


AMOU UNIVERSITY
“A Vehicle for Peace and Development”
AMOU UNIVERSITY



FACULTY OF COMPUTING AND ICT

DIPLOMA IN INFORMATION TECHNOLOGY PROGRAMME

ACADEMIC YEAR 2016/ 2017

COURSE DESCRIPTION

DIT 201	Calculus	
Contact Hours	45	
Pre-requisite	N/A	
Purpose/Aim	The course introduces students to the fundamentals of calculus and its applications in the field of IT	
Course Objective (Indicative Learning Outcomes)	<ul style="list-style-type: none"> • Students are required to learn concepts of calculus which build a foundation for computations such as in simulation and modeling 	
Course Content	<ul style="list-style-type: none"> • Basic Mathematics: Numbers and Simple functions, Complex numbers, Analytic Geometry; • Differentiation: Derivatives of functions including inverse trigonometric, hyperbolic, inverse hyperbolic and logarithmic functions; • Integral calculus: Integration as the inverse of differentiation, Definite integral as the limit of sum, Standard forms, Application of integration to length, area and volume; • Integration: Methods including partial fractions, substituting, integration by parts, and reduction formulae, Mean value theorem for integrals, • Differentiation of integrals; • Application of differentiation and integration, • Elements of numerical integration. 	
Learning & Teaching Methodologies	Lectures, tutorials	
Instructional Materials/Equipment	Classroom with audio visual aids Computer laboratory	
Course Assessment	Type	Weighting (%)
	Final Examination	60
	Mid Term Examination	20
	Assignment	10
	Attendance	10
	Total	100



AMOUD UNIVERSITY
“A Vehicle for Peace and Development”

Recommended Reading	Title	Author	Publisher
Additional Reading			
Other Support Material	A variety of multimedia systems and electronic information resources as prescribed by the lecturer. Various application manuals, URL search and journals.		