ARCHITECTURE ADVISORY COMMITTEE MEETING

April 22, 1997

Present: Syed Ahsan, Faculty, OCC
Daniel F. Christensen, Giffels Hoyem Basso, Inc.
Eugene Chun, DeMattia Associates
Paul N. Hunter, Oakland County Facilities Engineering
Celeste Allen Novak, Encompass
Dr. Carlos Olivarez, Dean, Academic and Student Services, OCC
Dale O. Orchard, Rochester Adams High School
Mike Pudists, Minoru Yamasaki Assoc. Architects
R. Rocco Romano, TMP Associates
Ruth Springer, Secretary, OCC
Kathleen Tetreault, Student, OCC

Preliminary Matters

Dr. Carlos Olivarez welcomed the group and asked them to introduce themselves. The minutes of the Architecture Advisory Committee meeting held on November 7, 1996, were reviewed and approved as written. The minutes of the follow-up meeting of OCC members of the advisory committee held on March 6, 1997, were reviewed, and a progress report was given on each committee recommendation, as follows:

Progress Report on Advisory Committee Recommendations

1. **That Architecture students be surveyed to determine their reasons for taking classes at OCC and their long-term goals.**

Mr. Ahsan distributed a rough draft of a survey which has been put together for this purpose. He reported that he has used the survey in one class, but he would like to add a few more questions and use it in the Fall term when he expects to have more students in classes. He asked the group for their suggestions as to how to improve the survey.

Dr. Olivarez pointed out that the survey does not have a question related to recommendation 5 as had been decided at the follow-up meeting. The group then discussed recommendation 5.

5. That instruction in word processing be included in the Architecture Program.

The group agreed that it is important for students to be trained in word processing. Ms. Kathy Tetreault, a student in the Architecture Program, was asked for her opinion. She responded that she herself has an extensive knowledge of word processing. It is helpful in doing reports and for general use. A little familiarity with the computer and keyboard is helpful in learning the CAD system.

Mr. Eugene Chun expressed the view that the term "word processing" is too restrictive. In reality, the entire world is a database. Architects report on databases in specialized ways, including drawing, word processing, spreadsheets, and database management. Students need to be generally literate in automated technologies and handling information.

Mr. Daniel Christensen agreed that there is a generally recognized need for basic skills. However, we do not know the skills of students coming into the program. They may already have the needed skills. That is why it is important to survey the students to determine their need for training.

Ms. Celeste Novak suggested that an open-ended question could be asked, or students might be asked to choose among several possible uses of computers which might be listed. Under no. 2 on the survey, students could be asked to describe their occupation, or students could be asked to circle their choice from a list of occupations.

Mr. Ahsan mentioned that he would like to add questions that would give students a chance to indicate what courses they need and give suggestions about the sequencing of courses and how and when they would like classes to be offered.

Regarding no. 5, Ms. Novak suggested that "continuing education credits" be added. She pointed out that architects are required to earn 36 continuing education credits each year in order to be able to continue putting "AIA" after their name. The State of Michigan will soon be requiring continuing education credits as well.

2. That Architecture students' CAD literacy be increased as early as possible in their program of studies, and that hand drafting be dropped from the program at whatever speed the College is able to do so by providing computer access in its place.

3. That computers be obtained for the Architecture classrooms, so that students can use both drafting board and computer in doing their assignments.

7. That Architecture students be provided with access to presentation graphics software to use in the preparation of presentations and assignments.

Mr. Ahsan reported that he met with Dr. Olivarez, Mr. Tahir Khan, and Mr. Doug St. Clair to discuss the possible modification and updating of the T-4 computer lab to be used by Robotics and Architecture classes. Mr. Ahsan explained that the Architecture Program is too small to justify providing computers exclusively for the use of students in that program. This group met to try to put together a plan for a computer lab which could be used by students in the Architecture, Electrical Trades, and Robotics Programs. Following the lecture in a given class, students would be given assignments and projects to do in the lab, so drawings could be done on a computer rather than on a drawing board. The instructor would be available in the lab to help students with their drawings. Students would take two CAD courses first to learn AutoCAD and Softdesk before taking the Architecture classes where they would need to be drawing. The three faculty involved would attempt to plan their class schedules in such a way that the lab would be available on the night it was needed by students in each program. However, there is a problem with this concept, since all three programs offer night classes Monday through Thursday, so students from all three programs could need to use the computer lab each night.

Dr. Olivarez explained the need of smaller classes and programs to share computer access, perhaps by offering some classes during the day or on weekends, or perhaps by having liberal arts classes use the computer lab during the day.

Mr. Chun expressed a concern about the focus of the discussion on the need for sharing resources. He emphasized that CAD and other automated technologies used in the field of architecture are not a luxury. This technology is a necessity. If such technology is not made an integral part of the Architecture Program, the program will not be viable. The computer must be viewed not just as a drawing tool, but as an architecture tool involving total automation. People need to learn to function intuitively with the machine. If OCC can train people in that way, the program will be more applicable and more marketable. The discussion of teaching for an hour in one classroom, then moving to a computer lab which must be shared with students from other programs, seems to be very basic compared to where the program really needs to be.

Dr. Olivarez explained that the problem is budgetary. Programs must compete for dollars to get what they need, and the competition is based primarily on student credit hours. Also, in addition to the purchase of the machines, there is the question of how to maintain them. The Architecture Program would need to consider adding a substantial lab fee, such as the $90 lab fee which is charged for each CAD class. If Architecture can join forces with another program, it is more likely to get some computer access for its students.

Ms. Celeste Novak reported that the University of Detroit struggles with the same problem. They are thinking of requiring students to bring a computer to class. OCC could not do that, but perhaps students could pay a fee to lease equipment and software. Ms. Novak mentioned that U. of D. is networked, so a great deal of software is available.

Mr. Ahsan commented that a network would be helpful, as it would mean that even if there were only five or ten computers in the Architecture lab, students would be able to access the necessary software through a server. At present, the software is on each computer. However, if a server was available, even if there were only ten computer stations, some students could do sketching while others worked on the computers. Since a typical enrollment for Architecture classes is 15-18 students, he believes ten computers would be adequate. Mr. Ahsan suggested that, when the AutoCAD Lab is upgraded, the needs of other smaller programs should be considered. A huge server is needed, so in the future other programs could link up with it.

Dr. Olivarez asked about the possibility of developing a partnership with some company which might be willing to leave its equipment at OCC and use our facility to demonstrate its software to potential clients.

The group agreed that some are doing that, and it would be good to explore that possibility. AutoCAD has a hold on the market now, but it is not as versatile as some other programs which are becoming available. Perhaps some of the newer programs would be willing to enter into such a relationship with OCC. Mr. Chun would be able to guide Mr. Ahsan in pursuing such a possibility.

Mr. Rocco Romano suggested that leasing might be a good possibility to consider, since it cuts the financial burden down to a monthly expense. Dr. Olivarez agreed that the school has leased equipment, and that this could be a viable option.

Mr. Ahsan pointed out that it is not just a question of obtaining computers for the classroom. If there is a computer lab, there must be a paraprofessional responsible to maintain that lab. If a computer lab is created for the Architecture Program, someone would need to be hired to take care of that lab. There are union rules which must be followed. However, OCC is not willing to hire new people now, so it is not possible to set up a lab.

Dr. Olivarez suggested that it might still be possible to have computers, as long as the instructor does not need a paraprofessional, for example, if there was not an open lab time where someone would need to be there in order for students to use the equipment. If equipment was leased, perhaps the company could be paid more to maintain the equipment.

Mr. Dale Orchard described the introduction of computers to his drafting program at Rochester Adams High School. He has seen a great increase in enrollment since computers were introduced. He believes that enrollment in OCC's Architecture Program will increase as well if computers are available in the classroom.

Ms. Kathy Tetreault pointed out that there are currently only two CAD classes in the Architecture Program. She has finished the first class, in which she learned to draw geometric shapes. She does not think two classes will be enough for her to be adequately prepared for a job in the field. She agrees there is a need to have computers in the classroom.

6. **That the College consider offering a section of CAD 100 for Architecture students in which the basics of AutoCAD would be taught using architectural drawing assignments.**

Mr. Ahsan reported that he is very comfortable with the instruction given in CAD 115 and with the level of skill required to do the final project. The group looked over samples of final projects and agreed that anyone who can complete that project is marketable.

Mr. Ahsan expressed his concern over the instruction students are receiving in CAD 100, in which they are to learn the AutoCAD software. Students are only required to do one exercise related to architecture, and Ms. Tetreault reported that this exercise is not being done in all CAD 100 classes. That is why the advisory committee had recommended that one section of CAD 100 be designated for Architecture students, who would learn the basics of AutoCAD using architectural drawing assignments.

Dr. Olivarez pointed out that, at the follow-up meeting held on March 6, 1997, it was decided that "Mr. Tahir Khan will review the CAD 100 syllabus and send a memo to all CAD 100 instructors to ensure that the focus of all sections is on geometric construction and the basics of AutoCAD, not on mechanical design. He will ensure that all sections are using the same syllabus and doing the same projects."

Mr. Orchard expressed the view that CAD 100 should be teaching the fundamentals of AutoCAD, and that there is no need to have an architectural emphasis in the class. Mr. Romano agreed that there is nothing wrong with drawing machine parts in order to learn AutoCAD.

Mr. Christenson pointed out that fundamentals are fundamentals, but that when OCC is trying to squeeze so much architectural information into a short curriculum, students should be learning AutoCAD in an architectural context.

Mr. Chun stated that he is uncomfortable with the emphasis on the generic nature of the CAD education. He believes students should be learning architecture through CAD, rather than viewing CAD as a separate entity taught generically and then applied to architecture.

Ms. Novak asked whether there is a problem with designating one CAD section for Architecture students. Mr. Ahsan suggested that perhaps a separate course, for example, "CAD 101," could be offered for Architecture students. Dr. Olivarez suggested that the Architecture Program could offer "ARC 101" to teach the architectural use of AutoCAD. Such a class would not have to have a CAD designation.

Ms. Novak pointed out that the language of AutoCAD is particular to architecture even in the fundamentals, if it is going to be used for architecture. A student who takes a generic fundamentals class will have to relearn many things in order to use AutoCAD for architecture. It would be beneficial for students who have a short period of time to become skilled if they could skip the generic

class and receive their basic instruction in an architectural context. Mr. Ahsan agreed that the CAD 115 students struggle because they are learning things that are different from what they were taught in CAD 100.

Mr. Hunter suggested that there may be a need to determine what skills students have when they enter the program. This could be added to the survey questions about computer literacy.

Mr. Pudists pointed out that, based on the discussion at the last meeting, there is a need to determine who attends this program. Those from certain high school programs would be able to begin with CAD 115. But what about the older student who is working and coming back to school? It is important to determine who the clientele is in order to know what type of instruction is needed. Training people in a generic class is all right, but if it is possible to begin immediately talking about architecture rather than machine tools, it is very important to do that. Students must understand what is required for architecture, not machine tools; it is not possible to cross over from one field to the other because there is a certain language that must be used. Students must be able to do an architectural site plan in order to be marketable.

Mr. Ahsan agreed that that is the market area he wants to capture. He believes students will be able to get a job right away if they know how to do a working drawing or site plan on the computer. Mr. Romano agreed, stating that that is the one place where students can fit in and be productive right from the start. Ms. Novak agreed that such employees are desperately needed.

Mr. Romano again affirmed that it would be better to have a separate class to teach AutoCAD to architectural students.

4.   **That freehand sketching be emphasized in Architecture classes, rather than the use of the T-square and triangle.**

Mr. Ahsan reported that freehand sketching is currently emphasized in ARC 113, Architectural Design I; ARC 114, Architectural Design II; and ARC 116, Interior Design and Color Theory. Students are learning how to present quickly, how to sketch freehand in 3D. Ms. Tetreault agreed, stating that they do sketches and renderings every week.

Ms. Novak pointed out that those are also the skills that will help students gain admission to a university program. People must be trained to think in a graphic format. Mr. Ahsan mentioned that OCC students who continue their studies at Lawrence Technological University find they are ahead of others in their classes.

Mr. Pudists commented that students must learn to think and express themselves in 3D, and sketching trains them to do that. The entire group agreed as to the importance of students being well trained in sketching.

8.   That the College seek to provide Architecture students with additional instruction in the communication of ideas in writing and speaking.

Mr. Ahsan reported that students in all Architecture classes are required to write reports in the way they would in a typical work situation. Most classes are required to do presentations, so they are prepared to sell, not just draw. Students are graded on every aspect of their presentation, as though they were presenting at city hall.

9.   That instruction about zoning codes be included in ARC 211, Architectural Site Development.

Mr. Ahsan reported that, when Mr. Chun taught this class, instruction about zoning codes was included. Mr. Pudists pointed out that such instruction is important because any building project stands or falls based on the ability of the architect to satisfy the officials who make rulings about the zoning codes. Students must know how to prepare a site plan and present it to people who understand nothing about it.

10.   That instruction about cost estimating be included in the Architecture Program.   If students are unwilling to register for ARC 220, Construction Estimating, instruction on cost estimating should be included in another course which they are required to take.

Mr. Ahsan pointed out that the Softdesk software has cost estimating built into it, so students using computers would be able to learn about cost estimating as they do their drawings in ARC 108, Architectural Drafting II - Residential Working Drawings; ARC 200, Architectural Drafting III - Commercial Working Drawings; and ARC 218, Architectural Drafting IV. This would be possible once computers have been made available to Architecture students. Mr. Ahsan believes this would be a more effective way of teaching cost estimating, since students do not register for ARC 220. He asked the group what they would recommend about this.

Mr. Hunter made a motion that ARC 220, Construction Estimating, be deleted from the curriculum, and that its instructional content be included in other appropriate courses. Mr. Romano seconded the motion, and the group approved the motion unanimously.

Architecture Programs at Other Community Colleges

Mr. Pudists asked what other two-year colleges are doing in the area of architecture. Mr. Ahsan responded that he has visited Henry Ford Community College, Lansing Community College, and Washtenaw Community College. There are things that OCC is doing differently from them, such as the design courses using Softdesk. The others are covering other areas more extensively. For example, one school offers three materials classes.

Ms. Tetreault suggested that the materials class should be divided into two classes because there is so much material to be covered.
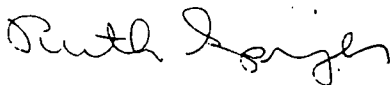
Mr. Ahsan suggested that perhaps for the next advisory committee, we can try to have information available from other community colleges regarding what their target population is.

Mr. Christensen suggested that copies of the curriculums from other schools be sent to advisory committee members prior to the next meeting. Mr. Ahsan commented that Lansing Community College has a very good architecture program. He will get copies of their curriculum to send as a model to members before the next meeting.

New Advisory Committee Recommendations

11. That OCC explore the possibility of developing a partnership with a company which might be willing to leave its equipment at OCC and then use OCC facilities to demonstrate its software to potential clients.

12. That OCC consider the possibility of offering a separate course to teach the fundamentals of AutoCAD in an architectural context.

13. That ARC 220, Construction Estimating, be deleted from the curriculum, and that its instructional content be included in other appropriate courses.

14. That a copy of the Lansing Community College Architecture curriculum be sent to advisory committee members prior to the next meeting.

Respectfully submitted,

Ruth Springer

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