International Connections through GLOBE

Two Fairmont State faculty members traveled with colleagues to Osun state in Nigeria for a week in early January 2007 to train Nigerian teachers in the use of The GLOBE Program’s research protocols. GLOBE (Global Learning and Observations to Benefit the Environment) is an international initiative that allows students in 109 countries and at all grade levels to engage in authentic scientific research.

Todd Ensign, Program Manager for the NASA IV&V Educator Resource Center and Temporary Assistant Professor of Geoscience at Fairmont State, is the GLOBE coordinator for the state of West Virginia, and this is his second overseas trip promoting GLOBE this year. Deb Hemler, Professor of Geoscience Education, served as pedagogy and hydrology expert on the trip. The unique partnership began at the GLOBE Learning Communities (GLC) workshop in Corpus Christi, Texas, in August 2005 when Ensign was introduced to Dr. Raifu Durodoye, Mathematics Professor at Dallas Area Community College (Texas). At this meeting Professor “Duro,” as he prefers to be called, introduced himself as a West Virginian at heart because he spent several years studying at Marshall.

The West Virginia contingent enjoyed opportunities to interact with the Nigerian people, including government officials, military personnel, teachers, school children and vendors at the many outdoor marketplaces.

NASA Funding for STEM Initiatives

$1.1 million in NASA funding will support a variety of exciting initiatives in Science, Technology, Engineering and Mathematics (STEM) at Fairmont State over the next three years.

As detailed below, the funding is targeted at improving the preparedness of prospective students, providing more student-centered, activities-based learning opportunities, initiating a collaborative online physics education program, establishing undergraduate research and internship programs, acquiring state-of-the-art instrumentation and expanding professional development opportunities for faculty.

The funding was secured through the collaborative efforts of Phil Mason, Vice President for Research and Graduate Studies, and faculty and administrators in the College of Science and Technology and in the School of Business, Aviation and Technology.

Faculty Development
• Support for faculty undertaking the graduate certificate in Online Learning offered through the School of Education at FSU.
• Auto Computer-Aided Design (CAD) workshops.
• Faculty development in classroom assessment of learning outcomes.
• Support for faculty participation in the NASA Online Digital Learning Network faculty development program.
• Equipment for computational science faculty research.
• Support for faculty efforts to involve STEM majors in research opportunities.

Student-Centered Opportunities for STEM majors
• Summer internship program.
• Support for student participation in the NASA Langley Aerospace Summer Scholars Program.
• Support for students engaging in undergraduate research with faculty mentors.

Programmatic Development/Enhancement
• Development of a largely online physics secondary education teaching specialization in collaboration with other institutions in West Virginia.
• Revision of our introductory physics courses based on national models, with a goal of having a strong emphasis on student-centered, activities-based learning.
• Enhancement of the engineering graphics technology program through the acquisition of a sophisticated, industry-standard graphics software package.
• Specialized equipment to enhance aviation and airframe maintenance training and educational facilities.

http://www.fairmontstate.edu/academics/CollegeofSciTech
Milestones in 2006-2007

- Todd Ensign was named as Program Manager and Marcie Rice was named as the Elementary Education Specialist for the NASA IV&V Educator Resource Center.
- Dr. Mahmood Hossain, Assistant Professor of Computer Science, completed his Ph.D. in Computer Science from Mississippi State University. He and his family welcomed a son, Ridwan, on Dec. 9.
- Dr. Alicia Kime, Associate Professor of Computer Science, joined the ranks of Emeritus Faculty after completing her last semester of phased-retirement teaching in the fall of 2006.
- Rosetta Kolar, Program Assistant II, was honored for five years of service.
- Dr. Harry Baxter, Professor of Chemistry, was named as the new Faculty Senate Webmaster.
- The Safety and Environmental Engineering Technology program and degree were renamed Safety Engineering Technology.
- Rick Wade, Adjunct Professor of Biology, and his family welcomed a son, Ashby Alexandar, on August 26.
- Dr. Matt Scanlon, Professor of Chemistry, performed in the chorus of the School of Fine Arts fall production of the musical Oliver.
- Dr. Erica Harvey and her physical chemistry students were profiled in an article entitled “Quantum Leap” on p. 152 of the October 2006 issue of Yoga Journal.
- Larry Allen, Assistant Professor of Electronic Engineering Technology, passed his Fundamentals of Engineering exam.

College Strategic Plan

The College of Science and Technology worked collectively throughout 2006 to develop a College mission (given at the start of this newsletter) and strategic plan for 2006-11. The strategic plan consists of six key objectives, with specific action steps and success indicators for each objective.

The strategic goals are given below; more detail can be found on the web at http://www.fairmontstate.edu/academics/CollegeofSciTech/Syr_StrategicPlan.asp.

1. Recruit motivated students who are interested in science and technology.
2. Support and retain students from West Virginia and elsewhere as they make the transition to college and grow into independent learners.
3. Cultivate a SciTech learning environment where high academic expectations are matched with equally high levels of opportunity, support and flexibility from the first course through the final capstone experience.
4. Support students as they make the transition from college into professional life.
5. Forge strong alliances with schools, state agencies, businesses, industry and other community groups in our service region.
6. Provide and promote professional development opportunities for faculty and staff that are targeted at accomplishment of our mission.

The SciTech strategic plan complements Fairmont State’s institutional strategic plan, which is available at http://www.fairmontstate.edu/StrategicPlanning.

College Assistants Teach Freshman Seminar

Marcie Rice and Joe Wiles teamed up to teach Freshman Seminar this fall semester. As newcomers to Fairmont State campus themselves, this course provided them an extra motivation to learn campus procedures quickly – they had to teach them!

According to Marcie, the experience was a great opportunity to closely watch a group of freshmen as they grew into their new role as college students, and she enjoyed playing a role in helping them through the transition.

Annual Carroll Lecture

Ceremony Honors Carroll Lecture Founder

A dedication ceremony honoring the life and philanthropic service of Rae Carroll Ramage (1913-2006) was held at Fairmont State University in late January. Ramage is best known in the College of Science and Technology for the annual Robert L. Carroll Memorial Scientific Lectureship that she endowed to honor the memory of her younger brother, a former member of the physics faculty at Fairmont State. Funds support an annual lecture on a cutting-edge topic, as well as scholarships for students in math and physics. Carroll gave the inaugural lecture in the series, during the 1994-5 academic year, titled “Beyond the Farthest Star.” Rae Carroll Ramage was a regular attendee at the lectures through the fall of 2006, asking penetrating questions of the speakers and always making sure to check up on College faculty members as well.

Born in Morgantown on Dec. 20, 1913, Rae Carroll Ramage was one of six children. She graduated from Barrackville High School in 1930, obtained her Bachelor of Arts in English in 1933 from Fairmont State College, and worked as a nurse in Fairmont for many years. Displays honoring the late Rae Carroll Ramage; her brother Robert Carroll, Ph.D.; and her husband Dr. Chesney McCauley Ramage were unveiled at the dedication ceremony.
Mitchell Is Classified Employee of the Year

Dennis Mitchell, Academic Lab Manager 1 for the Technology Department, has been named 2006 Classified Employee of the Year for Fairmont State University. Mitchell was honored with the award during the annual Classified Staff Luncheon. A May 2000 graduate of Fairmont State, Mitchell started his career at Fairmont State in February 2001. Many departments on campus provided gifts for the award winner.

After the event Mitchell said, “I was totally surprised because all the nominees were very deserving of the award. In fact, there are many FSU employees that are deserving of this award and go without recognition but continue to plug away.”

During the luncheon, Dalene Horner read aloud information about Mitchell: “Dennis became an employee of Fairmont State based on the great experience he had with all of the people he came into contact with as a student. Everyone was friendly and eager to help and he wanted to be a part of it. Dennis tries to have a positive attitude, a helping hand and a smile on his face for everyone.”

Also during the luncheon, the Office of Human Resources honored employees for their years of service to Fairmont State. Rosetta Kolar, Program Assistant II, was honored for five years of service.

Database Streamlines Budget & Purchasing

Joe Wiles, College Assistant, has been working to develop a database to help Julia Ozie and Rosetta Kolar track the more than $1,306,427.19 in the College of Science and Technology monies they are handling this fiscal year. Julia and Rosetta work diligently to track all the grant and departmental monies our College spends, and once completed this database will make running reports easier.

Emeritus Faculty News:

Where Can We Find Libby Frye?

Elizabeth Frye, Professor Emeritus of Mathematics, served as a valuable member of the Fairmont State faculty until her retirement in December of 2002. Born and raised in Grant County and a graduate from Petersburg High School, she earned degrees from Potomac State College, Fairmont State College and West Virginia University.

Before coming to Fairmont State College in 1974, Libby taught mathematics at the junior and senior high level. During her years at the college, Frye had the primary responsibility for the mathematics education programs and for supervising mathematics student teachers.

Libby was active in numerous professional committees and organizations at the local, state and national levels. She directed more than 20 grants for teachers, students and youngsters during the last 15 years of her career. She’s probably most proud of bringing Project AMPLE to Fairmont State.

Since her retirement, Libby and her husband Bill Ruoff spend much time traveling, reading, meditating and exercising. They now enjoy visits with their friends and family more frequently.

Libby is a member of three book clubs and is working on projects to fight hunger and poverty locally, nationally and globally. She loves her retirement home in Wilmington, N.C.; yet a bit of her heart will always be back in the Potomac Highlands of West Virginia.

While teaching at Fairmont State, she learned that this institution of higher education was an excellent springboard for projects to help children, in-service teachers and other citizens of West Virginia. She advises current students to take advantage of the expertise of their teachers: go to class and ask questions. In addition to class work, she encourages students to get involved in some campus project to help others.

We thank Dr. Elizabeth Frye for her years of service to Fairmont State.

Adjunct Faculty

Brandon Butcher

Brandon Butcher, Chief Meteorologist for CBS 3 Springfield (Massachusetts) is an adjunct instructor teaching Fairmont State’s very popular Introduction to Meteorology online course. Prior to arriving at CBS 3 Springfield, Brandon worked for more than six years as the Chief Meteorologist at WDTV in Clarksburg.

Brandon uses the most advanced forecasting equipment to deliver accurate and dependable forecasts right to your front door. During his career to date, Brandon has earned nearly 20 awards from the Associated Press, including Best Weathercast, Best Weathercaster, Best Weather Operation, Best Continuing Coverage, Best Feature, Best Documentary and Best Public Affairs Program. He was also recognized by the West Virginia Association of Broadcasters for both the Best Weathercast and the Best Locally Produced Television Show statewide.

Most recently, in July 2006, he was awarded an EMMY for his work from the National Academy of Television Arts and Sciences.

Brandon has earned the prestigious Television Seals of Approval from both the American Meteorological Society and the National Weather Association, recognizing superior delivery of broadcast meteorology.

Brandon, his wife Mary, and his daughter Cady live in Springfield.
Morris, Freshmen Explore Wilderness

The Wilderness Explorer Freshman Seminar, held this past August, was a big success. Not only did students have the time of their lives, but they also prepared for college and built bonds with other students and faculty.

Matt Schmuck, an adjunct faculty member with the Health and Human Performance Department, led the adventure. Tony Morris, Professor of Biology, assisted and led discussions around the campfire. They talked about typical Freshman Seminar topics such as anxieties, transition to college, study skills, clubs and organizations, sexual assault, nutrition and sleep. During the fall semester, students and faculty came back together to share stories, photos and laughter. The students commented that overcoming wilderness challenges prepared them to take on the challenges of college.

Equipment for the adventure was provided by Carolyn Crislip-Tacy and the Health and Human Performance Department. Funding came from the Title III grant. It is exciting to see this cross-campus collaboration and its positive impact on our students.

Instrumentation Grants Awarded by EPSCoR

Fairmont State University is the recipient of three awards from the West Virginia Experimental Program to Stimulate Competitive Research (EPSCoR) Grants Program. FSU has the distinction this year of being the only college or university to receive more than a single award.

Dr. Mark Flood, Professor of Biology, and interdisciplinary team members, Dr. Paul Reneau and Dr. Tad Kato, received a $40,000 award and a $20,000 cash match from FSU for their project “Bridging Mind and Body: The Interdisciplinary Study of Human Response in Psychology, Exercise Science, and Biology.” The monies will be used to purchase human physiology instrumentation.

“This is an exciting opportunity for FSU students from several disciplines to use state-of-the-art equipment,” Flood said. “Students from psychology, exercise science, biology, safety/environmental engineering technology and music will conduct hands-on activities in classes that will help them understand their discipline in a deeper fashion. In addition, this equipment will allow the faculty to be involved in new areas in collaboration with undergraduate students.”

Dr. Andreas Baur, Assistant Professor of Chemistry, received a $10,000 grant to obtain a new fluorescence detector for high performance liquid chromatography.

Baur said FSU students Adrienne Riggi, a biology and chemistry major, and Gregory Donohoe, a chemistry major, will participate in an undergraduate research project involving the new fluorescence detector.

“We plan to investigate the effects of homocysteine on cells; high levels of homocysteine are recognized as risk factor in cardiovascular diseases. The detector is going to be an essential part in determining the concentration of homocysteine and its metabolites in the intra- and extracellular matrix,” Baur said.

Dr. Sarah Dodson, Assistant Professor of Biology, received a $20,000 grant and a $7,000 match from FSU to purchase a digital imaging system.

Dodson said the digital imaging system will make it possible to visualize and document nucleic acids and proteins. The system is the type found in a laboratory that examines DNA, RNA or proteins in cells.

“The digital imaging system will be used by the students in many of the biology courses as well as being utilized in the ongoing faculty and student research projects at FSU,” Dodson said.

Interdisciplinary Research Team Receives Space Grant

Two biology professors and a chemistry professor are teaming up on a biomedical research project that recently received funding under the auspices of the FSU/NASA West Virginia EPSCoR Space Grant Programs Research Enhancement Awards.

Dr. Andreas Baur, Associate Professor of Chemistry; Dr. Mark Flood, Professor of Biology; and Dr. Sarah Dodson, Assistant Professor of Biology, will collaborate with two students to investigate the biochemical effects of homocysteine on stromal and endothelial cells. The group received $10,000 for work to be carried out during 2007.
Faculty colleagues from biology, nursing, psychology and physical education collaborated to develop and offer a new course focused on the scientific, societal and personal issues associated with obesity in Appalachia. Obesity: A Nation at Risk was team-taught during the fall of 2006 as a SCIE 1199 liberal studies science offering by Pamela Huggins, Assistant Professor of Biology; Sharon Bond, Associate Professor of Nursing; Ann Shaver, Associate Professor of Psychology; and Carolyn Crisp-Myers, Professor of Physical Education and Chair, Health and Human Services Department.

Obesity is a pressing health issue in Appalachia. For all states in the Appalachian region, the obesity prevalence rate is 20% or higher, and West Virginia in particular has one of the highest levels in the country. Obesity: A Nation at Risk was offered as a four-credit, activities-based non-majors science course. Students in the course were provided with research and clinically based information relating to the topic of obesity from a medical, social/psychological, financial and educational perspective. Students were asked to analyze, synthesize and apply scientific concepts in order to increase their awareness of how the obesity issue affects themselves, their families and community.

In August 2005, the core group involved in the project received grant support to attend the fifth annual SENCER (Science Education for New Civic Engagement and Responsibilities) Summer Institute at Santa Clara University in California. Phil Mason, Professor of Biology and the former Dean of the College of Science and Technology, convened the interdisciplinary group.

Hemler to Coordinate Presidential Award

Dr. Deb Hemler, Professor of Science Education, is the new coordinator for the Presidential Award for Excellence in Science Teaching for West Virginia. Hemler was named to the role on behalf of the West Virginia Science Teachers Association (WVSTA) by State Science Coordinator Mike Kees, and underwent training at the National Science Foundation. After being nominated, K-12 science teachers from around the state submit a portfolio and video of their teaching to a selection committee consisting of higher education faculty and past presidential awardees, headed by Hemler. That committee submits the names of three worthy West Virginia science teachers to the National Science Foundation, which administers the award on behalf of the White House Office of Science and Technology Policy and selects the final winner for each state. In addition to public recognition of their outstanding teaching and other opportunities, awardees receive $10,000 from the National Science Foundation.

A Celebration of Trees

On September 23, Dr. Don Trisel and members of his Advanced Botany class visited Longwood Gardens and the Brandywine Battlefield Park. While at the historic park, they had their photo taken with a magnificent old sycamore tree (Platanus occidentalis).

The giant sycamore, which measured approximately 35 feet in circumference, is certified by the National Arborist Association and the International Society of Arboriculture as having lived at this location at the signing of our Constitution in 1787. This tree is located next to the Gideon Gilpin House (in the background of the photo) near Chadds Ford, Pa., which served as General Lafayette’s quarters during the Battle of Brandywine, a defeat for the American forces in the Revolutionary War on September 11, 1777.

While visiting the Du Pont estate at Longwood Gardens near Kennett Square, Pa., the class learned about the history of horticulture, plant exploration, botanical research, conservation and public education. They used all of their senses to experience Longwood Gardens: water fountain shows set to music, indoor conservatories, outdoor water lily gardens, spectacular fall flower displays including botanical specimens from all over the world, taste tests of fall fruits such as paw paw and cornelian cherry, a kite flying celebration, an antique tractor show, formal topiary gardens, frozen treats from a local creamery and a children’s garden with a honeybee display.

In the photo below, the class gathers with tour guides beneath a Japanese maple and learns about opportunities for graduate studies and continuing education at Longwood Gardens.
Largely - Online Physics Teaching Specialization

The College of Science and Technology is pleased to announce that Florin Bocaneala has agreed to serve as our new Online Course Development Coordinator in Physics.

Bocaneala will be coordinating a multi-institutional collaboration to develop a largely online physics teaching specialization, with three years of NASA funding support. The project is described more fully at http://fairmontstate.edu/academics/PhysicsProgram/OnlinePhysics.asp.

The goal of the project is to develop and offer largely online versions of all the physics teaching specialization courses for use by remote students or other students who prefer a flexible, online learning environment that reinforces best practices in science education. Institutions that have expressed initial interest in the project include Glengville State College, West Liberty State College, West Virginia Wesleyan College, West Virginia University, Davis and Elkins College, the West Virginia Department of Education and Green Bank National Radio Astronomy Observatory. Fairmont State hosted an organizational conference for the project in the spring of 2007.

For more information about the project, please contact Florin Bocaneala at fbocaneala@fairmontstate.edu.

Bocaneala’s duties include primary responsibility for coordinating the design, development and initial offerings of online versions of the content courses comprising the physics teaching specialization, as well as an introductory astronomy course. Specialized content and pedagogy assistance will be provided by teams of faculty at Fairmont State and partner institutions. Bocaneala will work closely with physics faculty members Galen Hansen, Steve Haynes, Ashley Martin and Dwight Harris, as well as staff members in the Learning Technology Center at Fairmont State.

Bocaneala holds a Ph.D. in Physics from the Ohio State University (2005) and a B.S. in Physics from the University of Bucharest (1998). He comes to Fairmont this February from Olympia, Wash., where he has been working in an organizational role as AmeriCorps VISTA Leader at Community Youth Services.

As a graduate student, Bocaneala notably organized and taught Physics by Inquiry, familiarizing future science teachers with new teaching methods developed by physics education research. He contributed to the development and implementation of a new Introductory Physics laboratory and course based on the interaction between student-built computational simulations and real-life experiments for Engineering Honors Students.

Bocaneala’s substantial technical and programming skills were put to use during graduate school in the implementation of Lattice Gauge simulations for Super Young-Mills theories on Ohio Supercomputer Center clusters, the design and implementation of neural network models for cognitive research and the development of a web interface for testing and educational data collection for the Physics Education Research Group.

Riesen Helps Develop Calculus Content Standards

Dr. Joe Riesen has been named to the West Virginia Statewide Design Team for the development of course content standards and objectives. The Higher Education Math Task Force, with the support of the Office of Academic Affairs of the Higher Education Policy Commission, recommended Riesen along with four high school teachers and four other higher education faculty members from around the state. The team will work towards developing a unified vision of content covered in calculus courses, as well as an introductory astronomy course.

The goal of the project is to develop and offer largely online versions of all the physics teaching specialization courses for use by remote students or other students who prefer a flexible, online learning environment that reinforces best practices in science education. Institutions that have expressed initial interest in the project include Glengville State College, West Liberty State College, West Virginia Wesleyan College, West Virginia University, Davis and Elkins College, the West Virginia Department of Education and Green Bank National Radio Astronomy Observatory. Fairmont State hosted an organizational conference for the project in the spring of 2007.

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Math Students and Faculty Attend Meeting

A group of mathematics students and faculty traveled in September 2006 to Oxford, Ohio, for the 34th Annual Mathematics and Statistics Conference at Miami University. The topic this year was “Understanding Biological and Medical Systems Using Statistics.” The conference featured Louise Ryan from Harvard University, Wendy Martinez from the Office of Naval Research and Eric Smith from the Virginia Polytechnic Institute and State University.

Additionally, the group was able to attend the 33rd Annual Pi Mu Epsilon Student Conference also being held on the Miami University of Ohio’s campus. During this event, students present on topics related to mathematics, statistics, computing, operations research and math education.

Math Field Day Question Generators

Members of the Computer Science, Math and Physics (CSMP) department helped the Region VII Math Field Day committee write questions for a test bank for the yearly math competition. Dennine LaRue of the CSMP department serves as site coordinator for the Region VII Math Field Day and secretary for the West Virginia State Math Field Day program. The Region VII Math Field Day will be held March 3 at Bridgeport High School and the West Virginia State Math Field Day is April 28 at West Liberty State College.
Wallman Hall Renovation on Schedule

The steel skeleton for the new Technology Wing addition was begun in earnest over the winter break. The largest of the trusses weighs in at 37 tons. Occupants of the circular part of Wallman Hall were not allowed in the building while the sections nearest that end were erected with the help of two massive cranes and a crew of steelworkers. The project is scheduled for completion at the end of 2007.

Preparations for Mini Baja East Competition

Fairmont State’s mechanical engineering technology students are at it again. After winning the 2006 Briggs & Stratton Award for water crossing and the 2005 Overall Best Rookie Team at the Society of Automotive Engineers Mini Baja East Competition, they are out to win it all this year.

Returning student from last year’s Mini Baja East Competition, Craig (CJ) Poland guides their way for this year’s April competition at the University of Central Florida in Ocala. This year’s team is preparing for the event in their temporary workshops in the Turley Center due to Wallman Hall’s renovations and addition of two floors. SAE Faculty Advisor, Merle Thomas, Assistant Professor of Mechanical Engineering Technology, is keeping the team motivated.

“This year we are going to win. We want to beat MIT, Michigan, Ohio State … beat all the big guys,” Thomas said.

Approximately 20 students are creating the custom built dune-buggy like car, with six students as funded researchers through the Undergraduate Research Program at Fairmont State. FSU’s buggy will compete against over 70 colleges and universities from across North America. Their design will be tested not only in acceleration, braking, hill climbing, top speed and suspension competitions, but also in a four-hour endurance race. The race track will be approximately two miles long with bone-jarring challenges: railroad tracks, steep ramps, potholes, turns, bumps, sand, dense tree stands, hills with steep grades and even a major water crossing. The buggy has to be an amphibian!

The competition fosters hands-on learning for the College of Science and Technology students. They formulate, design, fabricate and then test the vehicle. If an axle breaks, they fix it. If the brakes need adjustment, they adjust them. If a part needs machined, they machine it.

All competitors use identical 10 horsepower Briggs and Stratton engines (which give top speeds of over 40 mph) and follow rigorous safety standards. Students work with computer models to find how their design will react under certain conditions (such as hitting a tree when a tire goes flat at high speeds) to improve the design. We wish them a safe competition and the best of luck!

Gathering Data for ABET Visits in 2007

Technology faculty worked hard all fall with the support of department chair Jim Goodwin and the new College Assistant for Assessment, Curriculum and Facilities, Joe Wiles, to prepare accreditation documents in preparation for an ABET, Inc. site visit in the fall of 2007. ABET, Inc., the recognized accreditor for college and university programs in applied science, computing, engineering and technology education, is a federation of 28 professional and technical societies representing these fields. ABET currently accredits some 2,700 programs at more than 550 colleges and universities nationwide.

Architecture Installations

Students in ARCH 3300-Design 3 explored the possibilities and practicalities involved with installation art during the fall of 2006.

“Students need the opportunity to interact with the built environment at full scale; to engage in the architectural process beyond the world of paper and the computer,” said Assistant Professor of Architecture Philip Freeman. “The projects are an intervention in a place that has some distinct character, but is in need of visual and visceral articulation. Through this study the students explore how the idea is made physical, public and visible.

“The intervention projects attempt to use existing conditions as the foundation for creating an experience through the application of materials, geometry and proportion, thereby enhancing the sense of place.”
SciTech Mentor Link Program

In the fall of 2006, incoming/first-year students and sophomores just starting majors-level courses in science, math and technology were invited to participate in the SciTech Mentor Link Program. Forty-five incoming students signed up for the program and 13 upper-class majors in the College of Science and Technology are serving as mentors, along with several SciTech alumni. Conceived by senior chemistry major Megan Damm and coordinated by College Assistant for Student Support, Recruiting and Outreach Marcie Rice, the program’s purpose is to support and encourage incoming students in the College of Science and Technology by connecting them in mentoring relationships with successful upperclass SciTech students and alumni from the same home county or region. Support for the program is provided by the Title III Strengthening Institutions grant, the American Chemical Society local section, and the College.

Thus far the members in Mentor Link have had a Fall Kick Off event, hosted an alumni welcome reception and met for informational lunches with topics including successful advising appointments and setting SMART goals.

Current plans are under way to formalize the program as a one-credit freshman seminar course for the fall of 2007, with continued participation by upper-class student and alumni mentors.

Undergraduate Research Grants

Undergraduate research grants are making some great things happen. The College of Science and Technology had 17 different students awarded grants under six faculty coordinators in the fall of 2006 for a total of over $22,000.

- Dr. Sarah Dodson is working with Stephanie Boblett to continue her previous research into the effects of homocysteine on mesenchymal cells.
- Ashley Erwin and Matt Hiener are investigating the effects of genotypes on plasma homocysteine levels with mentor Dr. Mark Flood.
- Ian Wilhelm is researching the role of detoxification on early embryonic survival and development with mentor Dr. Mark Flood.
- Tia Como is working with a group of students to research and design a canoe for the American Society of Civil Engineers Regional Virginia’s Concrete Canoe Competition.
- Six students under Merle Thomas’s direction are researching design and building a buggy for the Mini Baja East Competition.
- Learning techniques in bee hygienic behavior analysis and comparing mite control methods are the topics of Matt Menas and Ashley Hudimac’s research under the direction of Dr. Don Trisel.
- Finally Dr. Gene Turchin is directing the research of Jhaye Jones, Brandon Honce, Bryan Henderson and Darrell Ogden, on the evaluation of Linux distributions.

Scholarships and Awards

SciTech Scholarships & Awards Available

The College of Science and Technology is proud to offer numerous opportunities for our students to receive scholarships and awards this spring. Last year we were able to offer over $13,000 in awards and scholarships through generous endowments and contributions to the Fairmont State Foundation.

To see complete award criteria and information on applying for the awards please visit the financial aid office or see www.fairmontstate.edu/academics/CollegeofSciTech/scholarships.asp.

If you are interested in contributing to any of these scholarships, awards, or our SciTech general fund, please contact the Fairmont State Foundation by visiting www.fairmontstate.edu/admin/foundation/default.asp or phoning (304) 367-4009.

Student Organization News

RecycleMania

After Students Taking Action in Nature’s Defense (S.T.A.N.D.) sponsored a successful recycling competition for groups of four or more students culminating on November 14, America Recycles Day, they began making plans with the FSU faculty/staff learning community for “An Inconvenient Truth” to bring RecycleMania to the Fairmont State University campus.

RecycleMania is a national collegiate contest that aims to raise awareness about waste reduction and recycling. The program has been very successful during its seven-year lifespan. In 2006 alone, 18.6 million pounds of recyclables were collected from 93 schools across the country. This is the first year any West Virginia schools have participated. The 10-week contest began Sunday, Jan 28, and will run until Friday, April 6. For more information, visit http://recyclemania.org/

The FSU Library has been designated as RecycleMania headquarters, allowing you to recycle plastic bottles and white paper on each floor of the library.
**ASCE Club**

**Hard at Work**

The American Society of Civil Engineers Student Club, under Tia Como’s advising, has been busy around the state. Last June they hosted the annual summer technical conference with 40 professionals attending, earning six professional development hours, and Paul Mattox from the West Virginia Department of Highways as the guest of honor. Mark your calendar; plans are already under way for their June 7, 2007, conference.

This fall five students attended and presented at the ASCE West Virginia Section Meeting in Martinsburg, W.Va. Students also took a day trip to the JF Allen Rock Quarry and Central Supply and later a weekend trip to tour the Summersville Dam and New River Gorge Bridge. The students would like to send a special thanks to the Good Evening Ranch for providing free lodging while visiting the Summersville area.

The club is excited about the upcoming Regional Virginia’s Conference. Twenty students plan to go to compete in academic competitions, including the concrete canoe competition. They are hoping for a repeat first in this event so they can make it to nationals again.

If you don’t think our ASCE students are busy enough, they will also be visiting high schools and middle schools throughout West Virginia this spring to help the schools be successful with the West Point Bridge Competition. A grant from Younger Members Forum of ASCE to promote the competition helps the student travel to any interested West Virginia School.

**American Society of Safety Engineers**

The students in Safety Engineering Technology have been diligently working in industry to offer local companies assistance with their occupational health and safety related issues.

These projects have been beneficial for both the students and the companies. Some of the companies, which have solicited for interns from Fairmont State’s Safety Engineering Technology program, include Allegheny Energy Supply, Hensel Phelps, Zenith Corporation, MSES Consultants, Inc., Mylan Pharmaceuticals, CIA and Consol Energy. As a program requirement, students are required to successfully complete a 300-400 hour internship prior to graduation.

In addition to co-op opportunities, students have been participating in SET’s mentoring program to assist incoming students with program questions and concerns. In return, the incoming students have the opportunity to work closely with an upper classman on a hands-on project related to occupational safety and health.

The ASSE student chapter has been very busy in the professional development arena as well as community service. ASSE has sponsored several professional presentations from guest speakers in the field of safety and health. In addition, a trip is being scheduled for April 2007 to visit some high profile construction projects in the Washington, D.C., and Baltimore area. Another tour is being scheduled with Consol Energy’s Loveridge Mine to introduce students to the mine safety field. These site tours provide students with exposure to real-life conditions and operations. As a result, they have a better grasp of the various types of industry offering employment in the field of Safety, Health and Environmental (SH&E).

In an effort to encourage student involvement in community service, ASSE sponsored a charitable donation drive for Christmas angels in the community. This drive was a great success. As a result, several children were able to open presents from Santa on Christmas morning. Additional activities are planned for this spring semester.
Homeschoolers Study Chemistry

Associate Professor of Chemistry Andreas Baur is leading a chemistry class for homeschooled students during the 2006-07 academic year. Students in the class range in age from 12 to 15 and travel from all over Monongalia, Marion, Harrison and Doddridge counties. Participants commit to approximately one class meeting per month, with substantial homework between sessions.

Open House and other recruiting activities

The College of Science and Technology hosted an open house on Friday, October 3, 2006, for high school students interested in math, science and technology. Twenty-nine students from Fairmont Senior High, 17 from North Marion High and 36 from Hundred High arrived on campus and participated in the day-long event. Students were divided into small groups and participated in short talks and hands-on demonstrations led by faculty and current FSU students.

The next Open House is April 13, 2007.

Global Grid Connections

In October 2006, faculty members, administrators and students from biology, chemistry, computer science, information systems and physics met with representatives from the West Virginia High Technology Consortium (WVHTC) Foundation’s Global Grid Exchange™ to discuss possible uses of the Grid for College teaching and research applications.

According to Dr. Steven Armentrout, the developer of the Grid software and President and CEO of Global Grid Exchange partner Parabon Computation, Inc., the Grid resources are particularly useful for large computational problems with pieces that can be carried out independently on multiple parallel processors.

As of fall 2006, Fairmont State University led the world in donating computing cycles to the Global Grid Exchange, an online marketplace that delivers the spare processing power of Internet-connected computers to users involved in business, science and medical research. With access to hardware resources ranging from PCs to mainframes, the Global Grid Exchange can deliver computing power on demand to any desktop computer over the Internet, creating a cost-effective computation infrastructure.

According to Mike Bestul, FSU’s Chief Information Officer, “starting with this fall semester, our faculty, students and researchers will begin to leverage the power of the Global Grid Exchange directly, thus further enhancing Fairmont State’s educational and research efforts while at the same time strengthening our partnership with this important technology initiative for the state of West Virginia.”

Labware donated

Kevin R. Stewart, President of Molecular OptoElectronics Corporation in Mannington, donated general consumable lab supplies and chemicals from the Mannington, facility upon closing this fall. Producers of fiber optics that interface with electrical devices, MOEC had many materials that were beneficial to our labs. The College of Science and Technology is very appreciative of their donation.

Get Connected: Check out our Web Pages!

Our College web page (fairmontstate.edu/academics/CollegeofSciTech) is constantly growing, and we have added many great features recently to meet the needs of our current students and our expanding SciTech community of alumni, associates and friends.

The SciTech Directory links to current contact information for faculty (including their office hours) as well as a brief biography for each. We are also pleased to include new information about staff members, emeritus faculty and adjunct faculty to help you meet more of those who shape our college.

A special SciTech Students section contains pertinent information to help with procedures and navigating campus life, a list of College scholarships and awards and an area celebrating our student organizations.

We have recently created a SciTech Alumni page dedicated to sharing what is happening in the lives of our alumni, and we are hoping to further develop this page to include more alumni spotlights and updates from our alumni.

Our SciTech Outreach and Calendar link is designed to keep you informed on the happenings in our college where the public can participate, including information on programs for school aged children, lectures for the public and continuing education courses for current teachers.

You can also find the previous editions of SciTech News. There is so much happening and much to celebrate!

If you are an emeritus faculty member, alumnus, friend or member of our FSU College of Science and Technology community and have something pertinent to share on our web page, please contact our College Assistant for Outreach at scitech@fairmontstate.edu or (304) 367-4269. We want to give our web page the personal touch to help prospective students get a feel for the opportunities and people awaiting them here, while also providing those of you important to us a place to stay connected.
International Connections through GLOBE cont.

University and met his wife in Huntington, W.Va. About a year after this initial meeting, Ensign received a call from Duro asking if he was still willing to help Nigerians conduct a teacher workshop funded by the governor of Ondo State.

“I was very surprised to be invited to Africa and jumped at this opportunity to learn more about other cultures while sharing my passion for GLOBE,” Ensign said.

In August 2006, Berlin and Ensign traveled to Akure, Nigeria, and worked side by side with trainers from Nigeria, Cameroon and South Africa to train over 80 teachers, professors and local scientists in the first GLOBE workshop in the most populous country in Africa.

Immediately after the August workshop, other Nigerian state governments began to contact Duro with requests for GLOBE workshops, and West Virginia was fortunate not only to be invited back, but offered four training spots on the team. In addition to Ensign and Hemler, the American contingent included Tom Berlin, a land cover expert from Alderson-Broaddus College, and Tiffany Litton, a Lewis County High School teacher who was a GLOBE participant last summer at the West Liberty State College SMART Center in Warwood.

GLOBE teacher trainers from three African nations in addition to those from West Virginia were invited by His Excellency Prince Oyinlola, Governor of Osun State, Federal Republic of Nigeria, to present an introductory GLOBE training session for over 60 public school teachers of Osun State. This workshop took place due to the generosity of the Governor of Osun State, the education ministry of Osun State, Obafemi Awolowo University and the hard work of Dr. Durodoye, who is a native of Osogbo in Osun State. The African Regional Centre for Space Science and Technology Education, and Dr. Olumide Adegbeshe, hosted the workshop.

“We were treated like dignitaries, which I think illustrates the importance the Nigerian people and government place on science, math, and technology education,” Hemler said.

Plans are under way for a May 2007 workshop in Ondo State, and discussions are taking place to organize a federal government sponsored workshop in Abuja, the capital of Nigeria. For more details about GLOBE, contact Todd Ensign at todd.ensign@ivv.nasa.gov or (304) 367-8438.

Science After School

The Science After School enrichment program offered for kindergarten through sixth grade students was taught by elementary preservice teachers, under the direction of Dr. Deb Hemler, Professor of Geoscience Education, and Dr. Aileen Grattan and Jo Ellen Snider, adjunct professors. It was designed to engage students in active science.

Three programs ran during October: “Oil Spills!,” which explored the formation, extraction, importation and environmental impact of using oil, “A Drop of Water,” which used water to explore all branches of science, and “Sounds of Science,” which investigated sound, waves and sound applications.

Science Bowl Results

Thursday, December 14, the College of Science and Technology hosted the RESA VII Science Bowl. Teams from 12 schools in six different counties arrived early on campus to put their science skills to test.

Twenty-six College of Science and Technology faculty members volunteered their time to be moderators, time keepers, judges and score keepers. The overall event was organized by Marcie Rice, College Assistant for Student Support, Recruiting and Outreach, and Shannon Carnes from RESA VII.

The winning team was from Bridgeport High School; Fairmont Senior finished in second place, and University High School came in third. The three top-placing teams’ members and coaches received jump drives from the College of Science and Technology. The top two teams headed to the West Virginia State Science Bowl on February 3, 2007, at the National Energy Technology Laboratory.

Science Fair


The fair is open to all West Virginia students in grades six-12. It is not necessary to qualify for the Regional Fair through a preliminary fair, so submit your registration by March 19, 2007. All projects should include laboratory, field or theoretical research. Projects can be individual or team and there are two divisions, Junior (grades six-nine) and Senior (grades 10-12).

Registration forms and more information can be found at www.fairmontstate.edu/academics/ScienceFair or contact our Science Fair Director, at (304) 367-4269 or scitech@fairmontstate.edu for forms to be faxed or mailed to you. Complete copies of fair rules can be found on the International Science and Engineering Fair web site (www.sciserv.org/isef/index.asp). There is a lot of information out there to help you prepare for a science fair. Visit our site for some great places to get started.

Seventy-eight sixth- through ninth-graders from Marion, Gilmer and Doddridge counties participated in the 2006 North Central West Virginia Science, Energy and Engineering Fair at Fairmont State on March 3-4, 2006.
Alumni Coordinator

My goal as alumni coordinator is to help you stay connected with the College of Science and Technology at Fairmont State University. I would like to encourage you to fill out an alumni profile (see Alumni Spotlight article for details) and also to begin to send us updates of successes in your life. I plan to send the newsletter electronically to all interested alumni and hope to begin a webpage dedicated to sharing alumni current accomplishments. Please help by sharing your good news. You can begin by visiting www.fairmontstate.edu/academics/collegeofscitech/scitechalumni.asp to complete an electronic alumni update form.

Alumni Spotlights Needed

Happy, successful alumni are one of our strongest recruiting features, and we now have a way to feature alumni profiles on the web. To view current alumni spotlights from the College of Science and Technology, go to http://www.fairmontstate.edu/academics/collegeofscitech/scitechalumni.asp. Profile forms can be obtained at that website or by contacting SciTech alumni coordinator by email at sci-tech@fairmontstate.edu or by phone at (304) 367-4269.

Fairmont State University
College of Science and Technology
1201 Locust Avenue
Fairmont, WV 26554

ADDRESS SERVICE REQUESTED

Outreach Calendar

(more detail on the web at www.fairmontstate.edu/academics/CollegeofSciTech)

The College of Science and Technology hosts or co-hosts many outreach events. All events are free and open to the public unless otherwise noted. Mark your dates for:

- **Science Enrichment**
  - Wednesdays, March 24-April 10 from 6:00-7:00
  - Contact: Deb Hemler at (304)367-4393; dhemler@fairmontstate.edu

- **SUMMER, 2007**
  - Teacher Training/Graduate Science Courses
    - Location varies
    - Teachers seeking professional development credits for pay raises, re-certification and plus hours.
    - Coal in the Heart of Appalachia – tentatively July 16-20
    - GLOBE Workshop at the National Radio Astronomy Observatory in Greenbank – July 23-27
    - Contact: Deb Hemler at (304)367-4393; dhemler@fairmontstate.edu

- **SUMMER, 2007**
  - Gear Up Camps
    - Project AMPLE Extended
      - Residential camp on main campus
      - 7th grade students in 2006-2007 academic year
      - June 17-28
      - http://www.fscwv.edu/gearup/ample/
      - Contact: Stephanie Yoho at ample@fairmontstate.edu or (304) 367-4498

- **CSI (Crime Scene Investigations)**
  - 7th and 8th Graders from Gear Up Schools
  - Tentatively July 30-August 3
  - Contact: Mark Flood at (304) 367-4309; mflood@fairmontstate.edu

- **America/FS Counts math tutoring**
  - Sessions begin February 19
  - Mondays 5:00-6:00, 6:00-7:00;
  - Tuesdays 5:30-6:30, 6:30-7:30
  - Students with math difficulties, grades 5-8
  - Free; pre-registration is required.
  - Contact (304) 367-4579 or e-mail nwoodson@fairmontstate.edu

- **FRIDAY, APRIL 13**
  - SciTech Open House
    - 9:30 am – 1:30 pm, Hunt Haught Hall
    - High school students and teachers
    - Contact: Harry Baxter at (304) 367-4269; hbaxter@fairmontstate.edu

- **SATURDAY, MARCH 24**
  - Campus Visitation Day
    - SciTech representatives are present to provide information about our programs and majors. Tours of Science and Technology facilities provided upon request. For high school students, their families and adults who are deciding where to continue their education.
    - Click on the “Visiting Fairmont State” link on the bottom left of our home page (www.fairmontstate.edu) or call (800) 641-5678, Ext. 2, or (304) 367-4892.

- **FRIDAY & SATURDAY, MARCH 23-24, 2007**
  - North Central West Virginia Regional Science, Energy, and Engineering Fair
    - Grades 6-12, Turley Center Ballroom
    - Contact: Marcie Rice at (304) 367-4269; scitech@fairmontstate.edu

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