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<th>93-0043</th>
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<td><strong>New Technology in the Photography Classroom, Faculty Development in Digital Imaging</strong></td>
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Consortium project.

A consortium made up of the San Diego Supercomputer Center, the University of California San Diego Extension, and Southwestern College will facilitate the proposed faculty development activities component of this grant application.

The University of California San Diego Extension offers a comprehensive program in digital imaging and computer graphics. Students receive instruction in a 20 station model classroom housed at and maintained by the San Diego Supercomputer Center. The San Diego Supercomputer Center is a private sector research facility ran by General Atomic. John Craig Freeman, one of the project directors for this proposed FII grant, teaches all levels of digital imaging in the University Extension program. Drawing upon his expertise in the field, we will design a comprehensive two-part training program in digital imaging for community college faculty. The training program will consist of

An 18-hour workshop in digital imaging taught in the model classroom at the San Diego Supercomputer Center. The workshop will offer participants hands-on instruction in the use of applicable software and hardware.

On the Southwestern College campus we will conduct an 18-hour seminar in digital imaging instruction for community college faculty. The seminar will cover the practical and theoretical issues involved in the introduction of digital imaging into the classroom and the culture at large.

One of the outcomes of the seminar will be input from faculty-participants for the development of a model curriculum based on their workshop experience and teaching background. This information will be incorporated into the "Curriculum Guide for Digital Imaging Instruction at Community Colleges," which will be written after the completion of the workshop and seminar.

A digital imaging instructional aid station will be purchased through the loan portion of this FII grant. This equipment will be used for demonstrations of a variety of teaching methods, and peripheral imaging equipment during the seminar. Local suppliers and industry who use or produce peripheral hardware such as digital cameras, printers, and film recorders will be invited to demonstrate
their products during the seminar. We will also request that local industry allow site visitations and short term job shadowing for faculty-participants.

This consortium achieves an economy of scale by utilizing equipment and facilities not currently available at Southwestern College.
The area of the Board of Governors Basic Agenda Priorities that will be significantly impacted by this project is (C) Educational Quality. This project will help improve the quality of academic offerings by addressing four of the Board of Governors proposed initiatives in this category:

Maintain and improve the quality of instruction to promote excellence in the classroom, in both teaching and learning.

Make vocational education programs more relevant and work with industry and the private sector to prepare students for employment.

Update the vocational curriculum by incorporating modern industrial techniques.

Tie vocational courses to both intermediate and long-term labor market requirements.

In addition the proposed project impacts the mission statement of the Board of Governors Agenda Priorities and reaffirms strong support for vocational education.

The advent of digital imaging is quickly making traditional photographic techniques obsolete. Photographic and print based industries from small town newspapers to major graphic production houses are replacing darkroom and photographic equipment with digital cameras and desktop computer systems. In response to the industry change, four year universities and colleges around the country are making the transition to digital technology in many disciplines, including photography. Therefore, there is a systemwide need to retrain community college faculty to use this new technology and to update curriculum to prepare students for an increasingly computerized academic environment and work force.

The successful conclusion of this project will address this need by:

Retraining community college faculty throughout San Diego County to use digital imaging hardware and software in a series of intensive workshops in digital imaging.
Training community college faculty to teach these skills to students in a seminar in digital imaging instruction designed for community college faculty.

Publishing a "Curriculum Guide for Digital Imaging Instruction at California Community Colleges," which will be disseminated to all California Community College art and photography programs.
The specific educational program addressed by this project is 3.) Faculty and Staff Development, f. Other. Faculty Seminar and Workshops in Digital Imaging. As detailed in section 1. above, the Basic Agenda item being addressed is C) Educational Quality.

Project director John Craig Freeman has taught digital imaging at the University of California, San Diego Extension for three years. He also teaches traditional darkroom photography at Southwestern College and the University of California, San Diego. His experience is that students learn the fundamentals of photography faster and more efficiently on a computer than in a traditional darkroom. Furthermore, students learn general computing skills on a tangible visual level that helps them in more abstract computational disciplines. He and his university colleagues have observed that many community college transfer students lack the skills necessary to enter the increasingly computerized academic environment. His input, and our own research in the field, has made faculty at Southwestern College aware of the critical need to retrain community college photography faculty to teach digital technology. Southwestern College has supported this need through a Curriculum Development Grant for preliminary work in the integration of a digital imaging into the art program.
The field of photography is undergoing a fundamental evolutionary change; community college faculty are ill-equipped to respond to this change. For the whole of its 154 year history, the process of photography has required the use of dangerous and expensive chemicals. It is now possible to capture images using digital cameras and scanners. These digital images can be processed on modest desktop computers. Prints can then be produced that rival those made in a chemical darkroom. Over the past decade digital imaging has replaced chemical darkroom processes in most image publication work, including newspapers, magazines, books, etc. The replacement of traditional darkroom facilities with digital imaging computer laboratories reduces the environmental impact of image production by eliminating the toxic chemicals traditionally used.

Digital imaging is stretching the boundaries of the traditional role photography has played in our society. Sciences such as astronomy, geology, meteorology, atmospheric chemistry and many others have made exponential progress with computer enhanced photography. This work, which once required the use of supercomputers, can now be done at the desktop level. A journalist equipped with a digital or video camera and a cellular phone can now send images instantly to press. Pre-press and print industries are being revolutionized by digital imaging. New forms of digital publications are emerging and data bases are becoming visual. Medical image banks are being created that will provide doctors with on-line visual information. Digital imaging is a necessary tool for theorists working in the visualization of complex abstract models. New visual arts forms are being developed that could not have been imagined five years ago. The effects of this technological evolution cannot be denied.

It is the time for the educators at all levels to incorporate these advancements into the curriculum. An early start in this area will insure the viability of existing community college art and photography programs well into the next decade. This is especially important at this time. Increased fees will make prospective students more selective and more demanding of the community college system. As more and more industries and universities transform their traditional photographic programs into digital imaging programs community colleges will have to have to follow suit. Shrinking funds for faculty expansion requires programs to retrain existing faculty in the use of contemporary technology. Additionally, digital imaging is a rapidly growing technology that guarantees to produce many high skill, high paying jobs across many different fields. This project will be
a proactive step in the direction proposed by the Clinton Administration to rebuild the nation’s economy and prepare workers for the jobs of the future.

The most efficient way to address this problem is to retrain faculty and create a comprehensive plan for curriculum development.

An alternative to this approach would be to not respond to these technological changes, thereby limiting the vocational and transfer opportunities for students in the field. Another alternative would be to let faculty pick up these skills on their own. However, digital imaging is not an easy discipline to master. It is quite time consuming and expensive to learn individually. The proposed workshops and seminars in digital imaging will provide San Diego community college faculty with an intensive learning experience and access to the equipment needed to become proficient in the use of digital imaging. This approach will lay the groundwork for the modernization of the current community college curriculum to meet transfer and industry standards.
The immediate population to be served by the project is the faculty at San Diego Mesa College, Grossmont College, Palomar College, Cuyamaca College, Mira Costa College, San Diego City College and Southwestern College. Due to space and equipment limitations at the San Diego Supercomputer Center workshop size will have to be limited to twenty. The potential pool of participants for the workshops and seminar are the 35 full-time photography and art faculty at San Diego community colleges. Adjunct faculty will be admitted to the program as space permits. A $200.00 stipend to cover costs for travel and workshop expenses will be offered to participants as an incentive to attend the proposed retraining program.
The goal of the proposed project is to develop a model retraining program for San Diego area community college photography and art instructors to teach them the use of digital imaging techniques and how to teach this technology to community college students.

Specific objectives include:
1) Develop and implement an 18-hour workshop for community college instructors to introduce them to the hardware and software used in digital imaging technology (by December 18, 1993). The benchmark standard will be the completion of the workshop by December 18, 1993.

2) Develop and implement an 18-hour seminar in teaching digital imaging to community college students for community college instructors (by March 12, 1994). The benchmark standard will be the completion of the seminar by March 12, 1994.

3) Write a model guide for the integration of digital imaging into traditional community college photography and art programs. The benchmark standard will be the completion of the guide, and review and approval of the guide by the project monitor by May 27, 1994.

4) Print and disseminate the guide to community colleges with photography and art programs by June 1, 1994. The benchmark standard will be the dissemination of the guide by June 20, 1994.
Project directors Elizabeth Sisco and John Craig Freeman will be co-coordinators of this proposed project (see attached resumes). Dr. June Scopinitch, Dean of the Division of Arts and Humanities at Southwestern College will act as project supervisor.

In early Fall, 1993 the project directors will meet to plan the workshops and seminars. The workshops will take place at the San Diego Supercomputer Center on six Saturday afternoons from November 6 - December 18, 1993. At the beginning of Spring Semester, 1994 the group will reconvene at Southwestern College for six seminars in teaching methodology for digital imaging. The seminars will be held on Saturday afternoons from February 5 - March 19, 1994. For the remainder of the Spring Semester the project directors will write, revise and publish the "Guide for Digital Imaging Curriculum Development at California Community Colleges." The guide will be disseminated in early Summer, 1994. Fifty-percent of the requested grant funds will be used for the planning and implementation of the workshops and seminar, and fifty-percent will be used to write, produce, and publish the "Guide for Digital Imaging Curriculum Development at California Community Colleges."
The project objectives are to prepare San Diego area community college faculty to use and teach digital imaging, and to publish a "Guide for Digital Imaging Curriculum Development at California Community Colleges" for dissemination to all California Community College Art and Photography Programs.

This project will lay the groundwork for the systemwide modernization of Art and Photography programs to include digital imaging. The expected outcomes of the project activities detailed in the work plan include:

- faculty at community colleges throughout San Diego County who are familiar with digital imaging technology and prepared to start the process of implementing appropriate curricula at their own colleges;

- a guide for the implementation of this curricula that may be utilized by community colleges throughout California to update their vocational and fine art photography programs to include digital imaging.

Administrators at Southwestern College have demonstrated their firm commitment to the development of a digital imaging program through the award of a Curriculum Development Grant in digital imaging to Elizabeth Sisco and John Craig Freeman in Fall '92. Additionally, we are looking into the Fund for the Improvement of Post Secondary Education from the Federal Department of Education for continued support.
Before the final meeting of the workshops and seminar an evaluation form will be completed by all faculty-participants. Since the seminars and workshops represent a pilot program in the field, participant feedback will be encouraged on a regular basis during the sessions. It is the hope of the project directors that the diversity of teaching experience the participants bring to the project can be used to create a genuinely effective program in digital imaging.

Problems that are identified by the faculty-participants on the evaluation form will be discussed at an open forum at the end of the last meeting. Effective instructional methods will be noted at the open forum and included in the published "Guide for Digital Imaging Curriculum Development at California Community Colleges."

The "Guide for Digital Imaging Curriculum Development at California Community Colleges" will constitute a recommendation for the most efficient and effective way to integrate new computer technology into existing photography and art programs. The guide will include model curriculum, feedback from workshop and seminar participants, and recommendations for the purchase of hardware and software. A feedback request form will be enclosed with the guide to solicit user input for the improvement of the document.
The target population for the "Guide for Digital Imaging Curriculum Development at California Community Colleges" is faculty and administrators of Art and Photography programs at all California Community Colleges.

The published "Guide for Digital Imaging Curriculum Development at California Community Colleges" and evaluation form will be distributed to all of the faculty participants, and to the Deans of all California Community College Art and Photography programs. As we evaluate the feedback, we will be particularly interested in the feasibility of systemwide integration of new computer technology into community college vocational and fine art photography programs, and the possibility of offering future systemwide retraining programs in digital imaging.

A report of the outcomes of this project will be presented at professional conferences such as the Society for Photographic Educators, and the College Art Association, as college travel budgets allow.
The total FII funds being requested to support this project are $29,479.00 in grant money and a $10,533.00 loan for a total request of $41,191.00 in state funds. This will be matched by district in-kind funds of $8,130.00, and a contribution of $1,000.00 from a local private agency (San Diego Supercomputer Center) which will contribute computer time, facilities, and support for the workshops in digital imaging offered in November/December 1993. This contribution was based on a conservative charge of $50.00 for each of the twenty computers used during the six workshops. Thus the total project cost including state and local contributions is $50,321.00, which appears on the attached Application Budget Summary sheet.