The School of Engineering and Technology is comprised of the following disciplines:

- Computer Engineering
- Electrical Engineering
- Mechanical Engineering
- Manufacturing Engineering Technology
- Engineering Management

All LSSU senior engineering and engineering technology students are required to participate in a senior design experience. Students work in multi-discipline teams to allow a composite of their academic endeavors to successfully complete these projects. Each project of this capstone course is challenging and real-world oriented, requiring a detailed technical engineering analysis. The intent is to provide an opportunity for students to gain valuable engineering experience that will help them to either “hit the pavement running” in industry or further their education.

Find out more by visiting:
http://engineering.lssu.edu
or contact us at:
906-635-2207 • 1-888-800-LSSU, ext. 2207
engtech@lssu.edu

To visit campus or learn more about Lake Superior State University, contact the Admissions Department:
http://www.lssu.edu/admissions
906-635-2231 • 1-888-800-LSSU, ext. 2231
admissions@lssu.edu

Lake Superior State University
650 W. Easterday Avenue
Sault Ste. Marie, MI 49783
**Advanced Braking Technology**

**Angular Measurement System**

Team Members: Alice Duesing, Matt Engle, Corey Knapp and Steve Roch  
Fall teammate: Clint Lahey, co-op

Faculty Advisor: Dr. Nael Barakat

Project Sponsor: Continental Teves

Industrial Customer Contact: Robert Andersen

ABT has developed, in conjunction with Continental Teves, an Angular Measurement System for vehicle testing. It will provide more accurate and repeatable brake pedal travel measurements than any technologies currently used in industry.

**Volume Consumption Machine**

Team Members: Joshua Eagle, Simon Meilstrup, Derek Sandahl, Eric Schrage and Scott Wilding  
Fall teammate: Jason Nightingale, co-op

Faculty Advisor: Jon Couillard

Project Sponsor: Continental Teves

Industrial Customer Contact: Bob Andersen

DART updated and redesigned the volume consumption machine for Continental Teves, to be more state of the art and user friendly through the use of computer control. The device measures hydraulic brake system characteristics to gather data used to assist in the design/modification of those characteristics.

**Integrated Robotic Solutions**

**Three-Robot Assembly Workcell**

Team Members: Chris Casola, Steve Eles, Shawn Flint, Randall Hale, Brad Musgrove, and Trevor Wynsynski  
Fall teammate: Harry Wiley, co-op

Faculty Advisor: Jim Devaprasad

Project Sponsor: Lake Superior State University

Industrial Customer Contact: Ray Adams

IRS designed and integrated a modern robotics workcell in the LSSU robotics laboratory. It will be used for future robotics classes, summer engineering camps and lab demonstrations. Automated assembly of Rayovac flashlights demonstrated robotics workcell's full capabilities and functionality.

**Milling Equipment Control Technologies and Engineering Concepts**

**CNC Mill Retrofit and Update**

Team Members: Steve Dew, Jeff Gordon, Brian Kelly, Eric Lund and Andrew Zambusi  
Fall teammate: Michael Heyboer, co-op

Faculty Advisor: Keith Schwiderson

Project Sponsor: Lake Superior State University

Industrial Customer Contact: Jon Couillard

MECTEC converted a 2 1/2-axis CNC milling machine into a full 4-axis CNC machining center complete with automatic tool changer. It will be used as a learning tool within the University's Manufacturing Processes Laboratory.

**Quality Verification Technologies**

**Column Shift Tester**

Team Members: Paul Brough, Ryan Curtis, Jerry Drennan, Chris Morgan, Bo Reinhardt, Jeff Westfall and Steve Wojtaszek  
Fall teammate: Jeff Dukes, co-op

Faculty Advisor: Paul Duesing

Project Sponsor: Dura Automotive - Fremont

Industrial Customer Contacts: Kurt McDowell, Mark Hatfield

The Column Shifter Test Stand can test multiple key features on a variety of Ford column shift-levers. The stand uses a PLC to incorporate a pneumatic, vision, mechanical and electrical system to ensure the quality control of the millions of column shift levers that leave Dura's facility for Ford vehicles.