ELEC2217 - Building Automation I

Credits:	2 (0/2/0)
Description:	This course introduces students to building automation systems. These systems are becoming critical required components used for green buildings, energy conservation and building safety systems. Topics covered in this course include electrical energy production, alternative energy sources and interconnection of renewable sources to existing power systems. This course also covers green utilization equipment and controls such as lighting, heating, ventilating and air conditioning, and plumbing.
Prerequisites:	
Corequisites:	
Pre/Corequisites*:	
Competencies:	1. Identify the ways in which building automation can improve building efficiency. 2. Describe common building systems that can be integrated in a building automation system. 3. Identify the common electrical systems found in commercial and industrial facilities. 4. Compare methods of switching between energy sources, including alternative sources, and energy sources. 5. Describe different types of light sources, their characteristics and their uses in automated lighting control systems. 6. Identify the functions of different types of light switches, dimmers, control sequences and applications. 7. Describe the types of HVAC systems, the requirements for comfort control and the primary devices used in the system. 8. Identify the control devices and sensors used in an HVAC system to manage the distribution of conditioned water and air. 9. Describe the parts of a building plumbing system. 10. Identify the controlled characteristics of a plumbing water supply. 11. Evaluate the control strategies and results of the most common water saving and plumbing control applications. 12. Describe efficiencies of light sources.
MnTC goal areas:	None

**Can be taking as a Prerequisite or Corequisite.*

© 2026 Minnesota State Community and Technical College.
We reserve the right to periodically update information without notice.
The information in this publication should not be regarded as contractual in nature.