

## **2002 Romeo L. Moruzzi Young Faculty Award for Innovation in Undergraduate Education Recipient**

**Dr. Ross D. Shonat**

The Moruzzi Young Faculty Award is presented in memory of Romeo L. Moruzzi, a dedicated professor and founder of the WPI plan. WPI is pleased to present the 2002 Moruzzi Young Faculty Award for Innovation in Undergraduate Education to Professor Ross Shonat of the Department of Biomedical Engineering.



Professor Shonat is being recognized for his development of BE3110, Experimental Physiology for Engineers. This course was wholly conceived and created by Prof. Shonat after his arrival at WPI in 1998. While WPI offers many laboratory courses, this one is innovative because it combines traditional textbook material with computer simulations, sophisticated data acquisition systems, and hands-on experiments using animals. In addition, it addresses important ethical issues of animal use and teaches engineering students to document and analyze laboratory experiments. Because each student participates in all surgical and laboratory procedures, and because the biomedical engineering student is truly placed at the exciting intersection of biology and engineering, the course is unique among biomedical engineering programs.

Positive responses have come from both former students and their employers. Students have noted how Prof. Shonat effectively "tricked" them by gradually introducing new surgical and laboratory procedures over the term, with the final laboratory having a level of complexity equivalent to that at most animal research facilities or veterinary hospitals. Even students who never really became comfortable working with animals have commented that this course was their favorite at WPI. An employer of a summer intern who had taken Prof. Shonat's course made these comments: "His education at WPI has given him knowledge in the medical device engineering process and (in) physiology that appears unique...Especially encouraging was his knowledge of the underlying principles of documenting lab experiments and his willingness to closely record all of his experiments."

Recognition by former students of a job well done, and by their employers of excellent career preparation, testifies to the success of Prof. Shonat's efforts to integrate "theory and practice". The development and teaching of such a sophisticated hands-on experience are enormously labor-intensive, and require dedication, vision, and an advanced understanding of how to motivate learning.

WPI is proud to recognize the creative teaching of Professor Ross Shonat by presenting him with the 2002 Moruzzi Young Faculty Award for Innovation in Undergraduate Education.