

## SBM4104 IT Infrastructure

### Unit description

This unit deals with hardware and system software components needed to run IT applications. It introduces how infrastructure components work on an architectural level using building blocks to describe the infrastructure model. This unit focus on networking and data communications as a major part of IT infrastructure model. Describing the network models to be described using OSI and TCP layered models with the focus on Physical, data link, network, transport and application layers. Topics covered include: IT infrastructure components and model; communication media; media access control; IP network addressing and routing; and the network design using traditional and building block. Cloud computing and virtualization are introduced with the characteristics and benefits. This unit also covers security threats and network controls. This unit also draw focus on improving the management of networks and information systems, as well as implications for the management of the organization.

This unit is a core unit in the DipBIS and BBIS programs.

### Learning outcomes

On successful completion of this unit, students will be able to:

- [ULO1] Define the key principles and features of data structures and usage in IT Infrastructure solutions for a range of organization types and circumstances.
- [ULO2] Explain how layered systems architectures of networks and computers come together to increase efficiencies and resiliencies for a range of organization types and circumstances.
- [ULO3] Classify the IT infrastructure components and underlying theory behind IT Infrastructure solutions in the context of Internet-based environments.
- [ULO4] Analyse the underlying principles of service virtualisation and virtual computing along with core architectures and technologies used within Cloud Platforms.
- [ULO5] Design, architect and plan an IT infrastructure solution for businesses, allowing for dynamic scaling of applications.
- [ULO6] Appraise the security and business continuity features of alternative IT infrastructure solutions.
- [ULO7] Critique the roles and responsibilities of an IT infrastructure manager.

### Summary

Credit Points	6
Courses	DipBIS, BBIS
Total Credit Points	DipBIS: 48 credit points, BBIS: 144 credit points
Pre-Requisites	N/A
Co-Requisites	N/A
Other Requirements	N/A
Unit Level	Core
Duration	14 weeks (12 teaching weeks; 1 study week; 1 final assessment week)
Mode of Delivery	On-campus

Assessment	Quiz: 10%; Case study-1: 20%; Case study-2: 20%; Laboratory submission: 10%; Examination: 40%
Prescribed Textbook	Fitzgerald, J., Dennis, A. & Durcikova, A., (2017). Business Data Communications and Networking. 13th ed. s.l.:Wiley.
Expected student workload	Students should expect to spend approximately 8.5 hours per week over 14 weeks on learning activities for this unit. This includes time spent attending scheduled classes, undertaking private study, preparing assessments, and completing examinations.