**Lesson Plan**

Name of the Teacher - Kamal deep kaur

Class - M.Sc.Maths final

Name of Subject with Code- Topology(MTHCC-2301)

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| **Week1,** | | |
| 01-08-18 | Topological space | |
| 02-08-18 | Neighbourhood ,closed set ,closure | |
| 03-08-18 | Interior,exterior,boundary of set | |
| 04-08-18 | Adherent point | |
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| **Week 2,** |  | |
| 06-08-18 accumulation point | | |
| 07-08-18 | Closure of a set as e set of adherent point | |
| 08-08-18 | Derived set | |
| 09-08-18 | Properties of closure operator,dense subset | |
| 10-08-18 | Properties of neighbourhood,closure,interior,exterior,boundary points | |
| 11-08-18 | Base for a topology | |
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| **Week 3,** | | |
| 13-08-18 | Subbase | |
| 14-08-18 | Neighbourhood system | |
| 16-08-18 | Properties of Nbd system | |
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| **Week 4,** |  | |
| 20-08-18 base for Nbd system | | |
| 21-08-18 | Subspace and relative topology | |
| 22-08-18 | First countable | |
| 23-08-18 | Second countable | |
| 24-08-18 | Sarable space | |
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| **Week 5,** |  | |
| 27-08-18 | Their relation and hereditary properties | |
| 28-08-18 | Countability of collection disjoit open set in saparable space | |
| 29-08-18 | Lindelof’s theorem | |
| 30-08-18 | TEST | |
| 31-08-18 | Discussion | |
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| **Week 6,** |  | |
| 01-09-18 | Comparison of topologies | |
| **Week 7,** |  | |
| 04-09-18 | About intersection, union | |
| 05-09-18 | Infimum of topologies on a set | |
| 06-09-18 | Supremum of topologies on a set | |
| 07-09-18 continous function | | |
| 08-09-18 | Example of continous function | |
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| **Week8,** |  | |
| 10-09-18 | Characterization of continous function | |
| 11-09-18 | Composition of continous function | |
| 12-09-18 | Open and closed function | |
| 13-09-18 | Homeomorphism | |
| 14-09-18 | Tychonoff product topology | |
| **Week 9,** | | |
| 17-09-18 | Base for product topology | |
| 18-09-18 | Subbase for product topology | |
| 19-09-18 | Projection maps | |
| 20-09-18 | Characterization of product topology as smallest topology part 1 | |
| 21-09-18 | Characterization of product topology as smallest topology part 2 | |
| 22-09-18 | Continuity of function from space into product of space part1 | |
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| **Week 10,** | | |
| 24-09-18 | Continuity of function from space into product of space part 2 | |
| 26-09-18 | Countability spaces | |
| 27-09-18 | Product spaces | |
| 28-09-18 | Revision | |
| 29-09-18 | TEST | |
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| **Week 11,** | | |
| 1-10-18 | Discussion | |
| 3-10-18 | Separation axiom | |
| 4-10-18 | T0,T1,T2 Space | |
| 5-10-18 | Regular spaces | |
| 6-10-18 | T3 space | |
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| **Week 12,** | | |
| 8-10-18 | Characteristic of T3 space | |
| 9-10-18 | Hereditary properties | |
| 10-10-18 | Product property of T1 and T2 space | |
| 11-10-18 | Completely regular space | |
| 12-10-18 | Tychonoff space | |
| 13-10-18 | Their herediatory properties | |
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| **Week 13,** | | |
| 15-10-18 | SESSIONAL EXAM | |
| 15-10-18 | SESSIONAL EXAM | |
| 16-10-18 | SESSIONAL EXAM | |
| 17-10-18 | SESSIONAL EXAM | |
| 18-10-18 | SESSIONAL EXAM | |
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| **Week 14,** |  | |
| 22-10-18 normal space | | |
| 23-10-18 | T4 space | |
| 25-10-18 | Normality of regular space | |
| 26-10-18 | Uryshn’s lemma | |
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| **Week 15,** |  | |
| 29-10-18 | Complete regularity of regular normal space | |
| 30-10-18 T4 implies tychonoff space | | |  |
| 31-10-18 | Tietze’s extension theorem | |
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| **Week 16,** |  | |
| 02-11-18 | Revision | |
| 03-11-18 | TEST | |
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| **Week 17** | | |
| 05-11-18 | Discussion | |
| 10-11-18 | Connected space | |
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| **Week 18** |  | |
| 05-11-18 | Saparation of topological space | |
| 10-11-18 | Definition of connectedness in terms of separation | |
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| **Week 19** |  | |
| 12-11-18 | Characterization of connectedness | |
| 13-11-18 | Connected subset | |
| 14-11-18 | Their properties | |
| 15-11-18 | Continuity and connectedness | |
| 16-11-18 | Connectedness and product space | |
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| **Week 20** |  | |
| 19-11-18 | Compactness | |
| 20-11-18 | Example of compact space | |
| 21-11-18 | Compact subsets | |
| 22-11-18 | Compactness in term of FIP | |
| 24-11-18 | Continuity and compact set | |
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| **Week 21** |  | |
| 26-11-18 | Compactness and separation | |
| 27-11-18 | Revision | |
| 28-11-18 | TEST | |
| 29-11-18 | Discussion | |
| 30-11-18 | Revision | |