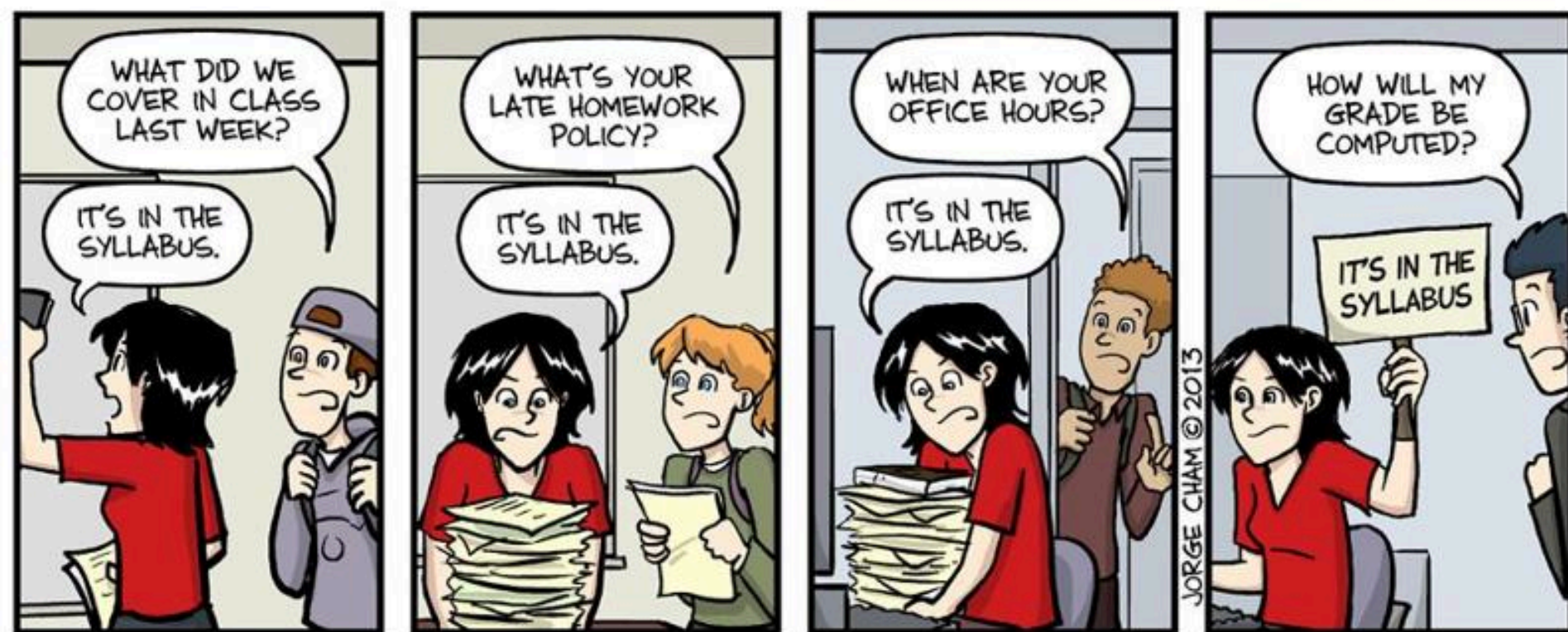


CREATING AN EFFECTIVE SYLLABUS

Amy Keirstead and Cathrine Frank
Presented to the CAS Faculty in 2013
and adapted for the CETL website





IT'S IN THE SYLLABUS

This message brought to you by every instructor that ever lived.

WWW.PHDCOMICS.COM

It's on the syllabus.

Essential Elements: Introduction

Meeting information

Title including course name, term

Course Syllabus for Chemistry 210 A/B, Organic Chemistry 1 University of New England, Fall 2012

Section A: MWF, 8-8:50 am, Alfond 205; Section B: MWF, 9-9:50 am, Marcil 202

Credit hours: 5.0; Prerequisite: CHE 111, minimum grade of C-; Corequisite: CHE 210L (lab) and CHE 210SA (lab lecture)

CHE 210 fulfills the "Organic Chemistry 1" requirement of many majors in the College of Arts and Sciences at UNE and is a pre-requisite for CHE 211 (Organic Chemistry 2), CHE 310 (Fundamentals of Biochemistry), and CHE 327 (Applied Physical Chemistry).

Instructor: Amy Keirstead, Ph.D.

Office: Morgane 010

E-mail: akeirstead@une.edu (preferred method of communication)

Phone: (207) 602-2264

Prerequisite, co-requisite information.
Role the course plays in the curriculum (major/core).

Office hours: Mondays 2-4:30 pm and Wednesdays 10:15-noon or by appointment (e-mail me to arrange a time).

Instructor information including preferred method of contact

Office hours. Best practice ≥ 4 h over at least two different days


Essential Elements: Outcomes

Course description (can copy from online catalog)



Course description: Organic chemistry is the chemistry of the compounds of carbon. CHE 210 is the first half of a comprehensive one-year course suitable for science majors. The first semester course includes structural and functional aspects of saturated and unsaturated hydrocarbons with various heteroatom functionalities. Discussion focuses on the mechanistic basis for organic compound reactivity. First semester laboratories concentrate on the basic techniques and procedures used in organic syntheses and separations, including microscale techniques. In addition, modern analytical techniques (e.g. infrared spectroscopy) used in the identification of organic compounds will be discussed.

Student Learning Outcomes: Upon successful completion of CHE 210, students will be able to:

- 
- (1) Draw and interpret chemical structures, identify functional groups and reactive sites, and assess the reactivity/stability of molecules based on their structural properties (structure-activity relationships).
 - (2) Generate, analyze, and interpret infrared spectra for organic compounds and correlate to structural features and functional groups.
 - (3) Perform conformational analyses of cyclic and acyclic hydrocarbons and identify stereochemical relationships, and to relate these structural properties to reactivity.
 - (4) Identify acids, bases, nucleophiles, electrophiles and leaving groups and predict how these will react in a chemical reaction. Predict the product(s) of a chemical reaction, identify reagents and reaction conditions, and write the reaction mechanism to explain the product formation.
 - (5) Generate, analyze, and interpret data to rationalize an observation or trend, or identify a pattern.

Student learning outcomes
(measurable ways to assess how
the objectives are being met).

Note: Some colleges additionally may require
“course objectives” which are overarching goals—
check with your Dean’s Office for direction

Essential Elements: Materials

Indicate required, recommended, suggested, as appropriate.

If materials are online or in the library, indicate where they can be found.

Course materials

Required:

- 1) Klein, *Organic Chemistry*, 1st Ed., Wiley, 2012.
- 2) Turning Technologies *ResponseCard NXT* "clicker".*
- 3) Darling, *Molecular Visions Organic Model Kit*.
- 4) Hayden McNeil *Organic Chemistry Student Laboratory Notebook* (100 carbonless duplicate pages).
- 5) Mohrig et al., *Techniques in Organic Chemistry*, 2nd or 3rd Ed., W.H. Freeman.
- 6) Chemical splash-proof goggles.

*Students purchasing a new clicker are eligible for a \$15 rebate. To redeem, visit rebates.turningtechnologies.com and use rebate code RuNE4.

Recommended:

- 1) Klein, *Student Study Guide & Solutions Manual for Organic Chemistry*, Wiley, 2012.
- 2) Harwood and Claridge, *Introduction to Organic Spectroscopy*, Oxford University Press, 1996.

Other considerations (as appropriate/at discretion of Instructor):

- List ISBNs
- Indicate which materials are required right away, and which materials students can wait to purchase.
- Can students use older editions?
- List instructions for technology (online homework access, clicker registration, etc.)

Essential Elements: Assessment

Course Assessment

Lab	25 points (25%, 250 points accrued in lab divided by 10)
Quizzes	8 points (8%) (10 @ 1 pt each, drop two)
Problem sets	12 points (12%) (4 @ 4 pts each, drop one)
Mid-term exams	30 points (30%) (3 @ 10 pts each)
Final exam	25 points (25%)
Total	100 points (or 100%)

List of components and weight

A blue arrow points from the 'List of components and weight' box to the 'Conversion to Letter Grades' table. Another blue arrow points from the 'How to convert assessment to a letter grade' box to the same table.

How to convert assessment to a letter grade

Conversion to Letter Grades: Your grade in points (out of 100) will be converted to the appropriate letter grade as follows:*

A = 94 and above	B+ = 87 to 89.9	C+ = 77 to 79.9	D = 60 to 69.9
A- = 90 to 93.9	B = 84 to 86.9	C = 74 to 76.9	F = 59 and below
	B- = 80 to 83.9	C- = 70 to 73.9	

*I reserve the right to modify this conversion scheme at my discretion, following the final exam, but not before. Modifications will always be in favor of the students.

Note that a "C-" is considered a pass for students whose major requires CHE 210 as part of the curriculum. A "D" is considered a passing grade for students who take CHE 210 as an elective. Students applying to the UNE College of Pharmacy require a minimum grade of "C" for admission.

Helpful for the student is if grading rubrics are incorporated into the syllabus or at least distributed sufficiently in advance to clarify how the assignment will be assessed [See tips on "Assessing your Course" on the CETL website]

Essential Elements: Assessment

Include detailed information about each assessment component, including:

when it is due

what is expected

Quizzes (8 points): Students will complete 10 quizzes throughout the semester; of these, the best 8 out of 10 will be counted and will each be assigned a grade out of 1 for a total of 8 points. The quizzes will be short, multiple choice format, and students will use the NXT “clickers” to complete them. The objective of the quizzes is to help students stay on top of the material and to be a self-assessment tool in between and in preparation for exams. Please see the course schedule below for quiz dates and note them accordingly in your calendar (note they are all on Monday mornings). **Quizzes will only be given in class at the specified time;** students who miss a quiz due to any reason will receive a zero for that quiz, but may use one of their “free passes” and drop that quiz. Answer keys for quizzes will be posted at 10 am on the morning of the quiz.

Problem sets (12 points): Students will complete four written problem sets throughout the semester; of these, the best three out of four will be counted and will each be assigned a grade out of 4 for a total of 12 points. The problem sets will be posted on Blackboard in the morning of the day specified and hard copies will be due **in class** on the due date – *no exceptions!* The answers for the previous problem set will be posted online immediately following submission, therefore **late problem sets will not be accepted.** The problem sets are designed as a tool for students to practice and master the course material in preparation for the midterms and final exam and will be comprised of both routine “practice” problems and more challenging “applied” problems. Please see the course schedule below for posting and submission dates and note them accordingly in your calendar.

policies on late work

Use of Blackboard/SafeAssign
(as applicable)

- Students should be able to look at the assessment description and have a general sense of what is expected.
- Specific information can be communicated with the individual assessments as the course progresses.

Essential Elements: University or College Policies

Check with your Dean's office, but you may be required to include certain policies, such as Academic Integrity, Mid-term Academic Progress, Access Statement, Use of Student Academic Success Center, etc.

For instance, in CAS college-wide policies with specific language are posted on V:\UNEDocs\CAS Dean\Syllabus_items.doc

or your college may allow you to

Reference the online catalog where these policies can be found.

Essential Elements: Your expectations such as attendance policies

Expectations for attendance

What happens if a student misses class?

Attendance: Students are expected to attend lecture. Attending lectures is an essential component to mastering Organic Chemistry; **if you do not attend regularly, you will have difficulty with the course.** Likewise, it is important to arrive at lecture on time – I begin lecturing promptly at the start of class, and showing up late is not only disruptive to the class, but you are also missing important material. **I reserve the right to refuse entry to a student who is consistently several minutes late and consistently disrupts the class as a result.**

Class attendance policies (including excusable absences) are consistent with those outlined in the undergraduate policy, <http://www.une.edu/registrar/catalog/1213/undergrad/policy.cfm#attendance>. If you are going to be absent from lecture, **you** are responsible for getting caught up on the material covered, by borrowing notes from a student, or reading the equivalent material from the text. I do not provide my lecture notes to students, and cannot hold tutoring sessions to re-teach the lecture to those who are absent due to my time constraints, but you can attend office hours to ask me questions about the material that you have difficulty with after you have made the effort to catch up.

How many classes can be missed?
What absences are excusable?
What happens if a student exceeds this?

How do students make up work?

Another consideration: what if you are absent/have to cancel lecture?

If I am going to be absent from class, I will let you know in a previous class or will e-mail the class and post an announcement on our class site at the earliest possible opportunity. I may or may not assign reading and/or practice problems in lieu of class.

Essential Elements: Your expectations and class policies

Other *recommended* policies to include:

- Statement on class participation – what is expected, consequences for non-participation
- Statement on use of cell phones, electronic devices, laptops
- Statement on extra credit opportunities
- Statement on confidentiality of materials
- Statement on how/when online resources (e.g., Blackboard) will be used (as applicable)
- Statement on method(s) of communication – e-mails, announcement on Blackboard, announcements in class, etc.
- Statement on late work (should also be in course assessment but a blanket policy may be included if applicable)
- *Others?*

Other Recommended Items

- Resources: what are the additional resources available to the student?
 - Library holdings (including reserve), web sites/discussion boards, peer tutor programs or review sessions, etc.
 - Suggested strategies for success.
- Dialogue or statement between the student and the instructor about expectations.
 - What is expected of the student, how can he or she meet those expectations?
 - What can the student expect of the Instructor?
 - Some faculty have the student sign a “contract” outlining expectations, adherence to policies including academic integrity.

Essential Elements: Course Outline

Organize by day or week as appropriate, and include:

lecture #(s) and date

Subject material

Associated readings

Lecture Outline:**

Week # / Lecture #	Dates	Topics covered	Sections of Text#	Class schedule
Wk 1, lectures 1-2 and Wk 2, lectures 3-4 (no class 9/3; Labor Day)	8/29 – 8/31 9/5-9/7	<ul style="list-style-type: none"> Course introduction Structure and bonding review: Lewis structures, octet rule, valency, bonding patterns, formal charges, VB and MO theories, hybridization VSEPR theory, electronegativity, dipoles 	1.1-1.4; 1.6-1.9	
Wk 3, lectures 5-7	9/10-9/14	<ul style="list-style-type: none"> Physical properties and IMFs: mp, bp, solubility Functional groups, structure drawing, DU, constitutional isomers, nomenclature 	1.12, 1.13 2.1-2.6; 4.1-4.3	F 9/7 PS 1 posted M 9/10 Quiz 1
Wk 4, lectures 8-10	9/17-9/21	<ul style="list-style-type: none"> Functional groups, structure drawing, DU, constitutional isomers, nomenclature Infrared spectroscopy: theory 	7.2, 8.3, 10.2, 13.1, 14.2, 20.2, 21.2, 23.2, 15.16 15.1-15.5	M 9/17 Quiz 2 9/21 PS 1 due
Wk 5, lectures 11-13	9/24-9/28	<ul style="list-style-type: none"> Infrared spectroscopy: using IR, interpreting spectra to identify structural features and functional groups 	15.6-15.7	M 9/24 Quiz 3 F 9/28 PS 2 posted F 9/28 1 pm MT 1

Pertinent course dates, e.g., quizzes, exams, due dates, guest speakers.

** Please note that this lecture outline is tentative and subject to change depending on the pace and progress of the class.

#The indicated text sections are **assigned** readings that correlate with the subject matter, not necessarily the date (depending on pace and progress of class). Students may read the text before or after coming to lecture, upon their preference, and are expected to complete the associated in-chapter "SKILLBUILDER" practice problems located within these sections of text.

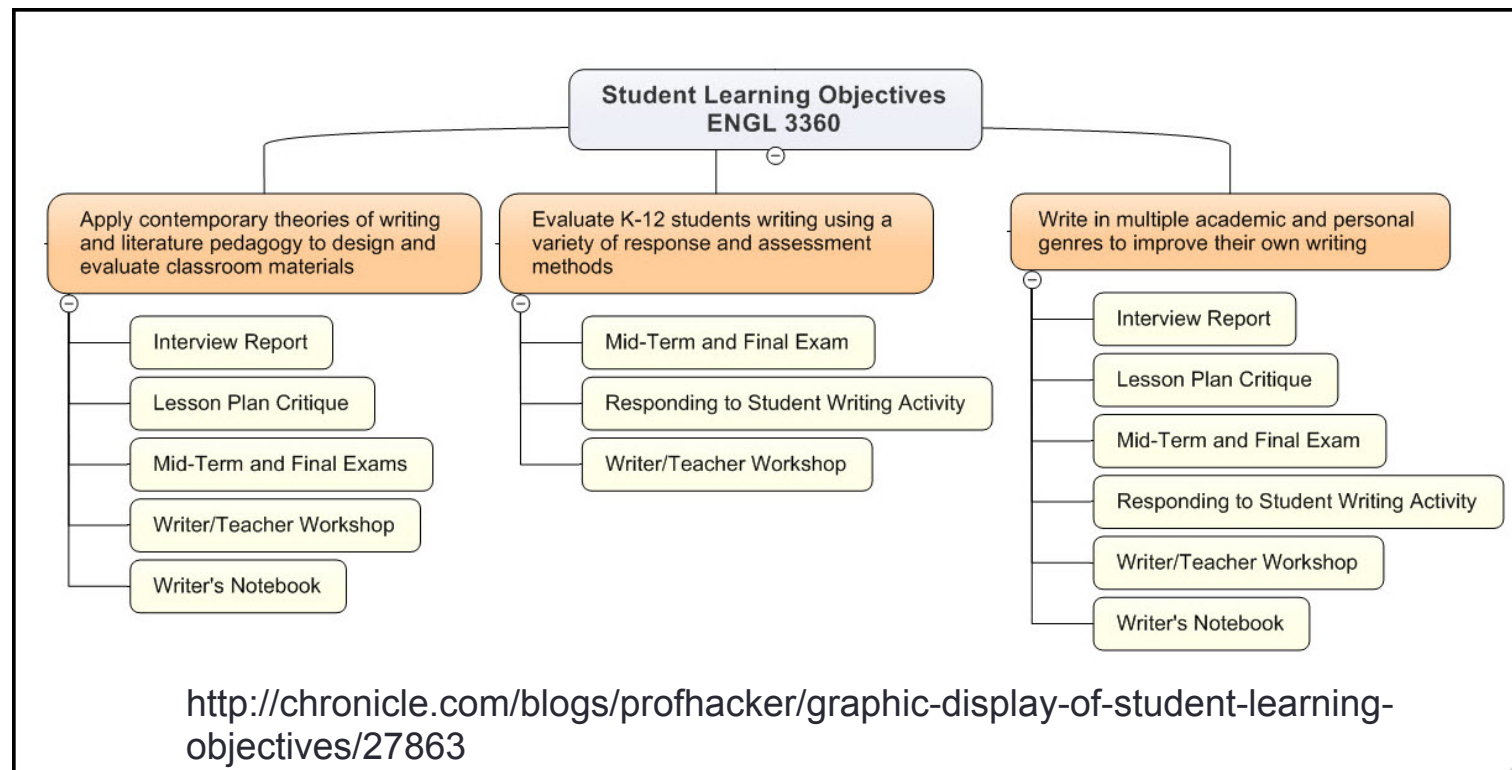
Where are the readings? Should the student read them before or after class?
What should the student do with the readings – read, outline, work problems?
What must the student do to be prepared for class?

Other General Considerations

- Write for your audience, using appropriate dialogue – are you teaching a freshman Explorations class, a 400 level majors class, or a graduate class?
- Use appropriately professional language but be clear to the student.
- Be thorough but concise – can components be extracted and posted separately or web links be used to avoid creating an unwieldy document?
- Proofread for clarity, typos, etc. (!)
- Use consistent formatting, e.g., headings, use of italics/bold/etc.
- Post an electronic copy so students can use active web links.
- Can be helpful to print on colored paper – students can easily find it.
- Rid your syllabus of the passive voice – encourage student engagement.

Yes, your syllabus can be creative!

- Allow students input into their grading scheme/assessments.
 - <http://chronicle.com/article/The-Promising-Syllabus/46748/>
- Add a student-specific SLO.
 - Allow them to create their own objective/outcome.
 - “Find something to fall in love with”.



- Create graphical displays of SLOs

Yes, your syllabus can be creative!

- There are many examples of creative syllabi online:
 - [Human Ways of Life \(ANT 100\)](#)
 - [Modern Latin American History](#)
 - [General Survey of Fiction](#)
 - [Fundamentals of Biological Anthropology](#)
- See more:
 - <http://chronicle.com/blogs/profhacker/creative-syllabuses/42114>
 - <http://chronicle.com/blogs/profhacker/creative-approaches-to-the-syllabus/35621>

Final tips and reminders

Your syllabus **will** evolve as you teach the class.

- Keep notes of what works and what doesn't, and make changes during the next iteration.
- Try to avoid 'syllabus bloat'!

You can contact the Center for the Enrichment of Teaching and Learning if you want help in crafting or revising your course syllabus.

Here are some books that contain sections on developing your syllabus available from the Center's lending library:

- Diamond, R. M. (2008). *Designing and assessing courses and curricula: A practical guide*. San Francisco: Jossey-Bass.
- Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses*. San Francisco: Jossey-Bass.
- Nilson, L. B. (2010). *Teaching at its best: A research-based resource for college instructors*. San Francisco: Jossey-Bass.
- Nilson, L. B. (2007). *The graphic syllabus and the outcomes map: Communicating your course*. San Francisco: Jossey-Bass.

There also are many resources online:

- <http://chronicle.com/blogs/profhacker/syllabus-extreme-makeover/22653>
- <http://chronicle.com/blogs/profhacker/11-fast-syllabus-hacks/22657>
- <http://chronicle.com/blogs/profhacker/rid-your-syllabi-of-the-passive-voice/22903>
- <http://chronicle.com/blogs/profhacker/from-the-archives-on-syllabicourse-design/25772>