PRESENTATION TOPICS:

1. Alexander Horned Spere (pages 170-172)*[AS]
2. Simplicial Approximation to CW complexes (pages 182-184)
3. Division algebras (Theorem 3.20, page 222)*[KG]
5. Hopf Algebra (pages 283-286)*[LF]
6. Pontryagin Product (pages 287-289)
7. Dual Hopf Algebra (pages 289-291)
8. CW structure of SO(n) (pages 294-296)
9. Mod 2 Cohomology of SO(n) (pages 296-299)
10. Integer Homology and Cohomology of SO(n) (pages 299-301)
11. Stiefel Manifolds (pages 301-302)
12. Bockstein Homomorphism (pages 303-306)
13. Limits and Ext (pages 311-316)*[JB]
14. Transfer Homomorphism (pages 321-322)*[NT]

* means that the topic is taken

Home Work 1 Chapter 2, Section 2.2

Home Work 2 Chapter 2, page 184
Exercises: 1, 2, 3, 5, 7
Chapter 3, pages 204-205.
Exercises: 3, 6, 9, 11.

Home Work 3 Chapter 3
page 267, Exercises 1, 2, 6.
page 280, Exercise 1.

Home Work 4 Chapter 3
pages 228-230, Exercises 1, 5, 10, 15.

EXTRA CREDIT:

Credit for *-problems will be given to first 4 persons who bring a correct solution to my office. Then the problem will be removed from the list.
Problem 1*[# of claims left - 2](3pts) Exercise 24 Chapter 2, Section 2.2

Problem 2*[# of claims left - 3](3pts) Exercise 35 Chapter 2, Section 2.2

Problem 3*[# of claims left - 4](3pts) Exercise 9 Chapter 2, page 184.

Problem 4*[# of claims left - 4](3pts) Exercise 7 Chapter 3, page 205.

Problem 5*[# of claims left - 4](3pts) Exercise 3 Chapter 3, page 267.

Problem 6*[# of claims left - 4](3pts) Show that for every map
\[ f : S^n \to S^k \times S^\ell, \quad n = k + \ell, \]
the induced homomorphism \( f_* : H_n(S^n) \to H_n(S^k \times S^\ell) \) is trivial.

Problem 7*[# of claims left - 4](3pts) Show if a closed manifold of dimension \( 2k \) has \( H_{k-1}(M;\mathbb{Z}) \) torsion free, then \( H_k(M;\mathbb{Z}) \) is also torsion free.