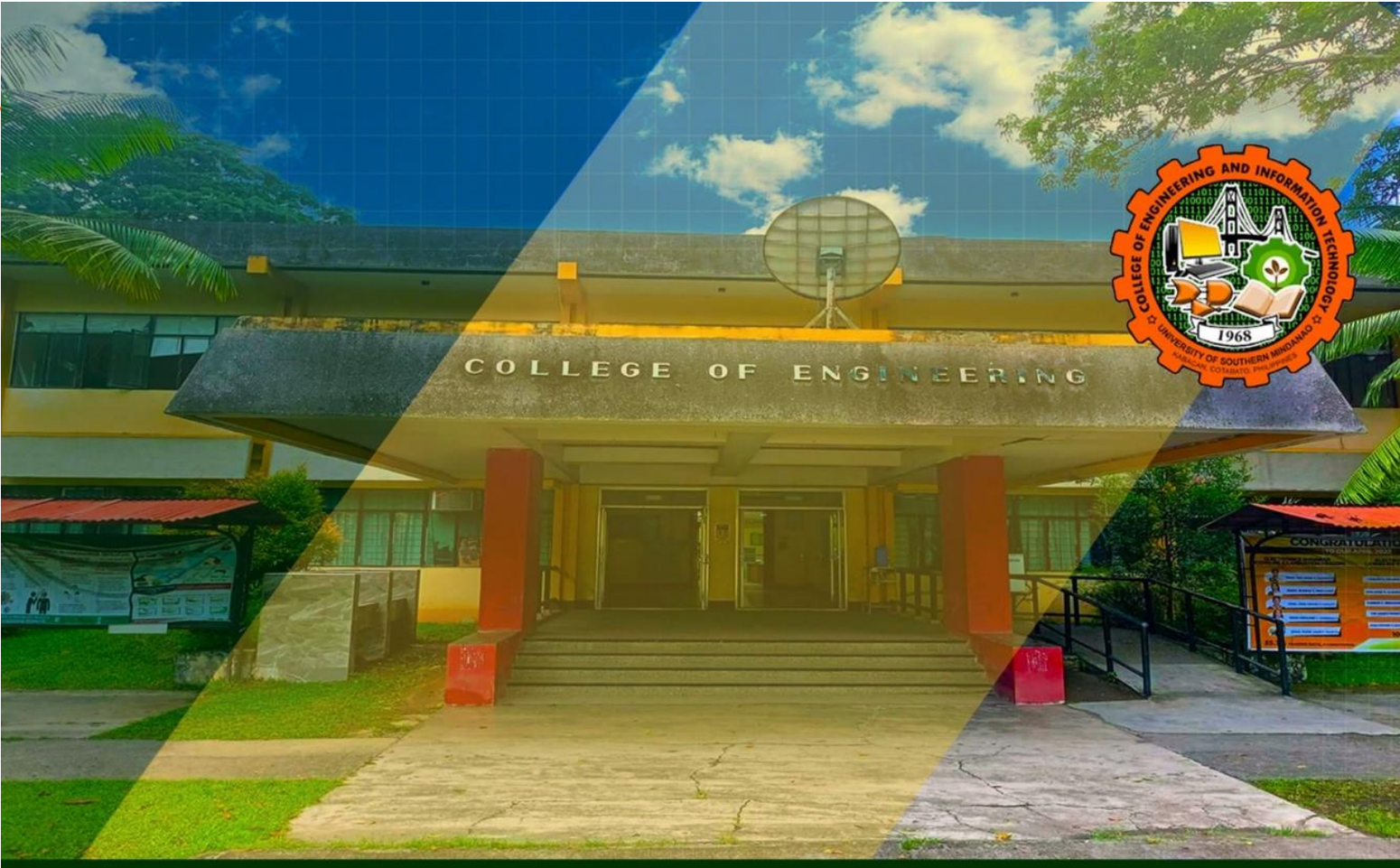


UNIVERSITY OF SOUTHERN MINDANAO

College of Engineering and Information Technology

NARRATIVE PROFILE

Bachelor of Science in Computer Science

Level III, Phase 2

NARRATIVE REPORT

Name of Program:

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Academic Unit where the Program is offered:

COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY

Institution:

UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Main Campus

Department Chairperson:

Prof. ARJAY S. AGBUNAG

College Dean:

Dr. MARICEL G. DAYADAY

University President:

Dr. JONALD L. PIMENTEL

TABLE OF CONTENTS

CURRICULUM & INSTRUCTION

WELL DEFINED OBJECTIVES

Rationale

Information Technology (IT) plays a crucial role in every organization, as modern communication and operational processes rely heavily on technological advancements. Many IT functions are computer-based and classified as automated communication systems, facilitating seamless interactions across various platforms.

The effective implementation of IT requires the integration of computer hardware and software. Key applications such as database management and information system reporting depend on computers to ensure accuracy, speed, and efficiency. In today's digital landscape, numerous activities are driven by technological innovations, including global electronic mailing systems, teleconferencing platforms, banking operations, and other remote services within the expansive domain of cyberspace.

With these advancements, the future will be significantly shaped by computers. Industries such as design and manufacturing increasingly incorporate automation, with many plants and factories already optimizing their processes through computerization.

Despite the widespread adoption of technology, the notion that computers will replace human workers remains a misconception. Computers will continue to serve as tools rather than autonomous decision-makers, reinforcing the necessity for skilled professionals in IT-related fields. The demand for experts in computer design, production, maintenance, operation, and programming is expected to grow, underscoring the importance of specialized education in this discipline.

The establishment of degree programs in IT—such as the **Bachelor of Science in Computer Science**—has been both timely and relevant. For the University of Southern Mindanao, whose mandate includes fostering

human resource development in Southern Philippines, the introduction of this program was a strategic initiative aligned with its mission.

To remain responsive to technological advancements and regulatory standards, the program's curriculum has undergone multiple revisions. It adheres to the guidelines set forth by the Commission on Higher Education (CHED), specifically Memorandum Order No. 25, Series of 2015, which outlines revised policies for Bachelor of Science programs in Computer Science, Information Systems, and Information Technology. Additionally, it complies with Memorandum Order No. 20, Series of 2013, which defines the general education curriculum aimed at fostering holistic understanding, intellectual growth, and civic competencies.

The Computer Science program is designed to cultivate well-rounded, highly skilled professionals equipped to navigate the complexities of the modern digital landscape. Through rigorous training in technical concepts, algorithmic foundations, and emerging ICT trends, students develop the analytical and problem-solving abilities necessary to address real-world challenges. Beyond technical expertise, the program emphasizes ethical responsibility, professional integrity, and social awareness, ensuring graduates are prepared to innovate, lead, and contribute meaningfully to both industry and society.

Objectives

The **Computer Science** program aims to:

1. develop students to become versatile, competitive, responsible individuals so that they may be able to address issues affecting the economy, safety, globalization and ethics;

2. train students in acquiring technical skills and knowledge on the concepts of theories; algorithm foundations, abstract and analytical processes, trends in ICT and other computer science related areas;
3. produce IT professionals who are:
   (1) proficient in designing, developing, and implementing computer based solutions;
   (2) able to apply fundamental concepts as problem solving skills;
   (3) able to recognize and apply technical standards and interoperability; and
   (4) able to practice their profession with high regard on the quality standards and ethical values; and
4. mold the students to become socially aware by involving them in research and extension activities as integration knowledge learned from the different areas of computer science.

The program's objectives focus on developing versatile individuals, equipping students with technical skills, producing proficient IT professionals, and fostering social awareness through research and community engagement.

ADEQUATE AND RELEVANT PROJECTS/ACTIVITIES TO ACHIEVE OBJECTIVES

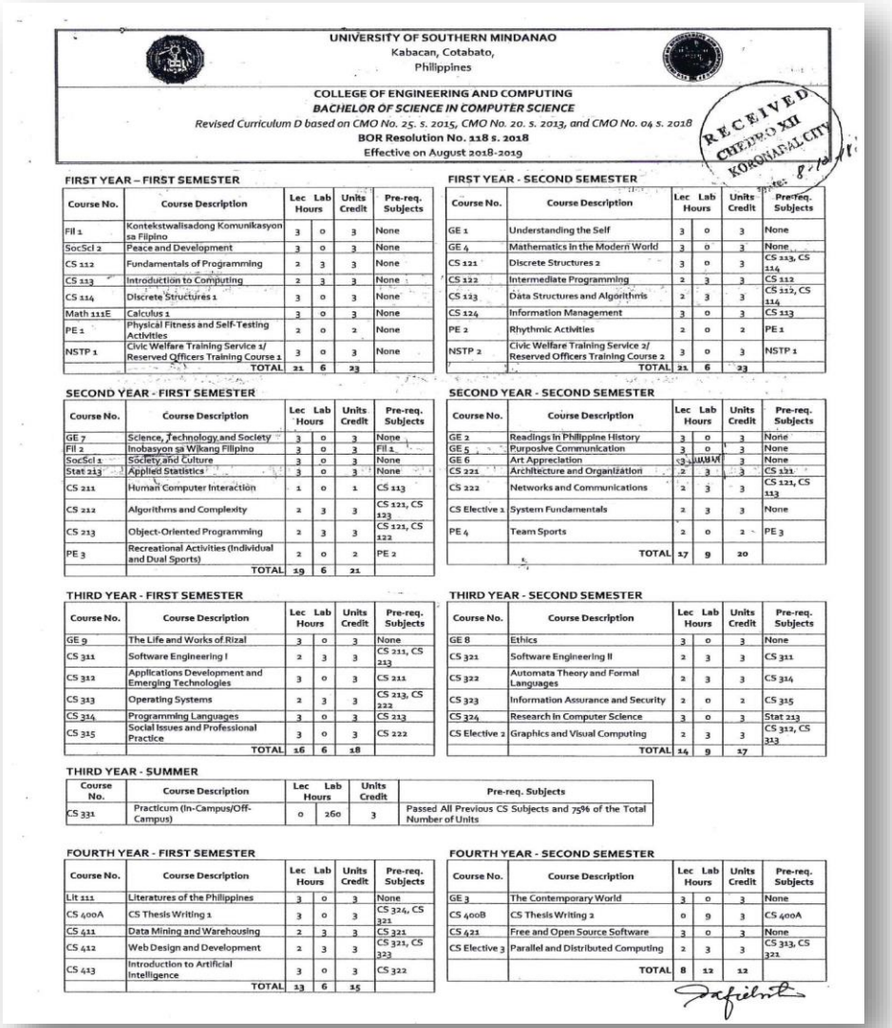
The Curriculum

Companies nowadays are geared towards the use of technology and prefer employing graduates who are not just computer literate but also have good analyzing skills, as well as knowledge in programming and systems development just to name a few.

The program is congruent with the university's mission and vision as well as the goals of the academic unit. Recent trends and developments are integrated in the courses through using recent reference materials, and course requirements such as researches, projects, on the job trainings, seminars, and field trips.

The latest revision of the BSCS curriculum was a collaborative effort by the stakeholders such that includes the faculty of the Department of Computing and Library Information Science, students, alumni, and industry partners through meetings to support the K-12 program with additional courses and standardized course codes where each requires a comprehensive syllabus with most recent references utilizing a variety of methods for effective transfer of knowledge and properly assess students' performance based on latest national standards, and recent trends.

To date, three (3) curriculums are used. The curriculum in Figure 1 is used by the 4th year students, while the curriculum in Figure 2(a) is used by the 2nd year, and 3rd year students and Figure 2(b) is used by the 1st year students.



UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato,
Philippines

COLLEGE OF ENGINEERING AND COMPUTING
BACHELOR OF SCIENCE IN COMPUTER SCIENCE
Revised Curriculum D based on CMO No. 25. s. 2015, CMO No. 20. s. 2013, and CMO No. 04 s. 2018
BOR Resolution No. 118 s. 2018
Effective on August 2018-2019

RECEIVED
CHEDRO XII
KORONADAL CITY

FIRST YEAR – FIRST SEMESTER

Course No.	Course Description	Lec Hours	Lab Hours	Units Credit	Pre-req. Subjects
Fil 1	Kontekstwalisadong Komunikasyon sa Filipino	3	0	3	None
SocSci 2	Peace and Development	3	0	3	None
CS 112	Fundamentals of Programming	2	3	3	None
CS 113	Introduction to Computing	2	3	3	None
CS 114	Discrete Structures 1	3	0	3	None
Math 111E	Calculus 1	3	0	3	None
PE 1	Physical Fitness and Self-Testing Activities	2	0	2	None
NSTP 1	Civic Welfare Training Service 1/ Reserved Officers Training Course 1	3	0	3	None
	TOTAL	21	6	23	

FIRST YEAR - SECOND SEMESTER

Course No.	Course Description	Lec Hours	Lab Hours	Units Credit	Pre-req. Subjects
GE 1	Understanding the Self	3	0	3	None
GE 4	Mathematics in the Modern World	3	0	3	None
CS 121	Discrete Structures 2	3	0	3	CS 113, CS 114
CS 122	Intermediate Programming	2	3	3	CS 112
CS 123	Data Structures and Algorithms	2	3	3	CS 112, CS 114
CS 124	Information Management	3	0	3	CS 113
PE 2	Rhythmic Activities	2	0	2	PE 1
NSTP 2	Civic Welfare Training Service 2/ Reserved Officers Training Course 2	3	0	3	NSTP 1
	TOTAL	21	6	23	

SECOND YEAR - FIRST SEMESTER

Course No.	Course Description	Lec Hours	Lab Hours	Units Credit	Pre-req. Subjects
GE 7	Science, Technology and Society	3	0	3	None
Fil 2	Inobasyon sa Wikang Filipino	3	0	3	Fil 1
SocSci 1	Society and Culture	3	0	3	None
Stat 213	Applied Statistics	3	0	3	None
CS 211	Human Computer Interaction	1	0	1	CS 113
CS 212	Algorithms and Complexity	2	3	3	CS 121, CS 123
CS 213	Object-Oriented Programming	2	3	3	CS 121, CS 122
PE 3	Recreational Activities (Individual and Dual Sports)	2	0	2	PE 2
	TOTAL	19	6	21	

SECOND YEAR - SECOND SEMESTER

Course No.	Course Description	Lec Hours	Lab Hours	Units Credit	Pre-req. Subjects
GE 2	Readings in Philippine History	3	0	3	None
GE 5	Purposive Communication	3	0	3	None
GE 6	Art Appreciation	3	0	3	None
CS 221	Architecture and Organization	2	3	3	CS 121
CS 222	Networks and Communications	2	3	3	CS 121, CS 113
CS Elective 1	System Fundamentals	2	3	3	None
PE 4	Team Sports	2	0	2	PE 3
	TOTAL	17	9	20	

THIRD YEAR - FIRST SEMESTER

Course No.	Course Description	Lec Hours	Lab Hours	Units Credit	Pre-req. Subjects
GE 9	The Life and Works of Rizal	3	0	3	None
CS 311	Software Engineering I	2	3	3	CS 211, CS 213
CS 312	Applications Development and Emerging Technologies	3	0	3	CS 211
CS 313	Operating Systems	2	3	3	CS 213, CS 222
CS 314	Programming Languages	3	0	3	CS 213
CS 315	Social Issues and Professional Practice	3	0	3	CS 222
	TOTAL	16	6	18	

THIRD YEAR - SECOND SEMESTER

Course No.	Course Description	Lec Hours	Lab Hours	Units Credit	Pre-req. Subjects
GE 8	Ethics	3	0	3	None
CS 321	Software Engineering II	2	3	3	CS 311
CS 322	Automata Theory and Formal Languages	3	3	3	CS 314
CS 323	Information Assurance and Security	2	0	2	CS 315
CS 324	Research in Computer Science	3	0	3	Stat 213
CS Elective 2	Graphics and Visual Computing	2	3	3	CS 312, CS 313
	TOTAL	14	9	17	

THIRD YEAR - SUMMER

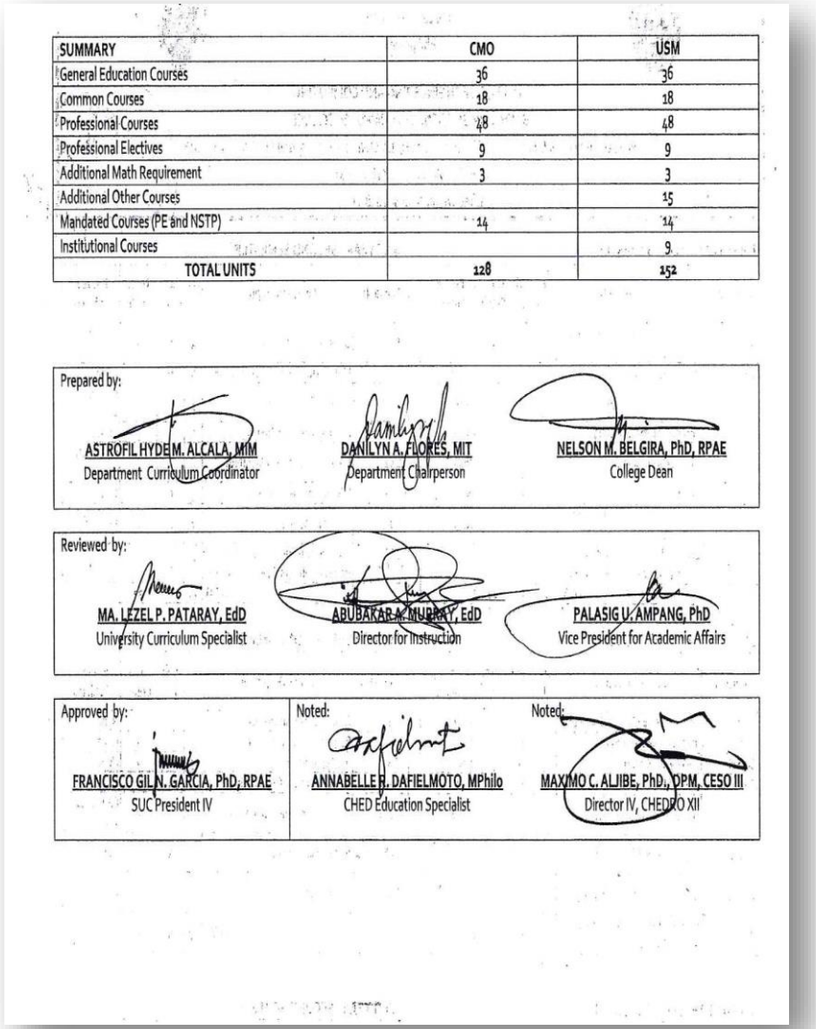
Course No.	Course Description	Lec Hours	Lab Hours	Units Credit	Pre-req. Subjects
CS 331	Practicum (In-Campus/Off-Campus)	0	260	3	Passed All Previous CS Subjects and 75% of the Total Number of Units

FOURTH YEAR - FIRST SEMESTER

Course No.	Course Description	Lec Hours	Lab Hours	Units Credit	Pre-req. Subjects
Lit 111	Literatures of the Philippines	3	0	3	None
CS 400A	CS Thesis Writing 1	3	0	3	CS 324, CS 321
CS 411	Data Mining and Warehousing	2	3	3	CS 321
CS 412	Web Design and Development	2	3	3	CS 321, CS 323
CS 413	Introduction to Artificial Intelligence	3	0	3	CS 322
	TOTAL	13	6	15	

FOURTH YEAR - SECOND SEMESTER

Course No.	Course Description	Lec Hours	Lab Hours	Units Credit	Pre-req. Subjects
GE 3	The Contemporary World	3	0	3	None
CS 400B	CS Thesis Writing 2	0	9	3	CS 400A
CS 421	Free and Open Source Software	3	0	3	None
CS Elective 3	Parallel and Distributed Computing	2	3	3	CS 313, CS 321
	TOTAL	8	12	12	



SUMMARY	CMO	USM
General Education Courses	36	36
Common Courses	18	18
Professional Courses	48	48
Professional Electives	9	9
Additional Math Requirement	3	3
Additional Other Courses		15
Mandated Courses (PE and NSTP)	14	14
Institutional Courses		9
TOTAL UNITS	128	152

Prepared by:

ASTROFIL HYDE M. ALCALA, MIM
Department Curriculum Coordinator

DANILYN A. FLORES, MIT
Department Chairperson

NELSON M. BELGIRA, PhD, RPAE
College Dean

Reviewed by:

MA. LEZEL P. PATARAY, EdD
University Curriculum Specialist

ABUBAKAR A. MURRAY, EdD
Director for Instruction

PALASIG U. AMPANG, PhD
Vice President for Academic Affairs

Approved by:

FRANCISCO GIL N. GARCIA, PhD, RPAE
SUC President IV

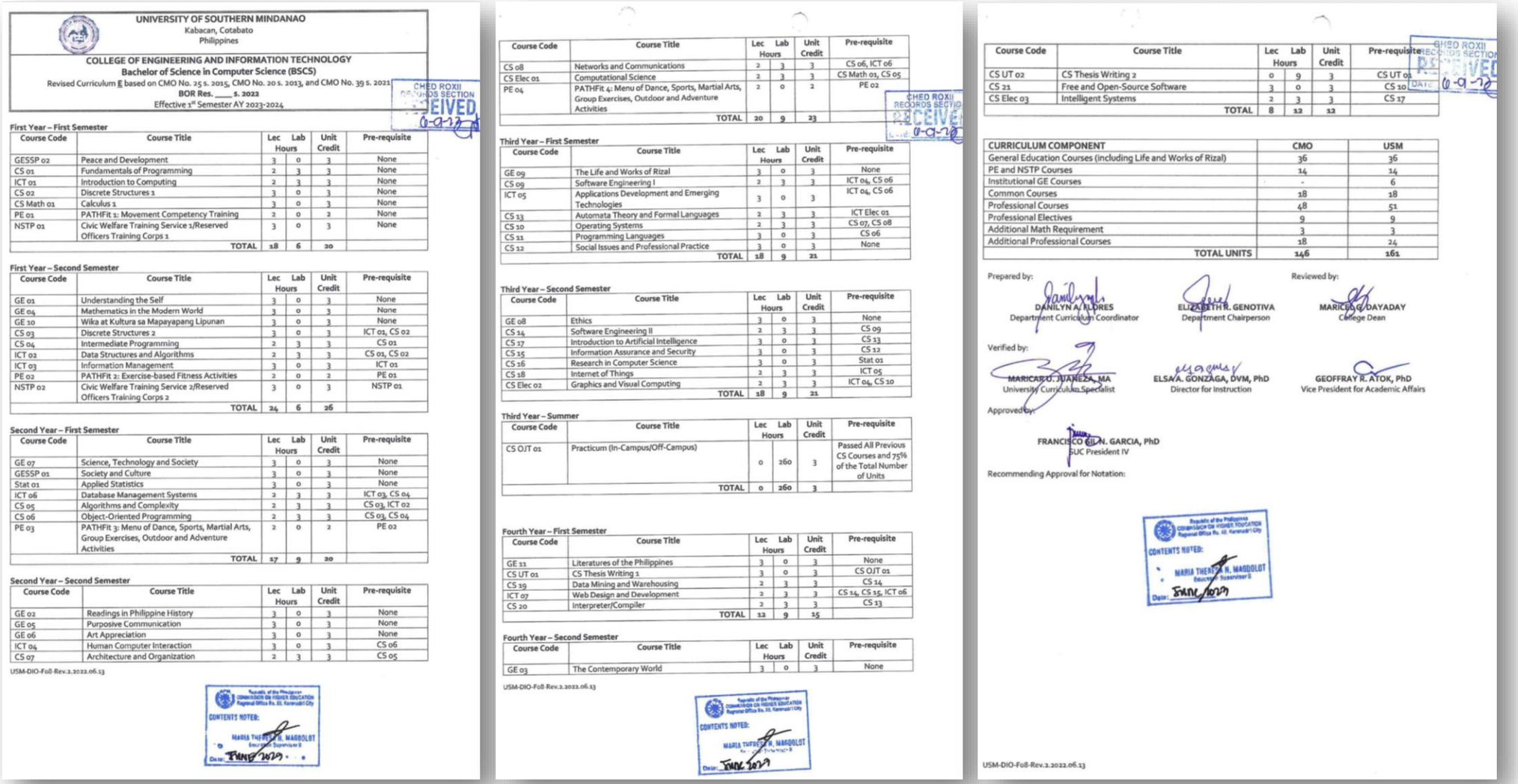
Noted:

ANNABELLE R. DAFIELMOTO, MPhilo
CHED Education Specialist

Noted:

MAXIMO C. ALJIBE, PhD., DPM, CESO III
Director IV, CHEDRO XII

Figure 1. Old Curriculum



UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Philippines

COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY
Bachelor of Science in Computer Science (BSCS)
Revised Curriculum E based on CMO No. 25 s. 2015, CMO No. 20 s. 2013, and CMO No. 39 s. 2021
BOR Res. ___ s. 2022
Effective 1st Semester AY 2023-2024

CHED ROXII RECORDS SECTION RECEIVED 0-9-22

First Year – First Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GESSP 02	Peace and Development	3	0	3	None
CS 01	Fundamentals of Programming	2	3	3	None
ICT 01	Introduction to Computing	2	3	3	None
CS 02	Discrete Structures 1	3	0	3	None
CS Math 01	Calculus 1	3	0	3	None
PE 01	PATHFit 1: Movement Competency Training	2	0	2	None
NSTP 01	Civic Welfare Training Service 1/Reserved Officers Training Corps 1	3	0	3	None
	TOTAL	18	6	20	

First Year – Second Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 01	Understanding the Self	3	0	3	None
GE 04	Mathematics in the Modern World	3	0	3	None
GE 10	Wika at Kultura sa Mapayapang Lipunan	3	0	3	None
CS 03	Discrete Structures 2	3	0	3	ICT 01, CS 02
CS 04	Intermediate Programming	2	3	3	CS 01
ICT 02	Data Structures and Algorithms	2	3	3	CS 01, CS 02
ICT 03	Information Management	3	0	3	ICT 01
PE 02	PATHFit 2: Exercise-based Fitness Activities	2	0	2	PE 01
NSTP 02	Civic Welfare Training Service 2/Reserved Officers Training Corps 2	3	0	3	NSTP 01
	TOTAL	24	6	26	

Second Year – First Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 07	Science, Technology and Society	3	0	3	None
GESSP 01	Society and Culture	3	0	3	None
Stat 01	Applied Statistics	3	0	3	None
ICT 06	Database Management Systems	2	3	3	ICT 03, CS 04
CS 05	Algorithms and Complexity	2	3	3	CS 03, ICT 02
CS 06	Object-Oriented Programming	2	3	3	CS 03, CS 04
PE 03	PATHFit 3: Menu of Dance, Sports, Martial Arts, Group Exercises, Outdoor and Adventure Activities	2	0	2	PE 02
	TOTAL	17	9	20	

Second Year – Second Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 02	Readings in Philippine History	3	0	3	None
GE 05	Purposive Communication	3	0	3	None
GE 06	Art Appreciation	3	0	3	None
ICT 04	Human Computer Interaction	3	0	3	CS 06
CS 07	Architecture and Organization	2	3	3	CS 05

USM-DIO-Fo8-Rev.2.2022.06.13

Republic of the Philippines COMMISSION ON HIGHER EDUCATION Regional Office No. XII, Koronadal City
CONTENTS NOTED:
MARIA THERESA H. MAGDOLOT
Education Supervisor II
Date: JUNE 2022

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
CS 08	Networks and Communications	2	3	3	CS 06, ICT 06
CS Elec 01	Computational Science	2	3	3	CS Math 01, CS 05
PE 04	PATHFit 4: Menu of Dance, Sports, Martial Arts, Group Exercises, Outdoor and Adventure Activities	2	0	2	PE 02
	TOTAL	20	9	23	

CHED ROXII RECORDS SECTION RECEIVED 0-9-22

Third Year – First Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 09	The Life and Works of Rizal	3	0	3	None
CS 09	Software Engineering I	2	3	3	ICT 04, CS 06
ICT 05	Applications Development and Emerging Technologies	3	0	3	ICT 04, CS 06
CS 13	Automata Theory and Formal Languages	2	3	3	ICT Elec 01
CS 10	Operating Systems	2	3	3	CS 07, CS 08
CS 11	Programming Languages	3	0	3	CS 06
CS 12	Social Issues and Professional Practice	3	0	3	None
	TOTAL	18	9	21	

Third Year – Second Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 08	Ethics	3	0	3	None
CS 14	Software Engineering II	2	3	3	CS 09
CS 17	Introduction to Artificial Intelligence	3	0	3	CS 13
CS 15	Information Assurance and Security	3	0	3	CS 12
CS 16	Research in Computer Science	3	0	3	Stat 01
CS 18	Internet of Things	2	3	3	ICT 05
CS Elec 02	Graphics and Visual Computing	2	3	3	ICT 04, CS 10
	TOTAL	18	9	21	

Third Year – Summer

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
CS OJT 01	Practicum (In-Campus/Off-Campus)	0	260	3	Passed All Previous CS Courses and 75% of the Total Number of Units
	TOTAL	0	260	3	

Fourth Year – First Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 11	Literatures of the Philippines	3	0	3	None
CS UT 01	CS Thesis Writing 1	3	0	3	CS OJT 01
CS 19	Data Mining and Warehousing	2	3	3	CS 14
ICT 07	Web Design and Development	2	3	3	CS 14, CS 15, ICT 06
CS 20	Interpreter/Compiler	2	3	3	CS 13
	TOTAL	12	9	15	

Fourth Year – Second Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 03	The Contemporary World	3	0	3	None

USM-DIO-Fo8-Rev.2.2022.06.13

Republic of the Philippines COMMISSION ON HIGHER EDUCATION Regional Office No. XII, Koronadal City
CONTENTS NOTED:
MARIA THERESA H. MAGDOLOT
Education Supervisor II
Date: JUNE 2022

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
CS UT 02	CS Thesis Writing 2	0	9	3	CS UT 01
CS 21	Free and Open-Source Software	3	0	3	CS 10
CS Elec 03	Intelligent Systems	2	3	3	CS 17
	TOTAL	8	12	12	

CHED ROXII RECORDS SECTION RECEIVED 0-9-22

CURRICULUM COMPONENT	CMO	USM
General Education Courses (including Life and Works of Rizal)	36	36
PE and NSTP Courses	14	14
Institutional GE Courses	-	6
Common Courses	18	18
Professional Courses	48	51
Professional Electives	9	9
Additional Math Requirement	3	3
Additional Professional Courses	18	24
TOTAL UNITS	146	161

Prepared by:
DANILYN A. FLORES
Department Curriculum Coordinator

ELIZABETH R. GENOTIVA
Department Chairperson

Reviewed by:
MARICEL G. DAYADAY
College Dean

Verified by:
MARICAR U. JUANEZA, MA
University Curriculum Specialist

ELSA A. GONZAGA, DVM, PhD
Director for Instruction

GEOFFRAY R. ATOK, PhD
Vice President for Academic Affairs

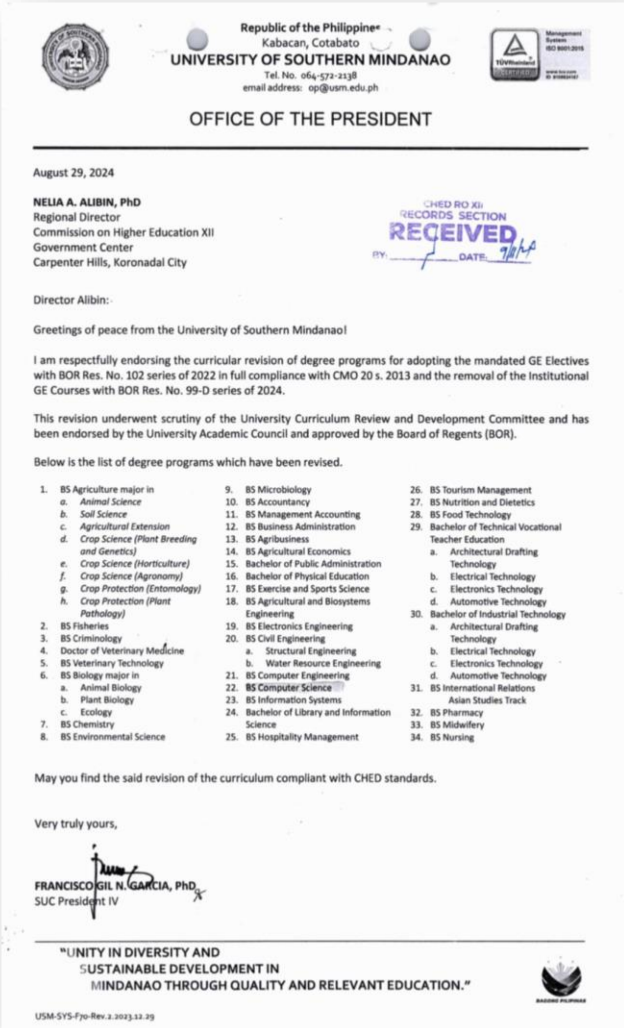
Approved by:
FRANCISCO G. N. GARCIA, PhD
SUC President IV

Recommending Approval for Notation:

Republic of the Philippines COMMISSION ON HIGHER EDUCATION Regional Office No. XII, Koronadal City
CONTENTS NOTED:
MARIA THERESA H. MAGDOLOT
Education Supervisor II
Date: JUNE 2022

USM-DIO-Fo8-Rev.2.2022.06.13

(a) Curriculum for Higher Years



Republic of the Philippines
Kabacan, Cotabato
UNIVERSITY OF SOUTHERN MINDANAO
Tel. No. 064-572-2138
email address: op@usm.edu.ph

OFFICE OF THE PRESIDENT

August 29, 2024

NELIA A. ALIBIN, PhD
Regional Director
Commission on Higher Education XII
Government Center
Carpenter Hills, Koronadal City

CHED RO XII RECORDS SECTION RECEIVED BY: DATE: 9/11/24

Director Alibin:

Greetings of peace from the University of Southern Mindanao!

I am respectfully endorsing the curricular revision of degree programs for adopting the mandated GE Electives with BOR Res. No. 102 series of 2022 in full compliance with CMO 20 s. 2013 and the removal of the Institutional GE Courses with BOR Res. No. 99-D series of 2024.

This revision underwent scrutiny of the University Curriculum Review and Development Committee and has been endorsed by the University Academic Council and approved by the Board of Regents (BOR).

Below is the list of degree programs which have been revised.

1. BS Agriculture major in
   a. *Animal Science*
   b. *Soil Science*
   c. *Agricultural Extension*
   d. *Crop Science (Plant Breeding and Genetics)*
   e. *Crop Science (Horticulture)*
   f. *Crop Science (Agronomy)*
   g. *Crop Protection (Entomology)*
   h. *Crop Protection (Plant Pathology)*
2. BS Fisheries
3. BS Criminology
4. Doctor of Veterinary Medicine
5. BS Veterinary Technology
6. BS Biology major in
   a. Animal Biology
   b. Plant Biology
   c. Ecology
7. BS Chemistry
8. BS Environmental Science
9. BS Microbiology
10. BS Accountancy
11. BS Management Accounting
12. BS Business Administration
13. BS Agribusiness
14. BS Agricultural Economics
15. Bachelor of Public Administration
16. Bachelor of Physical Education
17. BS Exercise and Sports Science
18. BS Agricultural and Biosystems Engineering
19. BS Electronics Engineering
20. BS Civil Engineering
    a. Structural Engineering
    b. Water Resource Engineering
21. BS Computer Engineering
22. BS Computer Science
23. BS Information Systems
24. Bachelor of Library and Information Science
25. BS Hospitality Management
26. BS Tourism Management
27. BS Nutrition and Dietetics
28. BS Food Technology
29. Bachelor of Technical Vocational Teacher Education
    a. Architectural Drafting Technology
    b. Electrical Technology
    c. Electronics Technology
    d. Automotive Technology
30. Bachelor of Industrial Technology
    a. Architectural Drafting Technology
    b. Electrical Technology
    c. Electronics Technology
    d. Automotive Technology
31. BS International Relations Asian Studies Track
32. BS Pharmacy
33. BS Midwifery
34. BS Nursing

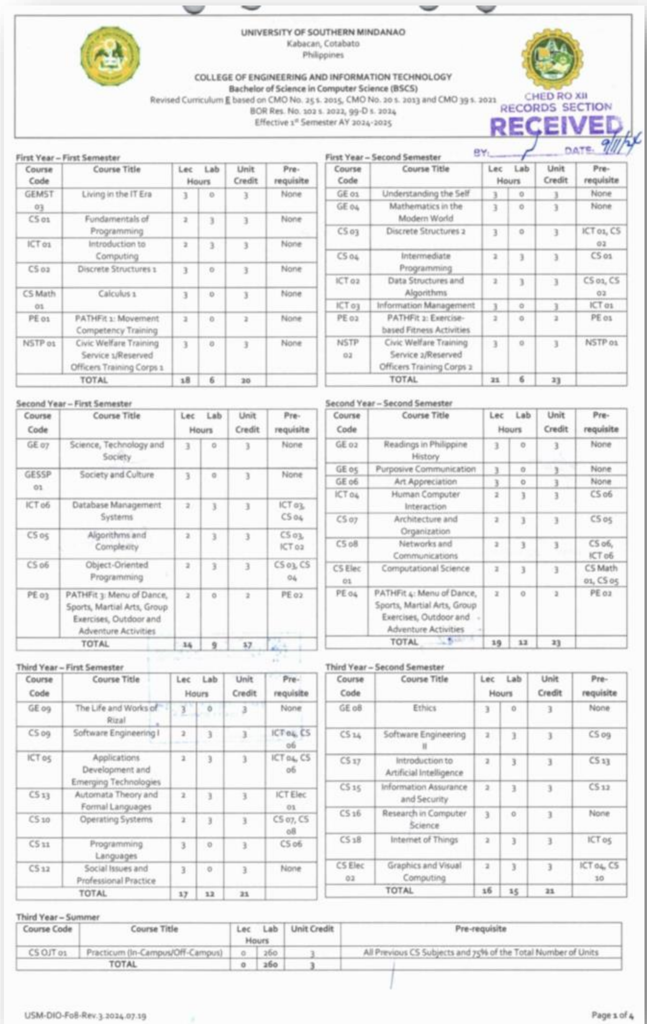
May you find the said revision of the curriculum compliant with CHED standards.

Very truly yours,

FRANCISCO GIL N. GARCIA, PhD
SUC President IV

"UNITY IN DIVERSITY AND SUSTAINABLE DEVELOPMENT IN MINDANAO THROUGH QUALITY AND RELEVANT EDUCATION."

USM-SYS-F70-Rev.2.2023.12.29



UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
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COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY
Bachelor of Science in Computer Science (BSCS)
Revised Curriculum E based on CMO No. 25 s. 2015, CMO No. 20 s. 2013 and CMO 39 s. 2021
BOR Res. No. 102 s. 2022, 99-D s. 2024
Effective 1st Semester AY 2024-2025

CHED RO XII RECORDS SECTION RECEIVED BY: DATE: 9/11/24

First Year – First Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GEMST 03	Living in the IT Era	3	0	3	None
CS 01	Fundamentals of Programming	2	3	3	None
ICT 01	Introduction to Computing	2	3	3	None
CS 02	Discrete Structures 1	3	0	3	None
CS Math 01	Calculus 1	3	0	3	None
PE 01	PATHFit 1: Movement Competency Training	2	0	2	None
NSTP 01	Civic Welfare Training Service 1/Reserved Officers Training Corps 1	3	0	3	None
TOTAL		18	6	20	

First Year – Second Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 01	Understanding the Self	3	0	3	None
GE 04	Mathematics in the Modern World	3	0	3	None
CS 03	Discrete Structures 2	3	0	3	ICT 01, CS 02
CS 04	Intermediate Programming	2	3	3	CS 01
ICT 02	Data Structures and Algorithms	2	3	3	CS 01, CS 02
ICT 03	Information Management	3	0	3	ICT 01
PE 02	PATHFit 2: Exercise-based Fitness Activities	2	0	2	PE 01
NSTP 02	Civic Welfare Training Service 2/Reserved Officers Training Corps 2	3	0	3	NSTP 01
TOTAL		21	6	23	

Second Year – First Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 07	Science, Technology and Society	3	0	3	None
GESSP 01	Society and Culture	3	0	3	None
ICT 06	Database Management Systems	2	3	3	ICT 03, CS 04
CS 05	Algorithms and Complexity	2	3	3	CS 03, ICT 02
CS 06	Object-Oriented Programming	2	3	3	CS 03, CS 04
PE 03	PATHFit 3: Menu of Dance, Sports, Martial Arts, Group Exercises, Outdoor and Adventure Activities	2	0	2	PE 02
TOTAL		14	9	17	

Second Year – Second Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 02	Readings in Philippine History	3	0	3	None
GE 05	Purposive Communication	3	0	3	None
GE 06	Art Appreciation	3	0	3	None
ICT 04	Human Computer Interaction	2	3	3	CS 06
CS 07	Architecture and Organization	2	3	3	CS 05
CS 08	Networks and Communications	2	3	3	CS 06, ICT 06
CS Elec 01	Computational Science	2	3	3	CS Math 01, CS 05
PE 04	PATHFit 4: Menu of Dance, Sports, Martial Arts, Group Exercises, Outdoor and Adventure Activities	2	0	2	PE 02
TOTAL		19	12	23	

Third Year – First Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 09	The Life and Works of Rizal	3	0	3	None
CS 09	Software Engineering I	2	3	3	ICT 04, CS 06
ICT 05	Applications Development and Emerging Technologies	2	3	3	ICT 04, CS 06
CS 13	Automata Theory and Formal Languages	2	3	3	ICT Elec 01
CS 10	Operating Systems	2	3	3	CS 07, CS 08
CS 11	Programming Languages	3	0	3	CS 06
CS 12	Social Issues and Professional Practice	3	0	3	None
TOTAL		17	12	21	

Third Year – Second Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 08	Ethics	3	0	3	None
CS 14	Software Engineering II	2	3	3	CS 09
CS 17	Introduction to Artificial Intelligence	2	3	3	CS 13
CS 15	Information Assurance and Security	2	3	3	CS 12
CS 16	Research in Computer Science	3	0	3	None
CS 18	Internet of Things	2	3	3	ICT 05
CS Elec 02	Graphics and Visual Computing	2	3	3	ICT 04, CS 10
TOTAL		16	15	21	

Third Year – Summer

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
CS OJT 01	Practicum (In-Campus/Off-Campus)	0	260	3	All Previous CS Subjects and 75% of the Total Number of Units
TOTAL		0	260	3	

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Fourth Year – First Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GESSP 04	The Entrepreneurial Mind	3	0	3	None
CS UT 01	CS Thesis Writing 1	3	0	3	CS OJT 01
CS 19	Data Mining and Warehousing	2	3	3	CS 14
ICT 07	Web Design and Development	2	3	3	CS 14, CS 15, ICT 06
CS 20	Interpreter/Compiler	2	3	3	CS 13
TOTAL		12	9	15	

Fourth Year – Second Semester

Course Code	Course Title	Lec Hours	Lab Hours	Unit Credit	Pre-requisite
GE 03	The Contemporary World	3	0	3	None
CS UT 02	CS Thesis Writing 2	0	9	3	CS UT 01
CS 21	Free and Open-Source Software	2	3	3	CS 10
CS Elec 03	Intelligent Systems	2	3	3	CS 17
TOTAL		7	15	12	

SUMMARY		
CURRICULUM COMPONENT	CMO	USM
General Education Courses (including Life and Works of Rizal)	36	36
PE and NSTP Courses	14	14
Common Courses	18	18
Professional Courses	48	51
Professional Electives	9	9
Additional Math Requirement	3	3
Additional Professional Courses	18	24
TOTAL UNITS	146	155

Prepared by:

ELIZABETH R. GENOTIVA, Department Curriculum Coordinator
DANILYN A. FLORES, Department Chairperson

Reviewed by:

MARICEL [illegible] DAYADAY, College Dean

Verified by:

MARIA LUZ D. CALIBAYAN, University Curriculum Specialist
LEORENCE C. TANDOG, Director for Instruction
MARCOS F. MONDERIN, Vice President for Academic Affairs

Approved by:

FRANCISCO GIL N. GARCIA, PhD, SUC President IV

Recommending Approval for Notation:

CONTENTS NOTED: MARIA THERESA R. MAR[illegible] Date: Oct 2024

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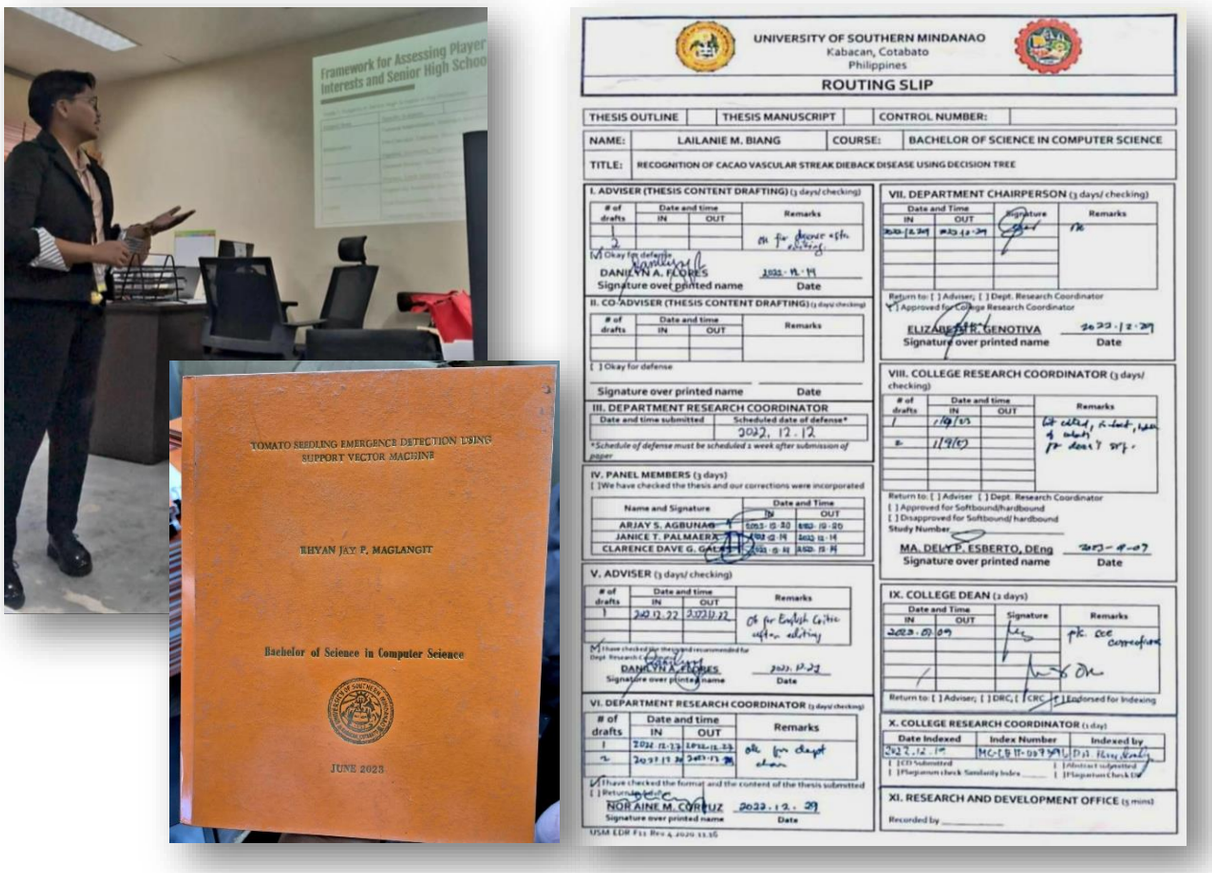
(b) Curriculum for Freshmen

Figure 2. New Curriculum

Student Researches

Being a research university and as part of the curriculum, BSCS students are required to complete an undergraduate thesis with topics that are from those specified in the CMO. From title formulation up to defending the title, outline, and manuscript, students are closely monitored by their adviser and the department research coordinator. They are as well guided during the defense (Figure 3 (a)) up until the manuscripts are bound (Figure 3 (b)) and signed by the panel members who asses how well they understood their study and their work logically and technically monitored using a routing slip (Figure 3 (c)). These researches are indexed and recorded in the university's Research and Development Information System (Figure 4) that also automatically checks for title similarities upon encoding so that studies are not duplicated. Table 1 lists the titles of students' researches for Academic Year 2019-2020 to 2024-2025.



(a) Defense (b) Hardbound (c) Routing Slip

Figure 3. Student Thesis

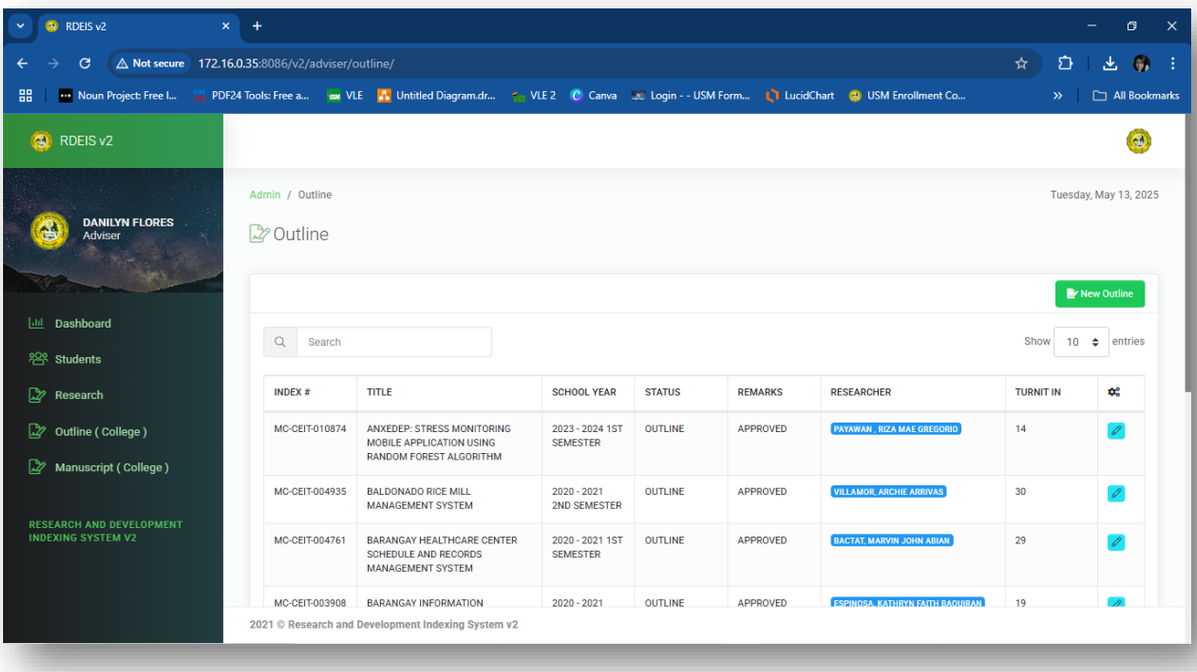


Figure 4. RDEIS

Table 1. List of Student Researches

ACADEMIC YEAR 2024-2025			
No	**Year**	**Title**	**Researcher**
1	2025	Coffee Beans Classification using CNN	Aballe, Novee Anne Amore A.
2	2025	Leveraging Machine Learning and Computer Vision for Early Detection of Tomato Dieses	Agustin, Riolynne R.
3	2025	A Yolo-based Tricycle Body Number Detection for Live Video Security in University of Southern Mindanao	Ardina, Bien Anjelou P.
4	2025	USM Applicant Screening and Evaluation using Fuzzy Matching Algorithm	Arisgado, Mary Ann T.
5	2025	A Keyword-Based Essay Checker Using Optical Character Recognition And Fuzzy Matching Algorithm	Arroyo, Karen Mae C.
6	2025	Classifying Curcuma Varieties using K-nearest Neighbors Algorithm and Support Vector Machine(SVM) Algorithm	Badua, Aizalyn B.
7	2025	Early Detection of hypertension using Machine Learning techniques with Data Visualization	Bajenting, Nikki M.
8	2025	A Dijkstra-Based Mobile Application for Tricycle Ride-Hailing in University of Southern Mindanao	Ballares, Jimboy D.
9	2025	Thesis Search Engine: A Machine Learning-Based Repository Searching System	Cagas, Christian Jay A.
10	2025	Identifying Teachers Deficiency Using Random Forest	Calacar, Maria V.
11	2025	Lanzones (Lancium Domesticum) Leaf Diseases Identification using Convolutional Neural Network (CNN)	Cambie Auman De Leon
12	2025	QuizSense: A Web Application for Multiple-Choice Question Quiz Maker	Camanto, Arifeh Osama C.
13	2025	Moisture Determination in Natural Rubber Cup lump using RGB-Multispectral Imaging and Deep Learning	Cascaño, Aian A.
14	2025	A Multilingual Text-Based Stress Detection on Facebook Notes Using Naïve Bayes Algorithm	Castillo, Drexel Jade L.

15	2025	Predicting Employee Turnover Using Machine Learning	Catcatan, Loren S.
16	2025	USM Student Risk Classification Using Random Forest	Ceralbo, Rico Jr. P.
17	2025	SENTIMENT ANALYSIS OF CUSTOMER REVIEWS ON SHOPPE AND LAZADA USING NAÏVE BAYES	Cillo, Desiree Mae B.
18	2025	Rubber Leaf Nitrogen Deficiency Classification using Image Processing Techniques and Machine Learning	Divinagracia, Janice G.
19	2025	Sentiment Analysis of Student Commuting Satisfaction at USM Campus	Edianon, Lincel Jay D.
20	2025	Predicting Faculty Performance in the University of Southern Mindanao Using Data Analytics and Deep Learning	Imbong, Asma D.
21	2025	MangGO: Mobile Application For Identification of Mango (Mangifera Indica) Leaf Disease Using Convolutional Neural Netwoks (CNNs)	Kalag, Hasmin K.
22	2025	Classifying of Corn leaf Disease using CNN	Laquinario, Angel Kris M.
23	2025	Sales Forecasting for USM PCC Dairy Products using the ARIMA Model	Mahusay, Rommela Jane P.
24	2025	PestaGO: A Mobile Application to Identify Mangosteen Leaf Disease (Pestalotiopsis leaf blight) Using Yolov8	Mangansakan, Tita Mae S.
25	2025	Arabic Prayer Speech Recognation using SVM	Omar, Sadhan D.
26	2025	PABOARD:BOARDING HOUSE RECOMMENDER SYSTEM USING GENETIC ALGORITHM FOR STUDENTS OF UNIVERSITY OF SOUTHERN MINDANAO	Ortiz, Weinstien Joe L.
27	2025	Rgb-multispectral image processing technique and machine learning to analyze soil moisture of rubber plantation	Pascua, Lenard A.
28	2025	Green Onion (ALLIUM FISTULOSUM) Disease Detection and Classification Using Convolution Neural Network (CNN) in a Mobile Application	Panogaling, Christy
29	2025	Automated Classification of Research Type by the Thematic Area Using BERTopic Algorithm	Pedtamanan, Hussien N.
30	2025	PAKIPRINT: A DIJKSTRA'S ALGORITHMIC FRAMEWORK FOR ADVANCED PRINT SHOP RECOMMENDATION SYSTEM	Quimot, Ian John Romel C.

31	2025	Tamarou's Tracks: A Decision-Driven Visual Novel Game For College Course Selection Using Weighted Decision Tree	Rapiz, Yzzah Madelle G.
32	2025	A Comparative of Q learning and Sarsa in grid game environment	Tampos, Vincent B.
33	2025	USM Faculty needs assessment using machine learning and data visualization	Tomines, Marve Edriane B.
34	2025	Identifying Crime Hotspots and Patterns in Kabacan North Cotabato Using DBSCAN Algorithm	Vicena, May Mae-Ann Joy A.
35	2025	English Profanity Censoring using Jaro-winkler Algorithm	Wakim, Norwahid M.
36	2025	Detection of Plastic and Non-Plastic Trash Using Yolo	Madidis, Norohaya A.
37	2025	Sentiment Analysis on Facial Wash Skincare Product (Kojie-San) using Support Vector Machine	Ambod, Arhama M.
ACADEMIC YEAR 2023-2024			
No	**Year**	**Title**	**Researcher**
1	2024	Evaluation of the Combined Use of an Artificial Neural Network and Expert System Algorithm for Efficient Water Management in IoT-Enabled Greenhouse Tomato Cultivation.	Camaddo, Tamjay Rodolf L.
2	2024	Course Planner Using Genetic Algorithm for Computer Science Students of University of Southern Mindanao	Guialil, Julyha T.
3	2024	SENTIMENT ANALYSIS AMONG CALL CENTER AGENTS IN DETERMINING THEIR STRESS LEVEL USING NAÏVE BAYES ALGORITHM	Romero, Benedick A.
4	2024	ClimaGrow: A Crop Recommendation System Based on Topology and Climate Using Naive Bayes	Chavez, Raymond
5	2024	COMPARATIVE STUDY OF CONVOLUTIONAL NEURAL NETWORKS (CNNs) AND RANDOM FOREST ALGORITHM IN IMAGE PROCESSING FOR WEED DETECTION	Seguritan, Gerald G.
6	2024	Rubber Leaf Disease Detection tool using YoloV8 Algorithm: A segmentation Approach	Pagayao, Marvic S.
7	2024	Soursop: Mobile Application for the Classification of Guyabano (Annona Muricata L.) Leaf Diseases Using Convolutional Neural Network Algorithm	Lacman, Jonaira M.

8	2024	PREDICTING STUDENT DROPOUT RATES USING SENTIMENT ANALYSIS IN UNIVERSITY OF SOUTHERN MINDANAO	Pon-An, Anne Rose P.
9	2024	IMAGE-BASED MANGO (MANGIFERA INDICA) VARIETAL IDENTIFICATION USING CONVOLUTIONAL NEURAL NETWORK	Madrio, Jay-R
10	2024	EARLY BANANA BUNCHY TOP DISEASE (BBTD) DETECTION USING CONVULOTIONAL NEURAL NETWORK ALGORITHM	Lamera, Leojay B.
11	2024	CAT BREED IDENTIFICATION USING YOU ONLY LOOK ONCE (YOLO) ALGORITHM	Ariata, Mary Clear M.
12	2024	CLASSIFICATION OF BANANA VARIETIES USING SUPPORT VECTOR MACHINE	Daquil, Vergel Jan A.
13	2024	ANALYSIS ON THE PREVALENCE OF RUBBER LEAF DISEASES: A DATA ANALYTICS APPROACH	Ogatis, Vince Angelo M.
14	2024	GAME BASED APPROACH IN VISUALIZING GENETIC ALGORITHM EFFECTS IN ENEMY CREATION AND PLAYER PROGRESSION	Mariano, Michael Jhon J.
15	2024	FORECASTING FUTURE BUDGET OF A SECONDARY SCHOOL IN MAKILALA USING REGRESSION MACHINE LEARNING ALGORITHMS	Saliling, Robert Bhonn V.
16	2024	BLOCKCHAIN-BASED ELECTION SYSTEM	Pacete, Jericho T.
17	2024	CAVARIETY: CACAO (THEOBROMA CACAO) VARIETY IDENTIFICATION USING MOBILE APPLICATION	Ontok, Alhakeem N.
18	2024	IoT-Based Early Detection Water Quality Monitoring	Ereje, Erico C.
19	2024	BITGOU APP: BITTER GOURD (Momordica charantia) DISEASES IDENTIFIER MOBILE APPLICATION	Prado, Rovelh Ausche Marc .
20	2024	CLFD DETECTIVE: A MOBILE APP THA CAN IDENTIFY CORYNESPORA LEAF FALL DISEASE ON RUBBER TREE (hevea brasiliensis)	Ancheta, Winard Cris A.
21	2024	DECISION SUPPORT SYSTEM BASED ON STUDENT FEEDBACK SENTIMENT ANALYSIS	Suagan, Francess Jene
22	2024	EARLY LEAF DISEASE DETECTION USING CONVOLUTIONAL NEURAL NETWORK ALGORITHM	Balindres, Eden Aubrey G.
23	2024	Enhancing Fire Safety with IoT: Development and Evaluation of an intelligent Wireless Sensor Network for Fire Detection	De Pedro, Donna Mae

24	2024	Ehancing Weather Monitoring through Localized Weather Stations	Biaca, Vanz Paul N.
25	2024	Greenhouse Automation and monitoring system	Agao, Jeyhan L.
26	2024	Program Recommendation System Using Decision Tree	Ellio, Mhica B.
27	2024	Mobile Application: Watering System for Radish Plant Monitoring with Predictive Analysis	Pastolero, John Lyster A.
28	2024	IDENTIFICATION OF FUNGAL DISEASE IN CACAO USING CNN	Felicia, Danher P.
29	2024	AUTOMATED INTERPRETATION OF RUBBER DISEASE SEVERITY INDEX USING PANDAS AI: AN ARTIFICIAL INTELLIGENCE TOOL	Velasco, Rolly C. Jr.
30	2024	DETERMINING USERS' EMOTION ON TWITTER TEXT DATA: A SENTIMENT ANALYSIS APPROACH	Napoles, Zxakira N.
31	2024	oTalong: USING MOBILE APPLICATION TO IDENTIFY EGGPLANT DISEASE (phomopsis fruit rot lesions)	Molid, Arnaida S.
32	2024	Rice Price Forecasting in Province of Cotabato using LSTM	Navaja, Joel P. Jr.
33	2024	Potato leaf disease detection using cnn	Guinawatan, Jewel Ezra M.
34	2024	SMART LEARNING MODULE FOR COMPUTER SCIENCE STUDENTS OF USM	Mantok, Sahada B.
35	2024	Pomelo (Citrus Maxima) Diseases Identifier Mobile Application	Ferolino, Gian Kayle M.
36	2024	SIGTREE: A MOBILE APPLICATION FOR IDENTIFICATION OF BANANA LEAF BLACK SIGATOKA DISEASE USING DECISION TREE	Matalam, Nor-Ain S.
37	2024	Anxedep: Stress Monitoring Mobile Application using Random Forest Algorithm	Payawan, Riza Mae G.
38	2024	JYPA: Personal Assistant	Mission, Janrex D.
39	2024	QR Code Scanning Using Reed Solomon Algorithm	Catamura, John D.
40	2024	IDENTIFICATION OF RUBBER TREE CLONE: A TRANSFER LEARNING APPROACH	Camat Ryline T.
41	2024	PREDICTING PARK LAND SUITES & RESTOBAR PROFITS: A LINEAR REGRESSION APPROACH TO SALES FORECASTING	Janani, Harris June C.

42	2024	MOTORCYCLE SMART LOCK USING NEAR-FIELD COMMUNICATION (NFC) AND ARDUINO	Constantino, Neil O.
43	2024	EARLY DETECTION OF PHYTOPHTHORA LEAF LESION DISEASE IN DURIAN USING COVOLUTIONAL NEURAL NETWORK	Villarubia, Alice M.
44	2024	IntegrityOne: AI-powered Academic Authenticity Checker Mobile Application	De Leon, Cambie A
45	2024	DEVELOPMENT AND IMPLEMENTATION OF A MOBILE APPLICATION FOR CAPTURING OBJECTS FROM MULTIPLE ANGLES AND GENERATING 3D MODELS	Villarante, Jair Adraian T.

ACADEMIC YEAR 2022-2023			
No	**Year**	**Title**	**Researcher**
1	2023	FILTEreD: A Filipino - Teduray Language Translator App	Gunsi, Steven Jeff
2	2023	"Classification of cucumber leaf Diseases using image processing and Support Convolutional Neural Network"	Gayak, Roweda
3	2023	Early Yellow leaf Disease Detection in PHIL 2000-2155 sugarcane (Saccarum Officinarum) using CNN	Mohamad, Kaiman
4	2023	Macronutrients Detection In Cassava Leaf Using Convolutional Neural Network	Mohamad, Datu Ali
5	2023	Speech Emotion Recognition for Counseling	Franceliso, Arvin
6	2023	Depression Prediction Using Random Forest Algorithm	Abdul, Asna
7	2023	Filipino-Hiligaynon Using Statistical Machine Translation (SMT)	Arzaga, Mary Jean
8	2023	Tagalog - Manobo Translator	Balladares, Pryncellie
9	2023	Tagalog - T'boli Language Translator	Castre, Francis Ian
10	2023	Simulation of the Growth and Yield of Peanut Using the Influence of Boron Fertilizer	Lamera, Leojay
11	2023	Phishing URLs Prediction Using Recurrent Neural Network	Damba, May-Ann
12	2023	Road signs recognition using support vector machine Algorithm	Mohamad, Amad Alfayed

13	2023	Filipino - Maranao Language Translator	Mangco, Ellyssa Mae
14	2023	Luminous: A Heart Rate based Horror Adventure Game using A* Pathfinding Algorithm	Tan, Ghian Carlos
15	2023	Rubber Tree (Hevea Brasiliensis) Algal Disease Identifier	Cariño, Jezelle
16	2023	Alpabetong Pilipino Speech Recognition Using Web Speech API	Gutierrez, Coleen Yvonne
17	2023	TOMATO (Solanum lycopersicum) SEEDLING EMERGENCE DETECTION BASED ON SUPPORT VECTOR MACHINE	Maglangit, Rhyan Jay
18	2023	DEVELOPMENT OF PHISHING AND NON-PHISHING CLASSIFICATION FRAMEWORK FOR E-BANKING WEBSITES USING SUPPORT VECTOR MACHINE	Elipian, Jethro Ryan
19	2023	Simulation of the Yield of Corn using the Influence of Nitrogen Fertilizer	Ariata, Mary Clear
20	2023	LET Mathematics Reviewer Mobile-Based Application	Bangcaya, Judy Rheanne
21	2023	Educational Data Mining on Moodle Logs using K-Prototype Clustering and Random Forest	Patundog, Janodin
22	2023	Determining the Optimal Machine Learning Algorithm Handwriting Recognition Doctors Cursive Penmanship	Daguit, Salahodin
23	2023	Early Disease Detection in Goat's Eye using Convolutional Neural Network	Resaba, Gerard Anthony
24	2023	IMPLEMENTATION OF AI-POWERED SEARCH ALGORITHM TO GALLERY	Principe, Troy
25	2023	VERTICILLIUM WILT DISEASE DETECTION IN EGGPLANTS USING MACHINE LEARNING	Sulaiman, Esnaira
26	2023	Identification of Pestalotiopsis Leaf Fall Disease in Hevea Brasiliensis	De Tomas, John Linar
27	2023	Classification of Palm Oil Leaf Diseases using CNN	Carbonell, Hierol John
28	2023	Gumamela Plant Leaf Disease Detection using CNN	Akil, Bai Norsida
29	2023	Guava Wilt Disease Detection in Guava Leaf Using Convolutional Neural Networks (CNN)	Dimasangkay, Norsalina
30	2023	Gray Leaf Spot Disease Detection in Corn (Zea Mays) Using Convolutional Neural Network	Aplal, Manisan

31	2023	Text Emotion Detection in Faculty Evaluation using Support Vector Algorithm	Floro, Paterno Eve Mar
32	2023	DEPRESSION DETECTION IN HIGH SCHOOL STUDENTS USING SUPPORT VECTOR MACHINE (SVM)	Betita, Harry Ian
33	2023	Identification of Philippines Native Herbal Plants using CNN	Carpio, Diana Kate
ACADEMIC YEAR 2021-2022			
No	**Year**	**Title**	**Researcher**
1	2022	Sentiment Analysis on Students Feedback Regarding to face to face classes using support vector machine algorithm	BARLOSO, Fiel Anthony B.
2	2022	Student Companion: Advanced Digital Encyclopedia For Learners	MALAGUIA, Nazer V.
3	2022	Detection of unauthorized entry using CCTV with automatic logging	CARLOS, Xyern Keith J.
4	2022	Classification of Aphids using Image Processing and Support Vector Machine Algorithm	SILVANO, Neressa D.
5	2022	The Development of a Mobile Learning Game for Preschoolers Using Fisher-yates shuffle algorithm	AGUIRRE, Suzanne M.
6	2022	7th Grade Science Module Assessment Using Multiple Testing and Feedback	BANGCAYA, Jusy Rheanne B.
7	2022	Smart Academic Advising System Using C4.5 Decision Tree Classifier	VISITACION, Jhonnas J.
8	2022	Usm lost and found system using image processing algorithm	AMANTIAD, Ace York A.
9	2022	Smart Plate Number Recognition System for University of Southern Mindanao	SUR, Christine Bryll D.
10	2022	E-Guide Mo Ako: An Offline USM Vicinity Map Application	PORRAS, Arshie G.
11	2022	Smart Electronic Handbook For USM Students	GALOY, Fatima A.
12	2022	SMS Spam Detection For Filipino Message Using Naive Bayes	DUREZA, Cherry May N.
13	2022	External Parasite Recognition Found in Dogs/Canines	REAL, Sharmaine Rose D.
14	2022	USM Examination Scheduling System Using Genetic Algorithm	ARELLANO, Jolina Jean M.
15	2022	USM Vehicle Scheduling System	SOLAIMAN, Moharif
16	2022	University Of Southern Mindanao Students' Safety Commuter App Using QR Code And SMS Alert	CORTEZ, Irene Mae O.
17	2022	Automated appointment system	MORALES, Gwyneth P.
18	2022	Grade Management System for Mindanao Islamic Foundation Polytechnic College, Inc.	PLANG, George R.
19	2022	Filipino Sign Language Recognition Application Using OpenCV Library	SALAVIA, John Kelton A.

20	2022	Sentiment Analysis of USM Faculty Evaluation Comments Using Naive Bayes Algorithm	SINGCO, John Lloyd C.
21	2022	Uniform detection using image processing	ANDATUAN, Abdulyahya P.
22	2022	Sentiment Analysis of Students' towards Online Class using Naive Bayes Algorithm	LAYAGUIN, Jessiel Mae P.
23	2022	Mobile Application: Augmented Reality and 3D Modeling in Library with search engine for books	PELADAS, Teofilo Jr. O.
24	2022	Stress it Out: A Mental Health Mobile Application	TAMPOS, Melody P.
25	2022	Certificate Issuance and Record Management System in Brgy. Poblacion, Kabacan North Cotabato	SORIANO, Reanne Mae B.
26	2022	"University App- Exploring the Possibilities of Mobile Student Data Access"	COTACTE, Jeson D.
27	2022	The development of Javatar using naive Bayes algorithm	CAMPOLLO, Joven C.
28	2022	Course Recommender System Using Genetic Algorithm	CASPILLO, Shanne Claire Pearl F.
29	2022	ARO Document Request Recommender System using Content Based Algorithm	PARAC, Fernan Jules P.
30	2022	Motorcycle Smart Lock using Near-field Communication(NFC) and Arduino	CONSTANTINO, Neil O.
32	2022	GERMATH: Solving Algebraic Equation Using Optical Character Recognition Algorithm	UTALA, Rodin R.
ACADEMIC YEAR 2019-2020			
No	**Year**	**Title**	**Researcher**
1	2020	Tenant Monitoring System with SMS Notification	AGOY Ludy Jan C.
2	2020	ULRC Mobile Book Finder Application	ALON Junaiden P.
3	2020	Development and Evaluation of Calamity Awareness Application	CARTAS Carlo Jr. A.

Practicum

Instruction in the four corners of the classroom, laboratory rooms, and university campus are inadequate to produce quality graduates. Students have to be exposed to and experience the real situation of the workplace and the industry for them to be able to apply and further enhance what they have learned at school and even learn things not taught at school. Hence, students are required to complete the 320 hours practicum as part of the curriculum. Prior to their deployment, students must submit all necessary requirements as required by the university and CHED (CMO 104 s. 2017).

As an additional requirement for their grades, the students have to submit a comprehensive Terminal Report (Figure 5) containing all their activities done during the internship including photos of them in action (Figure 7). Students also receive Certificates of Completion from their respective Host Training Establishment (HTE) (Figure 6 (b)).

Table 2 lists the institutions where BSCS students are deployed for the past 4 years. For every institution, there is a signed and notarized Memorandum of Agreement (MOA) (Figure 6 (a).

Table 2. BSCS OJT Partner Institutions/Agencies

Logo	Institution/Agency	Type of Industry	Category	Nature of OJT Work
	Awesome OS, Davao City	Customer Service and Software Development	International	Technical
	iBEX Global Davao City	Business Process Outsourcing Company	International	Technical
	FOCUSINC Group Corporation, Queens Theater Building, Bonifacio St., Poblacion District, Davao City	Business Process Outsourcing Company	International	Technical

Logo	Institution/Agency	Type of Industry	Category	Nature of OJT Work
	Office of the The Launchpad 2nd Floor Wheels and More Compound, Obrero Corner Bajada St., Davao City	Business Process Outsourcing Company	International	Technical
	TJ-101 Computer Sales and Services, Quirino Drive, Kidapawan City	Computer Sales and Services Company	Local	Technical
	Advanced Infinit Technology Solutions Incorporated, Davao City	Software Development	Local	Technical

Logo	Institution/Agency	Type of Industry	Category	Nature of OJT Work
	Information and Communication Technology Center, USM, Kabacan, Cotabato	Academic Institution	Local	Technical
	University of Southern Mindanao, Kabacan, Cotabato	Academic Institution	Local	Technical

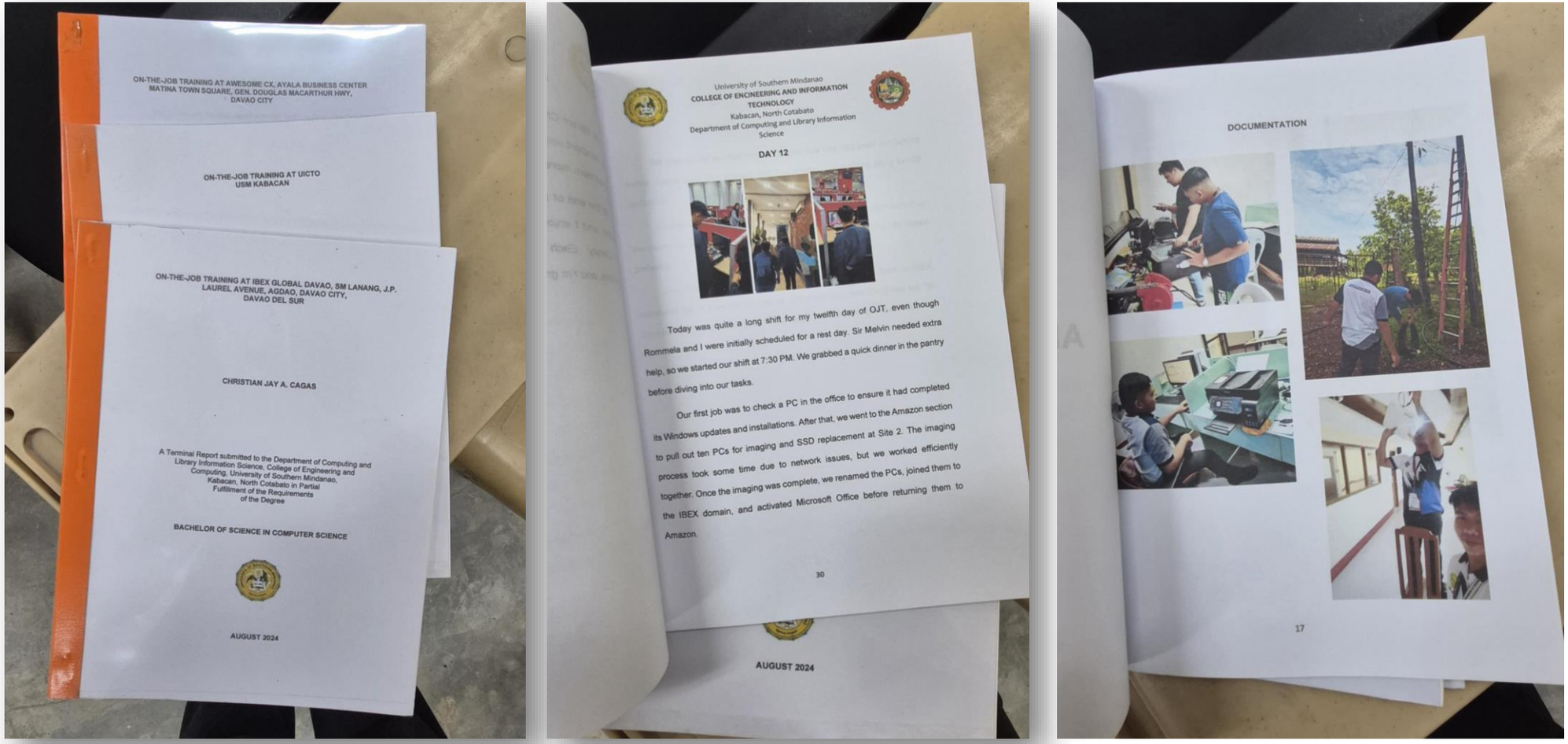
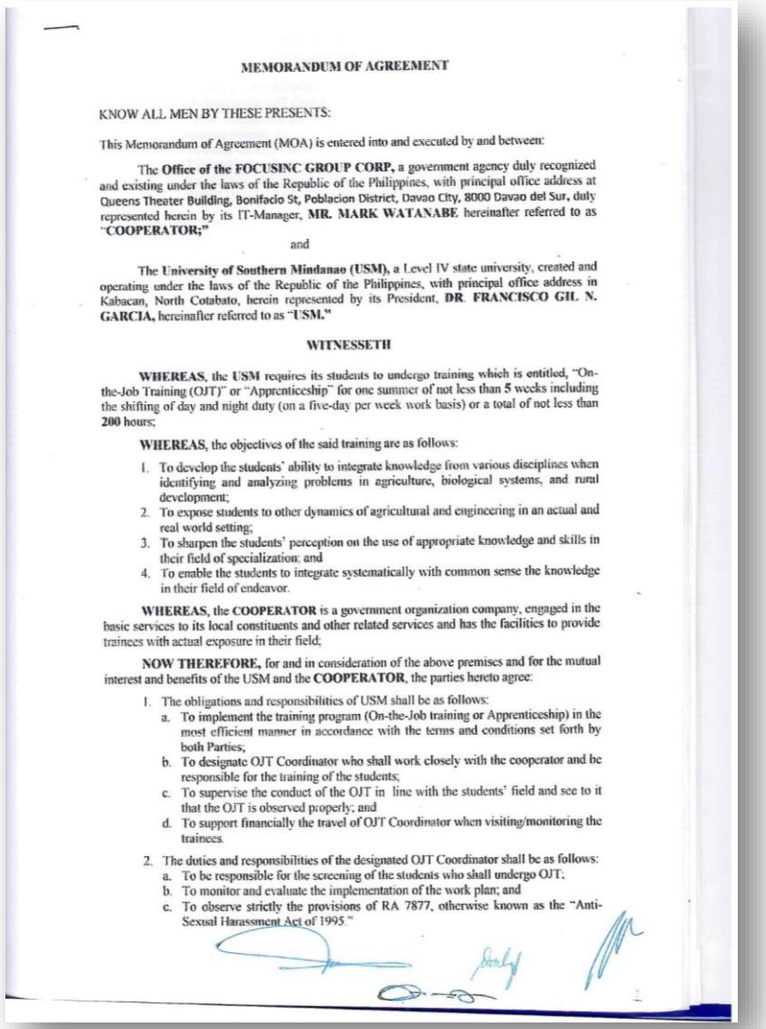


Figure 5. OJT Terminal Report



MEMORANDUM OF AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

This Memorandum of Agreement (MOA) is entered into and executed by and between:

The **Office of the FOCUSINC GROUP CORP,** a government agency duly recognized and existing under the laws of the Republic of the Philippines, with principal office address at Queens Theater Building, Bonifacio St, Poblacion District, Davao City, 8000 Davao del Sur, duly represented herein by its IT-Manager, **MR. MARK WATANABE** hereinafter referred to as "**COOPERATOR;**"

and

The University of Southern Mindanao (USM), a Level IV state university, created and operating under the laws of the Republic of the Philippines, with principal office address in Kabacan, North Cotabato, herein represented by its President, **DR. FRANCISCO GIL N. GARCIA,** hereinafter referred to as "**USM.**"

WITNESSETH

WHEREAS, the **USM** requires its students to undergo training which is entitled, "On-the-Job Training (OJT)" or "Apprenticeship" for one summer of not less than **5** weeks including the shifting of day and night duty (on a five-day per week work basis) or a total of not less than **200** hours;

WHEREAS, the objectives of the said training are as follows:

1. To develop the students' ability to integrate knowledge from various disciplines when identifying and analyzing problems in agriculture, biological systems, and rural development;
2. To expose students to other dynamics of agricultural and engineering in an actual and real world setting;
3. To sharpen the students' perception on the use of appropriate knowledge and skills in their field of specialization; and
4. To enable the students to integrate systematically with common sense the knowledge in their field of endeavor.

WHEREAS, the **COOPERATOR** is a government organization company, engaged in the basic services to its local constituents and other related services and has the facilities to provide trainees with actual exposure in their field;

NOW THEREFORE, for and in consideration of the above premises and for the mutual interest and benefits of the USM and the **COOPERATOR**, the parties hereto agree:

1. The obligations and responsibilities of USM shall be as follows:
   a. To implement the training program (On-the-Job training or Apprenticeship) in the most efficient manner in accordance with the terms and conditions set forth by both Parties;
   b. To designate OJT Coordinator who shall work closely with the cooperator and be responsible for the training of the students;
   c. To supervise the conduct of the OJT in line with the students' field and see to it that the OJT is observed properly; and
   d. To support financially the travel of OJT Coordinator when visiting/monitoring the trainees.
2. The duties and responsibilities of the designated OJT Coordinator shall be as follows:
   a. To be responsible for the screening of the students who shall undergo OJT;
   b. To monitor and evaluate the implementation of the work plan; and
   c. To observe strictly the provisions of RA 7877, otherwise known as the "Anti-Sexual Harassment Act of 1995."

(a) Memorandum of Agreement

(b) Certificates

Figure 6. OJT Documents

Figure 7. BSCS OJTs in Action

Field Visits

Being in a field of technology that constantly changes rapidly, students have to be exposed to these changes. And a better way to expose them to these changes is to visit technology companies. With the old curriculum, in the course Field Trips and Seminars, students organize and go on Educational Tours to technology companies in Cebu City with the supervision of the subject instructor. Some of the companies visited were:

- ✓ PLDT Business Solutions
- ✓ ABS-CBN
- ✓ PAG-ASA Weather Forecast – MIS Department
- ✓ Lexmark International Philippines
- ✓ Ng Khai Development Corporation
- ✓ Cebu City Hall Management Information Computer System – GIS
- ✓ Innodata Knowledge Services
- ✓ Traffic Enforcement Agency of Mandaue (T.E.A.M)
- ✓ Metropolitan Cebu Water District – MIS Department
- ✓ Teleperformance Philippines
- ✓ Symph
- ✓ Alliance Software Inc.

The preparation for the field visit is handled by the OJT Coordinator since the process should adhere to CHED requirements where all documents, from Parents Consent to Insurance papers, must be submitted to CHED for approval prior to the trip.

With this, students are at par with the latest changes in technology and are exposed to current technologies and methods that companies using. With the recent change in curriculum and the pandemic however, field trips are indefinitely on hold but can still be definitely integrated in the syllabus that would require such activity.

Figure 8 shows students in different companies visited during the field trips.

Alliance Software Inc.

Symph

Lexmark International

PAG-ASA

Ng-Khai Development Corporation

MICS-GIS

Innodata Knowledge Services

T.E.A.M

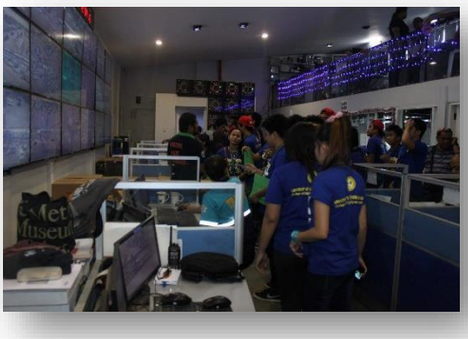


Figure 8. Company Visits

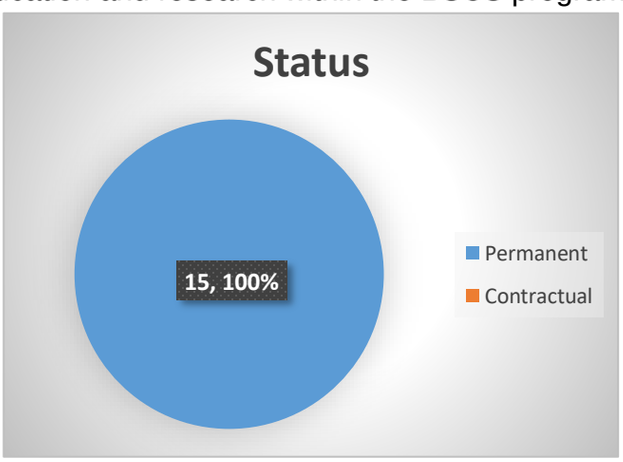
Faculty Profile

Handling courses of the BSCS program are active, dynamic, and qualified individuals whose baccalaureate and graduate degrees are vertically aligned to the computing field. The people are instrumental in the transfer of knowledge and essential in guiding the students to finishing their program on time. Academic information of each faculty are presented in Table 3.

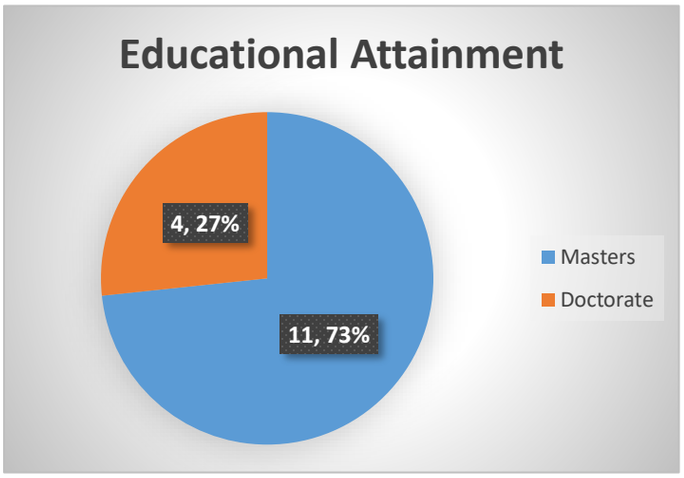
The faculty composition of the Bachelor of Science in Computer Science (BSCS) program reflects a strong foundation of expertise and academic qualifications.

As summarized in the charts in Figure 9, all 15 faculty members are permanent employees, ensuring stability and continuity in academic instruction. In terms of faculty ranking, the department is primarily composed of Assistant Professors (53%), followed by Associate Professors (27%), and Instructors (20%), with no Professors currently in the roster. The educational attainment of the faculty highlights a commitment to advanced studies, with 73% holding a Master's degree and 27% possessing Doctorate degrees.

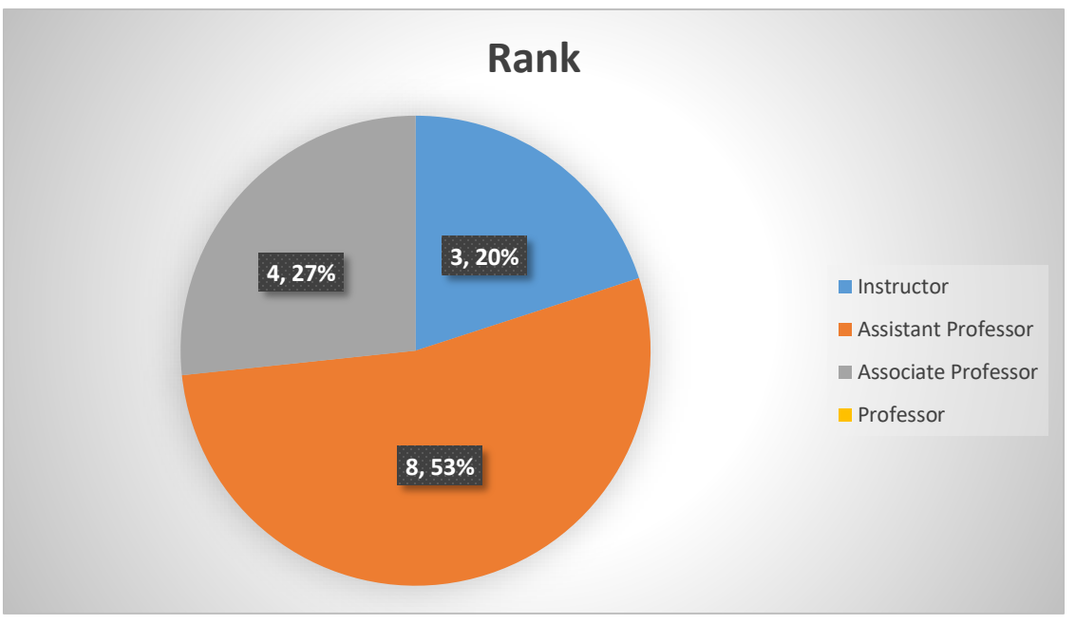
This distribution signifies a well-balanced faculty structure, combining extensive experience and advanced academic credentials to support quality education and research within the BSCS program.



(a) Status



(b) Educational Attainment



(c) Rank

Figure 9. Faculty Profile Summary

Table 3. BSCS Faculty Information

Name	Status	Baccalaureate Degree	Master's Degree	Doctorate Degree
	Permanent	Bachelor of Science in Computer Science University of Southern Mindanao Kabacan, Cotabato	Master in Information Systems University of Southern Mindanao Kabacan, Cotabato	
	Permanent	Bachelor of Science in Computer Science University of Southeastern Philippines Davao City	Master in Information Management University of Southern Mindanao Kabacan, Cotabato Master of Science in Public Policy and Management specializing Data Transformation and Analytics Carnegie Mellon University Australia	

Name	Status	Baccalaureate Degree	Master's Degree	Doctorate Degree
	Permanent	Bachelor of Science in Computer Science University of Southern Mindanao Kabacan, Cotabato	Master of Science in Information Technology (Complete Academic Requirements) De La Salle University Manila	
	Permanent	Bachelor of Science in Computer Science University of Southern Mindanao Kabacan, Cotabato	Master of Science in Information Science University of Southeastern Philippines Davao City	Doctor of Information Technology (On-Going) University of Southeastern Philippines Davao City

Name	Status	Baccalaureate Degree	Master's Degree	Doctorate Degree
	Permanent	Bachelor of Science in Computer Science AMA Computer College Davao City	Master in Information Systems University of Mindanao, Professional Schools Davao City	
	Permanent	Bachelor of Science in Computer Science University of Southern Mindanao Kabacan, Cotabato	Master in Information Technology University of the Immaculate Conception Davao City	

Name	Status	Baccalaureate Degree	Master's Degree	Doctorate Degree
	Permanent	Bachelor of Science in Computer Science University of Southern Mindanao Kabacan, Cotabato	Master in Information Systems University of Southern Mindanao Kabacan, Cotabato	
	Permanent	Bachelor of Science in Computer Science University of Southern Mindanao Kabacan, Cotabato	Master in Information Systems University of the Immaculate Conception Davao City	

Name	Status	Baccalaureate Degree	Master's Degree	Doctorate Degree
	Permanent	Bachelor of Science in Information Technology Agusan Sur State College of Agriculture and Technology	Master in Information Technology University of the Immaculate Conception Davao City	
	Permanent	Bachelor of Science in Information Systems University of Southern Mindanao Kabacan, Cotabato	Master in Information Systems University of Southern Mindanao Kabacan, Cotabato	

Name	Status	Baccalaureate Degree	Master's Degree	Doctorate Degree
	Permanent	Bachelor of Science in Computer Science University of Southern Mindanao Kabacan, Cotabato	Master in Information Management University of Southern Mindanao Kabacan, Cotabato	Doctor of Information Technology (On-Going) Technological Institute of the Philippines Manila
	Permanent	Bachelor of Science in Computer Science University of Southern Mindanao Kabacan, Cotabato	Master in Information Management University of Southern Mindanao Kabacan, Cotabato	

Name	Status	Baccalaureate Degree	Master's Degree	Doctorate Degree
	Permanent	Bachelor of Science in Computer Science Mindanao State University – Iligan Institute of Technology	Master in Information Management University of Southern Mindanao Kabacan, Cotabato	Doctor of Information Technology (On-Going) Technological Institute of the Philippines Manila
	Permanent	Bachelor of Science in Information Management University of Southern Mindanao Kabacan, Cotabato	Master in Information Management University of Southern Mindanao Kabacan, Cotabato	

Name	Status	Baccalaureate Degree	Master's Degree	Doctorate Degree
	Permanent	Bachelor of Science in Industrial Arts University of Southern Mindanao Kabacan, Cotabato	Master in Information Management University of Southern Mindanao Kabacan, Cotabato	Doctor of Information Technology (On-Going) Technological Institute of the Philippines Manila

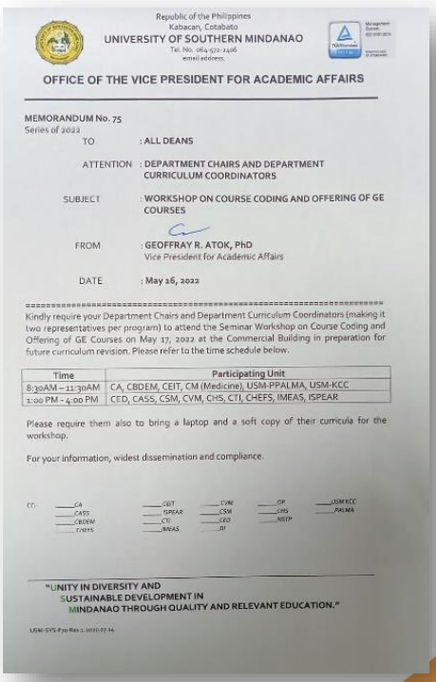
SYSTEMATIC AND EFFECTIVE PROCEDURES

Curriculum Development and Review

The administration requires for the creation and/or updating of curriculum and syllabus as stated in the Faculty Manual. Development of new and revision of existing curriculum adheres to the ISO guidelines and procedure of the university in the following forms:

1. USM-EDU-F03-Rev.1.2021.01.08 Curriculum Review and Verification Checklist
2. USM-EDU-F02-Rev.1.2021.01.08 Checklist for USM Curriculum Design
3. USM-EDU-003-Rev.3.2021.01.08 Design, Development and Revision of Curriculum

The revision must be made first at the department level and then presented to the college council for adoption. The revision is presented to the University Curriculum Review subject to the committees' comments and suggestions and approval. The final revision is then submitted to the University Academic Council, CHED, and BOR for approval. Upon approval, only then can the revised curriculum be implemented and used by incoming freshmen.



Republic of the Philippines
Kabacan, Cotabato
UNIVERSITY OF SOUTHERN MINDANAO
Tel. No. 064-570-2406
email address:

OFFICE OF THE VICE PRESIDENT FOR ACADEMIC AFFAIRS

MEMORANDUM No. 75
Series of 2022

TO : ALL DEANS

ATTENTION : DEPARTMENT CHAIRS AND DEPARTMENT CURRICULUM COORDINATORS

SUBJECT : WORKSHOP ON COURSE CODING AND OFFERING OF GE COURSES

FROM : GEOFFRAY R. ATOK, PhD
Vice President for Academic Affairs

DATE : May 16, 2022

Kindly require your Department Chairs and Department Curriculum Coordinators (making it two representatives per program) to attend the Seminar Workshop on Course Coding and Offering of GE Courses on May 17, 2022 at the Commercial Building in preparation for future curriculum revision. Please refer to the time schedule below.

Time	Participating Unit
8:30AM – 11:30AM	CA, CBDEM, CEIT, CM (Medicine), USM-PPALMA, USM-KCC
1:00 PM - 4:00 PM	CED, CASS, CSM, CVM, CHS, CTI, CHEFS, IMEAS, ISPEAR

Please require them also to bring a laptop and a soft copy of their curricula for the workshop.

For your information, widest dissemination and compliance.

"UNITY IN DIVERSITY AND SUSTAINABLE DEVELOPMENT IN MINDANAO THROUGH QUALITY AND RELEVANT EDUCATION."

Recently, the department chairpersons and department curriculum coordinators of the university attended the Seminar workshop on Course Coding conducted by the Office of Instruction which aims to centralize all course numbering especially GE courses and those courses offered in multiple programs. This is the first step towards a university wide curriculum revision scheduled for this year.

Instructional Processes, Methodologies, and Assessment

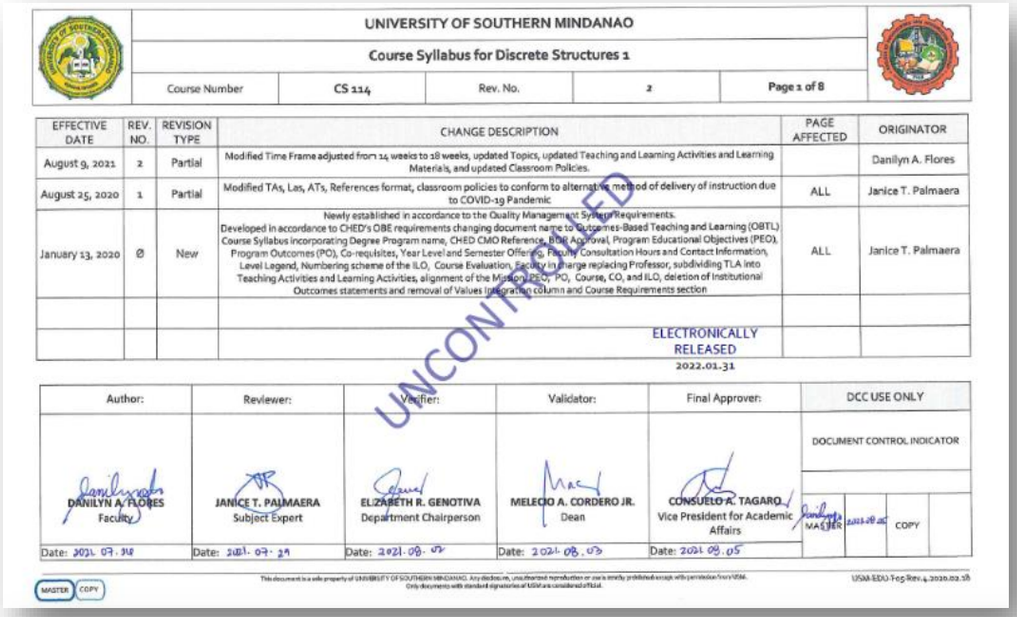
Outcomes Based Education

The university is adherent to CHED mandates and has since implemented Outcomes-Based Education. The administration requires for the creation and/or updating of curriculum and syllabus as stated in the Faculty Manual. The faculty assigned a specific course creates/revises a syllabus according to the required OBTL Format and adheres to the procedures as presented in following the ISO Forms:

1. USM-EDU-010-Rev.5.2021.06.10 Procedure for Course Syllabus Preparation and Revision
2. USM-WRI-002-Rev.1.2024.04.05 Work Instruction for Enrollment of Syllabus

The author creates a new or revises an existing syllabus based on the ISO-OBTL Syllabus Format. Once done, the author fills up a DORF from the College Document Controller and gives the DORF, syllabus, checklist, and monitoring sheet to the Department Curriculum Coordinator for review. After the review, the author gives it to the Department Chairperson for verification. After verification, the author gives it to the dean for validation. The faculty then forwards the validated documents to the Director for Instruction for checking and they will forward it to the VPAA for Approval. The author then gives the approved syllabi to the College DC for recording and retrieval of a copy.

Sample Approved ISO-OBTL Format Syllabus



UNIVERSITY OF SOUTHERN MINDANAO

Course Syllabus for Discrete Structures 1

Course Number	CS 114	Rev. No.	2	Page 1 of 8

EFFECTIVE DATE	REV. NO.	REVISION TYPE	CHANGE DESCRIPTION	PAGE AFFECTED	ORIGINATOR
August 9, 2021	2	Partial	Modified Time Frame adjusted from 14 weeks to 18 weeks, updated Topics, updated Teaching and Learning Activities and Learning Materials, and updated Classroom Policies.		Danilyn A. Flores
August 25, 2020	1	Partial	Modified TAs, Las, ATs, References format, classroom policies to conform to alternative method of delivery of instruction due to COVID-19 Pandemic	ALL	Janice T. Palmaera
January 13, 2020	Ø	New	Newly established in accordance to the Quality Management System Requirements. Developed in accordance to CHED's OBE requirements changing document name to Outcomes-Based Teaching and Learning (OBTL) Course Syllabus incorporating Degree Program name, CHED CMO Reference, BOR Approval, Program Educational Objectives (PEO), Program Outcomes (PO), Co-requisites, Year Level and Semester Offering, Faculty Consultation Hours and Contact Information, Level Legend, Numbering scheme of the ILO, Course Evaluation, Faculty in charge replacing Professor, subdividing TLA into Teaching Activities and Learning Activities, alignment of the Mission, PSO, PO, Course, CO, and ILO, deletion of Institutional Outcomes statements and removal of Values Integration column and Course Requirements section	ALL	Janice T. Palmaera
			ELECTRONICALLY RELEASED 2022.01.31		

Author:	Reviewer:	Verifier:	Validator:	Final Approver:	DCC USE ONLY
DANILYN A. FLORES Faculty	JANICE T. PALMAERA Subject Expert	ELIZABETH R. GENOTIVA Department Chairperson	MELECIO A. CORDERO JR. Dean	CONSUELO A. TAGARO Vice President for Academic Affairs	DOCUMENT CONTROL INDICATOR: MASTER 2022.01.31 COPY
Date: 2021.07.31	Date: 2021.07.31	Date: 2021.08.03	Date: 2021.08.03	Date: 2021.09.05	

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USM-EDU-F05-Rev.4.2020.02.18

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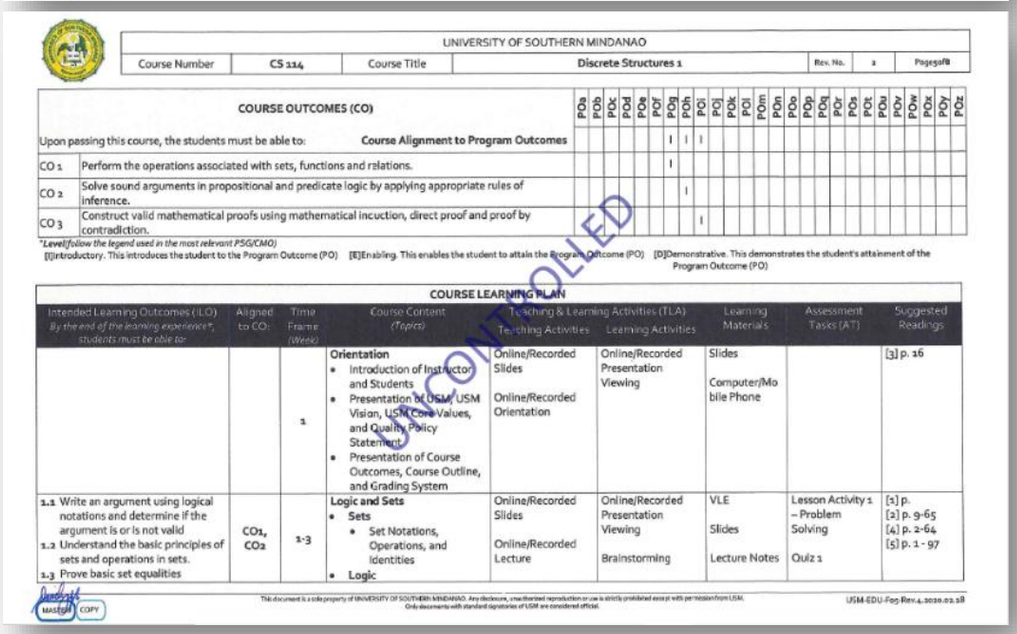

UNIVERSITY OF SOUTHERN MINDANAO

Course Number	CS 114	Course Title	Discrete Structures 1	Rev. No.	2	Page 2 of 8

COURSE OUTCOMES (CO)		POa	POb	POc	POd	POe	POf	POg	POh	POi	POj	POk	POl	POm	POn	POo	POp	POq	POr	POs	POt	POu	POv	POw	POx	POy	POz
Upon passing this course, the students must be able to:	**Course Alignment to Program Outcomes**																										
CO 1	Perform the operations associated with sets, functions and relations.							I																			
CO 2	Solve sound arguments in propositional and predicate logic by applying appropriate rules of inference.								I																		
CO 3	Construct valid mathematical proofs using mathematical incuction, direct proof and proof by contradiction.									I																	

*Level/follow the legend used in the most relevant PSG/CMO)
[I]ntroductory. This introduces the student to the Program Outcome (PO) [E]nabling. This enables the student to attain the Program Outcome (PO) [D]emonstrative. This demonstrates the student's attainment of the Program Outcome (PO)

COURSE LEARNING PLAN

Intended Learning Outcomes (ILO) *By the end of the learning experience*, students must be able to:	Aligned to CO:	Time Frame (Week)	Course Content (Topics)	Teaching & Learning Activities (TLA) Teaching Activities	Learning Activities	Learning Materials	Assessment Tasks (AT)	Suggested Readings
		1	**Orientation** • Introduction of Instructor and Students • Presentation of USM, USM Vision, USM Core Values, and Quality Policy Statement • Presentation of Course Outcomes, Course Outline, and Grading System	Online/Recorded Slides Online/Recorded Orientation	Online/Recorded Presentation Viewing	Slides Computer/Mobile Phone		[3] p. 16
1.1 Write an argument using logical notations and determine if the argument is or is not valid 1.2 Understand the basic principles of sets and operations in sets. 1.3 Prove basic set equalities	CO1, CO2	2-3	**Logic and Sets** • **Sets** • Set Notations, Operations, and Identities • **Logic**	Online/Recorded Slides Online/Recorded Lecture	Online/Recorded Presentation Viewing Brainstorming	VLE Slides Lecture Notes	Lesson Activity 1 – Problem Solving Quiz 1	[1] p. [2] p. 9-65 [4] p. 2-64 [5] p. 1 - 97

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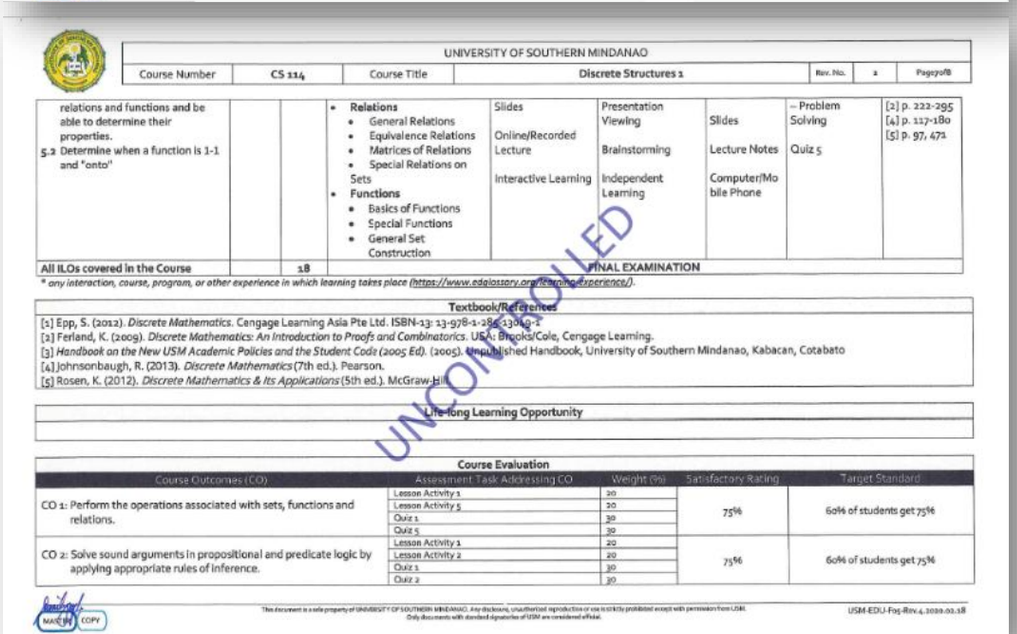

UNIVERSITY OF SOUTHERN MINDANAO

Course Number	CS 114	Course Title	Discrete Structures 1	Rev. No.	2	Page 3 of 8

relations and functions and be able to determine their properties.
5.2 Determine when a function is 1-1 and "onto"
			• **Relations**
			  • General Relations
			  • Equivalence Relations
			  • Matrices of Relations
			  • Special Relations on Sets
			• **Functions**
			  • Basics of Functions
			  • Special Functions
			  • General Set Construction
				Slides
				Online/Recorded Lecture
				Interactive Learning
					Presentation Viewing
					Brainstorming
					Independent Learning
						Slides
						Lecture Notes
						Computer/Mobile Phone
							– Problem Solving
							Quiz 5
								[2] p. 222-295
								[4] p. 117-180
								[5] p. 97, 472

All ILOs covered in the Course		**18**	**FINAL EXAMINATION**					

* any interaction, course, program, or other experience in which learning takes place (https://www.edglossary.org/learning-experience/).

Textbook/References

[1] Epp, S. (2012). *Discrete Mathematics*. Cengage Learning Asia Pte Ltd. ISBN-13: 13-978-1-285-13019-2
[2] Ferland, K. (2009). *Discrete Mathematics: An Introduction to Proofs and Combinatorics*. USA: Brooks/Cole, Cengage Learning.
[3] *Handbook on the New USM Academic Policies and the Student Code (2005 Ed)*. (2005). Unpublished Handbook, University of Southern Mindanao, Kabacan, Cotabato
[4] Johnsonbaugh, R. (2013). *Discrete Mathematics* (7th ed.). Pearson.
[5] Rosen, K. (2012). *Discrete Mathematics & Its Applications* (5th ed.). McGraw-Hill

Life-long Learning Opportunity

Course Evaluation

Course Outcomes (CO)	Assessment Task Addressing CO	Weight (%)	Satisfactory Rating	Target Standard
CO 1: Perform the operations associated with sets, functions and relations.	Lesson Activity 1	20	75%	60% of students get 75%
	Lesson Activity 5	20		
	Quiz 1	30		
	Quiz 5	30		
CO 2: Solve sound arguments in propositional and predicate logic by applying appropriate rules of inference.	Lesson Activity 1	20	75%	60% of students get 75%
	Lesson Activity 2	20		
	Quiz 1	30		
	Quiz 2	30		

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Instructional Materials Development and Adoption

One of the duties and responsibilities of the faculty is to devise Teaching Resources such as instructional aids/materials for their respective courses as stated in the USM Faculty Code under Instructional Responsibilities.

The procedures on the development and evaluation of instructional materials in the university are presented in the following ISO Forms:

1. USM-EDU-006-Rev.3.2021.01.05 Procedure on Evaluation of Instructional Materials
2. USM-WRI-005-Rev.2.2021.11.04 Work Instruction for Development and Review of Instructional Materials

Additional forms are required such as:

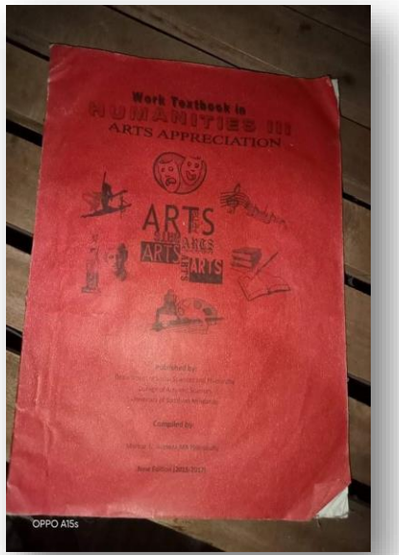
1. USM-EDU-F45-Rev.0.2021.01.05 Instructional Material Review Checklist
2. USM-EDU-F09-Rev.2.2021.01.05 Request for Approval of Instructional Material
3. USM-EDU-F10-Rev.2.2021.01.05 Assessment Rubric Guidelines for Instructional Material
4. USM-EDU-F11-Rev.2.2021.01.05 Assessment Rubric for Instructional Materials
5. USM-EDU-F12-Rev.2.2021.01.05 Software Evaluation for Instructional Materials

The faculty member/s loaded a specific subject creates or revises their own instructional materials. Following the university guidelines, a printed or softcopy of the material is forwarded to the Department

Chairperson or Program Head for initial checking. The checked material is then given to the Department IMDC Member who will then forward it to the College IMDC Chairperson. The chairperson will forward the material to the University IMDC and issue a Certificate of Utilization to the faculty once the material is approved.

Protecting intellectual property is encouraged as it has become a step in the Instructional Materials approval process. The university has recently become the first Innovation & Technology Support Office (ITSO) of IPOPHIL in Region XII through the efforts of the IPTTBDO making Intellectual Property Rights applications easier. Some of the IMs developed by the faculty have been approved for copyright.

Workbooks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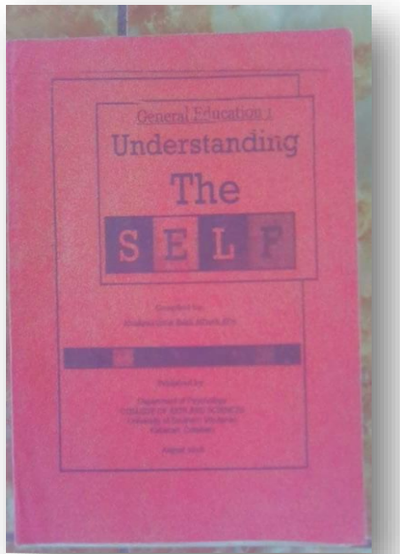
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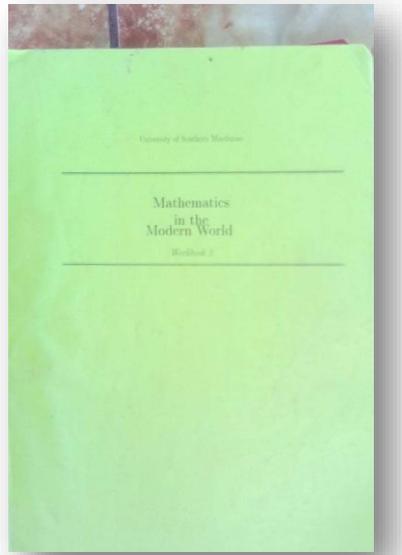
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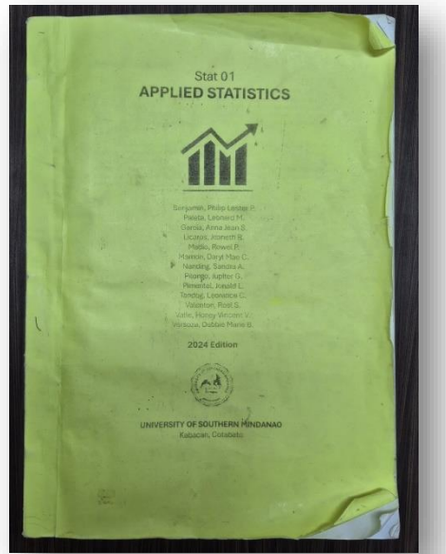
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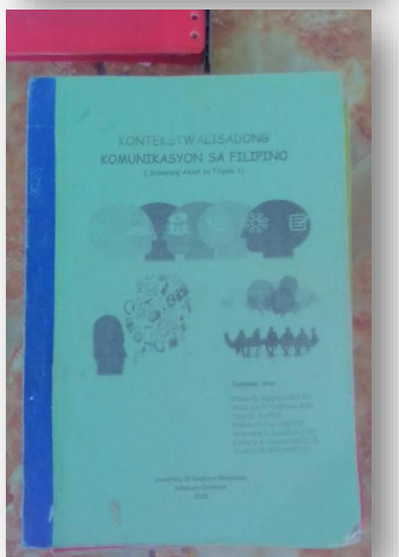
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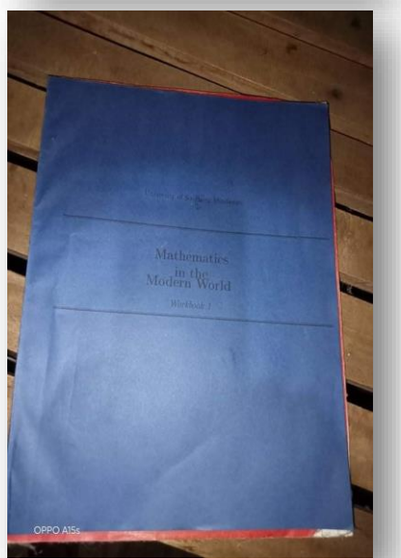
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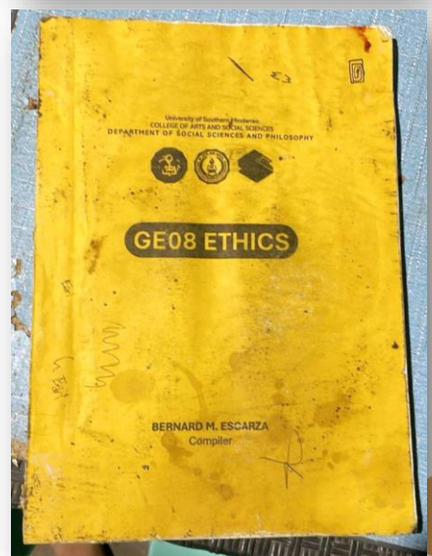
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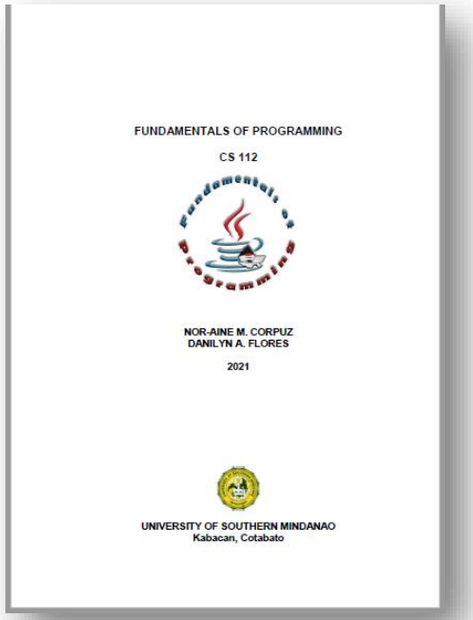
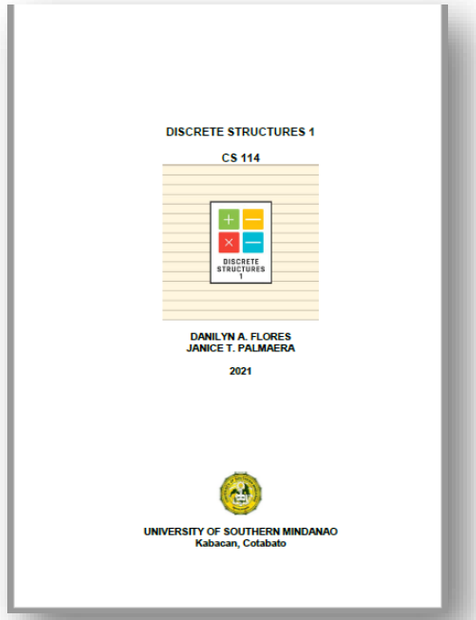
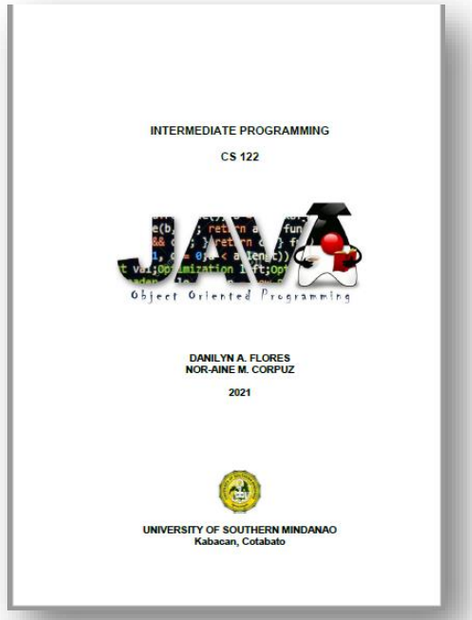
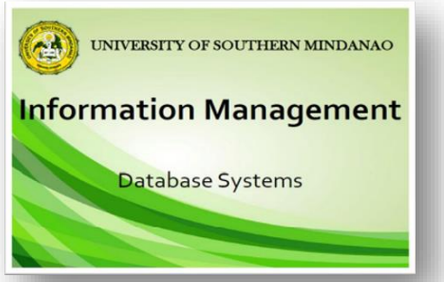
Modules

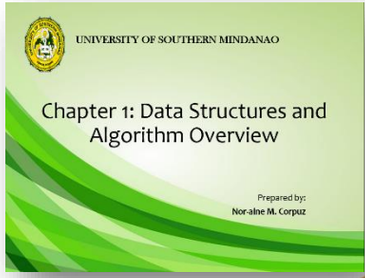




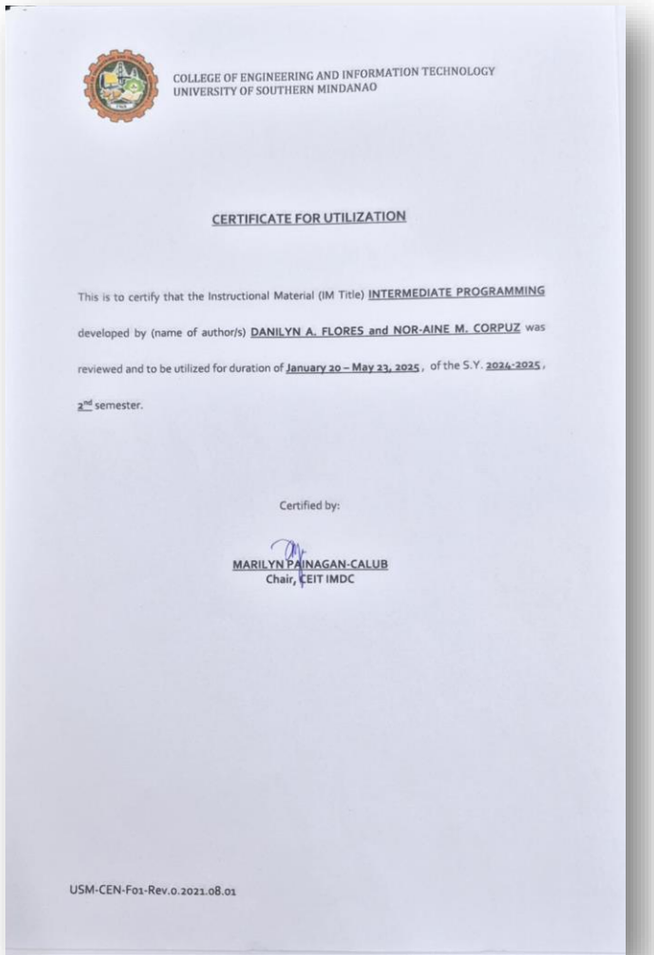


Presentations





Certificate for Utilization



COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY
UNIVERSITY OF SOUTHERN MINDANAO

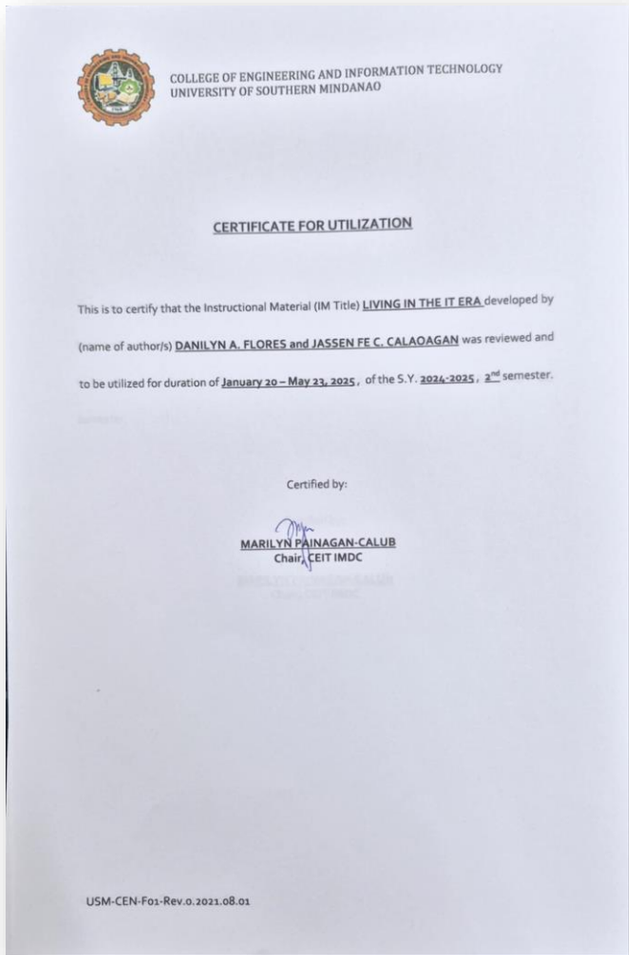
CERTIFICATE FOR UTILIZATION

This is to certify that the Instructional Material (IM Title) INTERMEDIATE PROGRAMMING developed by (name of author/s) DANILYN A. FLORES and NOR-AINE M. CORPUZ was reviewed and to be utilized for duration of January 20 – May 23, 2025, of the S.Y. 2024-2025, 2nd semester.

Certified by:

MARILYN PAINAGAN-CALUB
Chair, CEIT IMDC

USM-CEN-F01-Rev.0.2021.08.01



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This is to certify that the Instructional Material (IM Title) LIVING IN THE IT ERA developed by (name of author/s) DANILYN A. FLORES and JASSEN FE C. CALAOAGAN was reviewed and to be utilized for duration of January 20 – May 23, 2025, of the S.Y. 2024-2025, 2nd semester.

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Chair, CEIT IMDC

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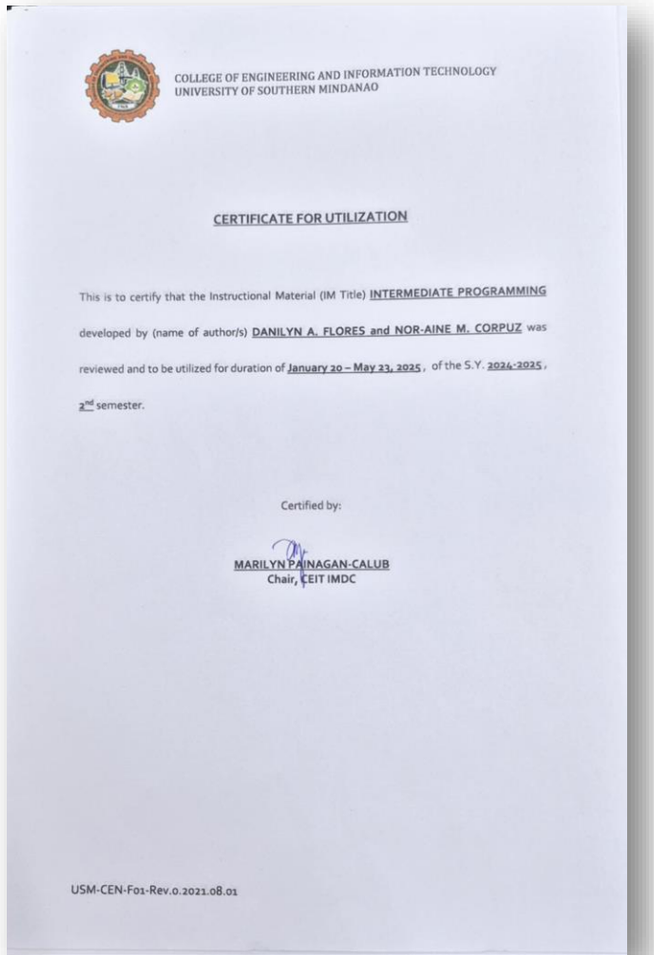

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Certified by:

MARILYN PAINAGAN-CALUB
Chair, CEIT IMDC

USM-CEN-F01-Rev.0.2021.08.01

Copyrights

Republic of the Philippines
INTELLECTUAL PROPERTY OFFICE OF THE PHILIPPINES
Bureau of Copyright and Related Rights
Taguig City, Philippines

Certificate of Copyright Registration

Transfer Certificate No. 2024-03245-A-TCCR

Be it known that on July 8, 2024, the **UNIVERSITY OF SOUTHERN MINDANAO,** Kabacan, Cotabato caused the recordation and transfer in his/her/its name, the copyright of the work with the following specifications:

Title	:	COMPUTER PROGRAMMING I
Author(s)	:	Danilyn A. Flores and Nor-Aine M. Corpuz
Class	:	Class A (Books, pamphlets, articles, e-books, audio books, comics, novels, and other writings)
Creation Date	:	June 30, 2021
Period of Protection	:	Lifetime of the last surviving author and for fifty (50) years after the said author's death.

By virtue of a notarized Deed of Assignment dated May 13, 2024 executed by **DANILYN A. FLORES and NOR-AINE M. CORPUZ** and duly recorded in this office on July 8, 2024. The transfer/assignment of copyright shall not affect the copyright term or period of protection of the copyrighted work as indicated in this Transfer Certificate of Copyright Registration.

The recordation of copyright transfer is submitted to the National Library of the Philippines (NLP), through the Intellectual Property Office of the Philippines (IPOPHL), for the purpose of completing the records of the NLP in accordance with Section 182 of Republic Act No. 8293, the Intellectual Property Code of the Philippines. This certificate is a transfer from Certificate of Copyright Registration No. 2024-03244-A (totally cancelled) by virtue hereof in so far as the above-described work is concerned.

Issued on July 12, 2024 in the City of Taguig, Philippines.

ATTY. EMERSON G. CUYO
Director IV
Bureau of Copyright and Related Rights

Republic of the Philippines
INTELLECTUAL PROPERTY OFFICE OF THE PHILIPPINES
Bureau of Copyright and Related Rights
Taguig City, Philippines

Certificate of Copyright Registration

Transfer Certificate No. 2024-03247-A-TCCR

Be it known that on July 8, 2024, the **UNIVERSITY OF SOUTHERN MINDANAO,** Kabacan, Cotabato caused the recordation and transfer in his/her/its name, the copyright of the work with the following specifications:

Title	:	COMPUTER PROGRAMMING II
Author(s)	:	Danilyn A. Flores and Nor-Aine M. Corpuz
Class	:	Class A (Books, pamphlets, articles, e-books, audio books, comics, novels, and other writings)
Creation Date	:	December 17, 2021
Period of Protection	:	Lifetime of the last surviving author and for fifty (50) years after the said author's death.

By virtue of a notarized Deed of Assignment dated May 13, 2024 executed by **DANILYN A. FLORES and NOR-AINE M. CORPUZ** and duly recorded in this office on July 8, 2024. The transfer/assignment of copyright shall not affect the copyright term or period of protection of the copyrighted work as indicated in this Transfer Certificate of Copyright Registration.

The recordation of copyright transfer is submitted to the National Library of the Philippines (NLP), through the Intellectual Property Office of the Philippines (IPOPHL), for the purpose of completing the records of the NLP in accordance with Section 182 of Republic Act No. 8293, the Intellectual Property Code of the Philippines. This certificate is a transfer from Certificate of Copyright Registration No. 2024-03246-A (totally cancelled) by virtue hereof in so far as the above-described work is concerned.

Issued on July 12, 2024 in the City of Taguig, Philippines.

ATTY. EMERSON G. CUYO
Director IV
Bureau of Copyright and Related Rights

Teaching Strategies

Table 4 lists the different teaching strategies and the subjects where each strategy is used. More often than not, multiple strategies are used by the faculty in delivering a subject to maximize the transfer of knowledge and ensure learning.

Table 4. Teaching Strategies Used to Facilitate/Enrich Learning

Teaching Strategy Used	Subject Where Strategy is Used
1. Lecture	All subjects
2. Laboratory	Fundamentals of Programming Introduction to Computing Intermediate Programming Data Structures and Algorithms Algorithms and Complexity Object-Oriented Programming Architecture and Organization Networks and Communications System Fundamentals Software Engineering I Operating Systems Software Engineering II Automata Theory and Formal Languages Graphics and Visual Computing Data Mining and Warehousing Web Design and Development Introduction to Artificial Intelligence Parallel and Distributed Computing
3. Group Research	Research in Computer Science Applied Statistics
4. Systems Study	Information Management Software Engineering I Software Engineering II CS Thesis Writing 1 & 2
5. Projects	Almost all subjects
6. Student Research	Research in Computer Science Applied Statistics CS Thesis Writing 1 & 2
7. Problem Solving	Almost all subjects
8. Hands-on	Fundamentals of Programming Introduction to Computing Intermediate Programming Data Structures and Algorithms Algorithms and Complexity Object-Oriented Programming Architecture and Organization Networks and Communications

	System Fundamentals Software Engineering I Operating Systems Software Engineering II Graphics and Visual Computing Practicum Data Mining and Warehousing Web Design and Development Parallel and Distributed Computing CS Thesis Writing 2
9. Seminars	Social Issues and Professional Practice Introduction to Artificial Intelligence
10. Independent Study	Research in Computer Science Applied Statistics CS Thesis Writing 1 & 2
11. Software Installation	Fundamentals of Programming Introduction to Computing Intermediate Programming Data Structures and Algorithms Algorithms and Complexity Object-Oriented Programming Architecture and Organization Networks and Communications System Fundamentals Software Engineering I Operating Systems Software Engineering II Graphics and Visual Computing Practicum Data Mining and Warehousing Web Design and Development Introduction to Artificial Intelligence Parallel and Distributed Computing CS Thesis Writing 2
12. Discussion	All subjects
13. Classroom Demonstration	All subjects
14. Fieldtrips	Applications Development and Emerging Technologies Social Issues and Professional Practice Information Assurance and Security
15. Critiquing session	Research in Computer Science Applied Statistics CS Thesis Writing 1 & 2
16. Consultation	All Subjects
17. Tutoring	CS Thesis Writing 1 & 2
18. Team Teaching	Almost all subjects
19. Cooperative Learning	Almost all subjects
20. Interview	Research in Computer Science Applied Statistics CS Thesis Writing 1 & 2
21. Computer Aided Instruction (CAI) and Computer Assisted Learning	Almost all subjects

Learning Assessment

Assessment of student's performance are measured using different methods. Table 5 lists the different evaluation measures and the subject where each method is used. These are done to ensure learning is maximized.

Table 5. Students' Performance Evaluation Measures

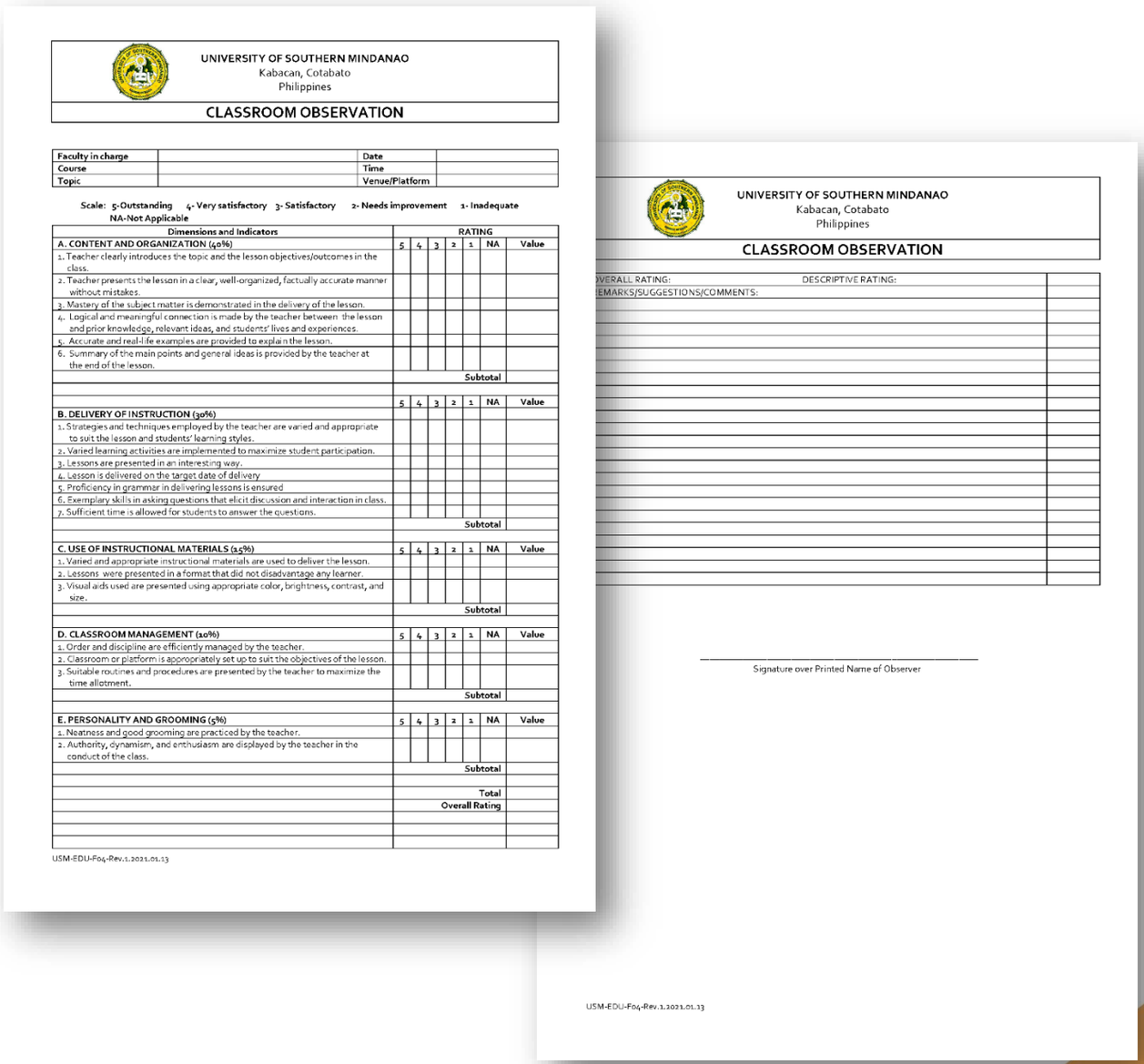
Evaluation Measures	Subject Where Used
Written Examinations	All subjects
Oral Examinations	CS Thesis Writing 1 & 2
Reporting	Almost all subjects
Projects, Term Paper, and Case study	Almost all subjects
Skills Demonstration and Evaluation	Fundamentals of Programming Introduction to Computing Intermediate Programming Data Structures and Algorithms Algorithms and Complexity Object-Oriented Programming Architecture and Organization Networks and Communications System Fundamentals Software Engineering I Operating Systems Software Engineering II Automata Theory and Formal Languages Graphics and Visual Computing Practicum Data Mining and Warehousing Web Design and Development Introduction to Artificial Intelligence Parallel and Distributed Computing CS Thesis Writing 2

Faculty Development and Evaluation

Faculty Observation

To maintain the quality of instruction delivered to students and that the topics in the syllabi are within the target timeframe, the faculty are observed through classroom observations that is done by the immediate supervisor for a permanent faculty once in a semester and twice in a semester for temporary and contract of service faculty as stated in the faculty manual. The procedures followed and the contents of the observation are in the following forms:

USM-EDU-002-Rev.2.2021.01.13 Procedure for Classroom Observation
USM-EDU-F04-Rev.1.2021.01.13 Classroom Observation



UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Philippines

CLASSROOM OBSERVATION

Faculty in charge		**Date**	
Course		**Time**	
Topic		**Venue/Platform**	

Scale: 5-Outstanding 4- Very satisfactory 3- Satisfactory 2- Needs improvement 1- Inadequate NA-Not Applicable

Dimensions and Indicators	**RATING**						
A. CONTENT AND ORGANIZATION (40%)	**5**	**4**	**3**	**2**	**1**	**NA**	**Value**
1. Teacher clearly introduces the topic and the lesson objectives/outcomes in the class.							
2. Teacher presents the lesson in a clear, well-organized, factually accurate manner without mistakes.							
3. Mastery of the subject matter is demonstrated in the delivery of the lesson.							
4. Logical and meaningful connection is made by the teacher between the lesson and prior knowledge, relevant ideas, and students' lives and experiences.							
5. Accurate and real-life examples are provided to explain the lesson.							
6. Summary of the main points and general ideas is provided by the teacher at the end of the lesson.							
						Subtotal	
	5	**4**	**3**	**2**	**1**	**NA**	**Value**
B. DELIVERY OF INSTRUCTION (30%)							
1. Strategies and techniques employed by the teacher are varied and appropriate to suit the lesson and students' learning styles.							
2. Varied learning activities are implemented to maximize student participation.							
3. Lessons are presented in an interesting way.							
4. Lesson is delivered on the target date of delivery.							
5. Proficiency in grammar in delivering lessons is ensured.							
6. Exemplary skills in asking questions that elicit discussion and interaction in class.							
7. Sufficient time is allowed for students to answer the questions.							
						Subtotal	
	5	**4**	**3**	**2**	**1**	**NA**	**Value**
C. USE OF INSTRUCTIONAL MATERIALS (15%)							
1. Varied and appropriate instructional materials are used to deliver the lesson.							
2. Lessons were presented in a format that did not disadvantage any learner.							
3. Visual aids used are presented using appropriate color, brightness, contrast, and size.							
						Subtotal	
	5	**4**	**3**	**2**	**1**	**NA**	**Value**
D. CLASSROOM MANAGEMENT (10%)							
1. Order and discipline are efficiently managed by the teacher.							
2. Classroom or platform is appropriately set up to suit the objectives of the lesson.							
3. Suitable routines and procedures are presented by the teacher to maximize the time allotment.							
						Subtotal	
	5	**4**	**3**	**2**	**1**	**NA**	**Value**
E. PERSONALITY AND GROOMING (5%)							
1. Neatness and good grooming are practiced by the teacher.							
2. Authority, dynamism, and enthusiasm are displayed by the teacher in the conduct of the class.							
						Subtotal	
						Total	
						Overall Rating	

USM-EDU-F04-Rev.1.2021.01.13

UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Philippines

CLASSROOM OBSERVATION

VERALL RATING: DESCRIPTIVE RATING:	
EMARKS/SUGGESTIONS/COMMENTS:	

Signature over Printed Name of Observer

USM-EDU-F04-Rev.1.2021.01.13

The form is shown to the faculty after the endeavor for conformance where the faculty signs the form signifying that they agree with the observations. The immediate supervisor shall comment and give commendations or suggestions to the faculty based on the observations.

Figure 10 shows the summary of the recent results of the Classroom Observation conducted by the Department Chairperson.

UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Philippines

RESULT OF CLASSROOM OBSERVATION

DEPARTMENT OF COMPUTING AND LIBRARY INFORMATION SCIENCE
1ST Semester 2024-2025

FACULTY	Date Observed	Overall Rating	Description
1. Balneg, Nelson Jr. G.	10-25-2024	4.73	Very Satisfactory
2. Calaoagan, Jassen Fe	2024-11-05	4.80	Very Satisfactory
3. Corpuz, Nor-Aine M.	2024-09-12	4.75	Very Satisfactory
4. Daffon, Catherine C.	2024-10-24	4.75	Very Satisfactory
5. FLORES, Danilyn A.	2024-10-08	4.86	Very Satisfactory
6. Galas, Clarence Dave G.	2024-10-29	4.80	Very Satisfactory
7. Genotiva, Elizabeth R.	2024-10-10	4.80	Very Satisfactory
8. Gonzaga, Ryan Z.	2024-11-15	4.50	Very Satisfactory
9. Lorilla, Joseph C.	2024-10-10	4.80	Very Satisfactory
10. Martinez, Susan S.	2024-11-06	4.96	Very Satisfactory
11. Mibalo, Alvin C.	2024-10-30	4.80	Very Satisfactory
12. Oliva, Virgilio JR. P.	2024-11-22	4.40	Very Satisfactory
13. Palmaera, Janice T.	2024-11-19	4.85	Very Satisfactory
14. Ranjo, Eugene G.	2024-11-14	4.85	Very Satisfactory
15. Sornito, Anita C.	2024-11-22	4.80	Very Satisfactory

Prepared by:
Digitally signed by Arjay Santillano Agbunag
DN: cn=Arjay Santillano Agbunag, c=PH, o=University of Southern College of Engineering Technology
ARJAY S. AGBUNAG
Department Chairperson

Figure 10. Classroom Observation Result

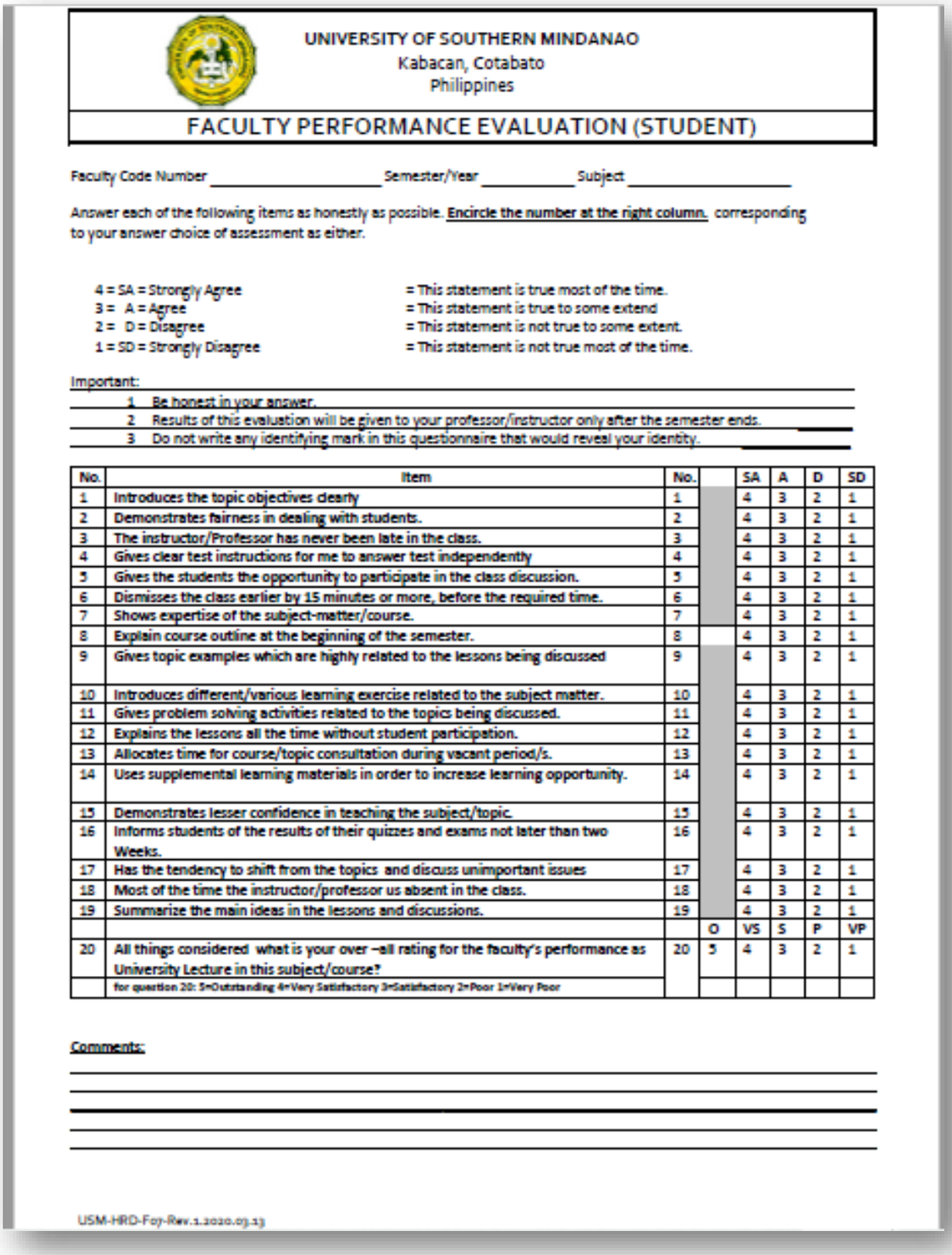
Faculty Performance Evaluation

The performance of faculty members shall be evaluated in accordance with the performance appraisal system adopted by the University which shall be administered in such manner as to

continually foster the improvement of individual faculty efficiency and organizational effectiveness. The performance appraisal system may provide for at least five adjectival ratings, such as: outstanding, very satisfactory, satisfactory, unsatisfactory, and poor. There shall be an established and strengthened Program on Awards and Incentives for Service Excellence (PRAISE) in the University which shall encourage creativity, innovativeness, efficiency and integrity in the public service by recognizing and rewarding faculty, individually or in groups, for their suggestions, inventions, researches, publications, superior accomplishments, and other operational improvements or for other extraordinary acts and services in the interest of the public subject to existing Civil Service rules and regulations. (Excerpts from Faculty Code Chapter 6, Faculty Performance Appraisal).

Faculty Performance Evaluation, a basis for promotion and giving awards to faculty, that is done by students, supervisor, peer, and self is conducted every semester for each of the faculty members of each department by the Department Chairperson and submitted to the HRMDO for the computation of results. Individual results are given to each faculty and the consolidated result is given to the dean. Paper forms were previously used in the conduct of the evaluation but since the pandemic, the evaluation is done online adherent to the ISO Procedure in Conducting Automated Faculty Evaluation (USM-HRD-001-Rev.1.2020.03.13) following the form USM-HRD-F07-Rev.1.2020.03.13 Faculty Performance Evaluation (Student).

Table 6 and Figure 11 shows the faculty performance evaluation result for the past 5 years.



UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Philippines

FACULTY PERFORMANCE EVALUATION (STUDENT)

Faculty Code Number _____ Semester/Year _____ Subject _____

Answer each of the following items as honestly as possible. **Encircle the number at the right column.** corresponding to your answer choice of assessment as either.

4 = SA = Strongly Agree	= This statement is true most of the time.
3 = A = Agree	= This statement is true to some extend
2 = D = Disagree	= This statement is not true to some extent.
1 = SD = Strongly Disagree	= This statement is not true most of the time.

Important:

1. Be honest in your answer.
2. Results of this evaluation will be given to your professor/instructor only after the semester ends.
3. Do not write any identifying mark in this questionnaire that would reveal your identity.

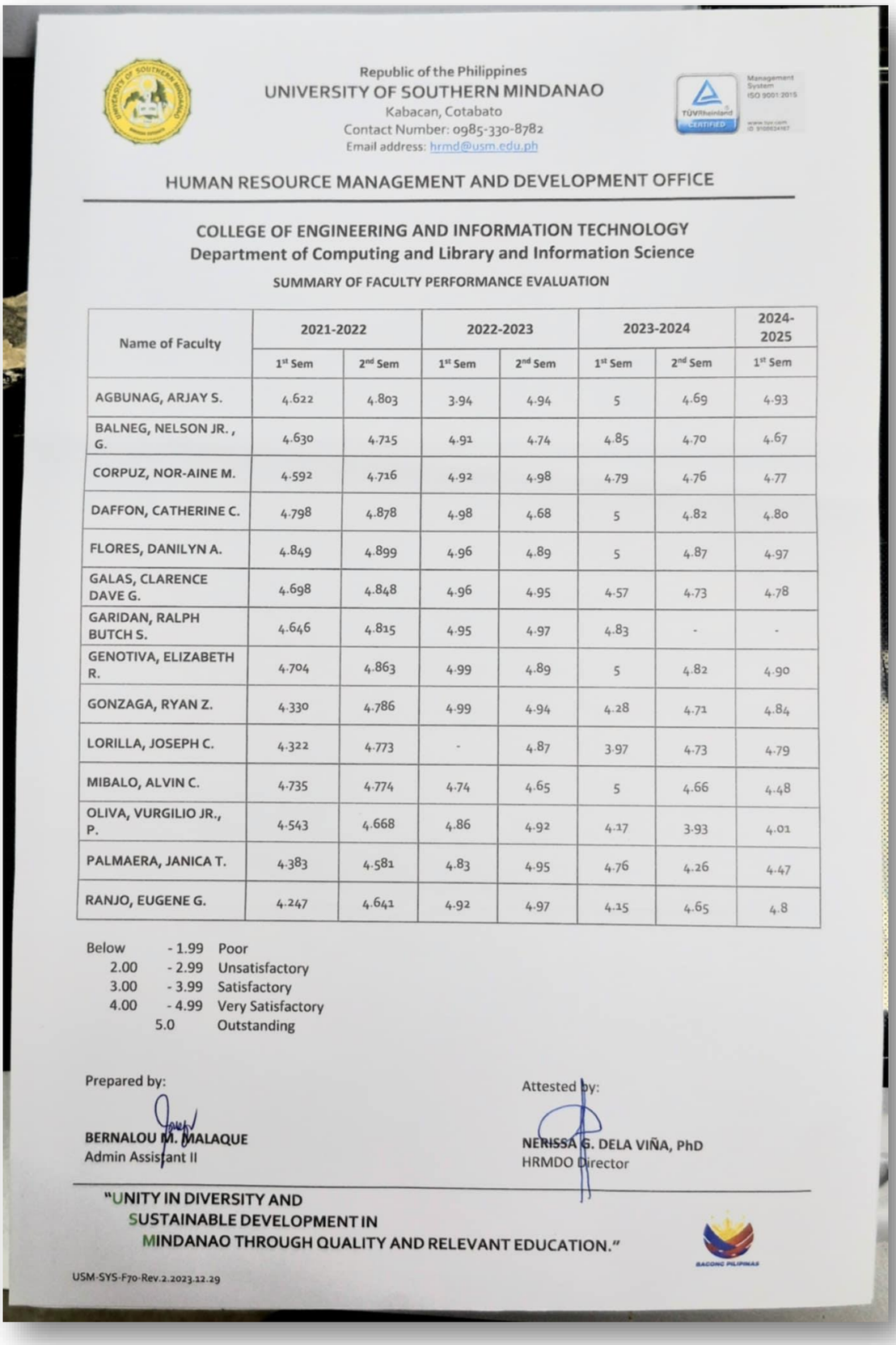
No.	Item	No.		SA	A	D	SD
1	Introduces the topic objectives clearly	1		4	3	2	1
2	Demonstrates fairness in dealing with students.	2		4	3	2	1
3	The instructor/Professor has never been late in the class.	3		4	3	2	1
4	Gives clear test instructions for me to answer test independently	4		4	3	2	1
5	Gives the students the opportunity to participate in the class discussion.	5		4	3	2	1
6	Dismisses the class earlier by 15 minutes or more, before the required time.	6		4	3	2	1
7	Shows expertise of the subject-matter/course.	7		4	3	2	1
8	Explain course outline at the beginning of the semester.	8		4	3	2	1
9	Gives topic examples which are highly related to the lessons being discussed	9		4	3	2	1
10	Introduces different/various learning exercise related to the subject matter.	10		4	3	2	1
11	Gives problem solving activities related to the topics being discussed.	11		4	3	2	1
12	Explains the lessons all the time without student participation.	12		4	3	2	1
13	Allocates time for course/topic consultation during vacant period/s.	13		4	3	2	1
14	Uses supplemental learning materials in order to increase learning opportunity.	14		4	3	2	1
15	Demonstrates lesser confidence in teaching the subject/topic.	15		4	3	2	1
16	Informs students of the results of their quizzes and exams not later than two Weeks.	16		4	3	2	1
17	Has the tendency to shift from the topics and discuss unimportant issues	17		4	3	2	1
18	Most of the time the instructor/professor us absent in the class.	18		4	3	2	1
19	Summarize the main ideas in the lessons and discussions.	19		4	3	2	1
			O	VS	S	P	VP
20	All things considered what is your over –all rating for the faculty's performance as University Lecture in this subject/course?	20	5	4	3	2	1
	for question 20: 5=Outstanding 4=Very Satisfactory 3=Satisfactory 2=Poor 1=Very Poor						

Comments:

USM-HRD-Fcy-Rev.1.2020.03.13

Table 6. Faculty Performance Evaluation Result (Students)

#	Faculty	2020-2021	
		1st Semester	2nd Semester
1	Agbunag, Arjay S.	4.566 Outstanding	4.261 Very Satisfactory
2	Alcala, Astofil Hyde M.	4.586 Outstanding	4.522 Outstanding
3	Balneg, Nelson Jr. G.	-	4.156 Outstanding
4	Corpuz, Nor-Aine M.	4.604 Outstanding	4.658 Outstanding
5	Daffon, Catherine C.	4.565 Outstanding	4.748 Outstanding
6	Flores, Danilyn A.	4.745 Outstanding	4.871 Outstanding
7	Galas, Clarence Dave G.	4.683 Outstanding	4.588 Outstanding
8	Garidan, Ralph Butch S.	-	4.509 Outstanding
9	Genotiva, Elizabeth R.	4.797 Outstanding	4.353 Very Satisfactory
10	Gonzaga, Ryan Z.	4.704 Outstanding	4.265 Very Satisfactory
11	Lorilla, Joseph C.	2.905 Satisfactory	3.424 Satisfactory
12	Mibalo, Alvin C.	4.658 Outstanding	4.758 Outstanding
13	Oliva, Virgilio Jr. P.	4.430 Very Satisfactory	4.246 Very Satisfactory
14	Palmaera, Janice T.	4.350 Very Satisfactory	3.511 Very Satisfactory
15	Ranjo, Eugene G.	4.793 Outstanding	4.733 Outstanding



Republic of the Philippines
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Contact Number: 0985-330-8782
Email address: hrmd@usm.edu.ph

HUMAN RESOURCE MANAGEMENT AND DEVELOPMENT OFFICE

COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY
Department of Computing and Library and Information Science

SUMMARY OF FACULTY PERFORMANCE EVALUATION

Name of Faculty	2021-2022		2022-2023		2023-2024		2024-2025
	1st Sem	2nd Sem	1st Sem	2nd Sem	1st Sem	2nd Sem	1st Sem
AGBUNAG, ARJAY S.	4.622	4.803	3.94	4.94	5	4.69	4.93
BALNEG, NELSON JR., G.	4.630	4.715	4.91	4.74	4.85	4.70	4.67
CORPUZ, NOR-AINE M.	4.592	4.716	4.92	4.98	4.79	4.76	4.77
DAFFON, CATHERINE C.	4.798	4.878	4.98	4.68	5	4.82	4.80
FLORES, DANILYN A.	4.849	4.899	4.96	4.89	5	4.87	4.97
GALAS, CLARENCE DAVE G.	4.698	4.848	4.96	4.95	4.57	4.73	4.78
GARIDAN, RALPH BUTCH S.	4.646	4.815	4.95	4.97	4.83	-	-
GENOTIVA, ELIZABETH R.	4.704	4.863	4.99	4.89	5	4.82	4.90
GONZAGA, RYAN Z.	4.330	4.786	4.99	4.94	4.28	4.71	4.84
LORILLA, JOSEPH C.	4.322	4.773	-	4.87	3.97	4.73	4.79
MIBALO, ALVIN C.	4.735	4.774	4.74	4.65	5	4.66	4.48
OLIVA, VURGILIO JR., P.	4.543	4.668	4.86	4.92	4.17	3.93	4.01
PALMAERA, JANICA T.	4.383	4.581	4.83	4.95	4.76	4.26	4.47
RANJO, EUGENE G.	4.247	4.641	4.92	4.97	4.15	4.65	4.8

Below - 1.99 Poor
2.00 - 2.99 Unsatisfactory
3.00 - 3.99 Satisfactory
4.00 - 4.99 Very Satisfactory
5.0 Outstanding

Prepared by:
BERNALOU M. MALAQUE
Admin Assistant II

Attested by:
NERISSA G. DELA VIÑA, PhD
HRMDO Director

"UNITY IN DIVERSITY AND
SUSTAINABLE DEVELOPMENT IN
MINDANAO THROUGH QUALITY AND RELEVANT EDUCATION."

USM-SYS-F70-Rev.2.2023.12.29

Figure 11. Summary of Faculty Performance Evaluation

REASONABLE BUDGET

The university upholds transparency and accountability in resource management, as demonstrated by its compliance with Section 93 (Transparency Seal) of R.A. No. 10155, ensuring high standards for its stakeholders.

The budgeting process is a collaborative effort, involving various offices, colleges, departments, and units in the institution. Each unit formulates a Project Procurement Management Plan (PPMP) for its allocated budget for each fiscal year, subject to thorough review and approval by the university. Budget utilization follows a strict procurement process, where Purchase Requests undergo rigorous evaluation in accordance with the university's ISO-certified procedures to guarantee efficiency, integrity, and adherence to regulatory standards. Through these measures, the university fosters responsible financial stewardship, reinforcing its commitment to transparency, accountability, and excellence in institutional governance.

The university has the following fund sources:

- ✓ Fund 01 New General Appropriations Fund
- ✓ Fund 05 Unprogrammed Funds
- ✓ Fund 06 Retained Income/Funds
- ✓ Fund 07 Revolving Funds

The budget allocation for the Department of Computing and Library Information Science, where the BSCS program is housed, is strategically focused on acquiring ICT equipment, infrastructure, and laboratory supplies to enhance the learning experience and technical proficiency of its students. By prioritizing investments in modern computing tools, software, and specialized facilities, the department ensures that students have access to resources necessary for academic excellence and industry readiness. This commitment to upgrading technological capabilities aligns with the university's broader goal of fostering innovation, research, and hands-on learning in the computing field. Table 7 presents the detailed budget for the department, while Table 8 and Table 9 outline

the financial allocations at the college and university levels, respectively, reflecting a comprehensive approach to institutional resource management and academic development.

Table 7. Department Budget (Taken from DCLIS PPMP for CY 2025)

CY 2025	Fund 07
Maintenance and Other Operating Expenses (MOOE)	
Laboratory Supplies	₱114,000.00
Repair and Maintenance of IT Equipment	₱23,000.00
Capital Outlay (CO)	
Office Equipment	₱92,000.00
ICT Equipment	₱432,000.00
TOTAL	**₱661,000.00**

Table 8. College Budget (Taken from CEIT PPMP for 2025)

CY 2022	Fund 07
Instruction	
Faculty Development	₱60,000.00
Student Development	₱60,000.00
Curriculum Development	₱60,000.00
TOTAL	**₱180,000.00**

Table 9. University Budget (Taken from the USM Annual Procurement Plan 2025)

Programs	Fund 05 Fiduciary	Fund 05 Tuition	Fund 06 Income Generating Project
Travel and Training Expenses	₱800,000.00	₱3,000,000.00	₱500,000.00
Supplies and Materials	₱764,311.55	₱279,893.42	₱509,336.82
Repair and Maintenance	₱30,000.00	₱215,000.00	₱650,000.00
Machineries and Equipment	₱130,000.00	₱560,000.00	₱1,055,000.00
Computer Software License	₱746,200.00	-	-
TOTAL	**2,470,511.55**	**4,054,893.42**	**2,714,336.82**

PROVISION OF MATERIALS AND OTHER RESOURCES

Computer Laboratories and Facilities

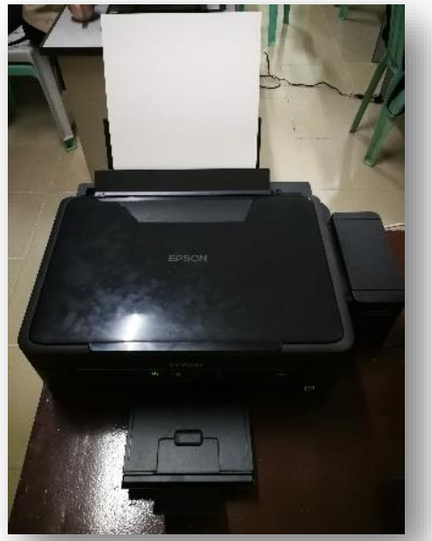
Teaching strategies are significantly more effective when integrated with appropriate laboratory equipment and facilities, as they provide students with hands-on learning experiences that reinforce theoretical concepts. In the field of Computer Science, access to well-equipped laboratories ensures that students can practice programming, system analysis, network configuration, and software development in a controlled environment. Advanced laboratory tools, such as high-performance computers, networking devices, and simulation software, enable students to experiment with real-world scenarios, enhancing their problem-solving skills and technical proficiency. Specialized facilities, including data centers, and cloud computing environments, allow students to engage with cutting-edge technologies and gain practical expertise that aligns with industry demands. Furthermore, integrating laboratories into teaching fosters active learning, collaboration, and critical thinking, preparing students for professional challenges beyond academia. Table 10 outlines the equipment and facilities available to BSCS students, demonstrating the university's commitment to providing a comprehensive and competitive learning environment that equips graduates with the necessary skills to thrive in the rapidly evolving IT industry. By ensuring access to modern laboratory infrastructure, the institution enhances the quality of education, supports innovation, and bridges the gap between theoretical instruction and practical application.

Table 10. List of Laboratory Equipment and Facilities

QUANTITY	EQUIPMENT/FACILITY	DESCRIPTION	PHOTO
150	Computer Unit	For use of instructors and students in lecture, demonstration, laboratory activities and other related activities in laboratory rooms.	
5	Projector	For use of instructors and students in lecture, demonstration, seminars, research purposes, and other related activities in laboratory rooms, lecture rooms, and other venues.	

QUANTITY	EQUIPMENT/FACILITY	DESCRIPTION	PHOTO
4	Tablet	For use of instructors and students in lecture, demonstration, and research purposes.	
2	Switch	For use of instructor and students in activities that require such tools such as networking.	

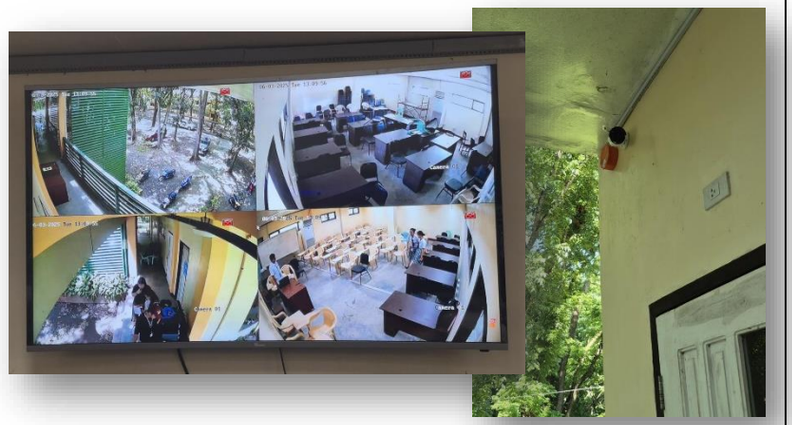
QUANTITY	EQUIPMENT/FACILITY	DESCRIPTION	PHOTO
10	Crimping Tool	For use of instructor and students in activities that require such tools such as networking.	
1	Smartboard	For use of instructors and students during lectures, demonstration, and research purposes.	

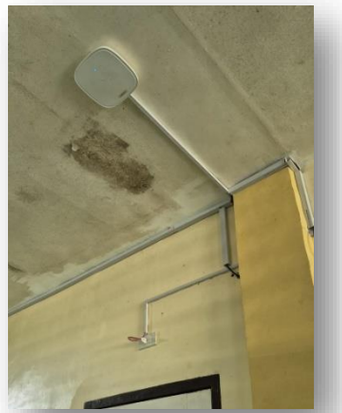
QUANTITY	EQUIPMENT/FACILITY	DESCRIPTION	PHOTO
6	Printer	For use of instructors to reproduce instructional materials such as quizzes, test papers, laboratory exercise sheets, rubrics, and other related documents.	
2	Photocopier	For use of instructors to reproduce instructional materials such as quizzes, test papers, laboratory exercise sheets, rubrics, and other related documents.	

QUANTITY	EQUIPMENT/FACILITY	DESCRIPTION	PHOTO
4	Projector Screen	For use of classes and other activities that require the use of projectors.	
5	Smart TV	For demonstration and use of classes that require Film Viewing and other related activities.	

QUANTITY	EQUIPMENT/FACILITY	DESCRIPTION	PHOTO
4	Computer Laboratory Room	For laboratory classes that require the use of computers specifically for computer-related courses, and other academic related activities.	
7	Whiteboard	For use of instructors and students for classes in computer laboratory rooms.	

QUANTITY	EQUIPMENT/FACILITY	DESCRIPTION	PHOTO
20	Mikrotik Networking Laboratory Equipment	The university, being recognized as one of the Mikrotik Academies in the Philippines, is a beneficiary of twenty (20) units of RB941 networking laboratory equipment for training purposes for free. The training is integrated in Computer Science, Information Systems, Computer Engineering, and Electronics Engineering curricula in the College of Engineering and Information Technology (CEIT) so that students may have the chance to earn their Mikrotik certification.	
1	University Library	As a learning laboratory, the library offers various services that aids students in their laboratory endeavors.	

QUANTITY	EQUIPMENT/FACILITY	DESCRIPTION	PHOTO
4	CCTV Cameras	For security of laboratory equipment, students, and faculty.	
1	Fusion Splicer	Networking Tools used to equip students with hands on networking skills in related subjects.	

QUANTITY	EQUIPMENT/FACILITY	DESCRIPTION	PHOTO
2	Access Points	Provides seamless Wi-Fi coverage experiences for all stakeholders, supporting multiple devices, and enabling interactive learning in the ICT Building.	 
2	Virtual Reality Glasses	For fostering experiential learning, allowing students to visualize abstract ideas, practice real-world applications, and collaborate in virtual classrooms, ultimately improving comprehension and engagement.	
1	Eye Tracker	Enabling eye-tracking technology for research, interactive learning, and assistive applications.	

PARTICIPATION OF SIGNIFICANT NUMBER OF FACULTY/ STAFF/ STUDENTS/ COMMUNITY IN MAJOR PROJECTS/ACTIVITIES

Participation of Faculty Members in Different Activities

In the field of Information Technology, continuous professional development is essential for faculty members to stay updated with industry advancements, emerging trends, and evolving technologies. By attending international, national, regional, and local seminars, workshops, and trainings, engaging in research, and participating in extension activities, educators refine their expertise, enhance their teaching methodologies, and effectively transfer knowledge to students. These activities ensure that faculty members remain well-versed in critical topics such as artificial intelligence, cybersecurity, cloud computing, and software development, allowing them to integrate relevant concepts into the curriculum. Moreover, exposure to diverse learning opportunities at various levels strengthens their professional network, fosters collaboration, and enriches their perspectives on global and local technological developments. Keeping faculty at par with industry standards not only boosts the institution's credibility but also ensures that graduates are well-prepared to meet the demands of the modern workforce. Table 11 highlights the seminars and training attended by BSCS faculty across different levels, demonstrating their commitment to continuous learning and academic excellence. Through this approach, institutions bridge the gap between academia and industry, equipping both educators and students with the knowledge and skills necessary for technological competitiveness and innovation.

Table 11. Faculty Participation in Relevant Activities

INTERNATIONAL				
Seminar/Training/Workshop/Conference	**Inclusive Dates**	**Venue**	**Sponsoring Agency**	**Faculty Participant**
2022 International Workshop on Applied Computing in Agriculture	March 4-5, 2022	Zoom Webinar	DLSU, NTU, and DOST	Flores, Danilyn A. Genotiva Elizabeth R.
Moving Forward: Education in a Post-Covid World	May 18, 2021	Zoom Webinar	Polytechnic University of the Philippines	Flores, Danilyn A. Genotiva, Elizabeth R.
NATIONAL				
Seminar/Training/Workshop/Conference	**Inclusive Dates**	**Venue**	**Sponsoring Agency**	**Faculty Participant**
Design Thinking Bootcamp for Professionals	January 30-31, 2025	Davao City	UPGRADE Education PH	Danilyn A. Flores
IT Education Summit CHEDx2.0 Expand , Exceed, Exemplify	December 4-5, 2024	Davao City	CHED National	Arjay S, Agbunag
Data Analytics for the Future (DAF X): A 5-Day Crash Course	September 16-20, 2024	USM	USM and UPLB	Arjay S, Agbunag Ellizabeth R. Genotiva Janice T. Palmaera
Promoting Tech-Based Startups in Support of Food Security	August 20, 2024	General Santos City	PHILAAST, DOST XII	Danilyn A. Flores
2-Day Seminar-Workshop on Crafting Engaging Extension Proposals, Excelling in Training Management, and Developing Effective Information, Education, and Communication Materials	January 25-26, 2024	USM	USM ESO	Danilyn A. Flores
3-Day Webinar for Educators	April 28-30, 2021	Zoom Webinar	Ang Kampilan	Corpuz, Nor-Aine M. Flores, Danilyn A.

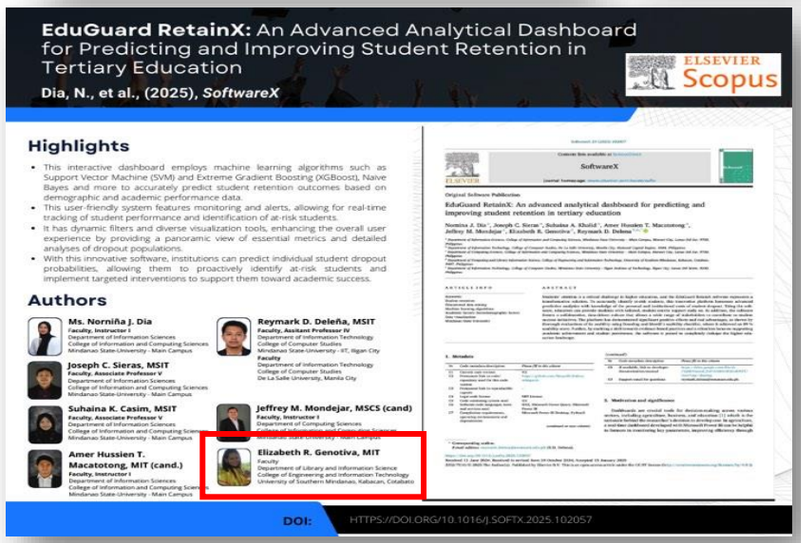
Living in the IT Era (LITE): Teaching College General Education Course on Information Technology	April 8, 2021	Zoom Webinar	PSITE XII, TechFactors Inc. UP Diliman	Corpuz, Nor-Aine M. Flores, Danilyn A.
Seminar in Robot Control and the	2020	University of the Philippines, Diliman	Computing Society of the Phils and The Department of Computer Science	Daffon, Catherine C
Understanding Technology-enhanced Flexible Learning	2020	University of the Philippines, Diliman	Computing Society of the Phils and The Department of Computer Science	
A Short Introduction to Deep Learning Architectures for Time Series Modeling	2020	University of Mindanao, Matina Campus , Davao City	University of Mindanao, Matina Campus , Davao City	
DMPCS Research Webinar: Deep Learning and Imaging Para sa Saging	March 21, 2022	Zoom Webinar	University of the Philippines Mindanao	Flores, Danilyn A. Genotiva, Elizabeth R.
SEEDS-TBI #growing a community of innovators	September 29, 2021	Zoom Webinar	University of the Philippines Visayas	Flores, Danilyn A.
Training-Workshop on Addressing Mental Health Challenges in the New Normal	August 27-29, 2021	Zoom	PRODEV Project Training Center	
17th Philippine Computing Science Congress	2020	University of San Carlos, Talamban Campus, Cebu City, Philippines	Computing Society of the Philippines	Galas, Clarence Dave G.
CSP SIG WIC: 2nd Virtual Meetup “Industry with a Slant Towards Data Science and AI”	July 17, 2021	Zoom Webinar	Computing Society of the Philippines	Genotiva, Elizabeth R.
2nd CRADLE Symposium: Science in Bloom – Innovative breakthroughs for wellness, community and the environment	February 24, 2022	Zoom Webinar	Department of Science and Technology Science for Change Program	Mibalo, Alvin C. Corpuz, Nor-Aine M. Flores, Danilyn A.
Agile Scrum Fundamentals	November 20-21-2021	Zoom Webinar	MST Connect	Mibalo, Alvin C.

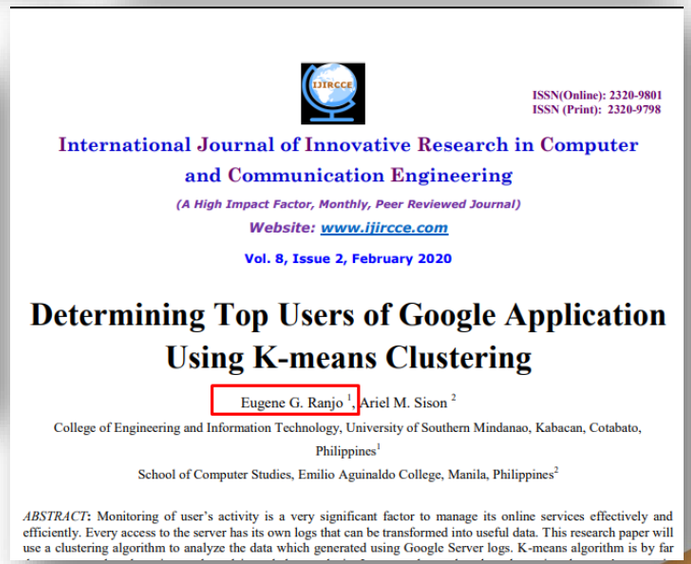
HERDIN PLUS Online Learning	2020	Webinar	Zoom hosted by Department of Science and Technology (DOST) Philippine Council for Health Research and Development (PCHRD)	Ranjo, Eugene G.
Staying Safe: IT Security for Systems & Network Administrators	2020	Webinar	Zoom hosted by Tuloy ang Infra Development! is organized by the PCARI Research and Instructional Infrastructure for Mentoring and Collaboration (PRIME)	
Staying Safe: IT Security for Systems & Network Administrators - Linux Security	2020	Webinar	Zoom hosted by Tuloy ang Infra Development! is organized by the PCARI Research and Instructional Infrastructure for Mentoring and Collaboration (PRIME)	
Webinar on AWS Technical Essentials	2020	Webinar	Online hosted by Tuloy ang Infra Development! is organized by the PCARI Research and Instructional Infrastructure for Mentoring and Collaboration (PRIME) in partnership with Amazon Web Services	
Turnitin Feedback Studio - Administrator Onboarding (Indonesia & Philippines)	2020	Webinar	Zoom hosted by Turnitin	
AACCUP Survey Visit of Mindanao State University - Iligan Institute of Technology (MSU-IIT)	2020	Webinar	Accrediting Agency of Chartered Colleges and Universities of the	

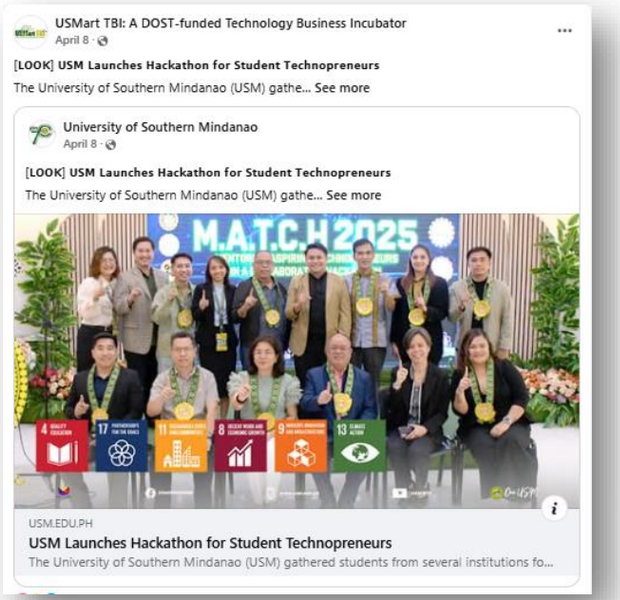
			Philippines (AACCUP) - Mindanao State University - Iligan Institute of Technology (MSU-IIT)	
AWS Data, Databases and Analytics Online Series	2020	Webinar	Online hosted by Amazon Web Services	
Find Yourself in the Future series: Cybersecurity Tech Talk	2020	Webinar	Online hosted by Cisco Networking Academy	
AACCUP Webinar on Online Accreditation System	2020	Webinar	Zoom hosted by Caraga State University, Butuan City Philippines	
The Digital Transformation of Higher Education: COVID-19 and beyond	2020	Webinar	Zoom hosted by Coursera	
REGIONAL				
Seminar/Training/Workshop/Conference	**Inclusive Dates**	**Venue**	**Sponsoring Agency**	**Faculty Participant**
Digital Shift with Sangfor: A Transformational Journey 2024	February 22, 2024	Kidapawan City	RPR, Sangfor, iTDepot	Danilyn A. Flores
Digital Literacy Training for Teachers	2020	Webinar	DICT - Mindanao Cluster	Balneg, Nelson G. Jr.
Website Design Training/Workshop for PPDO Online Data Banking	2020	North Cotabato	Provincial Capital Amas Kidapawan City	Gonzaga, Ryan Z.
Understanding Learning Management Systems and Building the Virtual Classroom in Moodle (Part 1A)		Webinar	CHED X	
LOCAL				
Seminar/Training/Workshop/Conference	**Inclusive Dates**	**Venue**	**Sponsoring Agency**	**Faculty Participant**

Seminar in Robot Control and the Operational Space Formulation	February 07,2020	USM	USM	Agbunag, Arjay S. Alcala, Astrofil Hyde M. Corpuz, Nor-Aine M. Daffon, Catherine C. Flores, Danilyn A. Genotiva, Elizabeth R.
How to Publish without Money Workshop	February 12,2020	USM	USM	
Robot Exoskeleton for enhanced Human Mobility	February 14,2020	USM	USM	
Trends in Machine Learning and Artificial Intelligence	February 19,2020	USM	USM	
Member of the Working Committee During the Modular Jacobian for Dual-Arm Robots Seminar	February 13, 2020	USM	USM	
Member of the Working Committee during the Robot Exoskeleton for Enhanced Human Mobility Seminar	February 14, 2020	USM	USM	
Seminar in Robot Control and the Operational Space Formulation	February 07,2020	USM	USM	Palmaera, Janice T.
How to Publish without Money Workshop	February 12,2020	USM	USM	
Robot Exoskeleton for enhanced Human Mobility	February 14,2020	USM	USM	

The faculty in different Academic Activities







LEVEL III, PHASE 2

NARRATIVE REPORT

CURRICULUM AND INSTRUCTION

LEVEL III, PHASE 2

NARRATIVE REPORT

CURRICULUM AND INSTRUCTION


MSTCONNECT
CERTIFICATE OF COMPLETION
ALVIN CIDRON MIBALO
COURSE OUTLINE:

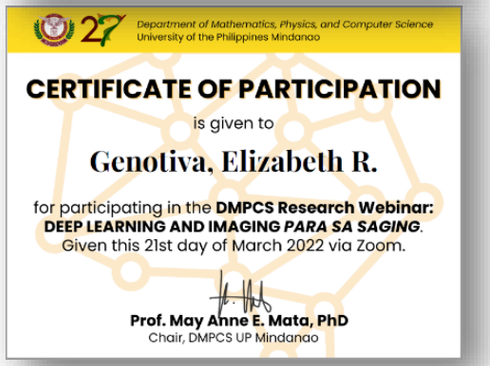

CERTIFICATE OF PARTICIPATION
Elizabeth R. Genotiva
2022 International Workshop on Applied Computing in Agriculture (AgriApp 2022)


Certificate of Copyright Registration


POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
Certificate of Participation
ELIZABETH R. GENOTIVA


University of the Philippines Visayas
College of Management
SEEDS-Technology Business Incubator
Certificate of Participation
DANILYN A. FLORES


Certificate of Participation
Nor-Aine M. Corpuz


Department of Mathematics, Physics, and Computer Science
University of the Philippines Mindanao
CERTIFICATE OF PARTICIPATION
Genotiva, Elizabeth R.
Prof. May Anne E. Mata, PhD


PHILIPINE SOCIETY OF INFORMATION TECHNOLOGY EDUCATORS
PSITE-SOCCKSARGEN REGION
Certificate of Participation
Nor-aine M. Corpuz


PRODEV PROJECT
CERTIFICATE OF PARTICIPATION
Danilyn A. Flores


Republic of the Philippines
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato 9407

awards this

CERTIFICATE
of Participation

to

DANILYN A. FLORES

FRANCISCO GIL R. GARCIA, RPAE, PhD
SUC President IV

By Authority of the President:

WILLIE JONES B. SALILING, RPAE, EnP
Director, Human Resource Management and Dev't Office


Computing Society of the Philippines
Special Interest Group for Women in Computing

presents this
Certificate of Attendance
to

ELIZABETH GENOTIVA

for attending CSP SIG WIC: 2nd Virtual Meetup
"Industry with a Slant Towards Data Science and AI"
by Aileen Judan-Jiao
on July 17, 2021 via Zoom Video Conference

[SGD] MA. MERCEDES T. RODRIGO
Convener, Virtual Meetups

[SGD] RACHEL EDITA O. ROXAS
Chair, CSP SIG WIC


Republic of the Philippines
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato 9407

awards this

CERTIFICATE
of Participation

to

DANILYN A. FLORES

FRANCISCO GIL R. GARCIA, RPAE, PhD
SUC President IV

By Authority of the President:

WILLIE JONES B. SALILING, RPAE, EnP


Republic of the Philippines
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato 9407

awards this

CERTIFICATE
of Participation

to

DANILYN A. FLORES

for actively participating during the **Outcomes-Based Education (OBE) and Outcomes-Based Teaching and Learning (OBTL): Course Outcomes Setting and OBTL Syllabus Design** held on July 8-17, 2019 at Administration Skyroom, University of Southern Mindanao, Kabacan, Cotabato

Given this 17th day of July 2019.

FRANCISCO GIL R. GARCIA, RPAE, PhD
SUC President IV

By Authority of the President:

WILLIE JONES B. SALILING, RPAE, EnP
Director, Human Resource Management and Dev't Office


University of the Philippines
LOS BAÑOS

Certificate of Completion

is awarded to

Elizabeth R. Genotiva

for completing the
Data Analytics for the Future (DAF X):
A 5-Day Crash Course (48 hours)
held on September 16-20, 2024
at the University of Southern Mindanao,
Kabacan, Cotabato.

JOMAR F. RABAJANTE, DSc
UPLB DAF X Team Lead

9202415


Republic of the Philippines
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato 9407

awards this

CERTIFICATE
of Participation

to

DANILYN A. FLORES

for actively participating during the **Outcomes-Based Education (OBE) and Outcomes-Based Teaching and Learning (OBTL): Program Assessment and Evaluation** held on April 29, 2019 at Administration Skyroom, University of Southern Mindanao, Kabacan, Cotabato

Given this 29th day of April 2019.

FRANCISCO GIL R. GARCIA, RPAE, PhD
SUC President IV

By Authority of the President:

WILLIE JONES B. SALILING, RPAE, EnP
Director, Human Resource Management and Dev't Office

CERTIFICATE
OF RECOGNITION

THIS CERTIFICATE IS PRESENTED TO

NOR-AINE M. CORPUZ, MIS

in grateful acknowledgement for rendering invaluable time and service as Evaluator during the activity entitled "**DSSC Research and Extension Project Proposal Review 2023**" on April 04, 2023 at Arnaldo's Hotel and Restaurant, Digos City Davao del Sur.

Given this 4th day of April 2023, at Arnaldo's Hotel and Restaurant, Digos City Davao del Sur.

AUGIE E. FUENTES, Ph.D
COLLEGE PRESIDENT

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

Certificate of Participation

Is awarded to

Danilyn A. Flores

For her active participation during the **Regional Pitching Competition** conducted by DICT Region XII and Mainland BARMM virtually held via Zoom Platform on October 28, 2022 with a theme "Stepping Up the Startup Ecosystem"

Digitally signed by Asum Alimbzar Pacasum

ALIMBZAR P. ASUM, MPA, J.D., CESO V
Director IV, Regional Director
DICT Region XII and Mainland BARMM

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

Certificate of Attendance

This is to certify that

DANILYN A. FLORES

attended the webinar on

VIDEO EDITING FOR TEACHERS

conducted on
DECEMBER 21, 2022 | 4 HOURS

R12_DECEMBER_22

Digitally signed by Asum Alimbzar Pacasum
ALIMBZAR P. ASUM, MPA, J.D., CESO V
REGIONAL DIRECTOR

University of the Philippines System
Office of the Vice President for Development
INFORMATION TECHNOLOGY DEVELOPMENT CENTER

This

Certificate of Attendance

is given to

DANILYN FLORES

for attending the webinar on
Introduction to Information Systems Strategic Plan (ISSP)
Held on 5 March 2025.
Given this 5th of March 2025 at U.P. Diliman, Quezon City.

GABRIEL F. VILLORENTE
Head of Training Team

PAULO NOEL G. PAJE
Director

CONTROL NO. DFu4JalhEi6p

CERTIFICATE OF PARTICIPATION

is awarded to

Arjay S. Agbunag

for participating in the **IT Education Summit** dubbed as:

CHED X 2.0
EXPAND, EXCEED, EXEMPLIFY

with the theme: **Building Synergy: Aligning IT Education with Industry** held on December 4-5, 2024, at SMX Convention Center, SM Lanang Premier, Lanang, Davao City.

Given this 5th day of December 2024, at Davao City, Philippines.

MARICAR R. CASQUEJO, PhD, CESO III
Director IV
Commission on Higher Education Region XI

CHERRIE MELANIE ANCHETA-DIEGO, PhD, CESO III
Director IV
Office of Programs and Standards Development

University of the Philippines LOS BAÑOS

Certificate of Completion

is awarded to

Arjay S. Agbunag

for completing the
Data Analytics for the Future (DAF X): A 5-Day Crash Course (48 hours)
held on **September 16-20, 2024**
at the **University of Southern Mindanao, Kabacan, Cotabato.**

JOMAR F. RABAJANTE, DSc
UPLB DAF X Team Lead

9202402

Participation of Students in Different Activities

Learning within the four walls of a classroom provides a strong academic foundation, but true education extends beyond textbooks and lectures. To develop well-rounded individuals, students must engage in diverse activities that foster both academic excellence and essential life skills. Extracurricular programs, such as leadership training, community outreach, industry immersion, research symposiums, and cultural events, enhance students' adaptability, teamwork, and problem-solving abilities. Participation in these activities cultivates critical thinking, communication skills, and social awareness, preparing students to navigate real-world challenges effectively. Moreover, exposure to interdisciplinary experiences strengthens their ability to contribute meaningfully to society, ensuring that graduates are not only knowledgeable but also capable of making a positive impact. Table 12 showcases the various activities attended by students over the past four years, illustrating the institution's dedication to holistic education. By integrating experiential learning into their academic journey, students become more confident, skilled, and socially responsible individuals, ready to excel in their chosen fields and serve as valuable contributors to their communities.

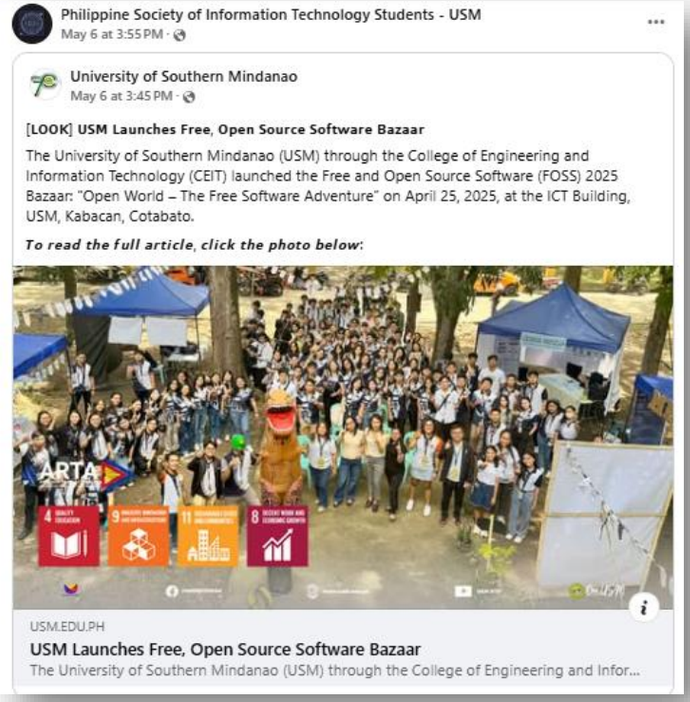
Table 12. Student Participation in Different Activities

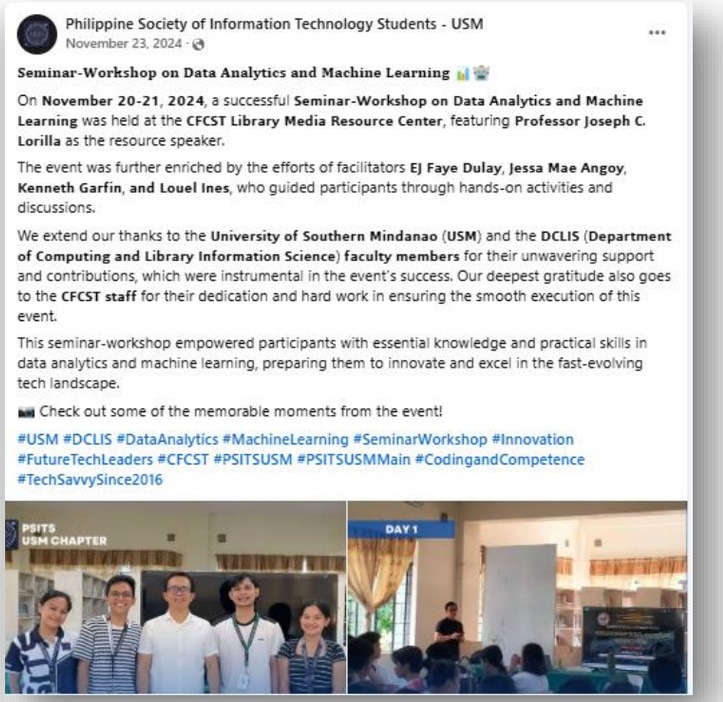
Activity	Description	Participants
Group Growth Program	This activity is led by the Peer Facilitators of each college trained by the University Guidance Office. Freshmen students go through different modules to help them adjust to their college life. After the 1st semester, students attend a culmination where all of them receive certificates.	All freshmen students
CEIT Fiesta	This activity is a celebration of the Founding Anniversary of the college. Students of every society	All students

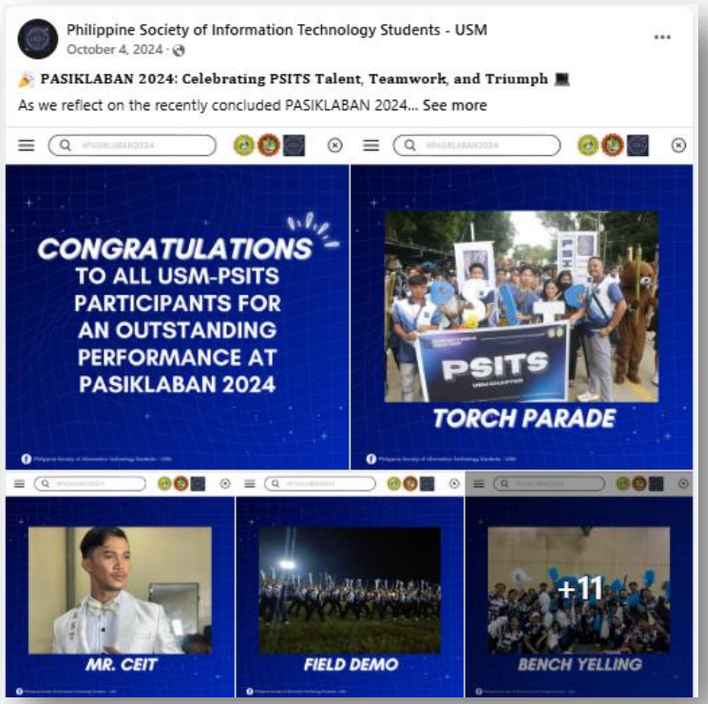
Activity	Description	Participants
	show their talents and skills in friendly Literary Arts, Musical, and Palarong Pinoy competitions that not only enhances their given talents and skills but also fosters self-confidence, sportsmanship, cooperation, and leadership.	
Unilympics	This university activity is done every year where students of every college show their skills in friendly sports and dance competitions that not only enhances their innate skills but also fosters self-confidence, sportsmanship, cooperation, and leadership.	All students
Kaliline Festival	This university activity is done every year where students of every college show their skills in friendly Literary Arts, Musical, and Intellectual competitions that not only enhances their given talents and skills but also fosters self-confidence, sportsmanship, cooperation, and leadership.	All students
Pasiklaban	This activity is a week-long celebration by the students for the foundation anniversary of the university. Students of every society compete in different competitions showcasing their different talents and skills. This activity fosters camaraderie, leadership, and cooperation.	All students
Software Freedom Day Seminars and Contests	This activity is done every year by the Philippine Society of Information Technology Students USM Chapter where members are required to attend and participate in different activities such as contests in programming, logo making, and quiz bowl, and IT related seminars.	All students
PSITS Convention Seminars and Contests	This activity is done every year by the Philippine Society of Information Technology Educators Region XII where members are enjoined to attend and participate in different activities such as contests in programming, logo making, and quiz bowl, and IT related seminars.	Selected and Interested Students
Balik Scientist Seminars	The university was recently a recipient of a Balik Scientist in the	Interested students

Activity	Description	Participants
	person of Dr. Rodrigo S. Jamisola. He conducted a series of seminars in line with his expertise in research and robotics attended by selected and interested faculty and students.	
Student In-House Review	Every year, the college and the university conducts a Student In-House Review where selected student researchers present their studies and receive awards.	Selected students
Leadership Training on Climate Change and Environmental Preparedness	Every year the National Service Training Program conducts seminars such as these for all enrolled students. This fosters their readiness and responsiveness as members of the community.	All students
Training on Community Service and Earthquake and Fire Drill		All students
Training on Standard Basic First Aid and Basic Water Safety		All Students
2nd Young Leaders Summit on Sustainable Development Goals		All Students

Students in different multidisciplinary activities






Philippine Society of Information Technology Students - USM
October 4, 2024 ·
PASIKLABAN 2024: Celebrating PSITS Talent, Teamwork, and Triumph
As we reflect on the recently concluded PASIKLABAN 2024... See more
CONGRATULATIONS
TO ALL USM-PSITS PARTICIPANTS FOR AN OUTSTANDING PERFORMANCE AT PASIKLABAN 2024
PSITS
TORCH PARADE
MR. CEIT
FIELD DEMO
+11
BENCH YELLING

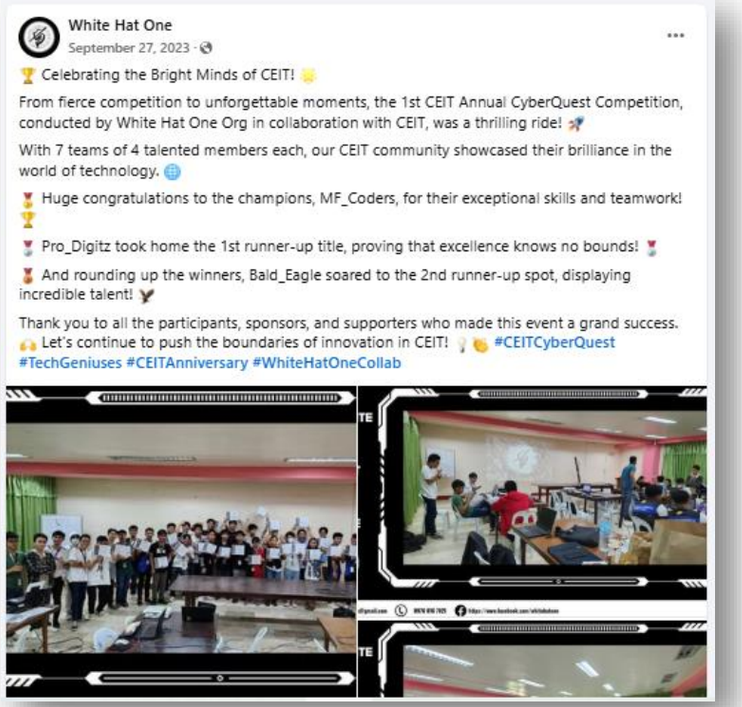

Philippine Society of Information Technology Students - USM
June 25, 2024 ·
PSITS Research Achievements: Computer Science Students Shine
We are incredibly proud to congratulate our five gradu... See more
PSITS RESEARCH ACHIEVEMENTS:
COMPUTER SCIENCE STUDENTS SHINE
CODING AND COMPETENCE


Philippine Society of Information Technology Students - USM
November 28, 2023 ·
Harmony and Rhythm Triumph: PSITS Celebrates Cultural Excellence!
A ... See more
PSITS
MASTS PERFORMERS
PSITS: Where Coding and Competence Collide
PSITS
FOLKDANCE
(Christian Category)
KEVIN CLIEN ALDARON
3RD YR BSINFOSYS A
1ST RUNNER UP
CODING & COMPETENCE
PSITS
LIVE BAND
LJ EDIANON
3RD YR BSCS A
2ND RUNNER UP
PSITS
LIVE BAND
BIEN ANJELOU ARDINA
3RD YR BSCS A
2ND RUNNER UP

LEVEL III, PHASE 2

NARRATIVE REPORT

CURRICULUM AND INSTRUCTION


White Hat One
September 27, 2023 ·
Celebrating the Bright Minds of CEIT!
From fierce competition to unforgettable moments, the 1st CEIT Annual CyberQuest Competition, conducted by White Hat One Org in collaboration with CEIT, was a thrilling ride!
With 7 teams of 4 talented members each, our CEIT community showcased their brilliance in the world of technology.
Huge congratulations to the champions, MF_Coders, for their exceptional skills and teamwork!
Pro_Digitz took home the 1st runner-up title, proving that excellence knows no bounds!
And rounding up the winners, Bald_Eagle soared to the 2nd runner-up spot, displaying incredible talent!
Thank you to all the participants, sponsors, and supporters who made this event a grand success.
Let's continue to push the boundaries of innovation in CEIT! #CEITCyberQuest
#TechGeniuses #CEITAnniversary #WhiteHatOneCollab


FRESHBYTES
FreshBytes
About Us
What We Are T
Key Features


USMart TBI
A DOST-funded Technology Business Incubator


CERT-PH
RED HAWK
USM
DICT | CERT-PH
HACK-GOV
KIAN
TOMMIE
RALPH
LOUIE
PARTICIPANT


Republic of the Philippines
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato

NATIONAL SERVICE TRAINING PROGRAM

CERTIFICATE OF PARTICIPATION

is hereby awarded to

FRAN CELISO , ARVIN L.

for having participated in **"TRAINING ON COMMUNITY SERVICE AND EARTHQUAKE AND FIRE DRILL"** on April 12, 26, May 5, 10, 2019 at University of Southern Mindanao, Kabacan, Cotabato.

Given this 24th day of May 2019 at the USM Gym, Kabacan, Cotabato.

MAY EVA L. GARCIA
Director, NSTP


Republic of the Philippines
University of Southern Mindanao
College of Engineering and Information Technology
Kabacan, Cotabato 9407

awards this

CERTIFICATE OF PARTICIPATION

to

YZZAH MADELLE G. RAPIZ

as **PARTICIPANT** during the **CEIT Exhibit Techno Pitch Fest and In-house Review** with a theme **"IE: Innovate, Evaluate and Excel."** held on May 15, 2025 at Commercial Building, University of Southern Mindanao, Kabacan, Cotabato.

MARICEL G. DAYADAY, DTE, ECE
CEIT DEAN


Republic of the Philippines
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato 9407

awards this

CERTIFICATE
of Participation

to

JHONNAS J. VISITACION

for actively participating during the **Trends in Machine Learning and Artificial Intelligence** held on February 19, 2020 at the DD Clemente Hall, University of Southern Mindanao, Kabacan, Cotabato

Given this 19th day of February 2020.

DR. RODRIGO S. JAMISOLA, JR.
Guest Scientist

FRANCISCO GIL N. GARCIA, RPAE, PhD
SUC President IV

By Authority of the President:

WILLIE JONES B. SALILING, RPAE, EnP
Director, Human Resource Management and Dev't Office


YOUNG LEADERS' PHILIPPINES (YOULEAD)
USM-NSTP, Kabacan, Cotabato

NATIONAL SERVICE TRAINING PROGRAM

Certificate of Involvement

is hereby awarded to

NAZER V. MALAGUIA

for his/her valuable involvement as an active participant during the **LEADERSHIP TRAINING ON CLIMATE CHANGE AND ENVIRONMENTAL PREPAREDNESS** held last March 30, 2019 at Municipal Gym, Kabacan, Cotabato in partnership with USM-NSTP.

This certifies that the name mentioned rendered relevant contributions to the achievement of the SDGs by year 2030.

Given this 24th day of May, 2019 at USM Gym, Kabacan, Cotabato, Philippines.

MAY EVA L. GARCIA
Director, NSTP

MR. RONALD PADOJINOG
Head, CEO

JOHN P. BAYLON
National Advise


Republic of the Philippines
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato

NATIONAL SERVICE TRAINING PROGRAM
Civic Welfare Training Service

CERTIFICATE OF PARTICIPATION

is hereby awarded to

FRANCELISO , ARVIN L.

for having participated in **"TRAINING ON STANDARD BASIC FIRST AID AND BASIC WATER SAFETY"** on April 12, 20, May 5, 10, 2019 at University of Southern Mindanao, Kabacan, Cotabato.

Given this 24th day of May 2019 at the USM Gym, Kabacan, Cotabato.

JOHN P. BAYLON
CWTS Head Program Coordinator

MAY EVA L. GARCIA
Director, NSTP


YOUNG LEADERS' NETWORK-PHILIPPINES
USM-NSTP, Kabacan, Cotabato

awards this

Certificate of Involvement

to

FRANCELISO , ARVIN L.

for his/her valuable involvement as an active participant during the 2nd **Young Leaders' Summit on Sustainable Development Goals (SDGs)** held at USM Gym, in partnership with USM-NSTP.

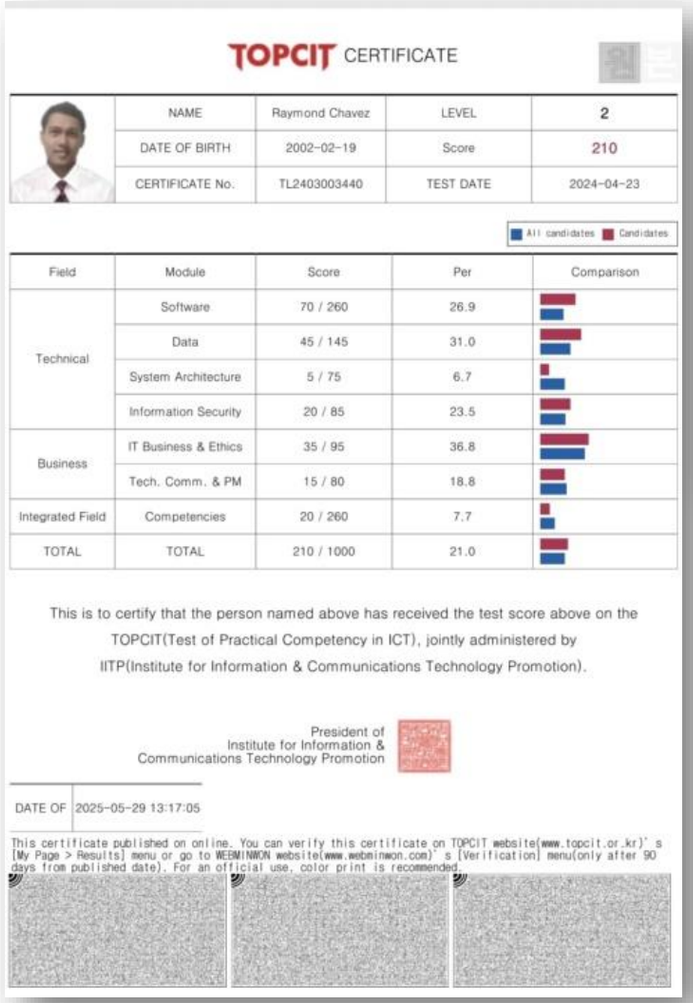
This certifies that the name mentioned rendered relevant contributions to the achievement of the SDGs by year 2030.

Given this 26th day of October, 2018 at USM Gym, Kabacan, Cotabato, Philippines.

MAY EVA L. GARCIA, PhD
USM-NSTP Director

MR. RONALD PADOJINOG
Head, CEO

JOHN P. BAYLON, MAEd
National Advise



TOPCIT CERTIFICATE

	NAME	Raymond Chavez	LEVEL	2
	DATE OF BIRTH	2002-02-19	Score	210
	CERTIFICATE No.	TL2403003440	TEST DATE	2024-04-23

All candidates Candidates

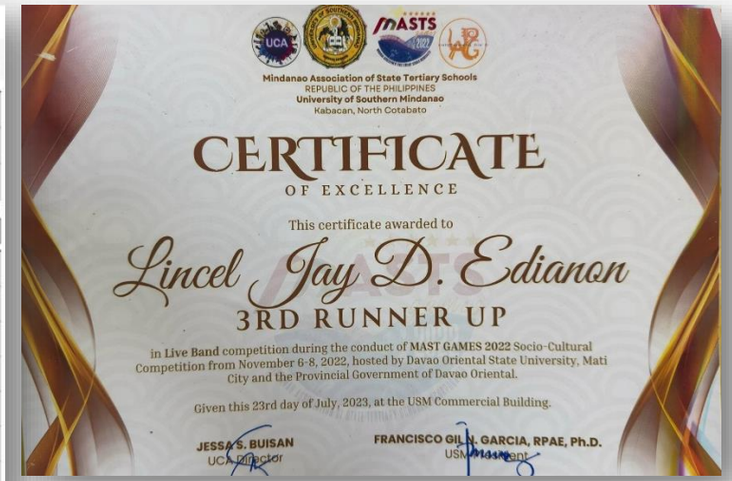
Field	Module	Score	Per	Comparison
Technical	Software	70 / 260	26.9	
	Data	45 / 145	31.0	
	System Architecture	5 / 75	6.7	
	Information Security	20 / 85	23.5	
Business	IT Business & Ethics	35 / 95	36.8	
	Tech. Comm. & PM	15 / 80	18.8	
Integrated Field	Competencies	20 / 260	7.7	
TOTAL	TOTAL	210 / 1000	21.0	

This is to certify that the person named above has received the test score above on the TOPCIT(Test of Practical Competency in ICT), jointly administered by IITP(Institute for Information & Communications Technology Promotion).

President of
Institute for Information &
Communications Technology Promotion

DATE OF 2025-05-29 13:17:05

This certificate published on online. You can verify this certificate on TOPCIT website(www.topcit.or.kr)' s [My Page > Results] menu or go to WEBMINMON website(www.webminmon.com)' s [Verification] menu(only after 90 days from published date). For an official use, color print is recommended.



Mindanao Association of State Tertiary Schools
REPUBLIC OF THE PHILIPPINES
University of Southern Mindanao
Kabacan, North Cotabato

CERTIFICATE
OF EXCELLENCE

This certificate awarded to

Lincel Jay D. Edianon

3RD RUNNER UP

in **Live Band** competition during the conduct of **MAST GAMES 2022** Socio-Cultural Competition from November 6-8, 2022, hosted by Davao Oriental State University, Mati City and the Provincial Government of Davao Oriental.

Given this 23rd day of July, 2023, at the USM Commercial Building.

JESSA S. BUISAN
UCA Director

FRANCISCO GIL N. GARCIA, RPAE, Ph.D.
USM President

47th UNIVERSITY RECOGNITION DAY

Republic of the Philippines
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato

ADMISSION AND RECORDS OFFICE

This certificate is awarded to

ROMMELA JANE P. MAHUSAY
BSCS

in recognition of her outstanding scholastic performance, achieving a General Weighted Average (GWA) of 1.687 during the First Semester of Academic Year 2024-2025.

Given this 13th day of March 2025 on the occasion of the 47th University Recognition Day.

CAA College Academic Award

NELIA O. DU, PhD
Director for Admission and Records

JONALD L. PIMENTEL, PhD
University President

MR & MS USM 2024

MR USM INSTRUCTION 2024

GIVEN THIS 29TH DAY OF SEPTEMBER 2024
AT USM AUDITORIUM

KENNY FLOYD S. MONTEFALCO
USG PRESIDENT

CERTIFICATE OF APPRECIATION

FRESHBYTES

for achieving CHAMPION in the **Best Booth** Category during the Startup Expo of MATCH 2025, held on April 3-4, 2025 at USM Commercial Building.
This award is given in recognition of your exceptional creativity, innovative thinking, and entrepreneurial excellence, demonstrating groundbreaking solutions that contribute to innovation and industry advancement.

Given this 4th of April, 2025 at University of Southern Mindanao, Kabacan, Cotabato.

JALALUDDIN B. MARONHOM, DBA

DEBBIE MARIE B. VERZOSA, PhD

MATCH 2025

FRESHBYTES

for achieving CHAMPION in the **Commendable Prototype** Category during the Startup Expo of MATCH 2025, held on April 3-4, 2025 at USM Commercial Building.
This award is given in recognition of your exceptional creativity, innovative thinking, and entrepreneurial excellence, demonstrating groundbreaking solutions that contribute to innovation and industry advancement.

AWARDS OF DISTINCTION AND ACHIEVEMENT AND GRANTS OF THIS PROGRAM. "BEST PRACTICES" ADOPTED.

Students' Academic Awards

The university fosters a culture of excellence by recognizing and rewarding students' academic achievements through scholarships, medal awards, and grants, ensuring that dedication and hard work are duly acknowledged. By providing financial assistance and merit-based incentives, the institution encourages students to strive for academic distinction, supporting their educational journey while alleviating financial burdens. Additionally, the annual Recognition Program serves as a platform to celebrate exceptional scholars, reinforcing the university's commitment to intellectual growth and motivation. Beyond academic honors, the university also values non-academic achievements, recognizing students who excel in various competitions, such as research symposiums, hackathons, debate tournaments, and cultural events. Tables 13 and 14 highlight students who have received scholarships, awards, and grants, as well as those who have triumphed in non-academic contests over the past four years. By honoring excellence across different fields, the institution not only cultivates a competitive yet supportive learning environment but also empowers students to reach their full potential, preparing them to make meaningful contributions to society.

Table 13. Academic Awards of Students

School Year	Awards	Recipients	Level
2020-2021	University Scholar College Scholar	0 20	Institutional
2021-2022	University Scholar College Scholar	7 93	Institutional
2022-2023	Cum Laude University Scholar College Scholar	2 1 33	Institutional
2023-2024	Cum Laude	4	Institutional

	University Scholar College Scholar	8 40	
2024-2025	Cum Laude	7	Institutional

Table 14. Non-Academic Awards of Students

Event	Awards	Recipient	Level
2025 CEIT Exhibit	Champion	PSITS USM	Institutional
MATCH 2025	Champion Best Booth	FreshBytes	Regional
MATCH 2025	Champion Best Logo	Agrimove	Regional
MATCH 2025	3rd Place Best Logo	FreshBytes	Regional
MATCH 2025	Champion Most Commendable Prototype	FreshBytes	Regional
2025 CEIT Student In-House Review	3rd Place Innovation Category	Ian John Romel C. Quimot	Institutional
CEIT 2024 Student In-House Review	1st Best Paper (Applied Research)	Marvic Pagayao	Institutional
CEIT 2024 Student In-House Review	3rd Best Paper (Applied Research)	Raymond Chavez	Institutional
Mr. and Ms. USM 2024	1st Runner Up	Lincel Jay Edianon	Institutional
Webtoon Art Competition	1st Place	Keandra Nathalie Acosta	National
MASTS Culture and Arts Festival 2023	2nd Runner Up Live Band	Lincel Jay Edianon Bien Anjelou Ardina	Institutional
MASTA GAMES 2023	Swimming Gold 4x50 Freestyle Silver 4x200 Freestyle Bronze 400IM	Josh Castillo	National
MASTA GAMES 2023	Taekwondo Gold Heavyweight Category	Harris June C. Janani	National
MASTA GAMES 2023	Chess 4th Individual 5th Group	John Catamura	National
MASTS Games 2022 Live Band	3rd Runner Up	Lincel Jay Edianon	National
76th Kabacan Founding Anniversary	Video Making Contest 2nd Place	Yzza Madelle Arifeh Camanto	Local
76th Kabacan Founding Anniversary	Muziklaban 1st Runner Up	Bien Anjelou Ardina	Local

CEIT SophFresh Day 2021	1st Place Freshmen Vocal Solo	Lincel Jay Edianon	Institutional
CEIT SophFresh Day 2021	3rd Place Freshmen Feature Writing	1 Student	Institutional
PSITS Day 2021	1st Place Online Individual Quiz Bee	Steven Jeff Gunsi	Institutional

Best Practices

The department strives to comply with institutional and national requirements to ensure that the curriculum of each program offering, including the BSCS program, is at par with the demands of the times.

✓ **COPC**

The university ensures that all its programs are compliant to national, regulatory, and statutory requirements to maintain its stakeholders' and the communities trust in providing quality education.

The BSCS program is compliant to the requirements of CHED as evident by the issuance of a Certificate of Program Compliance.

Republic of the Philippines
Office of the President
COMMISSION ON HIGHER EDUCATION
Region XII, Koronadal City
e-mail: chedro12@yahoo.com

CERTIFICATE OF PROGRAM COMPLIANCE

This is to certify that the ***University of Southern Mindanao***, Kabacan, North Cotabato has successfully complied with all the minimum requirements set by ***CHED Memorandum Order (CMO) No. 53, s. 2006*** *"Policies and Standards for Information Technology Education (ITE) Programs"* for the ***Bachelor of Science in Computer Science*** program effective ***AY 2014-2015.***

This **Certificate of Program Compliance** is based on the validation visit conducted by the team on ***July 3, 2014*** for the ***Bachelor of Science in Computer Science*** program.

Issued this 18th day of March 2015 in Koronadal City, Philippines.

FOR THE COMMISSION:

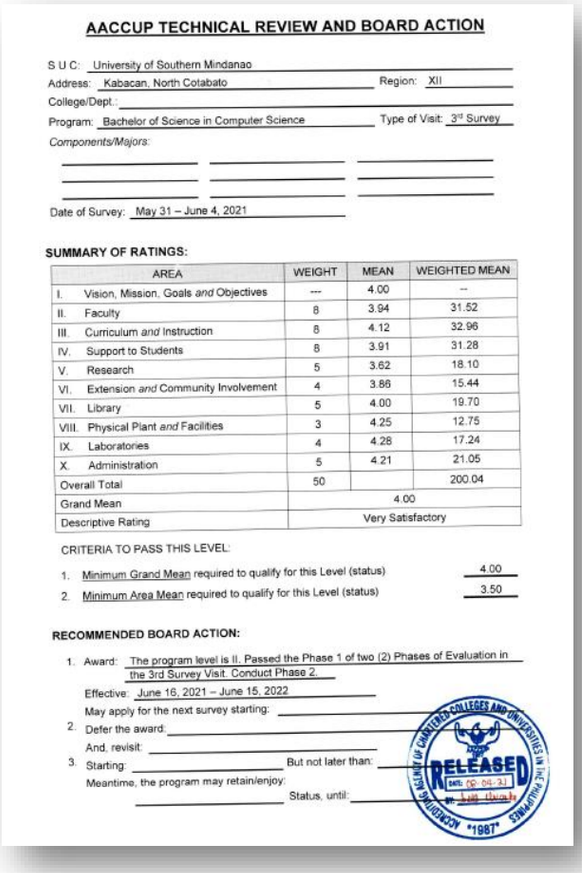
MAXIMO C. ALJIBE, Ph.D., DPM, CESO III
Director IV

RELEASED

✓ ACCREDITATION

The university believes that there is always room for improvement and that an outsider looking in can see opportunities for improvement that we sometimes do not. Thus, submitting programs for evaluation to different organizations.

The BSCS program is regularly submitted for Accreditation to AACUP and has recently been Level III Phase I Re-Accredited.



AACCUP TECHNICAL REVIEW AND BOARD ACTION

S U C: University of Southern Mindanao
Address: Kabacan, North Cotabato Region: XII
College/Dept.:
Program: Bachelor of Science in Computer Science Type of Visit: 3rd Survey
Components/Majors:

Date of Survey: May 31 – June 4, 2021

SUMMARY OF RATINGS:

AREA	WEIGHT	MEAN	WEIGHTED MEAN
I. Vision, Mission, Goals *and* Objectives	---	4.00	--
II. Faculty	8	3.94	31.52
III. Curriculum *and* Instruction	8	4.12	32.96
IV. Support to Students	8	3.91	31.28
V. Research	5	3.62	18.10
VI. Extension *and* Community Involvement	4	3.86	15.44
VII. Library	5	4.00	19.70
VIII. Physical Plant *and* Facilities	3	4.25	12.75
IX. Laboratories	4	4.28	17.24
X. Administration	5	4.21	21.05
Overall Total	50		200.04
Grand Mean	4.00		
Descriptive Rating	Very Satisfactory		

CRITERIA TO PASS THIS LEVEL:

1. Minimum Grand Mean required to qualify for this Level (status) 4.00
2. Minimum Area Mean required to qualify for this Level (status) 3.50

RECOMMENDED BOARD ACTION:

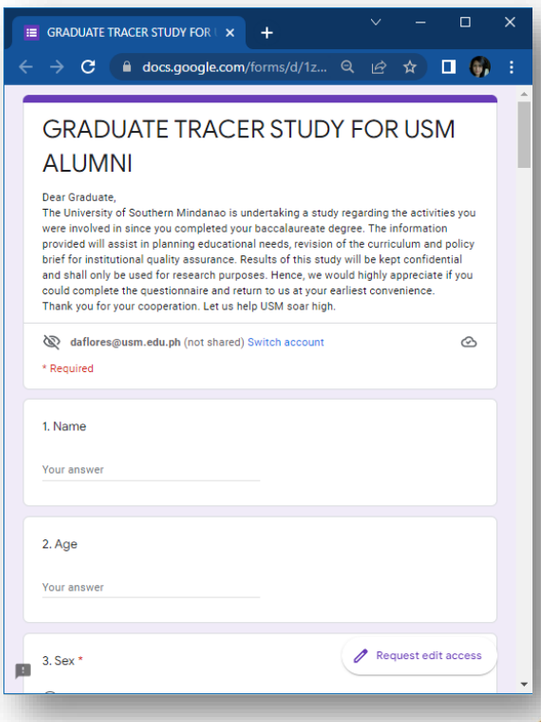
1. Award: The program level is II. Passed the Phase 1 of two (2) Phases of Evaluation in the 3rd Survey Visit. Conduct Phase 2.
   Effective: June 16, 2021 – June 15, 2022
   May apply for the next survey starting:
2. Defer the award:
   And, revisit:
3. Starting: But not later than:
   Meantime, the program may retain/enjoy:
   Status, until:

RELEASED

✓ TRACER STUDY

It is one of the university's responsibility to monitor their graduates' performance after graduation to assess how they are doing and by that determine what areas in the teaching-learning process should be continued, can be improved, and maybe added.

BSCS graduates are monitored through a university tracer study, and employers are given by



GRADUATE TRACER STUDY FOR USM ALUMNI

Dear Graduate,
The University of Southern Mindanao is undertaking a study regarding the activities you were involved in since you completed your baccalaureate degree. The information provided will assist in planning educational needs, revision of the curriculum and policy brief for institutional quality assurance. Results of this study will be kept confidential and shall only be used for research purposes. Hence, we would highly appreciate if you could complete the questionnaire and return to us at your earliest convenience.
Thank you for your cooperation. Let us help USM soar high.

daflores@usm.edu.ph (not shared) Switch account
* Required

1. Name
Your answer

2. Age
Your answer

3. Sex *
Request edit access

the department an Employer Feedback form where they can rate the graduate in terms of their work performance and in other areas.

✓ **ISO**

Part of the university's mission and vision is to provide the country and the rest of the world with quality graduates. To maintain and even improve the quality of services provided to its students, the university through its administrators therefore ensures that the processes of the university's services are within international standards. Hence, the application for ISO Certification.

Certificate

Standard ISO 9001:2015
Certificate Registr. No. 01 100 1634777

Certificate Holder: University of Southern Mindanao
Brgy. Poblacion, Kabacan,
Cotabato, Philippines

Scope: Design, Development and Provision of Tertiary Education including Research and Extension Services (College of Arts and Sciences, College of Agriculture, College of Veterinary Medicine, College of Engineering and Information Technology, College of Business Development Economics and Management, College of Human Ecology and Food Sciences and College of Education)

Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Validity: The certificate is valid from 2020-03-26 until 2023-02-12.
First certification 2017

2020-03-26

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

www.tuv.com IAF DAkkS TÜVRheinland® Precisely Right.

Recently in the university, seven (7) colleges, one of which is the College of Engineering and Information Technology where the BSCS program is under, has been ISO 9001:2015 Re-Certified.


UNIVERSITY OF SOUTHERN MINDANAO
MIT USM
1954
KABACAN, COTABATO


COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY
1968
UNIVERSITY OF SOUTHERN MINDANAO
KABACAN, COTABATO, PHILIPPINES


DEPARTMENT OF COMPUTING AND LIBRARY INFORMATION SCIENCE
CEIT 1997 USM