Introduction to Networking

CT0043-3-3-1

Introduction and Overview

Lecturer information

Lecturer Name:

Email:

Telephone Extension:

Pre-requisites for this module

- Nil

Aims of this module

1. Provide an insight into the basic concepts of data communications
2. Provide an understanding of networking, both Local and Wide Area Networks
3. Introduce students to standards and protocols used in data communication and networking and, in particular, the basic principles of the ISO-OSI Reference Model

Course Learning Outcomes, (CLOs)

- **At the end of this module, YOU should be able to:**

1. Explain the fundamental principles of current network operation including the standards and protocols used in data communication.(C2, PLO1)

2. Form the local area network design and configuration using simulation tool for the given scenario (A2, PLO6)

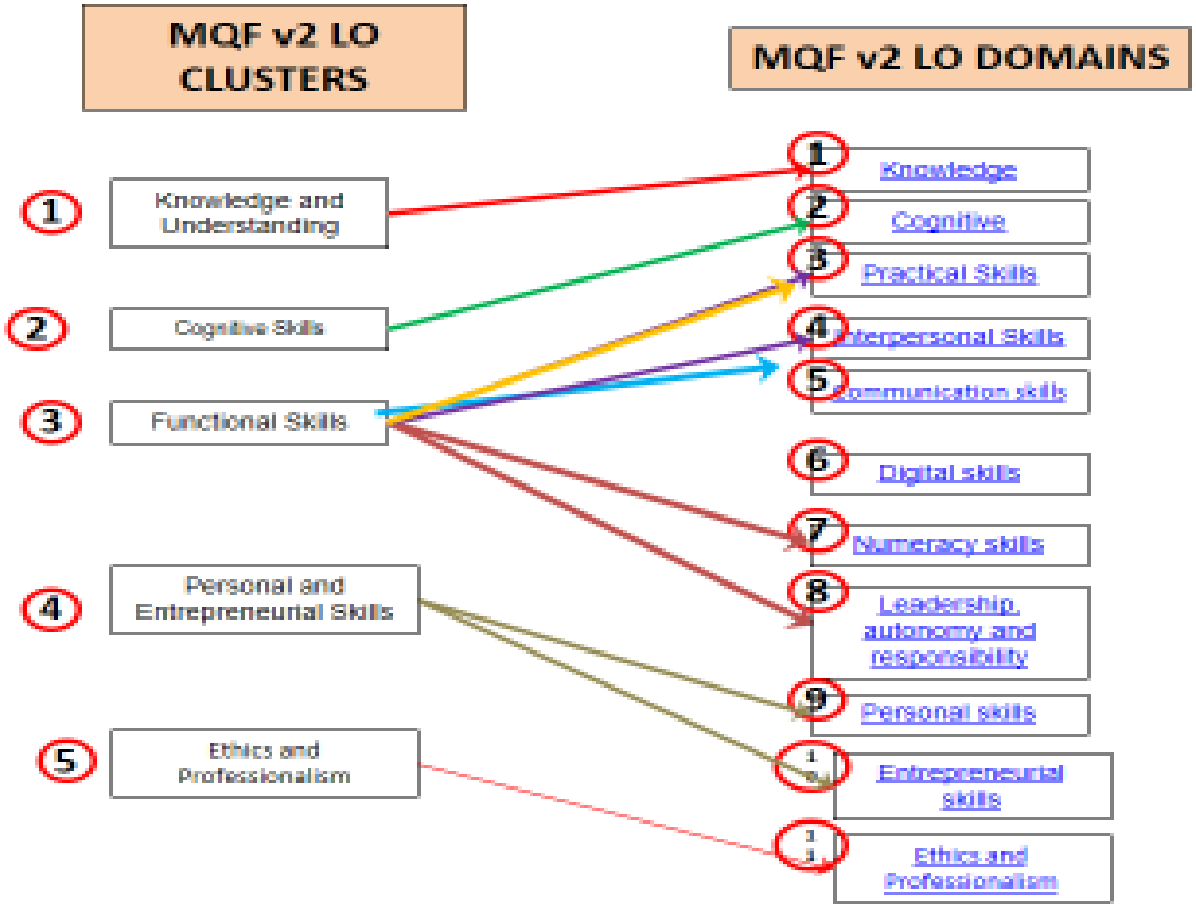
3. Work in a team to justify the topology and IP addressing plan based on the network design (A3, PLO4)

Mapping of CLOs with MOEs Domain

Course Learning Outcomes (CLO)	Programme Learning Outcomes (PLO)												Teaching Methods	Assessment
	Knowledge and Understanding, Cognitive	Cognitive Skills,	Practical Skills,	Interpersonal Skill,	Communication skill,	Digital Skills,	Numeracy Skills,	Leadership, autonomy and responsibility	Personal Skills,	Entrepreneurial Skills,	Ethics and professionalism			
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12		
CLO 1	✓												Lecture	Final Exam
CLO 2						✓							Case study/ Tutorial	Group Assignment - Individual Component.
CLO 3				✓									Tutorial	Group Assignment- Group Component
CLO4														

PLO1 – Knowledge
PLO6 – Digital Skills
PLO4 – Inter Personal Skills

MQF and MOE Domains



Teaching Strategies

- Lecture
- Tutorial
- Case Study (Individual and Group)
- Group Discussion

Assessment Methods

- Final Exam **(50%)** : CLO1

- Group Assignment **(50%)**
  - Form the local area network design and configuration using simulation tool for the given scenario (CLO2)
  - Work in a team to justify the topology and IP addressing plan based on the network design (CLO3)

  **refer to SAIS for details

Student Learning Time (SLT)

- **Course Credit Value: 3**
- **Total Learning Hours:**
  - Lecture: 28 hours per semester
  - Tutorial / Case Study : 21 hours per semester
  - Independent Learning Time: 68 hours

** Tutorials to be conducted in Labs

Methods of Delivery

Hence,

- We are now moving from the traditional topic based teaching to outcome-based education

Outcomes Based Education (OBE)

- OBE is education based on producing particular educational outcomes that:
  - Focus on what students can actually do after they are taught
  - Expect all learners / students to successfully achieve particular (sometimes minimum) level of knowledge and abilities.

So…What is OBE?

It's

NOT

What we want to teach,

It's

What You should learn

Course Content Outline

CLO1 : Final Exam (50%)

Lecture

- Introduction to Networks
- Network Protocols and Communications
- Network Access
- Ethernet
- Network Layer
- Transport Layer
- Application Layer

Tutorial

- Data Communication Concepts
- OSI Model and TCP/IP model

Course Content Outline

CLO2 & CLO3 : Group Assignment (50%)

Tutorial / Case Study / Group Discussion

- Configure Network Operating System
- IP Addressing
- Case Study : Subnetting IP Networks
- Build a Small Network
- Topology / Transmission Medium / Network Devices
- Networking Trends

*to be conducted in labs

What is expected of you

- **You should abide to all the rules & regulation of APU**
  - **Proper attire**
  - **No speaking of dialects**
  - **Attendance is compulsory and valid medical certificates or letters from parents /guardians must support any absence from class.**
  - **Three lateness will be equal to one absence**
  - **All pagers and handphones should be turned off during lectures.**

What support is available for you

- **Consultation hours**
- **Resources**
  - **Reference material**

Essential Reading

- Cisco Networking Academy (2016). *Introduction to Networks V6 Companion Guide.* United States: Cisco Press. ISBN: 978-1587133602.
- Lammle, T. (2016). *CCNA Routing and switching Complete Study Guide.* 2nd ed. Indiana: Sybex (Wiley). ISBN: 978-1119288282.

  - **Internet resources**

- Access to Cisco Networking Academy Platform - CCNA 1.
- Cisco Packet Tracer.

Achievement requirements

Undergraduate:

Marks	Alphabetical Grade	Grading Point	Classification
80-100	A+	4.0	Distinction
75-79	A	3.7	
70-74	B+	3.3	Credit
65-69	B	3.0	
60-64	C+	2.7	Pass
55-59	C	2.3	
50-54	C-	2.0	
40-49	D	1.7	Fail (marginal)
30-39	F+	1.3	Fail
20-29	F	1.0	Fail
0-19	F-	0	Fail

APU/APIIT PROFESSIONAL DRESS CODE FOR STUDENTS

APU/APIIT has always endeavoured to transform students into highly employable and professional graduates since its inception. It takes great pride in the professionalism demonstrated by its students through the Professional Code of Conduct.

APU/APIIT's Purpose exemplifies this:

"Transforming students into highly employable, competent and future-proof professionals"

The Professional Code of Conduct describes the sort of behaviour, attitude, professional outlook and image that are expected of the students during their journey in APU/APIIT. This has been clearly described in the letter of offer issued to each student.

APPROPRIATE DRESS CODE

	MONDAYS – FRIDAYS	FRIDAY OPTIONS
APPROPRIATE	• Long or Short Sleeve Collared Shirts (Tucked-in) • Slacks, Trousers, Khakis • Shoes, Loafers, Sneakers, Sports Shoes and Boots • Office Wear for Males & Females	• Traditional Attire & Traditional Accessories (eg: Songkok) • APU Clubs & Societies / Activity T-Shirts / APU Official T-Shirts (Tuckedin) • Collared T-Shirts (Tuckedin) • jeans / Pants with Denim material (strictly no ripped/torn jeans material)

INAPPROPRIATE DRESS CODE

INAPPROPRIATE	• Sandals (Males), Slippers, Flip-Flops, Slip-Ons • Short Pants, Revealing Blouses (Bare-back, Offshoulder, Crop-top, Deep-V, Spaghetti Strap, Tank-top) • Jogging Pants, Cargo Pants, Yoga Pants, Gym Tights/Leotards, Sports Tights • Beachwear • Skort (Shorts with front skirt) • Piercing except for Ears & Nose • Ripped / Torn Jeans • Round Neck T-Shirts • Caps / Hats / Non-Customary Headgear

Question and answer session

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Q & A

What we will cover next

- Introduction to Networks