

Teachable Tidbit – Part 1

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Teachable Tidbit – Part 1

- Goals:
 - Learning objective
 - Course Syllabi (but discuss this first)
 - Selection of Content

Syllabi

- Why do we give students syllabi?

Developing a Syllabus by Example

- Divide into groups of 3-4
- Part Ia:
 - Please look at the syllabi you were given
 - Each group should consider A, B, one other of your choosing (C, D, E, F or G), AND the syllabi that you have brought with you.
 - Discuss which features are in common and which are not. If not, which should be included and which left out?
- Part Ib:
 - Develop a set of guidelines that you believe are critical for a successful syllabus
 - Consider elements that might be useful from a pedagogical perspective
- Part II:
 - Edit your own syllabus to include critical features.
 - Share your thoughts with your neighbor

Syllabus — Handouts...

- GenChemSyllabusRedacted-A.pdf
- GenChemSyllabusRedacted-B.pdf

- AnalyticalSyllabusRedacted-C.pdf
- BioChemSyllabusRedacted-D.pdf
- PChemSyllabusRedacted-E.pdf
- BioChemSyllabusRedacted-F.pdf
- OChemSyllabusRedacted-G.pdf

Syllabus — Summary of Elements (from the group)

- Thoroughness:
 - But is a long syllabus too long?!
 - Avoid information overload
 - Way finding is key
- Content:
 - Need course objectives
 - Need list of course content/schedule or not?
 - List specific skills (for idea evaluation)
 - Better course description
- Include honor code and university requirements
- Very detailed about class activities
- Describe mechanism for contacts (e.g. subject)
- Legend/key for symbols
- If you use a chart, make it easy for them to get it
- Define specific rules...
- Need list of additional resources
- Grades break-down
- Define target audience well, and use language appropriate to them
- Layout is important... Use tables/diagrams
- Advisory information:
 - Keys to success

Questions to Consider

- What is the purpose of a syllabi?
 - Contract (policies, dates, commitments, expectations, etc.)
 - Pedagogy (outline course objectives, etc.)
 - Other
- Authoritarian or flexible
 - Exam dates and policies
 - Homework collaboration, dates and policies
 - Screens: yes, no, maybe?
 - Schedule of course topics and reading assignments
- How available do you want to be?
 - In person
 - E-mail (and to what extent)
 - Other social networking?
- On university-wide policies (like honor code or diversity) do you want to provide:
 - Full details, URL, or something in between
- Differences between general introductory classes, majors classes and graduate courses?

Objectives

- Department will have “Program Level” Objectives for your course
 - Improve student ability to synthesize new knowledge
- You will have “Course Level” Objectives that should be consistent with Departmental Objectives
 - Critical evaluation and critique of primary journal articles

Effective Objectives¹

1. Describe what you want your students to learn in your course.
2. Are aligned with program goals and objectives and the rest of the students' curriculum.
3. Tell how you will know a teaching goal has been achieved.
4. Use action words that specify definite, observable behaviors.
5. Are assessable through one or more indicators (papers, quizzes, projects, presentations, journals, portfolios, etc.)
6. Are realistic and achievable.
7. Use simple language.

¹ Cal State University Learning Center

Example Objectives

At the end of this course students will be able to:

1. Critically interpret the experimental procedure of report in *Organic Letters*.
2. Recognize the major functional groups and reactivity of organic compounds.
3. Determine and apply the appropriate statistical procedures to analyze the results of simple experiments.
4. Report results with correct precision, standard deviation and significant figures.
5. Correctly identify the major steps in protein synthesis.
6. Determine the heats of a reaction given a table of heats of formation.
7. Calculate the expectation value of an arbitrary observable in position or space for a hydrogenic orbital.
8. Understand chemical bonding in terms of molecular orbitals and valence orbitals.

First Deliverable

- Hierarchy of Learning Objectives:
 - Big-level objective to be included in a syllabus
 - Daily-level to be covered in a lecture that fits within the objective of the class syllabus
 - Micro-level to be covered in a lesson that fits within the objectives of the lecture
- You need to design a micro-level objective (showing how it fits in the hierarchy)
 - This is your “selection of content”

Teachable Tidbit Report

- 12:15PM - 12:30PM
- You can respond to any one of these:
 - “selection of content”
 - Your response to any of the concepts that have been discussed
 - Are you surprised at the level of thinking that needs to go into a syllabus and/or the selection of content?