

MINIMUM CORE SUBJECT AREAS: MANUFACTURING, INDUSTRIAL & SYSTEMS ENGINEERING

AREA	SUBJECTS / DESCRIPTION	RECOMMENDED CONTACT HOURS
A recommendation of 30 hours each in a minimum of 4 out of 5 areas below, totaling no less than 240 hours.		
1. Process / System Design	- such as product design, facilities layout, process analysis and design, service design, production system, manufacturing system, material processing / logistic, transportation system, smart manufacturing systems	30
2. Industrial Engineering	- such as work design, ergonomic, human factors, quality engineering, reliability engineering, production planning, operation and control, testing and certification, control and automation	30
3. Systems Engineering	- such as data systems, e-commerce/e-business technology, smart technology, internet-of-things, robotics, intelligent systems, innovation/design thinking, knowledge management systems, enterprise systems	30
4. Quantitative Method	- such as operation research, data analytic, statistics / probability, simulation, system modelling / stochastic models, predictive/prescriptive/decision analytics	30
5. Engineering Management	- such as operation management, engineering economics / costing / financial technology, business process management, innovation and entrepreneurship, logistic management, material management, quality management, project management, supply chain management, safety & health management, risk management, data management	30