

MINIMUM CORE SUBJECT AREAS: CONTROL, AUTOMATION & INSTRUMENTATION ENGINEERING

AREA	SUBJECTS / DESCRIPTION	RECOMMENDED CONTACT HOURS
A recommendation of 130 hours total from at least 2 of the following 4 areas.		
1. Control	<ul style="list-style-type: none"> - selected topics on control theory such as mathematical modeling of dynamic systems; system response; system analysis; types of control actions; control system design and simulation; etc. 	
2. Automation	<ul style="list-style-type: none"> - selected topics on automation such as controllers, actuators, sensors and transducers; interfacing and signal conditioning; design, fabrication, installation and programming of automatic systems; robotics; artificial intelligence; etc. 	
3. Instrumentation	<ul style="list-style-type: none"> - selected topics on instrumentation such as principles for measuring common physical parameters; design, construction, installation, maintenance and calibration of measuring instruments; standards; errors; data acquisition and signal conditioning; etc. 	
4. Application of control, automation and instrumentation technologies in engineering practice	<ul style="list-style-type: none"> - selected topics on the application of control, automation and instrumentation technologies in engineering practices such as in aviation, navigation, building services, material handling, plant and medical engineering; consideration of economic, safety and social factors in application, etc. 	