Dr. Whitney Angelini
College of Education  |  Physical and Health Education
College of Health, Environment and Science  |  Storm Harbor Equestrian Center

Ms. Courtney Gramlich
Storm Harbor Equestrian Center  |  Physical and Health Education

America’s Horse Cares – Equine Assisted Activity and Therapy Program

Funding Source: American Quarter Horse Foundation
Amount Proposed: $4,025
Project Dates: May 1, 2015 to May 1, 2016

Overview: The purpose of this project is to provide funding for the staff of Storm Harbor Equestrian Center to attend coursework through the American Hippotherapy Association.

Dr. Robert Arnhold
College of Education  |  Physical and Health Education

Slippery Rock University Transition Program for Individuals with Disabilities

Funding Source: FISA Foundation
Amount Awarded: $45,000
Project Dates: Jan. 1, 2015 to Dec. 31, 2017

Overview: The purpose of this project is to secure general operating support to conduct the SRU Transition Program for individuals with disabilities between the ages of 14-25 years.
Highly Qualified Adapted Physical Education Teachers in Pennsylvania

**Funding Source:** U.S. Department of Education  
**Amount Proposed:** $250,000  
**Project Dates:** Oct. 1, 2015 to Sept. 30, 2016

**Overview:** The purpose of this project is to train nine graduate scholars per year for five years to become highly qualified adapted physical education specialists to meet Pennsylvania's need for adapted physical education instructors. This funding is for Year 03 of a five-year grant.

Slippery Rock Transition Garden

**Funding Source:** Scotts Miracle-Gro  
**Amount Proposed:** $1,500  
**Project Dates:** Sept. 1, 2015 to Aug. 31, 2016

**Overview:** The purpose of this project is to establish the SRU Transition Garden as part of the SRU Transition Program. The program, held at the Macoskey Center, will teach gardening and farming to young adults with disabilities to work with the crops during the fall and spring semesters. In the summer, parents will bring the participants to campus to harvest the crops, sell them at the community farmer's market and donate them to community food banks.

Highly Qualified Adapted Physical Education Teachers in Pennsylvania

**Funding Source:** U.S. Department of Education  
**Amount Proposed:** $250,000  
**Project Dates:** Oct. 1, 2015 to Sept. 30, 2016

**Overview:** The purpose of this project is to train nine graduate scholars per year for five years to become highly qualified adapted physical education specialists to meet Pennsylvania's need for adapted physical education instructors. This funding is for Year 04 of a five-year grant.

Expansion of the SRU Transition Program

**Funding Source:** DSF Charitable Foundation  
**Amount Proposed:** $90,947  
**Project Dates:** Sept. 1, 2015 to Aug. 31, 2017

**Overview:** The purpose of this project is to provide general program support to expand the SRU Transition Program by adding a postsecondary education program and a summer transition component to the existing job training, residential, nutrition and physical activity components.
Slippery Rock University Postsecondary & Transition Program

Funding Source: D.R.E.A.M. Partnership  
Amount Awarded: $80,000  

Overview: The purpose of this project is to establish a postsecondary education program to be coupled with the SRU Transition Program to recruit students with intellectual disabilities to enroll for the college experience at SRU.

SRU Transition Program

Funding Source: XTO Energy Corporation  
Amount Awarded: $5,000  
Project Dates: July 1, 2015 to June 30, 2016

Overview: The purpose of this project is to conduct a campus-based transition program for high-school students with disabilities supported by SRU staff and student mentors in job training, nutrition education and physical activity training.

Ms. Deborah Baker  
University Advancement | Special Events

Alice Tan Ridley Residency

Funding Source: Pennsylvania Council on the Arts  
Amount Proposed: $2,200  

Overview: The purpose of this project is to introduce this well respected gospel and R & B artist to the SRU campus and community as part of the Performing Arts Series.
Ms. Renee Bateman  
Student Life | Health Services

Making Connections

**Funding Source:** Pennsylvania Liquor Control Board  
**Amount Awarded:** $40,000  
**Project Dates:** July 1, 2015 to June 30, 2017

**Overview:** The purpose of this program is to provide SRU students with a comprehensive health promotion program to reduce underage and dangerous drinking.

Ms. Karla Fonner  
Student Success | Student Intervention Services

Campus Grants to Activate Bystanders to Reduce Sexual Assault and Dating Abuse

**Funding Source:** Avon Foundation for Women  
**Amount Proposed:** $10,000  
**Project Dates:** Sept. 1, 2015 to Aug. 31, 2016

**Overview:** The purpose of this program is to enhance the Step UP! bystander intervention program offered on campus. The goal is to engage campus student leaders and staff/faculty who teach first year seminar class and are advisors of a student organization in Step UP! Sexual Assault/Relationship Abuse training.
Dr. Wei Bian
College of Education  |  Physical and Health Education

**Distance Education Professional Development**

**Funding Source:** Pennsylvania State System of Higher Education Faculty Professional Development Council  
**Amount Proposed:** $1,295  
**Project Dates:** May 10, 2015 to May 10, 2016

**Overview:** The purpose of this proposal is to attend an online training course offered by the University of Wisconsin-Madison to obtain a Certification in Online Education.

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Dr. Barbara Billek-Sawhney
College Health, Environment and Science  |  School of Physical Therapy

**Physical Therapy Faculty and Students Serving Others in Vellore, India**

**Funding Source:** Pennsylvania State System of Higher Education Faculty Professional Development Council  
**Amount Awarded:** $7,645  
**Project Dates:** Apr. 22, 2015 to Oct. 31, 2016

**Overview:** The purpose of this grant is to fund a physical therapy (PT) faculty-student service trip to Christian Medical College and Hospital (CMCH), Vellore, India. The faculty project director will deliver formal lectures/labs, examine and treat patients while simultaneously teaching about the skills she performs. Four PT students will provide direct patient care to those in need.
Mr. Fran Bires
College of Health, Environment and Science  MacKeever Environmental Learning Center

Ms. Christine McHenry-Glenn
College of Business  Hospitality, Event Management and Tourism

Robert A. Macoskey Center Field Trips and In-School Programs for Local Schools

Funding Source: Pennsylvania Department of Environmental Protection
Amount Awarded: $2,997
Project Dates: July 1, 2015 to June 30, 2016

Overview: The purpose of this grant is to offer in-school sessions on environmental education and field trips to the Macoskey Center to area schools.

Ms. Genevieve Bordogna
Transformational Experiences  Office for Global Engagement

Brazil Scientific Mobility Program

Funding Source: Institute of International Education (IIE)
Amount Proposed: $27,642

Overview: The purpose of this project is to offer students from Brazil the opportunity to pursue study at SRU for a one-year full-time academic program.

IREX Global UGRAD Program for Tunisia, Kosovo and Pakistan

Funding Source: International Research and Exchange Board
Amount Proposed: $23,524

Overview: The purpose of this program is to offer students from Tunisia, Kosovo, Eurasia/Central Asia and Pakistan the opportunity to pursue study at SRU for a one-year full-time academic program.
Dr. Thaddeus Boron
College Health, Environment and Science | Chemistry

Studying the Effects of Bridging Ligands on Metallacrown-Based Single-Molecule Magnets

**Funding Source:** Pennsylvania State System of Higher Education Faculty Professional Development Council
**Amount Proposed:** $10,000
**Project Dates:** May 1, 2015 to Oct. 31, 2016

**Overview:** The purpose of this project is to conduct research on very small magnets, called nanomagnets, which could serve as the next generation of computer data storage devices. This study will utilize student-faculty research to create new magnetic materials by systematically varying the connection between metal ions.

Dr. John Buttermore
College of Business | School of Business

SRU Clay Target Club

**Funding Source:** NRA Foundation
**Amount Awarded:** $7,200
**Project Dates:** Feb. 1, 2015 to Nov. 1, 2015

**Overview:** The purpose of this project is to provide funding to offset the cost of supplies for the SRU Clay Target Club members and prospective members.

SRU Clay Target Club

**Funding Source:** Midway USA Foundation
**Amount Proposed:** $2,772
**Project Dates:** June 1, 2015 to May 31, 2016

**Overview:** The purpose of this project is to provide equipment, supplies and logo apparel for club members. In addition, funds may be used to defray registration and travel costs of member participation in regional, state and national tournaments.
Dr. Ana Maria Caula
Dr. Gisela Dieter
College of Liberal Arts  |  Modern Languages and Cultures

Dr. Junko Yamamoto
College of Education  |  Secondary Education/Foundations of Education

Faculty Professional Development Workshop (Oral Proficiency Interview Assessment Workshop) to Promote Student Engagement and Standard Based Instruction

Funding Source: Pennsylvania State System of Higher Education Faculty Professional Development Council
Amount Awarded: $4,467
Project Dates: April 30, 2015 to April 30, 2017

Overview: The purpose of this project is to provide training in the American Council on the Teaching of Foreign Languages (ACTFL) Oral Proficiency Interview (OPI) to 10 faculty members in the Modern Languages and Cultures Department and the Secondary Education/Foundations of Education Department of SRU.

Dr. Colleen Cooke
Dr. Elizabeth Kemeny
Dr. Deborah Hutchins
College of Health, Environment and Science  |  Parks and Recreation

Survey of Recreational Therapy/Therapeutic Recreation Assessment Tools Used in Current Practice

Funding Source: American Therapeutic Recreation Foundation
Amount Awarded: $635

Overview: The purpose of this project is to conduct a survey of practicing Certified Therapeutic Recreation Specialists in order to determine what is current practice in terms of therapeutic recreation assessment across practice areas.
Dr. Aaron Cowan
Dr. Lia Paradis

College of Liberal Arts | History

Butler Historical Project: Applied Research and Digital Authorship for Community Use

Funding Source: Pennsylvania State System of Higher Education Faculty Professional Development Council
Amount Proposed: $10,000
Project Dates: June 1, 2015 to Aug. 15, 2015

Overview: The purpose of this project is to conduct research into local community history, and to collect, edit and curate oral history and multimedia enrichment content during the summer of 2015. The research and enrichment materials will be published as a digital history website and mobile phone app for use by the non-scholarly community, including local schools and community organizations.

Community Program Development for the Stone House Center for Public Humanities

Funding Source: National Endowment for the Humanities
Amount Proposed: $150,000
Project Dates: Dec. 1, 2014 to July 31, 2020

Overview: The purpose of this project is to secure long-range funding for the Center for Public Humanities, a public engagement “laboratory” that will connect the university’s humanities departments to the broader community by offering collaborative educational programming, public forums, non-degree courses, workshops and service learning opportunities.

Dr. Nicole Dafoe

College of Health, Environment and Science | Biology

The Role of CCS52 Genes in the Onset of Endoreduplication in Soybean

Funding Source: Pennsylvania State System of Higher Education Faculty Professional Development Council
Amount Awarded: $9,294

Overview: The purpose of this project is to conduct a student-faculty research project to understand how plants, specifically, soybeans, respond to different stresses. The researchers are studying stress induced by insects to identify better soybean growing varieties.
Ms. Laurel Dagnon  
Transformational Experiences  I  Center for Student Involvement and Leadership  

**PA Education of Children and Youth Experiencing Homelessness Program**  

**Funding Source:** Pennsylvania Department of Education through Intermediate Unit 4  
**Amount Awarded:** $2,500  
**Project Dates:** Apr. 15, 2015 to Oct. 31, 2015  

**Overview:** The purpose of this project is to provide tutoring and programs for homeless children in western Pennsylvania during the summer months.

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Dr. Stentor Danielson  
College of Health, Environment and Science  I  Geography, Geology and the Environment  

**Fire, Flood and Social Networks: Examining Whether and How Social Connections Enhance or Undermine Preparedness for Natural Hazards**  

**Funding Source:** National Science Foundation  
**Amount Proposed:** $405,402  
**Project Dates:** May 1, 2015 to April 30, 2018  

**Overview:** The purpose of this project is to examine how social connections (e.g., to friends, family, co-workers, neighbors, etc.) affect people's preparedness for floods in Pennsylvania and wildfires in Oregon.
Ms. Renee Decker
College of Business  Government Contracting Assistance Center

Government Contracting Assistance Center

**Funding Source:** Defense Logistics Agency through California University of Pennsylvania  
**Amount Awarded:** $20,000  
**Project Dates:** Sept. 1, 2014 to Aug. 31, 2015

**Overview:** The purpose of the Government Contracting Assistance Center (GCAC) is to provide services to companies interested in pursuing federal, state and local government contracts and subcontracts. GCAC provides services to help local businesses sell their products and/or services to the government and also provides training in government contracting procedures and issues through seminars and webinars.

Ms. Alice Del Vecchio
College of Liberal Arts  Professional Studies and Interdisciplinary Programs

SPEAK UP! 2015 Spring Form

**Funding Source:** Butler County Drug and Alcohol Program  
**Amount Awarded:** $2,187  
**Project Dates:** Apr. 25, 2015 to Apr. 25, 2015

**Overview:** The purpose of this project is to host the SPEAK UP! Forum to empower students to become prepared, invested and connected in their communities so that they may have their voices heard.
Dr. Cassandra Eisenreich
College of Liberal Arts  |  Music

SRU Community Engagement Initiative: Learning Enhanced Through Music

Funding Source: The College Music Society
Amount Proposed: $1,000
Project Dates: Sept. 1, 2015 to April 30, 2016

Overview: The purpose of this project is to provide an innovative music program specifically designed for preschool through elementary age students. The program currently serves the Head Start Preschool students from the Butler County Children’s Center in Butler, PA. SRU’s music education students will observe and co-teach these classes.

Dr. Keith Dils
Dr. James Preston
College of Education  |  Elementary Education/Early Childhood

Pre-service Differently

Funding Source: Pennsylvania Department of Education through Bloomsburg University of Pennsylvania
Amount Proposed: $37,952
Project Dates: May 18, 2015 to May 18, 2016

Overview: The purpose of this project is to engage SRU’s education faculty, students and their student-teaching partners in the Pre-Service Differently project. The goal of Pre-Service Differently is to implement an online tool to provide a continuous feedback loop to improve teachers’ education, induction and professional development programs. For education majors, this project translates into improved field experiences through the use of customized software.

Dr. Cassandra Eisenreich
College of Liberal Arts  |  Music

SRU Community Engagement Initiative: Learning Enhanced Through Music

Funding Source: The College Music Society
Amount Proposed: $200
Project Dates: Sept. 1, 2015 to April 30, 2016

Overview: The purpose of this project is to provide an innovative music program specifically designed for preschool through elementary age students. The program currently serves the Head Start Preschool students from the Butler County Children’s Center in Butler, PA. SRU’s music education students will observe and co-teach these classes.
Ms. Wendy Fagan  
Ms. Pamela Arnhold  
College of Education  |  Physical and Health Education  

University Student Certification and Training for National Disability Sport Programs  

**Funding Source:** Christopher and Dana Reeve Foundation  
**Amount Awarded:** $5,000  
**Project Dates:** Sept. 1, 2015 to Aug. 31, 2016  

**Overview:** The purpose of this project is to provide sport wheelchairs for certification and training for undergraduate and graduate students enrolled in the Adapted Physical Activity Program for development and expansion of disability sport programs across the country.

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Dr. John Golden  
College of Business  |  School of Business  

The Trust Challenge – Digital Media and Learning  

**Funding Source:** Center for Schools and Communities  
**Amount Proposed:** $58,850  
**Project Dates:** Jan. 1, 2015 to Dec. 31, 2015  

**Overview:** The purpose of this project is to conduct a state-wide online survey to measure student interest in learning about online activity and respectful digital citizenship, including their preferences for specific content and the best way to deliver it. A team of IT developers at SRU’s Sustainable Enterprise Accelerator will select the application platform (i.e., storyboard, game interface, etc.), based on the survey results to develop Digital Badging. Tasks associated with Digital Badging will be done by ImPress, a student start-up at the SEA. ImPress would issue badges to demonstrate student earned competencies.

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Building Partnerships to Research Underserved and Geographically Dispersed New Farmers in Pennsylvania  

**Funding Source:** U.S. Department of Agriculture through Penn State Extension  
**Amount Proposed:** $25,815  
**Project Dates:** Jan. 1, 2016 to Dec. 31, 2018  

**Overview:** The purpose of this project is to partner with Penn State Extension to build a partnership to reach underserved and geographically dispersed new farmers in Pennsylvania by providing workshops for new farmers at the Sustainable Enterprise Accelerator.
Ms. Courtney Gramlich
College of Health, Environment and Science  |  Storm Harbor Equestrian Center

Pennsylvania National Horse Show Grant

**Funding Source:** Pennsylvania National Horse Show Foundation  
**Amount Proposed:** $3,500  
**Project Dates:** Sept. 1, 2015 to Aug. 31, 2016

**Overview:** The purpose of this project is to help with Special Olympic Equestrian team funding. Funding will also help with clothing needs for the competition day in June at the State Special Olympic Summer games at Penn State University.

Dr. Stacy Hrizo
College of Health, Environment and Science  |  Biology

Elucidating Protein Quality Control and TPI Pathogenic Mechanisms

**Funding Source:** National Institutes of Health through University of Pittsburgh  
**Amount Proposed:** $146,789  
**Project Dates:** Sept. 1, 2015 to Aug. 31, 2020

**Overview:** The purpose of this research project is for SRU to collaborate with the University of Pittsburgh to determine the mechanism that targets each mutant triose phosphate isomerase (TPI) protein for degradation using yeast.
Dr. Deborah Hutchins
College of Health, Environment and Science | Parks and Recreation

**Recreational Therapy Equine & Aquatics Program**

**Funding Source:** Council on Brain Injury  
**Amount Awarded:** $3,145  
**Project Dates:** April 1, 2015 to Dec. 31, 2015

**Overview:** The purpose of this project is to engage individuals with brain injuries in therapeutic activities within a university environment utilizing Recreational Therapy (RT) students as instructors and/or mentors. The program will focus on a number of therapeutic outcomes for the participants including: increased social engagement; enhanced physical condition; elevated mood; cognitive stimulation and the potential development of increased leisure function/interest. The RT students will gain valuable practical experience working with individuals with brain injuries, applying what they learn in the classroom while mentoring participants.

Dr. Emily Keener
College of Health, Environment and Science | Psychology

**The Relationship Conflict Study**

**Funding Source:** Psi Chi – The International Honor Society in Psychology  
**Amount Awarded:** $2,000  
**Project Dates:** Aug. 25, 2014 to May 15, 2015

**Overview:** The purpose of this research project is to compare heterosexual and Lesbian, Gay, Bisexual, Questioning (LGBQ) college students’ strategies for solving interpersonal problems in varying social contexts (i.e., friendships vs. romantic relationships).
Ms. Jennifer Keller  
College of Liberal Arts | Dance

**Over, Under and Through: Creating an Experimental Dance Film from the Intimate Perspective of the Performer**

**Funding Source:** Pennsylvania State System of Higher Education Faculty Professional Development Council  
**Amount Awarded:** $8,425  
**Project Dates:** Apr. 22, 2015 to Oct. 31, 2016  

**Overview:** The purpose of this project is to create a professional, experimental dance film for submission to juried film festivals across the United States and abroad.

Dr. Elizabeth Kemeny  
College of Health, Environment and Science | Parks and Recreation

Ms. Courtney Gramlich  
College of Health, Environment and Science | Storm Harbor Equestrian Center

**Expansion of Adaptive Sports Programs for Disabled Veterans and Members of Armed Forces**

**Funding Source:** U.S. Department of Veterans Affairs  
**Amount Proposed:** $52,092  
**Project Dates:** Oct. 1, 2015 to Sept. 30, 2016  

**Overview:** The purpose of this project is to expand equine-assisted programs offered to disabled veterans at Storm Harbor Equestrian Center.
Dr. Elizabeth Kemeny
Dr. Deborah Hutchins
College of Health, Environment and Science | Parks and Recreation

Adaptive Sports Program for Disabled Veterans and Members of Armed Forces

Funding Source: Department of Veterans Affairs
Amount Awarded: $53,500

Overview: The purpose of this project is to expand equine-assisted programs offered to disabled veterans at Storm Harbor Equestrian Center.

Expansion of I Can Do It to Adults Aging with Disabilities

Funding Source: President’s Council on Fitness, Sport and Nutrition
Amount Awarded: $4,400
Project Dates: Jan. 1, 2015 to Sept. 29, 2015

Overview: The purpose of this project is to develop a community-based health promotion program, using therapeutic recreation students as leaders and mentors, under the supervision of faculty, which focuses on functionally-appropriate daily physical activity and healthy eating goals for individuals aging with developmental disabilities and older individuals who have acquired disabilities.

Dr. Elizabeth Kemeny
Dr. Deborah Hutchins
Dr. Colleen Cooke
College of Health, Environment and Science | Parks and Recreation

Enhancing Faculty Competency in Stress Management Modalities for High Impact Practices

Funding Source: Pennsylvania State System of Higher Education Faculty Professional Development Council
Amount Awarded: $8,355

Overview: The purpose of this project is to provide a professional development opportunity for three faculty members to obtain proficiency and certification in three different stress management modalities, Heart Math, animal-assisted therapy and therapeutic humor.
New Castle Bread Basket Program

**Funding Source:** Pennsylvania Campus Connect  
**Amount Awarded:** $2,500  
**Project Dates:** July 1, 2015 to June 30, 2016

**Overview:** The purpose of this project is to obtain a VISTA position to assist with the weekend feeding program at New Castle School District. This program will provide K-12 students in need with a dependable source of food over the weekends.

Pre-K Counts

**Funding Source:** Pennsylvania Department of Education through Lifesteps, Inc.  
**Amount Awarded:** $185,387  
**Project Dates:** July 1, 2014 to June 30, 2015

**Overview:** The purpose of the Lifesteps and SRU/SGA Preschool and Child Care Center joint grant is to coordinate services so that eligible children can participate in a developmentally appropriate, research-based early learning program that ensures a smooth transition to kindergarten. This is Year 02 of a five-year grant.

**Pre-K Counts**

**Funding Source:** Pennsylvania Department of Education through Lifesteps, Inc.  
**Amount Awarded:** $72,155  
**Project Dates:** July 1, 2014 to June 30, 2015

**Overview:** The purpose of the Lifesteps and SRU/SGA Preschool and Child Care Center joint grant is to coordinate services so that eligible children can participate in a developmentally appropriate, research-based early learning program that ensures a smooth transition to kindergarten. This is supplemental funding in Year 02 of a five-year grant.
Dr. John Lisco
College of Health, Environment and Science  |  Parks and Recreation

Law Enforcement Training for Managers

Funding Source: Pennsylvania Department of Conservation and Natural Resources
Amount Awarded: $44,185

Overview: The purpose of this grant is to provide 120 hours of quality training in park law to Pennsylvania forest and park managers.

Dr. Jack Livingston
College of Health, Environment and Science  |  Geography, Geology and the Environment

Street Tree Inventory in the Borough of Grove City

Funding Source: Pennsylvania Urban and Community Forestry Council
Amount Awarded: $4,400
Project Dates: May 15, 2014 to Oct. 31, 2014

Overview: This purpose of this project is to train SRU students to complete street tree inventories in the Borough of Grove City using software developed by the U.S. Department of Agriculture Forest Service and Davey Resources Group. The inventory includes all trees growing within the public right-of-way and in grassy areas of parks surrounded by city streets within the Grove City boundaries.
Dr. Jeffrey Lynn  
Dr. Joyann Urda  
College of Health, Environment and Science | Exercise and Rehabilitative Sciences  

SRU Wellness Initiative  

Funding Source: Pennsylvania Health and Welfare Fund  
Amount Awarded: $3,000  
Project Dates: Sept. 15, 2014 to June 30, 2015  

Overview: The purpose of this project is to provide SRU faculty, staff, administration and family the opportunity to engage in yoga, Tai Chi and meditation to improve various aspects of their wellness.

Dr. Scott Massey  
Ms. Jamie Hammond  
Ms. Teresa Preston  
College of Health, Environment and Science | Biology  

The Effects of an Integrated Special Needs Populations Focus in a Physician Assistant Program Curriculum: A Longitudinal Study  

Funding Source: Pennsylvania State System of Higher Education Faculty Professional Development Council  
Amount Proposed: $9,941  
Project Dates: May 1, 2015 to Oct. 31, 2016  

Overview: The purpose of this project is to study the effects of a Physician Assistant curriculum interwoven with special needs populations’ courses throughout didactic and clinical years in a longitudinal quasi-experimental study design.
Dr. Kathleen Melago
College of Liberal Arts  Music

Teaching Instrumental Lessons Through Distance-Learning

Funding Source: The NEA Foundation  
Amount Proposed: $5,000  

Overview: The purpose of this project is to provide SRU music teacher candidates with a field experience of teaching instrumental lessons to Karns City High School students via distance education by using iPads and apps. The videos will be sent back to the public school students to assist them in their continued improvement on their instruments.

Ms. Katherine Mickle
College of Liberal Arts  Art

Dr. Patrick Burkhart
College of Health, Environment and Science  Geography, Geology and the Environment

Art & Geology: Convergence in the Landscape

Funding Source: Pennsylvania State System of Higher Education Faculty Professional Development Council  
Amount Proposed: $10,000  
Project Dates: May 1, 2015 to June 1, 2016

Overview: The purpose of this project is for Art and Geology professors to lead a team of students on a two-week interdisciplinary research expedition to Badlands National Park, South Dakota and neighboring areas. Students from both departments will make multiple analyses of the landscape through a variety of concurrent approaches during this unique educational opportunity including daily group instruction, field experience, peer-mentoring, individualized instruction, museum visits and cultural tours. Collaborative explorations with students will expand knowledge outside the traditional classroom experience, leading to a greater understanding of both geologic and artistic viewpoints as they pertain to the Badlands and High Plains of the U.S.
Dr. Sunita Mondal
Dr. Roger Solano
College of Business | School of Business

Analysis of 2012 Census of Ag Data

Funding Source: Center for Rural Pennsylvania
Amount Awarded: $15,000

Overview: This project will utilize Census of Agriculture data to conduct quantitative and qualitative analysis of farmers and farm operations in Pennsylvania agriculture, examine the farmers' characteristics based on demographics, farm ownerships and farming practices and identify and analyze changes in types of farming operations, farm profitability and labor employment.

Dr. Lia Paradis
Dr. Aaron Cowan
College of Liberal Arts | History

Stone House Center for Public Humanities Phase 2: Advanced Training in Civic Engagement as a High Impact Learning Practice

Funding Source: Pennsylvania State System of Higher Education Faculty Professional Development Council
Amount Awarded: $10,000

Overview: This project will provide professional development for the two coordinators of SRU’s Stone House Center for Public Humanities (CPH) in three specific, but interconnected, areas of inquiry: 1) advanced pedagogical methodologies of civic engagement; 2) curriculum scaffolding for long-term, cohort-oriented programming outside of the university setting; and 3) the design of effective assessment tools to guide and improve future programming. The desired outcomes are acquiring advanced skills, applying them to existing and new programming at the CPH, and training fellow CPH faculty.
Ms. Ursula Payne
College of Liberal Arts | Dance

**Dancing the Terrain of Uganda: Rediscovering My Identify as a Performer**

**Funding Source:** Pennsylvania State System of Higher Education Faculty Professional Development Council  
**Amount Awarded:** $6,000  
**Project Dates:** Apr. 22, 2015 to Oct. 31, 2016

**Overview:** This project will feature the creation and performances of a new solo inspired by Uganda’s geography and historical landmarks that will be presented and performed in several universities and schools in and near Kampala, the capital of Uganda. Another important goal of this project will be to reclaim or “reform” the project director’s identify as a dancer and enter into a deep investigation of examining current performance practices.

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Ms. Debra Pincek
Planning, Resource Management and Assessment | Student Services

**SRU/SGA Preschool and Childcare CCAMPIS Grant**

**Funding Source:** U.S. Department of Education  
**Amount Proposed:** $14,283  
**Project Dates:** Oct. 1, 2014 to Sept. 30, 2015

**Overview:** The purpose of the Childcare Access Means Parents’ Success (CCAMPIS) program is to assist student-parents who wish to enroll in college and complete a degree program but do not have the funds to pay for childcare while they attend classes. This is Year 02 of a four-year grant.
Development of Special Needs Populations Curriculum for New Master of Science in Physician Assistant Studies

Amount Awarded: $15,000

Overview: The goal of this program is to develop the special needs curriculum for the Master of Science in Physician Assistant Studies Program at SRU. The development of the special needs curriculum involves regional and local development of appropriate agencies and institutions that will facilitate student training for the special needs patients.

Quality Simulation Genitourinary and Gynecologic Examination Training for Students of New Master of Science in Physician Assistant Studies Program

Amount Awarded: $5,817

Overview: This project is to purchase the teaching equipment necessary for developing Master of Science of Physician Assistant Studies Program at SRU and will be used for the instruction and testing of students' clinical skills.
Year-Two, Brand You, Sophomore Reflective Retreat

**Funding Source:** Pennsylvania Association of Colleges and Employers  
**Amount Awarded:** $1,000  
**Project Dates:** March 27, 2015 to March 28, 2015

**Overview:** The purpose of this project is to promote the reflective career development of sophomore students, including those in the Sophomore Living Learning Community by hosting an off-campus reflective retreat promoting the career and network development of a group of SRU sophomore students, through reflection, healthy activities and collaboration with employers and successful alumni.

Enhancing Family Involvement & Vocational Training in the SRU Transition Program for Children with Disabilities

**Funding Source:** Community Foundation for Western Pennsylvania and Eastern Ohio  
**Amount Proposed:** $10,000  
**Project Dates:** Jan. 1, 2015 to Jan. 1, 2016

**Overview:** The purpose of this project is to expand the SRU Transition Program by providing a family involvement component. It will also provide additional opportunities for the high school students with disabilities involved in this program to attend field trips related to specific vocational areas of interest to better prepare students with disabilities for a future career path after their graduation.
Ms. Lisa Ringer
Transformational Experiences | SGA Childcare Center

Keystone STARS Quality Improvement

Funding Source: Northwest Regional Key
Amount Awarded: $11,207
Project Dates: July 1, 2014 to June 30, 2015

Overview: The purpose of this project is to fulfill the long-term goal of the Childcare Center by providing a high quality learning experience that is aligned with the Pennsylvania Learning Standards in an environment that is safe and developmentally appropriate.

Mr. Paul Scanlon
President’s Office | Office of Sustainability

Mr. Fran Bires
College of Health, Environment and Science | McKeever Environmental Learning Center

Dr. Christine McHenry-Glenn
College of Business | Hospitality, Event Management and Tourism

Ms. Renee Coyne
Transformational Experiences | Career Education and Development

Healthy Planet, Healthy People Summer Camp and Community Project Incubator

Funding Source: U.S. Environmental Protection Agency
Amount Proposed: $120,499
Project Dates: Dec. 15, 2015 to Dec. 15, 2017

Overview: The purpose of this program is to attract 100 high school students from at least 20 school districts to attend an environmental education and stewardship summer camp held at SRU. During the summer of 2016, twenty high school teachers, will act as coaches/mentors to the students when they return home to implement community environmental education/stewardship projects.
Dr. David Skeele
College of Liberal Arts | Theatre

Taking Theatre Performance Pedagogy to a New Level: Advanced Training and Certification in Meisner Technique

Funding Source: Pennsylvania State System of Higher Education Faculty Professional Development Council
Amount Proposed: $4,650
Project Dates: July 1, 2015 to May 1, 2016

Overview: The purpose of this project is to attend the True Acting Institute in the summer of 2015, to complete the certification in an action method known as Meisner Technique.

Dr. Timothy Smith
College of Health, Environment and Science | School of Physical Therapy


Funding Source: The Leakey Foundation through the Northeast Ohio Medical University
Amount Proposed: $6,975
Project Dates: June 1, 2015 to May 31, 2017

Overview: The purpose of this research project is to build upon previous studies of the evolutionary developmental biology of the human body plan by examining the developmental integration of long bones across a broad ontogenetic sample of non-human primates with contrasting locomotor postures.
Dr. Julie Snow

Dr. Jack Livingston
College of Health, Environment and Science  I  Geography, Geology and the Environment

Dr. Hongbo Zhou
College of Health, Environment and Science  I  Computer Science

RUI: Using Climatological Airsheds to Investigate Mercury in the Great Lakes Region

Funding Source: National Science Foundation
Amount Proposed: $396,877
Project Dates: June 1, 2015 to May 31, 2018

Overview: The purpose of this project is to improve on a previously developed tool (GGEHysplitHelper) for creating atmospheric airsheds. Atmospheric airsheds are surface areas that contribute contaminants and/or pollutants to a defined location or the airmass above this location. This proposal will focus on creating a new tool to create atmospheric airsheds. The airsheds will then be used to study mercury deposition in the Great Lakes Region. This research incorporates the study of airsheds, mercury and coal-fired power plants, which are all critical components of the Great Lakes Region’s environment and economy.

Dr. Roger Solano

Dr. Sunita Mondal
College of Business  I  School of Business

Examination of Pennsylvania’s Primary Health Care Loan Repayment Programs

Funding Source: Center for Rural Pennsylvania
Amount Proposed: $49,999

Overview: The purpose of this research project is to conduct a quantitative analysis of the existing data to depict the trends in the effectiveness of the program as a recruitment and retention tool, a quantitative forecast of the future trends of the program under current conditions and a qualitative discussion of the policy implications.
Dr. Frederick Tannery
Dr. Larry McCarthy
College of Business | School of Business


Funding Source: Center for Rural Pennsylvania
Amount Proposed: $15,000

Overview: This research project provides a description of employment, wages and establishment creation over more than a 13 year period at the industry-county level in Pennsylvania. This detailed history will serve as a tool that will be able to evaluate the impact of government policies, technological change and macroeconomic business conditions at a more disaggregated level than is currently available. The researchers will also use this history to develop a forecast of future employment and occupations at the county and regional level.

Ms. Melissa Teodoro
College of Liberal Arts | Dance

Capturing the Seresese: The Development and Production of a Video-Documentary that Reveals the Silenced History of a Dance Form Practiced by Enslaved Afro-Colombian Gold-Miners in the 18th Century

Funding Source: Pennsylvania State System of Higher Education Faculty Professional Development Council
Amount Proposed: $2,850
Project Dates: June 1, 2015 to May 31, 2016

Overview: This project will examine a non-literary form of cultural expression, dance, as a valuable tool to reveal the untold histories of enslaved gold miners in northern Colombia. Through the analysis of the dance’s movement vocabulary, choreographic patterns and non-verbal discourse, the video documentary will present to its audience a closer understanding of the historic context in which this dance was conceived and developed. Through this project, the historical and sociological roots hidden behind the Seresese will be revealed in order to better understand the embodied politics and idiosyncrasies stored in this region’s collective memories and shared kinetic knowledge.
Mr. Dale Thornton
College of Health, Environment and Science | Exercise and Rehabilitative Sciences

**Athletic Trainer Professional Development**

**Funding Source:** Drug Free Sport Fund  
**Amount Proposed:** $1,000  
**Project Dates:** Apr. 1, 2015 to Mar. 31, 2016

**Overview:** The purpose of this project is to provide professional development opportunities for the athletic training staff.

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Dr. Christophas Walker
College of Health, Environment and Science | Public Health and Social Work

**Frederick Douglass Institute/GEAR UP Graduates Support**

**Funding Source:** Pennsylvania State System of Higher Education  
**Amount Awarded:** $1,000  
**Project Dates:** Aug. 2, 2014 to June 30, 2015

**Overview:** The purpose of this project is to support the Frederick Douglass Institute for Academic Achievement and Human Diversity to provide activities for the GEAR-UP students during the 2014-15 academic year.
The purpose of this internal grant initiative is to provide support to faculty research proposals that directly involve undergraduate or graduate students in scholarly research or creative activity directed toward a joint presentation, publication, demonstration and/or performance. The following faculty members prepared a grant proposal in response to the Request for Proposals.

Ms. Tricia Bishop
Art

“Exterior Architectural Ceramics in Western Pennsylvania”
A range of clay and glaze formulas will be produced and tested for Western Pennsylvania seasonal weather durability. The outdoor survival of fired clay through seasonal changes depends on its ability to withstand freezing and thawing with various levels of absorbed moisture. The research for this project will provide participants with the opportunity to create exterior architectural ceramics that is resistant to the climate changes and heavy rainfall in Western Pennsylvania. Students will learn the systematic process involved in testing a variety of clay and glaze formulas. Findings will be visually summarized in the form of ceramic tile benches along with printed and digital documentation of project research. Data collected will be used to seek publication and made available for the enrichment of students. Participating students will present at the Student Research Symposium in spring 2015. Completed benches will be donated to the Slippery Rock Park and Recreation Organization.


Dr. Nicole Dafoe*
Biology

“Characterization of Soybean Stem Defense Responses”
It is well established that defense-related genes are strongly induced in plant leaves that have been wounded or have been subjected to insect herbivory, but much less is known about how other tissues such as stems respond to similar damage. This is surprising given that many plants are vulnerable to damage by stem boring insects. Soybeans, for example, are susceptible to stem feeding by Dectes texanus LeConte. These insects can cause damage that significantly reduces crop yield. We can mimic this insect feeding by mechanically damaging soybean stems. We can then analyze changes in gene expression and protein activity by the plant to better understand the natural defenses different strains of soybeans have against this type of damage. By understanding the defense response in soybean stems, we can breed for or genetically engineer plants to be more resistant to stem boring insect damage.

$4,935

Dr. Arlene Ford*
Physics and Pre-Engineering

“The Construction of Complex Nanoarchitectures using DNA Nanotechnology”
Investigations into controlling the behavior of materials at the nanoscopic (one billionth of a meter) level have spurred new interest in building functional nanodevices and nanosensors for use in renewable energy and biomedical applications. These research topics are highly interdisciplinary and can lead to exciting collaborations in multiple research areas including physics, chemistry, biology, material science and engineering. One such area is DNA nanotechnology. Because DNA is a stable and programmable molecule, research efforts have been focused on using them to build complex nanostructures for use as nanoelectronic components. However, studies into controlling the behaviors of these nanocomponents and optimizing their aggregation is still an ongoing concern. For this project, we intend to build complex nanoarchitectures using the DNA origami method for use in functional nanoelectronic devices.

$5,000
Dr. Christine Pease-Hernandez*
Dr. Li Pu
Communication

“American College Students’ Perceptions of Foreign-Born Faculty”
The intensified globalization process in the past decades has greatly increased mobility of intellectuals, facilitating those highly skilled researchers and scholars to seek individual career success across national boundaries. The presence of foreign-born faculty in American higher education is a good example of international adaptability of intellectual talent. The purpose of this study aims to explore American college students’ perceptions of foreign-born instructors’ intercultural communication competence (ICC) in classrooms. Specifically, we are going to identify what demographic variables—race/ethnicity, sex, academic major and year in college will influence mostly on American students’ perceptions of foreign-born faculty’s ICC. This research will contribute to a growing body of literature on engaging multiculturalism in higher education.

$2,967

Dr. Kimberly Keeley*
Dr. Jackie Williams
Exercise and Rehabilitative Sciences

“Athletic Training Students’ Perceptions and Use of Electronic Tablet Technology in the Clinical Setting”
Electronic tablet technology has been introduced into healthcare to assist clinicians in areas such as patient care and administration. Tablet use can help improve efficiency and clinical care. While enrolled in the undergraduate athletic training (AT) major, students complete an extensive amount of time in various clinical experiences. Based on students’ personal use of technology, it is only logical that technology be included throughout their education. Although tablet technology has the potential to provide many benefits during their clinical education, AT students’ perceptions are unknown. Preconceived perceptions may impact the quality and frequency of their tablet use. Therefore, the purpose of this study is to determine how tablet technology can impact factors of the clinical setting (documentation, patient education, patient care, etc.) for AT students.

This study aims to identify perceptions and intended and actual use of tablets in the clinical setting to understand how tablets can enhance students’ learning experience.

Jan. 21, 2015 to Dec. 15, 2015
$4,984

Dr. Rizwan Mahmood*
Physics and Pre-Engineering

“Optical, Electrical and Thermal Properties of Nanoparticles and Liquid Crystals Composites”
During the grant period, we intent to study nanoparticles suspended in a poorly organized fluid like liquid crystal (LC). We will use a polarizing microscope to study the texture, phase behavior and an automatic liquid crystal tester to measure optical, electrical and thermal properties. The information will lead to an understanding of the interaction and the effects of nanoparticles on the self-assembly of LC molecules and the manner in which these particles organize in LC. This study is important for further developments in nanotechnology, sharp and fast display panels, delivery of drugs to a crucial location of a tumor site without damaging healthy tissues and for the development of an electronic nose for smelling chemicals in the air without a need for sniffing dogs. Recently, electronic tongue is in the development stages for food tasting before it hits the store.

$4,997

Ms. Katherine Mickle*
Dr. Patrick Burkhart
Art
Geography, Geology and the Environment

“Convergence in the Landscape: Art and Geology Collaborations”
Art and geology professors intend to lead a team of students on a two-week interdisciplinary research expedition to Badlands National Park, South Dakota, and neighboring areas. The overall intent is to contribute to the understanding of landscape evolution of the Badlands by investigating Holocene depositional and erosional processes while improving student portfolios. Great Plains dunes field and sod table investigations will be key. Students from both departments will make multiple analyses of the landscape through a variety of concurrent approaches, expanding fine art
applications and amplifying scientific research. Various pedagogical approaches will be explored during this unique educational opportunity including daily group instruction, field experience, peer-monitoring, individualized instruction, museum visits and cultural tours. Collaborative explorations with students will expand knowledge outside the traditional classroom experience, leading to a greater understanding of both geologic and artistic viewpoints as they pertain to the Badlands and High Plains of the U.S.

March 1, 2015 to Dec. 31, 2015
$5,000

Ms. Ursula Payne*
Dance

“Dance and Professional Practice: Enhancing Employability as Professional Dancers Through Simulating the Environment of a Professional Dance Company”
How dancers are trained and prepared for professional performance in the 21st century has been evolving. The traditional model where the choreographer tells the dancer what to do is fading away and the idea that the dancer only dances is antiquated. Increasingly, dancers are expected to be artistic collaborators who contribute to the development of movement vocabulary, exploration of props and the overall production and management of the show. Guest Artist, Helen Simoneau, will simulate the environment of a professional dance company for twenty-six dance majors for one week. They will undertake primary and secondary roles as dancers and collaborators as Simoneau guides them through the choreographic and theoretical processes used to develop the dance, Flight Distance II, for her own professional dance company, Helen Simoneau Danse.
$3,785

Dr. Rebecca Ridener*
Dr. Sarah Kuehn
Criminology and Criminal Justice

“Students’ Attitudes towards Punishment and Their Perception of Re-Offending Rates”
Much research has centered on exploring the effect that education has on students’ attitudes. The ability to adequately access the casual effect of education, however, is limited in these studies due to the use of cross-sectional data. This study attempts to overcome this issue by using a longitudinal sample of undergraduate students attending a university in the Great Lakes region. This study will examine changes over time and differences among criminal justice majors and non-majors in regards to their attitudes towards various criminal justice related issues. Specifically, the study focuses on which factors (i.e., course work, year in college, religion, victimization, political affiliation, etc.) influences their perceptions over time. Further, the study will compare actual re-offending likelihoods of ex-offenders with students’ perception thereof.
$4,968

Dr. Heather Rice
Political Science

“Correcting Human Rights Abuses: The Challenges of Using International Law to Protect Sexual Minorities in the Middle East”
This project explores the efficacy of international efforts to incorporate gays and lesbians into existing human rights norms that emphasize minority group status, and whether it is more fruitful to explore different norms for their protection. Existing international human rights proclamations suffer from a fatal flaw in that they assume sexual identities are universal categories that transcend culture. Specifically, they assume that the defining characteristic of sexual identity is group orientation; that is, men who have sex with men are gay, while women who have sex with men are straight. This assumption does not fit reality in the Middle East, so gays and lesbians must pursue a different strategy, one that does not emphasize minority group status, in order to gain protection of their rights. This project proposes the use of privacy protections to secure gay rights in the Middle East.
Jan. 1, 2015 to May 1, 2015

$4,968
Dr. Marketa Schublova  
Dr. Bonnie Siple  
Exercise and Rehabilitative Sciences  

“The Effects of a Six Weeks Training Program Utilizing a Suspension Training Strap and Swiss-Ball on Core Stability”  
Low back pain (LBP) is a common chronic condition with a lifetime incidence as high as 80%. Individuals with chronic low back pain have decreased recruitment of core muscles and exhibit core weakness. Core stability training has been indicated for low back pain treatment. Core muscle imbalance leads to LBP. Low endurance of core muscles has been a major cause of LBP recurrence. The use of instability devices to train the core muscles are an essential part of many LBP rehabilitation protocols and have a significantly greater effect on muscle activity than floor-exercises. The general purpose of this study is to determine the difference in muscular effects on core stability following a short, six-week training program using either the Swiss ball or the suspension training strap. Examining the difference in muscle activation will provide the researchers with valuable data that would inform rehabilitation prescription for low back injury.  

Ms. Melissa Teodoro*  
Dance  

“Embodying the Seresese: Revealing the Silenced History of Enslaved Afro-Colombian Gold Miners through an 18th Century Dance Form”  
Colombia’s history from the 17th to 19th centuries was mostly written from the perspective of the dominant elite minority, mostly of European ancestry. In those two hundred plus years, where colonization and slavery went hand in hand, Colombians of African ancestry had minimal opportunities and lacked the educational means to express their worldview. This research project will examine a non-literary form of cultural expression – dance, as a valuable tool to reveal untold histories. The Seresese, a dance first practiced by enslaved gold-miners in northern Colombia, will be examined. Through ethnographic/historic research, in addition to the physical embodiment of the dance, they will gain a closer understanding of the socio-political context in which this dance was conceived and developed. The choreographic/historic materials will then be processed and transmitted to SRU’s Afro-Colombian Dance Ensemble, and subsequently, presented at festivals, conferences and events regionally and nationally during the 2015-16 academic year.  
May 11, 2015 to Aug. 23, 2015  
$3,387  

Dr. Roger Solano*  
School of Business  

“Improving Time Tables in a Local Transit System”  
A local transit system has deployed an Automatic Vehicle Location (AVL) system in recent years. The system generates and collects AVL data including among others real time information about a bus location and adherence to schedule. This project analyzes the AVL data for five routes in the system. The objectives are to measure on-time performance, identify possible problems with the schedule and propose changes of the buses schedule in order to improve schedule adherence and performance reliability.  

Dr. Sam Thangiah  
Dr. Hongbo Zhou  
Computer Science  

“Assistive Technology to Navigating a Web Browser Using Neuro Signals, Hand Gestures and Voice Commands”  
The research project is to develop an assistive technology between a Web browser and a disabled person who has lost partial limbs, to interact with a Web browser using a brain computer interface, gesture control and verbal command recognition interfaces. The brain computer interface is based on a neuro signal analyzer device such as Emotiv, to register the thought patterns of the user and translate these signals to commands. The gesture control interface would register the gestures of the user, using the Myo Gesture Control Armband to translate gestures to user commands. The Kinect device will be used for voice recognition and converting verbal instructions to commands. The aggregate of commands obtained
from Emotiv, Myo and Kinect will be used to navigate the Web browser. The potential application of this research will result in enriching the lives of physically disabled people to navigate and browse the Web easily.


Dr. Donald Zapien*
Chemistry

“Electrochemistry of Ferritin in Thin Layers of Solution”
Ferritin is a protein whose principal function is to sequester excess iron in biological cells. However, ferritin can supply iron whenever it is needed such as in the synthesis of iron-containing proteins. When iron enters the protein it loses electrons, a reaction known as oxidation. Before iron can exit the protein, it must gain electrons, a process known as a reduction. The electrochemical reactions involved in ferritin’s biochemical functions will be examined using electrochemical methods employing a cell in which the solution surrounding the electrode is about 200 microns. The thin-layer cell permits the measurement of ferritin’s redox voltage, the number of electrons that are transferred per ferritin molecule and the diffusion coefficient in short time, and requiring very little sample.

$5,000

*Awarded

The Green Fund was established to support environmental initiatives on campus and in the community. The Advisory Board accepts proposals and distributes funding for programs promoting environmental education and projects related to environmental sustainability. The following proposals were submitted in response to the Request for Proposals.

Ms. Tricia Bishop  
Art  

“Biofuel Ceramic Kiln Firing”  
The vast majority of fuel based ceramic kilns today are designed to be fired using natural gas or propane. Gravity fed vegetable oil drip burner systems is also not uncommon in ceramic studio kilns; however, they are often fraught with issues of flame retention and the high viscosity restricted flow of the oil. This project is designed to investigate low cost, environmentally beneficial kiln fuel options using waste oil and biodiesel in multi-fuel burners. A ceramic test kiln will be built for this project using a self-supporting dry-fit arch design. Biodiesel is produced and available from SRU Facilities. Waste oil will be obtained from cafeterias on campus. Various percentage mixtures of waste oil and biodiesel will be tested. A fuel pump will be used to assist oil flow to the burner and atomize the fuel. Findings will determine the ideal fuel blend for firing kilns in warm and cold weather.  
June 1, 2015 to Dec. 10, 2015

Mr. Dallas Cott  
Facilities and Planning  

“Propane Powered Zero Turn Lawn Mower”  
The purpose of this grant is to purchase a propane powered zero turn lawn mower to replace a gasoline powered one that is past its useful life.  
$10,880

Ms. Angela Grazier (U)*  
Ms. Deborah Baker  
Mr. Brad Kovaleski  
Ms. Kelly Bailey  
Department of Special Events  
Student Development  
Alumni Engagement  

“Campus & Community Clean-Up”  
During the spring semester, the Green and White Society facilitate a Campus and Community Clean-up. This is an event organized to help polish our campus. With the help of students who volunteer, teams are established and sent to different zones around campus. This year, we hope to get involvement from the community members and extend our work zones into the community. In the morning, participants gather in Weisenfluh for breakfast before dispersing into their zones. At the conclusion of breakfast, there is a brief lecture to explain their assignments for the day. Following that, guest speakers on campus share their words. When that is all said and done, students get into their assigned team and follow their team leader, an ambassador, to their designated zone. For the next number of hours, students make their way around campus collecting trash until their zone is clean. Objects found are divided into recyclables, compost and trash.  
April 1, 2015 to April 30, 2015  
$215
Dr. Randy Nichols*
Ms. Christine McHenry-Glenn
Physical Education
Hospitality, Event Management and Tourism

“SRU Campus Trail Project: Causeway Construction and Workshop”
The purpose of this project is to remediate a portion of the existing Overlook Trail on campus. The project will involve a slight rerouting of the current trail and the construction of a causeway. This project is necessary to reduce the amount of impacts that the current trail creates to the soil and existing vegetation, due to the wet conditions. The trail section that is the focus of this project is one of the most heavily used areas of the trail. It connects the Ski Lodge and Campground to the Leadership Reaction Course and the McFarland Recreation Sports Complex. It also intersects with the newly constructed Disc Golf Course, and will be heavily used this summer during the Professional World Disc Golf Championship. The construction of the causeway will be completed during several trail workdays this spring, using student volunteers from a number of departments on campus.

$1,864

Ms. Erin Strain*
Leadership Development

“Butterfly and Hummingbird Garden”
This project is to plant a Butterfly and Hummingbird Garden using only native plants to Western Pennsylvania on the open lawn in front of the Leadership Development Center. The proposed size of the garden will be 70 feet long and 38 feet wide. There will be 16 different types of native perennials and 3 different types of native shrubs that will be selected. These plants will encourage a welcoming habitat for local butterflies and hummingbirds plus provide an aesthetic view for all visitors to the Leadership Development Center, walkers traveling by and parents with their students moving in during WOW. We will also add an educational component by installing a kiosk explaining the importance’s and benefits to our environment by planting a native garden and using the lasagna gardening method to prepare the soil.

June 1, 2015 to May 1, 2016
$2,619

Mr. Bill Sonntag
Ms. Cindi Dillon
Dr. David Krayesky
Slippery Rock Development, Inc.
Biology

“Slippery Rock Tree Fund”
The two goals of this project are to fund Slippery Rock in Bloom and Slippery Rock Borough to purchase trees to be planted in the downtown area and to educate students in urban forestry.

Nov. 3, 2014 to April 3, 2015

*Awarded
President’s International Professional Development Grants 2014-2015

The purpose of the President’s International Professional Development Grants Initiative, administered through The Office for Global Engagement, is to financially support the professional development of SRU faculty and professional staff in an international setting. Applications are judged on their international nature, professional merit and relevance to the applicant’s profession at SRU. Preference is given to junior faculty and staff members, those who have not received this award in the past five years and papers/performances accepted for presentation in the international setting. The following faculty and staff members prepared a grant proposal in response to the Request for Proposals.

**Dr. Mary Ann Holbein-Jenny***
School of Physical Therapy

To travel to rural villages near Entebbe, Uganda to join a health care team working to improve the education of vulnerable children.

_June 23, 2015 to July 11, 2015_

**Dr. Benjamas Jirasakuldech**
School of Business

To present the manuscript titled, “A Study of Nonlinear Dynamics in Equity Market Index: Evidence from Turkey,” at the 2015 Academic OASIS/IAABR – Bangkok International Multidisciplinary Academic Conference. In addition, Dr. Jirasakuldech will participate in the special sessions of business ethics, final markets and international investment and be able to incorporate information learned into SRU’s school of business finance curriculum and classes.

_July 5, 2015 to July 7, 2015_

**Dr. David Krayesky***
Biology

To present a poster proposing a new species of leafy liverworts to science at the annual meeting for Botanists at the Botany 2015 Conference in Edmonton, Canada.

_July 25, 2015 to July 29, 2015_

**Dr. Jeremy Lynch***
Special Education

To attend and present the results of an SRU funded research project of using a mathematical problem-solving framework for young learners, especially students with disabilities at the Biennial Conference of the International Association of Special Education in Wroclaw, Poland at the University of Lower Silesia.

_June 21, 2015 to June 26, 2015_

**Dr. Mark O’Connor***
**Dr. Danette DiMarco**
**Dr. Nancy Barta-Smith**
English

To attend the 22nd International Conference on Learning in Madrid at the Universidad San Pablo in Madrid, Spain. They will share the outcomes of “Advancing Online Pedagogy and Learning with Quality Matters (QM)” project.

_July 9, 2015 to July 11, 2015_

**Dr. Tamra Schiappa**
Geography, Geology and the Environment

To participate and present an abstract titled, “Synthesis of a decade of undergraduate multidisciplinary research in San Salvador, Bahamas,” in the 1st Joint Natural History and Geology Conference sponsored by the Gerace Research Center and College of the Bahamas.

_June 12, 2015 to June 17, 2015_
Dr. Kimberly Smith
Exercise and Rehabilitative Sciences
To orally present a collaborative student/faculty research project at the International Conference on Research in Education and Science and collaborate with international researchers to enhance our database involving international health behaviors in Antalya, Turkey.
April 23, 2015 to April 26, 2015

Ms. Melissa Teodoro*
Dance
To visit Colombia (Cartagena, Mompox, Talaigua), to research a non-literary form of cultural expression – Dance, as a valuable tool to reveal untold stories of Seresesé, a dance first practiced by enslaved gold-miners in northern Colombia.
July 7, 2015 to July 22, 2015

Dr. Jialing Wang*
Geography, Geology and the Environment
To attend and present a session titled, “The Impact of City Parks in the Quality of Life in Urban Residents – A Case Study of Yueyatan Park, Kunming, China,” at the 9th International Association for China Planning Conference, Chongqing, China.
June 19, 2015 to June 21, 2015

*Awarded
The mission of Slippery Rock University’s Center for Student Research is to create a community of learners by facilitating the exchange of ideas, to provide a collegial venue that prepares students for further scholarly exploration and professional careers and to promote scholarly inquiry as a fundamental value of the SRU experience. The goal of this internal grant program is to support and promote high-quality student/faculty collaborative research, scholarship and create activity. The following students prepared a grant proposal in response to the Request for Proposals.

Mr. John Crellin (U)*  
Ms. Brittany Sturm (U)  
Cooperating Faculty Member:  
Dr. Donald Zapien  
Chemistry  

“Redox Reactions of Dissolved Ferritin”  
Ferritin is a large protein responsible for uptake and storage of excess iron in biological cells. The specific mechanisms for how iron is taken up or released are not known. The voltammetry of ferritin has been achieved, however in these experiments, ferritin was immobilized on an electrode surface. In order to better study how ferritin behaves in biological cells, voltammetry will be conducted with ferritin dissolved form rather than immobilized form. The goal of this study is to design and construct an electrochemical cell and electrode system that will induce dissolved ferritin to exchange electrons with the electrode.  
Sept. 1, 2014 to May 1, 2015  
$500

Ms. Danielle Dulick (G)  
Ms. Adelaide Aukamp  
Cooperating Faculty Member:  
Dr. Jeremy Lynch  
Special Education  

“Utilizing Feedback to Promote Successful Research”  
This project will focus on surveying practitioners in the field of education in order to solicit feedback regarding the methodology used in previous research of the implementation of the I-THINK Problem Solving Framework in Mathematics. Those in attendance of a practitioner based conference session will be asked to complete a brief survey intended to provide the research team with beneficial feedback. The research team will then analyze the data. Said data will be crucial to improvement, as it will be acquired from educators with credible, valuable knowledge.  

Ms. Kristin Eberhart (G)*  
Mr. Ben Lowry (G)  
Ms. Laurie Martin (G)  
Mr. Connor Sheriff (G)  
Cooperating Faculty Member:  
Dr. Mary Ann Holbein-Jenny  
Physical Therapy  

“Providing Physical Therapy to an Under-Privileged Community in Arequipa, Peru”  
The purpose of this project is to provide volunteer services to an under-privileged community in Arequipa, Peru. This will be an invaluable, international service learning experience through Medical Ministries International. Four SRU physical therapy students will be responsible for providing skilled aid under the supervision and mentorship of local physical therapists to treat patients and distribute medical equipment to patients in need.  
Aug. 8, 2015 to Aug. 22, 2015  
$500

Ms. Jenna Hanlon (U)*  
Cooperating Faculty Member:  
Ms. Teena Custer  
Dance  

“Project Bandaloop: Dancing In A New Dimension”  
To continue my research in the field of dance, I will explore the vertical dance company, Project Bandaloop, through a two day, one-on-one intensive, at their studio based in Oakland, California. I will learn through kinesthetic movement the effects of gravity while dancing in the transverse plane, simultaneously ensuring safety through a tutorial of their rigging system. This exploration will stimulate a new creative process for creating dance work and will inspire new
movement vocabulary, resulting in a choreographed
group work to be presented in their Senior Synthesis
Dance Concert in May 2015.

$500

Mr. Patrick Jakim (U)*
Mr. Jacob Ciafre (U)
Cooperating Faculty Member:
Dr. Krishna Mukherjee
Physics & Pre-Engineering

“How Thermal Measurement Can Determine
Energy Efficiency”
This project seeks to observe and understand how
heat is transferred throughout portions of the Vincent
Science Center. A comprehensive evaluation of
interior temperature, exterior climate and structural
design will provide the necessary data to outline how
temperature variations result in energy transference.
This will also show how proper planning leads to
energy efficiency and prevents redundant energy
consumption. In addition, the group will study how
safe electrical usage can avert emergency situations
and will provide rudimentary guidelines that are
applicable to daily campus activities.

May 15, 2015 to Dec. 15, 2015
$500

Ms. Kathryn Jones (U)*
Cooperating Faculty Members:
Dr. Michael Holmstrup
Dr. Jeffrey Lynn
Dr. Steven Verba
Exercise and Rehabilitative Sciences

“How Examining the Clarity of Current Skinfold
Measurement Guidelines”
Sknfold measurement is a valid, economical method
of evaluating an individual’s body composition
for use in the decision-making process regarding
fitness assessment, risk stratification and weight
management. As such, clear and precise guidelines
are important for the proper implementation of
this skill. Current guidelines for the instruction of
the skinfold method lack clarity, particularly in the
identification of the suprailiac skinfold site. Though
correctly worded, two distinct interpretations of the
measurement of this site have been observed in a prior
project in our lab. Therefore, the aim of the present
study is to assess the potential discrepancies in the
measurement of the suprailiac when aligned from the
frontal and sagittal plane. Our findings will be used to
propose changes in the current guidelines to provide
clarity and precision for future instructional use.

Apr. 1, 2015 to Dec. 1, 2015
$500

Ms. Harmony Kasper (U)
Cooperating Faculty Member:
Dr. Li Pu
Communication

“How Social Media’s Agenda-Setting Function in
National TV News”
In this project, we will investigate the agenda-setting
role of social media in national television news.
Specifically, we will look at how the integration of
social media in traditional broadcast newsrooms has
changed journalistic practices in terms of finding story
ideas, selecting, constructing and presenting news and
reaching audiences at three major national TV Stations’
(CBS, NBC and ABC) evening newscasts. This
research will contribute to a growing body of literature
that looks at how social media has changed news
making process and audience consumption today.


Ms. Baylee Kushner (U)*
Cooperating Faculty Member:
Dr. Tamra Schiappa
Geology, Geography and the Environment

“How Shifting Sands: Drainage and Provenance
Changes in the Northern Appalachian Foreland
Basin”
Sand deposits in the Appalachian Foreland Basin
were deposited by river systems from various source
areas during the Lower Pennsylvanian period. This
study will investigate the Homewood, Mercer and
Connoquenessing sandstones that formed in this
manner. Petrographic analysis and geochronologic
age dating will be used to connect these sandstones
to known mountain building events on the eastern
margin of North America. Petrographic reports of the
sandstones will be determined from thin sections of
each rock unit sampled. Individual zircon and apatite grains will be collected and dated using laser ablation ICP mass spectrometry. The analysis of these grains will provide their source and age of deposition. Once the provenance has been identified, we will map out the ancient drainage patterns in the northern Appalachian Foreland Basin. The results of this study will be combined with previous studies across the Appalachian Mountain Belt to produce a detailed paleogeographic map.

April 1, 2015 to Jan. 31, 2016
$500

Ms. Leah Marshall (U)*
Cooperating Faculty Member:
Dr. Paul Falso
Biology

“The Effects of a Common Pesticide, Imidaclopid, on Amphibian Testosterone Levels”
Amphibian populations are declining globally. Chemical contaminants such as pesticides have been observed to play a role in amphibian mortality. However, the sublethal effects that low doses of pesticides could have on amphibians have not been previously studied in depth. The reproductive ability of amphibians plays a primary role in population maintenance. Reproductive health of male amphibians can be determined by examining levels of the hormone, testosterone, which is required for reproductive function. This project will determine the effects of exposure to a commonly used pesticide, imidaclopid, on testosterone levels of male amphibians.

$500

Ms. Amanda Ramp (G)
Cooperating Faculty Members:
Dr. Ashley Rineer-Hershey
Special Education

“The Effectiveness of Video-Recorded Feedback for CPAD Practicum Students”
This project will focus on the effect of video-recorded feedback, as based in the literature, to enhance student growth as a professional educator for practicum students in the Community Programs for Americans with Disabilities (CPAD) program of study. Each student’s practicum sessions will be video-recorded. Supervisors will have access to the recording as basis for feedback in addition to personal observations. Using revised, numerically based observation forms, student scores will be compared for each observed session to check for improvement. This data will be compared with scores from previous semesters to determine the effects of video-recorded feedback on student growth.


Ms. Shelby Ross (G)*
Mr. Connor Sheriff (G)
Ms. Candice Blevins (G)
Cooperating Faculty Member:
Dr. Nancy Shipe
School of Physical Therapy

“Physical Therapy Students Providing Service Learning to Three Rivers Adaptive Sports Alpine Skiing and Snow Boarding”
This project will enable three second-year students to provide service for adaptive skiers/snowboarders through Three River Adaptive Sports (TRAS) alpine skiing program. The students will assist TRAS in the skiing and snowboarding program for individuals with congenital disorders, amputations, traumatic brain injuries, spinal cord injuries or other. These adaptations will be specific to the strengths and abilities of each adaptive skier. Two SRU faculty members will meet with the applicants to discuss diagnoses, impairments and physical therapy of the skiers and snowboarders. The students will be mentored in the adaptive ski program by TRAS coordinator, Mark Kulzer.

$500
**Physical Therapy Students Providing Vu (Service) at Da Nang Orthopedic and Rehabilitation Hospital**

The purpose of this research project is to provide vu (service) to the developing nation of Da Nang, Vietnam via physical rehabilitation. This project is an international physical therapy (PT) faculty/student service trip to Da Nang Orthopedic and Rehabilitation Hospital, Da Nang, Vietnam coordinated through Health Volunteer Overseas. Four SRU PT students in their final semester of classes, which consist of clinical internships, will accompany Dr. Billek in the provision of patient care to those in need. The students will utilize their current education under the mentorship of Dr. Billek to provide rehabilitative services to the community of Da Nang.

*Jan. 1, 2015 to May 31, 2015*

*Mr. Lewis Tyler Savisky (G)*
*Ms. Aubrie Luckenbaugh (G)*
*Mr. Evan Andreyo (G)*
*Ms. Jaime Fiorina (G)*

Cooperating Faculty Member:
Dr. Barbara Billek-Sawhney
School of Physical Therapy

**Brain Awareness Week: Neuroscience, Stress and Health Interactions**

Stress is very prominent on college campuses but students are unaware of its neurobiological effects. A week-long series of events in March will be focused on educating the SRU student populations on the effects of stress on the brain. Brain Awareness Week is a national annual effort done in conjunction with the Dana Foundation, whose objective is to encourage groups to raise awareness about the brain by presenting to the public the benefits and progress of brain research. The focus of our research project will examine effects of meditation on working memory and stress in college students.

*Dec. 1, 2014 to April 30, 2015*

*$500*

**Making Magic: Directing, Choreographing, Filming and Editing a Dance Film**

The objective to this project is to create a high caliber dance film that is five to eight minutes in length. I will apply and refine my skills as a choreographer, videographer and editor. I will utilize mentors in the specific areas of videography and sound design to increase my knowledge and the caliber of the film. At the conclusion of this project, I will have created a dance film that I can submit in multiple festivals to support my career goals as a dance film artist.

*Dec. 15, 2014 to May 2, 2015*

*$500*

**A Christmas Prompt Book**

I will be completing a prompt book as part of my job as stage manager. The prompt book is a compilation of all of the paperwork accumulated during the course of a production. This paperwork includes the script, audition forms, production meeting and rehearsal notes, contact information and rehearsal schedules. One of the purposes of this project is to present my prompt book at the regional KCACTF Conference in January 2015 and receive feedback from professionals in theatre and also to present at the SRU Research Symposium. The other purpose is to apply work that I have done in classes in a professional, career-building manner.

*May 1, 2014 to Jan. 31, 2015*
Ms. MacKenzie Walker (U)*
Cooperating Faculty Member:
Dr. Krishna Mukherjee
Physics & Pre-Engineering

“Pairing Wearable Technology with Drones”
This research project is about investigating how to integrate muscle reading features of wearable technology with everyday life. The MYO armband will be used in conjunction with mini-drones like the Jumping Sumo and Rolling Spider to facilitate the movement of physically challenged persons.
Dec. 1, 2014 to April 30, 2015
$481

Ms. Maureen Walsh (U)*
Ms. Tyler Kuhn (U)
Ms. Jessica McFadden (U)
Ms. Taylor Weeter (U)
Cooperating Faculty Member:
Dr. Brock Jensen
Dr. Michael Holmstrup
Exercise and Rehabilitative Sciences

“Blood Pressure Cuff Selection: Does Adiposity Matter?”
Blood pressure (BP) measurement is widely used in the diagnosis of hypertension and cardiovascular disease risk, assessment of physical activity readiness, safe, effective exercise prescription and need for prescription medication. Errors in BP measurement may result in misdiagnosis, cardiovascular complications during activity, improper prescription of medications and ultimately contribute to an increased risk of death. Two forms of BP cuff size measurement are standard. The American Heart Association recommends that a BP cuff have a bladder length 80% of an individual’s arm circumference and the blood pressure cuff manufacturers have identified circumference ranges. Unfortunately, these two methods result in selection of different cuff sizes. While examination of the effect of cuff size on BP measurement comparing the 80% rule with AHA and manufacturer’s ranges is warranted, more research across the full spectrum of arm circumference measures, and delineating a ‘lean’ vs. ‘obese’ arm within these arm circumference ranges is needed.
Apr. 1, 2015 to Dec. 31, 2015
$500

Ms. Victoria Yeager (U)*
Cooperating Faculty Member:
Dr. Julie Snow
Geography, Geology and the Environment

“Examination of Airsheds in the Great Lakes Region as They Relate to Mercury Deposition”
Coal-fired power plants pose a risk to the health of humans, ecosystems and wildlife by releasing mercury into the atmosphere. Mercury infiltrates regions far from power plants through rainfall. This study examines the relationship between wind patterns and elevated mercury in rainfall in the Great Lakes Region. Using data from the National Atmospheric Deposition Program and the National Oceanic and Atmospheric Administration Hysplit model, mercury levels will be measured and tracked over a nine-year period from 2004 to 2012. The meteorology associated with elevated mercury events will be presented along with the results of an extensive examination.
Sept. 1, 2014 to May 1, 2015
$500
Mr. Michael Zech (U)*
Cooperating Faculty Member:
Dr. Kathleen Melago
Music

“Using Music Technology and Apps Easily and Effectively in the Classroom”
This project is to gain funding for the presentations I would like to present at various Music Education Conferences. I’m promoting the use of Music Technology in the classrooms to further advance musicianship and to promote the application of technology in the classroom. Music technology in App form has been growing steadily recently, and there are lots of bad apps, and lots of good apps, so to find them and to present which ones are worth using will be a great asset for any music educator.

*Awarded

Apr. 1, 2015 to Dec. 20, 2015
$500
The Summer Undergraduate Research Experience (SURE) grant is a program designed to introduce undergraduate students to the world of academic research. The program requires that each proposal be prepared as a joint effort between the faculty member and a qualified undergraduate student, and that the proposal describes a research project that will engage the student in research skills and techniques of that discipline. The following proposals were submitted in response to the Request for Proposals.

**Ms. Jessica Bennett (U)**
Faculty Mentor: Dr. Catherine Massey
Psychology

“Community Involvement among Lesbians, Gay, and Bisexual Men and Women: Implications of Body Image”
The proposed project will afford Ms. Bennett the opportunity, with guidance, to be involved in the research process by working on her own project that will result in conference presentations and a potential publication. She will use the existing data to examine her research questions. In addition, she will garner grant preparation and writing experience with multiple faculty that will add to her experiences as a psychology major. She will hone her skills in critically thinking, professional writing and expand her knowledge on more diverse groups of individuals. Being a part of this research project will help her grow as an individual to meet her ambitions and goals. It will help better prepare her for graduate school by being more skilled with the process of research, grant writing and statistical analysis.  
May 18, 2015 to Aug. 14, 2015
$780

**Ms. Melanie Clarke (U)**
Faculty Mentor: Dr. Michael Holmstrup
Exercise and Rehabilitative Science

“Observation of Inter-arm Systolic Blood Pressure Difference during Exercise”
Blood pressure measurement is used in the diagnosis of hypertension and cardiovascular disease risk, and in designing safe and effective exercise programs. Interarm systolic blood pressure difference (ISBPD), wherein a difference of <10 mmHg in systolic pressure between arms is noted, has been reported in the medical literature across the spectrum of age and health. The presence of ISBPD has been linked with peripheral vascular disease and a cardiovascular disease mortality. Exercise often reveals underlying cardiovascular pathologies that are absent during resting conditions, for example during an exercise EKG test. Exercise in normotensive individuals may reveal ISBPD not measured at rest, or exacerbate ISBPD if it is seen at rest, in line with EKG findings. To the author’s knowledge there have been no investigations into ISBPD during exercise. The aim of the present study is to measure and quantify the presence of ISBPD in healthy individuals during exercise.  
May 18, 2015 to Aug. 24, 2015
$780

**Mr. Andrew Davis (U)**
Faculty Mentor: Dr. Thaddeus T. Boron III
Chemistry

“The Study of Nano-magnetism in Lanthanide containing Metallacrown Structures”
The study of Nano-magnetic properties presented in the form of metallacrown structures could bring about improvement to current magnetic-material containing devices. In order to understand metallacrown structures and the components that make up metallacrown structures, each component must be studied in a way that systematically varies the components. The purpose of each component and the effects the components have on the structure can then be determined. Yttrium containing metallacrown structures are meant to be a way of determining the magnetic properties of the metallacrown ring structure without the lanthanide ion contributing to the magnetic properties. Results can therefore be used as a baseline for future studies to determine the effect of differing lanthanide ion on the nano-magnetic properties of metallacrown structures, while effectively removing the structural based magnetic properties.  
June 1, 2015 to Aug. 1, 2015
$780
Ms. Emily Eyth (U)*
Faculty Mentor:
Dr. Carena Winters
Exercise and Rehabilitative Sciences

“Exercise Intensity Estimates for Various Modes of Exercise”
Exercise science students need to be skilled in prescribing appropriate exercise intensity for various modes of exercise. Strategies to elucidate how students make decision involving exercise intensity selection are essential to understanding how well students come to an accurate or inaccurate conclusion. This study is designed to ascertain how well students can estimate various intensities on different modes of exercise. Students will be given heart rates that elicit low, moderate and vigorous intensities derived for a fictitious client on a treadmill. Using the “Think Aloud” procedure, subjects will vocalize their cognitive processes during the task. Accuracy of intensity estimates on the cycle ergometer and strategies used to estimate exercise intensity will be determined and comparisons will be made between accurate and inaccurate strategies utilized. This information will be used to apply pedagogical strategies to improve the accuracy of this skill and expose flawed thoughts that lead to inaccurate conclusions.

June 1, 2015 to Aug. 21, 2015
$780

Ms. Allison Franco (U)*
Faculty Mentor:
Dr. Jennifer Willford
Psychology

“Design and Development of the Reflective Supervision Rating Scale”
The project will provide Allison Franco with the opportunity to learn advanced methods of questionnaire development, design and statistical validation. Data were collected on the Reflective Supervision Rating Scale on Early Intervention Specialists working in PA. Using this data set, Allison will learn critical evaluation of theoretical and methodology issues related to the RSRS design and development including the purpose, item development and analysis and response format. Additionally, Allison will conduct exploratory factor analysis and evaluate the reliability and validity of the RSRS. The skills Allison will learn over the summer will enhance her knowledge of experimental research methods and advanced statistical techniques, a field in which she plans to pursue a PhD. In addition, the work will translate into increase scholarly productivity for Allison and Dr. Willford including conference presentations and publications.

May 18, 2015 to Aug. 21, 2015
$780

Ms. Baylee Kushner (U)*
Faculty Mentor:
Dr. Tamra Schiappa
Geography, Geology, and Environmental Science

“Shifting Sands: Drainage and Provenance Changes in the Northern Appalachian Foreland Basin”
Sand deposits in the Appalachian Foreland Basin were deposited by river systems from various source areas during the lower Pennsylvania period (320 Ma). The study will investigate Homewood, Mercer, and Connoquenessing sandstones that form in this manner. Petrographic analysis and geochronologic age dating will be used to connect these sandstones to known mountain building events on the eastern margin of North America. Petrographic reports of the sandstones will be determined from thin sections of each rock sample. Individual zircon and apatite grains will be collected and dated using laser ablation ICP mass spectrometry. The analysis of these grains will provide their source and age of deposition. Once the provenance has been identified we will map out the ancient drainage patterns in the northern Appalachian Foreland Basin. The analysis of these grains will provide their source and age of deposition. The results of this study will be combined with previous studies across the Appalachian Mountain Belt to produce a detailed paleogeographic map.

$780
Ms. Meghan O’Neill (U)*
Faculty Mentor:
Dr. Barbara Billek-Sawhney
Physical Therapy

“Long-Term Impact of a Walking Program on Physical Activity Levels in Children and Their Families”

According to the Centers for Disease Control and Prevention, 33.8% of adults and 17% of all children and adolescents in the US are considered obese. The purpose of this project is to enter and analyze data from a variation of the 10,000 Step Program of school aged children and their families; this research was completed at the Butler YMCA. The purpose of this proposal is to seek funding for phase II of the research project. Phase II of the project involves an interview follow-up with each of the children and their family members to determine the long-term impact of the 10,000 step walking program on physical activity and health related knowledge. In addition, previously collected data regarding adherence, self-efficacy, beliefs, socioeconomics, education, prior activity level and related will be entered into a database and analyzed. The student researcher will enter data, analyze data and prepare an abstract, presentation and manuscript.

$780

Ms. Linda Roldan (U)*
Faculty Mentor:
Dr. Rizwan Mahmood
Physics and Pre Engineering

“Gold Nanoparticle Colloids in Liquid Crystals”
Metamaterials with negative real electro-optic properties possess interesting electromagnetic properties. Due to the presence of anomalous refraction at the boundary between such a medium and a convectional medium, suggestions of interesting potential applications for these media have been made. To name a few, but not limited to, optical cloaking (stealth technology to make objects invisible to electromagnetic waves), super lenses, optical back hole (similar to a black hole in space), stationary satellite trackers, ultra-fast data processing, high speed fiber optic cables. These are artificially engineered composite materials possessing properties that are not exhibited in naturally occurring materials. The properties of these materials depend in a way the structure is formed. During the grant period, we plan to study electro-optic properties of gold nanoparticles (GNPs) colloids in liquid crystals and to map a phase diagram as a function of temperature and GNP’s concentration.

June 1, 2015 to Aug. 14, 2015
$780

Ms. Amelia Staub (U)*
Faculty Mentor:
Dr. Kimberly Smith
Exercise and Rehabilitative Sciences

“Relationship between Physical Activity, Obesity, and Cognition in College Students Worldwide”
In addition to obesity being related to morbidity and mortality, recent research suggests that obesity is also associated with poor cognitive performance,
independent of associated medical conditions. Fortunately, physical activity is a lifestyle behavior which has shown to improve both physical health and cognitive function. The purpose of this descriptive study is to examine overweight/obesity related health behaviors and cognition in college-aged adults from various international universities. After seeking approval from out targeted international universities, anonymous questionnaires will be sent out via email to a random sample of students. The email will include a brief introduction of the student research and a description of the project followed by a link to the electronic questionnaire. The questionnaire will be translated to the native language of the audience. The intended outcome of this study is to better understand and identify the relationship between physical activity, obesity and cognition.

$780

Ms. Shelby Schettler (U)*
Faculty Mentor:
Mr. George Lengyel
Chemistry

“NMR Analysis of Beta-Hairpin Peptides Containing Unnatural Amino Acids”
Peptide therapeutics can be used as a medical tool to treat various diseases on the cellular level. Synthesizing peptides using unnatural amino acids prevents decomposition of the therapeutics by the body. Increasing the lifetime of a therapeutic in the body decreases the necessary frequency of administering the drug. Unnatural amino acids, while useful, may destabilize the shape of the peptide. Once destabilized, the body no longer recognizes the peptide and does not perform the intended function. To determine which unnatural amino acid structure is the best candidate for incorporation, we are going to examine the impact of six unnatural amino acids with varying structural compositions. To analyze the effects of the substitutions, NMR spectroscopy will be used. Based on these results, we will conclude which unnatural amino acid can be used with disrupting the overall function of the peptide.

$780

Mr. Tylor Tustin (U)*
Faculty Mentor:
Dr. Roger Solano
School of Business

“Identifying data completeness issues in the Automatic Vehicle Location (AVL) data of the Butler Tran”
The Butler Transit Authority (BTA) approached us in 2014 to generate suggestions to improve schedule reliability using data generated by the automatic Vehicle Location (AVL) system. We identified a high number of missing data points that need to be evaluated. We will retrieve the data for 2013 and 2014 and perform multivariate analysis in order of identify patterns of occurrences in the missing values. The high number of missing values could negatively affect the validity of statistical analysis performed on the data. We suspect that hardware, software and configurations problem are resulting in missing values. The objective is to identify possible causes for the high frequency of missing values and generate the appropriate recommendations. These recommendations will be discussed with the BTA and the vendor that provides the AVL system in order to implement changes that will increase the effectiveness of the data collection process.

May 13, 2015 to July 27, 2015
$780

Mr. Blake Wallrich (U)*
Faculty Mentor:
Dr. Michael Zieg
Geography, Geology, and Environmental Sciences

“Collection of Petrographic Data to Test Magma Emplacement Hypotheses”
The emplacement history of igneous intrusion places critical constraints on the subsequent thermal and chemical evolution of the magma. A continuous sample profile through an intrusion from Nipigon, Ontario, is being used to investigate the ability of variation in texture and mineral abundances to pinpoint reinjection events in the rock record. Several of these horizons have been documented already, an NSF proposal will be submitted this summer to further this research. In this project, Blake Wallrich will work under the close supervision of Michael Zieg to characterize the
petrographic (mineralogical and textural signatures of magmatic reinjection horizons. This will give the student a unique opportunity to participate fully in several phases of an ongoing research project, from data collection, to processing, to analysis. This will support Zieg’s ongoing research as well as preparing Wallrich for advanced undergraduate (and eventually graduate-level) research.

June 1, 2015 to June 19, 2015

$780

Mr. Jordan Zajac (U)*
Faculty Mentor:
Dr. Paul Falso
Biology

“Assessment of Amphibian Life Stage Differences in Response to Pesticide Exposure”

Amphibian populations are disappearing worldwide. The study will consist of two parts focusing on the study of amphibians exposed to pesticides. The first part is an assessment of the health of adult frogs exposed to imidacloprid, a chemical pesticide, at environmentally relevant levels for extended periods of time. We will examine blood smears and plasma stress hormone (corticosterone) levels to determine immune and hormonal response to the chemical exposure. In addition, we plan to develop a noninvasive assay to measure water borne hormones released by early life stages (tadpoles) into surrounding water. This assay would be extremely helpful when studying small bodies, threatened, or endangered species. The development of this assay would be also beneficial in the study of early life stage amphibian’s endocrinology during long-term exposure to pesticides.


$780

*Awarded
Norton Undergraduate Research Scholarships 2014-2015

The Norton Undergraduate Research Scholarship is a scholarship program designed to assist undergraduate students in their pursuit of academic research or creative activity. This scholarship program is intended to enhance quality mentoring relationships between faculty and students who work collaboratively to answer questions, solve problems and provide learning opportunities to the highest caliber. Research conducted by Norton Scholars with faculty mentors contributing in meaningful ways to the knowledge base of a given discipline and support the strategic initiatives of the University. The following proposal was submitted in response to the Request for Proposals.

Mr. Tyler Kuhn*
Faculty Mentor:
Dr. Michael Holmstrup
Exercise and Rehabilitative Sciences

“Blood Pressure Cuff Selection: Does Adiposity Matter?”
Blood pressure (BP) measurement is widely used in the diagnosis of hypertension and cardiovascular disease risk, assessment of physical activity readiness, safe, effective exercise prescription and need for prescription medication. Errors in BP measurement may result in misdiagnosis, cardiovascular complications during activity, improper prescription of medications and ultimately contribute to an increased risk of death. Recent work, including findings from our lab, have confirmed that the proper selection of the cuff may have a large impact on the measurement of BP. Currently, guidelines from the American Heart Association (AHA) allow for the use of two disparate methods to calculate proper cuff selection. Unfortunately, these two methods do not always result in the same cuff being chosen. This study is intended to highlight the discrepancy using these two methods, and to make general recommendations on accuracy and clarity in upcoming AHA guidelines.

April 1, 2015 to Dec. 1, 2015
$500

*Awarded
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