Welcome Back—Spring Semester 2009

Welcome back for another exciting term of science at Chatham University. While you were away, we have made progress in searching for new faculty members to replace Dr. Mary Kostalos (who is retiring in May) and Dr. Roxanne Fisher. It is also likely that we will hire a new faculty member in biology to help deliver Anatomy and Physiology to students at Shadyside School of Nursing. We had 128 applications to consider—clearly many people would love to teach in the academic environment that we have here. The list of applicants has been narrowed, and we are in the process of determining who will be invited for on-campus interviews. As part of these interviews, each candidate will give a lecture on a research and/or teaching topic, so I hope each of you will come hear the talks and then give me your feedback.

Larry A Viehland,
Science Department Chair

Exercise Science Program at Chatham

The Exercise Science (EXS) program represents a new undergraduate major at Chatham. Previously housed within the graduate Health Sciences program, EXS found its new home this past fall in the Science Department. The EXS students are no strangers to Buhl Hall, as most of the pre-requisites for the major are science courses including biology, anatomy, physiology, chemistry, pre-calculus and physics. The major has grown rapidly since its inception and the first exercise science majors graduated in spring 2008.

Exercise science, as defined by the American College of Sports Medicine (ACSM), is the study of movement and its associated functional responses and adaptations. The field of exercise science includes an array of foci including disease prevention and/or management, health promotion and athletic performance enhancement. As the medical benefits of exercise continue to be revealed, exercise scientists will be instrumental in preventive medicine and wellness promotion.

The EXS major prepares students for professional careers in a variety of fields including exercise and fitness training, hospital-based and corporate wellness programming, cardiopulmonary rehabilitation, sports medicine, as well as preparation for graduate study in exercise physiology, medicine, physical therapy, and other health science professions.

There will be an informational session for those interested in joining Chatham’s first Exercise Science Club at noon on Wednesday, January 28 in the HHPL of the AFC.
Dr. Carena Winters is assistant professor of Science and program coordinator of the Exercise Science program at Chatham University. Dr. Winters has a primary appointment in the undergraduate exercise science program, where she teaches Introduction to Exercise Science, Sports Nutrition, Applied Exercise Physiology I and II, and Holistic Wellness. In addition, she teaches an online Master’s course in Wellness Physiology for Chatham’s College of Continuing and Professional Studies (CCPS).

Dr. Winters has been instrumental in designing the new exercise science major curriculum and has designed/developed a fully-functioning Health and Human Performance Laboratory (HHPL) on campus. This laboratory affords students the opportunity to apply principles of exercise physiology to their learning experience, providing a superior experience to the common observatory role of an undergraduate exercise science student. She is currently working on acquiring endorsement for the program, with future plans toward accreditation.

Dr. Winters serves as the director of the student wellness initiative and teaches holistic wellness as part of the general education curriculum. She is currently writing a foundation grant to assist in the development of the women’s wellness initiative and database entitled Supporting Wellness at Chatham (SWatCh). The SWatCh initiative involves providing individualized wellness prescriptions as well as the creation of a women’s health database. This information will assist in providing the most pertinent wellness programming for students as well as providing great research potential in the area of longitudinal documentation of women’s health. This database could be used for undergraduate student senior research projects (tutorials), graduate student research, and faculty research.

Dr. Winters comes to Chatham with a research background as a clinical/research coordinator and public educator on a number of NIH-funded projects in the area of behavioral modification weight loss, muscle metabolism, and physical activity epidemiology. In addition, Dr. Winters has coordinated the Pittsburgh-area center of a multi-center pharmaceutical-driven weight management trial. Her research areas of interest include substrate metabolism, physical activity epidemiology, exercise and obesity, and exercise in the prevention and management of chronic disease. Dr. Winters earned a PhD in Exercise Physiology and a Master’s in Public Health in Epidemiology from the University of Pittsburgh and is an ACSM Certified Clinical Exercise Specialist®.

Dr. Winters can be reached at cwintershart@chatham.edu or 412-365-1143.
Meet the Faculty: Science/Math Education

Dr. Barbara Biglan holds a B.S. in Multiple Science from Le Moyne College in Syracuse, NY, a M.Ed. from SUNY at Buffalo and a Ph.D in Science Education from the University of Pittsburgh. She has taught science and math at many levels: Middle and High School in New York State, Elementary School in Germany and West Virginia, College at the University of Pittsburgh, Duquesne University, and Point Park University in Pittsburgh, Marian College in Indianapolis, IN., and post-college at the University of Pittsburgh. Through the NSF sponsored Southwest PA Math Science Partnership, she teaches in-service math and science workshops to teachers from fifty-one regional school districts. Additionally, she has led seminars for Pittsburgh Teachers’ Institute as well as various public schools districts in the area. At Chatham, she teaches in both the science and education departments and supervises student teachers at the elementary and secondary levels. She is a member of NSTA, NCTM, NAAEE, NAEYC, ASCD and Pi Lambda Theta. Her hobbies include drawing and painting, traveling, biking in Europe and the USA, and spoiling grandchildren.

Dr. Martha Hildebrandt holds a B.S. in Mathematics from Wheaton College (IL) and an M.A. and Ph.D. in Mathematics Education from Northwestern University. She has taught math at all levels: as a Mathematics Consultant grades K-8 (Miami, Fl), middle school (Winnetka, IL), high school (Glenbrook, IL), college (Florida International University), and post-college (CMU). Through Carnegie Mellon’s Institute for Talented Elementary Students she currently teaches classes for gifted students as well as conducting all day In-Service Teacher workshops. Additionally, she has led seminars for Pittsburgh Teachers’ Institute as well as various public schools districts in the area. At Chatham she teaches in both the mathematics and education departments and supervises student teachers at the elementary and secondary levels. She is a member of NCTM, MAA, ASCD and Pi Lambda Theta. Her hobbies include growing orchids, skiing, doing needlepoint and cooking.

Dr. Christy Heid received B.S. degrees in both mathematics and physics from Westminster College (New Wilmington, PA); M.S. and Ph.D. degrees in physics from Lehigh University (Bethlehem, PA); and a M.A. degree in education from Ferris State University (Big Rapids, MI). She currently holds a join appointment between the Education and Science Department at Chatham as Associate Professor. She teaches courses in science education, physics, and math. She serves as a Higher-Ed Representative for the National Science Foundation-supported SW PA Math and Science Partnership. She has participated in and co-facilitated various MSP Teacher Leader Academies. Her prior professional experience includes the following positions: faculty member Calvin College (Grand Rapids, MI); High School Science Teacher (Asuncion, Paraguay); Senior Curriculum Specialist for Grand Rapids Area Pre-College Engineering Program (GRAPCEP) in Michigan; Principal Investigator of a federally funded grant to train over 90 secondary math and science teachers in Malawi, Africa and Outreach/Career Coordinator for the 2+2+2 Electro-Optics Program at Indiana University of Pennsylvania (IUP). She is a member of PSTA, NSTA, AAPT and APS. She enjoys gardening, baking and playing the flute at local churches and nursing homes.
Science Seminar Series

The final science seminar lecture of the Fall 2008 semester took place on December 3rd in the Beckwith auditorium. Dr. Partha Basu, an associate professor from Duquesne University’s Department of Chemistry and Biochemistry gave a talk titled "Arsenic in Chicken Feed: Vascular Activity and Biotransformation". In his presentation, Dr. Basu discussed roxarsone, an arsenic containing compound used to increase the weight of commercially grown chickens. Since arsenic is a toxic pollutant, there is a need to characterize the compound's effects on living organisms and to determine the eventual environmental fate of the arsenic. Specifically, Dr. Basu's research investigates the effects of arsenic compounds on blood vessel formation and the chemical mechanisms by which these compounds are processed by microorganisms.

Watch for dates of upcoming seminars this semester presented by candidates interviewing for the Biology positions in the department opening in Fall 2009.

Meet our newest Adjunct:

Dr. Stephen Fisher received his M.D. at the University of Illinois in 1966 when the tuition was only $100 per semester. He also received his B.S. at the University of Illinois from the college of liberal arts and science with a chemistry major. He has taught at UPMC, CCAC, LaRoche College, SUNY in Brooklyn, NY and Florida Atlantic University. He also has worked in private practice for 18 years in a medically underserved area of Pittsburgh. This is his first semester at Chatham. He is currently teaching Microbiology Laboratory (BIO 202) and Biochemistry, Cell & Molecular Biology Laboratory (BIO 440/CHM 340).

Second Nature,

by Deborah Hosking, MFA student
Dedicated to Dr. Roxanne Fisher

Second Nature, a video installation by MFA student Deborah Hosking, is on view at the Chatham campus greenhouse after 6:30 PM every evening through Thursday, January 15th. Visible from outside the greenhouse for several hours after darkness falls, the video images represent the seasons and elements of nature, the visual poetry of forces of nature and forces of man. There is no single meaning or intention, but like a poem or song, it is an effort to evoke rather than explain. The piece is dedicated to Dr. Roxanne Fisher.

Roxanne H. Fisher, Ph.D.
December 10, 1960—September 18, 2008
Chatham’s Summer Undergraduate Research Program

The Program: Chatham will conduct its eighth summer undergraduate research program (SURP) in 2009. This program will provide "hands on" research experience for students who are majoring in any discipline within the science department. Each student will spend at least ten weeks, beginning in May, working on a research project that is mutually satisfactory to her and a faculty member. In addition to performing research on a full-time basis, each student will participate in a regular seminar in which the faculty and students collectively try to overcome any difficulties. This program may help students get a jump start on their tutorial, but in any event it should provide considerable insight into how real research is conducted.

Eligibility Requirements and Selection Criteria: Students who have finished at least two courses within the science department are urged to apply. The selection criteria will include academic records (particularly grades in science courses) and recommendations by science faculty members. Formal recommendation letters are not required, but may be submitted if a student does not think the faculty members know her well enough. Current sophomores and juniors at Chatham University will be given preference.

Stipend: Stipends of $4,000 will be awarded to each student who completes at least ten weeks (400 hours) of full-time research.

Application Process: Interested students should submit a letter describing her interests, academic record and background in the sciences. The application should also indicate which faculty member she wishes to work with (it is best if she talks with this faculty member as soon as possible). This letter must be submitted electronically to viehland@chatham.edu by January 23, 2009. Students selected to participate in this program will be notified electronically in late February, 2009. Successful applicants will be given until March 15, 2009, to decide whether they will participate.

Questions: Contact Dr. Viehland as soon as possible.

Congratulations Dr. T.J. Meehan

Dr. TJ Meehan was honored with the excellence in teaching award from the doctor of physical therapy class of 2008 at their graduating hooching ceremony in December. He taught their gross anatomy course their first term at Chatham.

Congratulations Cate Babcanec !!

Cate Babcanec (who just graduated this fall with a BS in Biology) presented a poster based on her tutorial work at the Fourth Annual Symposium on Metals in Biology held at Duquesne University on December 5, 2008. The title of the poster was: Bioinformatics Approach to the Identification of Potential Sites of Interaction between HFE and TFR2.
Other Summer Research Opportunities

Many summer research opportunities are available for undergraduates. Some opportunities are located here in Pittsburgh such as at Magee-Women’s Research Institute and the University of Pittsburgh’s Human Engineering Research Laboratories. There are a wide variety of opportunities such as Marine Biology in Charleston, South Carolina, Neuroscience at West Virginia University, Nanotechnology, Quantum Chemistry, Research Science and Engineering at a variety of institutions, just to name a few. There are even international research experiences for undergraduates (IREU) available through the American Chemical Society. These opportunities usually range from 8 -11 weeks, are usually well-paid ($1500 - $4000), often include housing and may include partial travel reimbursements. Descriptions of these opportunities are available at the Science Department Newsletter website on Moodle: http://moodle.chatham.edu These are just a sample of opportunities that the department has received information about through mailings and should not be considered a complete listing of available opportunities.

Upcoming Events/Dates:

- **January 10**—Memorial Service for Dr. Dale Richey at 11:00 a.m. in the Mellon Board Room.

- **January 28**—Informational meeting for the Exercise Science Club at noon in the AFC

Dr. W. DALE RICHEY

The Chatham University community mourns the passing of Dr. Dale Richey, Emeritus Professor of Chemistry. He earned his BA from Hiram College in 1952 and his PhD from the University of Rochester in 1958. Dr. Richey taught at Chatham from 1963-1992 and influenced the lives and careers of many alumnae.

Chatham will host a memorial service for Dr. Richey on Saturday, January 10 at 11:00 a.m. in the Mellon Board Room. His life companion Barbara Campsie and son Lorn have asked that his friends and colleagues bring their memories and stories to share. Notes of sympathy may be sent to: Barbara Campsie, 5023 Bayard Street, Pittsburgh PA 15213

MISSION STATEMENT:

The undergraduate mission of the Science Department at Chatham University is to provide our undergraduate students with an excellent education that emphasizes hands-on experience, individualized instruction, interdisciplinary collaboration and undergraduate research, and that prepares them for professional work and graduate studies. The graduate mission of the Science Department at Chatham University is to provide our graduate students with the science courses and technical information that they will need in their allied health studies and future careers in biology. In accordance with the University mission, we will prepare students to be engaged, environmentally responsible, globally conscious, life-long learners and citizen leaders.