

# Topic Synopsis (SGUS Diploma (Conversion) in Computer Networking)

## 1. Certificate in Essential Skills to Enhance Employability

This certificate covers essential communication areas which include emotional intelligence (EQ), digital marketing and essential job search skills. It introduces key concepts in the areas of data and visual analytics using Power BI, statistics and cyber security. It introduces key concepts in the areas of data and visual analytics using Power BI, statistics and cyber security.

### **Topic 1: Emotional Intelligence (EQ) for Career Decision Making**

This 2 days' workshop is an enhanced training in which participants will acquire job-seeking related skills, capabilities and the ability to expand employment opportunities.

Emotional Intelligence (EQ) facilitates career decision-making process and leads to decisions that can achieve greater satisfy career-related interests, values, and aspirations. Emotions experienced during this process have implications for the perception of risk related to specific career options, the kind of self-exploration individuals will engage in, and how information related to career choice will be processed.

Through EQ, participants will be able to cope and learn to manage one's self-awareness which affect their overall well-being and decision making.

### **Topic 2: Getting ready for Your Next Job**

This course equips participants with the essential job search skills, knowledge and tools that will allow them to present themselves positively on paper, in person and on professional networking sites.

Participants will learn how to craft resumes that get the attention of prospective employers and recruiters and pivot their experiences to succeed and leave a good impression at job interviews (face-to-face or digital). This course also helps jobseekers to get started on using the popular professional networking site, LinkedIn, to create a professional brand for job search and networking.

### **Topic 3: Digital Marketing with Personal Branding**

This course introduces students to tools for establishing a personal brand online and importance of establishing digital marketing strategy to promote their own personal brand.

### **Topic 4: Visual Analytics using Power BI**

The course aims to equip the participant with the following:

**Knowledge and Understanding:** An understanding of how a dashboard works; its advantages and disadvantages and how it will be useful at workplaces.

**Intellectual skills:** How to apply the knowledge received during the course in developing the dashboard and using DAX functions, filters etc.

**Practical skills:** Participants will be developing their own dashboard. This exercise will enable them to show their creativity, skills obtained from the course and a satisfaction from attending the Power BI course.

**Transferable skills and personal qualities:** The knowledge and skills acquired from this course can be used at workplaces especially for those involved in KPI reporting, dashboard development or someone who have regular management meetings.

By the end of the course, learners will be able to:

- Upload data & and create data models
- Use DAX functions to enhance dashboards
- Associate links between variables for visual and descriptive analytics
- Find hindsight and insights from dashboard

### **Topic 5: Cyber Security for Non-IT Professionals**

The objectives of the course is to create awareness and understanding of common cyber threats, both at home and at work. Typical mitigation methods will be discussed to help participants make better use of the available cyber security tools to protect themselves against cyber adversaries.

Upon completion of this course participants will be able to:

- Relate what is Cyber Security what are at stake
- Examine common threats (e.g. Phishing, malware)
- Use common mitigation methods
- Use basic wireless and smartphone security
- Outline security related laws (e.g. PDPA, CMA)

## **2. Certificate in Network Administration**

This certificate covers the installation, configuration, application and use of Network Server Operating Systems, and the basic concepts in data communication.

### **Topic 1: Network Server Administration**

This module teaches the installation, configuration, application and use of Network Server Operating Systems. Students are taught how to install, configure and manage users and computers over a network. Topics covered include server installation, configuration, management of accounts and resources, troubleshooting and network security.

### **Topic 2: Computer Communications**

This module provides the basic concepts in data communication. It covers the necessary understanding of essential Networking equipment and techniques used in the implementation of data communication systems. The seven layer communication model is used as guideline to introduce networking concepts.

## **3. Certificate in Computer Networking**

This certificate covers concepts and configuration of Local Area Network switching and routing, and Wide Area technologies. Students will be given an opportunity to plan and design a network project.

**Topic 3: Computer Networking**

This module covers the introduction of network protocols using TCP/IP, routing, switching and acquiring an understanding of router components and routing protocols. Topics include routing protocols, configuration and management of access lists and packet filtering.

**Topic 4: Internetworking**

This module covers LAN switching and design, the concept of VLANs, Wide Area Network technologies and design, protocols used to transport voice and data over wide areas. Students are also taught Network planning, managing, network load sharing and network security techniques.

**Topic 5: Project**

Students will be given an opportunity to plan and design a network project. This project will be based on the knowledge and skills learnt from their course of study. Students will be able to learn how to integrate their knowledge from their course into a practical application in Computer Networking

**4. Certificate in IoT, Data Management and 5G Technology**

The certificate equips technical staff with an appreciation on internet of things (IoT) and data management. It also provides an overview of the new 5G wireless technology, its requirements and applications, future development and impact on the industry.

**Topic 1: Appreciation of IoT and Data Management**

The objective of this course is to equip Technical Staff with an appreciation on internet of things (IoT) and data management. Participants can apply the knowledge and skills to help them improve their operational tasks and increase work productivity.

**Topic 2: Introduction to 5G Technology and Applications**

This course aims to provide participants with a general overview of the new 5G wireless technology, its requirements and applications, future development and impact on the industry.

Participants will be able to understand the importance of 5G technology as an enabler of industrial transformation such as smart nation and autonomous transport solutions. They will also acquire basic knowledge to engage service provider to deploy 5G technology to enhance the efficiency, reliability and quality of their operations and services.

**5. Certificate in Network Fundamentals**

This module provides a general overview of computer networking. It provides a general introduction to networking terminology, concepts, devices, functionality, applications and standards required for computer networking. Students will learn to build simple LANs, perform basic network and service configurations, and implement IP addressing schemes.