Introduction:
Over the past eight years the Photography Area in the Department of Art has been making a steady transition from analog to digital photography. This effort is absolutely necessary given the change in technology. To maintain retention and recruitment, we must provide an education that is technologically current for photography and the demands of the growing employment market. Over the past few years, we have equipped professional digital facilities for both students and faculty research activity. Through grants, donations and University equipment requests we have built up a rather impressive printing facility. As with all technology, we are constantly upgrading our printing and computing stations to keep up with the enhanced image production. We are working with teaching and research cameras that have exceeded the processing speeds of many of our computers. Every year, and often multiple times during that year, camera manufacturers update their image file formats (RAW file format) which requires us to upgrade our software so the students are able to edit their images. Since 2005, we have upgraded Photoshop through seven versions. Photography will always rely on innovation requiring a continuing need for updated printers, cameras, computers and peripheral equipment. We have increased our efficiency such that we do not need massive hardware (computers for each student, such as an entire lab) except for printing and processing stations.

The list of equipment on the cover page is ranked in order of priority with 1 being the top priority. Not all prices reflect educational discounts nor shipping but if awarded we would work with the manufacturers to receive educational discounts to reduce the overall request amount.

Description of the equipment / Instructional activities to be enabled / Impact on instruction and innovation infrastructure, and need

Apple iMac 27" 16gb ram
In an effort to periodically update computers, we are seeking to replace four of our Apple iMac computers. These are barely able to process files from current cameras. Providing students with the learning tools needed to maximize their employment opportunities requires computers that are able to process the larger image files. Furthermore, instructors will be able to work with more complex imaging techniques in our photographic laboratory. In our current research and teaching labs, there are times when a computer is not able to process an image file fast enough and disrupts the technique being taught.

- Improved image production
- Improved student experience
- Intended to serve all students enrolled in photography curriculum

Mamiya DM40 Medium Format Camera
In 2011 with help from the University of Nevada, Reno we were able to add a Mamiya DM40 medium format camera into our research equipment. Over the past two years we have been working with the camera in both our research and teaching mission. However, through multiple tests we have found that it is important to acquire cameras that our students would be able to check out for their projects. To start we would like to purchase three cameras.

- A recruitment tool for potential undergraduate and graduate students
- Prepares students for equipment they will need when entering into the professional job market
- Allows for opportunities to produce large mural photographs
- Increases student problem solving abilities
- Intended to increase the opportunities for Advanced and Graduate Students
- Advanced image editing skills for students
Apple MacBook Pro 8gb ram

To increase flexibility in our laboratories, we are requesting an Apple MacBook Pro computer. The computer would be available for check out to run our Epson printers or to use with the Mamiya DM40 medium format camera. While tethered photography (where your camera is connected directly to the computer) has been around for many years, we have not had the ability to teach these techniques. Whether one is working in a commercial studio or with a specific research project, it is necessary to learn advanced skills in camera management. Working from the computer, students have increased ability to manipulate image exposure, composition, and lighting design. Flexibility is key to a successful teaching program and allows for the maximization of the facility. In our competitive marketplace, students and faculty require the skills incumbent in these advanced toolsets.

Epson 7990 24" wide printer / Epson 4990 17" wide printer

As early as 2003, the Photography Area has been working with digital printing but a few of our printers purchased as early as 2004 have lost their operational benefits. The longevity of some of these printers is quite impressive; however, there have been significant improvements in ink distribution systems, print head cleaning, color fidelity and speed of printing. To increase the student experience, it is important to replace a number of these printers. The maintenance required to keep these older printers serviceable requires ever increased funding (creating financial inefficiency). Up-to-date printers will save costs in instructional time — avoiding, for example, clogged print nozzles and conserving ink, which is a baseline huge expense.

- Reduction of time spent preparing printer to print
- Improved image production
- Improved student experience
- Reduced cost in maintenance and ink
- Ability to produce museum quality photographs for exhibition by students
- Intended to serve all students enrolled in photography curriculum

Enhancement of educational collaboration that cross-departmental and/or college boundaries. Joint proposals between academic units are welcome and encouraged / Leveraging of additional resources from state, federal, and/or private sources.

For over a decade, the Photography Area has maintained a partnership with the Reno-Sparks Visitors and Convention Authority (RSCVA). This has been a dynamic partnership that has increased students' understanding of career possibilities in the photographic arts. Each semester, selected students work directly within a client-based environment producing images for the RSCVA. For more than six years, we have been collaborating on research projects with UNR's Academy for the Environment. These projects involve students in both laboratory and field research. The relationship is vital to my program's mission emphasizing interdisciplinarity, specifically among the sciences. Our senior student researchers have produced visual profiles for the Academy for the Environment's publication "Tahoe: A Legacy of Research, Education and Outreach." Students' access to current cameras, computing, and printing tools is essential to their work. By the way, many Journalism students come to us for their visual research education; they participate in these programs, too.

Contribution to the strategic goals of UNR.

Increasing the learning outcomes of students is a fundamental element in the curriculum of the Photography Area. Improving the learning curve could not be done without relying on a digital darkroom. Students learn skills that are essential to their employment prospects and noticeably to their ability to earn acceptance into graduate programs.
Contribution to the economic goals of the state of Nevada.
Our curriculum is geared toward visual literacy and building the students' ability to develop a career using their photographic techniques. We emphasize technical proficiency as well as visual literacy and an understanding of visual theory. This is among the highest standards by competing universities working in the fine art model. Many of our students continue to work in Nevada with commercial studios or by creating commercial studios of their own.

Substantial and positive impact on the teaching needs of high-enrollment undergraduates and/or graduate programs.
Teaching in the technological demanding medium of photography requires a fully operational laboratory. This includes the need for computers and printers that enable the students’ learning experience and engage instructors’ innovative programs. New technology within the photography curriculum is essential in recruitment and retention; I know from personal experience that numerous students from the Las Vegas area come to our program rather than to UNLV’s photography area simply because we provide a more dedicated, professional digital laboratory. Providing a laboratory that is technically competitive dramatically improves the potential for success upon graduation. This applies both to our undergraduate classes and for the growing Masters of Fine Art (MFA) graduate program. We have a very high FTE for laboratories that are restricted to 22-24 students per classroom.

Showing significant promise for enhancing faculty diversity
Maintaining a professional teaching facility is paramount to attracting faculty from diverse regions, ethnicity, and backgrounds. A facility that is up-to-date is a significant recruitment tool.

Management plan and sustainability
The Coordinator of Photographic Research maintains the Photography Area laboratories. Student volunteers assist in supervising the main photography lab and help students check in and use the equipment. Photography classes are open to all students and there is a consistently high demand for photographic education.

It is unfortunate but much of the computing technology has a relatively short life span and many of the technological advances make many devices obsolete before substantial maintenance or repair are necessary. The modest operating costs of the photography area should provide the essential maintenance of the equipment.

*We do not have an existing proposal or funded projects at this time for equipment included in this request.