

18 Undergraduate Topology Spring, 1997
Dwyer

Textbook: C. T. C. Wall, A Geometric Introduction to Topology
Hocking and Young, Topology (Supplementary text)

covered the following chapters in Wall's book:

1. Spaces and Continuous Maps
2. Abelian Groups
3. Connected and Disconnected Spaces
4. More about Connection
5. Definition of Homotopy
6. A Study of the Circle
7. Lifting and Extension Problems
8. Calculations
9. Eilenberg's Separation Criterion
13. The Jordan Curve Theorem

I liked the book, and liked the fact that I was able to get up to the Jordan Curve Theorem and give a complete proof of it. Eilenberg's Separation Criterion is clever, elementary and powerful. The class was small and the students were very strong; I'm not sure how the book would work out with a larger more mixed group. I had two complaints.

- The book spends too much time on algebra in Chapter 2. This delays the treatment of topology. If I were doing this again I'd skip the parts on exact sequences and come back to them much later on when the subject actually comes up.
- There are a lot of misprints in the exercises. Proofread them before you assign them!

I tried to encourage class participation, with some success, but not as much as I would have liked. I had the students prepare some individual presentations (with my help) on supplementary material from Hocking and Young... for instance, on space-filling curves, or on the general definition of a topological space. (Wall restricts himself, wisely I think, to subspaces of Euclidean spaces.) These presentations went over pretty well. I'd be tempted to think of giving them a larger role and making it more of a seminar course.

Both Wall and Hocking/Young are inexpensive Dover reprints, so it wouldn't seem unreasonable to expect the students to buy both of them.