Five named Liberal Arts and Sciences Master Teachers for 2009-10

AMES, Iowa -- Five faculty members in the College of Liberal Arts and Sciences at Iowa State University were named Master Teachers for 2009-10. The LAS Master Teachers are Shu-Hui (Susan) Chang, director of distance education and senior lecturer in computer science; Tom Greenbowe, professor of chemistry; Madeleine Henry, professor in world languages and cultures; Lee Honeycutt, associate professor of English; and Fritz Keinert, associate professor of mathematics. This is the 11th year of the Liberal Arts and Sciences Master Teacher program, which recognizes teachers who have a reputation for using unique methods to enhance student learning. This year’s award recognizes individuals who have successfully enhanced teaching and learning in their courses through the effective use of technology, particularly novel technology. Previous Master Teacher themes have focused on experiential learning or off-campus learning opportunities, large lecture classrooms, undergraduate research and multicultural teaching activities. The five Master Teachers will share their innovative teaching methods in a teaching seminar during the academic year. The honorees include:

Shu-Hui (Susan) Chang, director of distance education and senior lecturer in computer science. Chang gained an in-depth expertise in novel learning technologies and their effectiveness during her Ph.D. study, and published her paper in a top-tier journal. She developed extensive experience teaching a very large online course (Com S 103) with approximately 1,000 students and maintained a high student satisfaction rate each semester at ISU for more than five years. She received two international awards: Blackboard Greenhouse Exemplary Course Program Awards in 2007 and 2008. She also received the College of Liberal Arts and Sciences Excellence in Undergraduate Introductory Teaching Award in 2008. Com S 103 covers knowledge units of modern computers and software, and their impacts on society, ethical issues, and applications. Such a course provides important skills to students that help them succeed in life and in their majors. Chang designed and taught the entirely online Com S 201 (COBOL Programming) and was also instrumental in the conversion of Com S 107 (Visual Basic Programming) from a face-to-face course to a web-based version under her charge as Director of Distance Learning in the department. She has used
innovative technologies, employing emerging pedagogies such as on-demand and active learning, and devised effective teaching methodologies to make these courses successful on campus. The technologies and methodologies facilitate student learning, student-to-instructor interaction, and student-to-student interaction by creating small communities where students share their experiences.

Tom Greenbowe, professor in the department of chemistry. As one of the foremost chemical educators in the world, some of Greenbowe’s research activities involve using technology in the chemistry department’s large, general chemistry courses to help foster student understanding of fundamental chemical principles. Greenbowe has focused his research and development activities on several important areas including the visualization of molecular and atomic phenomena, and the use of inquiry strategies in instruction. His professional contributions have had tremendous positive impact nationally and internationally. Specifically he has looked at the use of computer-based animation in helping students understand chemistry concepts, and the use of the “science writing heuristic” as an instructional strategy for laboratory. Greenbowe has been successful in obtaining funding for these and other projects and has received over $3.5 million from various agencies to support the effort of his research group. His published research work dealing with the use of computers, animations, and simulations in the classroom has been an important inspiration to other researchers and practitioners. Greenbowe was named Iowa Professor of the Year in 2008.

Madeleine Henry, professor in the department of world languages and cultures. Henry created and launched an innovative online first-year Latin course sequence (Latin 101 and 102), which is offered face-to-face, online on campus, and via distance education. She received the Iowa Distance Learning Association’s Points of Presence Award for 2007 in recognition of the significant contribution that online Latin has made to distance learning. Henry has also developed “Technical Terminology for the Professions” (Classical Studies 201x) in collaboration with Dr. Julio Rodriquez. These projects reflect an ideal collaboration of the humanities and technology by synthesizing outstanding instructional design in the liberal arts with technology, while fulfilling the land-grant mission of ISU through outreach to new publics beyond the campus. The instructional design of Henry’s courses
combines accessibility, academic rigor, and student/learner engagement. These courses provide interactive learning environments that make Latin and Classical Studies content accessible to students in Iowa and across the nation.

Lee Honeycutt, associate professor in the department of English. Honeycutt is a central figure in developing the technological component of the English Department’s undergraduate and graduate programs. At the undergraduate level, he has taught four technology courses and has served on the department’s Technical Communication Undergraduate Curriculum Committee, which developed the department’s Bachelor of Science degree in Technical Communications. At the graduate level, he has taught three technology courses and is a strong advocate for infusing technology theory and practice in curricular revisions in the Master’s program in Rhetoric, Composition, and Professional Communication (RPCP). In committees, Lee has provided a technology focus to help students critically think in new ways about technological theory and practice. For almost every major technological decision in the department, Honeycutt is either at that helm of the decision-making process or serves as a consultant.

Fritz Keinert, associate professor in the department of mathematics. Keinert led and implemented a redesign of Mathematics 150 (Discrete Mathematics for Business and Social Sciences) with a Web-based, self-paced model. The Web-based environment integrates WebCT as learning management software, Maple TA as an online testing program, and a textbook as the content basis. The redesigned course includes weekly small recitation sections, additional office hours, availability of the Math Help Room, and peer-mentoring through study groups and Supplemental Instruction. Additional student support includes Web-based feedback through online office hours, a Web-bulletin board for each class, and Web-published individual current scores and class standing. The Research Institute for Studies in Education (RISE) assessed the course redesign and found that students in the Web-based sections performed no worse, and usually performed better, than did classroom-based students. Keinert transformed Math 150 into an online course that demonstrably improves student outcomes measured in terms of learning.

- College of Liberal Arts and Sciences
  - Iowa State University