

OET 007– STATICS

Credit Hour Recommendation: 3 Semester Hours
Pre-Requisite: General Physics I (OSC014) or College Algebra/Trigonometry (TMM001/003) or Precalculus (TMM002)
Related TAG: Mechanical/Manufacturing Engineering Technology
General Course Description: Non-calculus based study of forces and force systems on rigid bodies at rest by analytical methods. Topics include forces, moments, equilibrium, centroids and moments of inertia. Applications include beams, trusses, and machine components. Learning outcomes are achieved through various in class and laboratory experiences.
Student learning outcomes marked with an asterisk (*) are essential and must be met.
1. Break force vectors into component and combine forces into a resultant.*
2. Determine moments and couples.*
3. Evaluate systems in force and moment static equilibrium.*
4. Determine forces on members in a truss, frame, and pulley.*
5. Apply friction laws to direction, wedges, belt, disk, and incline.*
6. Determine the centroid of areas.*
7. Determine moments of inertia.*
8. Analyze forces, unit vectors, and components in 3-D.

**MECHANICAL/MANUFACTURING ENGINEERING TECHNOLOGY TAG:
STATICS
FACULTY PARTICIPANTS
August-September 2016**

Name	Institution
Dan Burklo (Lead)	Northwest State Community College
Sudershan Jetley	Bowling Green State University
Shane Bendele	Columbus State Community College
Thomas Looker	Edison State Community College
Rob Speckert	Miami University
Scott Dilling	The University of Akron
Janet Dong	University of Cincinnati
Randy Wharton	Zane State College