Margaret Collier, Ph.D., Department of Educational Specialties

An Interactive Learning Approach: Exploration of the Classroom as Laboratory

Summary:
This proposal is a project designed to upgrade an existing assessment course into a laboratory of exploration using peer instruction. The course trains graduate-level student teachers to administer K-12 classroom tests. This project integrates interactive technology of classroom response systems ("clickers") and the pedagogical strategy of peer instruction to enhance student conceptual understanding of course material. Comparison will be conducted between a class taught in the spring semester without the use of clickers and the same class taught in the fall with the use of clickers. Results will determine whether peer instruction using clickers increases learning outcomes.

Christopher Holden, University Honors Program

Mobile Place-Based Learning

Summary:
This project seeks to continue the design, production, and use of place-based learning content using mobile technology at UNM and in the surrounding community. We will continue to work in and outside of classroom environments alongside a global authoring community using the open-source ARIS Augmented Reality platform. This will provide undergraduates at UNM with opportunities to engage in innovative course content, academic research, and community outreach.

Glenn Hushman, Health, Exercise and Sports Sciences

Using iPads to Produce Performance-Based Assessment in Physical Education

Summary:
The current standards-based educational environment requires teachers to show evidence of student achievement. Due to increased class sizes, decreased student physical education time, and a lack of paper and pencil resources, teachers in physical education settings must have access to portable electronic devices in order to provide high quality, performance-based assessments of students. The Apple iPad is an electronic device that offers a teacher in a physical education environment the ability to assess a large number of students quickly and efficiently in a dynamic, fast-paced gymnasium environment.

Tariq Khraishi, Claudia Luhrs, Mechanical Engineering

Advanced 3D Laser Scanner for Enriched Hands-on Learning and Reverse Engineering Education

Summary:
The proposed effort herein revolves around the purchase of high-tech 3D laser scanning equipment/software for use in undergraduate mechanical engineering (ME) courses, specifically the design courses: ME260, ME360 and ME460. Although ME courses are readily identified for the use of the equipment in teaching, the equipment has a wide range of applications of interest to many UNM departments which all will have access/training to the equipment. It will enable for the first time the introduction of "reverse engineering" concepts and practice. The introduction of this equipment/software will significantly enhance the quality and breadth of hands-on teaching within the department.

Alfredo Martinez, Ph.D., Department of Health, Exercise and Sports Sciences

Incorporating Immediate Feedback Through Video Analysis to Enhance Pre-Service Teacher Performance

Summary:
In order for learners to receive maximum benefit from feedback, it should be supplied as soon as possible after performance of the activity. Using a video camera and laptop computer to document and review teaching performance during field placements would provide the immediate feedback necessary for growth and development of important teaching skills and management techniques of pre-service teachers.

Dr. Suzanne Schneider, Ph.D., Department of Health Exercise and Sports Sciences

Development of a Real-Time EKG Interpretation Laboratory Experience

Summary:
The purpose of this teaching grant would be to purchase an iWorx Systems, Inc., "Labs by Design" Teaching Lab. The lab kit consists of hardware and software that could interface with our exercise laboratory computers, and also human physiology adaptors (respirometer, electrocardiography (EKG) leads, non-invasive blood pressure sensor, muscle stimulator) that would allow me to develop new laboratory exercises involving basic physiology measurements. I would immediately use this system in an Exercise Science Course I will teach this Spring--PEP 476, Exercise Testing and Interpretation. This course is designed for students interested in a clinical career in stress testing and cardiopulmonary rehabilitation. For such students, the interpretation of real-time EKG during exercise is an acquired skill. The new EKG labs I would design could enhance the learning experience of my exercise science students, by giving them more practice interpreting real-time EKG signals, rather than using textbook pictures or printed EKG tracings.

John J. Russell, Department of Mechanical Engineering

ME406 Racecar Design Laboratory Development

Summary:
The proposal addresses a deficiency in the Formula SAE Mechanical engineering senior three-course racecar design option. The current academic course (ME406) has no lab that takes classroom theory to application on the track. The Society of Automotive Engineers conducts a short course that follows the UNM academic course closely. However the course includes driving laboratories associated with each topic. Based on attending this course driving/testing lab will be developed and implemented for the course. The proposed funding includes registration fees and associated travel expenses for the short course that includes theory to track experience.

Kristen Loree, Department of Theatre and Dance

Chekhov Teacher Trainings

Summary:
In order to present the illusive art of Acting to freshman students we need knowledge of best practices in teaching structure, skill building, assessment and content for introductory Acting courses. By participating in the 18th Annual Chekhov Intensive, at the University of Texas, Arlington, and the intensive International Chekhov Workshop in Boston, I will "learn from master teachers how to structure teaching, script analysis, improvisation and application to scene, monologue and audition situations". Learning from this program will help to integrate Acting pedagogy and provide a platform from which to build the curricular sequence of Acting courses in the Department.

Vladimir Conde Reche, Department of Theatre and Dance

GAGA Technique – Dance for all bodies, ages and dance techniques

Summary:
I will go to Tell-Aviv to participate in the seminar/workshop of GAGA technique. This technique is geared to dancers but is been used on non-dancers with great success. It improves the movement quality of the participants and also opens the mind and bodies for the endless choreographic possibilities that have being explored in the modern/contemporary dance/movement world (Theater, dance, movies, performance in general). This technique helps a large array of people, from physically impaired movers to elite athletes/performers. Being able to provide this movement source and ideas to students at UNM will enhance their performance and further establish our position as a flagship University in New Mexico.

Karla V. Kingsley, Ph.D., Department of Teacher Education

Collaborative Virtual Learning Environments: Second Life as a Tool for Anytime, Anywhere Learning

Summary:
Simulations and other virtual learning environments such as *Second Life* offer unlimited opportunities for users to interact in a safe, familiar, collaborative space. Such environments encourage learners to create, analyze, and evaluate innovative ideas, view problems from diverse perspectives, and utilize multiple media to communicate and accomplish common goals. This project uses Second Life as a curricular tool for teaching and learning academic content in ways that are unique to virtual environments. Teachers will design interactive educational materials based on learning objectives focused on real world problems. Academic uses of wikis, blogs, and other interactive technologies are integrated into coursework.