

Graduate Certificate in Industry 4.0 (GCI4)

Developed and awarded by Singapore Institute of Management, Singapore

Schedule for GDI4

January Intake	May Intake	September Intake
Industry 4.0: Trends and Transformations	Data Analytics for Industry 4.0	Cyber-Physical Systems and the Industrial Internet of Things

Modules Outlines for GCI4

Industry 4.0: Trends and Transformations

This module provides students with a big picture overview of how Industry 4.0 is transforming the ways that businesses operate. Topics covered include the history of industrial revolutions, what is Industry 4.0, and overview of the major areas of change, including smart factories/smart manufacturing, cyber-physical systems, Internet of Things (IoT) and Industrial IoT, big data analytics, cloud computing and edge computing, artificial intelligence, 3D printing, and more.

Data Analytics for Industry 4.0

This module introduces students to some core fundamentals of data analytics, and then goes into detail about specific data analytic techniques that are used in manufacturing and supply-chain logistics. Analytics techniques include classification models, association analysis, cluster analysis, and anomaly detection. Students also learn the basics of how to visualise and present data.

Cyber-Physical Systems and the Industrial Internet of Things

This module provides a conceptual introduction to Cyber-Physical Systems and the Internet of Things (IoT), and then more specialised applications in the Industrial Internet of Things (IIoT) for manufacturing and logistical operations. Students would learn about sensor technology and embedded systems, real-time analytics paired with automated monitoring and control systems, the circular economy (i.e., reducing/reusing waste products), digital twins, and computer network architectures for IIoT.