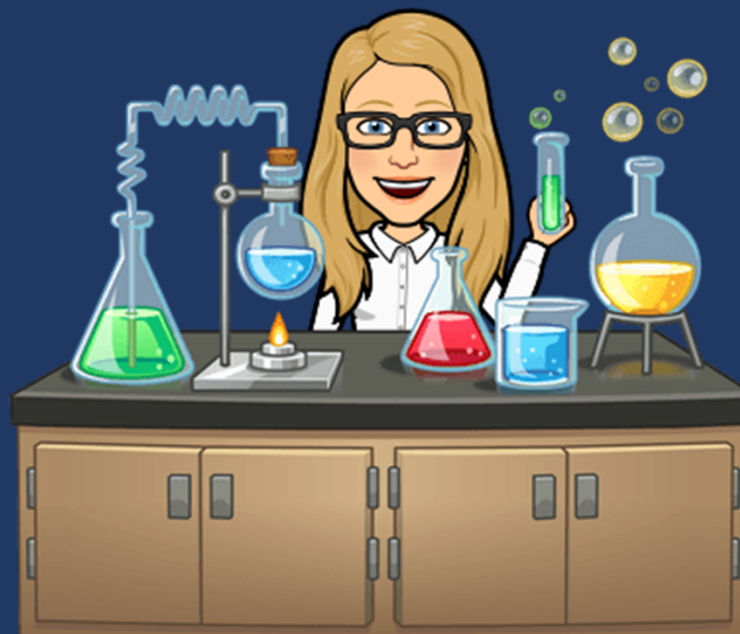


For clicker question voting, go to:  
<https://pollev.com/lauriestarke263>



Dr. Laurie S. Starkey  
Cal Poly Pomona

CHM 3150 Organic Chemistry II  
8/26/25

## Daily To-Do

## Flipped Lectures

## In-Class Worksheets

### Step 2

- Read Klein 11.2-11.5
- Attend class
- Work through **SkillBuilders** 11.1, 11.2, 11.3, 11.4

[Flipped Lecture video Chapter 11](#)

[WorksheetCh11-2](#)

# Today's Topic: Synthesis! (Chapter 11, Part 2)

- ✓ Watch
- ✓ Read
- ✓ Practice

### ▼ Chapter 11: Synthesis **WileyPLUS is organized by chapter**

📄 DID YOU EVER WONDER...what vitamins are and why we need them?

📄 11.1: One-Step Syntheses  
0 pts

**50 points W.P. = full  
homework credit (5 pts)**

📄 11.2: Functional Group Transformations (SkillBuilder 11.1)  
15 pts

📄 11.3: Reactions that Change the Carbon Skeleton (SkillBuilder 11.2)  
15 pts

📄 11.4: How to Approach a Synthesis Problem (SkillBuilder 11.3)  
15 pts

📄 11.5-11.8: Multi-Step Synthesis and Retrosynthetic Analysis, Natural Product Synthesis and Green Chemistry (SkillBuilder 11.4)  
20 pts

📄 Review & End of Chapter Problems: Chapter 11  
80 pts

**EOC**

# Tracking Our Progress

## *On Thursday: starting Chapter 12!*

Weeks <u>0-4</u>	Chapter 11 <u>Synthesis/Review</u>	Chapter 12 <u>Alcohols</u>	Chapter 13 <u>Ethers &amp; Epoxides</u>	<i>Exam I</i>
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### CHM 3150 Organic Chemistry II, Dr. Laurie S. Starkey, Fall 2025

#### *Tentative Schedule (Chapter and Worksheet #)*

Week	Mon	Tues	Wed	Thurs	Fri
0	8/18 <b>You are here</b>	8/19	8/20	8/21 <del>Review 7-11 #1</del>	8/22
1	8/25	8/26 Review 7-11 #2	8/27	8/28 Ch. 12 #1	8/29
2	9/1 <b>Holiday</b>	9/2 Ch. 12 #2	9/3	9/4 Ch. 12 #3	9/5
3	9/8	9/9 Ch. 13 #1	9/10	9/11 Ch. 13 #2	9/12
4	9/15	9/16 Ch.13 #3, Review	9/17	9/18 <b>Exam I</b>	9/19

Check course  
homepage  
for weekly  
activities

Watch  
lectures  
\*before\*  
attending  
problem-  
solving  
session

## Chapter 12 - Alcohols

[skeleton notes](#) | [Ch. 12 summary](#) | [SkillBuilder/EOC Cover Sheet](#)

Daily To-Do	Flipped Lectures	In-Class Worksheets
<b>Step 1 Read</b>		
<ul style="list-style-type: none"><li>Read Klein Sections 12.1, 12.2, 13.1 – 13.3 <b>Nomenclature, Physical Properties, Acidity of ROH</b></li><li>Watch flipped lecture</li><li>Work through SkillBuilders 12.1, 12.2, 13.1</li><li>Practice Alcohol/Ether Nomenclature: <a href="#">practice worksheet</a> and <a href="#">answer key</a></li></ul>	<a href="#">Nomenclature of Alcohols and Ethers, and Part 1 of Alcohols</a> <b>35 minutes,</b> <i>skeleton notes pages 12-1 to 12-3</i>	<a href="#">WorksheetCh12-1</a>
<b>Step 2 Read</b>		
<ul style="list-style-type: none"><li>Read Klein Sections 12.3 – 12.6 <b>Preparation of Alcohols</b></li><li>Watch flipped lecture</li><li>Work through SkillBuilders 12.3, 12.4, 12.5</li><li><a href="#">Grignard/Hydride homework</a> (submit to <a href="#">Gradescope</a>)</li></ul>	<a href="#">Alcohol Synthesis</a> <b>38 minutes,</b> <i>skeleton notes pages 12-4 to 12-7</i>	<a href="#">WorksheetCh12-2</a>
<b>Step 3 Read</b>		
<ul style="list-style-type: none"><li>Read Klein 12.9, 12.10, 12.13 <b>Reactions of ROH (Dehydration, Oxidation, Tosylation) &amp; Synthesis Strategies</b></li><li>Watch flipped lecture</li><li>Work through SkillBuilders 12.6, 12.7, 12.8, 12.9</li></ul>	<a href="#">Reactions of alcohols</a> <b>45 minutes,</b> <i>skeleton notes pages 12-8 to 12-11</i>	<a href="#">WorksheetCh12-3</a>

Practice

Watch

Practice

Watch

Free Red Ink Homework #2

Practice

Watch

Bookmark CHM 3150 Course Homepage!  
<https://www.chemistryconnected/courses/CHM3150>

**Daily Worksheets,** **Announcements,** **Clicker Questions** [CHM 3150 Semester Schedule](#)

Week 0/1	Week 2	Week 3	Week 4
<p>Th: <a href="#">WorksheetCh11-1   411</a> <a href="#">1 2 3</a> <a href="#">recording 8/22</a></p> <p>Tu: <a href="#">WorksheetCh11-2</a></p> <p>Th: <a href="#">WorksheetCh12-1</a></p>	<p>Tu: <a href="#">WorksheetCh12-2</a></p> <p>Th: <a href="#">WorksheetCh12-3</a></p>	<p>Tu: <a href="#">WorksheetCh13-1</a></p> <p>Th: <a href="#">WorksheetCh13-2</a></p>	<p>Tu: <a href="#">ReviewWorksheet</a></p> <p>Review session 9/17, 9 pm</p> <p>Th: <b>Exam I -9/19</b></p>

**missed class? watch the recording!**



# OLC Rosters

## Groups are forming!

- Add your name, or...
- Post to Discord, or...
- Canvas discussion board

### CHM 3150 Course Links

- [Gradescope](#) (log in with School Credentials)
- [WileyPLUS](#) (eText, resources, online practice)
- [Office Hours Zoom \(Mondays\)](#) ([what to expect](#))
- [OLC rosters](#) (study group sign-ups)
- [Course Padlet](#) (meet your classmates!)
- [Discord server](#) ([invite link](#)) (course Q&A, discussions)
- [Poll Everywhere](#) (for problem-solving sessions)
- [Canvas](#) (does NOT reflect your current grade!!)

Once you have formed a **CHM 3150 Organic Learning Community (OLC)**, please make sure you're signed in with your CPP credentials, then click on "Edit Document/ Edit in Browser" button, select an open box below, and enter the names of your OLC members. OLC #1 has been created as an example.

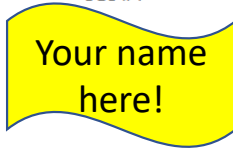
**Want to give your group a name?** Group names are optional and can be added at any time.

**Looking for a group?** Contact members of an existing group or start an OLC by putting your name in an empty box, or posting a message on [Discord](#). Perhaps you can add some comments about your availability, your major, etc.

**Remember, each OLC group ideally has 3-4 people in it.**

OLC participants will earn **up to 10 points** if they:

1. Meet with OLC for at least one hour each week; AND
2. Record your activities after each meeting (every student submits their own weekly "OLC Report" [Gradescope](#) assignment; a minimum of 10 entries required to receive full credit)

OLC #1 <b>Guardians of the O-Chem Galaxy</b>  Laurie Starkey H. Jon Benjamin Taika Waititi Rosario Dawson	OLC #2  Shamya Wilson  Blanca Reed Kassandra <del>lopez</del>	OLC #3  Thinh Le Wendy Pham	OLC #4  
OLC #5	OLC #6	OLC #7	OLC #9

Take a picture each week for OLC report, via Gradescope. Ten or more OLC meetings earns maximum credit (10 points).

# Gradescope: First 3 assignments are posted *log in with \*School Credentials\**

OLC Week 1/2

1.0

Complete report asap after OLC meeting. Must be submitted **every week** (by Sunday for the meeting in the prior week)

FridayFive Week 1 - Padlet

4.0

Must be submitted **every week** (by Friday of the following week)

20-Questions Review Homework#1

5.0

First "Free Red Ink" Homework has a due date, but late work is accepted (up until Exam 1 date)

Log In with your Gradescope account

EMAIL

PASSWORD

☐ Remember me

[Forgot your password?](#)

Log In

Or log in with

 School Credentials

 Google

☐ Remember me

[click here](#)

**FridayFive and OLC Reports are due every week – set a reminder!**



CHM 3150 Organic Chemistry II, Cal Poly Pomona, Dr. Laurie S. Starkey  
Homework #1 20-Question Review, Chapters 7-10

Name: \_\_\_\_\_

Section (day/time): \_\_\_\_\_

- On blank pieces of paper, draw out the following twenty textbook problems (Klein-Starkey, 5<sup>th</sup> edition) and solve them. *Do not just write down the answers.*  
**7.76acef, 8.42ac, 8.43a-f, 9.41bcd, 9.52bc, 10.19abc**
- Check your answers in the Student Solutions Manual (SSM), and make corrections to your work. You are encouraged to work with a study group, but your review of the material is worthwhile only if you attempt the problems before checking the SSM!
- Use Genius Scan to create a PDF of your homework – the app automatically crops pages to 8.5x11, but be sure to apply the black & white filter
- Submit to Gradescope – you must select the page(s) of your submission that correspond to each problem in Gradescope (on which page(s) can I find problems 7.76acef, and on which page(s) can I find Ch. 8 problems?)

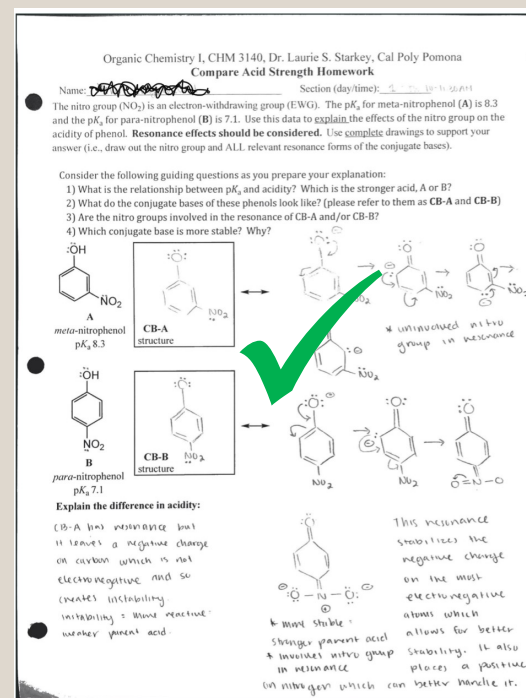
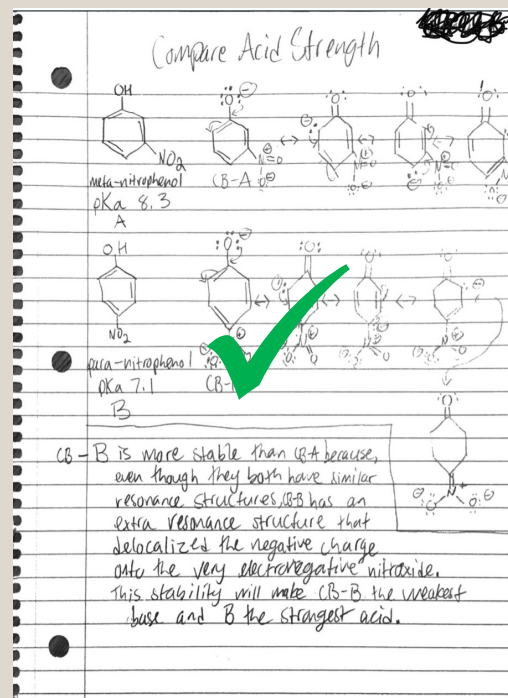
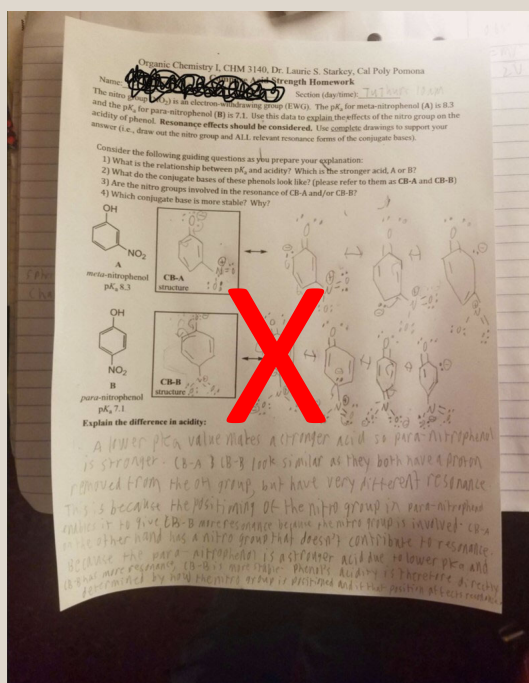
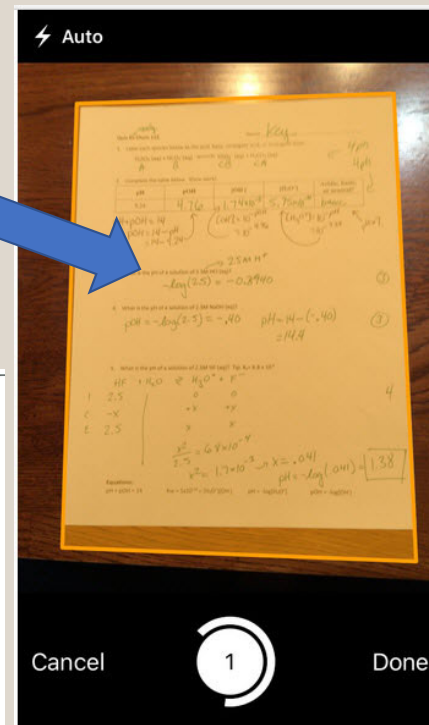
===== *Simply copying answers from solutions manual will not earn full credit!* =====

## 20-Question Review, Ch 7-10

### “Free Red Ink” Homework



# Genius Scan – please use if your scanning app does not easily crop and apply black & white filter



# Gradescope – Upload PDF & Assign Pages

## Chapter 11 Homework | Assign Questions and Pages

SUBMITTED AT: AUGUST 23, 1:47 PM

Select questions and pages to indicate where your responses are located. Use **esc** to deselect all items and hold **shift** to select multiple questions.

### Question Outline

Select pages to assign to Question 1.

TITLE

POINTS

1 11.1, 11.2, 11.3a-h

2.0 pts

P1 x

P2 x

P3 x

2 11.5a-c, 11.7a-c, 11.9a-e

3.0 pts

Select pages to assign to Question 1.

Assign Pages Sequentially

Submit

# Gradescope – Upload PDF & Assign Pages

## Chapter 11 Homework | Assign Questions and Pages

SUBMITTED AT: AUGUST 23, 1:47 PM

Select questions and pages to indicate where your responses are located. Use **esc** to deselect all items and hold **shift** to select multiple questions.

### Question Outline

Select pages to assign to Question 2.

TITLE POINTS

1 11.1, 11.2, 11.3a-h 2.0 pts

P1 x P2 x P3 x

2 11.5a-c, 11.7ace, 11.9a-e 3.0 pts

P3 x P4 x P5 x P6 x P7 x

P8 x P9 x

Select pages to assign to Question 2.


After assigning all pages, click Submit

Assign Pages Sequentially

Submit



# 500 Total Course Points

Exam I assignments*	Exam II assignments*	Exam III assignments*	<div>Homework Course Points</div> <div>125 (25%)</div> <div>*assignments due no later than date of each exam</div>
<div>WileyPLUS/textbook</div> <div>SkillBuild/EOC Ch. 115</div> <div>SkillBuild/EOC Ch. 1210</div> <div>SkillBuild/EOC Ch. 1310</div> <div><i>"Free Red Ink" Homework</i></div> <div>Ch. 7-10 Review (20 Qns)5</div> <div>Grignard Predict5</div> <div>Epoxide predict/mechanism5</div> <div>40</div>	<div>WileyPLUS/textbook</div> <div>SkillBuild/EOC Ch. 1910</div> <div>SkillBuild/EOC Ch. 2010</div> <div><i>"Free Red Ink" Homework</i></div> <div>Alcohol synthesis5</div> <div>Acetal mechanism5</div> <div>Hydrolysis predict/mech.5</div> <div>ArOH acidity5</div> <div>40</div>	<div>WileyPLUS/textbook</div> <div>SkillBuild/EOC Ch. 2110</div> <div>SkillBuild/EOC Ch. 175</div> <div>SkillBuild/EOC Ch. 1810</div> <div><i>"Free Red Ink" Homework</i></div> <div>Messy Aldol5</div> <div>Biphenyl EAS5</div> <div>FC alkylation5</div> <div>Diels-Alder5</div> <div>45</div>	
<div>Friday Fives (4 pts each)52</div> <div>(13+ earns max. credit)</div>	<div>OLC reports (1 pt each)10</div> <div>(10+ reports earns max. credit)</div>	<div>Exam Wrappers8</div> <div>(4 pts each, drop one)</div> <div>Exam Corrections8</div> <div>(4 pts each, drop one)</div>	<div>Study/Reflection Course Points</div> <div>75 (15%)</div>
<div>Midterm Exams x3</div> <div>200</div> <div>(100 pts each, drop lowest)</div>	<div>Final Exam</div> <div>100</div>	<div>Midterms: 200 (40%)</div> <div>Final: 100 (20%)</div>	


# Suggested Textbook Problems?

see “EOC/SkillBuilders” Handout

**Suggested Ch. 11 problems** (be sure to work on synthesis problems by hand – on paper!)

## In-Chapter Problems (includes SkillBuilders 11.1–11.4)

11.1	11.3 a–f	11.5 a–f	11.7 a–f	11.9 a–f
11.2	11.4	11.6	11.8	11.10




A sample's volatile organic compounds (VOCs) can be collected for analysis from the air above the sample, called the headspace.

**Problem 11.10**

## End-of-Chapter (EOC) Problems

11.11 a–d	11.17	11.22	11.29
11.12 a–e	11.18 a–e	11.23	11.30
11.13 ab	11.19 ab	11.26	11.31
11.14	11.20 a–d	11.27	11.32
11.15 a–d	11.21 a–e	11.28	11.39



**Problem 11.8**

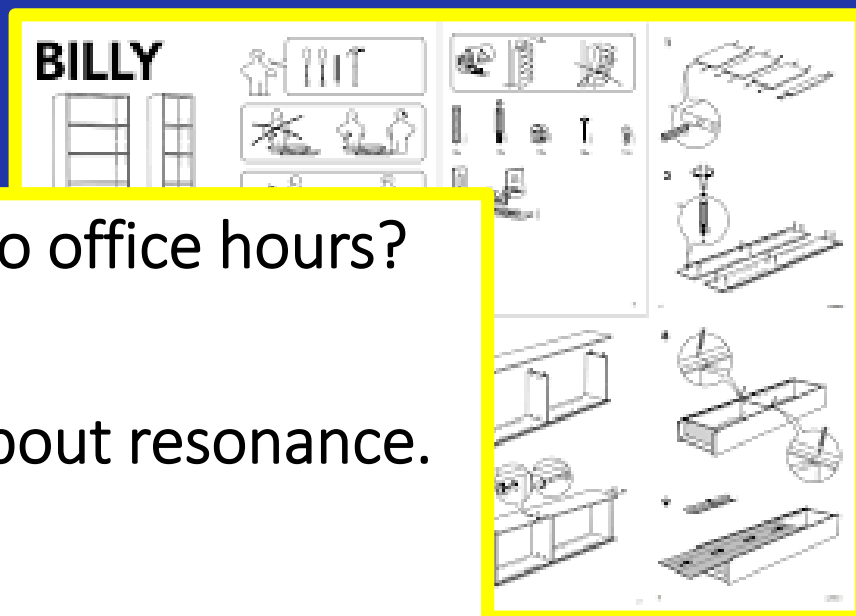
Colonies of *L. magnifica* avoid becoming fish food by producing a deadly toxin. If the sponge is squeezed, the smelly, red fluid that is released causes fish to flee.



I just bought  
a book from  
IKEA...



# Speaking of IKEA...



Student (after failing Exam I): Can I come to office hours?  
I really need help with resonance!

Dr. Starkey: Of course! Chapter 2 is all about resonance.  
How much of Chapter 2 did you read?

Student: I didn't read Chapter 2.

Dr. Starkey: I think I've diagnosed the problem...

*Don't try to build IKEA furniture without  
a manual, and don't try to learn Organic  
Chemistry without reading the textbook!*



Where is my textbook?  
Use WileyPLUS or Wiley Reader app

WP CHM 3150 > Assignments > 11.3: Reactions that Change the Carbon Skeleton (SkillBuilder 11.2)

Home

Wiley Course Resources

Modules

Grades

Syllabus

People

Outcomes

BigBlueButton

Collaborations

Course Analytics

Lucid (Whiteboard)

Assignments

Discussions

Announcements

Pages

Files

Rubrics

Quizzes

## 11.3: Reactions that Change the Carbon Skeleton (SkillBuilder 11.2)

Reading:

[11.3 Reactions that Change the Carbon Skeleton](#)

WileyPLUS eTextbook

LAUNCH

Wiley Reader

SkillBuilder Videos:

[SkillBuilder 11.2 Lightboard Video: Changing the Carbon Skeleton \(Learn the Skill!\)](#)

[Solved-Problem Video: Problem 11.6 \(SkillBuilder 11.2, Apply the Skill\)](#)

Legend:

Reading Video Interactive Lightboard

Try problems through WileyPLUS to be automatically graded

Assignment Launch

OPEN ASSIGNMENT

**PRACTICE** the skill

Scroll down to see link to SSM

**APPLY** the skill

**Solution to Problem 11.5**

[Solution](#)

11.5

Identify reagents that can be used to achieve each of the following transformations

(a) CC#CC >> CC#CCCC

(c) CCCC(C)(Br)CC >> CCCC(=O)CC

(e) C1CCCC1CCl >> C1CCCC1C=CC

(b) c1ccccc1CO >> c1ccccc1C#CC

(d) CC(C)C=CC >> CC(C)C(=O)O

(f) CC(C)C#CC >> CC(C)C(=O)O

For self-grading handwritten work

## Step 1 **Read**

- Read Klein Sections 12.1, 12.2, 13.1 – 13.3  
**Nomenclature, Physical Properties, Acidity of ROH**
- Watch flipped lecture
- Work through **SkillBuilders 12.1, 12.2, 13.1**
- Practice Alcohol/Ether Nomenclature:  
[practice worksheet](#) and [answer key](#)

**Practice**

Why do I need a textbook?!

## Step 2 **Read**

- Read Klein Sections 12.3 – 12.6  
**Preparation of Alcohols**
- Watch flipped lecture
- Work through **SkillBuilders 12.3, 12.4, 12.5**
- [Grignard/Hydride homework](#) (submit to [Gradescope](#))

**Practice**

Don't attempt to build IKEA furniture without the instruction booklet!