

Garth Ghearing

Lecturer in Engineering Technology (Mechatronics)

ph (423) 439-7825 ♦ 111A Wilson-Wallis Hall, East Tennessee State University ♦ ghearingg@etsu.edu

Degree Information

- M.S., Engineering Technology (August 2008)
Thesis: "ETSU GearUp: The design and development of an alternative energy greenhouse."
East Tennessee State University, Johnson City, TN
- B.S., Electrical Engineering Technology (December 2006)
East Tennessee State University, Johnson City, TN
- A.A.S., Electrical/Electronic Engineering Technology (May 2003)
Chattanooga State Technical Community College, Chattanooga, TN

Academic Work History

- Lecturer, Engineering Technology (August 2011 – present)
East Tennessee State University, Johnson City, TN
- Full-Time Adjunct Professor, Engineering Technology (August 2008 – August 2011)
East Tennessee State University, Johnson City, TN
- Graduate Teaching Assistant/Research Assistant/Full Scholarship (January 2007-August 2008)
East Tennessee State University, Johnson City, TN

Industrial Work History

- Energy Assessment Auditor (intermittent contract work)
University of Tennessee Center for Industrial Services, Knoxville, TN (June 2010 – present)
- Energy Assessment Auditor and Trainer
Industrial Assessment Center at ETSU, Johnson City, TN (January 2007 – present)

Classes Taught / Developed

- ENTC 1510 Student in University
- ENTC 2170 Computer Aided Drafting and Design
- ENTC 2310 Electrical Principles
- ENTC 2320 Electronics I
- ENTC 2510 (formerly 4287/5287) Introduction to Robotics
- ENTC 3020 Technology and Society
- ENTC 3030 Technical Communication
- ENTC 4017/5017 Industrial Supervision
- ENTC 4037/5037 Quality Assurance
- ENTC 4237/5237 Ergonomics and Process Optimization
- ENTC 4517/5517 Industrial Automation and Robotics (Developed Fall of 2010)
- ENTC 4900 Industrial Efficiency (Developed Spring of 2012)
- ENTC 5900 Advanced Automation (Developed Spring of 2012)
- ENTC 5900 Real-time 3D Tracking for Animation (Developed Spring of 2012)
- ENTC 5900 Precision in Hard Automation (Developed Fall of 2011)
- ENTC 5900 Advanced Mechatronics (Developed Spring of 2011)
- ENTC 4957/5957 Introduction to Mechatronics (Developed Spring of 2012)

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Selected Publications / Presentations / Research

- Hemphill, W.H., Ghearing, G.R. Workshop. "STEM Engagement: Designing & building electric guitars." 25th Annual Arts Education Conference. Millennium Centre, Johnson City, Tennessee, 14 Nov. 2011
- Ghearing, G.R., Hemphill, W.H. Presentation. "ETSU Automation and Manufacturing Projects: Mechatronics Applications." Siemens Lunch and Learn. Siemens Industry, Johnson City, Tennessee, 13 March 2012
- Designed and developed an automation laboratory including a retrofitted automated storage/retrieval system, programmable logic controllers, robotics, and other equipment, Fall 2010
 - Funded by 2010 ETSU Instructional Development Grant, \$4200

Selected Service

- Served on three M.S. thesis committees (2011-2012)
- Served on an honors thesis committee (2012)
- Academic Performance Scholar Supervisor (2012)
- Faculty advisor for ETSU chapter of the Society for Manufacturing Engineers (2010-present)
- Faculty advisor for ETSU Robotics Club (2010-present)
- Faculty liaison for future Siemens Automation Testing Laboratory at ETSU (2010-present)
- Assisted in presenting the ETSU Spring Break Faculty Guitar Building Workshop (2011-2012)
- Served on Course Alignment Matrix (Teamwork) Assessment Task Force, ETSU College of Business and Technology (Spring 2012)
- Developed and presented robotics workshop for children ages 11-15 at the first annual ETSU Office of Professional Development's Science & Engineering Camp (July 2012)
- Working with the Department of Energy's East Tennessee State University Industrial Assessment Center to train students to develop process modifications for area manufacturers in order to reduce costs and energy usage (2007-present)
- Working with the Department of Education's Gaining Early Awareness and Readiness for Undergraduate Programs to design and develop educational programs for area school children (2007-present)
- Judge at the Upper East Tennessee Regional Technology Student Association Conference (2009-2012)
- Judge at the Upper East Tennessee Regional Science Olympiad (2011-2012)
- Mentor for Science Hill High School Robotics Team (2012)
- Appointed as an affiliate member of the graduate faculty of ETSU (2010)