Maymester Science Classes

During Maymester there are two science classes being offered in the department.

The first class is “CSI Pittsburgh: The Science Behind the Scene” (FOR 200), taught by Dr. Corey Stilts. This is a popular class due to the CSI television series. Dr. Stilts’ class will include such topics as Crime Scene Analysis, Evidence types and collection, Blood Spatter, DNA Analysis, Forensics Photography, Impressions and Computer Forensics. In the photo above students collect data from a mock crime scene next to the Atrium of Buhl Science Building.

The second science class is “Human Cadaver Dissection” (BIO 205E), taught by Dr. T.J. Meehan. The cadaver lab at Chatham is used by undergraduates who have taken introductory anatomy and by four graduate programs: physical therapy, occupational therapy, masters in biology and physician assistant. After two years, the donated body is returned to the University of Pittsburgh for cremation; whole body donations for research and education can only be done by registering your wishes with a medical school. Please donate. All students find this experience so practical and valuable to their education in the health professions (or organismal biology). When the students aren’t dissecting, we study the anatomy: organs, muscles, bones, nerves, arteries, and veins. Our goal is for the students to be able to picture the anatomy in their head, so when they do clinical work, they can “see” what their patient would look like on the inside.

Dissecting is labor intensive, but endlessly fascinating to see genetic variations or pathologies. From past cadavers, students have witnessed the effects of lung cancer, emphysema, and an enormously enlarged heart.

Marldine Nganteh, sophomore Biochemistry major, was recently awarded the 2009 SURE/Research Experience for Undergraduates in Molecular Biosciences at the University of North Carolina at Chapel Hill. This NSF-funded Program will provide Marldine with an intensive summer research experience, scientific seminars, and numerous professional development activities to help prepare her for graduate school. Marldine will be working with Professor Vytas Bankaitis on phosphatidylinositol/phosphatidycholine transfer proteins (PITPs). His “laboratory is interested in the regulatory interfaces between novel lipid-mediated signal transduction pathways and important cellular functions.” We look forward to hearing about her research experience when she returns to campus in the fall.
Chatham’s SURP Students

Congratulations to Chatham’s 2009 awardees of the Summer Undergraduate Research Program (SURP). Chivone Chapman and Kimberly Kaplan received SURP awards to work on ion motion in gases with polyatomic species with Dr. Larry Viehland. Chivone is a sophomore pursuing a B.S. in Exercise Science. Kimberly is a sophomore pursuing a self designed major. Jenna Luek was awarded the 2009 Lorin Maazel-Rachel Carson Award for Environmental Field Studies. Jenna is a junior pursuing a B.S. in Chemistry and a minor in Environmental Studies. Jenna will be studying persistent organic pollutants in Antarctic air, water and ice samples. Her work is part of a larger study looking at Antarctic ice melt as a future source of old persistent pollutants to air and biota instead of being a sink for these chemicals as has been traditional. We look forward to hearing about their research during the Science Seminars in the Fall.

Chatham REU Students working at CMU and Pitt this summer

Shristi Kharel, junior Chemistry major, will be spending her summer doing research in the Department of Materials Science and Engineering at Carnegie Mellon University. Shristi will be working in the laboratory of Dr. Sridhar Seetharaman in the Center for Iron & Steelmaking Research. The focus of her summer research will be "Study of oxides formed on TRIP (transformation-induced plasticity) steel surface under different reheat furnace condition."

Sowmya Narayanan, junior Biochemistry and English major, will be continuing her summer research from last summer at University of Pittsburgh School of Medicine under the supervision of Dr. Olivera Finn and Dr. Pamela Beatty. She will be examining the relationship between MUC1, regulatory T cells and myeloid derived suppressor cells in a mouse model of pancreatic cancer to see if the expression of aberrant MUC1 is proportional to the numbers of these two immunosuppressive cell populations in the spleen.
Attention A&P or Microbiology students...Here’s $$ for you.

Pearson Higher Education, has announced their 2009 Allied Health Student Scholarship Contest. This year, two students will each receive a $1,250 scholarship award. This is a national search, but don’t let that prevent you from applying.

Students are eligible for the contest if they have taken Anatomy & Physiology or Microbiology courses since June 2007, or if they are enrolled to take one of these courses in the fall of 2009. Your professor’s signature on the application form is all that is needed to verify your eligibility. The application deadline is November 1, 2009.

In addition to the eligibility requirement and the completed application form, students must submit a 1-2 page typed response to one of the following two questions.

1. What is the most difficult topic that you have encountered in your Allied Health coursework? How did you overcome the challenge this topic presented? In 1-2 pages, describe the steps you took to overcome this difficulty and what made this topic clear to you.

2. What methods do you use to help maximize your study time? Please describe what (your professor, fellow student, media, or textbook) it was that most helped you study most effectively when you had limited time. How did it affect your interest in the subject as a result?

Applications will be judged on creativity, enthusiasm, focus, overall thoughtfulness, and practical value of your response. Two student entries will be selected to receive a $1,250 scholarship award, and all entries will be eligible for display on Pearson’s "Great Ideas!" website.

Additional information can be found on the Pearson website along with the 2008 awardees. A poster is on the first floor bulletin board. Let’s flood Pearson with applications from our Chatham Women.

Screening of A Sense of Wonder:
Celebrating the life of Rachel Carson

On Tuesday evening, March 31, Chatham University joined more than 150 cities across the nation as they hosted a screening of Kaiulani Lee’s A Sense of Wonder. The film portraying the life and work of Rachel Carson is based on the play by the same name that was written and performed by Kaiulani Lee. “Using many of Miss Carson’s own words, Kaiulani Lee embodies this extraordinary woman in a documentary-style film, which depicts Carson in the final year of her life. Struggling with cancer, Carson recounts with both humor and anger the attacks by the chemical industry, the government, and the press as she focuses her limited energy to get her message to Congress and the American people.” (www.asenseofwonderfilm.com)

A panel discussion followed featuring Joylette Portlock, PennFuture; Dave Cooper, Mountain Justice Summer; and Fiona Fisher, The Rachel Carson Homestead.

The event was sponsored by the Rachel Carson Institute and the Garden Club of Allegheny County and led by Dr. Nancy Gift.
Meet our newest postdoc:  
Dr. Yongbin Chang

Dr. Yongbin Chang graduated with a B. S. in Physics from National University of Defense Technology, China, followed by a M. S. from Institute of Plasma Physics, Chinese Academy of Science. Dr. Chang worked for many years at the Institute of Plasma Physics, doing research in the field of controlled thermonuclear fusion. He earned a Ph.D. in Physics from the University of North Texas. His recent research has focused on Chemical Physics during a post-doctoral fellowship at the University of British Columbia, Canada. Dr. Chang is very interested in doing research in Chemical Physics at Chatham University with Dr. Larry Viehland while improving his teaching skills. He has many years of experience using Mathematica and is very excited Chatham has just purchased this software. He is also fluent in Chinese. Please stop by his office in Buhl 111 and introduce yourself.

Chatham’s Science Scholarship News

Dr. Gary Marshall, just had a paper accepted for publication entitled “Estrogen Promotes Germ Cell and Seminiferous Tubule Development in the Baboon Fetal Testis” in Biology of Reproduction. Dr. Marshall performed most of the morphologic assessment and the morphometric analysis for the research presented in this paper that was co-authored with Eugene D. Albrecht, Malcolm V. Lane, Istvan Merchenthaler, David R. Simorangkir, Clifford R. Pohl, Tony M. Plant and Gerald J. Pepe.

Traveling to Baltimore, MD., Mary Beth Davison, anatomy / biology laboratory instructor, will be presenting a workshop at the Annual HAPS (Human Anatomy & Physiology Society) Conference. Her workshop, “Teaching Anatomy with DyKnow,” will include her classroom experiences while teaching undergraduate anatomy and graduate neuroanatomy during the recent 08-09 Fall and Spring semesters. Students were able to visualize structures in color, which differentiates structures more clearly for identification. The software enabled note-taking directly on the images without printing. The 2008 HP Technology for Teaching Award supplemented the university-supported tablet computers to ensure total class participation. This was especially necessary for the graduate students who must provide their own computers. Surveys administered at the end of the semester positively reflected the student’s perception of increased understanding of structures facilitated through the Dyknow developed homework and classroom exercises. The HAPS annual conference is attended by university, colleges and community college instructors who teach anatomy, physiology, neuroanatomy or health related subjects from all over the United States. This year’s conference is May 23-27th.
The American College of Sports Medicine (ACSM) and Chatham University are pleased to invite you to a very special event celebrating *Exercise is Medicine*™ (EIM), University, held on Chatham’s campus on Friday, May 8, 2009.

EIM is a program of the American College of Sports Medicine focused on connecting physicians and their patients in integrating exercise as part of their health care and treatment plans. The initiative is committed to the belief that exercise and physical activity are essential to the prevention and treatment of many diseases, and should be assessed as part of routine medical care. EIM calls on physicians to include exercise clearance and prescription or referral to a certified health and fitness professional as part of every patient’s office visit. You can learn more about the EIM initiative at www.exerciseismedicine.org.

This event at Chatham is part of a national call-to-action, bringing EIM into the University and college environment, bringing together regional and national University faculty, students and officials, ACSM leaders, local physicians and government officials. The goals of the conference are:

1. To provide Universities with an opportunity to learn what other Universities are doing to promote physical activity and its health benefits on their campus.
2. To introduce EIM to universities and provide them with an opportunity to become among the first educational institutions to make a commitment supporting EIM.
3. To provide universities with an opportunity to collaborate in supporting EIM on their campuses and in their local communities.
4. To open a dialog between Universities and public health officials on lifelong physical activity and EIM.

**Congratulations Dr. Carena Winters!**

On Thursday, April 23, 2009 Dr. Carena Winters was honored with the “Early Career Award” at University of Pittsburgh “School of Education’s 2009 Alumni and Student Leadership Awards Ceremony.” Dr. Winters joined Chatham in 2005 as Assistant Professor and Program Coordinator, Exercise Science and Director of the Student Wellness Initiative.

She was instrumental in organizing the *Exercise is Medicine* (EIM) event, mentioned above. She was recently quoted in the Post Gazette: “The upcoming event, ... is an opportunity to evaluate the role of institutions in promoting lifelong activity. Last year when we had the ACSM [American College of Sports Medicine] launch, I was reading about it [beforehand], agreed [on its need] and was passionate about what it involved.” She wanted to start the program at Chatham and got permission from the ACSM to use the EIM logo for T-shirts she distributed on campus. She also went to the ACSM conference and spoke with Robert Sallis, a physician at a Kaiser Permanente facility in California who was then president of ACSM, about her desire to spread the program on the Chatham campus. Dr. Sallis said, ’Hey, I like what you've done. ... I want this to spread.' That's how it came about to spread to the university level.
Final Science Seminar for Spring 2009

The last Science Seminar of the year took place on April 14th in Buhl Lecture Hall. We had two speakers, both from Chatham. Sara McMullen, a senior biochemistry major, spoke about her SURP research conducted last summer with Dr. Renee Falconer. Sara discussed two classes of compounds: polybrominated diphenyl ethers (PBDE's), which are used as flame retardants, and organo-chlorine (OC) pesticides. Specifically, Sara studied how effective various washing methods were at removing these compounds from stuffed animals. Sara recently presented this research at the American Chemical Society’s annual meeting in Salt Lake City, as shown in the photo.

Dr. Aaron Trout was the second speaker. He gave a brief introduction to the field of discrete differential geometry, an area of mathematical research focusing on finding discrete analogs to the concepts and theorems from classical differential geometry. Dr. Trout discussed the two main theorems he proved in his PhD thesis. The first is a discrete analog of the Bonnet-Myers theorem and bounds the diameter of positively curved combinatorial manifolds. The second is a rigidity result that corresponds to the classical Toponogov-Cheng sphere theorem.

Thanks to all the people who have supported this year's Science Seminars by attending the lectures.

Submitted by Dr. Aaron Trout

Upcoming Science Events/Dates:

May 1—University Day/ Buckets and Blossoms Day

May 5, 6, 7—Scholarship Festival 12:00—1:00 pm in PCW/Anderson Dining Room in Mellon

May 8—Exercise is Medicine: A Call to Universities
If you would like to attend this special event, please respond to freed@chatham.edu by Monday May 4th. Please direct questions to Dr. Carena Winters at cwinters@chatham.edu or 412-365-1143.

May 23—Commencement

Sept. 1—Next Newsletter publication  Have a great summer!!