BU WILL TURN to the darker side of health this year at the Health Sciences Symposium as it focuses on dying, death and end-of-life issues.

Daniel Davis, director of bioethics at the Geisinger Health System, will kick off the conference with his keynote speech, *Dying and Death: They Ain’t What They Used to Be*, on Thursday, April 23, at 6:30 p.m. in the Haas Center for the Arts, Mitrani Hall.

During his lecture, Davis will focus on end-of-life treatment and current definitions of dying, focusing on the radical transformation of medical processes that began in the 1950s, such as life-sustaining technology. He will identify the benefits, consequences and controversies associated with this new technology.

Davis will start the second day of the symposium by hosting the first Provost Lecture Series Workshop, Bioethics: An Open Forum, on Friday, April 24, at 9 a.m. in the Kehr Union Ballroom.

Also planned are professional presentations by BU faculty as well as two Bloomsburg University alumni, Henry J. Riordan ’89 and Gene G. Kinney ’84. From 1 p.m. until 2 p.m. in the Kehr Union Ballroom, Riordan and Kinney will present, From Bloomsburg to Biotech: A Primer and Guide to a Career in the Pharmaceutical Industry.

In conjunction with these sessions, the symposium will hold its annual Wellness Fair, where approximately 50 local and campus organizations will provide health information and health products from 9 a.m. until 2 p.m. in Kehr Union, Multipurpose Rooms A and B.

COMPUTER SCIENCE MAJORS Landan Cheruka, senior, and Brian Fekete and Daniel Pany, sophomores, took second place among 17 teams in a test of computer programming skills during the Pennsylvania Association of Computer and Information Science Educators (PACISE) 30th annual conference at Edinboro University.

Five students from BU’s Student Chapter of the Association for Computing Machinery (ACM), including seniors Jared Hallick and Aleks Hartzler, competed along with teams from seven of the universities in Pennsylvania’s State System of Higher Education.

BU’s Department of Mathematics, Computer Science, and Statistics is a member of PACISE, representing computer programs across the State System. The programming squad coach, Robert Montante, associate professor, represents BU at PACISE. He is also a member of ACM, an international professional organization of computer scientists and computer science educators.

AN ECOSYSTEM MANAGEMENT class taught by Amber Pitt, assistant professor of biological and allied health sciences, is creating an ecosystem management plan to help oversee a new property recently acquired and integrated into Kocher Park. Pitt’s students have been working with the Columbia County Conservation District, which manages Kocher Park, to create the plan.

Pitt describes an ecosystem management plan as a business plan for a property, mapping out the goals for its management and a specific strategy to achieve those goals.

“Creating an ecosystem management plan allows for the creation of well-thought-out goals and actions so that the actual management of the ecosystem can be as effective and efficient as possible,” says Pitt.

The new 52-acre property includes part of Fishing Creek, walking trails, a pavilion and a parking area. It also contains a portion of Stoney Brook, one of only two Exceptional Value, or highest possible quality, streams in Columbia County.

The management plan will be designed to ensure the protection and restoration of ecosystem function and integrity, and sustainable use of and access to the property for public recreation, community activities and educational opportunities. It aims to have the property ready for use this spring or summer. It will increase the size of the park and give river access, and includes the addition of bridges, trails and plantings.

The plan will be presented to the conservation district at the end of the semester.

By: Nick Cellucci ’16
Alumni Couple Establishes First Endowed Professorship

A GIFT OF $1.9 MILLION from Edward and Julianne Miller Breiner, who graduated from Bloomsburg University in 1977, establishes the university's first endowed professorship in support of an exceptional teacher, mentor and leader.

The couple looked to the needs of BU when determining the focus of their most recent gift and established the professorship within the Department of Nursing, specifically in support of BU’s Doctor of Nursing Practice. The Breiner Professorship of Nursing will create a new senior faculty position, with additional funding to be used for research, conferences, travel, software and equipment or other professional expenses.

“We talked with university officials about ways our gift could make BU a stronger university,” says Julie Breiner. “With the health profession, there is a potential to make a huge impact as far as healing and caring. Nursing really resonated with us.”

Impact is the reason the Breiners endowed the position. Ed Breiner has no difficulty naming faculty who challenged and motivated him during his BU student experience, including art professor Robert Koslosky, who, he says, “is at the top of that list.”

For Julie Breiner, it was another discipline. “I was challenged through all of my science courses and, because of that, I felt very well prepared for my internship,” she says.

The Breiners believe support for public and state-related universities is vital for ensuring students have outstanding educational opportunities and dedicated faculty.

Researching Intercellular Communication

WHAT STARTED with answering a flyer posted on a classrooms door ended up being a tremendous academic opportunity for Adam Kulp, a BU senior majoring in biology.

The flyer called for a student researcher to assist BU professors William Coleman and Jennifer Veditti. Their task: investigating the presence of a neural dominant protein, synapsin, to be present in sperm cells.

In order for a female egg to be fertilized, the sperm cells must first go through multiple functional states. In turn, the sperm cells have the potential to degrade the egg’s protective cell membrane and fertilize the egg. It was on the protein distribution across these multiple functional states that the team focused.

A specific family of proteins called synapsin are associated with communication between cells. Typically, they are only found in neurons. Coleman and Venditti hypothesized that these synapsin proteins would also be present in the sperm cells to assist in the communication between the sperm and the egg.

Using western blots and immunocytochemistry, the team was able to separate out the different proteins utilized in the sperm cell and identify synapsin’s presence. The team managed to find evidence of the protein in the equatorial segment of the sperm cell’s head.

After completing their research, Coleman, Venditti and Kulp traveled to Atlanta, Ga., to present their findings to the American Society of Andrology. They held a similar presentation at BU and will do the same for the Beta Beta Beta Beta National Biological Honor Society.

After completing his undergraduate, Kulp will be attending graduate school to complete his doctoral degree in biology.

“It was a great opportunity,” Kulp says about the project. He adds that working with Coleman and Venditti made his application stand out to programs at schools like New York University and Rensselaer Polytechnic Institute in Troy, N.Y.

By: Sean Williams ’15

Attracting STEM Transfer Students

A new program in the College of Science and Technology seeks to bring an increased number of transfer students to BU from the state’s community colleges. Developed by professors Toni Trumbo Bell, Curt Jones, Steven Rier, Michael Shepard and Peter Stine, this project is supported by a $35,000 Presidential Strategic Planning Grant.

The goal of the project is to increase the number of community college graduates holding associate’s degrees who choose Bloomsburg University to complete their Bachelor of Science degrees in STEM fields. The project also is aimed at improving the success of these transfer students by implementing new transfer student support programs. This programs targets the following programs:

- B.S. Biology - Environmental Biology
- B.S. and B.A. Chemistry-General
- B.S. Secondary Education-Chemistry
- B.S. Chemistry-Biochemistry
- B.S. Chemistry-Nanotechnology
- B.S. Chemistry-Pre-Medical Sciences
- B.S. Computer Science
- B.S. Digital Forensics
- B.S. Environmental, Geographical, and Geological Sciences-Environmental Geoscience
- B.S. Environmental, Geographical, and Geological Sciences-Professional Geology
- B.S. and B.A. Mathematics
- B.S. Physics
- B.S. Electronics Engineering Technology

This project will begin with HACC, Central Pennsylvania’s Community College, which delivers well-established associates degrees in related science disciplines. BU faculty will give guest lectures at HACC, provide professional development opportunities for faculty and students, and meet on a regular basis with HACC faculty to discuss how we can partner to ensure transfer students’ success.
Institute for Interactive Technologies

Faculty members Helmut Doll, Mary Nicholson and Karl Kapp are presenters for a Maker Faire workshop at the Online Learning Conference in Atlanta, Ga.. At the presentation, participants get hands-on experience creating small e-learning pieces that will be saved to a jump drive.

IIT’s twice-a-year Corporate Advisory Council Conference is scheduled for Wednesday through Friday, April 15 to 17. The conference includes student presentations and corporate presentations, as well as a day devoted to interviews, business meetings and education.

Nursing

Deb Sanders, assistant professor of nursing, recently presented her sabbatical research, Resilience and Self-Transcendence in Older Women, at the annual National Gerontologic Nurses Association meeting in San Antonio, Texas. This national association meeting encompasses nurses from across the United States who are involved in the care of older adults.

Kim Olszewski, assistant professor of nursing, recently gave a presentation, Occupational Health and Social Media: Guiding Employees Safely at the National Safety Council Congress and Expo in San Diego, Calif. Olszewski’s presentation provided suggestions on promoting wellness and healthier lifestyles for employees beyond the 40 hour work week. Guidelines and recommendations were offered on how businesses can educate and guide employees to use the Internet to find health information for their individual needs.

Assistant Professor Todd Hastings offered a poster and podium presentation at the 28th Annual Conference of the American Psychiatric Nurses Association held in Indianapolis, Ind. from Oct. 22 until Oct. 25, 2014. The poster presentation was created in collaboration with Barbara Buxton, a professor from the University of Scranton. The presentation, Clinical Supervision in Psychiatric Nursing, addressed the importance of consultation and support for nurse clinicians working with mental health patients. The podium presentation, Novel Education Strategies in Psychiatric Nursing Education, encompassed a nursing education focus, and discussed the creation and use of video case vignettes to engage students in problem-based learning.

Exercise Science

Professor of Exercise Science Swapan Mookerjee presented a paper, 02 Pulse During Single Set vs. Multiple-Set Resistance Exercise, at the European College of Sports Science Annual Congress in Amsterdam, Netherlands, in July 2014.

Digital Forensics

Phil Polstra, associate professor of digital forensics, delivered three presentations during the fall 2014 semester.

Polstra was one of only two speakers invited to give a four-hour workshop in the primary venue at the sixth iteration of the BruCON security conference in Ghent, Belgium on Sept. 25 and 26, 2014. His workshop was titled Autonomous Remote Hacking Drones.

On the weekend beginning Oct. 24, 2014, Polstra was one of four invited to speak at the 22nd annual PumpCon security conference in Philadelphia. His talk, Obligatory Drone Hacking Talk, centered on material from his recent book, Hacking and Penetration Testing with Low-Power Devices. The book presents methods of creating inexpensive, low-power devices for performing computer security penetration tests from distances up to a mile away by leveraging open source hardware and software.

On Oct. 29, 2014, Polstra presented a webinar, Bad USB – Why the USB Security System is Badly Broken, for the CISO Platform, an international organization dedicated to providing pertinent information to senior security executives.
Environmental, Geological and Geographical Science

Matthew Ricker, professor of geology and geosciences, wrote two papers that were published in the Soil Society of America Journal:


Anthony DiBiase won the student paper competition at the 2014 Pennsylvania Geographical Society meeting in State College:

Anthony DiBiase, Bloomsburg University of Pennsylvania, *A Geographical and Sociological Study of Parking Patterns in Bloomsburg, Pennsylvania*

Chemistry

Gregory Zimmerman, professor of Chemistry, recently published two papers:


Math/Computer Science


Biology

Amber Pitt and Bloomsburg University undergraduate students Marisa Buckle, Erick Wahlman, and Victoria DiTommo co-authored a natural history note entitled, “*Anaxyrus americanus* (American toad). Arboreal behavior” that was accepted for publication in the following:


Pitt also co-authored one paper with colleagues from Clemon University and another with a colleague from the University of Florida:


Sean Hartzell, an undergraduate student at BU, worked with biology professor Amber Pitt to write a natural history note that was recently published:


Exercise Science

Tim McConnell, professor of exercise science, recently co-authored a paper for the Journal of Religion and Health.