

Electro-Mechanical Systems Technical Outcomes and Competencies

The **Electro-Mechanical Systems** concentration prepares graduates for leadership and management positions in computer-controlled, automated environments. Students in this concentration take courses to develop an understanding of the many organizational elements and functions that make up industrial operations and courses that emphasize theory and application relating to the design, control, and integration of electrical, mechanical, hydraulic and pneumatic components and assemblies.

The general outcomes for the BS in Technology Management apply, plus the following concentration specific outcomes.

- A graduate will possess a level of understanding, skill, and attitude relating to the technology and operation of technical electro-mechanical power and control systems. This includes concepts related to prime movers, energy conversion and power transmission systems, applied process control engineering, and automation.
- A graduate will understand aspects of power and energy generation related to electro-mechanical systems, including energy sources, power transference, system maintenance, and automated control. This competence includes an understanding of the relationship and interdependence of the components.
- A graduate will understand technical electro-mechanical power conversion systems as related to contemporary production, distribution, construction, transportation, environmental control, and military systems.
- A graduate will understand technical electro-mechanical control systems as related to contemporary production, distribution, construction, transportation, environmental control, military systems, and others.