

INFORMATION TECHNOLOGY
CAPE UNIT 2
SEPTEMBER- DECEMBER 2022
CHRISTMAS TERM PLAN

Date	Specific objective	Content	Suggested Assessment
Week 1 Sept. 12-16	Course Overview	Syllabus Requirements of SBA	Quizzes, Presentation, Classwork assignments
	Explain database concepts	Differentiate among terms used in Information Management. For example, fields, records, tables, files, database and database management system.	
	Explain how files and databases are used in organizations	Uses: including store, organize, search, retrieve, eliminate redundancies, data mining, data marts and data warehouses	
	Internal Assessment	Outline Internal Assessment	
	Explain how the absence of data quality, accuracy, and timeliness impact on organizations;	Including loss of revenue, sales, competitive advantage, customers; poor decision-making; missed opportunities; impact on problem solutions.	
Week 2 Sept. 19-23	Explain how data storage and retrieval have changed over time	Concept of the terms; history of storage devices; formats of data (from text-based to multimedia); volumes to be stored; compression utilities; access method and speed.	Presentation on organization of files, Classwork/Assignment Problem definition
	Explain the advantages and Disadvantages of using a database approach compared to using traditional file processing.	Advantages including speed, efficiency, cost; data quality: completeness, validity, consistency, timeliness and accuracy; data handling, data processing.	
	Internal Assessment: Meet in groups to discuss		
	Describe the different types and organization of files and	File types including master and transaction files; file organization including serial, sequential, random or direct,	

INFORMATION TECHNOLOGY
CAPE UNIT 2
SEPTEMBER- DECEMBER 2022
CHRISTMAS TERM PLAN

	<i>databases</i>	indexed sequential database types including personal, workgroup, department and enterprise databases;	
Week 3 Sept. 26-30	<i>Describe the different types and organization of files and databases</i>	Database organization including hierarchical, relational, network and object-oriented.	Graded audio/visual presentation on Database organization. Quiz via Edulastic/Quizzes
	<i>Use Data Flow Diagrams (DFD) to document the flow of information within an organization</i>	Use of symbols for data stores, processing, data flow and external entities; context level DFD and first level detailed DFD;	
	<i>Internal Assessment</i>	Meet in groups to finalize problem definition	
	<i>Quiz</i>	<i>Quiz</i>	
Week 4 Oct. 3-7	<i>Use Data Flow Diagrams (DFD) to document the flow of information within an organization</i>	Use of symbols, context level DFD and first level detailed DFD to illustrate the information flow.	Class activity, Presentations, group work. Graded DFD
	<i>Use Data Flow Diagrams (DFD) to document the flow of information within an organization</i>	Use of symbols, context level DFD and first level detailed DFD to illustrate the information flow.	
	<i>Use Data Flow Diagrams (DFD) to document the flow of information within an organization</i>	Use of symbols, context level DFD and first level detailed DFD to illustrate the information flow.	
	<i>Internal Assessment</i>	Analysis of problem	
Week 5 Oct. 10-14	<i>Activity on DFD diagrams</i>	<i>Activity on DFD diagrams</i>	Class activities, Presentation
	<i>Explain how the growth of the Internet impact on data handling and data processing;</i>	Including the demands for information (by customers and suppliers); data mining, data warehousing; interfacing websites to underlying databases.	

INFORMATION TECHNOLOGY
CAPE UNIT 2
SEPTEMBER- DECEMBER 2022
CHRISTMAS TERM PLAN

	<i>Explain the concept of normalization</i>	Definition of normalization	
	<i>Explain the concept of normalization</i>	attribute redundancy and anomalies; normal forms: including first normal form (1NF), second normal form (2NF), third normal form (3NF); keys: primary, foreign and composite (or compound or concatenated); partial and non-key dependencies; relationships	
MID-TERM Oct. 17-19			
Six weeks			
test			
Oct. 24-28			
Week 6 Oct. 31-Nov 4	<i>Explain the concept of normalization</i>	First normal form (1NF) and second normal form (2NF),	Class activity <i>Revision of concepts done.</i>
Week 7 Nov. 7-11	<i>Use of ERD</i>	Introduction to the use of ER diagrams	<i>Class activities, quiz, presentation.</i>
	<i>Apply normalization rules to remove normal form violations</i>	To 1NF, 2NF and 3NF; removal of attribute redundancy and anomalies, such as repeating groups of data (or attributes), partial and non-key dependencies.	
	<i>Internal Assessment</i>		
Week 8 Nov. 14-18	ERD Exercise	Graded	Graded Worksheet ERD and Normalization, Classwork.
	<i>Apply normalisation rules to remove normal form violations</i>		
	<i>Internal Assessment- Analysis</i>		
	<i>Apply normalisation rules to remove normal form violations</i>		
Week 9 Nov. 21-25	<i>Apply normalisation rules to remove normal form violations</i>		<i>Normalization Worksheet Graded, Class activities</i>
	<i>apply normalisation rules to remove normal form violations</i>		
	<i>Internal Assessment</i>		

INFORMATION TECHNOLOGY

CAPE UNIT 2

SEPTEMBER- DECEMBER 2022

CHRISTMAS TERM PLAN

	<i>Normalization Worksheet</i>		
--	--------------------------------	--	--

INFORMATION TECHNOLOGY
CAPE UNIT 2
SEPTEMBER- DECEMBER 2022
CHRISTMAS TERM PLAN

Week 10 Nov. 28-Dec 2	<i>Explain how normal for relations impact databases;</i>	Including improve performance, data consistency, data integrity.	<i>Quizzes, practical activity.</i>
	<i>Normalization Test</i>		<i>Submission of analysis of data for Internal Assessment</i>
	<i>Construct a database.</i>	For importing, entering, manipulating, viewing reporting. Including forms; reports, queries, tables, records; use of foreign Keys, relationship links.	
	Internal Assessment- Analysis		
Six Weeks test Dec. 5-9			
Week 11 Dec. 12-14	<i>Construct a database.</i>	Enforcing referential integrity, updates or deletions, use of foreign keys, use of macros	<i>Class activities, Quizzes, practise exercise</i>
	<i>Construct a database.</i>	SQL	
	<i>IA</i>		
	<i>Construct a database.</i>	data validation and verification strategies;	
Week 12 Dec. 13- 17	<i>Construct a database.</i>		<i>Presentation/ Class discussion- Explain where each tool is necessary</i> <i>Research on Construct web pages;</i>
	<i>Explain reasons for the use of IT tools;</i>	Enhanced speed, accuracy, reliability, efficiency, flexibility, communication, presentation of information, integration of processes, decision making; storage and retrieval of large volumes of data; manageability of task; pressures from clients, competitors and suppliers.	
	<i>Internal Assessment</i>	Identify the tools for solution	
	<i>Explain the functions and uses of the major types of software tools;</i>	Examples of different types of software packages and their function and uses. Including Financial Packages, Software Development Tools, Statistical Tools, Word Processors, Spreadsheets, Presentation Tools, and Database Management	