The Biology News 2005

Eberly College of Arts and Sciences

Skills and Expertise of Instructional Faculty Enhance Biology Curriculum

The Department of Biology is blessed with many capable scientists who have a positive impact on undergraduates each day, but receive little recognition and are not on the tenure track. They're called Lecturers and Visiting Professors. They teach, develop new teaching techniques, revise lab exercises, step in to handle added course sections, and fill in when tenured Professors take sabbaticals. With other faculty members busy with research and serving in a variety of ways around WVU, the efforts of Lecturers and Visiting Professors are critical to fulfilling the Department's teaching mission.

The tenure-track faculty certainly can't do the job without them. Many of the Department's fifteen tenured faculty members have administrative duties or other circumstances that restrict or preclude their availability for teaching.

Dr. Gerald Lang, John Weere, and Curt Peterson, all distinguished scientists, are high-level WVU administrators. Jerry, an ecologist at WVU since 1976, is Provost and Vice President for Academic Affairs. John, a microbiologist and a leading expert in fungal lipid biochemistry, is Vice President for Research. Curt, a plant physiologist, is Assistant Vice President for Research. Administrative duties keep these three out of the usual teaching mix.

Three others with administrative responsibilities still teach as much as time allows. Dr. Keith Garbutt, an award-winning teacher, directs the University's Honors Program. Dr. Cliff Bishop directs the dynamic, interdisciplinary Forensics Program. Dr. Jonathan Cumming, another award-winning teacher, chairs the Biology Department.

That leaves nine tenured faculty members who are not also administrators at the level of Chair, Director, or higher.

Of these nine, two have been on sabbatical this year and one is on a leave of absence. That leaves only six, plus six more on the tenure track but not yet tenured.

These twelve tenure-track faculty members are expected to obtain extramural funding, conduct research programs, and publish articles in peer-reviewed journals. There is no way they could accomplish this without a lot of help teaching. After all, Biology has over 700 majors and pre-majors, including 150 in Forensics with an emphasis in Biology. Some introductory Biology courses have over 1000 students each. WVU's overall enrollment, now around 24,500, is increasing and expected to reach 30,000 within a few years.

Enter Lecturers Kim Bjorgo, Jane Caldwell, Cathy Merowich, Sue Rayman, and Beth Thomas, Visiting Associate Professor Sue Studlar, and Visiting Assistant Professors Kevin Lee and Linda Vorta-Davis. Some of these non-tenure-track biologists actively pursue research interests and participate at professional meetings, but when they're "on the clock" in the Life Sciences Building, they concentrate on teaching.

Early 1980s alumni and alumnae may have been classmates of Visiting Assistant Professor Linda Vorta-Davis. Linda took several WVU Biology courses while earning an M.S. in 1982 and a Ph.D. in 1986. Her main office is at the WVU Department of Surgery, where she is an Adjunct Associate Professor who studies cancer and sepsis. Her duties with Biology include teaching animal physiology and coordinating the Health Careers Opportunity Program.

Students considering careers in health sometimes take courses taught by Visiting Assistant Professor Kevin Lee. Kevin, who earned a Ph.D. from Temple, likes to provide context for his technical course material by touching on its social and policy implications. He teaches three upper level courses dealing with virology and cell and molecular biology.

Visiting Associate Professor Susan Studlar teaches three upper level courses.
Garbutt, Merovich Named Education Fellows in the Life Sciences

The National Academies, an organization that includes the National Academy of Sciences, named Dr. Keith Garbutt and Catherine Merovich National Academies Education Fellows in the Life Sciences for the 2004-2005 academic year. Keith is an Ebby Family Professor and Director of WVU's Honors Program. Cathy is a Lecturer in the Department of Biology. Selection as Education Fellows is competitive, based initially on proposals for improving undergraduate biology education. Keith, Cathy, and other successful candidates participated in a four-day Summer Institute held in August 2004 at the University of Wisconsin (Madison). Teams from twenty research universities developed ways to help students in large, introductory courses become active participants in their classes. Teams devised educational units to accomplish this. Then they left Madison with commitments to teach units developed by other teams, and to hold seminars to share what they had learned.

Keith and Cathy felt fortunate and honored to attend the Summer Institute, which Cathy called a "wonderful forum." They are two of the year's thirty-nine Education Fellows in the Life Sciences from across the country. Cathy, a young Lecturer completing her doctorate, welcomed the opportunity to swap ideas with more experienced teachers. The Institute led to teaching changes that have helped Cathy's students, who "seem to appreciate active learning rather than a straight lecture." As Keith, former Biology Department Chair and a faculty member since 1987, noted, "It is quite fun to teach a module that another group developed."

The commitment Keith and Cathy share for improving the quality of undergraduate education was no secret at WVU, but now their efforts have been recognized nationally. This was the first year for what is expected to become an annual program of the National Academies.

Flores Named Outstanding Teacher

Dr. Jorge Flores, Associate Professor of Biology, is an Ebby College of Arts and Sciences Outstanding Teacher and winner of a WVU Foundation Award for Outstanding Teaching. Both honors were announced in April 2005.

The awards recognized Jorge's fine work teaching Biology 793, "The Cell Matrix," and Biology 441, "Vertebrate Microanatomy," courses popular with graduate students and pre-med undergraduates. Enrollment in Biology 441, a demanding 5-credit-hour lab course, is particularly high for such a rigorous and challenging course.

Jorge urges his students to tackle problems critically. Motivated students have responded with enthusiasm, as shown by their exceptional evaluations of his courses. Students have praised Jorge's teaching with such positive comments as "I really appreciated this integrative approach to learning" and "This is the best course I have taken in the Biology Department, maybe at the University."

Such accolades are partly a result of the efforts Jorge makes to develop his courses and to provide resources beyond the usual lectures and handouts. His preparation and other efforts provide solid, positive experiences that serve students well as they proceed with their studies in medicine and biology.
EXCELLENCE IN TEACHING page 2

Professors Gail Adams, Laura Brady, and Elizabeth Fones-Wolf personify the college's primary mission.
Vince Lombardi, the legendary coach of the Green Bay Packers, once famously remarked, “Winning isn’t everything, it’s the only thing.” To countless teachers in the Eberly College, this belief resonates throughout their teaching philosophies – translating into “Learning isn’t everything, it’s the only thing.”

Recently, the Eberly College was proud to recognize four faculty members with its annual Outstanding Teacher Award. Jorge Flores (Biology), Aaron Gale (Religious Studies), Earl Scime (Physics), and Steve Zdatny (History) demonstrate a passion for teaching and an ability to connect with their students in a special way.
Associate Professor of Biology Jorge Flores understands the common link that brings him and his students together. He motivates students and nurtures their interest by showing them how seemingly unrelated lecture topics broaden their understanding of contemporary issues in biology and science.

"Dr. Flores is without a doubt one of the most passionate educators I have known. He approaches his subject with a zeal that sweeps students up in it and encourages them to look deeper. He broaches difficult topics in ways that make them approachable without sacrificing detail," wrote a student in nominating Flores for the award.

Since joining the WVU faculty in 1994, Flores has developed a variety of courses, through which nearly 2,500 students have had thoughtfully orchestrated opportunities to gain relevant information in their field. The courses have ranged from large enrollment survey courses to extremely specialized graduate level courses.

When Assistant Professor (now Coordinator) Aaron Gale came to WVU in 2000, the Program for Religious Studies was in a state of shock, following the sudden death of long-time Chair Manfred Metzten. Only two students were completing a religious studies major. Gale was hired as a temporary visiting assistant professor to teach History of Christian Thought and Introduction to the Old Testament. Since that first day as a temporary teacher, Gale has exhibited a passion for teaching.

"Dr. Gale by far is the best professor I've had at this University. This is the third time I've taken one of his classes and he is always a joy. He is prepared, funny, and very enthusiastic about his class. He's truly a joy to have in class. He challenged my beliefs in a positive manner," wrote a student on a course evaluation.

Since Gale's arrival, much has changed in the Program for Religious Studies, currently more than 20 students are majoring in religious studies, the highest number in the history of the program. There are new courses, a new focus on world religions, new websites, and new hope. Because of Gale's energy, vision, and passion, WVU's Program for Religious Studies is equipped to handle any challenge that the future may hold. He continues to break ground and move the curriculum into the twenty-first century.

Chair and Associate Professor Earl Scime's teaching career began while he was in high school. As a high school student he actually taught in a classroom. His high school lost its only qualified calculus teacher when his advanced placement (AP) calculus instructor moved to an administrative position during his senior year. The teacher asked Scime to teach the course to other students -- and to himself, at the same time.

"I knew then that I would be a physicist and that I would teach," said Scime. "It was never a matter of whether I would teach, anymore than it was a matter of whether I would be a physicist. Every night, I would read ahead in the text and the next day I would teach the material to my classmates. I quickly learned how ineffective the textbook was at conveying complex ideas and that I had a talent for teaching such ideas to my classmates."

Teaching is much more than memorizing facts, figures, and techniques. Scime's objective is to guide students into habits of critical thinking. He believes that experience is the best teacher, and that is why he engages students in research throughout their education. For some students, this is a relatively painless exercise. For others, the leap from equations in a book to understanding and solving real problems is enormous.

Associate Professor Steve Zldatsy believes that while he cannot always make students curious, he can keep them engaged in the learning process. Many student evaluations attest to his passion as a teacher. He begins each course by conveying the belief that education is not amusing; instead, he wants the students to understand that he expects them to work, even as he strives to make that work as rewarding as possible.

"Dr. Zldatsy's greatest talent as a teacher is his ability to make his students think. He does not tell students what he expects them to say, write, or do in class; he fosters an environment that allows his students to offer and discuss their own ideas. His classroom is always open and all students are encouraged to develop their own ideas and to share them without fear of ridicule or being wrong," wrote a student in nominating Zldatsy for this award.

Zldatsy discovered early in his career that the process of explaining history to other people helped him understand it better. For him, a powerful synergy links teaching to research. The thirst for knowledge that bonds teacher to student radiates through his class, as it does throughout the Eberly College. These four teachers demonstrate that learning is not a spectator sport and that they are not only coaches but also team captains on the field of academic competition.