



Republic of the Philippines
SULTAN KUDARAT STATE UNIVERSITY
College of Computer Studies
Isulan, Sultan Kudarat
First Semester, S.Y. 2024 - 2025



CC111 – INTRODUCTION TO COMPUTING

UNIVERSITY VISION

A leading university in advancing scholarly innovation, multi-cultural convergence, and responsive public service in a borderless 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

- a. **D**eliver quality service to stakeholders to address current and future needs in instruction, research, extension, and production
- b. **O**bserve strict implementation of the laws as well as the policies and regulations of the University
- c. **A**cquire with urgency state-of-the-art resources for its service areas
- d. **B**olster the relationship of the University with its local and international customers and partners
- e. **L**everage the qualifications and competences in personnel action and staffing

- f. **E**valuate the efficiency and responsiveness of the University systems and processes

UNIVERSITY OBJECTIVES

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

Program Objectives and its relationship to University Objectives:

PROGRAM OBJECTIVES (PO)		UNIVERSITY OBJECTIVES						
A graduate of BS in Information Systems (BSIS) can:		a	b	c	d	e	f	G
a. Employ theoretical and practical skills in innovating latest technology in computing.		✓	✓	✓	✓	✓	✓	✓
b. Design and implement business information systems		✓	✓	✓	✓	✓	✓	✓
c. Promote the advancement of industry-based services and technology that contributes to the development of the community; and		✓	✓	✓	✓	✓	✓	✓
d. Demonstrate the code of conduct as well as social and legal aspects of Information Systems.		✓	✓	✓	✓	✓	✓	✓

1. **Course Code** : CC111
2. **Course Title** : Introduction to Computing
3. **Prerequisite** : NONE
4. **Credits** : 3 UNITS
5. **Course Description** :

This course provides the Computing Industry and Computing profession, including Research and Applications in different fields; an appreciation of computing in different fields such as Biology, Sociology, Environment and Gaming; and Understanding of ACM Requirements; an Appreciation of the history of computing and Knowledge of Key Components of Computer Systems (Organization and Architecture), malware, Computer Security, Internet and Internet protocols. This course also covered the topic about Number Systems.

6. Course Learning Outcomes and Relationships to Program Objectives

Course Learning Outcomes		Program Objectives				
At the end of the semester, the students can:	a	b	c	d	e	
a. describe the five components of a computer: input devices, output devices, system unit, storage devices and communication devices;	✓	✓			✓	
b. discuss the advantages and disadvantage that users experience when working with computer	✓	✓	✓		✓	
c. discuss the uses of Internet and World Wide Web	✓	✓	✓	✓	✓	
d. distinguish between system software and application software	✓	✓	✓	✓	✓	
e. differentiate among types, sizes and functions of computer in each of these categories: personal computers (desktop), mobile computers and mobile devices, game consoles, servers, mainframes, supercomputers and embedded computers	✓	✓	✓	✓	✓	
f. explain how home users, small office, home office users, mobile users, power users and enterprise users interact with computer	✓	✓	✓	✓	✓	
g. discuss how society uses computer in education, finance, health care, science, publishing, travel and manufacturing	✓	✓	✓	✓	✓	
h. describe the various types of internet and network attacks	✓	✓	✓	✓	✓	
i. discuss techniques to prevent unauthorized computer access and use	✓	✓	✓	✓	✓	
j. discuss ways to prevent health related disorders and injuries due to computer use	✓	✓	✓	✓	✓	
k. discuss issues surrounding information privacy, including electronic profiles, cookies, spyware, adware, spam, phishing, privacy laws, social engineering, employee monitoring and content filtering	✓	✓	✓	✓	✓	
l. Discuss the use of the arithmetic operation of number system.	✓	✓	✓	✓	✓	

7. Course Content

Course Objectives, Topics, Time Allotment	Desired Student Learning Outcomes	Outcomes-Based Assessment (OBA) Activities	Evidence of Outcomes	Course Learning Outcomes	Program Objectives	Values Integration
1. SKSU VMGO, Classroom Policies, Course Overview, Course Requirements, Grading System (2 hours)						
1.1. Discuss the VMGO of the university, classroom policies, scope of the course, course requirements and grading system	1. Student can be aware of and appreciate the university's VMGO, classroom policies, course overview, requirements and grading system.	Individual participation in class discussion	Group and individual discussions			Value of appreciation
2. INTRODUCTION TO COMPUTERS (4 hours)						
At the end of the lesson the student can: 2.1. Explain why computer literacy is vital to success in today's world 2.2. Describe the five components of a computer system 2.3. Discuss the advantages and disadvantages that users experience when working with computers	The student can: 2.1. understand the importance of computer literacy in today's world 2.2. identify the different components of a computer system 2.3. enumerate the advantages and disadvantages of the users when working with computers	Students participation in question and answer activity facilitated by teacher Lecture/ Discussion Demonstration Individual/Group Project	Rubrics of class participation accomplished by professor. Quizzes Rubrics for Individual/Group Project	a, b,d	a, b, d, e	Value of Unity and Cooperation Value of participation Value of Respect

2.4. Discuss the uses of internet and world wide web	2.4. appreciate the uses of internet and world wide web					
2.5. Distinguish between system software and application software	2.5. differentiate system software and application software					
2.6. Differentiate among types, sizes and functions of computers in each category	2.6. identify the different types, sizes, and functions of computer in each category					
2.7. Explain how home users, small office/home office users, mobile users, power users, and enterprise users each interact with computers	2.7. identify the different uses of computers by different users 2.8. appreciate the use of computers and its application in the society					
2.8. Discuss how society uses computers in education, finance, government, health care, science, publishing, travel, and manufacturing						

3. THE INTERNET AND THE WORLD WIDE WEB (6 hours)						
<p>At the end of the lesson the student can:</p> <p>3.1. Identify and briefly describe various broadband Internet connections</p> <p>3.2. Describe the types of Internet access providers</p> <p>3.3. Explain the purpose of a Web browser and identify the components of a Web address</p> <p>3.4. Describe how to use a search engine to search for information on the Web</p> <p>3.5. Describe the types of Web sites</p> <p>3.6. Recognize how Web pages use graphics, animation, audio, video, virtual reality, and plug-ins</p> <p>3.7. Identify the steps required for Web</p>	<p>The student can:</p> <p>3.1. Identify and describe various broadband Internet connections.</p> <p>3.2. Identify different types of Internet access providers.</p> <p>3.3. identify the importance of a Web browser and its components</p> <p>3.4. describe how to use a search engine to search information on the Web</p> <p>3.5. Identify the different types of Websites and functions.</p> <p>3.6. Identify the steps for Web publishing</p> <p>3.7. Identify the different internet services and netiquette rules.</p> <p>3.8. Appreciate the importance of different internet services</p> <p>3.9. Apply the netiquette in their everyday lives</p>	<p>Students participation in question and answer activity facilitated by teacher</p> <p>Lecture/ Discussion Demonstration</p> <p>Individual/Group Project</p>	<p>Rubrics of class participation accomplished by professor.</p> <p>Quizzes</p> <p>Rubrics for Individual/Group Project</p>	c, d, e	a, b, d,e	<p>Value of Participation</p> <p>Value of Patience and Respect</p> <p>Value of Hard work</p> <p>Creativity</p>

publishing 3.8. Explain how e-mail, mailing lists, instant messaging, chat rooms, VoIP, FTP, and newsgroups and message boards work 3.9. Identify the rules of netiquette						
4. APPLICATION SOFTWARE (6 hours)						
At the end of the lesson the student can: 4.1. Identify the four categories of application software 4.2. Identify the key features of widely used business programs 4.3. identify the key features of widely used graphics and multimedia programs 4.4. identify the key features of widely used home,	The student can: 4.1. Identify and differentiate the four categories and features of application software 4.2. Determine the key features of widely used business, graphics and multimedia, home, personal and educational programs 4.3. Describe the web applications 4.4. Identify the different types of application software used in communications	Students participation in question and answer activity facilitated by teacher Lecture/ Discussion Individual Hands-on Activity	Rubrics of class participation accomplished by professor. Quizzes Rubrics for Individual Hands-on Activity	c, d, e	a, b, c, d,e	Value of participation Value of Hard work Patience Creativity

<p>personal and educational programs</p> <p>4.5. discuss web applications</p> <p>4.6. identify the types of application software used in communications</p> <p>4.7. describe the learning aids available for application software</p>	<p>4.5. Determine the learning aids available for application software</p> <p>4.6. Determine the different application software used in communications</p> <p>4.7. Discuss the different learning aids for application software</p>					
5. THE COMPONENTS OF SYSTEM UNIT (5 hours)						
<p>At the end of the lesson the student can:</p> <p>5.1. Differentiate among the various styles of system units on desktop, computers, notebook computers, and mobile devices</p> <p>5.2. Describe the control unit and arithmetic logic unit component of a processor, and</p>	<p>The students can:</p> <p>5.1. Determine the various styles of the system units on desktop, computers notebook and mobile devices</p> <p>5.2. Explain the importance and functions of arithmetic logic unit,</p>	<p>Students participation in question and answer activity facilitated by teacher</p> <p>Lecture/ Discussion Demonstration</p>	<p>Rubrics of class participation accomplished by professor.</p> <p>Quizzes</p>	c, d, e	a, b, c, d,e	<p>Value of Participation</p> <p>Value of patience and respect</p> <p>Value of Hard work</p> <p>Creativity</p>

<p>explain the four steps in a machine cycle</p> <p>5.3. Differentiate among the various types of memory</p> <p>5.4. Describe the purpose and types of expansion slots and adapter cards</p> <p>5.5. Differentiate between a port and a connector, and explain the differences among a USB port and other ports</p> <p>5.6. Describe the types of buses in a computer</p> <p>5.7. Explain the importance of cleaning a system unit on a computer or mobile device</p>	<p>control unit and the four steps in machine cycle</p> <p>5.3. Describe the various types of memory, expansion slots and card reader and its purpose</p> <p>5.4. Determine different ports and connector, buses of a PC</p> <p>5.5. Describe the importance of cleaning a system unit on a computer or mobile device</p> <p>5.6. Differentiate the different buses in a computer system</p> <p>5.7. Demonstrate and discuss the proper way of cleaning a system unit on a computer or mobile device</p>	<p>Individual/Group Project</p>	<p>Rubrics for Individual/Group Project</p>			
---	--	---------------------------------	---	--	--	--

6. UNDERSTANDING INPUT AND OUTPUT (6 Hours)						
At the end of the lesson the student can:	Students can:					
6.1. Identify the keys and buttons commonly found on desktop, computer keyboards, and describe how keyboards for mobile computers and devices differ from desktop computer keyboards	6.1. Identify and differentiate keys, mouse, and buttons found on desktop computers that with mobile computers	Students participation in question and answer activity facilitated by teacher	Rubrics of class participation accomplished by professor.	c, d, e	a, b, c, d,e	Value of Participation
6.2. Describe different mouse types	6.2. Differentiate various type of sensitive pad and touch screen	Lecture/ Discussion Demonstration	Quizzes			Value of patience and respect
6.3. Describe various types of touch screens and explain how a touch – sensitive pad works.	6.3. Differentiate and explain the functionality of input and output devices	Individual/Group Project	Rubrics for Individual/Group Project			Value of Hard work
6.4. Explain other types of input including various game controllers, other input for smart phones, how resolution affects the quality of a picture captured on digital cameras, voice and	6.4. identify the different types of inputs and can explain how resolution affects the quality of images					Patience Creativity

<p>video input, scanners and reading devices, various biometric devices, and terminals</p> <p>6.5. Explain the characteristics of LCD monitors, LCD screens, and CRT monitors</p> <p>6.6. Summarize the various types of printers</p> <p>6.7. Identify the purpose and features of input / output devices</p> <p>6.8. Identify input and output options for physically challenged users</p>	<p>6.5. identify and differentiate the characteristics of different types of monitors</p> <p>6.6. identify the different types of printers</p> <p>6.7. appreciate the uses of input and output devices</p> <p>6.8. appreciate the importance of input and output devices for the physically and challenged users</p>					
7. STORAGE (5 hours)						
<p>At the end of the lesson the student can:</p> <p>7.1. describe the characteristics of an internal hard disks</p> <p>7.2. discuss the purpose of network attached storage devices</p> <p>7.3. describe the various types of flash</p>	<p>The student can:</p> <p>7.1. explain the characteristics of internal hard disk and the purpose of network</p> <p>7.2. describe the various types of flash memory storage, cloud storage and its</p>	<p>Students participation in question and answer activity facilitated by teacher</p> <p>Lecture/ Discussion Demonstration</p>	<p>Rubrics of class participation accomplished by professor.</p> <p>Quizzes</p>	a,b,c,d,e	a, b, c, d,e	<p>Value of patience and respect</p> <p>Value of Hard work</p> <p>Value of</p>

memory storage 7.4. describe cloud storage and explain its advantages 7.5. describe the characteristics of optical discs 7.6. differentiate among the various types of storage 7.7. identify the uses of different types of storage	advantages 7.3. explain the characteristics of optical disc and the difference among the various types of storage 7.4. determine the uses of different types of storage 7.5. enumerate the characteristics of an optical discs 7.6. explain the difference of various types of storage 7.7. appreciate the uses of storage	Individual/Group Project	Rubrics for Individual/Group Project			participation Creativity
8. OPERATING SYSTEMS AND UTILITY PROGRAMS (5 hours)						
At the end of the lesson the student can: 8.1. define system software and identify the two types of system software 8.2. summarize the features of several stand-alone operating systems: Windows, Mac OS, UNIX, Linux	The student can: 8.1 explain the system software and determine the two types of system software 8.2 discuss the features of several stand-alone OS 8.3 determine various server operating systems and	Students participation in question and answer activity facilitated by teacher Lecture/ Discussion Demonstration	Rubrics of class participation accomplished by professor. Quizzes	a,b,c,d,e	a, b, c, d,e	Value of patience and respect Value of Hard work Value of participation Creativity

8.3. identify various server operating systems	explain the embedded operating systems	Individual/Group Project	Rubrics for Individual/Group Project			
8.4. briefly describe several embedded operating systems	8.4 discuss the purpose of several utility programs					
8.5. explain the purpose of several utility programs	8.5 enumerate the purpose of several utility programs					
9. COMMUNICATIONS AND NETWORKS (5 hours)						
At the end of the lesson the student can:	The student can:	Students participation in question and answer activity facilitated by teacher	Rubrics of class participation accomplished by professor.	a,b,c	a, b, c, d,e	Value of patience and respect
9.1. discuss the purpose of the components required for successful communications	9.1 explain the purpose of the components required for successful communications and the uses of computer communications					Value of Hard work
9.2. describe the uses of computer communications	9.2 discuss the different types of networks and the purpose of communications software	Lecture/ Discussion Demonstration	Quizzes			Value of participation
9.3. differentiate among different types of networks: LANs, MANs, WANs	9.3 discuss various types of lines for communications over the telephone	Individual/Group Project	Rubrics for Individual/Group Project			Creativity

<p>9.4. explain the purpose of communications software</p> <p>9.5. describe various types of lines for communications over the telephone network</p> <p>9.6. describe commonly used communications devices</p> <p>9.7. discuss different ways to set up a home network</p> <p>9.8. describe various physical and wireless transmission media</p>	<p>network and the commonly used communications devices</p> <p>9.4 explain the different ways to set up a home network and the various physical and wireless transmission media</p> <p>9.5 identify the different lines that can be used for communications</p> <p>9.6 identify and explain the different uses of communication devices</p> <p>9.7 enumerate the ways to set up home network</p> <p>9.8 identify and classify the difference of physical and wireless transmission media</p>					
10. COMPUTER SECURITY AND SAFETY, ETHICS AND PRIVACY (5 hours)						
<p>At the end of the lesson the student can:</p> <p>10.1 Describes various types of Internet attacks and identify</p>	<p>The student can:</p> <p>10.1 enumerate the different types of Internet attacks and</p>	<p>Students participation in question and answer activity facilitated by</p>	<p>Rubrics of class participation accomplished by professor.</p>	<p>a,b, c</p>	<p>a, b, c, d,e</p>	<p>Value of patience and respect</p>

ways to safeguard against these attacks, including firewalls and intrusion detection software	knows how to safeguard against the different attacks	teacher				Value of Hard work
10.2 discuss techniques to prevent unauthorized computer access and use	10.2 apply the different ways to prevent from unauthorized computer access and use	Lecture/ Discussion Demonstration	Quizzes			Value of participation
10.3 explain the ways to protect against software theft and information theft	10.3 apply the different ways to protect against software and information theft	Individual/Group Project	Rubrics for Individual/Group Project			Creativity
10.4 discuss ways to prevent health related disorders and injuries due to computer use	10.4 apply the different ways to prevent health related disorders and injuries due to computer use					
10.5 discuss issues surrounding information privacy, including electronic profiles, cookies, spyware, and adware, spam, phishing, privacy laws, social engineering, employee monitoring and content filtering	10.5 understand the different issues surrounding privacy and security issues					

11. NUMBER SYSTEMS (5 hours)						
11.1. Discuss the use of the arithmetic operation of number system.	11.1 Explain the use and conversation of the arithmetic operation of number system.	Students participation in question and answer activity facilitated by teacher Lecture/ Discussion Demonstration	Rubrics of class participation accomplished by professor. Quizzes	a,b,c,d,e	a, b, c, d,e	
	Lecture	52 hours				
	Exam	2 hours				
	Total Contact Hours	54 hours				

8. Course Evaluation
Grading System:

MIDTERM		
Examination	-	50%
Quizzes/Assignments	-	20%
Activities/Requirements	-	20%
Attendance/ Participation	-	<u>10%</u>
TOTAL		100%
MTG+FTG/2=FG		

Schedule of Examination:

Midterm	- October 16– 18, 2024
Final Term	- December 11–13, 2024
Classes End	- December 13, 2024

References:

- O'leary, T. J., & O'leary, L. I. (2011). *Computing Essentials 2011: Making IT Work for you*. Philippines: McGraw Hill.
- Shelly, G. B., Vermaat, M. E., & et.al. (2012). *Discovering Computer Fundamentals: Your Interactive Guide to Digital World*. Cenage Learning.
- Shelly Cashman series (2010)** Introduction to Computers. Philippines: Cengage Learning Asia Pte Ltd.
- Pinard, & Romer. (2012). *CMPTR*. United States of America: Cengage International.
- Pinard, Robin M. Romer, Deborah Morley Cmptr 3. Boston, MA : Delmar Thomson Learning, 2017

Supplemental

- Computer Number Systems and its types*. (n.d.). Retrieved from includehelp.com: <https://www.includehelp.com/computer-number-systems.aspx>
- Clark, P. (2015, June 02). *Teachers Discovering Computers* . Retrieved from slideplayer.com: <http://slideplayer.com/slide/5925551/>
- Computer Number Systems and its types*. (n.d.). Retrieved from includehelp.com: <https://www.includehelp.com/computer-number-systems.aspx>
- Harle, D. R. (n.d.). *Computer Fundamentals: Number Systems*. Retrieved from cl.cam: <https://www.cl.cam.ac.uk/teaching/1415/CompFund/NumberSystemsAnnotated.pdf>
- Introduction to Computing Explorations in Language, Logic, and Machines David Evans University of Virginia (2011)*
<https://computingbook.org/FullText.pdf>
- Fundamentals of Information Systems, Sixth Edition - PowerPoint PPT Presentation*. (2015). Retrieved from powershow.com: https://www.powershow.com/view/3b4c9f-MTAxM/Fundamentals_of_Information_Systems_Sixth_Edition_powerpoint_ppt_presentation
- Telecommunications and Networks*. (n.d.). Retrieved from slideplayer.com: <http://slideplayer.com/slide/9153506/>

Prepared by:

MA. RHODORA R. GALLO
Faculty

Checked by:

ALEXIS D. APRESTO, PhD
Program Chairman, BSIS

Approved By:

BENEDICT A. RABUT, DIT
Dean, College of Computer Studies

