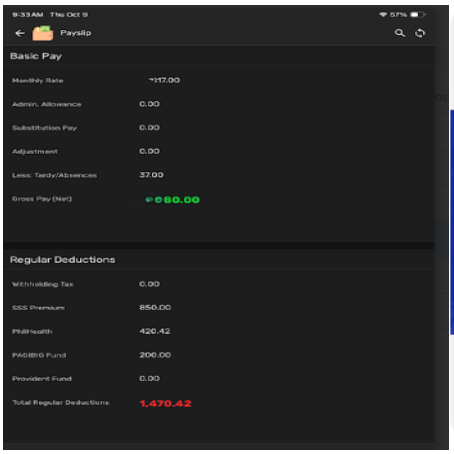
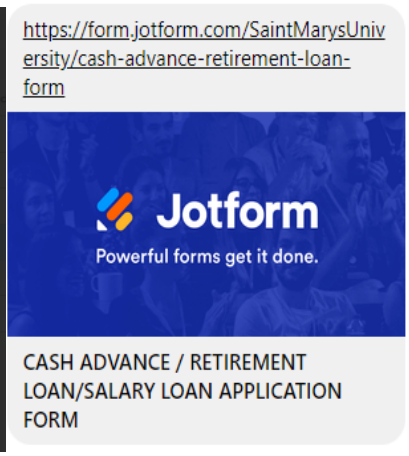
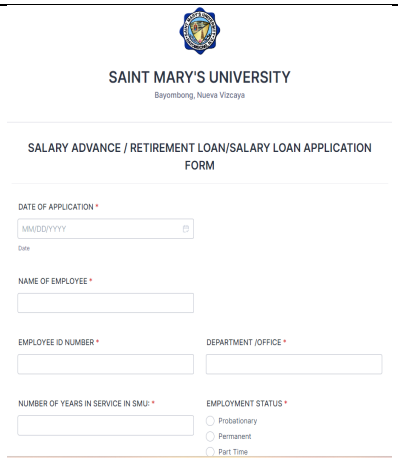
Program to reduce the use of paper and plastic in SMU campus

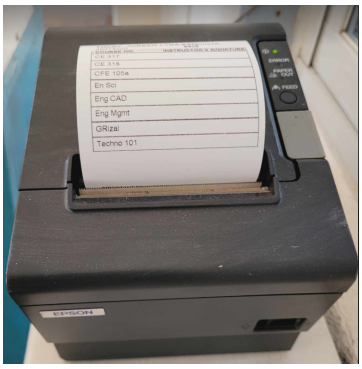


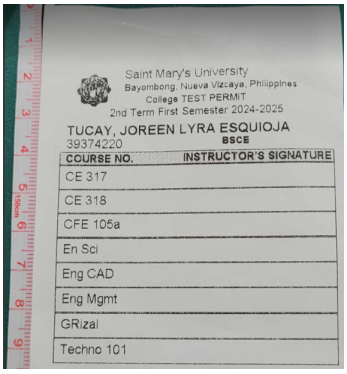




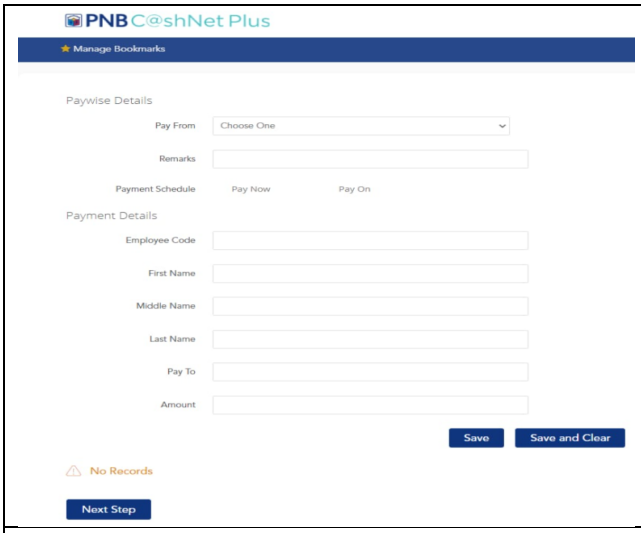
1. **Online PAY SLIP, Application for Salary Loans and Advances**

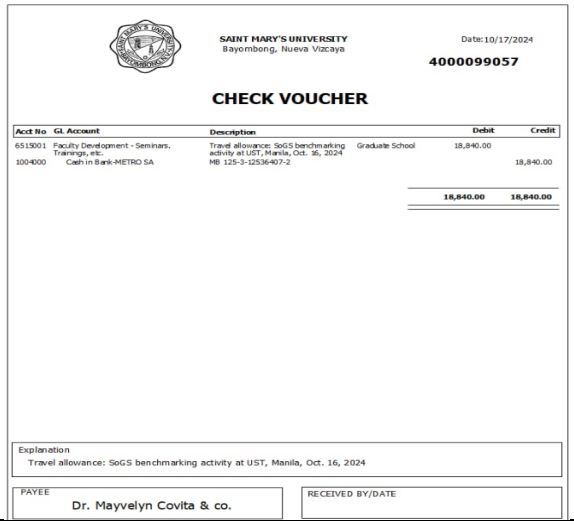






2. **STePG (Self-service Test Permit Generator)**





3. **Online Disbursements**

Reduce **Reuse** **Recycle**












tives in the Offices, Canteen, and Ornam

Reduce: Using reusable containers and mugs for food and drinks when buying at the canteen

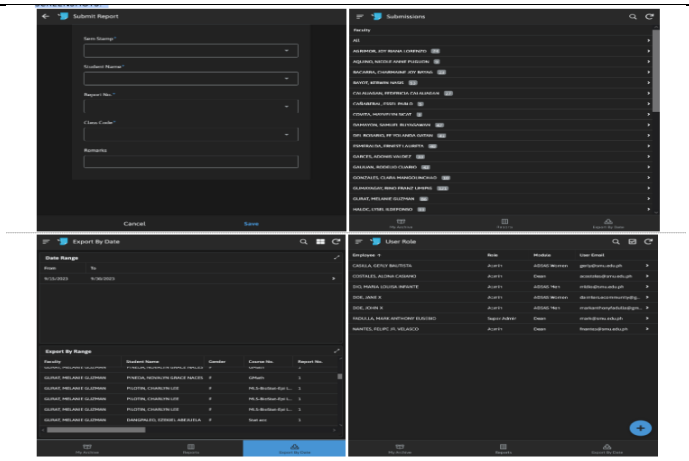






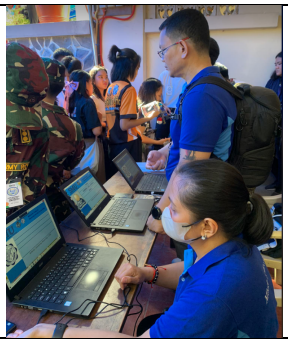



5. **CLEAN, HEALTHY, SAFE, FRIENDLY (CHSF) PROGRAM**

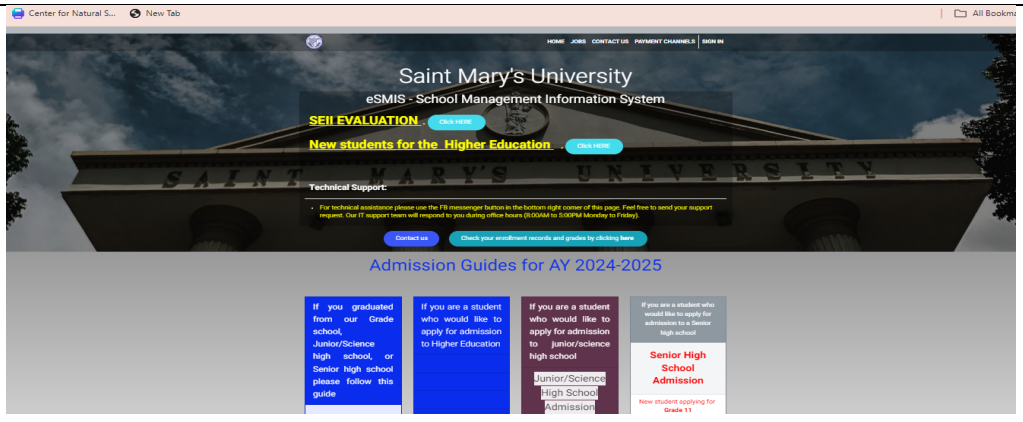


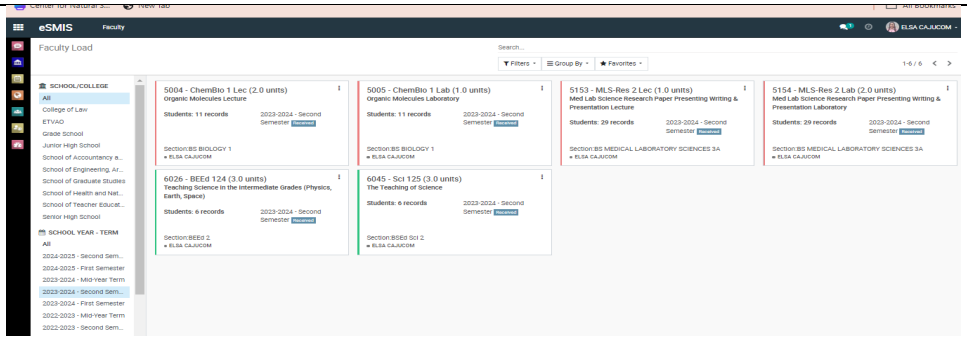
6. **STARE (Student Attendance Record Map) App**

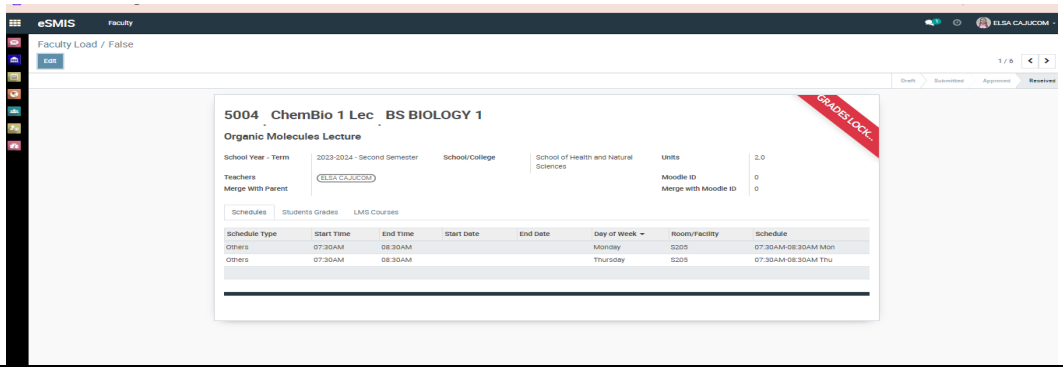




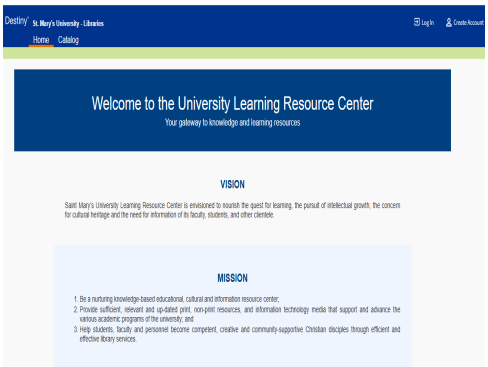
7. **Student Monitoring and Attendance Checking Society (SMACS App)**

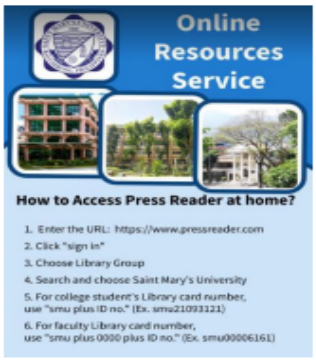






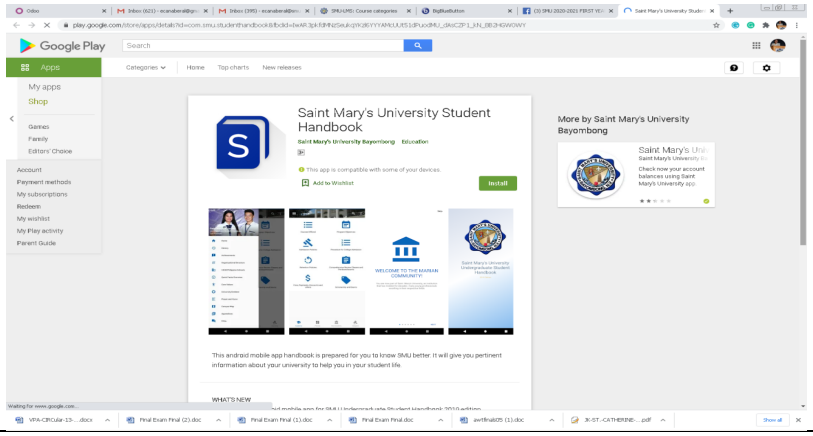
8. **Online Enrolment and Grades Release Via EsMIS**



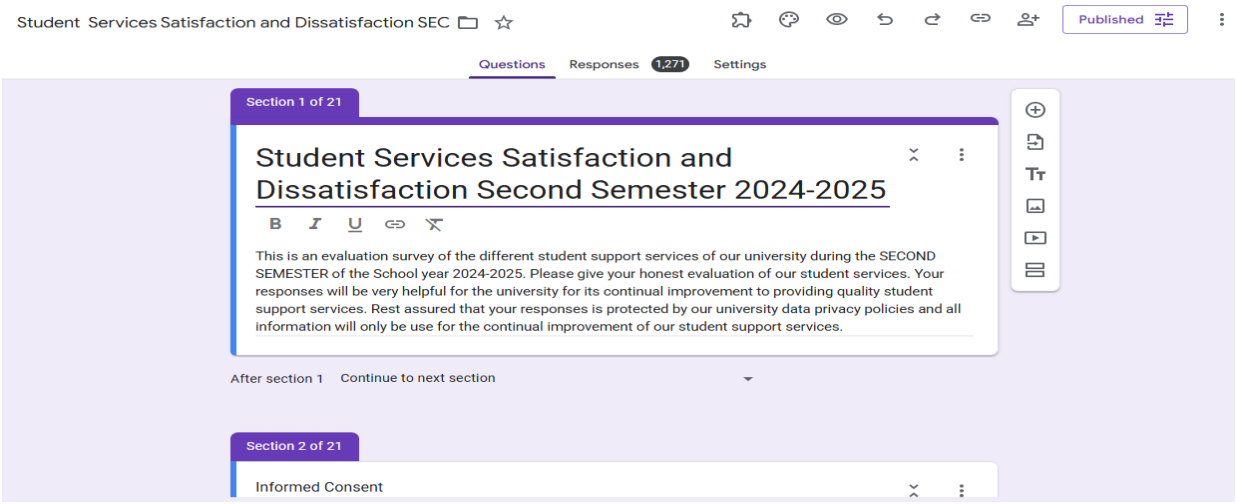




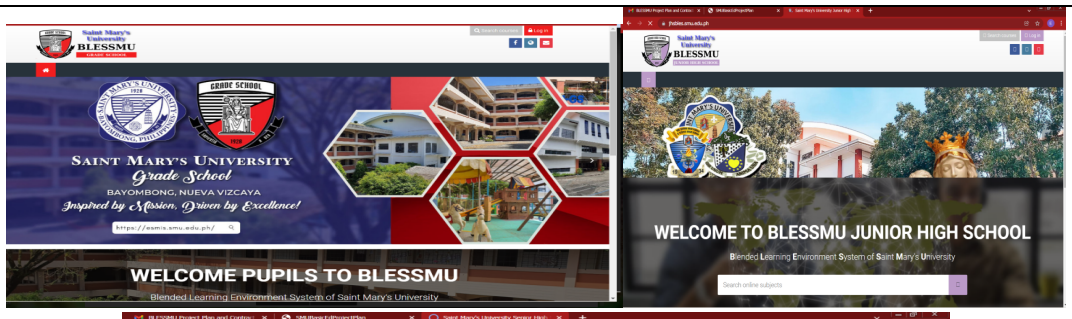
9. **SMU e-library**

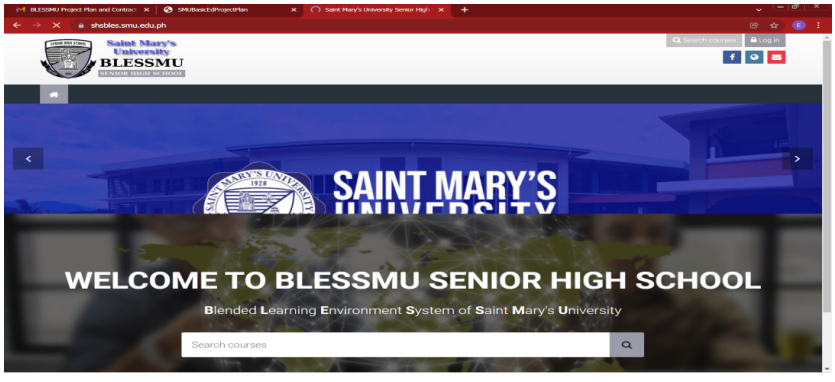


10. **Online Student Handbook**



11. **Online Evaluation of Student Services**





12. **SMU subscription to Google Workspace for Learning Management System**

SAINT MARY'S UNIVERSITY
BAYOMBONG, NUEVA VIZCAYA, PHILIPPINES
OFFICE OF THE VICE PRESIDENT FOR ADMINISTRATION

Document Code	EOMS-VPA-FO-043, Rev. 00
Effectivity Date	2024/12/08
Page/s	Page 1 of 2

STUDENTS' EVALUATION OF INSTRUCTORS INVENTORY (Lecture)

Directions: Read the statements about faculty behavior observed in class. Please rate them using the following scale.

1 – NEVER 2 – RARELY 3 – OFTEN 4 – ALWAYS N/A – NOT APPLICABLE

(Items can be shuffled.)

ITEMS	1	2	3	4	N/A
A. Christian Spirit/Relationship					
1. Starts and/or ends the class in fervent moments of prayer.					
2. Translates the lesson to feasible advocacy for community extension.					
3. Ignores students' difficulties in class and activities					
4. Recognizes issues, if any, and responds accordingly.					
5. Accommodates students for academic consultations and assists in their needs/concerns.					
6. Establishes rapport with students by showing genuine concern for their learning.					
7. Manifests Marian spirituality through compassionate teaching and acts of care, humility, simplicity, kindness, etc.					
8. Dismisses students' opinions, comments and suggestions raised during lessons or posted in message box.					
9. Responds encouragingly and tactfully to students' questions.					
10. Practices a sense of propriety in spoken and encoded words, and in actions, demeanor, grooming and attire.					
11. Integrates the university vision-mission, core values and relevant Christian and Marian virtues in the lesson.					
12. Urges students to exercise greater responsibility for learning and develop socio-emotional skills.					
B. Classroom Management					
1. Ensures class features conducive to learning, such as clarity of text, graphics, audio and video, correct labels of postings, sufficient time allotment.					

SAINT MARY'S UNIVERSITY
BAYOMBONG, NUEVA VIZCAYA, PHILIPPINES
HUMAN RESOURCE DEVELOPMENT OFFICE

Document Code	EOMS-HRD-FO-054, Rev. 01
Effectivity Date	2025/07/03
Page/s	Page 1 of 6

(CONFIDENTIAL)

OFFICE HEAD'S EVALUATION OF STAFF MEMBER

Employee Name:		**Period Covered:**
Date Hired:	**Position:**	**Tenure in Present Position and Office:** ____ year/s _____ month/s

Purpose of this Evaluation:
( ) **Annual Performance Evaluation** ( ) **Regularization** ( ) **Training and Development**

Kindly rate your staff member using the rating scale below:

RATING SCALE

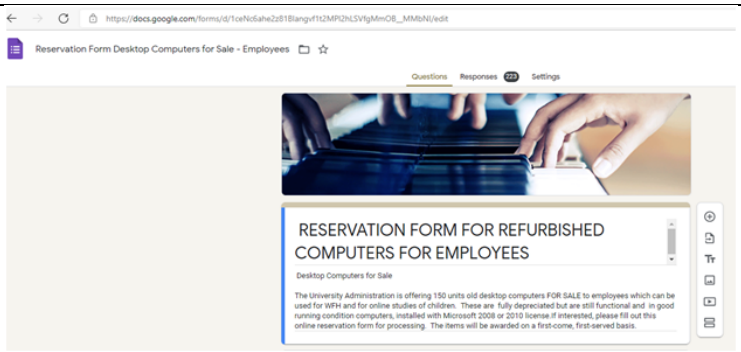
4	**- Every time**	**2**	**- Occasionally** (about 45% of the time)
3.5	**- Usually** (about 90% of the time)	**1.5**	**- Seldom** (about 30% of the time)
3	**- Frequently** (about 70% of the time)	**1**	**- Rarely** (less than 15% of the time)
2.5	**- Sometimes** (about 60% of the time)		

PART I: INSTITUTIONAL STANDARDS

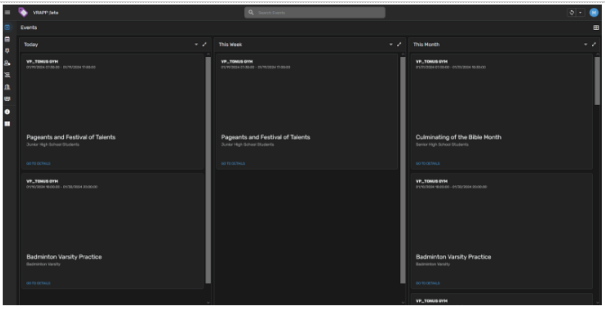
A. EXCELLENCE (25%)

ITEMS	4	3.5	3	2.5	2	1.5	1
1. **JOB KNOWLEDGE** (Understands and comprehends the tasks, responsibilities, practices and developments of his/her position)							
2. **QUALITY OF WORK**							
a. **THOROUGHNESS AND ACCURACY** (Demonstrates attentiveness to details, accuracy and thoroughness in all phases of work)							
b. **CREATIVITY** (Ability to be sharp & quick to anticipate potential problems; its causes and alternative solutions)							
c. **PRODUCTIVITY**							
c.1 EFFICACY/EFFICIENCY (Ability to achieve desired outcomes with minimal waste of resources; realistic achievement of number of tasks completed)							
c.2 TIMELINESS							

13. **Online Evaluation of Academic and Non-Academic Personnel by students and direct Supervisors**

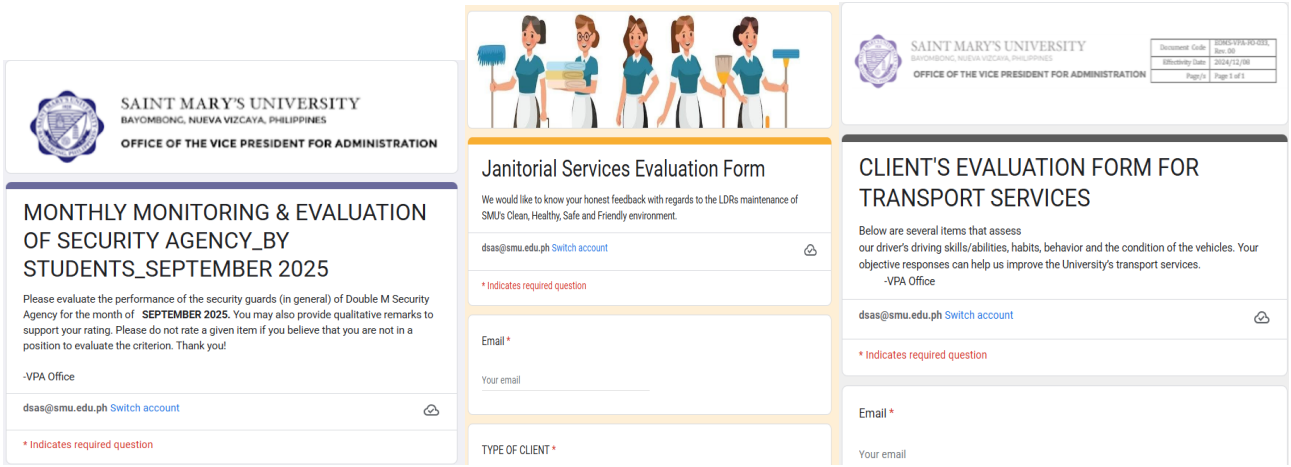




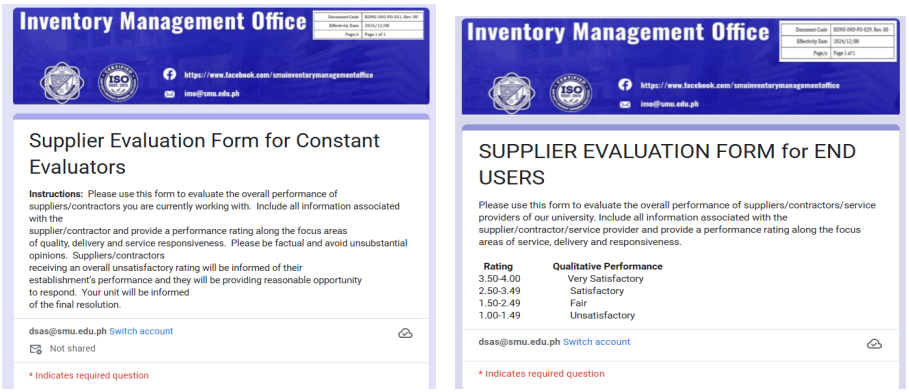


WHAT: Update Student Monitoring module
WHY: To allow users to update the sem stamp used by the different apps; to eliminate the task of verifying absence reports submitted by teachers
SHORT DESCRIPTION OF THE EVENT / APPRECIATION OF THE EVENT:

14. **Online Reservation Forms of SMU Offices**



15. **Online Evaluation from the OVPA Office on Security, Maintenance, and Driver Personnel**



16. **Online evaluation Form from the Inventory Management Office on Suppliers**

Saint Mary's University has adapted and is continually adapting to programs, projects, and activities that would lessen the use of paper and plastic in the university. These initiatives collectively contribute to the university's commitment to environmental sustainability. The following are several of the concrete activities of the university towards such objectives:

1. **Online PAY SLIP, Application for Salary Loans and Advances –** The university has adopted an online system of employee applications for loans and cash advances at the Accounting Office without the usual filling out of paper applications. In 2024-2025, the university developed through the Center of Information Technology and appsheet, where employees could view their payslip on their Cellphones or PCs without printing it on paper.
2. **STePG (Self-service Test Permit Generator) –** This is the way through which students can generate their Test Permits without filling out papers again by just tapping their IDs on a scanner. The STePG uses a resized 10 cm x 8 cm using eco-friendly thermal paper, which reduces the use of paper in test permit issuance.
3. **Online Disbursements –** This process is through the accounting office, where funds to be received by employees are directly transferred to the bank accounts of the recipients without the use of more papers for the issuing and receiving of the funds by employees or any other beneficiaries.

4. **Green Campus Initiatives in the Offices, Canteen, and Ornamental Plants Cultivation –** The university has several green initiatives. Recently, the Green Campus Project was implemented to ban the use of PET bottles in the university. Students were then encouraged to use drinking tumblers, and the canteen concessionaires are not allowed to sell products in PET bottles. Moreover, canteen concessionaires are creative enough in recycling materials, like using used cartons to contain products they sell, and the General Services Office (GSO) sees to it that materials that could be used are recycled or reused.
5. **CLEAN, HEALTHY, SAFE, FRIENDLY (CHSF) PROGRAM –** The university has a decades-long program on cleanliness called the CHSF. It is a program that aims to instill ecological stewardship among students.
6. **STARE (Student Attendance Record Map) App –** This App is used by the university where faculty members submit the absence report of their students online instead of using pieces of paper to report the absences of students. The Appsheet is downloadable in Google Play and ready for use through the cellphones or PCs of faculty members.
7. **Student Monitoring and Attendance Checking Society (SMACS App) –** The SMACS APP is used for electronic attendance of students during big events of the university. This electronic means of getting attendance of participants in big events lessens or even eliminates the need for paper-based checking of attendance.
8. **Online Enrolment and Grades Release Via EsMIS (Electronic Student Management Information System)–** This program allows students to enroll with less paper and for faculty members to be able to submit grades online without using paper. This makes the grades submission paper less.
9. **SMU e-library –** This service of the university allows students and employees to check the availability of books and other library resources and to reserve books without filling out forms to locate books and other library materials.
10. **Online Student Handbook –** The student handbook is a bulky document that requires paper as a printing material. With it being available online, students may not need printing since they can access it online.
11. **Online Evaluation of Student Services –** Students are able to evaluate the different student services without the use of paper. The university is also able to collate all the responses without using paper, except for printing the results when needed.
12. **SMU subscription to Google Workspace for Learning Management System -**
13. **Online Evaluation of Academic and Non-Academic Personnel by students and direct Supervisors –** The different employees of the university are evaluated by their direct supervisors, or their staff and students, through the use og Jotform, obtaining the objectives of measuring the performance of employees without the use of paper except when printing is needed.
14. **Online Reservation Forms of SMU Offices –** is a digital tool designed to help users find, book, and manage reservations for various venues such as conference rooms, event halls, sports facilities, or even classrooms. It is commonly used by educational institutions, businesses, event planners, or individuals to streamline the process of reserving spaces for meetings, events, or activities.
15. **Online Evaluation from the Office of the Vice President for Administration on Security, Maintenance, and Driver Personnel –** The evaluation for Security Guards, Maintenance personnel, and Drivers is paperless as it is done online.
16. **Online evaluation Form from the Inventory Management Office on Suppliers – Suppliers are also evaluated online without the use of paper to determine the quality of services provided by the suppliers to meet** the needs of the university.

By integrating these practices into daily operations, the school not only enhances its sustainability efforts but also educates students about responsible waste management, fostering a culture of environmental awareness that extends beyond the campus.



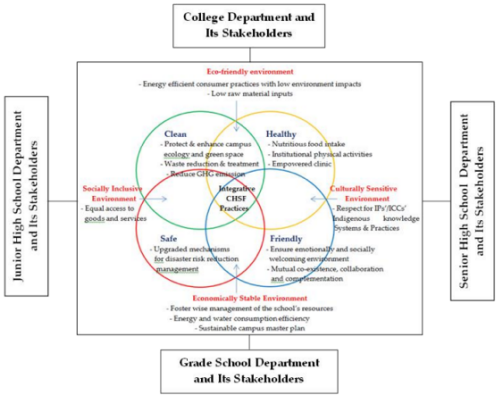


Figure 1. The CHSF Framework

Figure 1 is the new CHSF Framework. It resulted from the study of Dacles, Maslang, and del Rosario (2020) entitled, Securing a Clean, Healthy, Safe and Friendly School Environment, Challenges, and Prospects for Stakeholders: Context of a Private Educational Institution.

CHSF program framework incorporates the four departments of SMU – Grade School, Junior High School, Senior High School, and College. The components of CHSF are also spelled out: Clean, Healthy, Safe, and Friendly.

NARRATIVE REPORT

SDG: 3, 6, 11, 12, and 13

Title of Activity: Revitalizing the CHSF Best Zone and Best Building Program

Date/Time: April 02, 2025, 7:30 am

Venue: SMU College Campus

Organizers: Clean, Healthy, Safe, and Friendly (CHSF) Environment Committee

Objectives:

1. To ensure that all zones and buildings maintain high standards of cleanliness, hygiene, and safety, contributing to a healthier environment and improved well-being for employees, students, and visitors.

2. To motivate faculty, staff, visitors, and stakeholders to actively participate in maintaining and enhancing the quality of their surroundings through friendly competition and shared responsibility.

Participants:

Faculty, Staff, Students, and LDR's Agency of Saint Mary's University College Campus

---

A. Highlights of the Activity:

On April 2, 2025, the Clean, Healthy, Safe, and Friendly Environment Committee of Saint Mary's University proudly launched the "Revitalizing the Clean, Healthy, Safe, and Friendly Environment Best Zone and Best Building Program." This initiative marked a renewed commitment to promoting a campus culture grounded in cleanliness, wellness, safety, and mutual respect. The program is attended by students, faculty, staff, and administration after the flag ceremony.

Mr. Hanson T. Villanueva, Safety and Pollution Control Office, Head and CHSF Chair, shared a vision for creating a more welcoming and sustainable campus environment, emphasizing the importance of the Marian community involvement in maintaining a clean and safe learning space.

Highlights of the day included awareness talks not only on cleanliness but also on hygiene and health, safety protocols, and the announcement of a friendly competition recognizing the best-maintained zones and buildings. Employees,

students, and LDR's agency were encouraged to work together to improve their areas, fostering unity and a shared sense of responsibility.

The event successfully brought the Marian community together under a common goal: to ensure that Saint Mary's University College remains a model of environmental care, safety, and positive campus life. It was a meaningful step toward lasting environmental stewardship and institutional pride.

B. Appendices

Photo Documentation





Prepared by:

HANSON T. VILLANUEVA
SPCO Head

NARRATIVE REPORT

SDG: (17) Partnerships for the Goals

Title of Activity: Brigada SMU CHSF

Date/Time: August 10, 2024 8:00 – 12:00 PM

Venue: SMU

Organizers: VP for Administration Office

Objectives: To encourage shared responsibility and collaboration among stakeholders in preparing the school environment for the upcoming opening of classes.

Beneficiaries (if any): Marian Community

Participants: SMU Employees and Students

A. Highlights of the Activity

In preparation for the opening of classes on August 12, 2024, the Marian community united for Brigada SMU CHSF. From 8:00 AM to 12:00 PM, each school or office took charge of their designated cleaning zones, ensuring every corner of the campus was prepared for the new academic year.

Participants included students, faculty, and staff, all contributing to activities such as sweeping, organizing, repainting, and repairing facilities. The event showcased the spirit of bayanihan, as everyone worked together to create a CHSF (Clean, Safe, Healthy, Friendly) environment.

This collective effort highlighted the community's dedication to fostering a conducive learning space, ready to inspire and empower learners for the year ahead.

B. Appendices

1. Program of Activities

SAINT MARY'S UNIVERSITY
BAYOMBONG, NUEVA VIZCAYA, PHILIPPINES
OFFICE OF THE VICE PRESIDENT FOR ADMINISTRATION

VPA Circular No. 2024-03
AY 2024-2025

DATE : 7 AUGUST 2024
TO : VOLUNTEER EMPLOYEES AND STUDENTS
RE : BRIGADA SMU CHSF

In preparation for the opening of classes on Monday, August 12, 2024, we once again call for volunteers from among employees and students to help clean and beautify our campus. This **BRIGADA SMU CHSF** will be held on **Saturday, August 10, 2024 starting at 8:00AM until 12 Noon.**

These are the previously assigned CHSF zones:

School/Office/Unit	Zone/ Building/ Area
SAB	JVD Building, DeBusscherre Hotel, Balai Alumni, St. Joseph Inn, Fr. Verbist park
SEAIT	S-Building, RS-Building, D-Building, E-Building, Engineering Stage, Apo Pilo Building
SHANS	UB Building, St. Lorenzo Ruiz Park, CNS, Med Tech and Pharma lab buildings, Mini Forest
STEH	CL Building, RT Building, Sacred Heart Center, Tonus Gym
ULRC/Library	Fr. JVB Library, Jubilee Library

Employees holding office at the Lambrecht Hall will take charge of the A-building and its surroundings. Other non-academic staff can join the clean up in their work place building. Each group/unit will take charge of their snacks.

Let us prepare a welcoming campus especially for our first year students and transferees.

JOHN C. TAYABAN, PHD, RPm, RPsy
Vice President for Administration

Approved:

JOHN OCTAVIOUS S. PALINA, PHD,DBA
University President

Inspired by Mission, Driven by Excellence

Room A203, Second Floor, Fr. Godfrey Lambrecht Building
SMU Main Campus, Ponce Street
Bayombong, 3700 Nueva Vizcaya, Philippines
smu.edu.ph | vpadmin@smu.edu.ph

2. Photo Documentation







Prepared by:

Mrs. Rejean Ann P. Valentin
Faculty/Staff
Designation

Noted by:

Mr. Domingo T. Guntalilib Jr.
Supervising Head
Position

SAINT MARY'S UNIVERSITY
BAYOMBONG, NUEVA VIZCAYA, PHILIPPINES

OFFICE OF THE VICE PRESIDENT FOR ADMINISTRATION

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JOHN G. TAYABAN, PHD, RPm, RPsy
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Approved:

JOHN OCTAVIOUS S. PALINA, PHD,DBA
University President

Room A203, Second Floor, Fr. Godfrey Lambrecht Building
SMU Main Campus, Ponce Street
Bayombong, 3700 Nueva Vizcaya, Philippines
smu.edu.ph | vpadmin@smu.edu.ph

Narrative/Documentation Report

Project Title:	CLEAN-UP DRIVE
Date:	06 APRIL 2025
Time:	1:00-5:00
Team Composition:	
Lead Organizer:	YSHREN Q GUINYANG
Project Staff/Members:	BS CRIMINOLOGY 2B

Narrative

On April 6, 2025, the Criminology 2B class conducted a clean-up drive activity at Saint Mary's University School campus, aligning with the campus' program, Clean Healthy Safety and Friendly learning environment. The goal was to foster a clean, healthy, safe, and friendly environment and promote teamwork. The class consisted of 30 students, with 23 participating in the activity.

The activity, scheduled from 1:00 PM to 5:00 PM, began promptly with weeding and soil preparation in the designated areas of Debusschere and the back of Apo Pilo building. The collaborative effort focused on clearing weeds and leveling the soil, transforming the designated area. This hands-on approach not only contributed to the beautification of the campus but also strengthened the bonds within the class.

The activity concluded with attendance verification, after which the students dispersed. The event served as a valuable opportunity for the Criminology 2B class to engage in community service, strengthen interpersonal relationships, and reinforce their class theme.

Documentation










Prepared by:	*Yshren Q Guinyang*
Date Submitted:	*May 15, 2025*

Note:
**Append the list of extensionists/participants*
**Append the list of donors*

Narrative/Documentation Report

Project Title:	"PROJECT DALISAY: " Drive for a Cleaner, Greener, Community."
Date:	April 30, 2025
Time:	8:00AM-12:00NN
Team Composition:	
Lead Organizer:	CFE 104- Code:6549
Project Staff/Members:	Jonathan Vergara Students from CFE 104-Code: 6549

Narrative

On April 30, 2025, from eight in the morning until twelve noon, the students of CFE 104 section 6549 at Saint Mary's University in Bayombong, Nueva Vizcaya, held a school-based outreach program. This activity was done at the back of the Joseph Van den Daelen building. The program was led by our instructor, Mr. Jonathan P. Vergara. Although the activity was part of our class requirement, it became much more than that. It turned into a meaningful experience where we were able to help the environment, work together as a class, and learn the value of service and teamwork. Our main goal was to support the university's green spaces by planting vegetables. We also wanted to develop a stronger sense of responsibility toward nature and the community.

The program focused on planting fifty vegetable seedlings in total. These included twenty-five eggplant seedlings and twenty-five chili seedlings. By planting these vegetables, we hoped to promote environmental awareness among students and encourage everyone to take part in keeping the surroundings clean and green. The activity also gave us the chance to work together and apply what we learned in our course. To make everything organized and effective, the class was divided into four groups. Each group had a specific task to complete, which helped the whole program run smoothly and on time.

Group one had twenty-one students. Their task was to go to the mini forest nearby to collect fertilizer and black soil. They dug for soil, placed it in sacks, and carried it to the back of the JVD building where the planting would take place. This part of the work was very tiring, especially because the sacks were heavy. Since most of our classmates are girls and only a few are boys, it took a lot of teamwork to get the job done. Some students worked on digging, some placed the soil in sacks, and others carried the sacks to the planting area. Even though it was physically hard, everyone worked together and supported each other to finish the task.

Groups two and three each had ten students. They were assigned to plant the seedlings. Under the guidance of our teacher, Mr. Vergara, they made sure each seedling was planted properly. They dug holes with the right depth so that the roots would grow deep and strong. They also made sure that the soil around the seedlings was balanced and stable. They folded the sacks neatly so that sunlight and water could reach the seedlings better. These small steps were very important for the healthy growth of the vegetables. The students worked carefully and patiently to make sure that every plant was placed properly.

The fourth group also had ten students. Their responsibility was to water the seedlings after they were planted and to arrange them neatly. They made sure that every plant was watered and that no plant was left dry. They also organized the seedlings by grouping the eggplants together and the chilis together. This made the area look neat and easy to

manage. Their task helped give the planting site a more pleasing and organized appearance, showing that even small details can make a big difference in any project.

After all the seedlings were planted and watered, we still had extra time. Since we finished early, our instructor asked us to clean the area around the planting site. Without hesitation, we agreed. As students of Saint Mary's University, we believe in the values of keeping our surroundings clean, healthy, safe, and friendly. We pulled out weeds, swept the ground, cleaned corners and small spaces, and picked up trash such as plastic wrappers and other waste. Everyone helped out with a positive attitude. It felt good to know that we were not only planting vegetables but also improving the overall environment of our campus.

Even though the activity was successful, we faced some challenges along the way. One of the main problems was the weight of the sacks filled with soil. Carrying them from the mini forest to the planting site took a lot of energy. Another issue we had to deal with was the presence of red ants. Many students were bitten while digging the soil and planting the seedlings. It was uncomfortable and painful, but we continued with our tasks. Despite these difficulties, no one gave up. We worked together, helped each other, and finished everything that needed to be done. At the end of the program, everyone felt a strong sense of pride and accomplishment. We gathered for attendance before heading home, but we left with more than just a completed school requirement. We left with the feeling that we had done something meaningful for our environment and for our university. We also felt closer as a class, having worked side by side through every part of the activity.

Looking forward, we have made plans to take care of the vegetable garden. We will take turns watering the plants every week, making sure they grow healthy and strong. We will also monitor their progress, pull out weeds, add more fertilizer when needed, and protect them from pests. By continuing to care for the plants, we are showing that our commitment to the environment does not end with just one activity. It is an ongoing responsibility. This outreach program taught us many valuable lessons. We learned how to work as a team, how to take care of nature, and how to serve our community in a simple yet powerful way. It reminded us that even small actions, when done together, can lead to meaningful change. What started as a classroom requirement became an experience we will always remember. It helped us grow not only as students but also as responsible members of society. We are thankful for the opportunity and for the guidance of our instructor. To God be the glory forevermore.

Documentation



"Preparation for planting involves making three small holes in each sack, ready to be filled with soil for the vegetable seedlings."



"Individuals are digging up soil, a necessary step to fill the sacks in preparation for planting vegetables."



"A classmate is transporting sacks of soil, carrying them towards the designated planting area."



"The group is carefully planting the young seedlings into the prepared soil."



"Others are carrying more sacks of soil and additional planting materials, along with the seedlings, to the planting location at the back of JVD building."

Prepared by:	CFE STUDENTS OF CODE 6549
Date Submitted:	May 24, 2025

Narrative/Documentation Report

Project Title:	**Linis Bayanihan: Campus Care Drive**
Date:	**May 21, 2025**
Time:	8:00PM – 12:00PM
Team Composition:	
Lead Organizer:	**Earl Justine V. Ravelo**
Project Staff/Members:	**Raven Aristelle C. Caranza**

Narrative

The community extension activity titled "Linis Bayanihan: Campus Care Drive" was successfully conducted on May 21, 2025**,** at the backyard of the JVD Building. This initiative aimed to promote environmental awareness, cleanliness, and sustainability within the university while fostering social responsibility among Marian students. It served as part of the Saint Mary's University's broader commitment to holistic development and community engagement.

A total of 42 Marian students actively participated in the activity. All participants also acted as donors, contributing cleaning and gardening materials, time, and effort to accomplish the goals of the program. The activity began with a thorough clean-up of the assigned area. The backyard of the JVD Building, which required attention due to accumulated waste and disorganized vegetation, was cleaned by the students through sweeping, collecting garbage, and ensuring proper waste disposal. This segment of the activity highlighted the value of unity, discipline, and care for shared spaces.

Following the clean-up, the students transitioned to the next part of the program—planting vegetable seedlings. This initiative was not only a hands-on agricultural activity but also a meaningful step toward sustainability and social service. The planted vegetables are intended to support future feeding programs, benefiting individuals in need within and possibly beyond the school community. Through this, the activity extended its impact beyond the day it was held, contributing to food security and promoting self-reliance.

Despite the success of the program, several challenges were encountered. The lack of sufficient cleaning and gardening tools initially hindered the smooth start of the activity, requiring students to take turns or improvise with available resources. Additionally, the condition of the area, with uneven terrain and leftover debris, demanded extra effort from the participants. Nonetheless, the collective determination and cooperation among the students enabled the activity to proceed effectively.

The total number of participants involved was 42, with all 42 also counted as donors. The participants were composed of male and female Marian students aged between 17 to 22 years old. As this particular activity did not yet involve direct recipients, the primary beneficiaries will be determined once the vegetables are harvested and used in future feeding programs. There were no recorded financial expenditures for the activity, as all necessary materials were personally donated by the participants.

Overall, the "Linis Bayanihan: Campus Care Drive" achieved its intended objectives of campus cleanliness, community involvement, and laying the foundation for future outreach through gardening. The program stands as a reflection of the Marian values of service, stewardship, and compassion. Planned follow-up activities include the

maintenance of the planted vegetables and the implementation of the feeding program in the coming months.

Documentation

Part 1 of Activity: Cleaning the JVD Backyard








Part 2of Activity: Planting Vegetable seedlings






Prepared by:	**EARL JUSTINE V. RAVELO**
Date Submitted:	**MAY 27, 2025**

NARRATIVE REPORT

SDG: **(3) Good Health and Well-being**

(4) Clean Water and Sanitation

Title of Activity: **Project L.I.N.I.S.: Learning Initiatives for Nutrition and Improvised Sanitation at Brgy. Don Mariano Marcos**

Date/Time: April 5, April 26, May 3, and May 17, 2025 | 8:00 AM – 11:00 AM

Venue: Brgy. Don Mariano Marcos

Organizers: SMU-NSTP in partnership with Bgry. DMM Local Government Unit

Objectives: To promote children's health and hygiene in Brgy. Don Mariano Marcos, through a feeding program, hygiene education, and the distribution of hygiene kits.

Beneficiaries (if any): Selected children from Brgy. Don Mariano Marcos

Participants: CWTS 2 Code 9034 students and Brgy. Don Mariano Marcos clienteles

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A. Highlights of the Activity

Project L.I.N.I.S. (Learning Initiatives for Nutrition and Improvised Sanitation) was a community health initiative implemented by the CWTS Code 9034 class under the NSTP program of Saint Mary's University. The project was conducted in Brgy. Don Mariano Marcos, with the support of OIC Barangay Captain, Hon. Ronald Ramos. The project was led by Class President Ms. Abigail Paringit and facilitated by Mr. Christian Nel R. Dominguez, NSTP-CWTS facilitator. It aimed to address the urgent needs of children in the community by improving their nutrition, hygiene, and sanitation practices. A total of 33 children participated in activities held on April 5 and May 3, 2025.

The project included several key components: a feeding program, a community clean-up drive, and a hygiene education session called *Clean Hands, Clean Home*. These activities were designed to instill sustainable, healthy habits and environmental responsibility. The culminating event last May 17 involved the distribution of hygiene kits and certificates of participation, reinforcing the project's impact. The initiative supports SDG 3 and SDG 6 (Clean Water and Sanitation), and SDG 12 (Responsible Consumption and Production).

Funded with a budget of ₱11,200.00, the project spent ₱9,462.75, with the remaining ₱1,737.25 donated to the school's Centennial Building Project. Feedback from 10 child recipients showed overwhelming satisfaction (*Napnek unay*) with the project's services, representatives, and impact. The results of this feedback were formally disseminated to the

barangay officials and community on May 20, 2025, fostering transparency and continued support.

B. Summary of Evaluations

Summary of Community Feedback Survey

Name of Partner Barangay/School: Brgy. Don Mariano Marcos

Criteria		**N**	**(Average)**	**Qualitative Description**
Product/Service	**Usefulness**	10	3.90	Very Satisfied (Napnek unay)
	Quality	10	3.85	Very Satisfied (Napnek unay)
	Delivery	10	3.70	Very Satisfied (Napnek unay)
Representatives	**Responsiveness**	10	3.95	Very Satisfied (Napnek unay)
	Friendliness	10	4.00	Very Satisfied (Napnek unay)
	Preparedness	10	3.80	Very Satisfied (Napnek unay)
Overall Experience		10	3.90	Very Satisfied (Napnek unay)
Overall Average		10	3.87	Very Satisfied (Napnek unay)

Legend: 3.50 to 4.00 - Very Satisfied 2.50 to 3.49 – Satisfied 1.50 to 2.49 – Unsatisfied 0.50 to 1.49 - Very Unsatisfied

The community feedback on Project LINIS: Learning Initiatives for Nutrition and Improvised Sanitation at Brgy. Don Mariano Marcos revealed high satisfaction among the 10 recipients, with an overall average rating of 3.87, categorized as "Very Satisfied (Napnek unay)." All aspects of the project, from the usefulness (3.90), quality (3.85), and delivery (3.70) of services and hygiene kits to the representatives' responsiveness (3.95), friendliness (4.00), and preparedness (3.80) were rated very positively. This affirms the project's success in addressing the community's improved nutrition and sanitation needs. The overwhelmingly positive response supports the narrative that Project LINIS: Learning Initiatives for Nutrition and Improvised Sanitation was well executed and impactful, contributing meaningfully to the health and well-being of children in the partner barangay and advancing key Sustainable Development Goals.

Summary of Student Satisfaction Survey on NSTP Immersion/Integration

Class Code: **9034 (Brgy. Don Mariano Marcos)**

Evaluation Criteria	Survey Items	N	Mean	SD	Qualitative Description
General Experience	How satisfied are you with the overall immersion experience?	32	4.09	0.65	Satisfied
	How well did the immersion help you apply your acquired skills in the community?	32	4.19	0.58	Satisfied
	How relevant was the immersion experience to your personal and academic growth?	32	4.16	0.61	Satisfied
Preparation & Organization	How satisfied were you with the orientation and guidance provided before the immersion?	32	3.97	0.72	Satisfied
	How effective was the coordination between facilitators, partner agencies, and the community?	32	4.00	0.67	Satisfied
	Was the assigned barangay/community appropriate for the activities planned?	32	4.13	0.59	Satisfied
Implementation & Support	Were the resources (budget, materials, and support) sufficient for the activities?	32	4.25	0.54	Satisfied
	How well did the facilitators support and monitor students during the immersion?	32	4.13	0.63	Satisfied
	How satisfied were you with the level of community engagement and participation?	32	4.00	0.66	Satisfied
Post-Immersion & Feedback	How effective was the post-conference in addressing concerns and feedback?	32	4.16	0.62	Satisfied
	How likely are you to recommend this immersion program to future NSTP students?	32	4.34	0.52	Satisfied

Rating Scale: 5 – Very Satisfied 4 – Satisfied 3 – Neutral 2 – Dissatisfied 1 – Very Dissatisfied

The NSTP-CWTS immersion project evaluation results, titled *Project L.I.N.I.S.: Learning Initiatives for Nutrition and Improvised Sanitation*, implemented in **Brgy. Don Mariano Marcos** reflects a generally positive experience among the **32 student participants**. Across all areas assessed, the participants consistently rated their experience as "**Satisfied**" across all regions, indicating the project's success in delivering meaningful community engagement and skill application.

Under the **General Experience** category, students expressed satisfaction with the overall immersion (M=4.09, SD=0.65), affirming that the project allowed them to apply their acquired skills meaningfully within the community (M=4.19, SD=0.58). Additionally, the experience was viewed as relevant to their personal and academic development (M=4.16, SD=0.61).

Regarding **Preparation and Organization,** the orientation and guidance provided before the immersion (M=3.97, SD=0.72) were helpful, while coordination among facilitators, partner agencies, and the community (M=4.00, SD=0.67) was positively noted. Furthermore, Brgy. Don Mariano Marcos was regarded as an appropriate setting for implementing activities (M=4.13, SD=0.59), reinforcing the suitability of the chosen community for the project's objectives.

Regarding **Implementation and Support**, students agreed that the necessary resources—including budget, materials, and logistical support—were sufficiently provided (M=4.25, SD=0.54). Facilitators also received commendation for their active presence and monitoring during the immersion period (M=4.13, SD=0.63). The level of community engagement and participation (M=4.00, SD=0.66) was viewed positively, highlighting effective collaboration between the students and residents.

Finally, under the **Post-Immersion and Feedback** category, participants indicated that the post-conference effectively addressed their reflections and concerns (M=4.16, SD=0.62). Notably, a high number expressed their willingness to recommend the program to future NSTP students (M=4.34, SD=0.52), further demonstrating satisfaction with the overall implementation and outcomes of the project.

In summary, the findings underscore the successful execution of Project L.I.N.I.S., which offered students a well-structured, impactful, and community-relevant NSTP-CWTS immersion experience at Brgy. Don Mariano Marcos.

Evaluation Criteria	Survey Items	N	Mean	SD	Qualitative Description
Social Responsibility	I actively participate in community service activities and believe that my involvement contributes to the betterment of society.	32	4.38	0.55	Satisfied
Civic Awareness	I understand the importance of my role as a citizen in addressing social issues and am willing to take initiative in helping my community.	32	4.41	0.50	Satisfied

Rating Scale: (5) Strongly Agree (4)Agree (3)Neutral (2)Disagree (1)Strongly Disagree

Based on the data collected from 32 respondents, the evaluation of the CWTS immersion experience at Brgy. Don Mariano Marcos, under *Project L.I.N.I.S.: Learning Initiatives for Nutrition and Improvised Sanitation*, reflects positively on the dimensions of Social Responsibility and Civic Awareness.

For **Social Responsibility**, students reported a mean score of 4.38 with a standard deviation of 0.55, indicating that they were highly satisfied with their involvement in community service and believed

their participation had a meaningful impact on society. Similarly, the **Civic Awareness** item received a slightly higher mean score of 4.41 and a standard deviation of 0.50, suggesting that students strongly recognized their role as proactive citizens and were willing to contribute to addressing community concerns.

These results suggest that the immersion program successfully fostered both a sense of responsibility toward community development and a deeper understanding of civic duty among the student participants.

C. Appendices

1. Attendance Sheet (see attached copy)

2. Program of Activities (see attached copy)

Photo Documentation

April 5, 2025: Feeding Program for Nutrition



Feeding smiles and nutrition! Children enjoy a hearty meal during the Feeding Program under Project L.I.N.I.S. at Brgy. Don Mariano Marcos

April 26, 2025: Community Clean-Up for Sanitation



Sweeping for a cleaner tomorrow! SMU-NSTP CWTS Code 9034 unite for a Community Clean-Up Drive under Project L.I.N.I.S. at Brgy. Don Mariano Marcos.

May 3, 2025: Clean Hands, Clean Home: Hand washing & Waste Disposal Talk



Clean hands, healthy lives! Children learn proper hygiene and waste disposal during the Clean Hands, Clean Home talk under Project L.I.N.I.S. at Brgy. Don Mariano Marcos

May 17, 2025: Project L.I.N.I.S. Culminating Program



Keeping clean and healthy together! Children recipients happily receive hygiene kits and certificates during the Project L.I.N.I.S. celebration at Brgy. Don Mariano Marcos.

Insights from the Activity

Project L.I.N.I.S., implemented by the CWTS Code 9034 class, embodied excellence and innovation through its well-executed activities that addressed children's health and sanitation needs in Brgy. Don Mariano Marcos. The project's feeding program, clean-up drive, and proper hygiene education session promoted sustainable habits, directly contributing to the achievement of SDG 3 (Good Health and Well-being), SDG 6 (Clean Water and Sanitation), and SDG 12 (Responsible Consumption and Production). Despite limited resources, the students creatively maximized their impact, demonstrating their commitment to quality service and effective community engagement.

At the heart of the project was communion seen in the strong partnership with barangay officials, active involvement of community members, and the transparent sharing of results during the feedback dissemination on May 20. More importantly, the initiative reflected a passion for Christ's mission by uplifting the lives of vulnerable children through care, education, and compassion. CWTS served as a platform for the students to participate in nation-building, transforming academic learning into meaningful service that nurtures character and community development.

Prepared by:

Mr. Christian Nel R. Dominguez
NSTP-CWTS Facilitator

Noted by:

Mr. Domingo T. Guntalilib Jr.
NSTPO Head

Narrative/Documentation Report

Project Title:	Clean-up Drive
Date:	February 17-22, 2025
Time:	
Team Composition:	
Lead Organizer:	MARTIAN B. SEBBEY
Project Staff/Members:	

Narrative

The Clean-Up Drive was conducted from February 17 to 21, 2025, at Saint Mary's University Junior High School and Science High School. This initiative aimed to promote environmental awareness, instill responsibility, and foster teamwork among students. The activity was participated in by Grade 7 students from sections 7 Mahinahon, Masigasig, Masikap, Earth Savers, and Environmentalists.

Each section was assigned a specific area to clean, ensuring a systematic and thorough approach. 7 Mahinahon took charge of cleaning the TLE room, ensuring that the space was free of clutter and well-organized for future use. Masikap, Masigasig, and Environmentalists worked together to clean the back area of Saint Dominic Cathedral, clearing debris and maintaining the cleanliness of the school's surroundings. Meanwhile, Earth Savers focused on the SMU Junior High School grounds, removing litter and promoting a cleaner learning environment.

As a concluding activity, and in line with the Marian Service Learning program, students reflected on their experiences. They expressed their thoughts on the importance of environmental responsibility and how the activity deepened their understanding of community service. Many students shared that the Clean-Up Drive taught them discipline, teamwork, and the value of maintaining a clean and sustainable environment.

Overall, the Clean-Up Drive was a success, fulfilling its goal of promoting cleanliness and instilling values of service and responsibility in the students. The event not only enhanced the physical environment of the school but also reinforced the students' commitment to environmental stewardship.

Documentation

7 - MASIGASIG





7 - ENVIRONMENTALIST





7 - MASIKAP





7 - MAHINAHON





7 EARTH SAVERS





Prepared by:	**MARTIAN B. SEBBEY**
Date Submitted:	**02/24/25**

Note:

**Append the list of extensionists/participants*
**Append the list of donors*

Narrative/Documentation Report

Project Title:	Clean Up Drive
Date:	January 22, 2025 and February 10 & 20, 2025
Time:	Math 8 class time
Team Composition:	
Lead Organizer:	Beverly C. Ochinang
Project Staff/Members:	NA

Narrative

The Clean Up Drive is one of the Environmental Advocacy Program of the CDA office and it is also integrated in the Sipnayan Festival as one of its objectives. It aims to promote a clean and healthy environment in the school and in the St. Dominic cathedral and its vicinities and to inculcate responsible stewardship among Grade 8 students. This activity targets to have a clean school including the St. Dominic cathedral and its vicinities which are the Junior Marians' home. It also targets to transform each Grade 8 students into a responsible individual.

To realize this project, a session for each math 8 classes was devoted to do the Clean Up Drive. The students were requested to bring their own cleaning materials on their cleaning schedule. It was observed that the students were truly engaged in the activity through the result of the cleaning they did for that short period of time.

Documentation



class pictures before going to the site



the Grade 8 – Ecologists as they clean inside and outside the cathedral



the Grade 8 – Nature Lovers as they clean outside the cathedral



the Grade 8 – Maagap as they collect non-biodegradable garbage infront the JHS campus



the Grade 8 – Mabait and Grade 8 - Magalang cleaning inside the JHS campus

Prepared by:	Mrs. Beverly C. Ochinang
Date Submitted:	February 28, 2025

Narrative/Documentation Report

Project Title:	Clean Up Drive of Grade 8 Students
Date:	March 10-11, 2025
Time:	2:45 – 4:30 PM
Team Composition:	
Lead Organizer:	Mr. John Rey B. Gonzales
Project Staff/Members:	Miss Efraine Gervic L. Sta. Ines Miss Kristine G. Acuña Mr. Jayson G. Roda

Narrative

Organizing clean-up drive in school serves as an essential initiative that fosters a sense of responsibility and environmental stewardship among Junior Marian Students. The SMU Junior High School plays an important role in forming young minds, and activities like clean-up drives teach values such as teamwork, discipline, and environmental stewardship. By organizing a clean-up drive, our school provide Junior Marian students with hands-on experience in maintaining cleanliness and promoting a healthier learning environment. A clean and well-maintained community contributes to students' well-being, reducing health risks associated with unsanitary surroundings. Moreover, such initiatives encourage students to develop lifelong habits of cleanliness and waste management, ensuring they become responsible citizens who value sustainability.

The clean-up drive commenced at 2:45 PM during the MAPEH class with an orientation session conducted by the lead organizer. Students were briefed about their assigned areas, safety guidelines, and the proper segregation of waste materials. Cleaning materials such as gloves, trash bags, brooms, and dustpans were distributed to all participants. The students were divided into teams, each tasked with cleaning designated sections of Capt. Dela Cruz St. Some focused on collecting litter, cleaning the sidewalk canal, while others, swept sidewalks, and properly disposed of waste. By 4:00 PM, the collected waste was properly segregated into biodegradable and non-biodegradable categories. The LDR of our school assisted in the segregation of wastes. The activity concluded with a short reflection session where students shared their insights about their experience and the importance of maintaining a clean and healthy environment.

The success of the clean-up drive conveyed a sense of responsibility within the students, who realized teamwork and leadership values. Experiencing firsthand the effect of their involvement on the community strengthened the ties between the school and the community as grateful residents acknowledged the students' commitment.

The clean-up drive at Capt. Dela Cruz St. fulfilled its purpose and left a mark on junior high school students' lives as it given them a chance to enter into meaningful involvement within their community. It empowered leadership, teamwork, and the sense of responsibilities while developing a better and cleaner environment. Such exercises should continue for the students to sustain their will to serve the community and continue environmental stewardship.

Documentation



Students swept sidewalks



Students cleaning the sidewalk canal



Students collecting litters



Students helping in cleaning the cabin

Prepared by:	*Mr. John Rey B. Gonzales*
Date Submitted:	*April 2, 2025*

Note:

**Append the list of extensionists/participants*
**Append the list of donors*

Narrative/Documentation Report

Project Title:	**Marian Service Learning: Clean-up Drive**
Date:	**February 21,2025**
Time:	8:00-9:00, 9:45-11:45, 1:00-2:00, 3:00-4:00
Team Composition: SMU JHS & Sci-HS STaR Department & Grade 8 students	
Lead Organizer:	Judy Ann F. Sonday
Project Staff/Members:	•Dr. Agnes Madamba •Mrs. Weyalein Balonquita •Mr. Jimmy E. Valdez •Mrs. Vemelyn Q. De Guzman •Mr. John Ray Vea •Mr. Junior-Van B. Paritang

Narrative

The Marian Service Learning activity, conducted on February 21, 2025, at the Science Laboratory Rooms of Saint Mary's University Junior High School & Science High School, was a collaborative effort between the Grade 8 students and the STaR Department teachers. This initiative aimed to ensure a clean, healthy, safe, friendly, and sustainable learning environment by actively engaging students in cleaning and organizing laboratory spaces. The event emphasized the importance of sanitation, sustainability, and teamwork while fostering a sense of responsibility among students.

The activity was divided into five sessions, with different Grade 8 sections (Ecologists, Nature Lovers, Maagap, Mabait, Magalang) participating at designated time slots. Each class was assigned specific Science laboratory tasks, including sweeping floors, wiping surfaces, organizing laboratory equipment, and ensuring proper disposal of waste materials. Teachers from the STaR Department supervised and guided students in executing these tasks efficiently.

Students were instructed on the importance of proper waste segregation and sustainable disposal methods. They actively engaged in recycling materials and identifying potential hazards within the laboratory. Discussions on sanitation and safety were incorporated into the activity to reinforce the significance of maintaining a clean environment.

The Marian Service Learning activity was a meaningful initiative that successfully engaged students in creating a cleaner, healthier, safer, and friendlier learning environment. Through hands-on experience, students contributed to maintaining their school facilities and developed a greater sense of responsibility and awareness of sustainability. The collaboration between students and teachers was instrumental in achieving the activity's objectives, and the event reinforced the importance of ongoing efforts in cleanliness and environmental care. Similar initiatives will continue to be encouraged to instill lifelong values of cleanliness, teamwork, and sustainability among students.

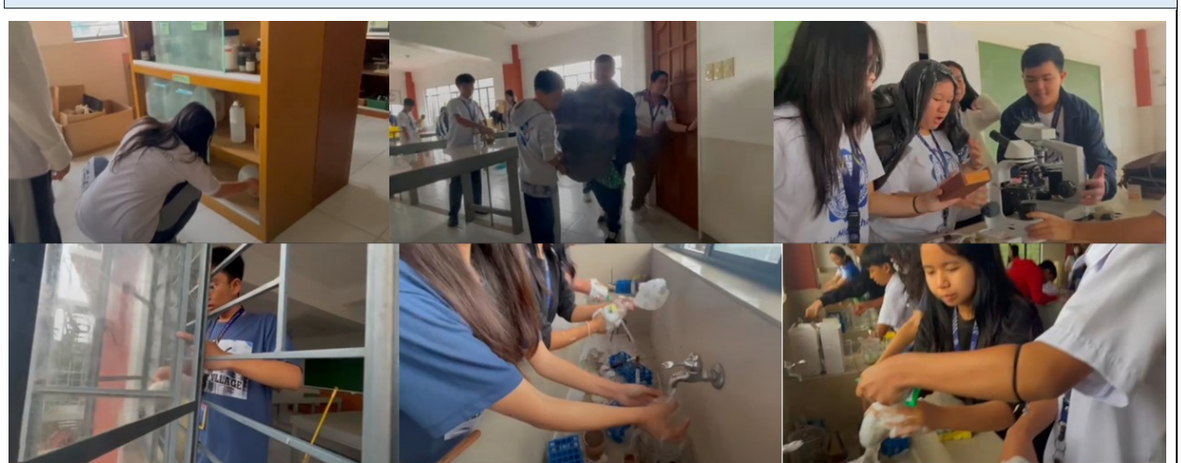
Documentation



8-ECOLOGISTS



8-MAGALANG



8-MAAGAP



8-MABAIT



8-NATURE LOVERS

Prepared by:	*Mrs. Judy Ann F. Sonday*
Date Submitted:	*March 3, 2025*

Narrative/Documentation Report

Project Title:	Clean-up Drive for the School-in-a-Garden Project
Date:	April 26, 2025
Time:	8:00 A.M.
Team Composition:	
Lead Organizer:	Mr. Allan S. Guiab
Project Staff/Members:	Non-Academic Personnel

Narrative

On April 26, 2025, the volunteer Non-Academic Personnel (NAP) of Saint Mary's University actively participated in a clean-up drive at the Apo Pilo area, in support of the university's **School-in-a-Garden Project**. This initiative was launched as part of the university's efforts to promote sustainability, environmental stewardship, and community engagement through hands-on gardening and green space development.

The activity began early in the morning, with NAP volunteers gathering on-site equipped with cleaning tools and a strong sense of commitment to the project. Together, they cleared the area of weeds, debris, and other waste materials to prepare the site for planting. Their collective efforts transformed the space into a more suitable and welcoming environment for gardening.

Once cleared, the area was designated for the cultivation of various vegetable crops. These vegetables will not only contribute to the beautification and greening of the campus but will also serve as a sustainable food source for small-scale community use or university events.

The project is a collaborative endeavor between the Non-Academic Personnel and the **NSTP (National Service Training Program) Office**, with NAP taking the lead in the ongoing maintenance and development of the garden. Through this partnership, the initiative aims to foster a sense of shared responsibility and ecological consciousness among university personnel while providing a practical example of sustainable living.

The clean-up and future cultivation at Apo Pilo reflect Saint Mary's University's dedication to holistic education, extending beyond academics to include active involvement in environmental and social causes. The NAP volunteers' commitment and teamwork exemplify how small, consistent actions can contribute to long-term impact.

This event marks the beginning of a continuing project that will evolve through regular care, planting, and collaborative effort, bringing the vision of a "School-in-a-Garden" closer to reality.

Documentation







Prepared by:	*Heidee L. Lamoste*
Date Submitted:	

Note:

**Append the list of extensionists/participants*
**Append the list of donors*

Impact of SMU's Setting and Infrastructure programs in supporting SDG 13 (Climate Action)






Construction and revitalization of energy-efficient buildings






Provision of eco-friendly and inclusive sanitation facilities





Development of pedestrian walkways and bike lane



Implementation of a No Vehicle Day"

Saint Mary's University has implemented various infrastructure and environmental setting programs that directly contribute to the achievement or impact of Sustainable Development Goals (SDGs). The key programs include:

- **Construction and revitalization of energy-efficient buildings:** The university upgrades facilities to be energy-efficient by using natural light, improved ventilation, and installing solar panels to reduce electricity consumption and the carbon footprint. Additionally, it replaces traditional lighting with LEDs and other energy-efficient equipment to improve lighting quality while significantly reducing energy use.
- **Provision of eco-friendly and inclusive sanitation facilities**: Accessible toilets in every building and waste segregation bins on each floor support campus-wide waste management and overall sustainability.
- **Development of pedestrian walkways and bike lane:** The development of pedestrian walkways and a dedicated bike lane **creates** a safer, more efficient, and healthier transportation environment for both employees and students.
- **Implementation of a "No Vehicle/ Motorcycle Day" :** A monthly "No Vehicle Day" and restricted parking policy are implemented to reduce emissions.

The university takes direct action on climate change by significantly reducing its carbon footprint. The installation of solar panels and upgrades to energy-efficient buildings reduce greenhouse gas emissions associated with energy consumption. The implementation of a monthly "No Vehicle/Motorcycle Day" and the promotion of non-motorized transport further cut emissions from vehicle traffic. These combined efforts demonstrate a steadfast institutional commitment to mitigating climate change and securing a sustainable future.

- University President's Circular Declaring a No Vehicle Starting February 5, 2025

By webmaster / February 5, 2025

SMU Launches First "No Vehicle/No Motorcycle Day" to Promote Sustainability

On February 5, 2025, Saint Mary's University successfully implemented its first "No Vehicle/No Motorcycle Day," an initiative aimed at reducing carbon emissions and promoting sustainable practices. The policy restricted the entry of vehicles and motorcycles into key campus areas, including the Grade School, Junior High School, College Campus, and dormitories, from 1:00 AM to 10:00 PM.

Exemptions were granted to SMU official vehicles, emergency vehicles, bicycles, and solar/electric-powered mobility aids, as well as vehicles transporting persons with disabilities approved by the administration. Visitors were encouraged to unload passengers at the gates and proceed on foot.

This initiative was supported by security personnel who facilitated smooth implementation and provided guidance. The activity highlights SMU's commitment to environmental sustainability and sets the stage for further refinement of the policy based on this initial execution.





Support Services

Alumni Affairs Office
Center for Information & Communication Technology
Dean of Student Affairs & Services
Guidance and Testing Office
Learning Resource Center
Registrar's Office
Treasury and Accounting Office



About SMU

Vision-Mission
University Prayer
University Logo
University Hymn
History

Functions:

1. receives and investigates complaints on sexual harassment following the prescribed procedures;
2. submits a report of its findings and recommendations to the Committee on Arbitration;
3. leads in the discussions on sexual harassment in the university in order to prevent occurrence of sexual harassment; and
4. performs other tasks as specified in the SMU Anti-sexual Harassment Policy and Implementing Guidelines.

q. CAMPUS SAFETY AND DISASTER PREPAREDNESS COMMITTEE (CSDPC)

Composition:

Chair: Vice President for Administration
Vice Chair: Head, Safety and Pollution Control Office

Members:

Dean of Student Affairs and Services
Academic Deans
Basic Education Principals
Director, HRDO
Director, PPPDMO
ADSAS for Men/Women
Department Head, CJED
UHSO Head
NSTP Office Head
Coordinators, DRRM Sanitation, Safety and Pollution Control
Head, Security Agency
General Services Supervisor

Adviser & President, Marian Emergency Response Team (MERT)
Adviser and President, Senior High School Emergency Response Team (SHERT)
President, Student Central Council
ROTC Corps Commander

Functions:

1. ensures that safety and security measures are in place in all buildings and facilities of the University at all times;
2. makes the necessary plans and procedures for a pro-active, quick and effective response to any calamity, disaster or major emergency cases that may affect the University, employees and students;
3. coordinates with other external agencies for disaster preparedness programs and activities for an effective and quick response to any calamity and disaster that may affect the University;
4. conducts the necessary disaster-preparedness drills and activities that will ensure effective response to calamities and other emergencies;
5. supervises emergency operations within the campuses and immediate vicinity during and after a calamity or disaster;
6. regularly inspects and submits reports to the University President regarding the safety and security assurance of the University and immediately after every calamity or disaster; and
7. recommends to the University President the formation of sub-committees related to safety and DRRM to handle specific issues.

NARRATIVE REPORT

SDG: (11) Sustainable Cities and Communities

(13) Climate Action

Title of Activity: **DISASTER RISK REDUCTION AND MANAGEMENT SEMINAR**

Date/Time: February 8, 2025 8:00 – 11:00 AM

Venue: Fr. Tonus Gymnasium

Organizers: NSTP Office

Objectives: To equip participants with knowledge and skills on disaster preparedness, response, mitigation, and recovery, fostering a culture of safety and resilience in communities.

Beneficiaries (if any):

Participants: NSTP Facilitators and Students, MDRRMO Bayombong

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A. Highlights of the Activity

The National Service Training Program organized a Disaster Risk Reduction and Management (DRRM) seminar to equip students with essential knowledge and skills in disaster preparedness. The seminar began with the university prayer, followed by the singing of the National Anthem and the Saint Mary's University Hymn.

To formally open the event, Sir Delano Rod Dacles, a CWTS facilitator, delivered the welcome remarks, emphasizing the crucial role of disaster preparedness in minimizing risks and protecting communities. Mrs. Rosemarie R. Paned then introduced the distinguished guest speakers: Mr. Jenkins C. Ampat, Mr. Roel A. Gurat, and Mr. Mark Clienton John Parilla, each bringing their expertise in different aspects of DRRM.

The first speaker, Mr. Jenkins C. Ampat, a Marian alumnus and former educator, engaged students through a puzzle game, setting a lively and interactive atmosphere. He emphasized the importance of participative learning, ensuring that students were actively involved throughout the discussion. He likened preparedness to a winding road, illustrating that achieving disaster resilience is a continuous process that requires strategic planning and commitment. He then elaborated on the principles of DRRM, highlighting proactive measures to mitigate disasters. Additionally, he discussed the laws governing DRRM and their historical development, emphasizing their significance in national disaster response efforts.

Next, Mr. Roel A. Gurat provided an insightful discussion on geohazards, focusing on their impact on communities. He identified major fault lines in the Philippines, particularly in region 2 and Nueva Vizcaya, and stressed the importance of geohazard mapping for disaster preparedness. He also explained the phenomenon of liquefaction, detailing how intense ground shaking can cause the soil to lose its strength. He underscored the necessity of soil analysis to assess the safety of an area, helping communities make informed decisions to reduce geological risks.

The final speaker, Mr. Mark Clienton John Parilla, tackled flood hazards, a pressing concern in many parts of the country. He outlined the dos and don'ts during calamities, stressing the importance of preparedness measures such as securing emergency supplies and developing evacuation plans. He also emphasized the need for individuals to be aware of the locations of designated evacuation centers to ensure a swift and organized response in times of disaster.

As the seminar concluded, the speakers left the participants with a powerful reminder: "Prevention is better than cure." Their discussions reinforced the importance of proactive disaster preparedness and community resilience.

To recognize their valuable contributions, the NSTP facilitators awarded Certificates of Appreciation to the guest speakers, acknowledging their expertise in DRRM. The event concluded with a closing prayer led by Mrs. Janice Jacinta Bernardo, a CWTS facilitator, leaving the audience with a renewed sense of responsibility and commitment to disaster readiness.

Through this seminar, students gained essential knowledge and practical insights, empowering them to become proactive advocates for disaster preparedness in their communities.

B. Summary of the Activity Evaluation

How would you rate the seminar in terms of the following?	**Mean**	**SD**	**QUALITATIVE DESCRIPTION**
1. Attainment of the Activity's objectives	4.72	0.52	Very Satisfactory
2. Relevance of the Topics:	4.73	0.53	Very Satisfactory
3. Trainers/Facilitators/Speakers Effectiveness 1	4.68	0.56	Very Satisfactory
Trainers/Facilitators/Speakers Effectiveness 2	4.73	0.53	Very Satisfactory
Trainers/Facilitators/Speakers Effectiveness 3	4.66	0.61	Very Satisfactory

4. Management	4.62	0.63	Very Satisfactory
5. Venue conduciveness	4.59	0.64	Very Satisfactory

Legend: 4.5-5.0 Very Satisfactory (VS); 3.5-4.49 Satisfactory (S); 2.5 3.49 Good (G;) 1.5-2.49 Fair (F); 1.0-1.49 Needs Improvement (NI)

A. Which of the topics/activities do you think is the most important to you?

- The majority expressed that all topics covered in the seminar were important or most important to them.
- Many specifically emphasized Disaster Risk Reduction and Management (DRRM) as crucial.
- Commonly highlighted topics include disaster preparedness, mitigation and prevention, and what to do before, during, and after disasters.
- Specific disaster types frequently mentioned were floods, landslides, earthquakes, cyclones, and storms, especially those relevant to their local area or personal experience.
- Several respondents valued learning about disaster causes, risks, and safety measures.
- Some found the real-life experiences of rescuers and emergency management phases (mitigation, preparedness, recovery) particularly impactful.
- A few noted the importance of learning about relevant laws such as Republic Act 10121 related to disaster management.

Overall, the focus was on practical knowledge that helps individuals and communities be better prepared and protected during natural disasters.

B. Which of the topics/activities do you think is the least important to you?

- The vast majority of students said none or N/A, meaning all topics were important to them.
- Many emphasized that every topic is relevant and useful, especially because the seminar focuses on saving lives and disaster preparedness.
- A few mentioned specific disaster types like tsunami, flood, typhoon, tropical cyclone, earthquake, and duck cover and hold, but only in passing or as something less important — yet still recognized as relevant.
- One comment highlighted discomfort with graphic images shown without warning, but still found the overall seminar timely.
- A few expressed being already familiar with some risks due to prior learning, but still did not discount their importance.

Overall: The consensus is that no topic should be considered least important since all parts contribute to understanding disaster risks and preparedness.

C. Suggestions:

- Most students said "None" or "N/A" — many felt the program was good or already perfect.

- Some asked for better organization, like:
  - Coordinating student seating and program flow.
  - More organized seating arrangements.
  - Informing participants ahead about possible conflicts (e.g., venue availability).
- Improving visuals and readability:
  - Larger font sizes and clearer text on slides.
  - Use both projector screens.
  - Better color contrast for fonts.
- Requests for more engaging activities and enthusiastic emcees.
- A few suggested providing snacks.
- Giving out flyers or handouts for better note-taking or review.
- Comments encouraging the team to keep up the good work.

Overall, the main actionable points are about clarity of presentation, better coordination, and some added engagement — but mostly positive feedback!

C. Appendices

1. Attendance Sheet (scanned)

2. Program of Activities



3. Photo Documentation









Prepared by:

Mrs.Rejean Ann P. Valentin
Staff, NSTP Office

Noted by:

Mr. Domingo T. Guntalilib Jr.
Head, NSTP Office

COURSE SYLLABUS

Course Number	Course Descriptive Title	Semester/ Term	A.Y.	Credit Unit/s			Time Allotment Per Week		
				Lecture	Laboratory	Total	Lecture	Laboratory	Total
GSTS	Science, Technology, and Society	2nd SEMESTER	2023-2024	3	0	3	3	0	3-

I. University and School Vision-Mission and Graduate Attributes

University Vision-Mission	Graduate Attributes	SHANS Vision-Mission
Saint Mary's University is envisioned as a premier CICM Catholic educational institution drawn into communion by the Wisdom of God, dedicated to the integral formation of persons exemplifying excellence, innovation and passion for Christ's Mission. We dedicate ourselves to: 1. Joyfully witnessing to Christ mission; 2. Responsibly taking the lead and participating in community building; 3. Relentlessly manifesting academic, personal and professional excellence; 4. Conscientiously strengthening communion; and 5. Steadfastly nurturing creativity and physical prowess.	Graduates of CICM institutions including Saint Mary's University are expected to have the following attributes: • life-faith integrated persons; • compassionate missioners; • globally enterprising leaders; • socially engaged professionals and • ethically committed stewards.	The School of Health and Natural Sciences of Saint Mary's University, envisions to become a leading healthcare educational institution that aims to produced globally competent healthcare professionals, and a science resource center that will develop excellent, innovative Christian Science experts who can transform lives through its mission.

II. Institutional Outcomes-Based Education Framework

At Saint Mary's University, outcomes-based education (OBE) focuses and organizes its discipline-based learning activities around what are essential for all learners to know, value and be able to do and achieve these at the desired competency level. The OBE framework of SMU is visually represented by images that would resemble an inner human figure being nurtured by its likeness. The learner-centeredness of Marian OBE is highlighted by the institutional outcomes derived from the vision-mission that define the core values of **Mission** and **Excellence** and through the core strategies of **Innovation** and **Communion**. The framework sets the attributes of the ideal Marian graduates based on the SMU vision - mission as part of institutional goals or program educational outcomes that emphasize lifelong learning (what are expected of Marian graduates about five years after graduation), and using these as bases for developing specific program outcomes (what are expected of Marian students upon graduation). The various curricular program outcomes are the sets of competencies (related knowledge, skills and attributes) that all learners are expected to demonstrate. These desired outcomes are translated to what the students learn in specific courses. SMU ensures that at the level of the courses, the desired course and learning outcomes are attained with the proper content, methodologies, and student performance assessment with the necessary supportive teaching-learning environment. The outcomes are anchored on the typology-based expectations of a university towards research to contribute to nation-building through knowledge generation and to community development. At the same time, the various elements are governed by standards for quality assurance and continuous improvement and by the goal of addressing local, as well as, global needs.



MARIAN OBE FRAMEWORK

III. Approval and Revision History

	Name	Designation	Signature	Date		Name	Designation	Signature	Date
Last updated by	Elaine Joyce B. Afaga	Instructor			Verified by	DR. JOMAN J. BALITON	Academic Dean		
Reviewed by	Dr. Elsa L. Cajucom	Director			Approved by	DR. MOISES ASUNCION	VP Academic Affairs		

IV. Program Educational Outcomes (refer to the OBE Handbook for BS Nursing Program)

V. Program Outcomes, Performance Indicators and Measurement System (refer to the OBE Handbook for BS Nursing Program)

VI. Curriculum Justification and Curriculum Map (refer to the OBE Handbook for BS Nursing Program)

VII. Course Prerequisite Map (refer to the OBE Handbook for BS Nursing Program)

VIII. Course Description

Science, Technology, and Society is a course that deals with interactions between science and technology and social, cultural, political, and economic contexts that shape and are shaped by them. This interdisciplinary course engages students to confront the realities brought about by science and technology in society. Such realities pervade the personal, the public, and the global aspects of our living and are integral to human development. Scientific knowledge and technological development happen in the context of society with all its socio-political, cultural, economic, and philosophical underpinnings at play. This course seeks to instill reflective knowledge in the students that they are able to live the good life and display ethical decision making in the face of scientific and technological advancement. This course includes mandatory topics on climate change and environmental awareness.

IX. Alignment Matrix of Program Outcomes, Course Outcomes and Course Learning Outcomes

Course Outcomes	Course Learning Outcomes		Program Outcomes																
		PM1	PM2	PM3	PM5	PC1	PC2	PC3	PC4	PC5	PE1	PE2	PE3	PE4	PE5	PE6	PI1	PI2	PI3
CO1: Articulate the impacts of science and technology on society, specifically Philippine society.	CLO2: Discuss the interactions between S&T and society throughout history CLO4: Identify the paradigm shifts in history CLO5: Articulate ways by which society is transformed by science and technology																		
CO2: Explain how science and technology affect society and the environment and its role in nation-building.	CLO6: Discuss the role of science and technology in Philippine nation building CLO7: Evaluate government policies pertaining to science and technology in terms of their contributions to nation building CLO8: Identify actual science and technology policies of the government and																		

Course Outcomes	Course Learning Outcomes	Program Outcomes																	
		PM1	PM2	PM3	PM5	PC1	PC2	PC3	PC4	PC5	PE1	PE2	PE3	PE4	PE5	PE6	PI1	PI2	PI3
	appraise their impact on the development of the Filipino nation																		
CO3: Analyze the human condition in order to deeply reflect and express philosophical ramifications that are meaningful to the student as a part of society .	CLO9: Analyze the human condition in order to deeply reflect and express philosophical ramifications that are meaningful to the student as a part of society. CLO13: Evaluate contemporary human experience in order to strengthen and enlighten the human person functioning in society.																		
CO4: Define and demonstrate the impact of social media on the students' life and Philippine society in general	CLO12: Examine human rights in order to uphold such rights in technological ethical dilemmas CLO14: Link learned concepts to the development of the information age and its impact on society CLO15: Illustrate how the social media and the information age have impacted our lives																		
CO5: Imbibe the importance of science and technology in the preservation of the environment and the development of the Filipino Nation	CLO3: Discuss how scientific and technological developments affect society and the environment																		
CO6: Critique human flourishing vis-à-vis the progress of science and technology such that the student may be able to define for himself/herself the meaning of the good life	CLO10: Critique human flourishing vis-à-vis the progress of science and technology so that the student can define for himself/herself the meaning of the good life.																		

Course Outcomes	Course Learning Outcomes	Program Outcomes																	
		PM1	PM2	PM3	PM5	PC1	PC2	PC3	PC4	PC5	PE1	PE2	PE3	PE4	PE5	PE6	PI1	PI2	PI3
CO7: Foster the value of a healthy lifestyle toward the holistic and sustainable development of society and the environment	CLO16: Determine the interrelatedness of society, environment, and health CLO17: Discuss the ethics and implications of GMOs and potential future impacts CLO20: Describe gene therapy and its various forms																		
CO8: Creatively present the importance and contributions of science and technology to society	CLO18: Discuss the major impacts (both potential and realized) of nanotechnology on society CLO19: Analyze the issue through the conceptual STS lenses CLO19: Critique the issue on its costs and benefits to society																		
CO9: Examine shared concerns that make up the good life in order to come up with innovative and creative solutions to contemporary issues guided by ethical standards	CLO11: Examine shared concerns that make up the good life in order to come up with innovative, creative solutions to contemporary issues guided by ethical standards																		
CO10: Illustrate how the social media and information age impact their lives and their understanding of climate change	CLO21: Assess the issue's potential benefits and detriments to CLO22: Identify the causes of climate change CLO23: Assess the various impacts of climate change including economic, geopolitical, biological, meteorological, etc. CLO24: Apply STS concepts to the issue of climate change global health																		

X. Course Learning Plan and Timeframe

Course Learning Outcome	Topic/s	Week No. and Time Allotment	Methodology	Resources (References and Materials)	Assessment
CLO1. integrate the importance of the University Vision-Mission in the course	**Course Orientation** 1. University Prayer 2. University Vision-Mission 3. School Vision-Mission 4. Course Description 5. Course Prerequisite Map 6. Course Outcomes 7. Course Requirements and Grading System 8. Class Policies	1 (1 hr)	**Lecture-discussion** on the nature of the course	Undergraduate Student Handbook Course Syllabus	**Personal Reflection.** The students will write an essay on the importance of the University VMGO in their course.
CLO2: Discuss the interactions between S&T and society throughout history CLO3: Discuss how scientific and technological developments affect society and the environment CLO4: Identify the paradigm shifts in history	**Historical Antecedents In Which Social Considerations Changed The Course Of Science And Technology** 1. In the World: Ancient, Middle and Modern Ages 2. In the Philippines	1-2 (6 hrs)	**Interactive discussion** on historical antecedents in which social considerations changed the course of science and technology **Video Presentation** supplementary for teaching-learning process **Group Activity:** "Standing on the shoulders of Giants"	Philosophy of Science (Encyclopedia) Scientific Progress, Scientific Revolutions Floridi, Luciano. 2014. The Fourth Revolution, Oxford University Press Caoli. History of Science and Technology of the Philippines. Video: Stephen Colbert's interview with Neil Tyson https://www.youtube.com/watch v=YXh9RQCvxmg&noredirect=1 Youtube: World's Greatest Inventions (3 minutes) Philippine Great Inventions https://explorable.com/scientificreductionism https://explorable.com/what-is-a-paradigm http://www.history.com/topics/enlightenment/videos/mankind-the-story-of -all-of-usscientific-revolution Kuhn , Structure of Scientific Revolution	**Quiz** **Graded recitation**. How scientific and technological developments affect society and the environment **Group Presentation.** Activity entitled "Standing on the shoulder of the Giants"

Course Learning Outcome	Topic/s	Week No. and Time Allotment	Methodology	Resources (References and Materials)	Assessment
CLO5: Articulate ways by which society is transformed by science and technology	**Intellectual Revolutions That Defined Society** 1. Copernican 2. Darwinian 3. Freudian 4. Information 5. Meso-American 6. Asian 7. Middle East 8. African	3-4 (6 hrs)	**Interactive discussion** on intellectual revolutions that defined society. **Video Presentation** as supplementary for teaching-learning process	PowerPoint presentation on the individual scholars and great works http://www.flowofhistory.com.readings Flowcharts/revival-west/the-age-enlightenment http://hti.osu.ed/scientific revolution/lesson plans	**Quiz** **Journal Reports.** The students will be given questions on ways by which society is transformed by S&T. **Group Activity.** The students will make a chart which summarizes intellectual revolution.
CLO6: Discuss the role of Science and Technology in Philippine nation Building CLO7: Evaluate government policies pertaining to science and technology in terms of their contributions to nation building CLO8: Identify actual science and technology policies of the government and appraise their impact on the development of the Filipino nation	**Science and Technology and Nation Building** 1. The Philippine Government S&T Agenda 2. Major development programs and personalities in S&T in the Philippines 3. Science Education in the Philippines 4. Selected indigenous science and technologies	5 (3 hrs)	**Interactive discussion** on the role of science and technology in Philippine nation building. **Video Presentation** as supplementary for teaching-learning process **Group Activity** on the major development programs and personalities in S&T in the Philippines.	Government Documents: 1. NEDA. National Development Agenda; Regional Agenda http://www.dbm.gov.ph/wp-content/uploads/GAA/GAA2015 /GAA%202015%20Volume%20I/NEDA/NEDA.pdf Filipino Great Men and Women Great Filipino Inventions	**Quiz** **Journal Reports.** The students will evaluate government policies pertaining to science and technology in terms of their contribution to nation building. **Group Activity.** The students will present their activity in class.
WEEK 6 FIRST TERM EXAMINATION					

Course Learning Outcome	Topic/s	Week No. and Time Allotment	Methodology	Resources (References and Materials)	Assessment
CLO9: Analyze the human condition in order to deeply reflect and express philosophical ramifications that are meaningful to the student as a part of society	**The Human Person Flourishing in Terms of Science and Technology** **Technology as a Way of Revealing**	7 (3hrs)	**Interactive discussion** on human person flourishing in terms of science and technology, and technology as a way of revealing **Video Presentation** as supplementary for teaching-learning process	The Question Concerning Technology by Martin Heidegger *Heidegger, Martin. The Question Concerning Technology and Other Essays, HarperCollins, 1982.* A Return to the Beginning by Daniel J. McNamara, SJ, in Stellar Origins, Human Ways (2011) *McNamara, Daniel J. in "A Return to the Beginning," in Stellar Origins, Human Ways: Readings in Science, Technology, and Society, ed. Ma. Assunta Cuyegkeng, Quezon City: Ateneo de Manila University Press, 2011.*	**Quiz** **Journal Reports.** The students will critique the journal of Martin Heidegger and Daniel J. MacNamara **Personal Reflections.** The students will reflect on the philosophical ramifications that are meaningful to them as part of the society.
CLO10: Critique human flourishing vis-à-vis the progress of science and technology so that the student can define for himself/herself the meaning of the good life.	**Human Flourishing**	8 (3hrs)	**Interactive discussion** on human flourishing **Video Presentation** as supplementary for teaching-learning process **Group Activity**	Maboloc, Christopher Ryan. "Eudaimonia and Human Flourishing" in Ethics and Human Dignity, 15-23, Rex Bookstore, 2010. McNamara, Daniel J. in "A Return to the Beginning," in Stellar Origins, Human Ways: Readings in Science, Technology, and Society, ed. Ma. Assunta Cuyegkeng, Quezon City: Ateneo de Manila University Press, 2011. Hickel, Jason. "Forget 'developing' poor countries, it's time to 'de-develop' rich countries," The Guardian, Online: http://www.theguardian.com/global-development-professionals-network/2015/sep/23/developing-poor-countries-de-develop-richcountries-sdgs Movie Clip (youtube): The Magician's Twin: CS Lewis and the case against Scientism Film: Akiro Kurosawa's Dreams "Village of the Watermills"	**Film Analysis.** The students will critique (*Movie Clip (youtube): The Magician's Twin: CS Lewis and the case against Scientism* *Film: Akiro Kurosawa's Dreams "Village of the Watermills")* **Group Presentation** on how technology reveals nature and the human person's role in it.

Course Learning Outcome	Topic/s	Week No. and Time Allotment	Methodology	Resources (References and Materials)	Assessment
CLO11: Examine shared concerns that make up the good life in order to come up with innovative, creative solutions to contemporary issues guided by ethical standards	**The Good Life**	9 (3hrs)	**Interactive discussion** on good life **Video Presentation** as supplementary for teaching-learning process **Reflection**	Book VI and Bk X Nichomachean ethics of Aristotle What Is and What should be the role of scientific culture in modern society – Richard Feynman in the Pleasure of Finding Things Out: The Best Short Works of Richard Feynman 1999 Perseus Books. USA pp97-115 The Concepts of the Public Good: A View from the Filipino Philosopher by Rolando Gripaldo in the Making of a Filipino Philosopher and Other Essays, 2009, National Bookstore pp 82-101 Eudaimonia and Human Flourishing in Ethics and Human Dignity by Christopher Ryan Maboloc). Manila, 2010. Rex Bookstore pp 15-23 That Sugar Film (2015) (documentary) Ppt: towards a green economy: pathways to sustainable development and poverty eradication–UNEP	**Personal Reflection:** The students will make a reflection on what make up a good life in order to come up with the innovative creative solutions to contemporary issues guided by ethical standards. **Film Analysis.** A documentary film on the Production and Consumption of Sugars
CLO12: Examine human rights in order to uphold such rights in technological ethical dilemmas	**When Technology And Humanity Cross**	10 (3hrs)	**Interactive discussion** on when technology and humanity cross **Video Presentation** as supplementary for teaching-learning process **Reflection**	The ethical dilemmas of robotics http://news.bbc.co.uk/2/hi/technology/6432307, stm Is Google Making Us Stupid? 2008. Nicholas Carr http://www/theatlantic.com/magazine/archive/2008/07/Is google making us stupid/306868/?	**Quiz** **Personal Reflection:** The students will make a reflection on the journal *The ethical dilemmas of robotics* *Is Google Making Us Stupid? 2008. Nicholas Carr*

Course Learning Outcome	Topic/s	Week No. and Time Allotment	Methodology	Resources (References and Materials)	Assessment
CLO13: Evaluate contemporary human experience in order to strengthen and enlighten the human person functioning in society	**Why Does the Future Not Need Us?**	11 (3 hrs)	**Video Presentation** as supplementary for teaching-learning process **Reflection**	Why The Future Doesn't Need Us (2000) – Bill Joy, Chief Scientist and Corporate Executive Officer of Sun Microsystems http://www.cc.gatech.edu/computing/nano/ documents Movie: "A I" Isaac Asimov, "I Robot"	**Film Analysis:** The students will critique the movie: *A I"* *Isaac Asimov, "I Robot"* **Case Study:** The students will critique WAZE.
WEEK 12 SECOND TERM EXAMINATION					
CLO14: Link learned concepts to the development of the information age and its impact on society CLO15: Illustrate how the social media and the information age have impacted our lives	**The Information Age (Gutenberg to social media)**	13 (3 hrs)	**Interactive discussion** on the information age **Video Presentation** as supplementary for teaching-learning process **Individual Presentation**	Book: "Alan Turing: The Enigma" (Andrew Hodges and Douglas Hofstadter) TEDTalk: Julian Assange on "Why the World Needs Wikileaks" Nature's Longest Threads by Janaki Balakrishnan and B V Sreekantan How we decide by Jonah Lehrer Information: The new language of science (Hans Christian von Baeyer) Philippine Science and Technology: Economic, Political and Social Events Shaping Their Development (Socorro M. Rodriguez, 1996) Germ Catcher (David J. Ecker, Scientific American, 2014) Physics of the Future: How science will shape human destiny and our daily lives by the year 2100 (Michio Kaku, Doubleday, 2011)	**Individual Report.** The students will make a report of their choice and present it in class. *1. Activity Report: A day without Technology* *2. Activity Report: Timing your Technology* **Interview.** The students will interview elders regarding technology in the past. *3. Activity Report: Technology and Past (interviews with elders*

Course Learning Outcome	Topic/s	Week No. and Time Allotment	Methodology	Resources (References and Materials)	Assessment
CLO16: Determine the Interrelatedness of society, environment, and health CLO17: Discuss the ethics and implications of GMOs and potential future impacts	**Biodiversity and the Healthy Society** **Genetically Modified Organisms: Science, Health, And Politics**	14 (3 hrs)	**Interactive discussion** on biodiversity and GMO. **Video Presentation** as supplementary for teaching-learning process	Life and Biodiversity ppt. Evolution and biodiversity Ecoscience-Biodiversity: an overview Article: "The politics of golden Rice" (Dubock, Adrian GM Crops & Food. JulSep2014, Vol5 Issue 3 p 210-222 13p.) Article: "Ethics in Research with Vulnerable Populations and Emerging Countries: The Golden Rice Case." (Duguet, Anne Marie et. al., Journal of International Law and Commercial Regulations. Summer 2013, Vol. 38 Issue 4, p979-1013, 35p) Agro-ecology: What it is and what it has to offer? Is this the future of farming?	**Journal Report:** The students will discuss the potential impacts of GMO. **Debate:** The class will be divided into two groups and discuss the pros and cons of GMO.
CLO18: Discuss the major impacts (both potential and realized) of nanotechnology on society CLO19: Analyze the issue through the conceptual STS lenses CLO19: Critique the issue on its costs and benefits to society	**The Nano World**	15 (3 hrs)	**Interactive discussion** on Nano World. **Video Presentation** as supplementary for teaching-learning process	TEDTalk: Ray Kurzwell on "How Technology Will Transform Us" Article: "Nanoethics: The ethical and Social Implications of Nanotechnology" (Patrick Lin and Fritz Allhoff, Hoboken, New Jersey: John Wiley and Sons, Inc. 2007) Article: "Environmental Impacts of Nanotechnology and Its Products" (Zhang et. Al Proceedings of the 2011 Midwest Section Conference of the American Society for Engineering Education, 2011) Ppt: Can we build a culture of science through nanotechnology? By Fabian M. Dayrit (2013)	**Journal Report:** The students will critique issues on nanotechnology. **Graded Recitation.** **Quiz**

Course Learning Outcome	Topic/s	Week No. and Time Allotment	Methodology	Resources (References and Materials)	Assessment
CLO20: Describe gene therapy and its various forms CLO21: Assess the issue's potential benefits and detriments to global health	**Gene Therapy (Stem Cells)**	16 (3 hrs)	**Interactive discussion** on gene therapy. **Video Presentation** as supplementary for teaching-learning process	Youtube: Science Friction: Stem Cell Research TEDTalk: Susan Lim on "Transplant Cells Not Organs" TED Talk: Juan Enriquez on "the Next Species of Human"	**Journal Report**: The students will assess the issues, potential benefits and detriments to global health of gene therapy **Personal Reflection:** The students will reflect on their stand to gene therapy and its future impact.
CLO22: Identify the causes of climate change CLO23: Assess the various impacts of climate change including economic, geopolitical, biological, meteorological, etc. CLO24: Apply STS concepts to the issue of climate change	**Mandated Topics:** **1. Climate Change And The Energy Crisis** **2. Environmental Awareness** **Other Topics:** **Alternative Energy Resources (e.g. O-Tech Ocean Thermal Energy Conversion)**	17 (3 hrs)	**Interactive discussion** on climate change and environmental awareness. **Video Presentation** as supplementary for teaching-learning process **Culminating Activity**	YouTube: or Book "An inconvenient Truth: The Planetary Emergency of Global Warming and What we can Do About It" (Al Gore) Book: "The Future: Six Drivers of Global Change" (Al Gore) Report: " Changing the Atmosphere: Anthropology and Climate Change" (NCAR) BUHOS: A Climate Change Documentary by Loren Legarda Article: " The Tragedy of the Commons" by Garrett Hardin Article: "Scientists tackle mystery of thunderstorms that strike at night" (NCAR) Article: "Reigning in the Weather" (Webster, Donovan, Discover, 02747529. Jun2008, Vol. 29, Issue 6)	**Group Presentation.** The students will discuss the application of STS concepts to the issue of climate change **Making Video Presentation:** The students will make a video on the impact of climate change including economic, geopolitical, biological, meteorological, etc.
WEEK 18 FINAL TERM EXAMINATION					

XI. Required Readings [incl. textbook, print or electronic]

	CALL NO.	Bibliographic citation
Textbook(s)		Serafica, et al. 2018 Science, Technology and Society. Rex bookstore
		Calimlim, J., Samson, M., Ramos, J., & Santos, A. (2021). Science, technology and society. Edric Publishing House.
Other Required Readings		Dayrit, Fabian. "Sustainable Development: An Evolving Paradigm for the 21st Century," in Stellar Origins, Human Ways: Readings in Science, Technology, and Society, ed. Ma. Assunta Cuyegkeng, Quezon City: Ateneo de Manila University Press, 2011
		Maboloc, Christopher Ryan. "Eudaimonia and Human Flourishing" in Ethics and Human Dignity, 15-23, Rex Bookstore, 2010.

XII. Suggested Readings and References

	CALL NO.	Bibliographic citation
References*		History of Science and Technology in Ph
		Philosophy of Science . Scientific Progress, Scientific Revolutions
Supplementary Materials*		• Agro-ecology: What it is and what it has to offer? Is this the future of farming? • Alan Turing: The Enigma" (Andrew Hodges and Douglas Hofstadter) • Aristotle, Nichomachean ethics, Book VI and Book X • Article: "Environmental Impacts of Nanotechnology and Its Products" (Zhang et. Al Proceedings of the 2011 Midwest Section • Conference of the American Society for Engineering Education, 2011) • Article: "Nanoethics: The ethical and Social Implications of Nanotechnology" (Patrick Lin and Fritz Allhoff, Hoboken, New Jersey: • John Wiley and Sons, Inc. 2007) • Government Documents: 1. NEDA. National Development Agenda; Regional Agenda • Kuhn, Structure of Scientific Revolution
Non-print Resources and Online Educational Resources *[e-books, CD/DVD materials, Open Educational Resources, internet sources, other digital resources produced by faculty members]*		• Dayrit, Fabian M. Ppt: Can we build a culture of science through nanotechnology? (2013) • Film: Akiro Kurosawa's Dreams "Village of the Watermills" • http://www.history.com/topics/enlightenment/videos/mankind-the-story-of -all-of-us-scientific-revolution • http://www.flowofhistory.com.readings

		• http://hti.osu.ed/scientific revolution/lesson plans • http://www.theguardian.com/global-development-professionals-network/2015/sep/23/developing-poor-countries-de-develop-richcountries-sdgs • http://news.bbc.co.uk/2/hi/technology/6432307, stm, The ethical dilemmas of robotics • http://www/theatlantic.com/magazine/archive/2008/07/Is google making us stupid/306868/, Is Google Making Us Stupid? 2008. Nicholas Carr • http://www.cc.gatech.edu/computing/nano/documents, Why The Future Doesn't Need Us (2000) – Bill Joy, Chief Scientist and • Corporate Executive Officer of Sun Microsystems • https://explorable.com/scientific-reductionism • https://explorable.com/what-is-a-paradigm • Movie: "A I" Isaac Asimov, "I Robot • Movie Clip (youtube): The Magician's Twin: CS Lewis and the case against Scientism • Martin Heidegger, The Question Concerning Technology • UNEP, That Sugar Film (2015) (documentary) Ppt: towards a green economy: pathways to sustainable development and poverty eradication • Video: Stephen Colbert's interview with Neil Tyson https://www.youtube.com/watchv=YXh9RQCvxmg&noredirect=1 • Youtube: World's Greatest Inventions (3 minutes) • Youtube: Science Friction: Stem Cell Research • TED Talk: Juan Enriquez on "The Next Specieis of Human" • TEDTalk: Julian Assange on "Why the World Needs Wikileaks" • TED Talk: Ray Kurzwell on "How Technology Will Transform Us" • TEDTalk: Susan Lim on "Transplant Cells Not Organs"
Professional Journals		

IV. Course Requirements and Analytic Rubrics for Assessment

COURSE REQUIREMENTS	Weight
Class Standing 1	**100%**
a. Recitation/ Online Forums	10%
b. Learning Assignments	20%
c. Group Activities/ Group Forums	30%
d. Personal Reflections	40%
Class Standing 2	**100%**
e. Article review/Journal Critique	40%
f. Quizzes	20%

g. Practical Exam	10%
h. Oral Reporting	30%
Term Examination	**100%**

GROUP ORAL REPORTING RUBRICS

Content and Organization (40)- The speaker provides a variety of types of content appropriate for the task, such as generalizations, details, examples, and various forms of evidence. The speaker adapts the content in a specific way to the listener and situation. The message is overtly organized. The speaker helps the listener understand the sequence and relationships of ideas by using organizational aids such as announcing the topic, previewing the organization, using transitions, and summarizing.

Delivery (30)- The speaker delivers the message confidently, poised, enthusiastic in fashion. The volume and rate vary to add emphasis and interest. Pronunciation and enunciation are obvious—the speaker exhibits very few disfluencies.

Creativity (20)- Very original presentation of material; captures the audience's attention. Observe the rule of creating a PowerPoint Presentation.

Time Management (10)- The presentation is within the allotted time frame.

JOURNAL CRITIQUING RUBRICS

Description	Fair (Below standards)	Good (Meets minimum standards)	Very Good (Exceeds minimum standards)	Points
Page 1 Summary	The student does not summarize the main points of the article (i.e., the main research question, methods, results, and implications) and/or includes inaccurate information.	Most of the article is summarized, but the student may not cover all aspects (i.e., the main research question, methods, results, and implications).	The summary clearly outlines the main research question, methods, results, and implications in the student's own words.	15
Page 2 Analysis	The student does not move beyond a summary of the article to provide an analysis. No new ideas are contributed beyond what is in the article itself, or the analysis is overly confusing.	The student analyzes the article by answering most of the assigned questions. The ideas presented are mostly novel, going beyond what is in the article itself.	The student provides an insightful analysis of the article, answering all or nearly all of the questions assigned. The student articulates novel ideas that go beyond what is in the article itself. The analysis is clear and rational.	20
Writing	Overall, the student's communication of their analysis is confusing, unclear, and/or suggests a limited understanding of the issues involved in this question.	Overall, the student's communication of their analysis is somewhat clear and/or suggests some understanding of the issues involved in this question.	Overall, the student's communication of their analysis is clear and evidences a general, overarching understanding of the issues involved in this question.	5
Format	The Paper does not follow all formatting guidelines outlined and either fails to cite the article or cites in inaccurately.	The Paper is 2 pages long, follows all formatting guidelines outlined in the syllabus, and accurately cites the article in APA format at the end.	The Paper is 2 pages long, follows all formatting guidelines outlined in the syllabus, and accurately cites the article in APA format at the end.	5

Mechanics	Grammatical, punctuation, and spelling errors significantly detract from reading the paper. Basic sentence structure often includes poor structure (e.g., run-on sentences).	There may be a few grammatical, punctuation, and/or spelling errors, but they do not detract too much from reading the paper. Basic sentence structure is good (e.g., avoids run-on sentences, sentence structure is solid).	Grammatical, punctuation and spelling errors are RARE and do not detract from reading the paper. Basic sentence structure is good (e.g., avoids run-on sentences, sentence structure is solid).	5
Total Possible Points				50

PERSONAL REFLECTION RUBRICS

Criteria	EXCELLENT	VERY GOOD	GOOD	FAIR	POINTS
Depth of Reflection	Response demonstrates an in-depth reflection on, and personalization of, the theories, concepts, and/or strategies presented in the course materials to date. Viewpoints and interpretations are insightful and well supported. Clear, detailed examples are provided, as applicable.	Response demonstrates a general reflection on, and personalization of, the theories, concepts, and/or strategies presented in the course materials to date. Viewpoints and interpretations are supported. Appropriate examples are provided, as applicable.	Response demonstrates a minimal reflection on, and personalization of, the theories, concepts, and/or strategies presented in the course materials to date. Viewpoints and interpretations are unsupported or supported with flawed arguments. Examples, when applicable, are not provided or are irrelevant to the assignment.	Response demonstrates a lack of reflection on, or personalization of, the theories, concepts, and/or strategies presented in the course materials to date. Viewpoints and interpretations are missing, inappropriate, and/or unsupported. Examples, when applicable, are not provided.	15
Required Components	Response includes all components and meets or exceeds all requirements indicated in the instructions. Each question or part of the assignment is addressed thoroughly. All attachments and/or additional documents are included, as required.	Response includes all components and meets all requirements indicated in the instructions. Each question or part of the assignment is addressed. All attachments and/or additional documents are included, as required.	Response is missing some components and/or does not fully meet the requirements indicated in the instructions. Some questions or parts of the assignment are not addressed. Some attachments and additional documents, if required, are missing or unsuitable for the purpose of the assignment.	Response excludes essential components and/or does not address the requirements indicated in the instructions. Many parts of the assignment are addressed minimally, inadequately, and/or not at all.	15

Structure	Writing is clear, concise, and well organized with excellent sentence/paragraph construction. Thoughts are expressed in a coherent and logical manner. There are no more than three spelling, grammar, or syntax errors per page of writing.	Writing is mostly clear, concise, and well organized with good sentence/paragraph construction. Thoughts are expressed in a coherent and logical manner. There are no more than five spelling, grammar, or syntax errors per page of writing.	Writing is unclear and/or disorganized. Thoughts are not expressed in a logical manner. There are more than five spelling, grammar, or syntax errors per page of writing.	Writing is unclear and disorganized. Thoughts ramble and make little sense. There are numerous spelling, grammar, or syntax errors throughout the response.	15
Evidence and Practice	Response shows strong evidence of synthesis of ideas presented and insights gained throughout the entire course. The implications of these insights for the respondent's overall teaching practice are thoroughly detailed, as applicable.	Response shows evidence of synthesis of ideas presented and insights gained throughout the entire course. The implications of these insights for the respondent's overall teaching practice are presented, as applicable.	Response shows little evidence of synthesis of ideas presented and insights gained throughout the entire course. Few implications of these insights for the respondent's overall teaching practice are presented, as applicable.	Response shows no evidence of synthesis of ideas presented and insights gained throughout the entire course. No implications for the respondent's overall teaching practice are presented, as applicable.	15
Total Possible Points					60

V. Grading System

Transmutation: 60% score=75 grade (for General Education and CFE courses); 65% score=75 grade (for professional/major subjects); 70=75% (for review/integration courses)

Grade	Remarks	60% score=75 grade	65%score=75 grade	70%score=75 grade	Grade
100	Highest possible grade	100	100	100	100
99		98 - 99	99	99	99
98		97	97 - 98	98	98
97		95 - 96	96	96 - 97	97
96		94	94 - 95	95	96
95		92 - 93	93	94	95
94		90 - 91	92	93	94
93		89	90 - 91	92	93
92		87 - 88	89	90 - 91	92
91		86	87 - 88	89	91
90		84 - 85	86	88	90
89		82 - 83	85	87	89
88		81	83 - 84	86	88
87		79 - 80	82	84 - 85	87
86		78	80 - 81	83	86

Grade	Remarks	60% score=75 grade	65%score=75 grade	70%score=75 grade	Grade
85		76 - 77	79	82	85
84		74 - 75	78	81	84
83		73	76 - 77	80	83
82		71 - 72	75	78 - 79	82
81	Lowest passing grade for academic scholars, dean's listers and Latin honors	70	73 - 74	77	81
80		68 - 69	72	76	80
79		66 - 67	71	75	79
78		65	69 - 70	74	78
77		63 - 64	68	72 - 73	77
76		62	66 - 67	71	76
75	Lowest passing grade	60 - 61	65	70	75
74		58 - 59	64	69	74
73		57	62 - 63	68	73
72		55 - 56	61	66 - 67	72
71		54	59 - 60	65	71
70	Lowest grade reported in the grading sheet	52 - 53	58	64	70
69		50 - 51	57	63	69
68		49	55 - 56	62	68
67		47 - 48	54	60 - 61	67
66		46 -	52 - 53	59	66
65	Lowest possible computed grade in the class record; Given also for cheating in assessment	0 - 45	0 - 51	0 - 58	65

Sample Grading Policy in the Administrative and Employment Manual for Academic Personnel (2015)

Course Requirements	First Term	Second Term	Third Term
Class Standing during the Term	50%	50%	25%
Quizzes			
Assignment/Projects/Exercises/Seatwork			
Recitation			
Other Sources of Performance			
Long Term Examination	50%	50%	25%
First Term Grade			25%
Second Term Grade			25%

XV. Class Policies

1. ATTTENDANCE REQUIREMENTS

a. Saint Mary's University observes regular attendance and punctuality as important obligations of students. Every student then **must come to the class regularly** with zero or minimal number of absences and tardiness from the first day of the school calendar.
b. Only those who are **officially enrolled** in the code of this subject will be considered as "students" of the subject. Classes missed because of late enrollment shall be considered as absences.
c. A student who has been absent even for only one class period shall not be allowed to re-enter the class without an **admission slip duly signed by the Associate Dean of Student Affairs and Services for Men/Women.** The **"NO ADMISSION, NO ENTRY" Policy** must be strictly observed.
d. A student who was late, i.e., enter the classroom after the bell rang, shall also not be allowed to re-enter on next session unless an admission slip is presented.
e. Three counts of tardiness will be considered one absence.
f. A student is held responsible for lectures, classroom discussions, graded activities and assignments missed due to absences.
g. A student who missed a quiz due to an unexcused absence will NOT be given credit for the quiz. When excused, a student will be given another set of quiz items parallel to the missed quiz, or will depend on the agreement with the instructor.
h. A student is given first and second "warning" before he/she is "dropped" from the class. The number of hours of incurred absences corresponding to a 3-unit subject is shown in the table below.

1st Report (Warning)	2nd Report (Warning)	3rd Report (Dropping)
4.5 hrs.	**9 hrs.**	**12 hrs.**

2. ACADEMIC REQUIREMENTS
   a. Every student must attend classes regularly and participate in class discussions, individual works and group activities.
   b. Every student will be given equal opportunities to develop himself/herself to the maximum by complying strictly with the academic requirements of the course.
   c. Every student must complete all the academic requirements (except major examinations) such as special problems, problem sets and research outputs on or before the deadline. Students who pass requirements beyond the set deadline will be given demerits.
   d. Every student is encouraged to take a major examination on the scheduled date. During major examinations, students must present their test permits for their scores to be credited. Otherwise, an INC mark will appear as their grade.
   e. A special examination may be given only with the written permission of the Academic Dean, and for special cases, the Vice President for Academic Affairs.
   f. Special examinations are granted with full credit for circumstances beyond the control of the student such as sickness (with medical certificates), accidents and death of an immediate family member.
   g. No student may be granted exemption from any examination.
   h. Every student in a group activity will be assessed by the instructor and peers based on certain levels of performances in the cooperative learning activity rubric

3. All students must strictly follow the university policies on the conduct of students inside the school as stated in the **Undergraduate Student Handbook**.

4. Consultation hours (at least three hours per week) will be scheduled depending of the instructor's teaching load and schedule. No consultation will be entertained beyond office hours and during weekends, unless emergency and the teacher started the conversation. As much as possible, a polite message prompt must be sent by the student to schedule a consultation to let the instructor prepare. The message prompt must include the following:
   a) Start with a greeting. "Good Morning/Afternoon, Ma'am/ Sir" ...
   b) Introduce yourself (Complete Name, Program, Code and Descriptive Title)
   c) State the purpose of your message.
   d) Ask for clarifications (if any).
   e) End the conversation with gratitude.

XVI. Continuous Quality Improvement (refer to the OBE Handbook for BS Nursing Program)

NARRATIVE REPORT

SDG: (6) Clean Water and Sanitation (16) Peace, Justice, and Strong Institutions

Title of Activity: CHSF Behavioral Guidelines and Philippine Heraldic Code Seminar

Date/Time: September 14, 2024

Venue: Rev. Fr. Cornelius Tonus Gymnasium

Organizers: NSTP Office

Objectives:
1. To instill in NSTP students the CHSF Behavioral Guidelines as an integral part of Marian culture.
2. To foster respect for national symbols, promoting patriotism and discipline that contribute to responsible citizenship and the strengthening of national identity.

Beneficiaries (if any):

Participants: NSTP Facilitators and Students

A. Highlights of the Activity

As part of the integral formation for new Marian students, the NSTP Office organized a discussion on the CHSF Guidelines and the Philippine Heraldic Code. The program began with an opening prayer, followed by the playing of the national anthem and the singing of the SMU hymn.

Mr. Delano Rod Dacles, NSTP facilitator, delivered the welcome remarks to formally open the program.

Mr. Bryan Ricardo, the Master of Ceremonies, then introduced the resource speaker, Mr. Christian Nel R. Dominguez. Mr. Dominguez discussed the CHSF guidelines that students must follow to foster a more conducive learning environment. By adhering to proper waste management practices, everyone can contribute to maintaining our university as a clean, safe, healthy, and welcoming place. He emphasized that small acts of kindness, when combined, can make a significant impact.

Mr. Dominguez also highlighted that CHSF has long been a part of Marian culture, much like our DNA—an integral aspect of our identity. Additionally, he underscored the importance of upholding nationalism by showing respect for our national flag and embodying the Philippine Heraldic Code: 'MAKADIYOS, MAKATAO, MAKAKALIKASAN, at MAKABANSA'. Embracing

nationalism in a way that celebrates our country's strengths while valuing its diversity can contribute to a more harmonious and prosperous society.

After the insightful discussion, Mr. Domingo T. Guntalilib Jr., NSTP Head, along with the NSTP Facilitator, presented a certificate of appreciation to Mr. Dominguez for his invaluable expertise and contributions. This gesture recognized his efforts in enhancing the learning environment and promoting important values.

To conclude the activity, Mrs. Alma M. Salazar delivered a heartfelt closing prayer, expressing gratitude for the knowledge shared and seeking continued guidance and blessings for the Marian community.

B. Summary of the Activity Evaluation

How would you rate the seminar in terms of the following?	Mean	SD	QUALITATIVE DESCRIPTION
1. Attainment of the Activity's objectives	4.43	0.78	Satisfactory
2. Relevance of the Topics:	4.48	0.72	Satisfactory
3. Trainers/Facilitators/Speakers Effectiveness	4.45	0.76	Satisfactory
4. Management	4.46	0.74	Satisfactory
5. Venue conduciveness	4.52	0.68	Very Satisfactory
A. Which of the topics/activities do you think is the most important to you?	See attached answers (verbatim)		
B. Which of the topics/activities do you think is the least important to you?	See attached answers (verbatim)		
C. Suggestions:	See attached list of comments and suggestions (verbatim)		

Legend: 4.5-5.0 Very Satisfactory (VS); 3.5-4.49 Satisfactory (S); 2.5 3.49 Good (G;) 1.5-2.49 Fair (F); 1.0-1.49 Needs Improvement (NI)

A. Most Important Topics/Activities:

- Learning about the Philippine flag, its rules, and regulations is emphasized as a vital topic for understanding national pride and respect.
- Disaster Risk Reduction and Management (DRRM) is considered crucial for safety and preparedness, especially in the context of natural calamities.
- The core values of "Makadyos, Makatao, Makakalikasan, and Makabansa" are highlighted as essential to understanding Filipino identity and behavior.

- The proper use and disposal of the Philippine flag are noted as key elements in respecting the nation's symbols.
- The discussion on the Republic Act 8491, which governs the flag code, is seen as a necessary part of national education.

B. Least Important Topics/Activities:

- Food and entertainment-related activities, such as karaoke, were considered less relevant to the educational purpose of the seminar.
- The CHSF (Citizen and Human Services Foundation) and its specific rules were seen by some as less important or irrelevant to the focus of the seminar.
- The core values, while significant, were not always considered as practical in everyday applications by all participants.
- Some participants felt the seminar on flag-related topics could have been more engaging and interactive.
- The rules of the flag were discussed, but the importance of such topics sometimes felt less impactful compared to practical safety measures like DRRM.

C. Suggestions:

- Improve time management to ensure that the seminar starts on time and runs smoothly.
- Make the session more interactive by including engaging activities or games to hold the participants' attention.
- Ensure a clearer and louder sound system for better audio delivery, especially for those seated at the back.
- Include more real-life examples and situations to make the material relatable and applicable.
- Focus on providing clearer, more specific information about the discussed topics, such as how to manage disaster risks or handle the flag properly.

C. Appendices

1. Attendance Sheet (scanned)

2. Program of Activities

*(The scheduled seminar was on **Disaster Risk Reduction and Management**. However, due to unforeseen circumstances, the guest speaker was unable to attend. As a replacement, Mr. Christian Nel R. Dominguez discussed the **CHSF Behavioral Guidelines and the Philippine Heraldic Code**.)*

3. Photo Documentation



Awarding of certificate to the resource speaker, Mr. Christian Nel R. Dominguez, with the NSTPO Head and Facilitators.

Prepared by:

Mrs. Rejean Ann P. Valentin
Staff, NSTP Office

Noted by:

Mr. Domingo T. Guntalilib Jr.
Head, NSTP Office

NARRATIVE REPORT

SDG: 13, 15, 17

Title of Activity: Fourth International Conference on Cultural Studies (FICCS)

Date/Time: February 26-28, 2025

Venue: Saint Mary's University and Imugan, Sta. Fe, Nueva Vizcaya

Organizers: CEIPSC and SHANS

Objectives:

To promote the integration of indigenous knowledge systems with scientific approaches to address global challenges in biodiversity and environmental conservation.

Participants:

1. Dr. Elsa L. Cajucom, LPT (Organizing Committee)
2. Mr. Jason Arnold L. Maslang (Organizing Committee)
3. Ms. Vivien Junelle R. Almendra
4. Ms. Leana Pauline B. Alap
5. Ms. Arcelle Mae P. Novida
6. Mrs. Julieta A. Villanueva
7. Mr. Michael S. Catacutan

A. Highlights of the Activity:

From February 26 to 28, 2025, Saint Mary's University (SMU) played host to the Fourth International Conference on Cultural Studies (FICCS), bringing together thought leaders and experts from across the Philippines, Singapore, New Zealand, Australia, and Nepal. The conference focused on the powerful role that indigenous knowledge systems play in tackling pressing global issues related to biodiversity and conservation.

Seven (7) faculty and four (4) BS Biology students from the SMU's Center for Natural Sciences (CNS) were at the heart of the event, not only attending sessions but also actively engaging in meaningful conversations that wove together scientific inquiry, cultural traditions, and environmental sustainability. Their participation highlighted how interconnected these fields truly are, showcasing the importance of combining empirical research with time-honored indigenous practices.

One of the key highlights of FICCS 2025 was the BaNTAY-Kalanguya-Ikalahan project, which shone a spotlight on the value of cultural heritage in promoting eco-friendly and sustainable solutions. CNS faculty played a pivotal role in various breakout sessions, where they shared insights on how

biological sciences can enhance biodiversity efforts rooted in local traditions and community knowledge.

Dr. Christopher Allen Marquez, Director of the Community Engagement and Indigenous People Studies Center (CEIPSC), noted that the conference served as a powerful reminder of how embracing cultural understanding can lead to more innovative and adaptable responses to today's environmental challenges. Collaborations with major organizations like UPLB, WWF-Philippines, and the ASEAN Centre for Biodiversity further elevated the event's impact.

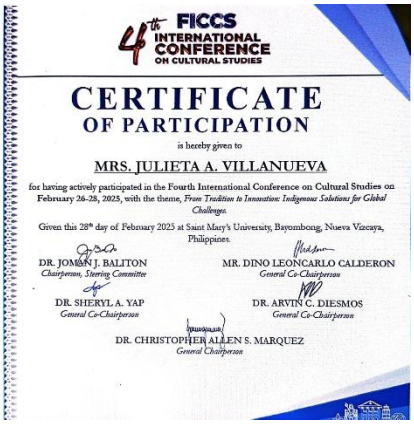
In all, the strong presence of CNS faculty at FICCS 2025 reaffirmed SMU's ongoing commitment to promoting solutions that are not only science-driven but also deeply respectful of cultural contexts and indigenous wisdom.

B. Appendices

1. Certificate of Participation









2. Photo Documentation









Prepared by:

Dr. Elsa L. Cajucom
CNS Director

NARRATIVE REPORT

SDG: 4, 13, 15

Title of Activity: Special Lecture in Taxonomy and Systematics with Dr. Ming Kai Tan

Date/Time: February 25, 2025

Venue: Saint Mary's University, AVR 1

Organizers: CNS

Objectives: To provide BS Biology, MAT Biology, and BSED major in science students with a foundational understanding of taxonomy and systematics, including their principles, applications, and significance in biodiversity conservation, thereby enhancing their knowledge and appreciation of systematic organization in the biological sciences.

Participants: BS Biology, MAT Biology, & BSEd Science students, CNS Faculty

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A. Highlights of the Activity:

Leading up the main conference on February 26 to 28, 2025, the Fourth International Conference on Cultural Studies hosted a special pre-conference lecture on February 25, 2025, featuring Dr. Ming Kai Tan, an Associate Scientific Manager and Curator of Entomology at the Lee Kong Chian Natural History Museum, National University of Singapore. His lecture provided students with a foundational understanding of the principles and applications of taxonomy and systematics.

Dr. Tan's discussion covered broad topics on classification systems, species identification, evolutionary relationships, and the role of taxonomy in biodiversity conservation. His lecture offered valuable insights into the importance of systematic organization in the biological sciences, equipping attendees with a general background essential for further study in these fields.

This lecture was primarily intended for BS Biology, MAT Biology, and BSED major in science students. It served as a critical introduction to taxonomy and systematics, providing students with a comprehensive perspective on the subject. The pre-conference lecture was organized by the Center for Natural Sciences (CNS), ensuring an engaging learning experience.

B. Appendices

1. Program





2. Photo Documentation







Prepared by: Dr. Elsa L. Cajucom

CNS Director

NARRATIVE REPORT

SDG: 4, 12, 13

Title of Activity: Green Chemistry and Chemistry Education

Date/Time: February 22, 2025

Venue: via Zoom

Organizers: Philippine Association of Chemistry Teachers-National Chapter (PACT-National) Inc.

Board Member and Treasurer
Philippine Federation of Chemistry Societies, Inc.

Objectives: It integrates the principles of green chemistry into science education to foster environmentally conscious practices. This includes updating course content, incorporating hands-on experiments, and adopting interdisciplinary approaches. Green chemistry also aims to reduce waste, minimize hazardous substances, and promote sustainable practices in chemistry education and research

Beneficiaries (if any):

Participants: Mrs. Julieta Villanueva

A. Highlights of the Activity:

On February 22, 2025, the Philippine Association of Chemistry Teachers-National Chapter (PACT-National), Inc., in collaboration with the Philippine Federation of Chemistry Societies, Inc., organized an online seminar via Zoom titled "Green Chemistry and Chemistry Education." The event aimed to promote the integration of Green Chemistry principles into science education, equipping teachers and students with the knowledge and skills necessary to foster environmentally conscious practices in the field of chemistry.

Promoting Sustainability: Integrating Green Chemistry into Education

In a progressive move towards sustainability, educators are championing the integration of Green Chemistry principles into mainstream education. The initiative aims not only to enrich the curriculum but also to foster a generation of chemists equipped with the knowledge and skills to tackle environmental challenges.

Embracing Green Chemistry

Green Chemistry, also known as sustainable chemistry, emphasizes the design of chemical products and processes that minimize the use and generation of hazardous substances. Its principles advocate for the reduction of waste, the use of renewable resources, and the creation of safer products. By embedding these principles into chemistry education, institutions are preparing students to become conscientious stewards of our planet.

Shaping Future Chemists

Educators are leveraging innovative teaching methods to introduce Green Chemistry concepts effectively. Practical laboratory exercises emphasize sustainable practices, such as using benign solvents and designing reactions to maximize efficiency. Students are encouraged to analyze the environmental impact of chemical processes and propose greener alternatives.

Collaborative Efforts

Across educational institutions, collaborations with industry and environmental organizations are enriching the educational experience. Guest lectures from experts in Green Chemistry provide real-world insights, while partnerships facilitate access to sustainable technologies and practices.

Impact and Challenges

The integration of Green Chemistry into the curriculum has shown promising results. Students report increased awareness of environmental issues and a deeper appreciation for sustainable practices. However, challenges such as resource constraints and the need for specialized training for educators highlight ongoing areas for development.

Looking Ahead

As society increasingly prioritizes sustainability, the role of Green Chemistry in education is set to expand. By empowering future chemists with the tools to innovate sustainably, educational institutions are not only preparing them for successful careers but also equipping them to address global environmental challenges proactively.

In conclusion, the integration of Green Chemistry into chemistry education represents a transformative step towards a more sustainable future. By instilling a commitment to environmentally responsible practices early on, educators are nurturing a generation of scientists poised to make a positive impact on the world. Overall, teaching Green Chemistry equips students to become environmentally conscious scientists and problem-solvers for a sustainable future.

B. Appendices

1. Certificate of Attendance/Participation



Philippine Association of Chemistry Teachers-
National Chapter, Inc.

Certificate of Participation

This certificate is awarded to

Julieta A. Villanueva

as a Participant during the imPACT 6 Chemistry Week 2025 with the
Teaching Green Chemistry and Sustainable Practices
"Teaching Green Chemistry and Sustainable Practices"
February 22, 2025 | via Zoom
Program Accreditation No. PTR-2019-277-7713
with PRC approved 2.00 CPD units.

VOLTAIRE G. ORGANO, PhD, RCh
President, PACT

Prepared by:

Mrs. Julieta A. Villanueva
CNS Faculty

Scholarly publications on SDG 13 in one year period (SY 2024-2025)

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Safeguarding Campus Water: A Preliminary Assessment of Microplastics and Microbial Pollution in SMU Groundwater System

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Abstract

Access to clean groundwater is vital for health and sustainability, particularly in academic institutions like Saint Mary's University (SMU) in Bayombong, Nueva Vizcaya. This preliminary study assessed microbial and microplastic contamination in SMU's groundwater to support sustainable campus operations aligned with UI GreenMetric standards and the United Nations Sustainable Development Goals. Water samples from multiple locations across SMU's Main Campus, Junior High School, and Grade School departments were analyzed using microbial culture methods and density separation for microplastics. Microbial analysis revealed no detectable coliform contamination, with all samples recording <1.8 CFU/100 mL—well within safety limits set by national health standards. These results indicate the groundwater is microbiologically safe for human use. The microplastic assessment identified low-density granular sediments but no fibers or colored fragments characteristic of synthetic plastics. This suggests limited current microplastic contamination, although definitive identification requires advanced analytical techniques. The findings affirm that SMU's water sources are safe and reflect positively on existing waste management and water infrastructure policies. The study highlights opportunities to strengthen sustainability efforts, such as promoting reusable water containers, phasing out bottled water sales, and integrating water stewardship education. Continuous monitoring and advanced testing are recommended to detect emerging risks and safeguard long-term water quality. This research provides baseline data for water resource management and policy development within educational settings. It offers a replicable model for other institutions aiming to enhance environmental resilience and health protection.

Keywords: Groundwater quality, Microplastic contamination, Microbial analysis, Coliform bacteria, Campus sustainability, Water safety, Environmental monitoring, SDGs

INTRODUCTION

Background of the Study

Access to clean and safe water is a fundamental human need and a key factor in protecting public health. At institutions like Saint Mary's University (SMU) in Bayombong, Nueva Vizcaya, groundwater—sourced through deep wells or institutional water systems—is used for a range of purposes, including cleaning, washing, irrigation of campus greenery, and potentially even for drinking and laboratory work. Traditionally, the safety of such water has been evaluated using physicochemical and microbial tests. However, growing international concerns have shifted attention toward microplastic (MP) pollution, which remains largely unmonitored in groundwater systems.

Microplastics, defined as plastic fragments smaller than 5 millimeters, come from the breakdown of larger plastic items or are released directly in forms like microbeads and synthetic fibers (Andrady, 2017; Crawford & Quinn, 2017). These particles are now found in both land and water ecosystems and have even been detected in underground water sources. This trend presents a dual threat to the environment and human health, as microplastics not only pollute physically but also act as carriers for microbial contaminants, complicating water quality evaluations.

As SMU strives to maintain sustainable campus operations in line with UI GreenMetric standards and the United Nations Sustainable Development Goals (United Nations, 2023), it becomes increasingly important to determine whether its groundwater is at risk from newer contaminants like microplastics and the microbial hazards they can harbor. The lack of baseline data on these pollutants in SMU's water systems highlighted a pressing need for research and risk assessment.

Review of Related Literature

Recent global research has confirmed the presence of microplastics in groundwater, revealing the alarming extent of plastic pollution—even in subsurface aquifers. Early studies by Mintenig et al. (2019) and Panno et al. (2019) were among the first to detect microplastics in drinking water wells. These studies highlighted how human activity and land use significantly influence the infiltration of microplastics into the ground.

Similarly, Yang et al. (2021) identified microplastics in karst groundwater systems, particularly in urban and industrial areas. Their findings link the contamination to ineffective waste management practices and the high permeability of local soils. Supporting this, Gonzalez-Pleiter et al. (2023) and Samandra et al. (2022) found that polyethylene (PE), polypropylene (PP), and polystyrene (PS)—common in packaging, lab materials, and household waste—are the most prevalent microplastics in aquifers. These materials are also frequently used in institutional environments, such as Saint Mary's University (SMU).

Wu et al. (2022) noted that several factors affect how microplastics move through soil, including rainfall, soil type, particle size, and electrostatic properties. This suggests that seasonal rains may exacerbate microplastic infiltration into groundwater at SMU, especially if plastic waste is not managed effectively on campus.

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Beyond their physical presence, microplastics also serve as carriers for microbial contaminants. Research by Wang et al. (2022) and Yu et al. (2021) shows that microplastics provide surfaces for biofilm formation, enabling bacteria like coliforms and *E. coli* to survive longer and spread more easily through groundwater. This interaction poses additional challenges for ensuring water safety.

A growing body of literature emphasizes microplastic contamination in groundwater as an emerging global threat, primarily driven by human activities. Common types of microplastics—such as PE, PP, and PS—are typically found in the form of fibers and fragments, particularly in urban, industrial, and landfill areas (Paray et al., 2024; Samandra et al., 2022). This pattern reflects strong correlations between land use and contamination levels (Lee et al., 2024; Wu et al., 2022).

Several factors influence the transport of microplastics into aquifers, including soil properties, pore water flow, groundwater recharge rates, and aquifer types (Liu et al, 2023; Severini et al., 2022). For instance, open aquifer systems tend to contain a wider variety of microplastic morphologies compared to confined systems (He et al., 2024). In agricultural and urban areas, vertical infiltration and recharge processes further intensify microplastic intrusion (Aung et al., 2022; Wilyalodia et al., 2024).

A persistent challenge across studies is the lack of standardized sampling and analytical methods, which hampers the ability to compare results and assess risks (Viaroli, et al., 2022; Calero et al., 2024). To address this, conceptual models like the Hydrogeoplastic Model and analytical tools such as the Contrasting Analysis of Scales (CAS) have been proposed to better understand microplastic behavior in subsurface environments (Viaroli et al., 2022; He et al., 2024).

From a health and environmental perspective, microplastics are increasingly concerning. Cox et al. (2019) estimate that people may ingest thousands of microplastic particles annually through food and water. Although the long-term health effects remain uncertain, Vethaak and Leslie (2016) highlight potential risks, including toxicity and bioaccumulation, making microplastics a key issue in sustainable water management.

In the Philippines, most microplastic studies have focused on surface waters. For example, Osorio et al. (2021) documented high levels of microplastics in Manila Bay and the Pasig River, linking the contamination to poor waste management and high population density. However, there is a notable lack of research on groundwater contamination, especially in institutional settings like schools and universities.

Recent findings suggest microplastics are widespread in Philippine ecosystems, including groundwater (Wilyalodia et al., 2024), rivers (Gabriel et al., 2023), lakes (Deocaris et al., 2023), beach sediments (Sajorne et al., 2022), and marine organisms (Yong et al., 2021; Laput et al., 2024). These studies attribute contamination to urbanization, poor sanitation, and ineffective waste disposal systems.

Health-related research underscores the ubiquity of microplastics in human food, feces, and drinking water, raising serious concerns about bioaccumulation and toxicity (Luqman et al., 2021; Yue et al., 2023). Documented toxic effects include oxidative stress, inflammation, organ dysfunction, and developmental issues.

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Locally, studies such as those by Santos et al. (2020) have also reported microbial contamination—specifically total and fecal coliforms—in well water used by rural communities. This highlights the ongoing vulnerability of groundwater to both chemical and biological pollutants.

Although there is a growing body of research on groundwater quality and contamination across the Philippines, there is still a noticeable lack of localized data on microplastic particles and microbial pollutants in campus-based water sources, especially at Saint Mary's University. While some local sources have been found to contain microbial contamination, few studies have taken an integrated approach that looks at both microbial and microplastic pollution in educational settings, where clean water access is vital. This gap is especially troubling considering SMU's growing dependence on groundwater for daily needs and the lack of regular systems in place to monitor such contaminants. Compounding the issue is the limited risk communication and low awareness among students and staff about these hidden dangers.

This study aimed to fill these research gaps by conducting a data-driven assessment of groundwater quality at SMU, examining both microbial and microplastic contamination. The goal is to provide baseline information that can guide effective strategies for water safety and sustainability on campus.

Context of the Study

Saint Mary's University stands as a premier catholic institution in Northern Luzon, dedicated to sustainability through its involvement in the UI GreenMetric World University Rankings. A key aspect of this commitment includes responsible practices in water usage and waste management. However, meaningful improvements in the university's environmental performance depend on properly monitoring and addressing emerging threats like microplastic infiltration and microbial contamination in groundwater. This study aimed to generate empirical data on the presence of microplastics and microbial pollutants in the university's groundwater sources, examine the contributing factors to contamination, and offer recommendations for sustainable water management. The results are expected to support SMU's internal policy development and sustainability reporting, while also potentially shaping regional water safety measures for other schools and similar institutions.

By tackling a significant yet under-researched environmental and public health issue, this study advances the broader goals of environmental care, access to clean water, and data-driven campus sustainability. It aligns closely with the United Nations Sustainable Development Goals—specifically SDG 6 (Clean Water and Sanitation), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action).

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Objectives of the Study

This initial study set out to assess the quality of groundwater sources at Saint Mary's University by examining the levels of microbial and microplastic contamination. It aimed to determine the presence and concentration of microbial pollutants in comparison to recognized drinking water standards, while also identifying any microplastics and their possible types that could pose risks to the environment and human health. Given that research into microplastics is still emerging, this study concentrated on spotting and describing visible microplastic contamination to lay the groundwork for more in-depth exploration. The results are intended to add to the current understanding of local groundwater quality and support the university's efforts to manage water resources sustainably. By offering baseline data, the research seeks to direct future studies and inform policies or actions aimed at maintaining safe water within the campus.

METHODS

Research Design

This research used a quasi-experimental design to explore the presence of microplastics and microbial contaminants in the groundwater sources at Saint Mary's University. Water samples were collected and analyzed from various natural groundwater sites around the campus. Since this was an initial investigation, the study centered on identifying and understanding potential pollutants rather than testing specific variables or interventions. The quasi-experimental method was fitting for this context because it enabled the researchers to study actual conditions in different water sources without the need for random assignment. This approach helped establish foundational data that could guide future studies and support water safety planning.

Locale of the Study

The study was conducted at Saint Mary's University (SMU), a private Catholic educational institution located in Bayombong, Nueva Vizcaya, in the northern region of the Philippines. Situated in a valley surrounded by mountain ranges and agricultural zones, SMU maintains a sizable campus that supports academic, residential, and environmental functions. The university sources its water primarily from deep wells and institutional groundwater systems, which supply various campus needs—including cleaning, irrigation, and potentially laboratory and drinking use.

Given SMU's commitment to sustainability through its participation in the UI GreenMetric World University Rankings, the university has taken steps toward responsible resource use and environmental monitoring. However, with increasing reliance on groundwater for daily operations, there is a growing need to assess its vulnerability to emerging pollutants. The water samples for this study were drawn from multiple identified groundwater points across the campus, ensuring a representative assessment of the university's internal water system.

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The setting offers a practical and meaningful context for the study, as SMU reflects both the infrastructure of a modern institution and the environmental challenges faced by schools in developing regions. The study location is especially relevant due to its dual role as an academic center and a microcosm for examining broader sustainability issues, such as groundwater safety and pollution management.

Procedures

Microbial Analysis

Water Sample Collection

Collection bottles for water samples were prepared in the Center for Natural Sciences (CNS). The bottle mouth was covered with foil and tightened with rubber bands. The bottles were autoclaved for 1 hour to eliminate any possible contaminants. The collection of water samples from each water source lasted 5 to 10 seconds to avoid foreign contaminants that could enter the collection bottle, and the opening of the bottle was immediately covered with its foil and secured with its rubber band. These collection bottles were labeled with the respective sampled sites' names and stored in an ice box. The collected water samples were immediately transported to the CNS Research laboratory within 24 hours for further analysis.

EMB Preparation

The CNS Research laboratory prepared the Eosin Methylene Blue (EMB) agars. EMB was prepared by mixing 10g of bacto peptone, 5g of bacto lactose, 5g of bacto sucrose, and 2g of dipotassium phosphate. 13.5g agar, 0.4g of eosin Y, 0.065g of bacto methylene blue, and distilled water, bringing a final volume to 1 L. The pH was adjusted to 7.2 and boiled to dissolve the agar. After which, the medium was sterilized in an autoclave for 15 minutes at 15psi.

Bacteriological test

Presumptive Test

In the coliform test, the most probable number (MPN) test method was done, wherein tubes of 9 mL lactose broth were inoculated with the collected water samples. The series of tubes consisted of three groups three, labeled #1, #2, and #3. In the serial dilution technique, using a sterile 1000µL pippeter, 1000µL of water sample was inoculated into test tube #1. The test tube was shaken, then another 1000µL from test tube #1 was inoculated to test tube #2. Test tube #2 was shaken, and another 1000µL from the test tube was inoculated to test tube #3. A 1000µL from test tube #3 was inoculated and discarded. The procedure was repeated for serial dilution for the remaining water samples. After serial dilution, test tubes were incubated at 37 ^{o}C for 24h. Any turbidity and bubble production in any tubes was presumptive evidence of coliforms. The MPN of coliforms in 10 mL of the water samples was estimated by the number of positive tubes using the MPN table based on the FDA's Bacterial Analytical Manual (2017).

Confirmatory Test

If any tubes inoculated with the serially diluted water samples in the presumptive test became turbid and produced bubbles, that sample in the test tube was presumed unsafe and risky. The presence of coliforms was confirmed by using EMB agar plates and inoculating water samples from positive presumptive tubes unto the respective EMB plates. The EMB plates were inverted and incubated at 37oC for 24 hours after streaking water samples. The morphological characteristics of grown coliforms on the EMB plates were observed under the microscope. Gram staining technique was done. The observed morphological features of bacterial growths were used to identify the possible bacteria present in the inoculated presumed positive water sample.

Microplastic Identification

The methodology stems from density analysis methodologies compiled by Sheriff et al. (2024) with modifications done to suit availability of materials and equipment. a zinc chloride solution with a density of 1.6 g/cm^3 was prepared by dissolving 99.2 g of anhydrous zinc chloride in distilled water and adjusting the total solution weight to 160 g. For pre-treatment, 10 mL of hydrogen peroxide solution was added to degrade organic matter, after which the sample was left undisturbed for approximately one hour to allow visible sediment to settle. For the density separation, 5 mL of the pre-treated sample is transferred to a test tube, and an equal volume of the zinc chloride solution is added in a 1:1 ratio. The mixture was gently mixed for 1 minute and then left to settle for 30 minutes to 1 hour. During this period, denser particles such as sand and residual organic matter settled to the bottom, while less dense particles and potential microplastics floated to the surface.

Data Treatment

Water quality was assessed through a bacterial protocol, which had failed in the presumptive test with indicated high MPN value ranging from >3.6 to >1100 MPN/100mL wherein samples exceeded the suggested desirable limit of <1.1 MPN/100mL water sample. The MPN of coliforms in 10mL of the water samples was estimated by the number of positive tubes using the MPN table based on Administrative Order No. 2017-0010 of the FDA's Bacterial Analytical Manual (2017).

Ethical Considerations

The study involved experiments on the bacteriological and microplastic identification in Saint Mary's University campuses ground water sources. It did not involve human or animal participants. Researchers followed strict safety protocols due to the hazardous nature of the chemicals used, which could pose environmental and health risks. All procedures generating potential aerosols were conducted in safe laboratory environments. There was no conflict of interest in conducting this study. Saint Mary's University

is the sole owner of the intellectual property of the study and the researchers remain as authors.

RESULTS AND DISCUSSION

Microbial Analysis

Water samples were gathered from randomly picked sources throughout Saint Mary's University – Main Campus, such as drinking fountains, lavatories, and faucets. Microbial analysis samples were taken in 20 areas. The data are shown in Table 1.

Table 1
Most Probable Number and Coliform Analysis of Collected Tap Water within SMU Main Campus

Most Probable Number MPN Analysis		Coliform Analysis
SAMPLE	CFU/100mL	
1. AP Building	< 1.8	negative
2. Balay Alumni (Women's CR)	< 1.8	negative
3. Balay Alumni (Kitchen)	< 1.8	negative
4. Balay Alumni (Drinking Fountain)	< 1.8	negative
5. St. Joseph Inn (Water Source)	< 1.8	negative
6. Debuscherre Hall	< 1.8	negative
7. Tonus Gym (Canteen)	< 1.8	negative
8. Tonus Gym (Drinking Fountain)	< 1.8	negative
9. Tonus Gym (Water Source)	< 1.8	negative
10. JVD Canteen	< 1.8	negative
11. JVD CR	< 1.8	negative
12. STEH (Dean's Office)	< 1.8	negative
13. PERIO	< 1.8	negative
14. URC CR	< 1.8	negative
15. SHANS (Dean's Office)	< 1.8	negative
16. President's Office	< 1.8	negative
17. H Canteen	< 1.8	negative
18. S Building	< 1.8	negative
19. TTBDO	< 1.8	negative
20. CICM House	< 1.8	negative

Legend: World Health Organization MPN Standard for Water Potability. 1–10 MPN/100 ml is regarded as low risk; 11–100 MPN/100 ml is medium risk.

As indicated by the data, the most probable number of colony-forming units (CFU) in water samples from the selected locations fell below the detection threshold. These findings suggest that all sampled water sources demonstrate minimal microbial contamination, consistent with the acceptable range defined by the Department of Health's

drinking water standards (Department of Health, 2017). The presumptive test for coliforms also showed no signs of lactose-fermenting coliforms – indicating that there are no signs of fecal contamination and the water coming from the tested locations are safe for human consumption (Shariq, et al., 2016).

Microbial testing across all samples collected across the campus confirmed a low risk of microbial contamination, with no detectable coliform growth— affirming that all water sources meet safe drinking standards. These findings support the University's ongoing sustainability efforts to promote tap water as a safe alternative to bottled beverages. To maintain this standard, periodic monitoring of water sources as well as proactive maintenance of water infrastructure, including pipe replacements and system upgrades, should be prioritized to prevent future contamination risks. Expanding drinking water station accessibility in high-traffic areas could further reduce plastic waste while ensuring consistent water quality across campus.

Ten water samples were collected from selected locations at Saint Mary's University Junior High School for microbial analysis. The results are summarized in Table 2.

Table 21
Most Probable Number and Coliform Analysis of Collected Tap Water within SMU Junior High School

Most Probable Number MPN Analysis		**Coliform Analysis**
SAMPLE	**CFU/100mL**	
1. Dental Clinic (Faucet)	< 1.8	negative
2. Dental Clinic (CR)	< 1.8	negative
3. Lavatory (B Building)	< 1.8	negative
4. Lavatory (Library)	< 1.8	negative
5. Lavatory (A Building)	< 1.8	negative
6. Faculty Room (Girl's CR)	< 1.8	negative
7. Registrar/Cashier (CR)	< 1.8	negative
8. Principal's Office (CR)	< 1.8	negative
9. Library Lounge	< 1.8	negative
10. Lavatory (Canteen)	< 1.8	negative

Legend: World Health Organization MPN Standard for Water Potability. 1–10 MPN/100 ml is regarded as low risk; 11–100 MPN/100 ml is medium risk.

The analysis showed that colony-forming units (CFU) in all water samples were below the method's detection limit, indicating negligible microbial contamination. These results comply with the Department of Health's drinking-water standards (Department of Health, 2017). Likewise, the presumptive coliform test detected no lactose-fermenting coliforms, pointing to an absence of fecal contamination and confirming that water from the sampled sites is safe for human consumption (Shariq, et al., 2016).

The Junior High School's access to safe drinking water provides a strategic opportunity to reduce single-use plastics by promoting reusable bottles, installing refill

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stations, and phasing out bottled water sales – as the campus focuses primarily on plastic waste management initiatives rather than cutting out plastic usage entirely like in SMU Main Campus. Aligning with existing waste management efforts, integrating water conservation, and empowering student-led initiatives can foster eco-conscious behavior while tracking reductions in plastic waste. This approach not only minimizes the school's environmental footprint but also cultivates student stewardship, demonstrating how educational institutions can leverage existing resources to model community-wide sustainability (Setiawan et al, 2023).

Nine water samples were collected from selected locations at Saint Mary's University – Grade School Department for microbial analysis. The results are summarized in Table 3.

Table 32
Most Probable Number and Coliform Analysis of Collected Tap Water within SMU Grade School Department

Most Probable Number MPN Analysis		**Coliform Analysis**
SAMPLE	**CFU/100mL**	
1. Clinic	< 1.8	negative
2. Canteen	< 1.8	negative
3. Ground Area (Preschool)	< 1.8	negative
4. Cashier's Office	< 1.8	negative
5. Guidance Office	< 1.8	negative
6. JP (CR)	< 1.8	negative
7. Waiting Area	< 1.8	negative
8. Drinking Fountain (JP)	< 1.8	negative
9. Drinking Fountain (inside JP Building)	< 1.8	negative

Legend: World Health Organization MPN Standard for Water Potability. 1–10 MPN/100 ml is regarded as low risk; 11–100 MPN/100 ml is medium risk.

All water samples had colony-forming unit (CFU) counts below the method's detection limit, indicating microbial contamination below detectable levels and full compliance with Department of Health drinking-water standards (Department of Health, 2017). The presumptive coliform test likewise yielded no lactose-fermenting coliforms, signifying no fecal contamination and confirming that the sampled water is safe for consumption (Shariq, et al., 2016).

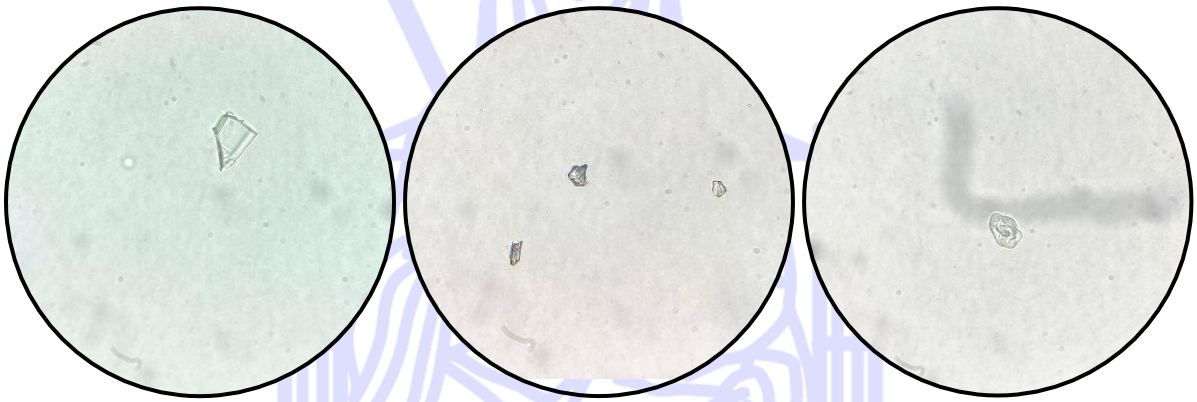
The Grade School Department's access to safe drinking water presents a strategic opportunity to reduce single-use plastic consumption among young learners by introducing age-appropriate initiatives such as child-friendly reusable bottles, more accessible water refilling stations, and interactive lessons on water stewardship. The Grade School Department can focus on incremental, student-engaged strategies—phasing out bottled beverage sales in cafeterias, organizing classroom competitions to track plastic waste reduction, and integrating water conservation into science or art curricula through storytelling or hands-on projects (Gunansyah et al, 2021). By aligning these efforts with the

school's existing plastic waste management thru the CHSF framework, students can develop early eco-conscious habits while contributing to measurable reductions in plastic waste.

Microplastic Detection

Low-density sediments present in all water samples were collected and examined using a compound microscope.

Figure 13
Observed Low-density Sediments found in Water Samples



All observed sediments were exclusively granular in morphology, lacking natural or synthetic fibrous structures as shown in Figure 1. However, the lack of characteristic coloration associated with synthetic plastics (Li, et al., 2024) in these sediments presented difficulties in conclusive microplastic identification. Consequently, advanced analytical techniques—including compositional and structural analyses—are required to enable comprehensive identification of potential microplastics within the collected low-density sediments. All water samples were collected from groundwater sources. As reviewed by Viaroli et al, (2022), subsurface processes—such as seepage through pores and fractures, as well as interactions with colloidal aggregates—can influence microplastic dynamics, complicating their detection in groundwater. Potential microplastic sources in groundwater include airborne deposition, surface water infiltration, urban runoff, and agricultural leaching.

The low-density sediments detected indicate minimal microplastic exposure, suggesting that groundwater across all campuses remains relatively clean with limited influence from nearby pollution sources. The findings of microplastic detection are consistent with the university's effective plastic waste policies and sustainability initiatives that minimize plastic waste. While current risks are low, expanding development and urbanization necessitates ongoing monitoring to track potential contamination increases. These findings support campus sustainability efforts, such as promoting tap water over

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bottled alternatives, and highlight institutional waste management as a key protective measure against microplastic contamination in the University's local water sources.

CONCLUSIONS AND IMPLICATIONS

This preliminary assessment of Saint Mary's University (SMU) groundwater quality revealed two important findings: (1) all tested water sources across the main campus, Junior High School, and Grade School demonstrated microbial levels well below national detection thresholds, and (2) minimal presence of low-density granular sediments with no conclusive microplastic characteristics were detected, indicating negligible microplastic contamination at present.

The absence of fecal coliforms and the low microbial counts affirm the current safety of groundwater for human consumption. This validates the university's ongoing infrastructure maintenance and suggests that existing sanitation measures are effective. Moreover, while the presence of low-density sediments warrants further investigation using advanced microplastic detection techniques, the lack of identifiable synthetic fibers or colored fragments suggests that current risks from microplastic contamination are low.

These findings have several key implications:

1. **Support for Sustainable Practices**
   SMU's shift toward tap water as a safe and sustainable alternative to bottled water. This aligns with its commitments to the UI Green Metric rankings and UN SDG 6 (Clean Water and Sanitation), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action).

2. **CHSF Policy Reinforcement and Expansion**
   Safe water quality provides a solid foundation for enforcing plastic waste reduction policies across all departments. SMU can confidently implement more aggressive strategies such as eliminating bottled water sales, increasing the number of refill stations, and promoting reusable containers.

3. **Educational and Engagement Opportunities**
   While current contamination levels are low, the potential for future risks—especially from increased urbanization and land-use changes—demands periodic water testing. This should include advanced microplastic detection and microbial surveillance to ensure ongoing safety.

4. **Replication for Broader Impact**
   SMU's methodical approach and results can serve as a model for other institutions across the region. Establishing a standardized protocol for water quality assessment and sustainable policy integration may help improve campus environments nationwide.

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STRATEGIC PLAN (aligned to SDG 13) – On Local Education Program on Climate Change Adaptation, Mitigation and DRR

STRATEGIC PLAN 2025-2030

CENTURY OF MISSION, A FUTURE OF IMPACT



Strategic Program/ Project	KRA	BSC	Partner Units	Y1	Y2	Y3	Y4	Y5	KPI	Budget
a. Rainwater Harvesting System Project									shall have been installed.	
b. Campus Energy Consumption Reduction Project	IEGE	IBP	PPPDMO GSO SPCO Finance IMO	Solar panel installation	5-10% energy reduction compared to previous year	5-10% energy reduction compared to previous year	5-10% energy reduction compared to previous year	5-10% energy reductioncompared to previous year	By the end of Year 5, a cumulative reduction in total campus energy consumption of at least 20% (based on Year 2 baseline level) shall have been achieved.	
c. Green Campus Project	IEGE	IBP	PPPDMO GSO	1	1	1	1	1	By the end of Year 5, 5 instagramable sites shall have been developed.	
Consolidation of SDG Initiatives	IEGE	CUS	PERIO	1	1	1	1	1	By the end of Year 5, 5 reports on SDG initiatives shall	

Strategic Program/ Project	KRA	BSC	Partner Units	Y1	Y2	Y3	Y4	Y5	KPI	Budget
									have been made and published.	
Waste and Emissions Management Program a. Waste Electrical and Electronic Equipment (WEEE) / e-waste Reduction	AD	IBP	SPCO CETSO	300kg reduction	300kg reduction	300kg reduction	300kg reduction	300kg reduction	By the end of Year 5, WEEE shall have been reduced to 1500kg	
b. Waste Segregation	AD	IBP	SPCO PPPMDO (GSO)	1000 bags segregated	1000 bags segregated	1000 bags segregated	1000 bags segregated	1000 bags segregated	By the end of Year 5, 5000 bags shall have been segregated.	
c. Recycling	AD	IBP	SPCO PPPDMO (GSO)	300 kg recycled	300 kg recycled	300 kg recycled	300 kg recycled	300 kg recycled	By the end of Year 5, 1500kg shall have been recycled.	
Enhanced CHSF Program	AD	IBP	ADSAS DSAS	2 meetings with PDEA or other government	100% provision of the legal requirement,	Completed and sustained	Completed and sustained	Completed and sustained	By the end of Year 5, the university is accredited by at	Php 10,000

GOAL 4:
Bolstered transformative engagement with the local and global communities (SOCIAL RESPONSIBILITY)

Strategic Objective 4.1: Transform communities by supporting CICM advocacies

Strategic Program/ Project	KRA	BSC	Partner Units	Y1	Y2	Y3	Y4	Y5	KPI	Budget
Hunger Alleviation Program 1. Feed My Lambs Project	MI	CUS	CEIPSC HRDO NSTP GTO	5	5	5	5	5	By the end of Year 5, 25 recipients of the Feed My Lambs Project have been identified.	
2. Complementary Feeding Program	MI	CUS	CEIPSC NAP NSTP Basic Ed		1		1		By the end of Year 5, at least two complementary feeding projects with partner communities / schools shall have been conducted	
Ecological Protection and Sustainability Program (Integrity of Creation) 1. Ecological Education	MI	CUS	CEIPSC NSTP Basic Ed	1	1	1	1	1	By the end of Year 5, five ecological education activities shall have been conducted with partner communities/schools	
2. Adopt-a-River Project	AA	CUS	CNS CEIPSC NSTP SPCO	1	1	1	1	1	By the end of Year 5, at least five river conservation, monitoring, and	

Strategic Program/ Project	KRA	BSC	Partner Units	Y1	Y2	Y3	Y4	Y5	KPI	Budget
									community engagement activities shall have been implemented.	
3. Clean Water and Sanitation	MI	CUS	CEIPSC NSTP SPCO JHS	1	1	1	1	1	By the end of Year 5, at least 5 clean water and sanitation-related activities shall have been conducted.	
4. Tree-growing and site clearing activities	MI	CUS	CEIPSC NSTP PPPDMO SPCO GSD JHS	GSD=175 JHS=660 College=327	GSD=175 JHS=660 College=327	GSD=175 JHS=660 College=327	GSD=175 JHS=660 College=327	GSD=175 JHS=660 College=327	By the end of Year 5, 5,810 trees shall have been planted and sustained/maintained	
Disaster Risk Reduction Program	MI	CUS	CEIPSC SHS NSTP SPCO	1	1	1	1	1	By the end of Year 5, at least five extension activities on DRRM trainings/capacitation shall have been conducted	
Health and Wellbeing Promotion Program	MI	CUS	CEIPSC SHANS NSTP	1	1	1	1	1	By the end of Year 5, at least five extension activities on medical mission activities shall have been conducted	