



ACTIVITY DESIGN

Title:	Summer Upgrading Program for Mathematics Teachers (SUPMaT 2024)
Participants:	Mathematics Faculty from the VSU System College and Senior High School Mathematics Teachers (primarily from Region 8)
Date:	June 3-5, 2024
Venue:	2 nd Floor CCE Building, VSU, Baybay City, Leyte (tentative venue)

Rationale

The Summer Upgrading Program for Mathematics Teachers (SUPMaT) is a regular activity of the Mathematical Society of the Philippines (MSP), the nation's foremost professional organization dedicated to advancing mathematics and mathematics education, alongside its yearly convention. This three-day activity aims to help SHS and college mathematics teachers enhance their knowledge of mathematics, sharpen their mathematical skills, and be updated on their teaching techniques. This activity was previously called the Summer Upgrading Program for College Teachers of Mathematics (SUPCOM). It was renamed SUPMaT in 2019 to expand its target beneficiaries to include high school math teachers. This is the first SUPMaT to be conducted after the pandemic.

One of the quality objectives of the Department of Mathematics, to conduct extension projects designed to train professionals in mathematics education at all levels, is aligned with MSP's advocacy. Hence, sharing the same aspiration of advancing mathematics and mathematics education, VSU, through the DMath, will jointly host the SUPMaT 2024. The target participants of this program are mathematics educators at VSU and from the various senior high schools, colleges, and universities in the region.

Finally, the SUPMaT 2024 will provide an avenue for mathematics teachers from the region to meet some renowned mathematicians and educators in the country. Hence, this activity allows them to learn the best practices for teaching and doing mathematical research.

Objectives

The SUPMaT 2024 aims to help SHS and college mathematics teachers enhance their knowledge of mathematics, sharpen their mathematical skills, and be updated on their teaching techniques. To these ends, the seminar/workshop aims to accomplish the following objectives:

1. Demonstrate effective strategies in teaching selected topics in Calculus;
2. Demonstrate effective strategies in teaching selected topics in Abstract Algebra;
3. Give an introduction and the fundamentals of mathematical modeling;



4. Recall and demonstrate the different methods of constructing mathematical proofs;
5. Discuss the basics and give specific pointers on writing and publishing papers in pure and applied mathematics.

Methodologies/Strategies

The SUPMaT 2024 is a three-day seminar/workshop consisting of specific lectures, presentations, and activities to cover the following topics:

1. Effective Strategies in Teaching Calculus
2. Effective Strategies in Teaching Abstract Algebra (Group Theory)
3. Constructing and Writing Mathematical Proofs
4. Mathematical Modeling
5. Writing and Publishing Mathematics Papers

The invited resource persons (some renowned mathematicians and mathematics educators in the country) will facilitate the lectures and discussion. We will limit the number of participants to 60 for a more engaging activity. The set-up of the activity is similar to a classroom setting. The resource person is the facilitator, and the participants are the learners. A pre-assessment and post-evaluation will be conducted.

Here is the content detail for this activity:

Sub-Topics and Time Allotment for every topic (in hours)	Expected Learning Outcomes	Activities to Achieve Learning Outcomes	Assessment Strategies, including Assessment Tools	Requirements/Outputs
1. Effective Strategies in Teaching Calculus (4.5 hours)	<ul style="list-style-type: none"> Exhibit mastery of selected topics in Calculus Demonstrate new techniques and strategies in teaching selected topics in calculus 	Lecture-discussion, demonstration, workshop	Pre-test and Post-test or Self-assessment tools	<ul style="list-style-type: none"> Attendance Completed assessment instrument Workshop output, if any
2. Effective Strategies in Teaching Abstract Algebra (Group Theory) (3 hours)	<ul style="list-style-type: none"> Recall basic concepts in Group theory Apply new techniques and strategies in teaching selected topics in Abstract Algebra 	Lecture-discussion, demonstration, workshop	Pre-test and Post-test or Self-assessment tools	<ul style="list-style-type: none"> Attendance Completed assessment instrument Workshop output, if any
3. Writing and Constructing Mathematical Proofs (3 hours)	<ul style="list-style-type: none"> Recall the different methods of proof Construct/write proofs of a mathematical statement 	Lecture-discussion, demonstration, workshop	Pre-test and Post-test or Self-assessment tools	<ul style="list-style-type: none"> Attendance Completed assessment instrument Workshop output, if any

4. Mathematical Modeling (3 hours)	<ul style="list-style-type: none"> Discuss the importance/significance of mathematical modeling Give an overview of mathematical modeling 	Lecture-discussion, demonstration, workshop	Pre-test and Post-test or Self-assessment tools	<ul style="list-style-type: none"> Attendance Completed assessment instrument Workshop output, if any
5. Writing and Publishing Mathematics Papers (3 hours)	<ul style="list-style-type: none"> Explain the importance of publishing research papers Discuss some guidelines for publishing research works in pure and applied mathematics Gain motivation to do research work and publish research papers 	Lecture-discussion, workshop	Pre-test and Post-test or Self-assessment tools	<ul style="list-style-type: none"> Attendance Completed assessment instrument Workshop output, if any

Resources Needed

A. Manpower Requirements (For VSU part only)

Overall Supervision: Eusebio R. Lina, Jr. – SUPMat 2024 Co-chair

Activity Coordinators:

1. Abas, Crisanto L.
2. Cañete, Joy Ann A.
3. Sidaya, Irish C.
4. Valenzona, Divina L.

Technical Staff: Sidaya, Jerum H., and staff from the venue

B. Supplies and Materials

General Description	Unit	Qty./Size
Seminar kit (ID, Notebooks, Ballpens, Tote Bags)	Pcs.	65
Whiteboard Markers	Pcs.	10
Printing materials for certificates and programs	Pcs.	150
Certificate holder	Pcs	6
Ink printer	btls	4
Lei for guests	pcs	6
Fuel for VSU vehicles	L	200

C. Facilities and Equipment

- Seminar venue
- AV equipment (LCD projector, sound system with microphone)
- Whiteboard/chalkboard

Expected Outcome

At the end of the activity, we are expecting to have trained at least **50 math teachers** in senior high school and college with improved and upgraded knowledge and skills of the following:

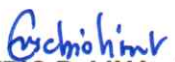
1. Strategies and techniques for teaching selected topics in Calculus
2. Strategies and techniques for teaching selected topics in Abstract Algebra
3. Fundamentals of mathematical modeling
4. Writing and constructing and writing mathematical proofs with ease
5. Writing and publishing papers in pure and applied mathematics

Estimated Budget


Particulars	Cost in peso (Php)
Meals & Refreshments	(115 000.00) *
Supplies and Materials (excluding fuel)	(20 000.00) *
Honoraria, if any	To be provided by MSP
Others (Fuel for VSU vehicle to be used from June 2 to June 6, 2024)	10 000.00
Tokens (A bag of VSU/local products to be given to the resource persons and guests)	8 000.00
TOTAL	18 000.00

*To be funded through registration fees

Prepared by:



EUSEBIO R. LINA, JR.
Head, DMath & Co-chair, SUPMaT 2024

Availability of funds:

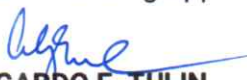

ALICIA M. FLORES
Budget Officer *Note: Fuel charged to - GF-MODE L&D Tokens*

Noted by:



MA. THERESA P. LORETO
Dean, CAS


HONEY SOFIA S. COLIS
Director, HRMO

Recommending Approval:


EDGARDO E. TULIN
VP for Administration & Finance

Approved:


PROSE IVY G. YEPES
President