



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



CC 111

Introduction to Computing

1st Semester
School Year 2024 – 2025

Prepared by:

CERILO B. RUBIN, JR., MIT

Program Objectives and its relationship to University Objectives:

| PROGRAM OBJECTIVES (PO) | | UNIVERSITY OBJECTIVES | | | | | | |
|--|--|-----------------------|---|---|---|---|---|---|
| | | a | b | c | d | e | f | G |
| A graduate of BS in Information Technology (BSIT) can: | | | | | | | | |
| a. innovate technological concepts and ideas underpinning desired IT solutions | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| b. Administer competently the computer networks, system 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** : CC111
2. **Course Title** : Introduction to Computing
3. **Prerequisite** : NONE
4. **Credits** : 3 UNITS
5. **Course Description** :

This course provides of 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. It will discuss also the number system.

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 | | ✓ | ✓ | ✓ | ✓ | ✓ |

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|---|---|---|---|---|---|
| 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 | ✓ | ✓ | ✓ | ✓ | ✓ |
| I. 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 |
|--|--|---|---|--------------------------|--------------------|--------------------------------|
| 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, 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 |
| CHAPTER 1: 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 | The student can: 2.1. understand the importance of computer literacy in | Students participation in question and answer activity facilitated by | Rubrics of class participation accomplished by professor. | a, b,d | a, b, d, e | Value of Unity and Cooperation |

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| <p>2.2. today's world</p> <p>2.2. Describe the five components of a computer system</p> <p>2.3. Discuss the advantages and disadvantages that users experience when working with computers</p> <p>2.4. Discuss the uses of internet and world wide web</p> <p>2.5. Distinguish between system software and application software</p> <p>2.6. Differentiate among types, sizes and functions of computers in each category</p> <p>2.7. Explain how home users, small office/home office users, mobile users, power users, and enterprise users each interact with computers</p> <p>2.8. Discuss how society uses computers in education, finance, government, health care, science, publishing, travel, and manufacturing</p> | <p>2.2. identify the different components of a computer system</p> <p>2.3. enumerate the advantages and disadvantages of the users when working with computers</p> <p>2.4. appreciate the uses of internet and world wide web</p> <p>2.5. differentiate system software and application software</p> <p>2.6. identify the different types, sizes, and functions of computer in each category</p> <p>2.7. identify the different uses of computers by different users</p> <p>2.8. appreciate the use of computers and its application in the society</p> | <p>teacher</p> <p>Lecture/Discussion</p> <p>Individual/Group Project</p> | <p>Rubrics for Individual/Group Project</p> <p>Quizzes</p> | | | <p>Value of participation</p> <p>Value of Respect</p> |

| CHAPTER 2: FUNDAMENTALS OF WORLD WIDE WEB AND INTERNET (4 hours) | | | | | | |
|---|---|--|--|---------|-----------|---|
| At the end of the lesson the student can: 3.1. Identify and briefly describe various broadband Internet connections 3.2. Describe the types of Internet access providers 3.3. Explain the purpose of a Web browser and identify the components of a Web address 3.4. Describe how to use a search engine to search for information on the Web 3.5. Describe the types of Web sites 3.6. Recognize how Web pages use graphics, animation, audio, video, virtual reality, and plug-ins 3.7. Identify the steps required for Web publishing 3.8. Explain how e-mail, mailing lists, instant messaging, | The student can: 3.1. Identify and describe various broadband Internet connections. 3.2. Identify different types of Internet access providers. 3.3. identify the importance of a Web browser and its components 3.4. describe how to use a search engine to search information on the Web 3.5. Identify the different types of Websites and functions. 3.6. Identify the steps for Web publishing 3.7. Identify the different internet services and netiquette rules. 3.8. Appreciate the importance of different internet services 3.9. Apply the netiquette | Students participation in question and answer activity facilitated by teacher Synchronous / Asynchronous Lecture / Discussion Individual/Group Project | Rubrics of class participation accomplished by professor. Rubrics for Individual/Group Project Quizzes | c, d, e | a, b, d,e | Value of Participation Value of Patience and Respect Value of Hard work Creativity |

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| chat rooms, VoIP, FTP, and newsgroups and message boards work 3.9. Identify the rules of netiquette | in their everyday lives | | | | | |
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CHAPTER 3: APPLICATION SOFTWARE (4 hours)

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| 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, personal and educational programs 4.5. discuss web applications | 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 4.5. Determine the learning aids available for application software 4.6. Determine the different application | Students participation in question and answer activity facilitated by teacher Synchronous / Asynchronous Lecture / Discussion Individual/Group Project | Rubrics of class participation accomplished by professor. Rubrics for Individual/Group Project Quizzes | c, d, e | a, b, c, d,e | Value of participation Value of Hard work Patience Creativity |
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| 4.6. identify the types of application software used in communications | 4.7. software used in communications Discuss the different learning aids for application software | | | | | |
| 4.7. describe the learning aids available for application software | | | | | | |

CHAPTER 4: THE COMPONENTS SYSTEM UNIT (3 hours)

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|--|--|---|---|---------|--------------|---|
| At the end of the lesson the student can: | The students can: | | | | | |
| 5.1. Differentiate among the various styles of system units on desktop, computers, notebook computers, and mobile devices | 5.1. Determine the various styles of the system units on desktop, computers notebook and mobile devices | 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 Value of patience and respect Value of Hard work Creativity |
| 5.2. Describe the control unit and arithmetic logic unit component of a processor, and explain the four steps in a machine cycle | 5.2. Explain the importance and functions of arithmetic logic unit, control unit and the four steps in machine cycle | Synchronous / Asynchronous Lecture / Discussion | Rubrics for Individual/Group Project | | | |
| 5.3. Differentiate among the various types of memory | 5.3. Describe the various types of memory, expansion slots and card reader and its purpose | Individual/Group Project | Quizzes | | | |
| 5.4. Describe the purpose and types of expansion slots and adapter cards | 5.4. Determine different ports and connector, buses of a PC | | | | | |
| 5.5. Differentiate between a port and a connector, and | 5.5. Describe the importance of cleaning a system unit on a computer or mobile device | | | | | |
| | 5.6. Differentiate the different buses in a | | | | | |

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| explain the differences among a USB port and other ports 5.6. Describe the types of buses in a computer 5.7. Explain the importance of cleaning a system unit on a computer or mobile device | computer system 5.7. Demonstrate and discuss the proper way of cleaning a system unit on a computer or mobile device | | | | | |
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CHAPTER 5: UNDERSTANDING INPUT AND OUTPUT (3 Hours)

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| At the end of the lesson the student 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 | Students can: 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 Synchronous / Asynchronous Lecture / Discussion Individual/Group Project | Rubrics of class participation accomplished by professor. Rubrics for Individual/Group Project Quizzes | c, d, e | a, b, c, d,e | Value of Participation Value of patience and respect Value of Hard work Patience Creativity |
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CHAPTER 6. STORAGE (4 hours)

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| At the end of the lesson the student can: 7.1. describe the characteristics of an internal hard disks 7.2. discuss the purpose of network attached storage devices | The student can: 7.1. explain the characteristics of internal hard disk and the purpose of network 7.2. describe the various types of flash memory storage, | Students participation in question and answer activity facilitated by teacher Synchronous / Asynchronous Lecture / Discussion | Rubrics of class participation accomplished by professor. | a,b,c,d,e | a, b, c, d,e | Value of patience and respect Value of Hard work Value of participation Creativity |
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| <p>7.3. describe the various types of flash memory storage</p> <p>7.4. describe cloud storage and explain its advantages</p> <p>7.5. describe the characteristics of optical discs</p> <p>7.6. differentiate among the various types of storage</p> <p>7.7. identify the uses of different types of storage</p> | <p>7.3. explain the characteristics of optical disc and the difference among the various types of storage</p> <p>7.4. determine the uses of different types of storage</p> <p>7.5. enumerate the characteristics of an optical discs</p> <p>7.6. explain the difference of various types of storage</p> <p>7.7. appreciate the uses of storage</p> | Individual/Group Project | Rubrics for Individual/Group Project Quizzes | | | |

CHAPTER 7: OPERATING SYSTEMS AND UTILITY PROGRAMS (6 hours)

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| 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,d,e | a, b, c, d,e | Value of patience and respect Value of Hard work Value of participation Creativity |
| <p>8.1. define system software and identify the two types of system software</p> <p>8.2. summarize the features of several stand-alone operating systems: Windows, Mac OS, UNIX, Linux</p> <p>8.3. identify various server operating systems</p> | <p>8.1 explain the system software and determine the two types of system software</p> <p>8.2 discuss the features of several stand-alone OS</p> <p>8.3 determine various server operating systems and explain the embedded operating systems</p> <p>8.4 discuss the</p> | <p>Synchronous / Asynchronous Lecture / Discussion</p> <p>Individual/Group Project</p> | <p>Rubrics for Individual/Group Project</p> <p>Quizzes</p> <p>Video Presentation</p> | | | |

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| 8.4. briefly describe several embedded operating systems | 8.5 purpose of several utility programs | enumerate the purpose of several utility programs | | | | | |
| 8.5. explain the purpose of several utility programs | | | | | | | |

CHAPTER 8: COMMUNICATIONS AND NETWORKS (6 hours)

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| At the end of the lesson the student can: 9.1. discuss the purpose of the components required for successful communications | The student can: 9.1 explain the purpose of the components required for successful communications and the uses of computer communications | Students participation in question and answer activity facilitated by teacher Synchronous / Asynchronous Lecture / Discussion | Rubrics of class participation accomplished by professor. | a,b,c | a, b, c, d,e | Value of patience and respect Value of Hard work Value of participation Creativity |
| 9.2. describe the uses of computer communications | 9.2 discuss the different types of networks and the purpose of communications software | Individual/Group Project Video Presentation | Rubrics for Individual/Group Project Quizzes | | | |
| 9.3. differentiate among different types of networks: LANs, MANs, WANs | 9.3 discuss various types of lines for communications over the telephone network and the commonly used communications devices | | | | | |
| 9.4. explain the purpose of communications software | 9.4 explain the different ways to set up a home network and the various physical and wireless transmission media 9.5 identify the different lines that can be used for | | | | | |

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|--|---|--|--|--|--|--|
| 9.5. describe various types of lines for communications over the telephone network | 9.6. communications identify and explain the different uses of communication devices | | | | | |
| 9.6. describe commonly used communications devices | 9.7. enumerate the ways to set up home network | | | | | |
| 9.7. discuss different ways to set up a home network | 9.8. identify and classify the difference of physical and wireless transmission media | | | | | |
| 9.8. describe various physical and wireless transmission media | | | | | | |

CHAPTER 9: COMPUTER SECURITY AND SAFETY, ETHICS AND PRIVACY (6 hours)

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|---|---|---|---|--------|--------------|---|
| 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 Value of Hard work Value of participation Creativity |
| 10.1 Describes various types of Internet attacks and identify ways to safeguard against these attacks, including firewalls and intrusion detection software | 10.1 enumerate the different types of Internet attacks and knows how to safeguard against the different attacks | Synchronous / Asynchronous Lecture / Discussion | Rubrics for Student Presentation | | | |
| 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 | Students Presentation | Quizzes | | | |
| 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 | | | | | |

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|---|--|---|--------------------|-----------|--------------|--|
| 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 | | | | | |
| CHAPTER 10: NUMBER SYSTEM (20 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. | Synchronous / Asynchronous Lecture / Discussion | Quizzes Activities | 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

| | | |
|-------------------------------------|---|-------------|
| Exam | - | 50% |
| Quizzes/ Assignments/ Participation | - | 25% |
| Requirements / Reports | - | 25% |
| TOTAL | | 100% |
| MTG+FTG/2=FG | | |

Schedule of Examination:

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|-------------|--------------------------|
| Midterm | - October 19 – 21, 2024 |
| Final Term | - December 14 – 16, 2024 |
| Classes End | - December 16, 2024 |

References:

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Prepared by:

CERILO B. RUBIN, JR. , MIT
Subject Instructor

Checked by:

CERILO B. RUBIN ,JR. MIT
Program Chairman, BSIT

Approved By:

ELBREN O. ANTONIO. DIT
Dean, College of Computer Studies