

**COURSE LEARNING OUTCOMES**  
**DEPARTMENT: Mathematics, Malda College**

**After studying this course, you should be able to:**

- 1. explain the geometric meaning of each of the metric space properties (M1) – (M3) and be able to verify whether a given distance function is a metric**
- 2. decide whether given functions are or are not metrics;**
- 3. distinguish between open and closed balls in a metric space and be able to determine them for given metric spaces**
- 4. define convergence for sequences in a metric space and determine whether a given sequence in a metric space converges**
- 5. state the definition of continuity of a function between two metric spaces.**
- 6. understand whether examples of metric spaces are complete or not using Cauchy sequences.**