Republic of the Philippines
SULTAN KUDARAT STATE UNIVERSITY
College of Computer Studies
Isulan Campus
Isulan, Sultan Kudarat
1ˢᵗ Semester SY 2024-2025

UNIVERSITY VISION

A trailblazer in arts, science and technology in the region.

UNIVERSITY MISSION

The University shall primarily provide advance instruction and professional training in science and technology, agriculture, fisheries, education and other related field of study. It shall undertake research and extension services, and provide progressive leadership in its area of specialization.

UNIVERSITY GOAL

To produce graduates with excellence and dignity in arts, science and technology.

UNIVERSITY OBJECTIVES

a. Enhance competency development, commitment, professionalism, unity and true spirit of service for public accountability, transparency and delivery of quality services;
b. Provide relevant programs and professional trainings that will respond to the development needs of the region;
c. Strengthen local and international collaborations and partnerships for borderless programs;
d. Develop a research culture among faculty and students;
e. Develop and promote environmentally-sound and market-driven knowledge and technologies at par with international standards;
f. Promote research-based information and technologies for sustainable development;
g. Enhance resource generation and mobilization to sustain financial viability of the university.

Program Objectives and its relationship to University Goals:

PROGRAM OBJECTIVES (PO)	OBJECTIVES						
A graduate of BS in Information Technology can:	a	b	c	d	e	f	g
a. Innovate technological concepts and ideas underpinning desired IT solutions;	/	/			/		/
b. Administer competently the computer networks, systems development, software applications, hardware and maintenance;	/	/	/	/	/	/	/
c. Design industry-based applications, infrastructures and technologies that will promote the advancement and development of the community;	/	/	/	/	/	/	/
d. Adopt to various national and international industries standards in the practice of the profession; and;	/	/	/	/	/	/	/
e. Demonstrate professionalism in the social, environmental and legal aspects of information technology.	/	/	/	/	/	/	/

1. Course Code   : **CC 115**
2. Course Title   : Information Management
3. Prerequisite   : IT121
4. Credits   : 3 UNITS

5. Course Description:

This course explores various aspects of managing information assets, including databases, data warehousing, data analytics, and information security. Students learn to assess organizational information needs, design information systems, and implement strategies to ensure the integrity, availability, and confidentiality of data. Additionally, the course examines emerging technologies and trends in information management, preparing students to address the challenges and opportunities of the digital age. Through hands-on projects and case studies, students develop practical skills in information management and gain insights into its strategic importance in modern enterprises.

6. Course Learning Outcomes and Relationships to Program Educational Objectives

Course Learning Outcomes	Program Objectives				
At the end of the semester, the students can:	a	b	c	d	e
a) Understand the fundamental concepts and principles of information management, including data modeling, database design, and information lifecycle management.	/		/	/	/
b) Develop proficiency in utilizing database management systems (DBMS) to organize, retrieve, and manipulate data efficiently, ensuring its accuracy and integrity.	/		/	/	/
c) Explore various data analysis techniques and tools to derive meaningful insights from organizational data, facilitating informed decision-making and strategic planning.	/	/	/	/	/
d) Gain knowledge of information security principles and practices to protect sensitive data, mitigate risks, and ensure compliance with regulatory requirements.	/	/	/	/	/
e) Acquire skills in designing and implementing information systems that align with organizational goals and support business processes effectively, fostering innovation and competitive advantage.	/	/	/	/	/

7. Course Content

Course Objectives, Topics, Time Allotment	Desired Student Learning Outcomes	Outcomes-Based Assessment (OBA) Activities	Evidence of Outcomes	Course Objectives	Program Outcomes	Values Integration
Topic: SKSU VMGO, Classroom Policies, Course Overview, Course Requirements, Grading System (2 hours)						
1. Discuss the VMGO of the university, classroom policies, scope of the course,	1.1 Student can be aware of and appreciate of the university's VMGO, classroom	Individual participation in class discussion and group presentation	Group and individual discussions			Value of appreciation

course requirements and grading system	policies, course overview, requirements and grading system.					
Chapter1- Concepts and Fundamentals of Information Management						
1.1 Introduction to Information Management	1.1 Define Information Management and explain its significance in modern organizations.	1.1 Quick Writing exercise	1.1 Submitted definitions and explanations	a,b,c,d,e	a,c,d,e	1.1 Responsibility
1.2 Data, Information, and Knowledge	1.2 Differentiate between data, information, and knowledge and explain their interrelationship.	1.2 Short quiz with scenarios	1.2 Quiz results			1.2 Integrity
1.3 Information Systems and Their Components	1.3 Identify and describe the main components of an Information System.	1.3 Diagramming exercise	1.3 Completed diagrams			1.3 Collaboration
1.4 Information Life Cycle	1.4 Outline the stages of the Information Life Cycle and explain the significance of each stage.	1.4 Class discussion	1.4 Discussion notes and a completed life cycle map			1.4 Diligence

1.5 Ethical, Legal, and Security Considerations in Information Management	1.5 Identify key ethical, legal, and security issues in Information Management.	1.5 Case study analysis	1.5 Written case study analyses - Rubrics with Percentage			1.5 Ethical Accountability

Chapter 2 - Systems Analysis and Design (SAD)

2.1: Introduction to System Analysis and Design (SAD)	2.1 Understand the purpose and importance of SAD in the development of information systems.	2.1 Concept Map	2.1 Concept Map Review / Case Study Discussion			2.1 Ethical Responsibility
2.2: Introduction to the System Development Life Cycle (SDLC	2.2 Identify and describe the stages of the SDLC and their significance.	2.2 SDLC Diagram	2.2 SDLC Diagram Review / Group Presentation			2.2 Systematic Thinking
2.3: Requirements Gathering and Analysis	2.3 Analyze methods and tools for effective requirements gathering.	2.3 Requirements List	2.3 Requirements Analysis Report / Interview Role-Play			2.3 Attention to Detail
2.4: System Design and Modeling	2.4 Create and evaluate system models to design solutions.	2.4 Design Model	2.4 Design Model Review / Design Prototype			2.4 Creativity

Chapter 3 - Unified Modeling Language (UML) Diagrams

3.1: Introduction to UML and Its Importance	3.1 Understand the purpose and significance of UML in system modeling.	3.1 Diagramming	3.1 Concept map, reflection			3.1 Precision and accuracy in communication
3.2: Use Case Diagrams	3.2 Identify and create use case diagrams for system functionality representation.	3.2 Create use case.	3.2 Completed diagram, analysis			3.2 Clarity and teamwork in identifying system requirements.
3.3: Class Diagrams	3.3 Analyze and design class diagrams for system structures.	3.3 Class diagram creation	3.3 Draft diagram, peer review.			3.3 Attention to detail and critical thinking.
3.4: Sequence Diagrams	3.4 Develop sequence diagrams to model interactions over time between system components.	3.4 Sequence analysis.	3.4 Diagram, interaction flow.			3.4 Logical thinking and problem-solving.
3.5: Activity Diagrams	3.5 Construct activity diagrams to illustrate workflows and business processes.	3.5 Process flowchart.	3.5 Workflow, process explanation.			3.5 Organization and efficiency in workflow design.

Chapter 4 - Database Management Systems (DBMS)

4.1: Introduction to Database Management Systems (DBMS)	4.1 Understand the purpose of a DBMS and its role in managing data efficiently.	4.1 Short quiz	4.1 Quiz results, participation	a,b,c,d,e	a,c,d,e	4.1 Responsibility in handling data
4.2: Database Models and Architecture	4.2 Differentiate between various database models (hierarchical, network, relational) and their architectures.	4.2 Diagramming	4.2 Diagrams, group presentation			4.2 Critical thinking in system design
4.3: Relational Database Concepts	4.3 Explain the concepts of relational databases, including tables, relationships, and keys.	4.3 Case study	4.3 Written report, case analysis			4.3 Attention to detail in problem-solving
4.4: Structured Query Language (SQL)	4.4 Demonstrate the ability to write basic SQL queries to manipulate and retrieve data from databases.	4.4 Hands-on exercise	4.4 SQL queries, outputs			4.4 Perseverance in mastering technical skills
4.5: Database Security and Integrity	4.5 Identify and implement best practices for database security	4.5 Group discussion	4.5 Discussion summary, group feedback			4.5 Integrity in protecting sensitive information

	and data integrity.					
4.6: Database Management and Maintenance	4.6 Explain the processes involved in maintaining and managing databases, including backup, recovery, and performance tuning.	4.6 Reflection paper	4.6 Reflection, personal insights			4.6 Accountability in ensuring system reliability

Chapter 5 - Data Modeling and Database Design						
5.1 Data Modeling Basics	5.1 Explain the concept and importance of data modeling in database design.	5.1 Case Study	5.1 Explanation, Understanding	a,b,c,d,e	a,c,d,e	5.1 Accuracy and Responsibility
5.2 Entity-Relationship (ER) Diagrams	5.2 Identify and create basic ER diagrams to model relationships between data entities.	5.2 Diagramming	5.2 Diagram, Application			5.2 Precision, Attention to Detail
5.3 Relational Design Principles	5.3 Apply principles of relational design.	5.3 Design Exercise	5.3 Design, Application			5.3 Logical Thinking, Systematic Approach
5.4 Normalization	5.4 Apply normalization up to 3NF.	5.4 Normalization	5.4 Analysis, Simplification			5.4 Clarity, Structure

5.5 Database Keys	5.5 Differentiate primary, foreign, composite keys.	5.5 Identification	5.5 Differentiation, Application			5.5 Organization, Integrity

Chapter 6 - Data Warehousing and Data Mining

6.1 Data Warehousing Basics	6.1 Explain data warehousing and its importance in data storage for analysis.	6.1 Diagramming	6.1 Diagrams, Definitions	a,b,c,d,e	a,c,d,e	6.1 Organization, Strategic Thinking
6.2 Data Warehousing Architecture	6.2 Identify components like ETL and storage layers in data warehousing.	6.2 Diagram Analysis	6.2 Written Explanations			6.2 Precision, Analysis
6.3 Data Mining Basics	6.3 Describe data mining and its purpose in identifying data patterns.	6.3 Research Summary	6.3 Reports			6.3 Critical Thinking, Insight
6.4 Data Mining Techniques	6.4 Explain techniques such as classification and clustering.	6.4 Case Analysis	6.4 Case Solutions			6.4 Problem-Solving, Innovation
6.5 Applications in Industries	6.5 Discuss uses of data warehousing and mining in sectors like	6.5 Presentation	6.5 Real Examples			6.6 Relevance, Practical Knowledge

	healthcare and finance.					
6.6 Ethics and Privacy in Data Mining	6.6 Address ethical concerns in data handling and security.	6.6 Case Discussion	6.6 Reflections			6.6 Integrity, Responsibility

Examination (4 hours)
Lectures (36 hours)
Laboratory (54 hours)
Total no. of Hours: 94 hours

8. Course Evaluation

Course Requirement: In this course, students will create a data management plan outlining strategies for data collection, storage, and security. They will design an information system to manage data operations, assess and improve business information systems, diagram the flow of information within an organization, and develop guidelines for data governance and privacy.

Grading System:

MIDTERM		**FINAL TERM**	
Exam	-40%	Exam	-40%
HO/Case Study/Assignment/Quizzes	-20%	HO/Case Study/Assignment/Quizzes	-20%
Exercise/Project	-30%	Exercise/Project	-30%
Attendance	-10%	Attendance	-10%
	100%		100%

MTG+FTG/2=FG

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