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AMOU UNIVERSITY



FACULTY OF COMPUTING AND ICT

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY PROGRAMME

ACADEMIC YEAR 2015/ 2016

COURSE DESCRIPTION

BIT 413	Routing and Switching
Contact Hours	52
Pre-requisite(s)	BIT 325 Wireless and Mobile Communication BIT 326 Local Area Networks
Purpose/Aim	<ul style="list-style-type: none"> • The course focuses on some advanced topics that are important to computer networks technically and theoretically. • This course gives students full concept necessary for understanding of network design and how packets reach their destination from source to destination.
Course Objective (Indicative Learning Outcomes)	<ul style="list-style-type: none"> • The student should learn about computer network or internetwork and how the layers or devices are exchanging and forwarding the packets. • The course shall focus on configuration of all network devices for any purpose. • Students shall examine the advanced components of Routing and switching.
Course Content	<ul style="list-style-type: none"> • Introduction of basic network • OSI model and TCP/IP suite • Internet protocol sub-neting and VLSM • Basic routing protocols <p>Static routing protocol; Dynamic routing protocol</p> <ul style="list-style-type: none"> • Static routing protocol • Dynamic routing protocol <p>Rip version 1; Rip version 2 ; EIGRP; OSPF</p> <ul style="list-style-type: none"> • Switching • Virtual local area network VLAN



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	<ul style="list-style-type: none"> • Vlan trunk protocol VTP • Inter-vlan <p>Router on a stick; Tradition method; Layer 3 switch</p>		
Learning & Teaching Methodologies	Lectures, practical configurations with manual simulators like cisco packet tracker and real devices		
Instructional Materials/Equipment	i.e. Classroom with audio visual aids, Computer laboratory e.t.c.		
Course Assessment	Type		Weighting (%)
	Examination(End Term/Final)		50
	Continuous Assessment(Mid Term)		25
	Quizzes and attendance		15
	Continuous Assessment(Attendance)		10
	Total		100
Recommended Reading	Title	Author	Publisher
	Principles of routing and switching		Pearson education (1999)
Additional Reading	Network Essentials		Pearson education (2008)
	CCNA EXPLORATION		Addison Wesley (2002)
Other Support Material	A variety of multimedia systems and electronic information resources as prescribed by the lecturer. Various application manuals, URL search and journals.		