

Appendix 1

SALG Baseline Survey

Instructions to students:

Teachers value students' feedback and take it into account when improving their courses. Please be as precise as you can in your answers. Please choose "not applicable" for any activity you did not do. You may find one or more questions at the end of each section that invite an answer in your own words. Please comment candidly, bearing in mind that future students will benefit from your thoughtfulness. Remember that this is an anonymous survey: your teacher will never know what any individual student has written.

Understanding

1. Presently, I understand...

1.1 the following concepts that will be explored in organic chemistry:

	not applicable	not at all	just a little	somewhat a lot	a great deal
1.1.1 how to use the Periodic Table	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.2 how to draw Lewis Dot structures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.3 how to assign formal charge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.4 how to predict 3-D shapes and polarity of molecules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.5 orbitals, including atomic, hybrid and molecular	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.6 how to name alkanes, alkenes, alcohols, alkyl halides, ethers, thiols, epoxides, and enantiomers by the IUPAC system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.7 how to identify all the functional groups present in a given organic chemical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.8 how to propose and predict the outcome of acid-base reactions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.9 how IR, NMR, and mass spectroscopy work & how I can use each kind of spectrum to identify structural facets of an unknown molecule	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.10 how to recognize the difference between conformations, constitutional isomers, and configurational isomers, including enantiomers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.11 how to identify chiral molecules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.12 how to draw the stereoisomers of chiral compounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.13 how to identify the stereochemical relationship between structures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.7 how studying organic chemistry helps people address real world issues

1.8 What concepts would you like to understand at the end of the course?

Skills

2. Presently, I can...

not applicable **not at all** **just a little** **somewhat a lot** **a great deal**

2.1 Find published data I need for lab work and report writing

2.2 Critically evaluate debates in the media about issues related to science involving organic chemistry

2.3 Identify patterns in data

2.4 Recognize a sound argument and appropriate use of evidence

2.5 Write documents in the style and format appropriate for chemists

2.6 behave as an effective team member

2.7 behave as an effective leader

2.8 interact productively to solve problems with a diverse group of classmates

2.9 analyze chemical models and draw appropriate conclusions

2.10 develop testable hypotheses

2.11 design and execute experiments

2.12 What skills would you like to gain or improve upon during this course?

Attitudes

3. Presently, I am...

not applicable **not at all** **just a little** **somewhat a lot** **a great deal**

3.1 Enthusiastic about learning organic chemistry

3.2 Interested in discussing topics related to organic chemistry with friends or family

3.3 Confident that I will understand and

succeed at organic chemistry

3.4 Comfortable working with complex ideas

3.5 Willing to seek help from others (teacher, peers, TA) when working on academic problems

3.6 What are your reasons for taking this course?

3.7 Please comment on your interest level in the subject PRIOR to the beginning of the semester.

3.8 Please comment on your present level of interest in the subject.

Integration of learning

4. Presently, I am in the habit of...

not applicable **not at all** **just a little** **somewhat a lot** **a great deal**

4.1 Connecting key ideas and reasoning skills that I learn in my classes with other areas of my life

4.2 Using systematic reasoning in my approach to problems

4.3 determining how each piece of new information or knowledge fits into the pattern of my existing knowledge

4.4 critically analyzing data and arguments before I make an action plan

4.5 Please comment on how you expect the organic chemistry material to integrate with your studies, career, and/or life:

Future Plans

5. Please characterize your future plans at this time:

No **Yes** **not applicable**

5.1 I plan to major in chemistry.

5.2 I plan to attend a health-related professional school (medical, dental, vet,

pharmacy, etc.)

5.3 I plan to attend graduate school in the natural sciences.

5.4 I plan to gain employment as an engineer.

5.5 Please comment on your future plans here, especially if none of the above apply:

5.6 Have your future plans changed since you entered the university?