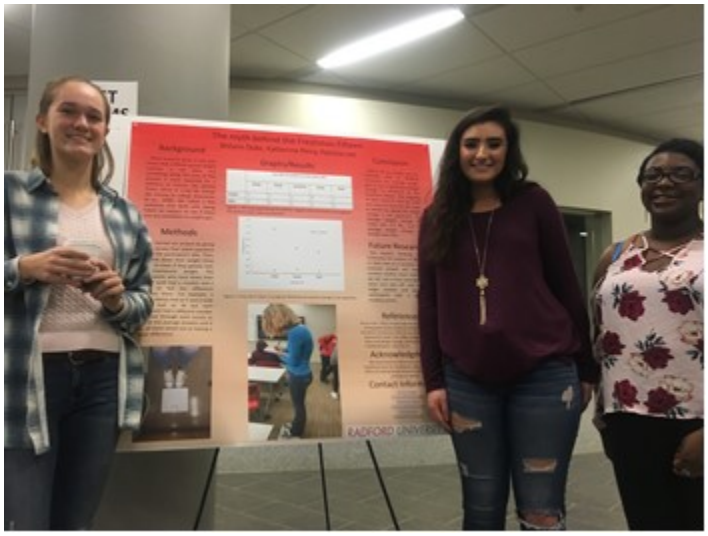
FROM THE DEAN'S DESK – December 15, 2017

THE RADFORD UNIVERSITY ARTIS COLLEGE OF SCIENCE AND TECHNOLOGY NEWSLETTER

Video and pictures captured by Dr. Skip Watts via unmanned aerialvVehicles during a recent snowfall have been viewed by thousands in the region and beyond.

BIOLOGY CONNECTIONS LEARNING COMMUNITY STUDENTS PRESENT RESEARCH PROJECTS

Students in the Biology Connections learning community had the opportunity to showcase some of what they have been exploring over the fall semester during a poster session on Tuesday, November 28th in the Center for the Sciences.



Biology students discovered that weight gain among most freshmen was a myth when looking at the participants in their study. On average, they learned that men tend to lose about 6.7 lbs. while women see no weight gain or loss.

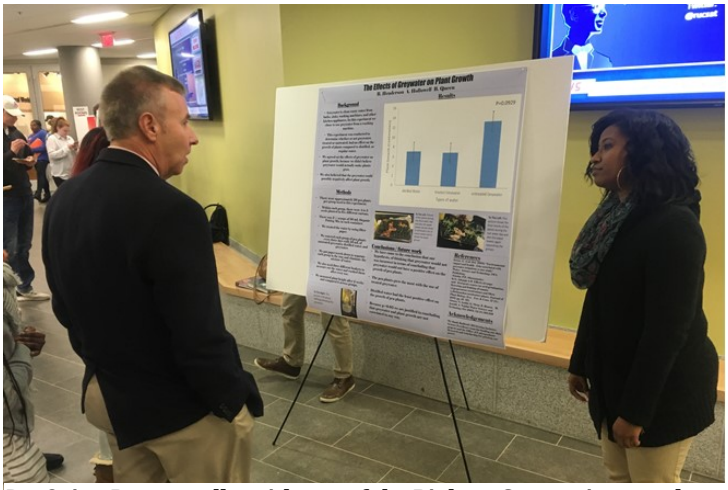
Dr. Sarah Redmond's Biology 160 class members shared their thoughts on topics ranging from "The effects of greywater on plant growth" to "The myth of the freshman fifteen" to "Algae growth in response to water from different locations and conditions." Designed to help students learn the importance of clear and concise science communication, the project was supported by a "Kickbox Minigrant" from the REALising Inclusive Science Excellence (REALISE) program funded by a grant from the Howard Hughes Medical Institute.

Engaging students in biology research as freshmen can help in strengthening their academic readiness for the rigors of the upper levels of the program and can also improve retention through active participation.

The Biology Connections program is a supportive, residential learning community for RU freshmen who have declared Biology as their major. Students in the community will engage inside and outside the classroom through intentional biology related programming, linked courses taken with other Biology Connections students, and added academic support through peer tutors, advising, and study sessions. Biology Connections students live and learn together in Stuart Hall.

Learn more about the Biology Connections living-learning community by visiting their website located at: https://www.radford.edu/content/high-impact/home/learning-communities/biology-connections.html

This fall marks the first semester of the REALise program. More details are available at www.radford.edu/realise .



Dr. Orion Rogers talks with one of the Biology Connections students as she shared her exploration of the effects of greywater on plant growth.

ELECTRONIC POSTER SESSION CAPS YEAR FOR CHEM 450 STUDENTS

On Monday, December 4th, students from Assistant Professor of Chemistry, Dr. Amy Balija's CHEM 450 class hosted an electronic poster session in the atrium of the Center for the Sciences. During this time, the students delivered 5 -10 minute presentations about various chemistry topics including subjects such as the chemistry behind nail polish and how chemistry combats against Lupus.

Chemistry students shared their findings with friends and guests during the session.

"The electronic poster session and mock interview session was the pinnacle for the CHEM 450 course," stated Dr. Balija. "Throughout the semester, the students were learning how to write effective resumes, prepare elevator pitches, and network with others."

Lauren Purser, a chemistry major enrolled in CHEM 450, stated "The poster session that I participated in really helped me to improve my presentation skills, especially with the large amount of students who came to view the presentations." She added "The mock interview session was most important to me, as I have never been interviewed before and I was able to get an understanding of the questions and atmosphere."

The students utilized several of these skills to prepare chemistry presentations and discuss their findings to people ranging from nonscientists to chemistry professors. "Many of our students are humble and are nervous to talk to strangers, said Dr. Balija. "However, this poster session and the following mock interviews provided the students the ability to pursue their future goals with confidence."

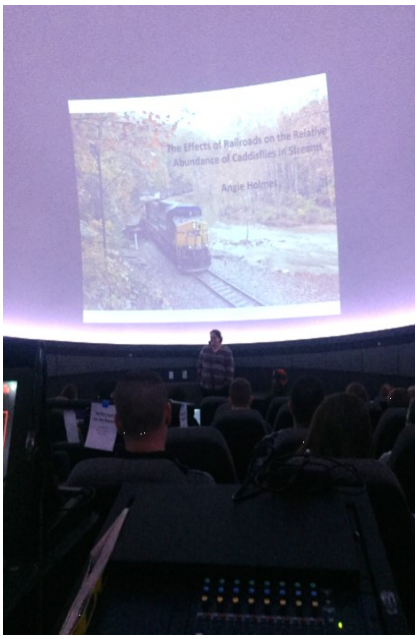
Jazmin Valentine details what she has learned through her research.

BETA BETA BETA CHAPTER HOSTS INAUGURAL "FLASH TALK" SESSION

Summarizing a scientific theory or research project can be a challenge, but to help the world understand new discoveries, students are strongly encouraged to learn to communicate efficiently and effectively. In an effort to hone these skills, the Sigma Rho chapter of Beta Beta Beta (Tri-Beta) at Radford University held a "Flash Talk" session.

Limited to one hour with 24 presentations, participants had two minutes to deliver a presentation on a topic from across the scientific spectrum. A standing room only crowd of more than 100 people came out in support of the program which was held in the Radford University Planetarium and in an overflow space receiving a live-stream of the event on the Main Street level of the Center for the Sciences.

"I'm glad we at Tri-Beta could host a set of 24 Flash Talks with topics from all over science," stated Tri Beta chapter president Conner Philson. "I think this event shows the positive effect undergraduate research has on our students, and Tri-Beta looks forward to working with the University to advance undergraduate research and events like the Flash Talks!"



Angie Holmes delivered her "flash talk" on the effects of railroads on caddisflies to a capacity crowd.

Conner Philson shared his thoughts on genetic algorithms with the faculty and students assembled in the Planetarium.

FACULTY ENGAGEMENT ATTRACTS FRESHMAN TO DAIM ACCELERATED MASTER'S PROGRAM

Nolan Ieradi

Nolan Ierardi started programming with Scratch at the age of nine. His expertise quickly blossomed and his programs evolved into complex games and applications. As he grew older, Ierardi decided to pursue a career in information technology. Which university would he rely on to assist him in developing the correct skills?

Knowing that interaction with faculty would propel him forward faster in his pursuit of a career in IT, Ierardi, 18, chose Radford University's Data and Information Management (DAIM) accelerated track.

While attending Blacksburg High School, Ierardi took introductory classes in IT and Java. During his own time, he taught himself HTML, CSS, and Javascript and used these three web programming languages to develop his personal website.

During an information session, Ierardi found his interest in the DAIM program.
"At this point, I was still considering other schools. By the time I left Radford that day, I was certain that this university would be my future home," Ierardi said. "I knew the DAIM program would help me acquire a career more quickly in the future."

There were plenty of reasons Ierardi chose Radford but the deciding factor for him was that the university is one of six four-year universities in Virginia designated as a National Center of Academic Excellence in Cyber Defense Education (CAE-CDE).

"Radford's emerging cyber security program is one of the best in the state, and the faculty-to-student ratio ensures that I will get help when needed," stated Ierardi. The university is designated a CAE-CDE by the National Security Agency and the U.S. Department of Homeland Security.

Ierardi also chose Radford for the classroom structure, "Radford's teaching model emphasizes real-world scenarios and practical application of the material taught, which ensures students will be prime candidates for careers in the future."

Although Ierardi did not know quite what to expect when arriving to campus, he quickly found his niche and became accustomed to the challenging courses after a few weeks.

During his transition, Ierardi appreciated guidance from DAIM's graduate coordinator, Dr. Jeff Pittges, "I'd like to thank Dr. Pittges for personally advising me. He helps students clearly understand specific topics and prepares them for the professional workforce related to computer science."

After graduation, Ierardi desires to work with a large technology company but stated that starting small may be beneficial, "I will most likely start off working for a small, localized company, which will allow me to hone my skills further and gain experience in the workforce that will build my resume and allow me to obtain a job at larger companies."
Story by Emily Lewis

UAV VIDEO OF RADFORD UNIVERSITY CAMPUS FLIES HIGH ONLINE

The Radford University campus as viewed from more than 100 feet in the air.

During a recent snowfall on campus, Dr. Skip Watts, Professor of Geology, recorded video and 360 degree images of the campus with unmanned aerial vehicles. These UAVs are being utilized in a number of geohazard projects directed by the Department of Geology including a current research effort at Natural Bridge in conjunction with VDOT.

The Radford University campus looks beautiful year round, but even more magical in the fresh snow. Please follow the links and you can use your mouse to zoom in and pan around the image. This works well in the Chrome Browser and on most Macs, but might not be visible on all web browsers.

https://viewer.hangar.com/360?assetId=/ar53Qw8Y

https://viewer.hangar.com/360?assetId=/brM2X5z0

The video and images were extremely popular garnering more than 71,000 views online and were shared on social media outlets around the University community and in regional media.

The video is still available online:

https://www.facebook.com/wdbj7/videos/10155386808122217/?hc_ref=ARQ7Gh1R7qyHG7jjRORv9Sy53slYkNpeTNd88BmTGsW9mAtyNXzUzreEt27nf9Ys68Y

These are just a couple of the many different projects undertaken in the Department of Geology's Unmanned Aerial Systems class during the fall semester. More details about the work with UAVs in the region and especially at Natural Bridge will be available in 2018.

SEASONS OF LIGHT SHOW CONCLUDES RECORD YEAR AT RADFORD UNIVERSITY PLANETARIUM

A holiday favorite continues for additional shows at the Radford University Planetarium capping a year of record attendance. When the numbers are finally tallied, more than 7,000 patrons will have toured the solar system and beyond from Main Street Radford in the Center for the Sciences. Seasoned and new astronomy enthusiasts from the Radford University community, K-12 students from across SW and Central Virginia, and many guests from the immediate region and beyond.

An annual tradition at the Radford University Planetarium is the show from Loch Ness Productions, " Seasons of Light" which describes the legends associated with the stars that appear during the Christmas season, including the Star of Bethlehem, Saint Nick and his various forms, holiday lights and candles.

Presents and festivals are also explored in this festive show. A sky tour prior to the show discusses the more prominent stars and constellations of the season, and why the sky played such a prominent role in their lives.

This 35-minutes show is narrated by Noah Adams of NPR's "All Things Considered."

This show will be presented on:

Saturday, December 16th at 10:30am

Tuesday, December 19th at 4pm and 7pm

Thursday, December 21 at 4pm and 7pm

The planetarium will be closed following these shows and will reopen in January during the Radford University spring semester.

Shows in the Planetarium are free, but seating is limited. It is recommended to arrive at least 30-45 minutes prior to show times to help ensure entrance. Groups are strongly encouraged to contact the Planetarium Director Dr. Rhett Herman, rherman@radford.edu. Special shows may be arranged for groups of at least 20 based on availability.

Please enter the Center for the Sciences on the Main Street Level Parking Lot C to visit the Planetarium
Hearing-assist receivers are available for our sound system--please bring your own earphones (1/16 inch [3.5mm] stereo jack). No food/drinks allowed in the planetarium. For more information please visit www.radford.edu/planetarium