Coverage of Bio Topics

- Separate biochemistry classes should make this redundant, however a course taught from a chemical perspective would be most useful for organic students. This is often not the case for existing biochemistry classes.
- Most people prefer judicious selection of biochemistry examples to supplement traditional organic topics.

Nomenclature

- Is this an important topic? Mixed opinions.
- Some departments include this in first-year general chemistry.
- Some instructors have students read/learn this subject on their own.
- Some teach this, but with reduced emphasis.
- Online testing can be used to reinforce concepts and test students.
- Trivial/common names included in addition to IUPAC.

Spectroscopy

- Most teach this according to standard textbook-timeline: IR close to functional groups; NMR in second term.
- Some cover all spectroscopy at once.
- Some skip ^{13}C NMR spectroscopy.

Reactions

- Some concerns about the utility of some arcane reactions.
- Certain reactions have limited practical usage, but are essential for pedagogical reasons.
- Most agree there is room for modernization of some reactions, but would be difficult to drop the majority of dated reactions.
- Are there too many reactions? Some say yes; some no. There is some value in having a large number of reactions to encourage students to identify general mechanisms.
- Some departments include basic organic reactions in first-year general chemistry saving time in second year organic courses.

Retrosynthesis

- Students need to have a ‘toolbox’ of reactions before they can get anything out of the exercise.
- Hard to give students complex problems, which limits the use of doing retrosynthetic problems
- Best to save for third and fourth year courses.

Two or three semester sequence?

- Still need to review concepts either way.
- Does this really allow for additional material? To some degree – but not that much more.
- Does this reduce or enhance performance/understanding? Not sure.

MO Theory

- In introductory courses, most just use in Diels-Alder reactions and for discussions of conjugated systems.

Radical Chemistry

- Doesn't this just complicate issues? Additional arrows/possibilities for students?
- Polymer chemistry can be a useful touchstone for the students and teaching of radical chemistry is essential for this.
- Many do cover it, but only briefly.

Teaching with Multiple Instructors

- Obvious problems: differing levels of coverage, different exams, equity in grading.
- Some solutions: coordinate topic list, team teaching (one instructor for a series of topics in multiple sections), consolidated exams.
- Some expect resistance to some of these approaches.
- Does coordination of topics across multiple sections impinge on "academic freedom"?

Mechanistic vs Functional Group Approach

- Is there a preference for teaching from one or another perspective?
- Seems that some favor one or another; but most prefer to introduce groups of reactions through mechanism.
- Consensus that few textbooks do this approach well.
- Mechanism approach simplifies material for students.

On-line notes

- Some use; some don't.
- Many do not like the de-emphasis of writing for the students in class.
- Those that use online notes encourage note-taking by leaving gaps in the notes or addressing supplemental topics.
- Students benefit from paying attention in class instead of scrambling to keep up with writing.

Textbooks

- Most require a single textbook but some use two textbooks for a three-term sequence.
- Many seem to focus on using problems from book, but not really used for instruction/reading. Problem/solution manuals could be a better option for some.
- Many offer online notes that supplement or supplant the text.
- Cost of books is high for students based on benefit to them.
- Some options: Oxford “primers”; write own modular textbook and make available to instructors, write own problem set manual

Bridging

- Bridging between general and organic courses is not optimal. Many feel that common topics (acids bases etc.) are not covered well enough in general courses forcing organic instructors to repeat.
- Bridging between two semesters of organic – multiple instructors can cause issues when coverage is different.