

**Happy Holidays
From The OCSE
Dean's Office!**

DECEMBER 2013 NEWSLETTER

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Ogden College News

WKU HOSTS MEETING OF KENTUCKY'S SCIENCE & ENGINEERING DEANS

Science and engineering deans of public universities in Kentucky met for the first time at WKU on Sept. 23.



They were welcomed to campus by WKU President Gary Ransdell who spoke about the importance of working together to enhance the STEM pipeline in the state. In his remarks, Dr. Ransdell referred to the importance of the WKU SKyTeach science teacher education program as being a great source for teachers of future scientists and engineers and the Gatton Academy of Mathematics and Science in Kentucky as a source for future scientists and engineers.

The discussions throughout the day focused on issues common at all Kentucky universities including retention, expansion of inter-university partnerships, STEM pipeline and workforce development, and the opportunity to speak to STEM issues with one voice.

Participants included Dr. Cheryl Stevens and Dr. Cathleen Webb, WKU; Dr. John Ferrar and Dr. Sam Zachary, Northern Kentucky University; Dr. John Walz, University of Kentucky; Dr. Neville Pinto, University of Louisville; Dr. Steve Cobb, Murray State University; Dr. Tom Otieno and Dr. John Wade, Eastern Kentucky University; and Dr. Roger McNeil, Morehead State University.

The group has agreed to meet annually at different campuses in Kentucky. The meeting ended with a tour of the research facilities at the WKU Center for Research and Development.

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OCSE DEAN'S OFFICE WELCOMES KAYLEE RANCK

Kaylee is the Manager of Graduate Programs Development and is responsible for developing and implementing professional development training for graduate students. Kaylee received her B.A. in Spanish from Pacific University and a M.Ed. in Adult & Higher Education Administration from Montana State University. Prior to WKU she served as the Director of Graduate Admission, Recruitment, Retention & Professional Development at Montana State.



WKU TO CLOSE THOMPSON COMPLEX NORTH WING IN JANUARY

WKU will permanently close Thompson Complex North Wing in January due to failing HVAC systems. The closure is expected to be complete and faculty offices, classrooms and research facilities relocated by Jan. 24.

An analysis of North Wing in 2005 determined that rehabilitation of the building was not financially viable, and the building was identified at that time for demolition. Since 2002 more than \$60 million has been invested in WKU’s science facilities, including the construction of the Engineering and Biological Sciences Complex and Snell Hall and the renovation of College High Hall. Renovation of Thompson Complex Center Wing and demolition of the North Wing have been pending approval and funding by the Kentucky General Assembly since 2008 and will again be the University’s top capital project request in the 2014 session, which begins in January.

Thompson Complex North Wing opened in 1960 and currently houses the Biology Department and some offices for the Chemistry Department.

ALPHA EPSILON DELTA INDUCTS NEW MEMBERS

WKU’s chapter of Alpha Epsilon Delta (AED) inducted 20 new members on Monday evening, November 18th. Alpha Epsilon Delta is the National Health Pre-professional Honor Society dedicated to the encouragement and recognition of excellence in pre-professional health scholarship, including medicine, dentistry, veterinary medicine, physical therapy and others. The Kentucky Gamma Chapter at WKU was established in 1968 and has inducted over 1000 members over its 45 years on The Hill. The fall semester inductees and their hometowns were:

Alexis Baker—Bowling Green	Michael Bennett—Sturgis	Lindsey Burke—Louisville	Autumn Smith—Glasgow
Caylan Bybee—Tompkinsville	Brooke Duke—Brownsville	Jonathan Dunn—Jamestown	Machala Wells—Shelbyville
Laura Fulkerson—Upton	Collins Garst—Glasgow	Leslie Hutcheson—Bowling Green	Hannah Ruggles—Lexington
Dalton James—Nicholasville	Karie Jeter—Edmonton	Chase Knibble—Union	Madison Preece—Owensboro
Bradley Lankford—Owensboro	Merideth Murrell—Columbia	Hannah Pennington—Union	Erica Plummer—Paris

KAS Winners

GRADUATE RESEARCH COMPETITION

Zoology	Jacob Fose	1st Place
	Kayla Pittman	2nd Place
Ecology & Environmental Science	Nicholas Levis	3rd Place
Engineering	Mychal Drew-Moses	3rd Place
Chemistry - Analytical/Physical	Shashidhar Annarapu	2nd Place
	Yogesh Kherde	3rd Place

UNDERGRADUATE PAPER PRESENTATIONS

Health Sciences	Addie Dodson	2nd Place
Microbiology	Charles Coomer	2nd Place
	Kelsey Carter	3rd Place
Physiology & Biochemistry	Brandon Farmer	2nd Place
Computer & Information Sciences	Bryan Knowles	2nd Place
Physics & Astronomy	Mary Spraggs	3rd Place
Geology	Richard M. Burnworth	3rd Place
Mathematics	Stephanie Hagan	3rd Place

UNDERGRADUATE POSTER PRESENTATIONS

Ecology & Environmental Science	Ryan Vincent	1st Place
Health Sciences	Audrey Brown	2nd Place
Microbiology	Alyssa Huff	2nd Place
	Hannah Rodgers	3rd Place
Chemistry - Analytical/Physical	Isaac Kresse	2nd Place
Physics & Astronomy	Keith Andrew	3rd Place
Zoology	Morgan Murrell	1st Place

The Kentucky Academy of Science Annual Meeting was held November 8-9, 2013 at Morehead State University. Congratulations to all WKU Student Winners!

Mathematics

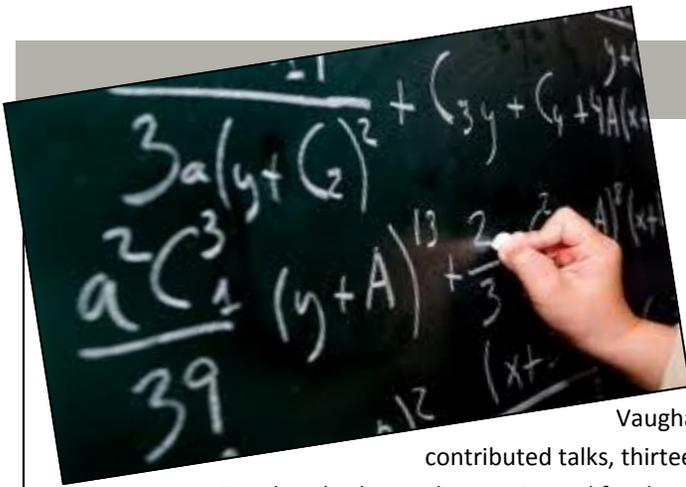
WKU hosted the 33rd Annual WKU Mathematics Symposium on November 8th-9th. Guests included two excellent speakers:

Dr. Michael Orrison from Harvey Mudd College and Sir

Vaughan Jones, Fields Medalist from Vanderbilt University. There were 21

contributed talks, thirteen of which were student talks, representing speakers from five

states. Two hundred attendees registered for the event, about 60 more than attended last year.



Operation Comics

Dr. Bruce Kessler was invited to display his Operation Comics series at the Kentucky Book Fair held November 15th-16th in Frankfort, KY. Operation Comics teaches math lessons to elementary school children (target 4th through 6th grade) in a comic book format. There are six comics so far. Friday was Children's Day, and Saturday was the main event. Two hundred authors were invited to the event and it drew over 4,000 attendees who bought almost \$145,000 in books.



Dr. Shirley Gray, mathematics professor at California State University, Los Angeles and WKU alum ('57), and three other authors (one is her husband and WKU alum ('57) Harry Gray), just recently had a paper published in the prestigious Notice of the AMS, October 2013, Volume 60, Number 9, entitled "Was Something Wrong with Beethoven's Metronome?" This is a great accomplishment by a WKU Math alum. The online version is available at <http://www.ams.org/notices/201309/index.html>.

Computer Science

Congratulations to the WKU ACM programming team for earning second place



amongst sixteen teams competing at Murray State University in the 2013 ACM Mid-Central USA Programming Contest. Team "Tacocat" completed four of the eight problems during the five hour contest. They placed 39th out of 129 teams in the entire region. Team members were Bryan Knowles, Chaz Durbin, and Jeffrey Heinze. Thank you for an amazing job!

Psychological Science

Psychological Sciences has twenty outstanding faculty members who teach undergraduate and graduate courses in psychology. We conduct a wide variety of research with undergraduate and graduate students in the many domains that are psychological science: clinical, industrial/organizational and psychological science (experimental, cognition, development and aging). We are committed to providing students with a strong education in the theoretical, scientific and applied study of psychology as well as advancing the field through research.

Agriculture



Three WKU turfgrass students were awarded scholarships from the Kentucky Turfgrass Council at the KTC Annual Conference that took place this past October. These students were recognized for their academic efforts in the classroom, professional development, community service, and workplace experience. Pictured from left to right are Tyler Sadler, Jerry Edmonds, Luke Headley, and Dr. Paul B. Woosley, their academic advisor. Justin Duckworth, a M.S. student in the department of Agriculture, presented his research at the KTC Conference related to Bermuda grass control in tall fescue turf with topramezone and fluzafop.



Freshmen Agriculture Students from the AGRI-175 University Experience Class participated in a class Halloween Party. The event included a Halloween costume and pumpkin carving contest.



Local food in South Central KY just became easier to access with the new/old Mobile Farmers Market bus. The bus will travel to schools and community events to educate the public on the value and nutrition of eating locally grown foods. The bus is a 1982 model that was remodeled by Rustic Nail Company. The funds to purchase and remodel the bus are part of a USDA grant, 'Local Food for Everyone', principal Investigator Martin Stone, WKU Agriculture and Co-Investigator Christian Ryan-Downing, WKU Sustainability Coordinator.



Members of the WKU Dairy Challenge Team traveled to Louisiana State University to participate in the 8th Annual Southern Regional Intercollegiate Dairy Challenge® Contest. The WKU team was comprised of five students: Adam Blessinger, Holly Burnette, Kim Pierce, Audrey Stephens, and Holly Young with Dr. Fred DeGraves from the Dept. of Agriculture providing coaching support. The two-day competition provided a unique opportunity for students to develop team building, critical thinking, problem solving, public speaking, and dairy herd management skills. The Dairy Challenge Team provided numerous helpful suggestions to improve the dairy operation. Kim Pierce earned 1st place with Holly Burnette and Audrey Stephens taking home 2nd.

Agriculture, Cont.

This fall has been busy for the WKU Livestock Judging Team. The team competed in five contests located in several states.

The team members were: Ethan Berry, Chad Burcham, Dustin Ogburn, Katie Oliver, Lydia Richardson, Rachel Schmitt, Molley Scott and Cory Wallace with Dr. Amanda Gipe McKeith coaching.

The competitions entailed evaluating twelve classes consisting of beef, sheep, swine and occasionally, goats. Each member of the team also gave eight oral reasons to defend their placing for the eight classes they evaluated. The team prepared by developing their skills throughout the semester in class and in weekend practices.

The Keystone International Livestock Judging Contest held in Harrisburg, PA resulted in the team winning 3rd overall behind Ohio State and the University of Missouri. The team also earned 2nd in Beef Cattle, 5th in Swine, 3rd in Sheep and 3rd in reasons. Rachel Schmitt and Chad Burcham placed in the top ten - Rachel in beef, sheep and reasons with Chad placing in sheep. In the Stockman Contest Lydia Richardson took 12th place. The team placed in the top twenty-five in both the American Royal Contest and the National Intercollegiate Livestock Contest.

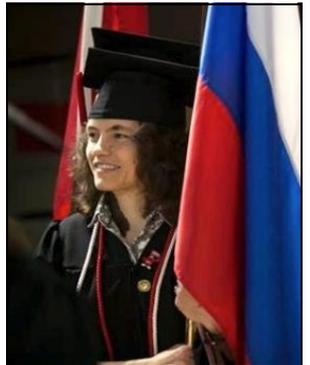
The Department of Agriculture is very proud of the livestock team as they performed extremely well. This spring many of these students will continue to represent WKU by competing on the Meat Judging Team during more competitions.



Engineering

CIVIL ENGINEERING DEPARTMENT REMEMBERS ANNA ZHIDKOVA

The Civil Engineering Department unveiled a plaque in late October in honor of Anna Zhidkova, an engineering student from Russia, who died October 14, just five months after graduating from the university. Anna was diagnosed this past August with cancer. Her parents were able to attend the plaque unveiling ceremony which was held in the Civil Engineering Student Resource Room. Anna was an inspiration to many for her energy, positive attitude and bravery. Stated Warren Campbell, one of Anna's professors, "She was humble even though her academic accomplishments would justify some arrogance, but she wasn't like that."

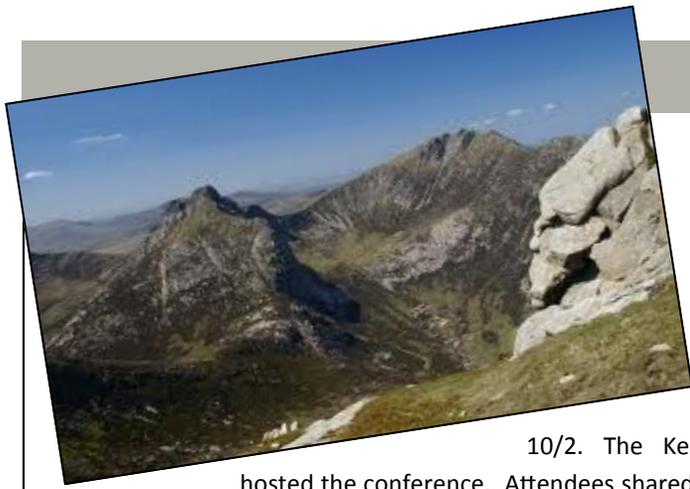


WKU Junior Dylan T. Jones of Berea received a \$1,000 scholarship from the American Society of Civil Engineers (ASCE) Kentucky Section at its annual meeting Friday, Oct. 25 in Louisville. Jones, a civil engineering major, is president of the WKU ASCE student chapter. The scholarship was presented by Nancy Albright (pictured at left) of the ASCE Kentucky Section.

The Department of Engineering hosted the 14th Annual Kentucky Bluegrass Robotics Competition on November 9th. The competition, which is the department's primary high school outreach effort, provides secondary school students with a challenging design experience and secondary school teachers with guidance in teaching engineering topics. Fifteen teams from a dozen schools were slated to compete. Teams built a robot using construction materials provided by WKU; the robots competed against each other in a "Hunger Games" based competition. Kevin Schmaltz coordinated the department's efforts with Robert Choate, Julie Ellis, Ron Rizzo and Troy Robertson proving major support. Engineering students set up and executed the event.

Geography & Geology

WKU STUDENTS, FACULTY & STAFF ATTEND GIS CONFERENCE



The annual Geographic Information Systems (GIS) conference took place in Louisville, KY at the Galt House Hotel from 9/30 to 10/2. The Kentucky Association of Mapping Professionals (or KAMP) once again hosted the conference. Attendees shared ideas and discussed innovative technologies and solutions in GIS for disseminating geospatial data.

Geoscience graduate student Luke Miles and Kevin Cary, WKU GIS Director and certified GIS professional (GISP), presented WKU GIS, the KY Mesonet, and Web Maps. Their presentation discussed displaying live Kentucky Mesonet data in various web map forms in an Internet browser on both desktop and mobile devices powered by GIS technologies. Web maps are dynamic maps displaying many map layers and various levels of detail on demand for any area of interest at different map scales. These types of maps open doors for on-the-fly spatial analysis and serve as a portal for gathering additional information about a particular location or area. Web maps discussed in the presentation were created using Adobe Flex, Microsoft Silverlight, and Java Script.

Scott Dobler, Instructor of Geography and Co-Coordinator of the Kentucky Geographic Alliance (or KGA), presented Engaging the K-12 Esri Site License, and Call for Interested Professional Help for 2013-2014. Dobler has been very active with the KGA over the past few years and has been pivotal in making Esri's GIS software available to Kentucky's primary and secondary schools. He also spoke during lunch on opportunities for GIS professionals participating with Kentucky's schools.

Josh Montgomery, GIS Specialist with WKU Planning, Design & Construction (PDC), Thomas Woodall, Campus Infrastructure and Data Specialist with Facilities Management, and Kevin Cary presented Partnering with Academics to Utilize and Maintain a University Enterprise GIS. Both Montgomery and Woodall are graduates of WKU's GIS program majoring in GIScience. Woodall is also a Geoscience graduate student.

Also in attendance at the conference were Taylor Berzins, a junior majoring in GIScience, and (James) Austin Boys, a WKU meteorology major and GIS minor, who was recognized at the conference as the awardee of a \$500 scholarship from KAMP.

"GIS analytical techniques are changing the way that we interact with our surroundings in myriad innovative ways," noted Geography and Geology Department Head David Keeling, "and WKU's GIS program and facilities have set the standard for GIS training in the state of Kentucky and surrounding regions."

For more information on GIS, visit <http://www.wku.edu/gis> or contact Kevin Cary in the WKU's Center for GIS at (270) 745-2981 or kevin.cary@wku.edu.

WKU DEPARTMENT HEAD COMPLETES EASTERN EUROPE EXPEDITION

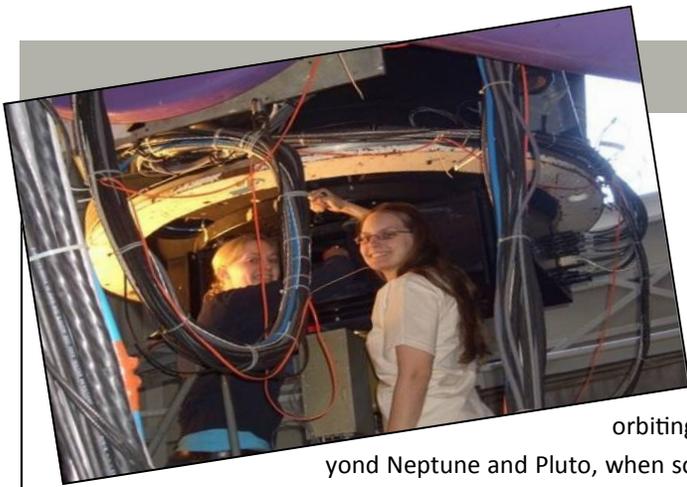
Dr. David Keeling, Department Head of Geography & Geology, recently completed an Eastern European-West Asian expedition representing WKU and the American Geographical Society. The expedition focused on urbanization, economic change and socio-historical development. Dr. Keeling gave lectures along the way on the East European city, oil and gas resources in Central Asia, the Balkan conflicts and the role of transportation and infrastructure in developing regional economies.



"Turning the vision of becoming a leading American university with international reach into reality requires two important ingredients. First, others must recognize the outcomes and accomplishments needed to build a wider reputation, and second, there must be a meaningful international element to what we do that is recognized and valued," stated Keeling. Expeditions like the one he just completed help WKU to focus on both of these critical elements. Former SEC chairs, CEO's of Fortune 500 companies and other leaders in higher education, business and industry also participated. "These leaders learn about WKU's goals and ambitions and thus become more likely to give philanthropically," stated Keeling.

Physics & Astronomy

"Comets: Icy Interlopers Interacting with the Sun" will be presented at WKU's Hardin Planetarium Dec. 1-Jan. 5.



Comet ISON is a 3-mile wide chunk of dirty ice. Decades ago it was orbiting the Sun in the remotest boondocks of the solar system, well beyond Neptune and Pluto, when some other object passed near and gravity nudged comet ISON into a new orbit moving toward the Sun. Thawing as it approaches the Sun, this frozen interloper has been shedding hundreds of thousands of pounds of **dust** and gas every minute. Ejected material stretches behind the orbit and reflects sunlight, creating the comet's tail.

Just a few comets in the last generation have developed exceptionally long tails stretching across the sky. When it has moved enough away from the Sun to be viewed from Kentucky, comet ISON could be spectacular to behold. It isn't possible to predict exactly how bright comet ISON will become, nor how big its tail will be; however, it has the potential to be an amazing sight in the pre-dawn sky throughout December 2013.

The 40-minute show is free and suitable for all ages with time for questions at the end of the show. Show times are as follows:

December 8, 15, 22, 29 and January 5

2 PM

December 5, 10, 12, 17, 19, 26 and January 2

7 PM

There will be no shows on Christmas Eve or New Year's Eve.

Architectural & Manufacturing Sciences

Drs. Arbuckle and Doggett attended the ATMAE Accreditation Review Meeting at the ATMAE conference in New Orleans, LA. We are now fully accredited (with the adjustments made to the curriculum for the fall) in the Advanced Manufacturing Construction Management program, Architectural Sciences program and the MSETM program for five years with a two year progress report. The MSETM accreditation is only the fourth given by ATMAE to a Master's program in the U.S.

Also at the conference the Technology Manager Competency Model developed by Mark Doggett was endorsed by the ATMAE Management Division. It will be incorporated into the Certified Technology Management exam next year. The model will serve as the basis for the Technology Management Body of Knowledge (BOK).

The Construction Management major got its first accreditation by the American Council for Construction Education (ACCE) and the Association of Technology, Management and Applied Engineering (ATMAE).

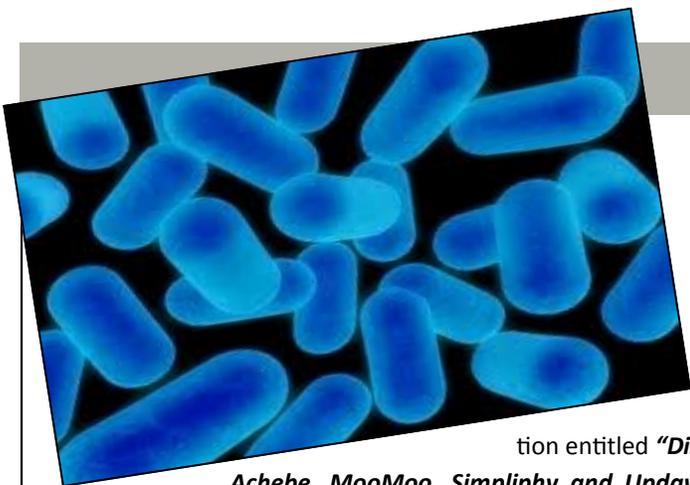
Two MSETM graduate students, Andrew Austin and Sumbul Khan, made professional presentations at the ATMAE annual conference. The presentations by the graduate students were as follows: Sumbul Kahn, ***Assigned Textbooks of ATMAE Accredited Technology Management Programs Improving Pedagogically-Based Laboratory Learning*** and Andrew Austin, ***Improving Process Capability in a Computer Integrated Manufacturing CCIM Cell with the Use of a Renishaw 40-2 Spindle Probe***.

Eric Wetzal, Construction Management Alumni, received the Cunningham Doctoral Scholarship from Virginia Tech.

Mychal-Drew Moses won third prize in the Graduate Research Competition at the KAS Annual Conference held Nov. 8-9 at Morehead State University. Mychal is a second year master's student in the Engineering Technology Management Program.



Biology



Congratulations to Senior Biology Major Amy Ni and Gatton Academy Senior Gretchen Walch. Gretchen and Amy both won first place awards at the 2013 SE Regional NIH IDEA meeting in Little Rock, Arkansas. Gretchen won first place for her poster presentation

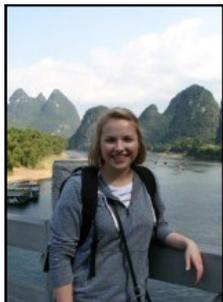
entitled *"Discovery and Bioinformatic Analysis of Mycobacteriophages*

Achebe, MooMoo, Simpliphy and Updawg." Amy won first place for her oral paper presentation entitled

"Time-course effects of growth hormone (GH) and GH antagonist on auditory hair cell regeneration in zebrafish (Danio rerio)."

Gretchen works with Rodney King and Amy Ni works with Michael Smith. Sarah Schrader also gave an outstanding oral presentation on her research at the meeting. WKU was well represented by these three amazing young women.

Graduate student Olivia Boyd won second place in the Graduate poster competition at the Entomological Society of America meeting recently in Austin, TX. Olivia's work was entitled, *"A preliminary look at the phylogeography of the monotypic cave beetle genus Darlingtonia (Coleoptera: Carabidae)."* Competition was heavy so this win is a nice honor.



Sophomore student Megan Laffoon returned recently from Guilin, China where she attended a two week training workshop on water resources at UNESCO's International Research Center on Karst. Laffoon was one of 17 students on five continents selected for the program. The training course offered Megan an opportunity to gain experience related to both of her academic pursuits at WKU, her study of Biology and her language study as a participant in the Chinese Language Flagship Program at WKU. "These two weeks were an incredible opportunity that not only allowed me to learn from some of the brilliant minds in karst hydrology," Lafoon said, "but also gave me the opportunity to utilize my Chinese language skills in both a practical and professional setting."

Dr. Chandra Emani, who is the biology faculty at WKU-O, is exposing the students to research in plant biotechnology and plant molecular biology thanks to a unique relation that WKU-O shares with the Owensboro Center for Business and Research's emerging ventures research program. This relation enables Dr. Emani to be a liaison between WKU-O and the area-wide biotechnology industries. Dr. Emani's research lab is situated in the Center for Business Research's research incubator that houses many biotech and commercial industries. All the biology classes with laboratory components are being conducted at the incubator so that students can be exposed to real world scenarios by working with the industries and also observe firsthand the workings of the cutting-edge instrumentation available at the industries.

Chemistry

Six students participated in a ten week summer research experience at the National Chung Hsing University (NCHU) in Taichung, Taiwan. The students worked on chemistry and chemical engineering research projects that included bamboo particles to remove toxic metal ions, electrochemical capacitors and switchable surfaces. The WKU group worked closely with faculty mentors and students at the Chemical Engineering Department at NCHU. The project was funded through a three year grant from the National Science foundation's Office of International Science and Engineering. Dr. Eric Conte, WKU Chemistry professor and the principal investigator, who joined the students for part of their stay, has been collaborating with faculty at the NCHU for the past seven years through these grants. The students will present their results at regional and national meetings in the United States.

