Republic of the Philippines
SULTAN KUDARAT STATE UNIVERSITY
Isulan, Sultan Kudarat
College of Computer Studies
S.Y. 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 Systems can:	a	B	c	d
a) Perform theoretical and practices skills in innovating latest technology in computing;	/	/	/	/
b) Design and implement business information systems;			/	/
c) Design industry-based services and technology that will promote advancement and development to the community;			/	/
d) Demonstrate the code of conduct as well as social and legal aspects of Information System.	/	/	/	/

1. Course Code : IS 312
2. Course Title : Systems Infrastructure and Integration
3. Prerequisite :
4. Credits : 3 UNITS

5. Course Description:

The purpose of this course is to enable students to assimilate, identify and analyze modern Information Systems infrastructures and emerging technologies for the organization. Students will learn how to integrate the systems infrastructure and emerging technologies to best serve the organizational needs and enhance the organization's competitive position. .

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
a) Identify, evaluate and select an integrated systems infrastructure (hardware, software, architectures, and services) to best fulfill a given set of organizational requirements.	/	/		
b) Critically analyze an existing systems infrastructure in an organization, identify its strengths and weaknesses, and develop a roadmap for future evolution.	/	/		
c) Critically assess an emerging technology and demonstrate how it can be used to enhance a firm's competitive position.	/	/	/	/
d) Analyze and appraise the technical, managerial, security, regulatory, and ethical issues associated with the acquisition, deployment, and management of modern Systems Infrastructures and how this will be integrated to best serve the organization.	/	/	/	/

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
SKSU VMGO, Classroom Policies, Course Overview, Course Requirements, Grading System (1 hours)						
1. Discuss the VMGO of the university, classroom policies, scope of the course, course requirements	1.1 Student can be aware of and appreciate of the university's VMGO, classroom policies, course overview, requirements and grading system.	Individual participation in class discussion	Class Participation			Value of appreciation

and grading system						
Topic 1: Introduction: Living in a Network Centered World (3hrs)						
1.1. Discuss how networks impact daily life support business and personal communications. 1.2. Discuss the role of data networking in the human network. 1.3. Explain the key components of the data network. 1.4. Characteristics of network architectures: fault tolerance, scalability, quality of service, and security. 1.5. Identify the opportunities and challenges from converged networks.	At the end of the topic, the students can: 1.1. Understand how networks impact daily life support business and personal communications. 1.2. Explain and relate in real situation the role of data networking in the human network. 1.3. Understand and explain the key components of the data network. 1.4. Characteristics of network architectures: fault tolerance, scalability, quality of service, and security. 1.5. Identify the opportunities and challenges from converged networks.	Students participation in question and answer activity facilitated by teacher Quizzes and Assignments In-class Activity: Case Study Analysis Individual or Group Interactive Sessions	Rubrics score for group collaboration / In-class presentation Individual score for class participation Result of Quizzes/ Assignments Rubrics for Individual or Group Interactive Sessions	A,B,D	A,B,D	Optimistic Value of participation Value of appreciation Determination
Topic 2: Information Systems and Its Components (6 hours)						
2.1 Discuss information systems in functional perspective and structural perspective.	At the end of the topic, the students can: 2.1 Explain information systems in functional perspective and structural perspective. Then analyze its differences.	Students participation in question and answer activity facilitated by teacher	Rubrics score for group collaboration / In-class presentation	A,B,D	A,B,D	Alertness Patience Unity and Collaboration

2.2 Discuss information systems technically. 2.3 Explain and illustrate the activities in an information system produce an information that organizations need to make decisions, control operations, analyze problems, and create new products or services (input, processing, output). 2.4 Discuss the computer-based information systems. 2.5 Explain and differentiate the components of information systems. 2.6 Differentiate between Computers and Information Systems. 2.7 Discuss between Information Technology and Information Systems.	2.2 Define information systems technically and how it could support business decision making. 2.3 Examine the activities in an information system produce an information that organizations need to make decisions, control operations, analyze problems, and create new products or services (input, processing, output). 2.4 Understand the computer-based information systems. 2.5 Enumerate, explain and give example on the components of information systems. 2.6 Analyze and understand Computers and Information Systems. 2.7 Understand between Information Technology and Information Systems.	Pair Activity: List example in each components Quizzes and Assignments Case Study Analysis Board work: input, processing, output illustration	Individual score for class participation Result of Quizzes/ Assignments Rubrics for Individual or Group Interactive Sessions			Value of participation Value of appreciation

Topic 3: Introduction to Computer Networks and Architecture (9 hours)						
3.1 Discuss wired vs. wireless technology. 3.2 Define Computer networks and understand why networks use in an organization. 3.3 Discuss and present common types of computer networks and examine what network design fit in needs of organization. 3.4 Differentiate Peer-to-peer networks into client/server network. 3.5 Discuss and present the LAN, MAN & WAN Networks. 3.6 Discuss Network Topologies. 3.7 Explain the importance of network architecture in an information systems.	At the end of the topic, the students can: 3.1 Differentiate wired vs. wireless technology and give example of its application. 3.2 Understand Computer networks and understand why networks use in an organization. 3.3 Learn and identify common types of computer networks and determine what network design fit in needs of organization. 3.4 Identify and give example of the Peer-to-peer networks into client/server network fits to business needs. 3.5 Understand and label the LAN, MAN & WAN Networks. 3.6 Identify different Network Topologies. 3.7 Understand the importance of network architecture in an information systems.	Students participation in question and answer activity facilitated by teacher Pair Activity: Assessing the tools Quizzes and Assignments In-class Activity: Network Illustration Individual or Group Interactive Sessions Drawing and Presentation	Rubrics score for group collaboration / In-class presentation Individual score for class participation Result of Quizzes/ Assignments Rubrics for Individual or Group Interactive Sessions	A,B,D	A,B,D	Attentiveness Confidence Creative Effectiveness Unity and Collaboration Value of participation Value of appreciation

Topic 4: Understanding the Data and the Data Warehousing (6 hours)						
4.1 Discuss the basic definitions and concepts of data warehouses 4.2 Explain data warehousing architectures 4.3 Describe the processes used in developing and managing data warehouses 4.4 Explain data warehousing operations 4.5 Illustrate the data integration and the extraction, transformation, and load (ETL) processes	At the end of the topic, the students can: 4.1 Understand the basic definitions and concepts of data warehouses 4.2 Understand data warehousing architectures 4.3 Describe the processes used in developing and managing data warehouses 4.4 Describe data warehousing operations 4.5 Understand data integration and the extraction, transformation, and load (ETL) processes	Students participation in question and answer activity facilitated by teacher Quizzes and Assignments In-class Activity: Case Study Analysis Individual or Group Interactive Sessions	Rubrics score for group collaboration / In-class presentation Individual score for class participation Result of Quizzes/ Assignments Rubrics for Individual or Group Interactive Sessions	A,B,D	A,B,D	Appreciation of the available technologies Enthusiasm Patience Teamwork
Topic 5: Information Systems Security and Control (3hours)						
5.1 Discuss why information systems are vulnerable to destruction, error, and abuse. 5.2 Explain the business	At the end of the topic, the students can: 5.1 Understand and explain why information systems are vulnerable to destruction, error, and abuse. 5.2 Learn the business value of	Students participation in question and answer activity facilitated by teacher	Rubrics score for group collaboration / In-class presentation Individual	A,B,D	A,B,D	Cooperation Meticulous Perceptive

value of security and control. 5.3 Discuss the components of an organizational framework for security and control. 5.4 Discuss the most important tools and technologies for safeguarding information resources.	security and control. 5.3 Enumerate and understand the components of an organizational framework for security and control. 5.4 List and explain the most important tools and technologies for safeguarding information resources.	Quizzes and Assignments In-class Activity: Case Study Analysis Individual or Group Interactive Sessions	score for class participation Result of Quizzes/ Assignments Rubrics for Individual or Group Interactive Sessions			Teamwork Reliability Value of Participation
Topic 6: E-Business: How Businesses Use Information Systems (12 hours)						
	At the end of the topic, the students can:					
6.1 Discuss the role played by the major types of systems in a business and their relationship to each other. 6.2 Describe the information systems supporting the major business functions: sales and marketing, manufacturing and production, finance and accounting, and human resources. 6.3 Discuss the relationship between organizations,	6.1 Evaluate and determine the role played by the major types of systems in a business and their relationship to each other. 6.2 Describe the information systems supporting the major business functions: sales and marketing, manufacturing and production, finance and accounting, and human resources. 6.3 Analyze the relationship between organizations,	Students participation in question and answer activity facilitated by teacher Quizzes and Assignments In-class Activity: Case Study Analysis Individual or Group Interactive Sessions Problem Solving	Rubrics score for group collaboration / In-class presentation Individual score for class participation Result of Quizzes/ Assignments Rubrics for Individual or Group Interactive Sessions	A,B,C,D	A,B,C,D	Appreciation of the available technologies Creative Enthusiasm Perseverance Patience Meticulous Resourcefulness

	information systems, and business processes.		information systems, and business processes.	Group Dynamic			Unity and Teamwork
6.4	Explain how enterprise applications promote business process integration and improve organizational performance.	6.4	Describe how enterprise applications promote business process integration and improve organizational performance.				
6.5	Explain the challenges posed by information systems in the enterprise and management solutions.	6.5	Assess the challenges posed by information systems in the enterprise and management solutions.				
Topic 7: Managing Projects: Information Systems (3hours)							
		At the end of the topic, the students can:				A,B,C,D	A,B,C,D	Attentiveness
7.1	Explain the objectives of project management and why is it so essential in developing information systems.	7.1	Understand the objectives of project management and why is it so essential in developing information systems.	Students participation in question and answer activity facilitated by teacher	Rubrics score for group collaboration / In-class presentation			Value of Participation
7.2	Discuss and Identify methods can be used for selecting and evaluating information systems projects and aligning them with the firm's business goals.	7.2	Learn and Identify methods can be used for selecting and evaluating information systems projects and aligning them with the firm's business goals.	Quizzes and Assignments In-class Activity: Project Assessment Individual or Group Interactive Sessions	Individual score for class participation Result of Quizzes/ Assignments Rubrics for Individual or			
7.3	Discuss how can	7.3	Determine how firms can assess					

	firms assess the business value of information systems projects.		the business value of information systems projects.		Group Interactive Sessions		
7.4	Discuss and identify the principal risk factors in information systems projects.	7.4	Understand and identify the principal risk factors in information systems projects.				
7.5	Explain what strategies are useful for managing project risk and system implementation.	7.5	Understand and apply what strategies are useful for managing project risk and system implementation.				
Final Project and Presentation (8 hours) Description of the Project**: Documentation of the Existing and Proposed Upgraded Information Systems.** Students will have a group project that they will conduct an evaluation of the existing information systems in an organization and come-up a proposal which they will have an upgrades to best serve the organization to its purpose. Presentation of the project per group will be allotted 5 minutes + 10minutes Q&A.							
Lectures (51)							
Examination (3 hours)							
Total Number of Contact Hours: 54hours							

8. Course Evaluation

Course Requirements:

- Compilation of the Individual or group interactive session
- Completion of the project

Grading System:

MIDTERM		FINAL TERM	
Exam	- 50%	Exam	- 50%
Quizzes/ In-class Activity/Assignment	- 40%	Quizzes/ In-class Activity/Assignment	- 40%
Attendance	- 10%	Attendance	- 10%

MTG+FTG/2=FG

Schedule of Examination:

Midterm exam :
Final Exam :
Class End :

References:

Text books

Gary B. Shelly and Misty E. Vermaat, Discovering Computers Fundamentals: Your Interactive Guide to the Digital World, © 2012 Course Technology, Cengage Learning, ISBN-13: 978-1-1115-3045-7

Irv Englander, The Architecture of Computer Hardware, Systems Software, and Networking: An Information Technology Approach, 5th Edition, Wiley 2014

John R. Vacca, Computer and Information Systems Security, Waltham, Copyright © 2013 Elsevier Inc.

Kenneth C., and Jane P., Laudon, Ahmed A. Elragal, Management Information Systems Managing the Digital Firm, ISBN: 978-1-4082-7160-5

Larry Long, Management information Systems, Prentice-Hall International Editions

M.C.A. (Sem III) Paper - VI- Management Information System, October 2011, Institute of Distance and Open Learning University of Mumbai

Raymond McLeod, Jr., George Schell, Management Information Systems 9th Edition, Personal Edu. South asia Pte Ltd., ISBN 981-06-9930-1

Richard Murch. Project Management: Best Practices for IT Professionals, 2001, Prentice Hall

Terru Lucey, Management Information Systems, 9th Edition, 2005, Thomson Publishing, PEARSON EDUCATION LTD, Copyright © 2013, ISBN 1-84480-126-8

Thomson Learning, The Management and Control of Quality, 5th Edition, copyright 2000 South

Supplemental

https://www.journals.elsevier.com/information-systems/

https://www.tutorialspoint.com/management_information_system/mis_quick_guide.htm

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