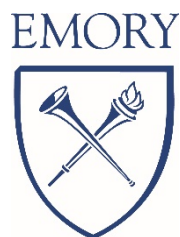

Teachable Tidbit Part 1: Backwards Course Design, Learning Outcomes, and Syllabi



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2 August 2019

With thanks to
R. Waterman
University of
Vermont



Setting Goals

- **Backwards Course Design: set goals first**
- **Learning Outcome: finishes the sentence “Upon successful completion of this course, students will be able to...”**
- **Learning Objective: a (relatively) short-term goal which successful learners will achieve within the scope of the course**

“Start at the end”

Each Piece of the Puzzle

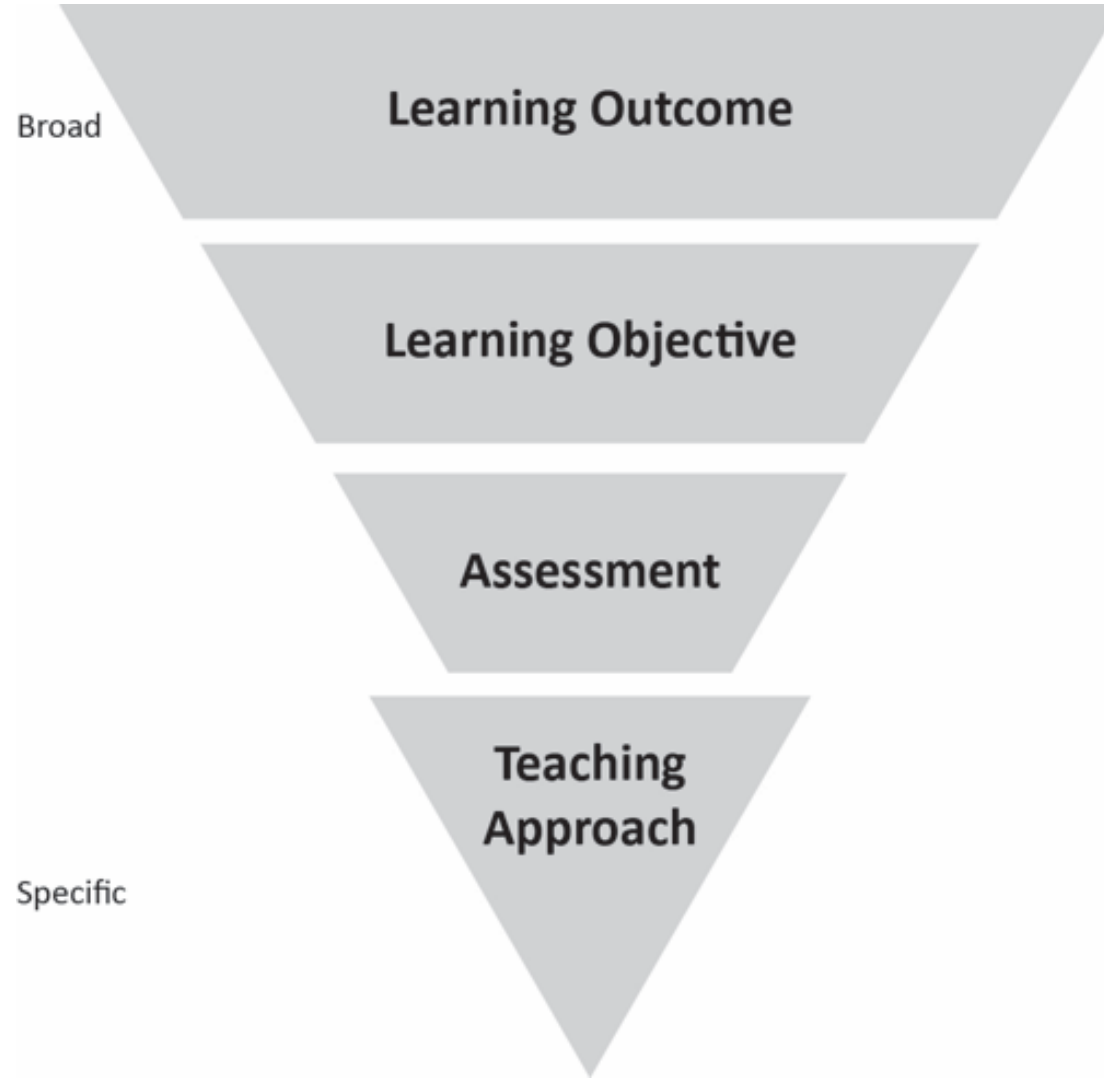


Image: <http://www.celt.iastate.edu/>

In backwards design, think broad to specific

Syllabi

- What is required on a syllabus?
Only that which your employer requires
- What can you accomplish with your syllabus?
Communicate key facts, set the academic tone, establish interaction expectations with students, generate (or minimize) anxiety

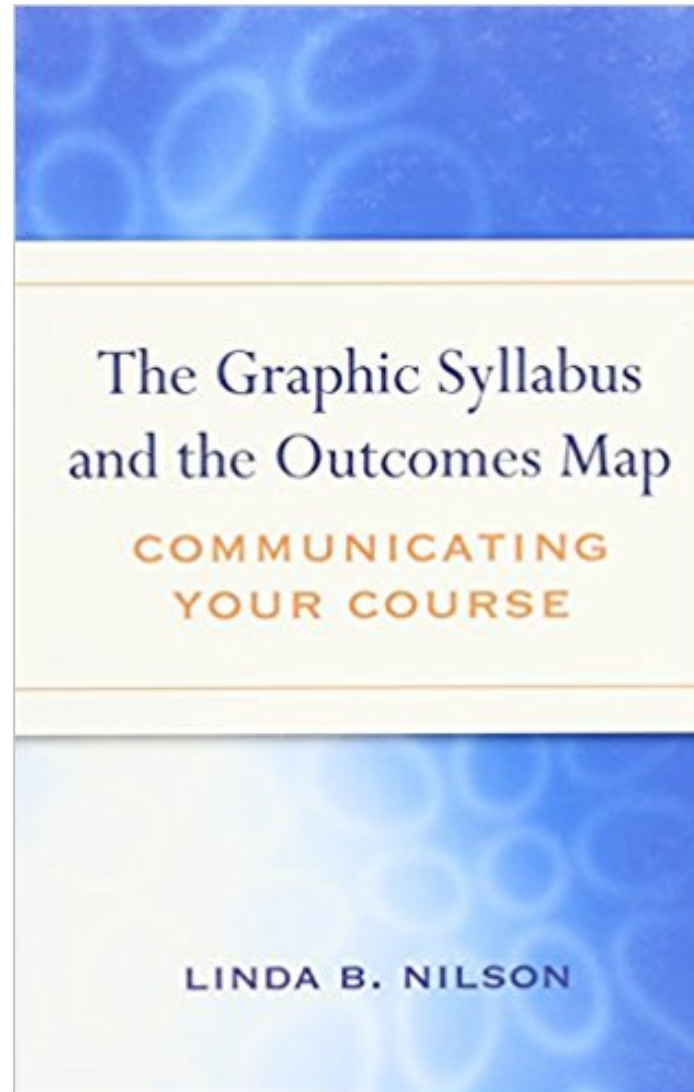
Teaching/Learning Centers LOVE to help with syllabi

The Two Most Important Items

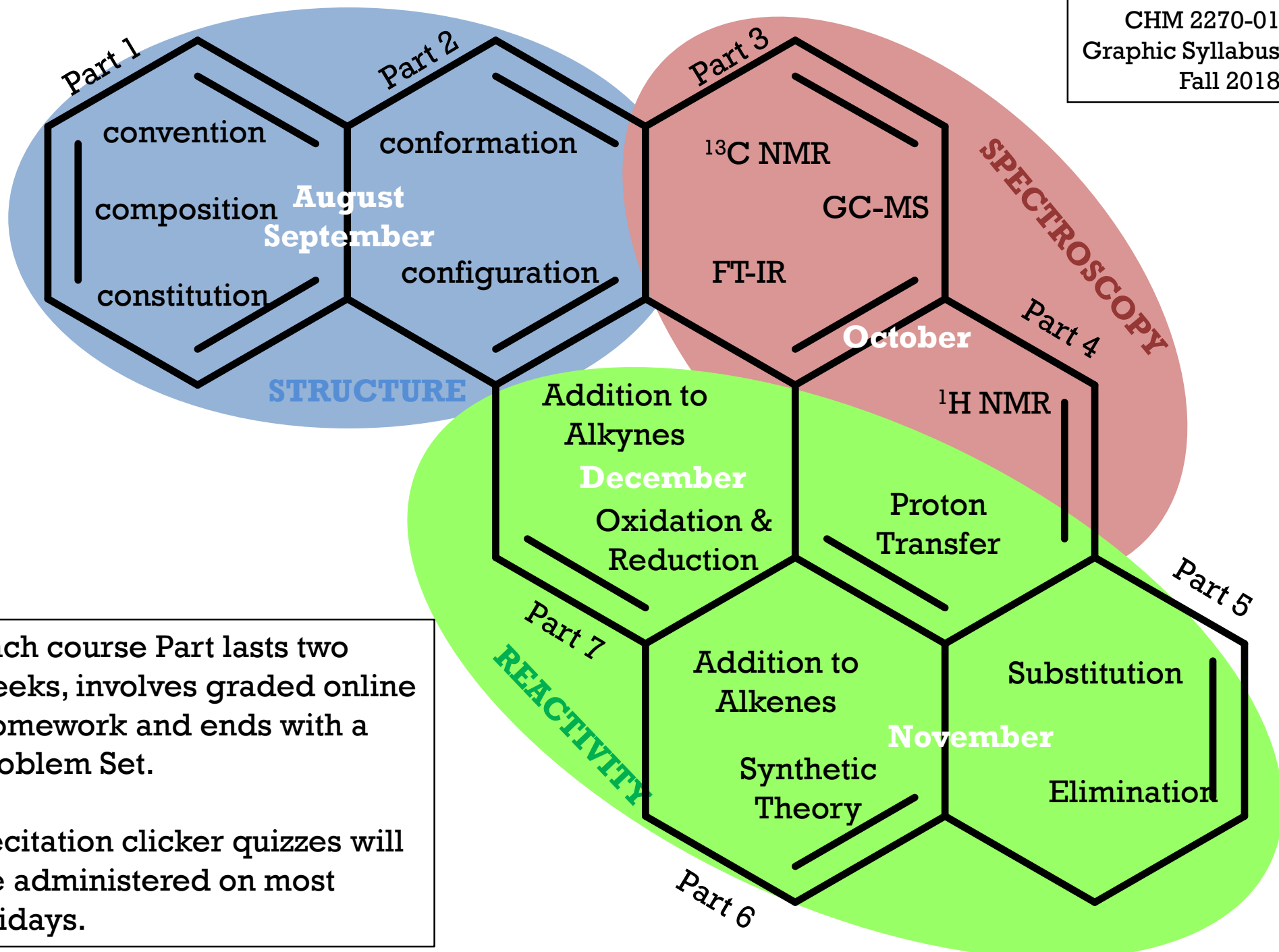
- The above schedule, policies, procedures and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement and/or to ensure better student learning.
- Students may vary in their competency levels on these abilities. Students can expect to acquire these abilities only if they honor all course policies, attend class meetings regularly, complete all assigned work in good faith and on time, and meet all other course expectations.

Not including these may lead to...complications

Nontraditional Syllabi



Be sure to take into account accessibility

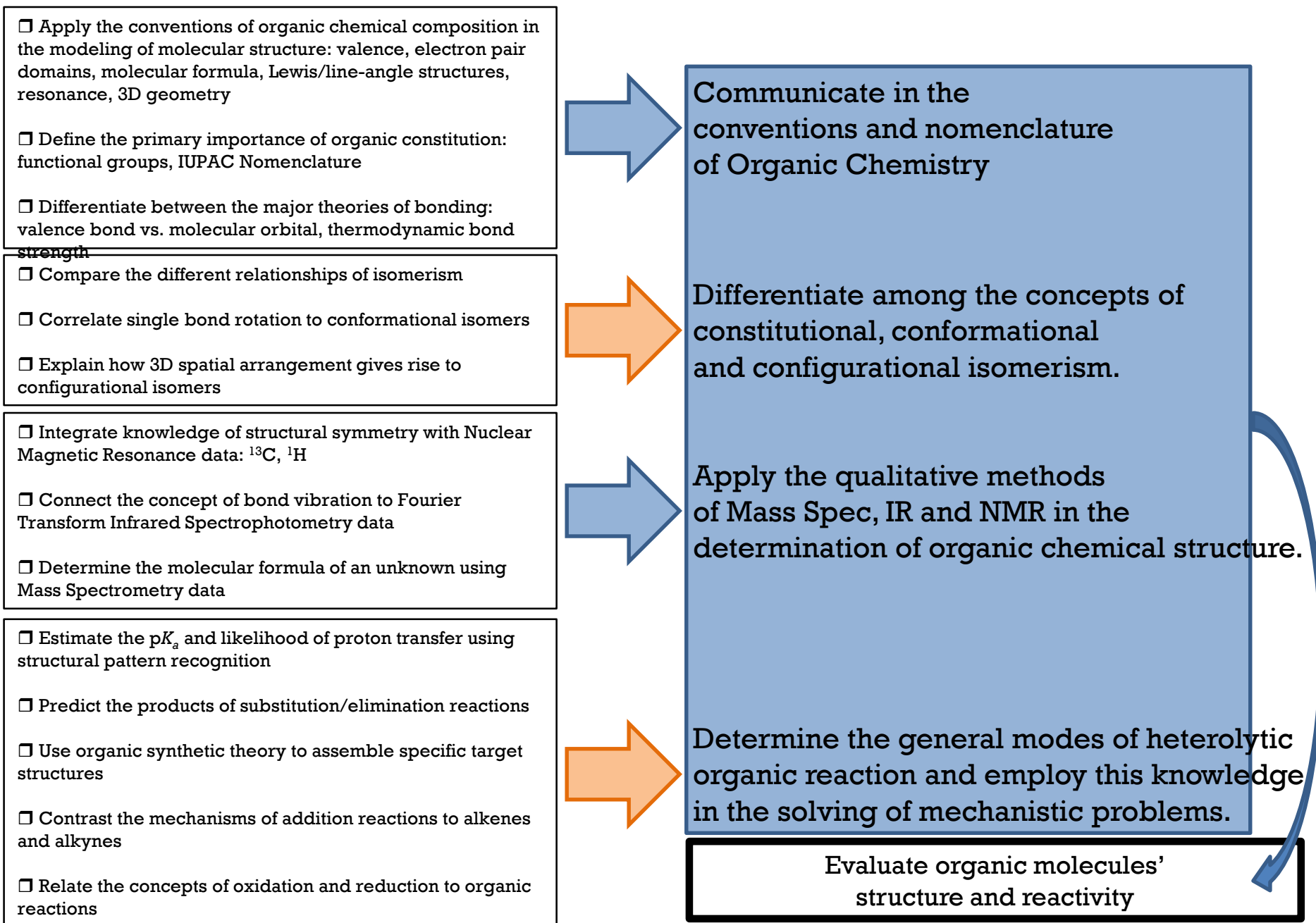


Each course Part lasts two weeks, involves graded online Homework and ends with a Problem Set.

Recitation clicker quizzes will be administered on most Fridays.

CHM 2270-01 Outcomes Map Fall 2018

As students progress through the course, they will be able to...



ORGANIC CHEMISTRY 1
CHEM 2410



Instructor: Dr. Erin Whitteck
Office: Shannon-206
E-mail: erin.whitteck@slu.edu

What we will learn



Build foundation of
chemical intuition

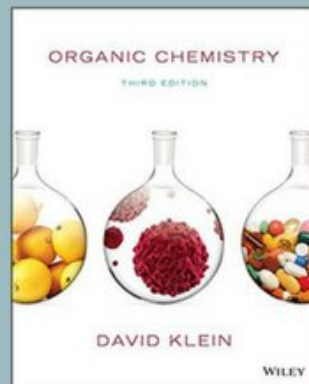


Learn spectroscopic tools to
inspect molecules



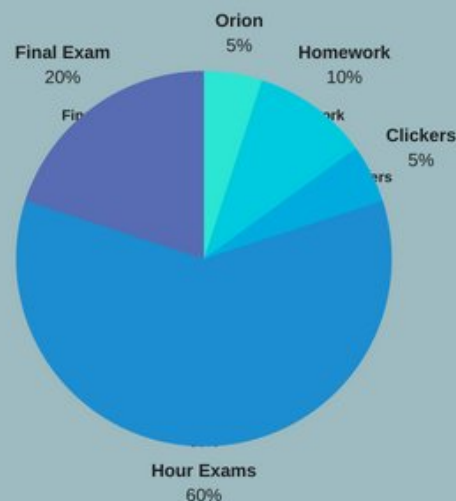
Apply chemical intuition
to predict mechanisms,
and build molecules

REQUIRED MATERIALS



- WileyPLUS required
- Model kit and Organic Chemistry as a second language optional

ASSIGNMENTS





- 2 lowest homework and Orion assignments can be dropped
- 50% of clicker questions correct to achieve 100% of points
- If final exam grade greater than any hour exam grade lowest hour exam grade will be replaced

GRADE SCALE





A	88.0%
A ⁻	84.0%
B ⁺	80.0%
B	72.0%
B ⁻	68.0%
C ⁺	64.0%
C	56.0%
C ⁻	52.0%
D	44.0%
F	

Start With the Student Outcome

- Traditional instruction: content-oriented

 What will I teach?
 Plan lecture.

- Modern instruction: learning-oriented

 What should students learn?
 How can that learning be measured?
 What activities promote the desired learning?
 **Design instruction and activities.**

A conscious choice made by the instructor

Depth of Learning

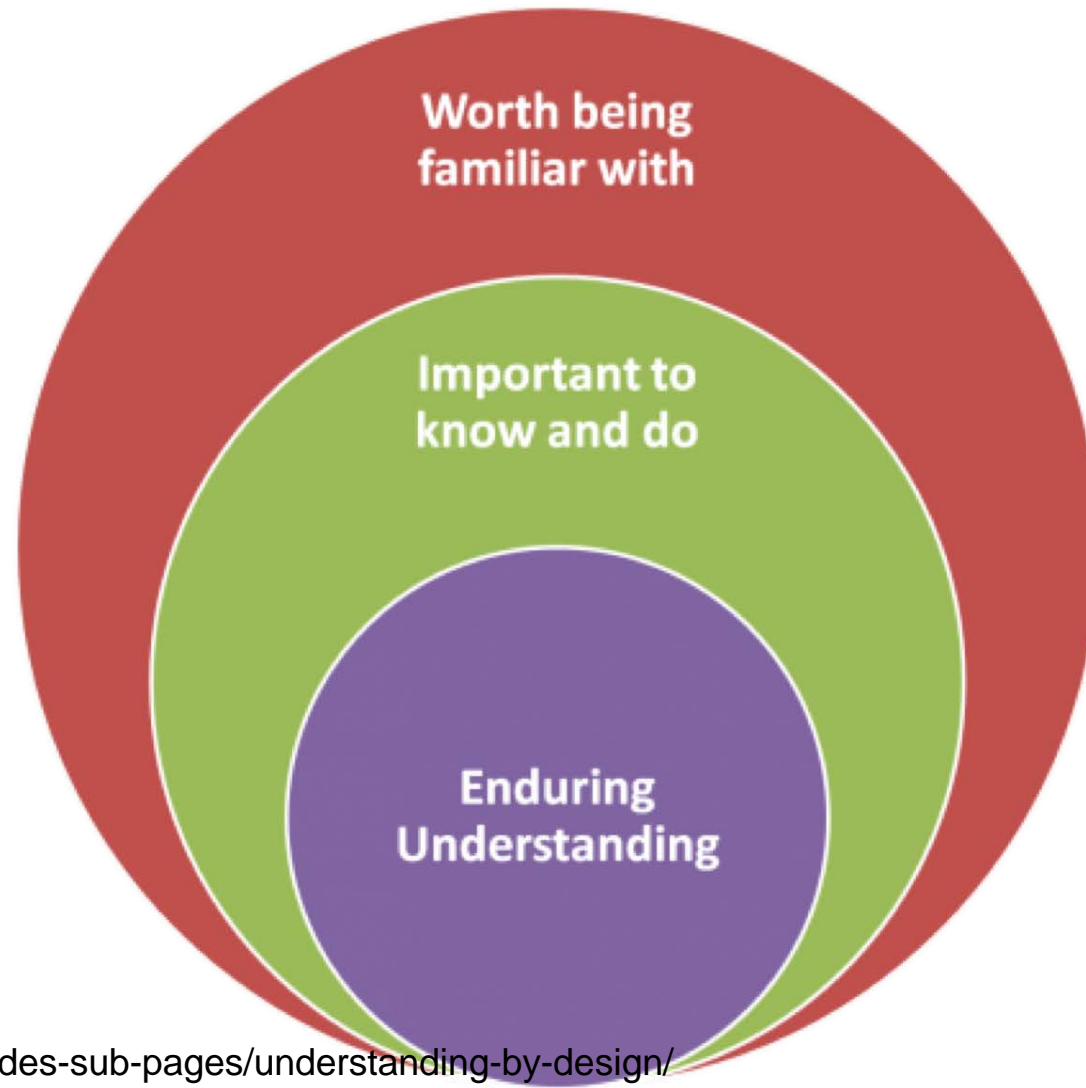


Image from <https://cft.vanderbilt.edu/guides-sub-pages/understanding-by-design/>

All are learning, which do you aim for?

Getting To Your Tidbit

Degree Outcomes

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graph TD; A(Degree Outcomes) --> B(Course Objectives); B --> C(Unit/Part/Week Objectives); C --> D(One meeting's Objectives); D --> E(Part of one meeting's Objectives = Tidbit);
```

Course Objectives

Unit/Part/Week Objectives

One meeting's Objectives

Part of one meeting's Objectives = Tidbit

Tidbit = a smaller unit of learning

Now What?

Tidbit = part of one class meeting = content
Your goal: turn that into a class experience/activity

Step 1. Identify the content area

Step 2. Pick a key concept or skill

 Step 3. Articulate goal for students (objective)

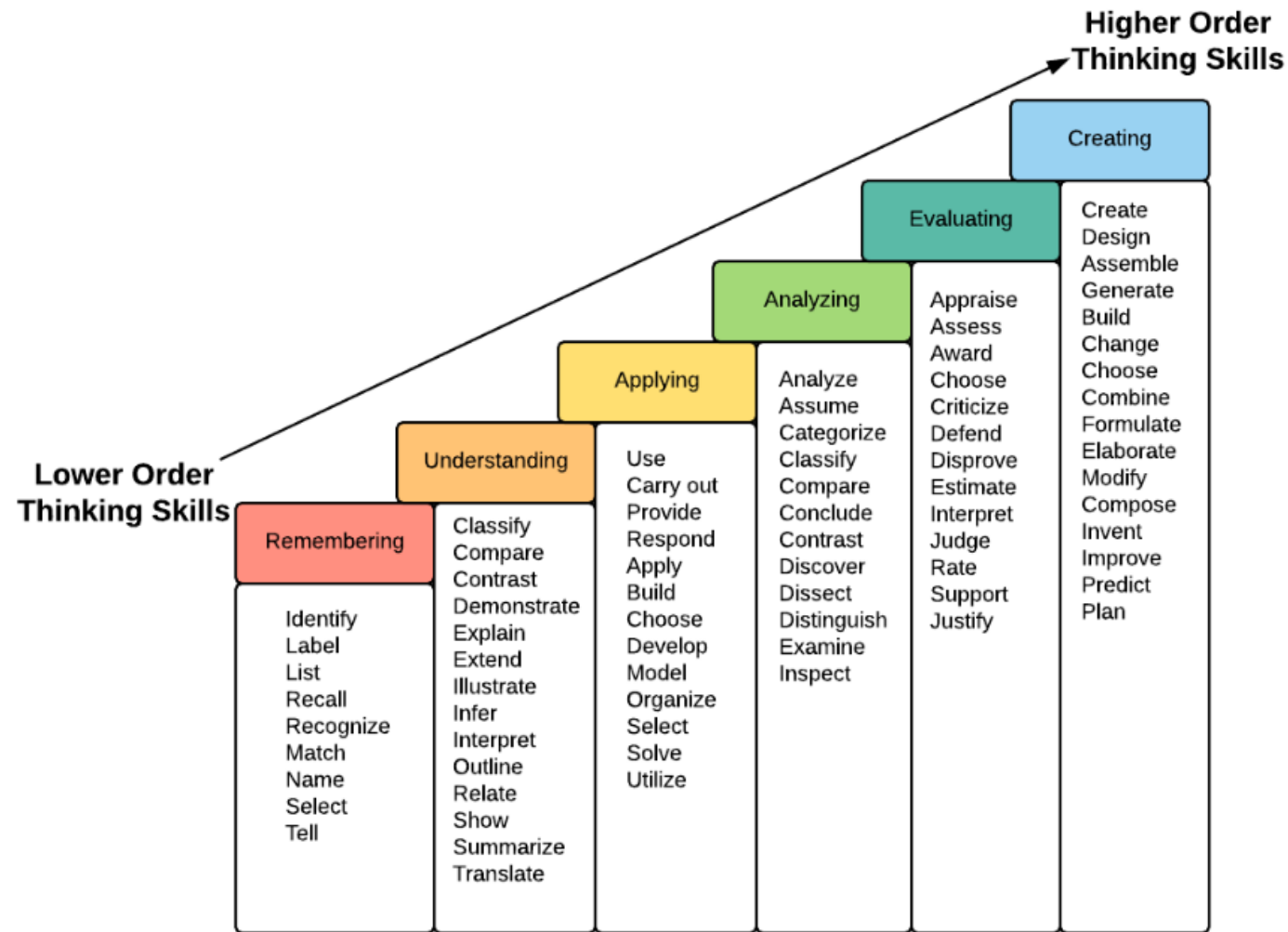
Step 4. Pick activity for content/skill

Step 5. Decide how to measure the outcome

Step 6. Practice

Off to work!

Bloom's Taxonomy of Measurable Verbs



Proper phrasing of goals helps you AND students