary equipment to teach AET 251, Direct Digital Controls.

Mr. Pennefather reported that the necessary parts have been obtained from Siemens Building Technologies, Inc., but he and Mr. Rob Featherstone need training in order to be able to assemble the equipment so it can be used in teaching. Dr. Rowe agreed that they need training, as well as time to put together labs modeled after the labs at Siemens.

Mr. John Geist stated that he works with that type of equipment every day. He would be glad to help with the assembly.

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.

Dr. Rowe reported that a marketing plan has been developed which includes two major mailings per year to a database of approximately 1000 companies and contractors. A targeted mailing list of about 800 has been compiled, and one mailing has been done. There is a need for budgeting follow-through, so funds are available to carry out this part of the marketing plan on a regular basis.

Dr. Blackman responded that a marketing plan is currently being developed for the entire Technology Department. She asked whether responses were tracked from the previous mailing to see what results were achieved. We need to see whether the marketing effort had an effect on inquiries and enrollment.

Dr. Rowe suggested we do another mailing and collect data on responses, as well as surveying students to see how they learned about the classes.

- 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.**

One of the previous follow-up actions under this recommendation involved contacting Dr. Martha Smydra, Royal Oak/Southfield Campus President, about the possibility of putting equipment needed to teach the introductory Environmental Systems classes in the Alternate Energies Lab or in another space at Royal Oak or Southfield. Dr. Rowe expressed the belief that the time has passed for this to be feasible. However, Mr. Matt Daly pointed out that the Royal Oak Campus is being revamped now. Dr. Rowe stated that she would talk with Dr. Smydra about the possibility of adding some things to Dr. Rowe's classroom to make the space more useable for teaching TER 111.4, Introduction to Refrigeration. Dr. Blackman will also contact Dr. Smydra about this.

- 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.**

Dr. Blackman reported that this recommendation has been put on hold until the new curriculum and necessary equipment are in place.

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.**

This was discussed earlier in the meeting.

14. **That steps be taken to include in the curriculum instruction in Business Communication.**

This recommendation has been completed.

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.**

Dr. Blackman stated that she will discuss these recommendations further with the Director of Placement and Cooperative Education. Number 19 is not feasible at this time, since students do not have e-mail accessibility on the campuses now.

General Discussion

Mr. Gerow mentioned that he and Mr. Pennefather had gone to Ferris State University to discuss the possibility of developing an articulation agreement with Ferris. He believes that OCC should continue to pursue this possibility. He offered to set up another meeting for Mr. Pennefather with appropriate Ferris staff.

Mr. Daly suggested that the distribution of classes between the four semesters be revised so students would not be taking three classes during their first term of study.

Dr. Blackman commented that alternative delivery methods are being considered, possibly offering classes in accelerated form so students can get through classes more quickly if they wish.

Mr. Daly commented that it will be necessary to allow classes to be taught even if enrollment is low in order for students to continue to take their classes in sequence.

Appreciation

Dr. Blackman thanked the group for their service as members of the advisory committee. She presented each member with a certificate of appreciation and a small gift.

Advisory Committee Recommendation

1. That OCC continue to pursue the possibility of an articulation agreement with Ferris State University.

Respectfully submitted,



Ruth Springer



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