Dr. Curtis O'Malley

Assistant Prof. of Mechanical Engineering
New Mexico Institute of Mining and Technology
Email: curtis.omalley@nmt.edu **Cell: 443-807-2379**

a) Professional Preparation

Drexel University, Philadelphia, PA	Civil Engineering	B.S.	2005
Drexel University, Philadelphia, PA	Architectural Engineering	B.S.	2005
Georgia Institute of Technology, Atlanta, GA	Civil Engineering	M.S.	2007
Georgia Institute of Technology, Atlanta, GA	Civil Engineering	Ph.D.	2011

b) Appointments

New Mexico Institute of Mining & Technology, Socorro, NM
- 2016-Present Assistant Professor, Mechanical Engineering Department
- 2015-2016 Research Faculty, Mechanical Engineering Department
- 2012-2016 Adjunct Professor, Mechanical Engineering Department
- 2012 Post Doc, Mechanical Engineering Department

Central New Mexico Community College, Albuquerque, NM
- 2011-2013 Part-time Instructor

US Army Aberdeen Testing Center, Aberdeen, MD
- 2003-2005 Engineering Intern

c) Teaching highlights

2018 SGA Faculty Appreciation Award – Selected by the student body as the faculty member that helped and positively influenced the most students on campus.

Awarded and completed a NM Space Grant Consortium Grant to develop and implement a new first-year introduction to mechanical engineering design course. The objective is to set up students for success by introducing key topics within engineering (coding, analysis, design, drafting, etc) as well as bringing in industry representatives to discuss career paths.

Our Junior/Senior Design Clinic class is a four-semester project-oriented capstone experience that includes heavy communication emphasis with a linked technical writing course. On average I advise two teams a year on how to interact with their sponsor, identify problems and work toward solutions, as well as maintain a strong team working dynamic. Additionally I teach the first two semesters of the junior design clinic courses, overseeing the work of all 21 of our teams.

d) Products

Senior Design Projects Advised: (Team Name – Primary Task)

SAE Baja – Design build and race a Baja off road vehicle
NMT Model Airplane Team – Design build and fly a plane for AIAA competition

Test Shelter Team – Design a mobile and collapsible vehicle shelter for US Navy center at China Lake
Sandia National Labs Modal Energy Team – Test energy dissipation
Sandia National Labs Test Article Team - Collect transportation vibration measurements
Sandia National Labs Vibration Mechanism Team – Design and build a vibration test article
Wind Turbine Design Project – Design a turbine to generate electricity from an attic exhaust vent

Refereed Journal Articles:
Wang, N., O'Malley, C., Ellingwood, B. and Zureick, A. (2011). "Bridge Rating Using System Reliability Assessment I: Assessment and Verification by Load Testing." *J. Bridge Engrg*. ASCE 16(6):854-862.

Pier Reviewed Conference Proceedings:
Garcia, J., Norway, A., DuPriest, V., O'Malley, C., (2019). "Application of Engineering Design in the Introduction to Mechanical Engineering Curriculum." 2019 ASEE Annual Conference (under final review).

Published Reports:
Misla, A., O'Malley, C. (2018). "Modal Analysis of a Brake-Ruess Beam and Computational Modeling at the Undergraduate Level." *IMAC* XXXVI/Vol. 9/Paper 36i-276.

O'Malley, C. Yuan, G. Deswood, D. (2015). "Farmington-Thoreau Railroad Study." NM Economic Development Department.

Zureick, A. Ellingwood, B. Kim, S. Bechtel, A. O'Malley, C. Shah, F. and Krapf, C. (2012). "Bridge Repair and Strengthening Study, Part I," Draft report, Georgia Department of Transportation.

Ellingwood, R. Zureick, A., Wang, N., O'Malley, C. (2009). "Condition Assessment of Existing Bridge Structures, Task 4 - Development of Guidelines for Condition Assessment, Evaluation and Rating of Bridges in Georgia." Georgia Department of Transportation Project RP 05-01," (ftp://ftp.dot.state.ga.us/DOTFTP/Anonymous-Public/Research_Projects/)