

**SARDAR PATEL UNIVERSITY**  
**Programme & Subject: B.Sc (Mathematics)**  
**Semester: V**  
**Syllabus with Effect from: June-2013**

<b>Paper Code: US05CMTH03</b>	<b>Total Credit: 3</b>
<b>Title Of Paper: Metric Spaces</b>	

<b>Unit</b>	<b>Description in detail</b>	<b>Weighting (%)</b>
I	Metric spaces, Limit in metric spaces, continuous functions on a Metric space .	
II	Open and closed sets , More about open sets , connected sets .	
III	Bounded and totally bounded Sets, complete metric spaces, Compact metric spaces.	
IV	Continuous functions on compact metric Spaces, continuity of the inverse function , uniform continuity.	

**Recommended texts:**

- Goldberg, R.R., Methods of Real Analysis, Oxford and IBH.
- Chapter 4(4.2,4.3), chapter 5(5.3,5.4,5.5),chapter 6 .

**Basic Text & Reference Books:-**

- S.C.Malik and Savita Arora, Mathematical Analysis, second Edition New Age International Pvt. Ltd., New Delhi 2000.

