

A. INSTRUCTION

4. Professional Ancillary Courses Curriculum Development

This discussion will examine two courses in which the candidate achieved significant contributions to the curriculum. The courses are ID 521 Interior Drawing - U3, taught in the Autumn Quarter, and ID 523 Interior Space Modeling - U3, taught in Winter Quarter.

ID 521 Interior Drawing - U3

Autumn 1988, 1989, 1990, lecture/lab with an average of 17 students

The course is an ancillary studio course required of Interior Space Design (ISD) majors in the Department of Industrial Design. The candidate taught the only section in Autumn 1990.

For this quarter, the candidate linked the subject matter of ID 521 to the activities of the concurrent Interior Space Design studio course, ID 460.08, in which the students also enrolled. ID 460.08 had students working on several projects to introduce the issues of Interior Space Design.

To link the two courses together the candidate worked with the instructor for ID 460.08, Prof. Charles Wallschlaeger. Together, the course work for ID 521 acted in concert with and enhanced the Interior Space Design studio course ID 460.08.

a. Development of Curriculum

The candidate utilized the subject matter and concepts from the sections taught in Autumn 1988 and 1989. The subject matter continues and refines the necessary knowledge and skills associated with drawing for interior space design. The students acquired drawing experience in prerequisite courses in the department and in Engineering Graphics. The fundamental goal of the course was for all students to communicate information in interior design with an acceptable level of drawing ability.

To achieve the goal the candidate continued to utilize the strategy to build student confidence in their drawing ability. To build student

confidence, the candidate, utilized demonstration and practice of technique through assigned studio exercises. Participation in demonstrations and completion of exercises builds for each student the required knowledge and level of skill.

Four units of content presented the subject matter of the course. These four units introduced the variety of drawing consideration associated with interior space design, including: Fundamentals of Freehand Conceptual/Ideation Drawing Methods and Techniques of orthographic, axiometric and perspective drawing; Rapid Visualization in Mixed Media of space, interior objects and surfaces; Visual communication of interior drawings; and Sequential character of concept, development and refinement in interior drawing.

Subject matter of these content units included: introduction of subject, definition of terminology, examples of application, discussion of examples and tools, demonstration of application and tools, and student exercises to explore application and tools.

b. Curriculum Contributions and Innovations

The candidate designed a number of contributions and innovations to the curriculum to provide students with methods, techniques and skills for interior drawing.

Designed the Curriculum to Enhance Student Abilities and Confidence

Drawing was their weak link, yet the key means of communication for Interior Space Designers. Based on their previous courses the students in Interior Space Design knew how to draft and did some sketching. Yet they could not quickly or clearly sketch spaces and communicate concepts .

The candidate designed a series of exercises to develop student abilities and confidence. Drawing needs to be learned as one would learn a language. With plenty of practice, as often as possible. To develop this practice the students would draw in-class and then create a set of five drawings for the next class. They drew 3-D interior space, furnishings, product relationships and other subject matter as orthographic, axiometric and perspective drawings. In addition much of Interior Space drawing is done as conceptual ideation in Rapid Viz/Indication mode without

mechanical drawing tools. This mode of drawing was the primary focus of the course.

Required Students to Maintain a Graphic Journal

First, is the repeated exposure to applying a structured process to solving design problems. The students were required to prepare a "Sketch Book" which documents their learning experience. The Sketch Book contains experiments with media and techniques, conceptual development drawings, found examples and other ideas.

ID 523 Interior Space Modeling - U3

Winter 1992 and 1993, lecture/lab with an average of 20 students

The course is an ancillary studio course required of Interior Space Design (ISD) majors in the Department of Industrial Design. The candidate team taught one of two sections in Winter 1993. The other section was taught by Prof. Jim Kaufman, Department Chair and GTA Tom Neuzil exclusively to Product Design (PD) majors.

Together with Prof. Kaufman and GTA Neuzil, the candidate continued the curriculum developed for the course during the previous year, with minor revisions. The revisions achieved two fundamental changes to the curriculum. First, to tie the curriculum to a new textbook, and second, to link subject matter to concurrent studio courses.

For this quarter, the candidate linked the subject matter of ID 523 to the activities of the concurrent Interior Space Design studio course, ID 461.08, in which the interior space design students also enrolled. ID 461.08 had students working on several projects to explore the issues of Interior Space Design. Likewise, Prof. Kaufman linked subject matter to the activities of the concurrent Product Design studio course, ID 461.04, in which the product design students also enrolled.

To link the two courses together the candidate worked with the instructor for ID 461.08, Prof. Heike Goeller. Together, the course work for ID 523 acted in concert with and enhanced the Interior Space Design studio course ID 461.08.

a. Development of Curriculum

The basic subject matter provided an introductory experience with the skills and methodology associated with computer representation of 2- and 3-dimensional space and products. This representation is created and visualized using AutoCAD software on both 80486 and 80386 Personal Computers with the MicroSoft Disk Operating System (MS-DOS). The use of the computer as a visualization tool has become standard operating procedure in the interior space design profession. It is rapidly becoming the visualization tool of choice, especially in the later stages of development for product design. While there are a wide variety of CAD software packages available, AutoCAD has by far the widest

dissemination across the design profession. It is the software of choice for CAD instruction at this point in time.

To maintain consistency between the two sections, the two instructors agreed to work within a subject matter framework while developing their own set of suitable studio problems. The instructors defined two core subject matter issues for the course: thinking and visualization.

The thinking subject matter is being "smart" about how to use the computer to generate 2-and 3-dimensional space and products. The visualization subject matter is manifested as drafting, creating 3D computer models, and establishing perspective views. These two groups of subject matter are applied over the four units of the course in conjunction with the studio problems.

The revisions required that the studio problems create a broader design educational experience for the students. A fundamental goal of the course is to generate both confidence and expectation in the students for using computer in the design visualization process. The textbook used in the candidate's section specifically focused on AutoCAD applications in Interior Space Design. This developed for the students a strong understanding of purpose for computer visualization. The instructors agreed to design the lab exercises to link up with the students concurrent studio design course. The students used the computer to generate orthographic, isometric, and perspective views of their designs. This built confidence and fulfilled their expectations for the educational experience.

The instructors designed four units of content to present the subject matter of the course. These four units introduced the AutoCAD software and its application to interior space and product design, including: Introduction to AutoCAD; Drawing and Editing Basics; Advanced Drawing, Editing, and Dimensioning; and Three-Dimensional Modeling of Space and Form.

Subject matter of these content units included: introduction of subject; definition of terminology; examples, demonstration, and discussion of application, commands, and tools; and student exercises to explore application, commands, and tools.

Based on the agreed subject matter and studio objectives, the candidate developed more detailed subject matter and concepts.

b. Curriculum Contributions and Innovations

Together with Prof. Kaufman, the candidate designed a number of contributions and innovations to the curriculum to enhance the student's understanding of AutoCAD software and its usage in design.

Designed Curriculum to Enhance Student Confidence

Developing a student's confidence to begin and complete the documentation of a project using CAD software requires their understanding of how and what can be done. The curriculum progressively introduces AutoCAD: software command structure, drawing editor, and shell editors for text, polyline, dimensions, and dview (perspective). The AutoCAD curriculum is taught with exercises and projects linked directly to design studio experiences.

Designed Curriculum to Focused on Design Use of CAD

The candidate designed the curriculum based on a variety of inputs. These included: content previously developed by Prof. Kaufman, textbook content, and content previously developed by the candidate. The resulting curriculum developed student abilities and confidence. Lectures led directly into demonstrations. Demonstrations led directly into the student in-class exercises.

The course was taught in the PC Computer Lab run by Academic Computing Services in Brown Hall.