

Pure Mathematics 607

Topology II

(see Course Descriptions under the year applicable: <http://www.ucalgary.ca/pubs/calendar/> )

*Syllabus*

<u>Topics</u>	<u>Number of hours</u>
Homotopy of paths; homotopy equivalence of spaces	3
The fundamental group; functorial properties	3
Covering maps and covering spaces	3
Lifting theorems; covering transformations and the fundamental group	3
The fundamental groups of simple spaces	3
Free products of groups; the van Kampen theorem	3
Fundamental groups of surfaces; glueing polygons	3
Applications	3
Simplicial complexes and their homology groups	3
Singular homology and its homotopy invariances; relative homology	3
Excision; long exact sequence in homology	3
Equivalence of simplicial and singular homology	3
Computations and applications	3
<b>TOTAL HOURS</b>	<b>39</b>

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