

Homotopy theory of CW complexes

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1. Homotopy groups; fibrations and homotopy. 1 1/2 week
2. Whitehead and Hurewicz theorems. 1 1/2 week
3. Obstruction theory. 2 weeks
4. Spectral sequences. 1 week
5. Serre spectral sequence. 2 weeks
6. Eilenberg-MacLane spaces and classifications theorems. 1 week
7. Postnikov towers. 1 week
8. Suspension theorem. 1 week
9. Computations: homotopy groups of spheres, Lie Groups, Grassmannians, cobordism groups. 2 weeks