OBJECTIVE	STANDARD
Statement of the competency	**Achievement context**
To demonstrate the importance of the principles, ideas and methods of logic and mathematics as disciplines.	Using appropriate laboratory exercises. Using appropriate texts.
Elements	**Performance criteria**
1. To recognize the nature of logical reasoning and of mathematical reasoning.	1.1 Accurate definition of concepts such as proof, axiom or postulate, consistency, validity and soundness of arguments, and so on. 1.2 Appropriate illustration of the nature of proof by the use of these concepts.
2. To formulate arguments in accordance with the central concepts of mathematics and logic.	2.1 Accurate identification of the component parts of arguments. 2.2 Appropriate use of various forms of valid argument. 2.3 Explication of the use of valid argument in mathematics.
3. To explain relationships between mathematics, logic and other disciplines.	3.1 Clear statement of concepts common to philosophy, sciences and mathematics. 3.2 Appropriate illustration of the uses or importance of mathematics in arts and in sciences. 3.3 Adequate description of accomplishments in mathematics that are important in the history of other fields.
4. To apply deductive systems and inductive systems in various instances.	4.1 Correct distinction between the respective natures of deductive and inductive systems. 4.2 Appropriate illustration of deductive and inductive systems. 4.3 Demonstration of proof in such systems.
5. To do an assignment in an area of mathematics and logic.	5.1 Correct use of appropriate terms in an area of mathematics and logic. 5.2 Correct solution of problems in an area of mathematics and logic.