

Chemistry 40A - Fall, 2017

APPROXIMATE COURSE SCHEDULE and ASSIGNMENTS in Vollhardt & Schore, 7th ed.

READ IN ADVANCE the sections assigned below, as well as the "Keys to the Chapter" in the Study Guide. The sections "New Reactions" and "Important Concepts" at the end of chapters are especially helpful in organizing the material. You are not responsible for history, for personalities, for stories in the "Chemical Highlight" sections ("Boxes"), or for captions to photographs, but you will enjoy reading some of this material.

Do as many exercises and problems as you have time for (more than just those with "!"), but you may not wish to do all those listed below. Many are trivial drill that you should persist with until you feel confident that you *could* easily do the rest. The "arithmetic" ones are not assigned, but they may be instructive. So choose to do exercises and problems to help you understand and to help extend your understanding. Do the exercises within the chapter as you read, and do the problems at the end of each chapter, which are especially recommended, after the relevant lectures. Your answers are not to be handed in, so you are encouraged to collaborate with other students. The answers are not important in themselves, so don't just look them up! What is important is the understanding that the exercises and problems test for and the method of thinking that they demonstrate. If you have an answer that you think is correct but is different from the one in the Solutions Manual, ask your TA. You may also ask (and answer) questions at the course website (<https://tritoned.ucsd.edu>), where you sign in with your UCSD e-mail username and password. This schedule is also posted there, and you are responsible for keeping informed of any changes.

Key to symbols:

- ! = difficult or important or both; don't just skim
- () = optional (for your enjoyment or general edification)
- + = plus additional material in lecture
- = partial coverage (pay attention to emphasis in lecture, skim text if unclear)
- ? = don't believe all you read (or misprint in Exercise, Problem, or Answer)
- X = except

Sep. 29, Oct. 2, 4, 6: **CHAPTER 1** (Use Lewis *or* Kekulé, **with** lone pairs.)

Sections: Preface(pp xx-xxvii)!, (0), (1!), 2±, 3!-, 4!+, 5+!, 6!-, 7+!, 8±!, 9!

Exercises: 1b!("Memorize", or include on Reminder Sheet), (2), 3, 4?, 6!, 7, 8, 9ab-, 10, 11, 14, (15), (17?), 19!, (20), 21, (22)

Problems: 23, 24, 25!, (26), 27!, 28Xf, 29!, 30!, 31!?(nonoctet unnecessary), 32-, (34ab), 35!, 36?, (37), 38!Xg, 40, 44!, 45!, 46, 47ac, 49!, (50), 51!Xi, (52), 54, 55, 56, 57

Oct. 9, 11, 13 (guest lecturer): **CHAPTER 2**

Sections: (0), 1-, 2!, Table2!("Memorize"), 3, Table3!("Memorize"), 4, 5-, Table5("Memorize" names to $n=10$), Table6("Memorize"), [*Nomenclature*: Be sure that you can draw the correct structure from a molecule's name. For 140A you need not learn how to provide the correct name.], 6-, 7!, 8!

Exercises: (1), (2), (6), 7!, 8, 9, 10a(b), 11, 12!, 13b, 14, 15, 16a!b, 18!, 19, 20, 21, 22ab, 23

Problems: 28Xiii, (29), 30, (31), 32!, 33!, (37), 38-, 39!-, 40!, 41-, 42, 43, 44!, 46!, 48b, (50), 54, 55, 56, 57, 58

Oct. 16: **CHAPTER 3**

Sections: 0, 1!-, Table1-("Memorize"), Fig. 3-1, 2±!, (3), Fig3-4!, 4!±, 5-, 6!, 7-, 8-, 9-, (10)

Exercises: (1), (2), 4a(b), 5, 7a, 8a!, 9a!, (10), (11)

Problems: 13a-, 15, 16Xname, orbitals, 20!, 21a, 22!, 27, (29), 30b(2-Brpentane), (40), 46

Oct. 18, 20: **CHAPTER 4**

Sections: 0, 1!-, 2-, 3!-, 4-, Table 3-, 5-, 6-, (7!)

Exercises: (1), 3-, (4-), (7), (11), 12!, 13a!(b), (15), 16, (17), 18!

Problems: 19!ab, 21!, 22!, 24!-, 25, 27, 30!, (31), 32!, (34), (35), (37), (39-), 41a(b), (42), 43!, (44), (45), (48), 54, 55, 56

Oct. 23 (Monday): **MIDTERM EXAM**, covering CHAPS. 1-4.3 (and to Problem 4-27).

Oct. 20 (notice), 25, 27, 30, Nov. 1: **CHAPTER 5**

Sections: 0!, Figure1("Memorize"), 1!+ (Box1), 2!-, 3! (Box2), (4)[Warning: Do not use Fischer projections!], 5! (Box3), 6?+, 7!+ (Box4,Box5), 8

Exercises: (throughout, no "bowties") 1, 3, (4), 5!, (6), (7), 9,! 10!, 11, 12!, 18b, 19bcd, 20zigzag, 22?, 23?, 24, 25, 26!, 27!

Problems: 28!, 29, (30), (31), 32!XlowT, 33!, 34, 35, 36Xa, 37, 38Xb, 39!, 40!-, 41!, 42, 43, 44!, 45, 46-, 50, 51, 53a, 54a, 56!-, 57!, 58!, 59, 60, 61!, 62!, 63?(N in a), (64), 65!

Nov. 1 (notice), 3, 6: **CHAPTER 6**

Sections: 0, 1-, 2!, Table3!, 3!, 4, 5!, 6, 7!, Table4!, 8!, Table5,Table7examples!, 9

Exercises: 1!, 2, 3, 4!, 5, 6, 7, 8, 12!, 13!, 14!, (15), 16, 18, 19, 20, 21, 22, 23, 24, 25!, 26!, 27, 28

Problems: 29, 30a(b), 32, 33!-, 34!-, 35, 36!, 38, 39, 41, 42!Xa, 43, 44!, 45!, 46Xb, 47?, 48!, 49, (52), 53!, 54, 55, 56, 57, 59!, 62!, 63, 65, 66

Nov. 8, 13: **CHAPTER 7**

Sections: 0, 1, 2, Fig.2!, 3, 4, 5!±, Table2("Memorize"), 6, 7-, 8, 9!, Table4X2°("Memorize")

Exercises: 1, 3, 4!, 5!, (6), 7, 8, 10, 11, 12!, (13), (15), 16ab, 17, 18, 19, 20, 21, 22

Problems: 23, 25, 26, 27a!(b), 28!, 30, 31, 32, 33, 34!, 35, 36, 38, 39, 40?, 42!, 44Xch, 46, 47, 48, 50!, 53, 54, 57, 58Xcf, (59), (60), 62, 63, 64, 65

Nov. 15, 17, 22(may be canceled), 27: **CHAPTER 8**

Sections: 0, 1-, 2-, 3, (4), 5, 6!- (Box1), 7! (Box2), 8!, 9!, pp324-325

Exercises: 1, 3, 4, 5, 7, 8!, 10, 11!, 12?, 13, 14, 15, 16!, 17!, 18, 19, 20!, 21!

Problems: 22, (23)see website, 25, (28), 30bc, 31, (33), 34, 35, 36(a)b+(d), 37, 38, 39, 40!+, (41), 42!, 43, 44, 45!, 46!, 48, 50+, 51!, 52, 53, 54, 55, 56, (57), (58), (59), (61), 65

Nov. 20 (Monday): **MIDTERM EXAM**, covering CHAPS. 1-7.

Nov. 29, Dec. 1, 4: **CHAPTER 9**

Sections: 0, 1, 2!, 3!, 4-, 5-, 6, 7, 8, Box2!, 9-, 10-, (11) (Box4)

Exercises: 2, 3, 4!, 5!, 6, 7!, 8, 9, 10, 11bc!, 12!, 13!, 14!, 16, 17!, 18, 19, 20!, 21!, 23, 24, 25b

Problems: 26!, 27!, 28bc, 29, 30, 31, 32, 33, 34, 36, 37, 38!, 39!, 40!, (42), 43!, 47a, 48, 49Xf, 50, 51!, 52, 54, 55, 58, 59, 60!, 61, 65!, 66Xd, (67), (68), (69), (70), (71), 73, 76, 77, 78

Dec. 6: **CHAPTERS 10, 11, 14**

Sections: 10-2-, Fig.1, Fig.2; 11-8!±, Table 4-("Memorize"), 9-, 11!; 14-11-, Fig. 14

Exercises: (10-2), 11-17, 18, (19), (20), 21!, 24!, 26; 14-29

Problems: (10-25); 11- (53), 55!, 57, 61, 62, 66, 70, 71, 74; 14-70acf(Fig.14), 71, 81

Dec. 8: Margin of Safety/Review

Dec. 13 (Wednesay), 3:00 PM - 5:59 PM: **FINAL EXAM**, covering CHAPTERS 1-9&10-2&11-8,9,11&14-11 **in Rec Gym or Galbraith Hall** (subject to availability). **Sit in alternate seats, with no one adjacent.** If you want to retrieve your exam, either bring a stamped, self-addressed business-size (4.25x9.5 inch) envelope (postage 71¢, unnecessary if sent to on-campus address), or be willing to sign your exam authorizing us to leave it in the 5th floor lobby of PacHall.