

UNDERGRADUATE RESEARCH AND CREATIVE WORKS

FUTURE RESEARCH

Students: if you are interested in getting involved in research or scholarly work with a professor next semester, now is the time to start asking around! Consider approaching a professor about research they may be working on, or even ask a professor to mentor you in your own project endeavors. If you have a paper you think you would like to publish or present, ask a professor to help you through the process. Your research and scholarly work does not need to be science-focused to be published, so start your work sooner rather than later.

November 2014

Mission Statement

To engage undergraduates in student-faculty led collaborations that reflect individual and unique scholarly and imaginative experiences which promote the development of new competences, foster critical and creative thinking and provide students with privileged opportunities to add to the sum of human knowledge.



The Research Rookies program is a research-based program open to all freshmen and first-semester sophomores that is meant to bring students into the university's culture of research and creative work early on in their undergraduate career. This comprehensive program runs for two consecutive semesters, and involves 15 tasks to be completed, as well as one mini-research project. These activities focus on eight objectives: information literacy, the importance of research, research ethics, methods and design, data and analyses, writing research, presenting research, and exploring research opportunities. The 15 tasks all fall within these objectives, and the students have a plethora of activities to choose from based upon their chosen discipline of study. The students who successfully complete the program will receive a Certificate of Completion and will be elevated to the status of Research Apprentice. The Research Rookies program is a fabulous opportunity for students to broaden their educational horizons and stand out to potential employers. Students from all majors



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Undergraduate research is a student-faculty collaboration to examine, create, and share new knowledge or work commensurate with practices and discipline.

are welcome to apply. Those interested should contact Dr. Joanne Altman, director of Undergraduate Research and Creative Works, at jaltman0@highpoint.edu

Summer Research Programs 2015

Our summer research opportunities are expanding and now is the time to get on board! There are two programs: Summer Research Institute (SuRI) and Summer Research Program in the Sciences (SuRPS). SuRI is open to undergraduates in all disciplines, and students must identify a faculty mentor who will work with them over the summer, as well as a description of the project goal, method, and timeline. Students may stay on-campus for free during the research period as long as they are not enrolled in any classes. SuRPS is a competitive program for 24 undergraduate

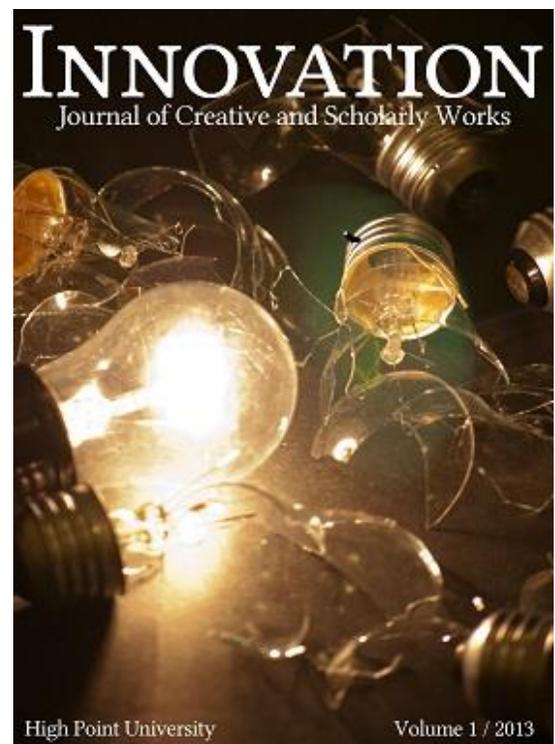


Student Rachel Thiets conducting research

research assistant positions with faculty in biology, chemistry, or physics. A position in the program comes with free housing, meals, and a summer stipend. Students will be able to view the projects to choose from before applying and must identify their top 3 projects on the application. The applications for both programs will be available in the Spring 2015 semester.

Call for Manuscripts: Innovation

High Point University's Scholarly Journal, *Innovation*, is accepting manuscripts until December 31st. Students from all disciplines may submit, therefore manuscripts may be creative or research-based. Consider asking a professor to work with you on a previous paper to help improve it before submission. *Innovation* is professionally reviewed, and all manuscripts will be evaluated by professors who are well-versed in your subject-areas. Manuscript will be sent back to students with revisions before publication, and they must be resubmitted with corrections. The journal has an International Standard Serial Number (ISSN) so that it may be searched for and referenced throughout the world, and will be published in May. Recent graduates and seniors can and should apply! If you wish to learn more about the journal, or see previous research published, go to the URCW website and click on "HPU Journals" on the left-hand side. There are two previous issues available.



BigSURS and High-PURCS 2015

Submissions for the Big South Undergraduate Research Symposium (BigSURS), which will be held at Campbell University on April 10-11, 2015, are now open to students. BigSURS provides undergraduate scholars in all fields a forum to share the results of their work through posters, presentations, performances, and works of art. To submit an abstract and to learn more about BigSURS, go to <http://www.campbell.edu/bigsurcs-2015>.

High Point University students from all disciplines, majors, and minors are invited to participate in HPU's 3rd annual Research and Creativity Symposium (High-PURCS), which will be held on April 15, 2015. Students may choose to present their work in a variety of mediums, including posters, oral presentations, a brief performance, or an exhibit. Projects entered must be mentored by a faculty member and reflect originality and creativity. Submissions to High-PURCS will open in the Spring 2015 semester.

SNCURCS 2014

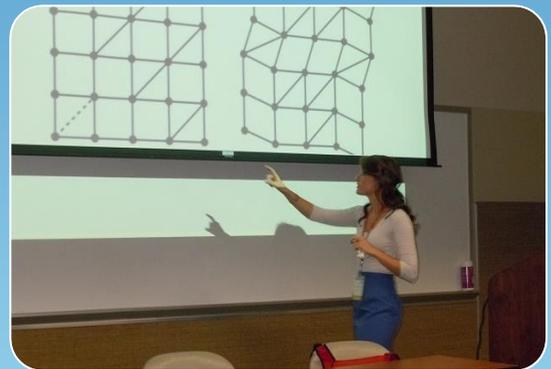
The list of High Point University students that participated in the State of North Carolina Undergraduate Research and Creativity Symposium (SNCURCS) this year are as follows:

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|-------------------------|---|
| Tayla Curran | (oral presentation, English)
Mentor: Dr. Allison Walker |
| Caitlin Ferguson | (oral presentation, Chemistry)
Mentor: Dr. Brian Augustine |
| Sydney Knoechel | (oral presentation, Business)
Mentor: Dr. Pete Summers |
| Katelyn Long | (oral presentation, Psychology)
Mentor: Dr. Joanne Altman |
| Sarah Patterson | (oral presentation, English)
Mentor: Dr. Laura Linker |
| Sarah Dorrell | (oral presentation, Math)
Mentor: Dr. Laurie Zack |
| Amanda Szymanski | (poster presentation, Psychology)
Mentor: Dr. Kim Wear |

Three members of the Research Rookies Program, Cassie Rogden, Rebecca Ulrich, and Molly Lowry, attended SNCURCS as a part of the program to familiarize younger students with research culture at universities.



Students at SNCURCS 2014



Sarah Dowell presenting work



High Point Attendees of SNCURCS 2014

Grants, Conferences, and Achievements



Reza Moghtaderi Esfahani working on his app

Every year, SNCURCS also presents a grant called the George Barthalmus Undergraduate Research award to several sophomores who wish to do research. These awards are designed to help students with development and participation in undergraduate research. Awards are presented to the winning students at the fall symposium, and students are expected to present research at SNCURCS the following year. This year, our very own **Mollie Mckinley** won a George Barthalmus Undergraduate Research award, and she will present at next year's symposium, which will be held at High Point University's campus on November 14, 2015.

Dr. Shirley Disseler and **Emily Ruth Harris** from the Department of Education have received a grant to attend the National Social Science Association's National Technology and Social Science Conference in Las Vegas, Nevada from March 29-31, 2015. Their paper, titled "Elementary Teachers' Perceptions Towards Teaching Science," examines attitudes of 167 elementary school teachers in North Carolina towards teaching science and using technology in the classroom. They used SPSS and Qualtrics to collect and analyze their data in an online survey, and the paper also examines literature surrounding the best practices for teaching science.

Students **Zoey Chittick, Ashton Kirby, Peyton Senning, Rachel Abel, Danielle Criss, and Madison Bryan** received a grant to attend the American College Dance Festival, held from March 6-9, 2015, at the Austin Peay State University in Clarksville, Tennessee. Faculty members Lindsey Howie and Kristen Lucas will also be attending. The students will perform guest choreographer Shannon Bramham's dance work in the adjudication concert held at the festival, and two students, Danielle Criss and Madison Bryan, will be presenting or performing their own works. All of the students attending will take classes from professors, artists, and various professional dancers from around the country. This conference is a wonderful opportunity for the students to showcase their talents, and to allow High Point University to make connections with other universities in the dance community.

Students **Hallie Stidham**, **Stephanie Pettit**, **Jacob Brooks**, and **Amiras Simeonides**, along with mentor Dr. Titus, received a grant to attend the American Association of Physics Teachers 2015 Winter Meeting on January 3-6, 2015 in San Diego, California. Each student will be presenting their own research. Hallie Stidham's project, titled "Physics in Non-Inertial Reference Frames," focuses on creating classroom-friendly videos of motion in non-inertial reference frames where fictitious forces are needed to apply Newton's laws. Stephanie Pettit's work, titled "Multi-component Chalcogenide Gradient Index Materials Research," studied refractive indices of optical lenses to work toward a new way to correct aberrations in these lenses. "VPython Modeling to Design Artificial Platform Magnetics" by Jacob Brooks investigates cilia (a biological structure found in the human body) beat amplitude and frequency with artificial cilia, where each cilium is a polymer rod with its upper portion surrounded by a magnetic tube. The results of the simulation in the experiment are discussed within the project. Finally, Amiras Simeonides will be presenting "Fabrication of Nanofilm Capacitor for Use in a Portable EKG" which investigates methods of fabricating a thin and flexible EKG lead that can be integrated into clothing.



Department of Music students **Roxy Daneman**, **Ashley Siebeneichen**, and **Madison Jordan** attended the Promising Artists of the 21st Century Program in Costa Rica, for a week of performing, teaching classes, and gaining cultural experiences at several Costa Rican venues, including the San Jose National Theatre. The Promising Artists program started in 1986 and is recognized by the U.S. State Department. Each year, The Costa Rica Centro Cultural invites students from top-tier institutions considered the best of the best from the U.S. Daneman, Siebeneichen, and Jordan received an exclusive invitation to the event, and chose to perform a U.S. musical theatre showcase featuring popular scenes and melodies from a variety of Broadway shows. "There are no proper words to express how much this trip helped me to expand as a performer and a professional in the field of performance," says Daneman. "Not only was I able to push myself to work hard for a week full of performances, I was able to expand my cultural horizons by traveling to a foreign country. I am so thankful to everyone involved in the Promising Artist of the 21st Century program and to all of the people who helped me to grow so much along this journey."

Reza Moghtaderi Esfahani and **Charles Douglas** have completed their internet application, called "EconApps," which is now available for free download on the iTunes app store. The main objective of EconApps is to provide a hands-on, interactive way of teaching and learning various economic concepts. It is composed of several apps (Public Goods, Cartel Games, and PitMarket) that each have the purpose of familiarizing students with different concepts in the economic field. Work on the app was actually started about four years ago, but Reza and Charles have worked very hard to bring the app to fruition. Their hope is that the app will be useful in educating students on economic topics, and that instructors in other fields of study will use their app's internet-independent infrastructure to create their own apps and games for the purpose of education.

Nick Zayatz and **David Naylor**, with faculty member Dr. Roger Shore, attended the ACM Mid-Southeast conference in Gatlinburg, Tennessee on November 13th and 14th. They presented their research on Voting Theory that they worked on with Dr. Graham-Squire for the past few months. They gave a 15 minute presentation their findings and answered questions following the presentation. While attending the conference, they also had the opportunity to attend several other talks covering a broad range of topics. They met other students from the conference at a social gathering which allowed them to establish contacts with other researchers. Nick and David say that the conference greatly helped them to expand their knowledge, experience, and confidence in regards to the Computer Science field.

Research Assistants Wanted

There are also a number of research opportunities available on the URCW website. Several professors are looking for students to help them with scholarly work in upcoming semesters. For more detailed descriptions and other research opportunities, go to www.highpoint.edu/urcw and click on the “Research Assistant Opportunities” tab on the left side of the page. A few opportunities are listed as follows:

Reading Intervention Research-Work Directly with Local 2nd and 3rd grade struggling Readers!

Research Assistants (RA) needed for spring semester. RAs will be working on an intervention study that focuses on helping children attain foundational reading fluency skills. Student outcomes will be evaluated to determine what, if any, particular characteristics influence a student’s success with the intervention. RA positions are open to all majors and levels provided students can meet the qualifications listed below. Stacey Potkin-Field from NC State University is conducting this project in coordination with Dr. Sarah Vess, Chair of the Special Education Department at HPU. For more information on how to sign up, email spotkin922@hotmail.com or svess@highpoint.edu

Zoo Research



Dr. Joanne Altman, Director of Undergraduate Research and Creative Works, and Professor of Psychology, is seeking two dedicated students who are interested in getting involved in zoo research. Dr. Altman studies animal cognition and psychological well-being in captive wildlife. Right now Dr. Altman is cognitive testing lemurs at the Greensboro Science Center. Students will have the opportunity to gain experience in research methods, animal behavior and training, writing a literature review, and more. Volunteers will have to do IACUC training and get tested for TB. Open to all majors and class levels. Contact Dr. Joanne Altman: jaltman0@highpoint.edu

Human Relations: Psychological Impact of high- and low-power posing on self-perceptions.

Immediate opportunity! Dr. Sarah Nielsen, Assistant Professor of Human Relations, is seeking 1-2 students to serve as research assistants on a project investigating the psychological impact of high- and low-power posing on self-perception. Students will have the opportunity to gain experience in survey design, data entry and coding, running experimental subject groups, writing literature reviews, and more. Open to all majors and class levels. Students must be willing to complete IRB training. Contact Sarah Nielsen: snielsen@highpoint.edu

Contact Us and Like Us on Facebook!

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