# DE LA SALLE UNIVERSITY – MANILA COLLEGE OF SCIENCE Mathematics Department

# **SYLLABUS**

COURSE CODE

MTH M D

Topic/Subtopic	Learning Strategies/ Activities	Week/Meeting
<ul> <li>2Discrete and Indiscrete Spaces</li> <li>Finite Complement and Countable Complement</li> <li>Topologies</li> <li>4 Finer and Coarser Topologies</li> <li>Closed and Open Sets</li> </ul>		
<ul> <li>2. The Euclidean Topology</li> <li>2 The Euclidean Topology on the Real line</li> <li>2 2The Euclidean Topology in</li> <li>2 Basis for a Topology</li> <li>24 Subbasis for a Topology</li> </ul>	Lecture Discussions Problem Solving Use of MS Excel and or Mathematica Wolfram Alpha	Weeks 2
3. Limits Points Limit Points and Closure 2Neighborhoods 2Connectedness and Separability	Lecture Discussions Problem Solving	Weeks 4
Long Test No. 1		Weeks 6
<ul> <li>4. Continuous Functions and Homemorphisms</li> <li>4. Continuous Functions</li> <li>4. Continuous Functions</li> <li>4. 2Intermediate Value Theorem</li> <li>4. Subspaces</li> <li>4. Homeomorphisms</li> </ul>	Lecture Discussions Individual Group Reporting	Weeks
5. Separation Axioms T <sub>k</sub> and T spaces 2. Mausdorff Spaces T. Spaces	Lecture Discussions Individual Group Reporting	Week
<ul> <li>6. Metric Spaces <ul> <li>Metrics and Metric Spaces</li> <li>2Convergence of Sequences</li> <li>Completeness</li> </ul> </li> <li>4 Baire Spaces</li> </ul>	Lecture Discussions Individual Group Reporting	Weeks 9
Long Test No. 2		Week k
<ul> <li>7. Compactness</li> <li>Open Covers and Subcovers</li> <li>2Compact Spaces</li> <li>Heine Borel Theorem</li> <li>4 Local Compactness</li> </ul>	Lecture Discussions Individual Group Reporting	Weeks
<ul> <li>8. Product Topology <ul> <li>Finite Products</li> <li>2Projections</li> <li>Urysohn s Lemma</li> </ul> </li> <li>4 General Products <ul> <li>Tychonoff s Theorem</li> </ul> </li> </ul>	Lecture Discussions Individual Group Reporting	Week 2
9. Quotient Spaces	Lecture Discussions	Week
FINAL EXAMINATION		Week 4

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## **COURSE REQUIREMENTS**

# K 2Long TestsK Final Examination

### **K** Problem Sets

### **SOURCES**

### BOOKS

- K Willard S General Topology New York, Dover Publications kk4
- K Hun K P Van Mill J and Simon P Recent Progress in General Topology Springer Link k 4

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- K Encyclopedia of General Topology Amstredam, Elsevier North Holland kk4
- K Koshi J D Introduction to General Topology New York, Wiley 9
- K Diximer Jacques General Topology New York. Springer Verlag 9

### ONLINE MATERIALS

- K www math ed uk aar papers munkres 2pdf PDF copy of Topology by James Munkres
- K www.topologywithouttears net E book. Morris Sidney Topology Without Tears k 4 edition

Noted by,

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