BUILDING AUTOMATION SYSTEMS

Laney College

Outcome	Institutional Outcomes	Assessment Method
Explain the theory and techniques relevant to building automation, including technical math, physics for building science, electricity, computer hardware and software basics, and techniques for reading and interpreting design documents, drawings, and specifications.		Tests and written reports
Describe the components, functional applications, troubleshooting strategies, and testing, adjusting and balancing techniques for commercial HVAC systems.		Tests and hands-on lab projects
Describe the components and functions of Direct Digital Controls (DDC) microprocessor hardware and software and practice control systems programming and energy efficient design strategies.		Tests and hands-on lab projects
Describe and apply the building commissioning, re-commissioning and retro-commissioning process		Tests, hands-on lab projects, and written reports
Assess control systems networking and control systems integration strategies in commercial buildings		Tests, hands-on lab projects, and written reports
Explain energy saving opportunities in buildings, including control systems documentation, energy efficient control routines, data analysis, performance monitoring, and energy efficient policies and codes compliance.		Tests, hands-on lab projects, and written reports