



DIPLOMA LEVEL - INFORMATION TECHNOLOGY (IT)

LIST OF COURSES

1)	MATH1102	Pure Math	
2)	ITAD1100	Advanced I T Skills	
3)	MATH1101	Pre-Calculus	
4)	MATH1100	College Algebra	
5)	ENTW1100	Technical Writing I	
6)	ITSE1100	Information System Multimedia	
7)	ITDB1102	Introduction To Database	
8)	ITNT1103	Computer Hardware	
9)	ITSE1101	Introduction To Programming	
10)	MATH1201	Managerial Statistics	
11)	ENTW1200	Technical Writing I I	
12)	ITDB1204	Applied Database	
13)	ITNT1204	Introduction To Networking	
14)	BACO1212	Job Search Techniques	
15)	ITSE1202	Introduction To Operating System	
16)	ITSE1203	Introduction To Web Technology	
17)	ITNT2201	Principles Of Data Telecommunications	
18)	MATH1200	Calculus I	
19)	ITSE2100	Object Oriented Programming(Java)	
20)	ITDB2101	System Analysis And Design	
21)	BAMG1100	Introduction To Business	
22)	ITPJ2202	Course Project	
23)	MATH3103	Math I I	
24)	ITSE2102	Introduction To Software Engineering	
25)	PHIL3108	Business Ethics	
26)	ITMM2200	Fundamentals Of Multimedia	
27)	PHIL2200	Formal Logic	
28)	ITBS2203	E-Commerce For I T	
29)	ICDL1	Concepts Of Information Technology	N/A
30)	ENGL2100	Technical Communication	N/A



1) MATH1102 PURE MATH

This course deals with Functions and Graphs, Definition of a function schematic, functions defined by set of ordered pairs, functions defined by equations, domain and range of a function, exponential functions, logarithmic functions , division and synthetic division), division algorithm, remainder theorem. Trigonometric functions, inverse sine and cosine identities, evaluation of inverse, trigonometric identities. Sequence and series-definition of a sequence, finite series and infinite series, Sum formula for finite geometric series, sum of an infinite geometric series. Descriptive and Inferential Statistics, Sample space, random experiment, events(mutually exclusive events, Independent events), probability, multiplication rule, probability rules.

2) ITAD1100 ADVANCED I T SKILLS

The course builds on the skills acquired in the IT foundation course to train students on important software applications such as E-Learning, Desktop Publishing, Web applications, Advanced Spreadsheets and Databases. The students should be able to Demonstrate their ability to use the E-Learning portal, Design publications using publishing software and develop web sites using a web developing software, Apply advanced functions in MS-Excel and develop databases.

3) MATH1101 PRE-CALCULUS

This course deals with Trigonometric Functions, Sequences and Series , Mathematical induction, Multiplication Principle, Permutations-combinations, Binomial Formula Trigonometric Functions, Analytical Geometry. Polar coordinates and Graphs, Conic Sections, Translation of Axes, Parametric Equations.

4) MATH1100 COLLEGE ALGEBRA

This course enable to Solve equation and inequalities, Quadratic equation, Inequality, Graphs, Exponents, Polynomial, Rational expression, Systems of linear equations, Complex Numbers, log and exponent function, Trigonometric functions, identities& application.

5) ENTW1100 TECHNICAL WRITING I

This course deals with basic academic writing skills so as to communicate effectively and clearly. This includes knowledge of reading analysis and understanding which will aid written assignments and projects. This also includes grammatical structures; pays attention to layout; spelling and punctuation; helps students to locate source materials in the library and on the internet; evaluating their usefulness; credibility; relevance; etc.

6) ITSE1100 INFORMATION SYSTEM MULTIMEDIA

The course should enable the student the fundamentals of applications programs, using the Microsoft Office suite as a typical example. The students should be able to differentiate the categories of software, operating system (including communications software and user interface) and Applications software (pre-packaged, or Custom-built). Demonstrate the common commands and functions of Word and Excel in a variety of applications. Demonstrate the common commands and functions of Access and PowerPoint in a variety of applications.

7) ITDB1102 INTRODUCTION TO DATABASE

Introduction to Database course is designed to focus on the principles, design, implementation and applications of database management .All the way through this course the basics concepts, terms and operation of relational model are taught. It covers the areas of logical database design principles including ER diagram, Normalization, Relational Algebra, and design and manipulation of relational databases using SQL. Students will gain the required knowledge to describe, define, design and manage Relational Databases using SQL on Oracle Platform.

8) ITNT1103 COMPUTER HARDWARE

Computer hardware is a course introduces the technical concepts and terminology of the PC's and laptops internal and external components. The main objectives of this course are targeted to enable the students to gain knowledge & skills pertaining to the structure, management, installation, set-up, analysis, customization and the use of various utilities to enhance the performance of the system and to learn practical skills that will help them optimize hardware resources for networking products and also to get exposure to the functions and operations of components of a general purpose computer.



9) ITSE1101 INTRODUCTION TO PROGRAMMING

C++ is a general purpose object oriented programming language. It is considered to be an intermediate level language, as it encapsulates both high and low level language features. While studying this course students are able to grab the brief history of the C++ language, basic program development cycle, basic structure of C++ program, to be familiar with writing codes, compiling and running a program, to recognize a portable main() function, Control Structure, loop structure, array, function.

10) MATH1201 MANAGERIAL STATISTICS

This course deals with The nature of Probability and statistics, Descriptive and Inferential statistics, Random sampling, Random numbers. Frequency Distribution and Graph ,Data Description, Counting Rules and Probability, Addition and multiplication rule, Correlation and Regression, Applications of Normal Distribution. Hypothesis Testing .

11) ENTW1200 TECHNICAL WRITING I I

This course is a continuation of the ENTW 1100. It deals with effective and appropriate writing based on real life situations. This includes expository writing and skills integrated with listening, reading and speaking skills. This also teaches students how to communicate effectively in oral and written English; editing skills, teamwork skills, information gathering and research skills and critical thinking skills.

12) ITDB1204 APPLIED DATABASE

This course focuses on writing Windows based applications that interface with a database management system [SQL server] using the VB.Net language. Covers using data sources and datasets for Rapid Application Development, three-layer Windows Forms applications, using reporting features of Visual Studio. After completing this course student will be able to develop database driven applications using VB.NET as they are familiarize with all necessary windows controls and database controls for data connectivity across multiple applications using visual studio.

13) ITNT1204 INTRODUCTION TO NETWORKING

An introductory course to networking designed to teach the student about the underlying principles of network communication which includes LANs and WANs and its technologies, network topologies, OSI and TCP-IP models, protocols & standards, data transmission types, modulation and demodulation techniques, and wireless communication. The course also includes an introduction to network design & troubleshooting which gives emphasis on sub netting, server & PC configuration, as well as preparing network documentation.

14) BACO1212 JOB SEARCH TECHNIQUES

This course is to assist student to gain confidence necessary to obtain or improve employment. This course also emphasis on job search techniques and strategies, resume writing, interviewing skills, and improving employment opportunities.

15) ITSE1202 INTRODUCTION TO OPERATING SYSTEM

This course is an introduction to the theory and practice behind computer operating systems. This Course explained about what an operating system does do, how system calls and interfaces are working, What is thread, processes and concurrent programming and also include the CPU scheduling for various Input Output operations, resource scheduling. Besides It says how the Operating System manages the Primary Memory, virtual memory, Memory allocation for a particular Process and how to handle the deadlock. It includes the File Concept and security. Use of basic Unix fundamental Shell commands.

16) ITSE1203 INTRODUCTION TO WEB TECHNOLOGY

This course introduces the Internet principles and World Wide Web (WWW) concepts to the students and equips them with the techniques of Hyper Text Markup Language tags, HTML Forms, Java Script Introduction, JavaScript Methods and Events, Cascading Style Sheet. At the end of this course, the students should be able to define the features and elements of WWW and Internet principles. Demonstrate the ability to utilize HTML tags for web page design. Understand and utilize how JavaScript can contribute to web page design and create client side validation.



17) ITNT2201 PRINCIPLES OF DATA TELECOMMUNICATIONS

A principle of Data Communications is courses on analog communication systems, digital data communication, networks, and mobile communication. This course teach the student about the key topics such as telecommunication theory, transmission media, coding, multiplexing, carrier modulation, PSTN, radio communication, switching concepts, the SONET/SDH protocol architecture, multiple access technique, cellular communication, GPRS, Wimax, Wifi, DSL / ADSL technologies, mobile communication generation , and microwave communication.

18) MATH1200 Calculus I

This course deals with Limit and continuous functions .Differentiation, Derivatives of Trigonometric functions, Parametric equations, Implicit functions and Transcendental functions , Application of Derivatives ,Velocity & Acceleration ,Tangents & Normal ,Maxima and Minima, Integration, Definite Integral ,Applications of Definite Integral. Polar Co-Ordinates .

19) ITSE2100 OBJECT ORIENTED PROGRAMMING(JAVA)

Object Oriented Programming Concepts using core Java Language- it covers all basics concept and more stresses on the topics like classes and arrays it also covered little concept of Strings and utility classes, it also focuses on programming using classes and it also coved little advanced java concepts like Inheritance, the basics concepts like variables, constants, data types and operators used in the language – basic programming constructs; sequence, selection, and looping, Arrays, classes, objects , and writing methods-encapsulation, inheritance-Polymorphism; compile time and Runtime- and Exception handling are also covered.

20) ITDB2101 SYSTEM ANALYSIS AND DESIGN

Systems Analysis and Design- This course is designed for students to acquire and apply the concepts and skills required to perform the job of system analyst in system development following the phases of Systems Development Life Cycle methodology. The course guide students on proper conduct of system analysis, design and implementation of business solution applications using various techniques and tools.

21) BAMG1100 INTRODUCTION TO BUSINESS

This course deals with the general knowledge of the modern business environment which enhances the understanding of the characteristics and activities of a business organization.This also includes types; functions; advantages and disadvantages of different business organizations; economic, social, legal & ethical aspects of business; regional & global business environment as well as with some case studies.

22) ITPJ2202 COURSE PROJECT

The aim of the project is to expose students to the real-world experience where students will need to synthesize and apply what they have learned. The course project is designed to demonstrate the skills of a student to design and develop an IT based project. The project is an opportunity for students to bring together the breadth of knowledge and skills developed during their education and training. It should be able to illustrate a student's technical knowledge as well as project management competence. The realization of such projects will develop students to become excellent programmers, systems analysts, researchers, database administrators, and the like, who will contribute to the country's development effort.

23) MATH3103 MATH I I

This course deals with Round-off Error and Computer Arithmetic, Bisection Method, Fixed Point Iteration Method, Newton Raphson Method. Interpolation and Polynomial Approximations. Numerical Differentiation and Integration, Trapezoidal & Simpsons Rule .Introduction to Matrices, Cramer's Rule, Gaussian Elimination, Solving system of equations by Matrix Inversion.

24) ITSE2102 INTRODUCTION TO SOFTWARE ENGINEERING

The course deals with fundamentals concepts and principles of Software Engineering. This course is useful for students to understand the primary characteristics of the software, stake holders, models, cost estimation techniques, testing techniques, and design techniques used to develop the software. The course also deals with exemplifying the roles and responsibilities of software engineer and its importance to the organization and society.After completing this course students will be able to analyze and apply the knowledge in the development of live projects in the real world.



25) PHIL3108 BUSINESS ETHICS

This course is to equip the student with the highest ethical standards that will guide him/her through real life dilemmas. It also enable the student to understand the concept of value, Islamic and Omani values, appreciate and respect ethnic and cultural diversity.

26) ITMM2200 FUNDAMENTALS OF MULTIMEDIA

In this course students learn the concepts, standards and components of multimedia through practical using an appropriate software /tool to design, manipulate and animate images. Students Develop multimedia systems for industrial, educational and personal applications.The course starts learning with various elements of multimedia such as text, graphics, sound, video, animation, and virtual reality using the latest tools, technologies, techniques, and standards.Student also learns how to apply principles of multimedia to project management and distribution.

27) PHIL2200 FORMAL LOGIC

This course develops the ability to think and function effectively, logically and analytically, effectively using oral and written communication. This includes the concept of value; Islamic and Omani values; ethnic and cultural diversity etc.

28) ITBS2203 E-COMMERCE FOR I T

This course explores the concepts, theories and technologies used in E-Commerce. Topics include overview of E-commerce, e-commerce models, consumer behaviors, payment option and other related concepts. Students will also gain practical exposure and experience in designing and developing their own web-based E-Commerce applications using PHP and MySQL.