A.4. Statement of the Program Objectives.

Department Objectives

The Department of Mathematics and Statistics aims to:

1. produce students with mastery in the core areas of mathematics and statistics, including algebra, analysis, and geometry;

2. develop students' skills in pattern recognition, generalization, abstraction, critical analysis, synthesis, problem-solving and rigorous argument;

3. express an enhanced perception of the vitality and importance of mathematics in the modern world including inter-relationships within math and its connection to other disciplines; and

4. develop students' skills in creating and evaluating mathematical conjectures and arguments, and in validating their own mathematical thinking.

Program Objectives (Based on CMO 48 series 2017)

The BS Applied Math graduates shall be equipped with enhanced mathematical and critical thinking skills. Graduates are expected to have developed deeper appreciation and understanding of the importance of mathematics in history and the modern world. They will be able do research or perform jobs that require analytical thinking and quantitative skills.

The program provides students with substantial exposure to the breadth and depth of mathematics, from classical to contemporary, and from theoretical to applied. The curriculum covers foundational courses in core areas of applied mathematics as well as advanced courses that will help prepare graduates to pursue higher studies or work in a variety of fields.

Program Educational Objectives (PEO)

PEO 1 Provide leadership in various development programs both public and private

PEO 2 Equip with technical, conceptual and human resource skills

PEO 3 Pursue entrepreneurial activities

PEO 4 Able to adapt to diverse culture

PEO 5 Pursue advanced studies in emerging related fields

Program Outcomes (PO)

Upon graduation, the University of Southern Mindanao BSAM students must be able to:

a) Articulate and discuss the latest development in the specific field of practice.

b) Effectively communicate orally and in writing using both English and Filipino

c) Work effectively and independently in multidisciplinary and multi-cultural teams.

d) Act in recognition of professional, social and ethical responsibility

e) Preserve and promote "Filipino historical and cultural heritage"

f) Participate in the generation of new knowledge in research and development projects.

g.) Demonstrate broad and coherent knowledge and understanding in the core areas of physical and natural sciences.

h.) Apply critical and problem solving skills using the scientific method.

i.) Interpret relevant scientific data and make judgements that include reflection on relevant scientific and ethical issues.

j.) Carry out basic mathematical and statistical computations and use appropriate technologies in the analysis of data.

k.) Communicate information, ideas, problems, and solutions, both orally and in writing, to other scientists, decision makers, and the public.

l.) Relate science and mathematics to the other disciplines.

m.) Design and perform safe and responsible techniques and procedures in laboratory or field practices.

n.) Critically evaluate input from others.

0.) Appreciate the limitations and implications of science in everyday life.

p.) Commit to the integrity of data.

q.) Gain mastery in the cores areas of mathematics: algebra, analysis, and geometry.

r.) Demonstrate skills in pattern recognition, generalization, abstraction, critical analysis, synthesis, problem-solving and rigorous argument.

s.) Develop an enhanced perception of the vitality and importance of mathematics in the modern world including inter-relationships within math and

its connection to other disciplines.

t.) Appreciate the concept and role of proof and reasoning and demonstrate knowledge in reading and writing mathematical proofs.

u.) Make and evaluate mathematical conjectures and arguments and validate their own mathematical thinking.

v.) Communicate mathematical ideas orally and in writing using clear and precise language.