

	Chapter in "Elements of Synthesis Planning"	End-of-Chapter Problems	Supplementary Topic(s)	Supplementary Readings*
Tues. Jan. 11 – Thurs. Jan. 13	Chapter 1: Introduction	n/a	Suzuki Cross-Coupling Reactions	Sorrell: pp. 504-506 (pp. 506-510 are also good general info) Bruice: pp. 516-519 Vollhardt-Schore: pp. 588-589 (chemical highlight 13-1)
Tues. Jan. 18 – Thurs. Feb. 3	Chapter 2: Functional Group Oriented Bond-Sets	2.1 is tough, but give it a shot before reading the solution. You should be able to do 2.2	Conjugate Additions	Ogilvie: pp. 906-919 Sorrell: pp. 834-841, 498-500, 766-771 Bruice: pp. 779-785 Solomons: pp. 889-893, G8 (special topic inserted after p.999), 814-816 Vollhardt-Schore: pp. 850-855, 1095-1099, 310-311 (chemical highlight 8-3), 1090-1094
Tues. Feb. 8 – Tues. Feb. 15	Chapter 3: Skeleton Oriented Bond-Sets	3.1 You should be able to make bonds 3 and 2. You probably haven't seen the reaction Hoffmann uses to make bond 1, but see if you can come up with an alternative (even if it takes a few steps) 3.2 Your model kit will be helpful here. (b) seems easier than (a).	Wittig Reactions	Ogilvie: pp. 858-860, 874-876, 933-937 Sorrell: pp. 684-689 Bruice: pp. 776-778 Solomons: pp. 757-761 Vollhardt-Schore: pp. 804-807
Thurs. Feb. 17 – Tues. Mar. 1	Chapter 4: Building Block Oriented Synthesis	4.1 and 4.2	Reductive Desulfurization	Ogilvie: pp. 941-942 Sorrell: pp. 374-375 Vollhardt-Schore: pp. 795-797
Thurs. Mar. 3 – Tues. Mar. 8	Chapter 5: The Basis for Planning	5.1 Your answers will likely be different than Hoffmann's but you should be able to come up with something reasonable.	Sulfur Ylides Make Epoxides from C=O	Sorrell: pp. 689-691; p. 337

Thurs. Mar. 10 – Tues. Mar. 22	Chapter 6: Formation of Cyclic Structures	6.1, 6.2, 6.3	Carbenes and Simmons-Smith Reactions Birch Reductions	Ogilvie: pp. 998-999 (Birch reduction) Sorrell: pp. 293-295 (carbenes and Simmons-Smith) Solomons: pp. 361-362 (carbenes and Simmons-Smith); pp. 719-720 (Birch reduction) Vollhardt-Schore: pp. 531-532 (carbenes and Simmons-Smith)
Thurs. Mar. 24	Chapter 7: Protecting Groups	7.1 Read through the question and identify the reactions each protecting group has to survive. You may be able to suggest a couple of potential protecting groups, but likely don't know enough different ones to generate a full set. That's fine. Then read over the answer and make sure your logic was consistent with it. 7.2 You may need to look up what a couple of the protecting groups are, but this question should be doable		
Tues. Mar. 29	Chapter 8: Ranking of Synthesis Plans			

*For each supplementary topic, it is expected that you read the supplementary readings in at least **one** of the texts and work through the corresponding practice problems in that text.

One copy each of the following books will be available at the reserve desk at the library. They all have 24 hour loan periods.

- Organic Chemistry 2nd edition (Thomas N. Sorrell)
- Organic Chemistry 8th edition (Paula Yurkanis Bruice)
- Organic Chemistry 10th edition (T.W. Graham Solomons and Craig B. Fryhle)
- Organic Chemistry 6th edition (Peter Vollhardt and Neil Schore)