



### Center Information

The Maintenance and Reliability Center  
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Inquiries concerning Title IX, Section 504, and the Americans with Disabilities Act of 1990 should be directed to the Office of Equity and Diversity; 1840 Melrose Avenue; The University of Tennessee; Knoxville, Tennessee 37996-0144; (865) 974-2498. Charges of violation of the above policy also should be directed to the Office of Equity and Diversity.

THE UNIVERSITY of TENNESSEE



#### College of Engineering

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# maintenance and reliability center



## A Message from the Director

We appreciate your interest in the Maintenance and Reliability Center (MRC). Established by the University of Tennessee in 1996, the center is a unique industry/academia partnership dedicated to improving productivity, efficiency, safety and profitability through the development of advanced maintenance and reliability technologies and management principles.

The MRC creates comprehensive programs of education, research and information sharing opportunities for students, faculty and industry professionals and is a valuable partner and resource, leading the way in today's improvements and tomorrow's best practices and technologies.

For more information about the MRC, please visit our web site at [www.engr.utk.edu/mrc](http://www.engr.utk.edu/mrc), call us at (865) 974-9625 or contact us by e-mail at [mrc@utk.edu](mailto:mrc@utk.edu). If you are in the area, please call to arrange a visit. We look forward to hearing from you.

Sincerely,  
Tom Byerley, MRC Director

## Areas of Expertise

The MRC deals with all aspects of maintenance and reliability including physical asset management; equipment reliability; predictive maintenance; and machinery condition monitoring technologies such as vibration analysis, airborne ultrasonics, infrared thermal imaging, motor testing and oil analysis. The MRC also focuses on maintenance and reliability strategies and techniques such as root cause analysis, reliability centered maintenance, operator based maintenance, Computerized Maintenance Management Systems (CMMS) and enterprise asset management.



The MRC is dedicated to becoming the premier source of qualified maintenance and reliability personnel, knowledge, and research by:

- Developing both students and faculty who are sought after for their expertise
- Sponsoring conferences and education initiatives that provide the highest quality source of best practices information
- Conducting research that generates effective, applicable solutions when implemented

## Programs and Initiatives

The MRC carries on several programs in four primary areas:

**Education**—The MRC, in conjunction with the College of Engineering, offers a wide spectrum of educational opportunities, both formal and informal.



The COE's Undergraduate Certificate can be earned while completing a traditional on-campus engineering BS degree.

Several unique off-campus (distance education) graduate programs offer both Graduate Certificate and Master's Degree programs.

The Graduate Certificate in Maintenance and Reliability Engineering is administered through UT's Graduate and International Admissions School: [www.anywhere.Tennessee.edu/de/tech](http://www.anywhere.Tennessee.edu/de/tech).

A Master's Degree in Reliability and Maintainability will be offered by the COE starting in 2006. This program will be administered through UT's Graduate and International Admissions School: [www.anywhere.Tennessee.edu/de/tech](http://www.anywhere.Tennessee.edu/de/tech).

In partnership with Monash University, Australia's largest university, the MRC provides distance-learning programs leading to a Master's Certificate in Maintenance Management and a Master's Certificate in Reliability Engineering. An M.S. degree in Maintenance Management and Reliability Engineering, and a Graduate Diploma in Maintenance Management is also available through the Monash program: [www.engr.utk.edu/mrc/dislear.htm](http://www.engr.utk.edu/mrc/dislear.htm).

Additionally, several short courses and seminars are available on demand in the Knoxville area or on company sites. For more information, contact the MRC at [mrc@utk.edu](mailto:mrc@utk.edu).

**Research and Technology Assessment**—The MRC conducts research and technology assessment projects recommended by its industrial affiliates and supported by its members and/or third party funding. Faculty and students conduct projects utilizing laboratories and other resources at the University of Tennessee and national research facilities such as the Oak Ridge National Laboratory (ORNL).

**Information Sharing**—The MRC holds regular meetings for its member companies to share "best practices" and other information. The Center also sponsors MARCON (Maintenance And Reliability CONference), an annual public forum for nationally and internationally recognized specialists to exchange information on new methods and practical applications of advanced techniques in the maintenance and reliability field. The MRC publishes a quarterly newsletter highlighting current developments in the field of maintenance and reliability, and promotes papers and presentations by faculty and affiliates associated with the Center.

**Business Support and Alliances**—The MRC seeks to support businesses and build alliances among member companies, partnering institutions and the university. The center provides meeting and networking opportunities, facilitates various technical activities, provides introduction into other parts of the university and larger community and offers other appropriate support functions.



## Center Resources

In addition to a small administrative staff, the MRC draws on faculty from all departments within the UT College of Engineering, plus professionals from member companies and affiliates as needed. This capability provides the MRC with a significant number of resources with very diverse interests available to lead or respond to almost any opportunity that arises.