

CHEM 142 A  
General Chemistry  
Course type: Face-to-Face

Evaluation Delivery: Online  
Evaluation Form: B  
Responses: 342/603 (57% high)

Taught by: Colleen Craig, Damian Dunford, Raymond Jin  
Instructor Evaluated: Colleen Craig-Lecturer

**Overall Summative Rating** represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
4.0	4.7
(0=lowest; 5=highest)	

**Challenge and Engagement Index (CEI)** combines student responses to several IASystem items relating to how academically challenging students found the course to be and how engaged they were:

<b>CEI: 5.5</b>
(1=lowest; 7=highest)

## SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	342	22%	36%	31%	9%	1%		3.7	4.5
The course content was:	341	21%	40%	30%	7%	2%		3.8	4.4
The instructor's contribution to the course was:	342	40%	35%	17%	6%	1%		4.2	4.9
The instructor's effectiveness in teaching the subject matter was:	341	38%	38%	15%	8%	1%		4.2	5.0

## STUDENT ENGAGEMENT

Relative to other college courses you have taken:	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Do you expect your grade in this course to be:	337	8%	14%	25%	27%	15%	6%	6%	4.4
The intellectual challenge presented was:	338	21%	41%	22%	12%	2%	1%		5.8
The amount of effort you put into this course was:	337	23%	40%	18%	13%	4%	1%	1%	5.8
The amount of effort to succeed in this course was:	338	31%	41%	17%	9%	2%			6.0
Your involvement in course (doing assignments, attending classes, etc.) was:	338	25%	38%	20%	13%	4%			5.8

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

**Class median: 10.7 Hours per credit: 2.1 (N=334)**

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	2%	9%	13%	17%	15%	13%	11%	8%	6%	3%	4%

From the total average hours above, how many do you consider were valuable in advancing your education?

**Class median: 7.9 Hours per credit: 1.6 (N=334)**

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	1%	9%	16%	20%	17%	13%	8%	7%	3%	3%	1%

What grade do you expect in this course?

**Class median: 3.2 (N=333)**

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	F (0.0)	Pass	Credit	No Credit
8%	24%	19%	14%	13%	8%	6%	3%	3%	1%	1%				

In regard to your academic program, is this course best described as:

**(N=333)**

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
38%	30%	1%	1%	26%	4%

**STANDARD FORMATIVE ITEMS**

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	336	30%	41%	21%	5%	1%	1%	4.0	5
Sequential presentation of concepts was:	338	28%	43%	21%	6%	1%		4.0	10
Explanations by instructor were:	339	35%	40%	18%	6%			4.1	7
Instructor's ability to present alternative explanations when needed was:	338	35%	38%	18%	7%	1%		4.1	8
Instructor's use of examples and illustrations was:	338	41%	40%	15%	3%	1%		4.3	2
Instructor's enhancement of student interest in the material was:	338	34%	37%	20%	7%	2%		4.1	4
Student confidence in instructor's knowledge was:	339	49%	37%	12%	3%			4.5	6
Instructor's enthusiasm was:	338	59%	27%	12%	2%			4.7	1
Clarity of course objectives was:	338	34%	41%	19%	5%	1%		4.1	3
Interest level of class sessions was:	338	23%	35%	30%	10%	2%		3.7	11
Availability of extra help when needed was:	338	31%	33%	25%	9%	2%		3.9	16
Use of class time was:	338	30%	39%	24%	5%	1%		4.0	9
Instructor's interest in whether students learned was:	337	38%	34%	20%	7%	1%		4.1	12
Amount you learned in the course was:	338	28%	36%	27%	8%	1%		3.9	14
Relevance and usefulness of course content were:	337	28%	39%	23%	8%	1%		3.9	15
Evaluative and grading techniques (tests, papers, projects, etc.) were:	338	23%	31%	27%	12%	4%	2%	3.7	17
Reasonableness of assigned work was:	339	26%	30%	27%	12%	4%	1%	3.7	18
Clarity of student responsibilities and requirements was:	336	32%	38%	22%	7%	1%		4.0	13

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## STANDARD OPEN-ENDED QUESTIONS

### Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. The class did stretch my thinking, the content was more in depth compared to high school materials.
2. The content was very challenging and the tests were next to impossible.
3. Yes it was. I had to work very hard for this class.
4. Yes because it contained challenging content
5. Yes because the stoichiometry calculations challenged me as I had not understood it before but now I felt good about it.
6. Yes because it was in depth information that was clearly conveyed.
7. It was intellectually stimulating. Craig's lectures are amazing. The class made me want to explore more in Chemistry. Her professional way of instructing definitely stretched my thinking.
8. No. Intro chemistry.
9. Yes. This class required me to think in different ways and connect ideas together in order to understand the concepts rather than just memorize examples.
10. Not really since I had learned most of the content in highschool
11. Yes this class was intellectually stimulating because it was a challenge.
13. I am more intellectually stimulated by applied learning. Some times I thought about the applications of what I was learning, but, for the most part, I do not know how I will use what i learned.
14. Definitely Unit 1 was the hardest for me, mostly because it was about quantum mechanics (which was something I never conceptualized very well)
15. I think this class is semi intellectually stimulating. I feel like there were a lot of materials and I was more focus on completing tasks rather than retaining information and stretching my thinking. Although doing the Aleks objective, it helped me stretch my thinking.
16. The concepts presented in this class were intellectually challenging, so naturally the class stretched my thinking.
17. Yes, critical thinking was involved as you were required to be able to apply concepts to real world situations, straying from the standard scientific based questions.
18. It helped the most with the examples provided and the practice problems done in class
19. It was stimulating because the things that were performed in class was able to advance my tinkling into the major that I am potentially going into.
20. Yes. Interesting concepts. Basically just fancy algebra.
21. The class was knowledgable. There were times in which it was challenging, but there was never an instance where it was absurd. The class was extremely well taught. I only wish I had dedicated more time to receive a better grade.
22. This class was very intellectually stimulating to me and was a lot more challenging than I expected. It was challenging however in a positive sense and I feel as though I grew mentally from it.
23. The class was intellectually stimulating because we had the opportunity to discuss questions posed in class with our classmates, and much of the material presented was contextualized with examples.
24. Yes, it made me enjoy Chemistry more. it made me think on a atomic level.
25. Most of topics of the covered in General Chemistry 142, were things that were covered in High school Chemistry. I personally forgot some of the things, I have learned. And it was a very good refresher. Some of the new topics were challenging, and hard to understand at times.
26. I had already taken two years of chemistry so much of the class was review, but after listening to Dr. Craigs lectures I felt more confident in my knowledge of the material..
27. In a way yes, but there is still so much to learn before I can start thinking more about this class.
28. nope, it's just basic fundamental chem that i'll need to rely on and understand well when I get into the good stuff later on.
29. It was very different from high school chemistry but I could pull on my prior knowledge on some topics.
30. The intellectual stimulation was limited. Most of the work associated with this class involved familiarization with the different avenues in which the material may be presented, and solving these problems within strict time constraints. A limited series of problems involved some level of critical thinking (mostly pertaining to algebraic application and mathematically setting up a problem) were present, but these problems did not normally arise in substantial volume on graded assignments (labs, exams, etc) and thus I did not feel that my ability to think was stretched by the presented course material.
31. Yes, I think this class is intellectually stimulating and it had stretched my thinking because all the math work that is attached to chemistry materials, also, the multiple choice type of tests made me recognize chemistry in a very different way and it helped me study better.
32. this class taught me something that I haven't learned before.
33. Yes, it was interesting.

34. It was interesting and difficult.
35. This class was intellectually stimulating because it made me think about how the different parts of chemistry connect.
36. I learned most of the material in AP Chemistry last year so i didnt have a hard time with the class. Dr. Craig taught the material in a good way and would explain some of the reasons behind what we are learning and that made the class much more interesting.
37. There was a lot covered in a short amount of time. The concepts we're challenging.
38. Yes, ALEKS allowed me to "stretch my thinking".
39. This class was intellectually stimulating. The concepts were all challenging but I was able to understand them.
40. Yes, Professor Craig not only included the mathematics involved, but also the history as well. She presented the information and really pushed us to be able to apply it to situations she had not given as examples previously.
41. Yes chem is difficult
42. Yes, It challenged me in a topic that many consider to be difficult and it also challenged me to do better in order to learn
43. Yes, this class was intellectually stimulating because I learned a lot of new information
44. It was basic to me because I've taken the honors and AP version already in high school.
45. I had to think about the concepts to really understand them.
46. Yes, it made me question my previous chemistry education in how deep it went into certain topics
47. Yes this class was intellectually stimulating. A majority of the topics were more in depth than the high school level that I took, so I had to try harder to understand and connect topics.
48. The class did stretch my thinking as I have taken 3 years of chemistry prior, but it still showed me new concepts and different ways of thinking.
49. I think it was intellectually stimulating and it stretched my thinking. ALEKS challenged me a lot and made me teach myself stuff.
50. This class was intellectually stimulating because every assignment or any other work involved a thinking process and an explanation to every answer. This class stretched my thinking because it made me think outside the box and I had to put extra effort in order to understand the information and context.
52. Yes
53. Yes because the way she presented examples made me think about concepts in various ways
54. Yes, some questions in the quizzes and tests requires you to apply what you learned in a slightly different way to solve. In other words, you are given different variables than what you are used to solve for the answer.
55. Yes, the general chemistry series is difficult on its own, and to understand it, the effort needed is a lot.
56. Yes, the lectures were presented very well and very clearly which made me understand the material more and had me asking questions
57. Somewhat. The material was very general because this class is a prereq for almost every STEM major. This made it hard to relate it to what I am interested in.
58. Most of the content I had covered in high school AP classes, but it did present new information in a new manner.
59. yes, I learned a lot of things although I took chemistry courses in high school
60. It was not intellectually stimulating, but STEM classes rarely are.
61. Yes, this class was intellectually stimulating and helped me stretch my thinking. I have always struggled with stem classes and I took this class to learn about how I study best. Although I may not turn out with the best grade, I am confident that I will do significantly better in any other STEM class because I learned how I can study properly.
62. Yes. I learned chemistry on a level that I have not experienced before.
63. I think this class helped me understand chemistry more and get interested in. I used to memorize all the formulas and elements' name but now I don't memorize it but realize it.
64. It was intellectually stimulating, and it introduced me to new ideas which helped stretch my thinking. That said, it is general chemistry, so it wasn't trying to stretch my thinking beyond the relevance of the class.
65. Yes. The content was presented in a way that promoted more thinking compared to similar courses in high school.
66. Yes. It forced me to think more conceptually about chemistry and it's applications to real life.
67. This class was intellectually stimulating. It made me consider topics that I had learned about previously in a new way and changed my view on certain topics in the natural world. The class itself made me think as to why some things were the way they were, as well as how to critically evaluate a problem and understand what to do.
68. yes. the concepts were very difficult.
69. Yes, I was forced to go farther in my studies.
70. It was. It was high-quality material that was challenging.
71. Yes, the questions took our understanding of a general topic and applied to something new and complex.
72. This class was intellectually stimulating because I hadn't taken a chemistry course in a long time and it really pushed me out of my comfort zone.
73. Yes it was intellectually stimulating. Dr.Craig especially showed how current modes of thinking evolved which really expanded my understanding of chemistry principles. She was also willing to explore more complex and difficult to understand or abstract topics and how chemists go about making sense of them.
75. This class was intellectually stimulating and it stretched my thinking because Craig encouraged engagement with the material in new and different ways than I had been taught previously.
76. It was intellectually stimulating and did stretch my mind.
77. it was because it was hard

78. No. We were just giving different laws etc. to learn and different ways to do problems with math. I never learned how any of this impacts our world or where we would see it in science majors or jobs.
79. No, the course was about what I expected for a general chemistry course.
80. Yes it was, this material went way beyond my high school chemistry knowledge. I learned a lot and put lots of effort in so I could understand the material.
81. Yes, but I am already familiar with the material.
82. I have taken AP chemistry in high school, but this class helped to clear up things I didn't completely understand.
83. A little bit only because most was review from high school honors chemistry.
84. This class was indeed intellectually stimulating. It stretched my thinking in that I was able to understand chemistry more thoroughly than in previous settings and continuously challenged me to have a better grasp on concepts within the course. The subject was cumulative so I got to build onto concepts previously learned which I found satisfying.
85. It did stretch my thinking because I have had little knowledge of chemistry.
87. To be honest, I do not really like chemistry. Since this was the first level of chemistry (meaning we only learned about stoichiometry, bonds/bond structure, etc), I did not find it to be intellectually stimulating. But that did not have anything to do with the class or the instructor. I just do not have a big interest in chemistry to begin with.
88. While I thought this class was challenging, I wouldn't say that it was really stimulating. A lot of the subjects we covered I had learned about in the past. The really challenging part was refining that knowledge by practicing it over and over again.
89. Yes it did because I had to make connections from each individual topic and relate it to the subject of Chemistry as a whole.
90. It is pretty inspiring and intellectually stimulating.
91. It was not that stimulating because most of the content was pretty basic, and was some review of previous high school classes.
92. Yes, it was one of the few classes that I enjoyed taking. It required thinking in multiple steps that were logical yet intellectually demanding.
93. Yes because she went over many problems and showed us videos and did experiments.
94. The class was definitely intellectually stimulating. A few questions definitely stretched our thinking to its maximum.
95. Yes, it made me realize what college thinking means. Not just understanding a concept and understanding the math, but actually how they work hand and hand. This was a great introduction to higher level learning.
96. I had already learned the material presented in this course before I took it
97. It was more of an in-depth review of what I had learned previously. It added on to what I knew, so it was stimulating.
98. This class was intellectually stimulating. It stretched my thinking because in order to do well I had to understand the concepts to their deepest level.
99. Being a general chemistry class, we weren't able to go into enough depth to be intellectually stimulating.
100. Yes. Some of the chemical concepts were definitely intellectually stimulating.
101. Yes, it taught me a lot and was very difficult
102. yes, a lot more application than high school chem
103. The class was intellectually stimulating because Craig talked about chemistry beyond the eyes of the textbook.
104. This class was very mentally stimulating for me, because a large portion of what I learned was new information.
105. Yes because it is very hard but interesting
106. This class was intellectually stimulating as the instructor used many different ways to teach the material, including on slide notes, diagrams, and pictures, as well as videos and live demonstration. It did stretch my thinking as it helped me visualize these concepts in how they would work in the real world.
107. yes because it definitely challenged me, I thought this shouldn't have been as hard as it was but yeah
108. I really really enjoy chemistry, so in terms of the content this class was definitely intellectually stimulating. I definitely think that it stretched my thinking, because I had to a lot of the teaching myself because at times Professor Craig would rush over things and not pause to explain something more.
110. Would have liked better thought out lectures. Some lectures seemed unrelated, or not useful to the week's quiz.
111. I feel that the Lectures were intellectually stimulating, just because it builds a border of information for what we have to learn on our own time.
112. Stimulating, but difficult
113. Yes, because it made me make connections about what we learned.
114. Yes
115. Yes, I learned a lot of new things.
116. It is not really hard. It is relatively easy because it is related to high school chemistry.
117. Yes it was hard but I learned the basics of chemistry I needed to
118. This class challenged me to approach chemistry in ways that I haven't before, as the concepts were different and in some ways more difficult than I have previously encountered. This class also pushed me to become more efficient with studying.
120. It did. The content was very dense and I had to go back and make sure I didn't miss concepts to grasp the biggest concept.
121. The labs were pretty good. They were fun and applied the material we were learning
122. Yes, the class was very difficult
123. Yes it did
125. Yes

126. i already learned a lot of it
127. it was fine, I'm new to chem and it stretched my thinking, sometimes too far
128. This class challenged me intellectually because chemistry is a difficult subject but very important and just need time to understand.
129. Yes. The class was intellectually stimulating.
130. no
131. This class was challenging and required a lot of thinking. It definitely stretched my thinking.
132. This class was intellectually stimulating and it did stretch my thinking because chemistry is very complex and requires a lot of work to understand and practice.
133. Yes because as an international student I had to adapt to the language and to the differences in teaching.
134. No, already taken 4 years of high school chemistry
136. yes, required me to think about problems in a new way
137. Yes because the content is applicable in my work.
138. Yes, the class definitely stretched my thinking. It forced me to think of concepts and strengthened my core concepts.
139. Yes the topics were interesting and were presented in a really approachable manner.
140. This class was quite challenging and required a lot of thought and effort into understanding and combining various concepts.
141. Very, provided a very strong introduction to chemistry concepts
142. Yes, it was pretty challenging, especially after the 1st month. It did stretch my thinking as I struggled several times.
143. Yes, the topics were difficult and required more thinking.
144. At some point, yes. But I've learned most of the class content in high school.
145. I found that class to be partially intellectually stimulating, but that was due to the fact that I have covered a larger portion of the material already during high school. The parts that I am unfamiliar with caused me to have to stretch my thinking a fair bit.
146. I recalled a lot of the information learned from my high school Chemistry class, so this class was not particularly intellectually stimulating.
147. Yes, it was a lot of work.
148. Yes, it taught valuable foundational information to start me on the chem series
149. The content was decently interesting
150. Yes this class was very interesting and engaging.
151. It did not stretch my thinking. This class is really difficult and I was unable to cope with it.
152. I thought the class was both of those things. The concepts are difficult enough to master that it probably takes a good two weeks of practice for each unit, which is about what you're given.
153. no, but chemistry is not my thing
154. I have taken many chemistry courses in high school, and this was most similar to AP chemistry but it was still intellectually stimulating.
155. Yes. I relearned concepts I have not studied in a long time in a new way that changed my view on the topics.
156. Yeah because she only taught some aspect of it but tested on the rest
157. No, poorly taught class
158. Yes, it made me think of concepts in a way I hadn't before
159. Chemistry is very stimulating because it constantly requires students to bring concepts together to solve difficult questions. Every new concept learned is usable in many different styles of questions.
160. Yes definitely, although I had already learned some of these topics before this course went deeper into topics I had learned and branched out on them.
161. Yes it did stretch my thinking because I had never learned about quantum mechanics until I took this course.
162. I do not find the content especially interesting so it was difficult to remain engaged, but the material was challenging to me so yes at times.
163. Yes it required conceptual and critical thinking applications of the learned lecture topics.
164. It was an interesting class because I got to do more chemistry.
165. Yes. It was challenging however I was re-learning most of the material since I took AP Chemistry in High School. It did strengthen my abilities as a college student however.
166. Yes, I enjoyed what I learned in this class.
167. Many concepts challenged thinking and required effort to understand
168. This class was very stimulating. It stretched my thinking from the very beginning because we started with quantum mechanics. It's understandable though because it is a weed out class.
169. Yes it stretched my thinking, and knowledge because of all the new material being taught, and the different ways to learn the topics.
170. This class was not intellectually stimulating. Most of the class was not used to discuss examples but concepts.
171. This course showed me that chemistry is more interesting than I had previously thought, but my interest is not much elevated beyond the fact that I need this class as a pre-requisite.
172. Yes, it really challenged me. I enjoyed the concepts but it was difficult for me to understand right away.
173. Yes, the topics of the course were both challenging and interesting to delve into.
174. Yes

175. Yes
176. Yes
177. Yes, a good stretch.
178. Both yes because it challenged us in all ways.
179. I think this class was definitely stimulating with the interesting examples and demonstrations in class. I think it stretched my thinking in looking at concepts I'd already learned but from a different perspective.
180. Yes. Normally chemistry is a subject that I am not very fond of, however, this class has changed my mind.
181. Yes this class was intellectually stimulating, since a lot of the concepts were new to me.
182. Yes, this class was intellectually stimulating. It made me think about so many new concepts and made those concepts fun to learn about.
183. Yes
184. Yes
185. This class stretched my thinking a lot.
186. Yes it definitely taught me to rethinking the way I study.
187. This class was very intellectually stimulating
188. Yes, the class required lots of outside studying in order to be successful.
189. The class was challenging, but manageable
190. Yes, but I found it hard to study.
191. This course was helpful in deepening my understanding of the material and basics of chemistry.
192. At some points, yes. Couple of complex subjects that required deeper thinking.
193. Yes it did. The class was challenging but to the point where it is effective and valuable for learning. It was a good class to think about certain topics and apply based on a situation.
194. This class was very intellectually stimulating because the topics in class were very interesting and I drew more questions from those topics.
195. I enjoyed chemistry. As a new student to UW, it was hard to adjust to the size of the class.
196. Was a great first science class to take for college. I had learned some of the material in high school so some of it was a refresher which was nice while I was getting used to the speed of a college course. I also learned some new things as well which cause me to think a little more.
197. Yes it did! I wasn't very good at chemistry in high school but the way you taught the course, Dr. Craig, made me more confident in my intelligence, so I tried harder in this class!
198. Yes, the tests/questions asked were very challenging.
199. yes forced me to think critically and actually understand topics instead of just using the same methods over and over again.
200. Yes, this class was intellectually stimulating. The labs in particular were helpful in challenging me to demonstrate my knowledge.
201. Yes; No. I learned new things but didn't exactly have any notable change in thought process.
202. Very stimulating but really really hard for the quarter system.
203. It connected many physics concept with chemistry. It covers the basics of chemistry at a fast pace.
204. Although I learn these concepts in high school and got credit for this class, it provided new concepts that were strikingly challenging but interesting for me. I was able to think deeper into the concepts and connect them together.
205. Yes, it delved into more chemistry topics I have never learned about in high school.
206. Yes, the concept and knowledge I learnt in this class is completely new to me.
207. Yes, because I was introduced to many new topics.
208. It helped me restructure my foundation of basic chemistry concepts that will aid me in future chemistry classes I plan to take. I am now able to notice certain aspects of general chemistry that I before had not considered.
209. No, not really the class was very basic in my opinion and just forced one to try hard.
210. Yes, the class was intellectually stimulating
211. Yes because it was very academically challenging and had a demanding workload
213. It did stretch my thinking into understanding the concepts beyond just the simple basics. I feel as though that was the reason for the class being intellectually stimulating.
214. Yes
215. This class wasn't entirely intellectually stimulating, because the class was set up so that we learn about a topic, but never actually apply it.
216. Yes I thought the lectures were good
217. Yes, the problems were often stretched over several units so we really had to apply many areas of knowledge to be successful.
219. Yes it was
220. It did stretch my thinking because it is a difficult class.
221. I wish that I just stuck with my AP credit.
223. Yes, this class went much further in depth on every topic than the chemistry class I took in high school.
224. Sometimes. I struggle with chemistry since it doesn't seem very relevant to my everyday life. I can't apply it as much.
225. Yes it was but I had a hard time understanding all the concepts, it got me to think more than I could think.

226. Yes it made me think on a more molecular level
227. Yes this class was intellectually stimulating because the material we learned continue to build and create foundations for future material.
228. Yes, it was intellectually stimulating and it stretched my thinking.
229. Yes because I haven't taken a chemistry class in a while.
230. It was very stimulating based on how hard it was.
231. Colleen was very enthusiastic which stimulated my desire to learn and make my think more.
232. -
233. The topic on Kinetic energy and gases really did stretch my thinking because I really had to visualize what was going on and how molecules are affected by changing one thing.
234. Yes, it taught me chemistry in a very effective way
235. Yes it was, it allowed me to think from different perspectives, to solve problems.
236. The quizzes and labs were especially hard - I think the most intellectually stimulating things were the quizzes and tests since they were timed. A lot of the complex worksheets also helped.
237. During certain topics yes, and it was fascinating and forced me to think. At times it felt as if i was gradually falling behind making it more worrying than stimulating.
238. Yes, there were some questions that were pretty challenging, which made us try to apply concepts differently.
239. Yes, this class was stimulating because it was a pretty challenging class. I was exposed to a lot of new chemistry concepts that I had not known before and new contexts to apply them in.
240. Yes because I thought it was hard.
241. YES.
242. Yes
243. Yes
244. This class did stimulate my thinking. The material was a bit more in depth than the material I learned in High School, which made me think harder and combine different theories.
245. Yes, because it combines both hands-on experiences with the material in the labs, with learning the information through lecture.
246. it did stretch my thinking. encouraged me to make connections with all the concepts and material learned in class. it also encourage thinking analytically and outside the box.
247. It was a general chemistry class, so I would say that it didn't "stretch" my thinking too much. Mostly learning basic principles of chemistry.
248. yes. Conceptually yes, somethings were difficult to understand and apply to problems.
249. I loved the content, it was interesting to learn and it was simple to grasp
250. Yes, I learned more in depth concepts of chemistry than I did in high school.
251. It felt more routine than it did stimulating. After realizing I wanted to switch majors and CHEM 142 was not a requirement, it became more of a chore. CHEM 142 caused me unnecessary stress and was more of a difficult stressor than intellectually stimulating.
252. Yes. It challenged me with concepts I hadn't dealt with before this course.
253. Yes, it made me think that life acts in a specific way and we can describe that way if we dig a little deeper.
254. Yes
255. Yes, it did! Not only did I learn a lot of new material, but my understanding of materials I learned in previous classes became a lot deeper in this class, because Dr. Craig talked about why things happen, not just that they happen. The lectures were always stimulating, with great examples of different concepts, like the crushed tank illustrating how temperature relates to pressure.
256. Yes because now I know more concepts in chemistry.
257. When I first started Chem 142, I thought it was a repeat of high school chemistry. It almost was, but the part of the class after the midterm went much further than high school did. The professor showed us some coll things, did some cool demos, but has not quite topped my old physics instructor riding a red wagon with a fire extinguisher attached across the stage.
258. yes, the course material was very interesting, and while totally doable made you think about the process needed to complete work.
259. Not really. I didn't like the subject so i didn't really find it intellectually stimulating.
260. Yes, because the lecture is attractive and the professor is nice.
261. Absolutely. Challenged me to find ways to learn and study affectively.
262. Yes it was. I'm pretty trash at Chemistry. My thinking is now very flexible because it has been super stretched.
263. Yes, and I liked how Dr. Craig made the material approachable.
264. simulators example problems
265. Very difficult.

#### What aspects of this class contributed most to your learning?

1. It is part of my major
2. I learned to accept failure despite the hard work I put in. Sometimes no matter how hard you try, you can't succeed.
3. The homework and tge quizzes.



4. Book reading
5. Teacher going over practice problems and explaining the concept slowly.
6. Lectures and online worksheets.
7. Homework and lecture.
8. Aleks Objectives. Repetitive problems that would make me learn to check for certain mistakes.
9. Dr. Craig is an excellent professor; her lectures were very clear and helped me understand the concepts. Having a quiz section also helped.
10. Aleks
11. Lecture
13. Reading the book and doing the end of the chapter questions.
14. Weekly worksheets, and just lots of practice problems.
15. I think doing Aleks objective contributed the most to my learning. I understand concepts better when I keep doing practice problems. I also like that professor Colleen Craig post panopto recordings, lecture notes, and practice problems online.
16. The weekly quizzes and my own time I set aside for studying using the EOCs and weekly worksheets contributed most to my learning.
17. The lectures were very helpful as well as the quiz and group quizzes. I believe that helped me learn the most as I learned from other's explanations as well as from mistakes I've made.
18. learning the general topics and going through the readings and doing the end of chapter questions
19. The aspect is the review sheets that were part of the learning process
20. Office hours and doing all the practice problems.
21. Her resources, which include weekly quizzes, review problems for exams, weekly problems related to coursework.
22. The fact that Professor Craig knew what she was talking about real contributed to the fact that the course was successful in teaching me what I need to know.
23. Reviewing the material multiple times - in lecture, in textbook, in weekly worksheets, and in the end-of-chapter questions.
24. Her lectures were good and also the worksheets she gives are a good supplement to the quizzes and tests.
25. Attending lectures I felt to be most useful, and it was the contributed to most of my learning. They were very clear, engaging and Professor Craig made sure the topic was understood before moving on to the next topic.
26. The lectures
27. The lectures were very helpful in covering the material.
28. Studying for tests.
29. Having a fig group helped me know a smaller group of people in such a large group. Another thing was the panopto recordings are very helpful because if you missed something in lecture or need to hear it again you can on your own time.
30. Homework problems and lab work. The skills utilized in lab will be very relevant to my career path on a personal level. As far as reiterating the material itself, the volume and difficulty of homework problems were largely sufficient in establishing and strengthening my understanding of the material introduced in both the readings and lecture.
31. The online materials contributed most to my learning because I am a visual learner and those practices helped me with the quizzes a lot.
32. The lectures were really easy to understand and were interesting. That it kept me interested in listening to the lectures contributed most to my learning.
33. The labs and the book problems
34. Attending class
35. The online ALEKS course contributed most to my learning.
36. I knew most of it already, Dr. Craig make it interesting when i was relearning material that i had forgotten.
37. The TAs
38. ALEKS as well as the online worksheets.
39. Both the lectures and labs contributed to my learning. The quizzes also helped me see what I understood and what I needed to work on more. I really liked that there were so many suggested problems and worksheets for extra practice. The pre-exam review was also very helpful.
40. Outside of class, working with other students. ALEKS actually provided some clear explanations for me, especially for rate laws.
41. listening to lectures/panaptos
42. Enthusiastic lectures and Helpful TA's
43. The lectures and alek contributed most to my learning.
44. The quiz section.
45. The worksheets were very effective.
46. The worksheets, quizzes and the lectures
47. Having to complete the ALEKS homework and attending lecture, because in class you are more compelled to pay attention and take notes.
48. The weekly quizzes really kept me in check with the amount of material fo the week.
49. I think ALEKS did.
50. Some aspects of this class that contributed most of my learning is by having lectures and notes about the major concepts of the textbook and Aleks to help me understand better on the concepts and calculations.

52. ALEKS
53. Lectures
54. The lectures and the homework website, Aleks.
55. The core understanding of chemistry is necessary for the health field [the career I want to pursue] so almost everything is important to my learning, whether it's lectures or labs [but lectures more, really].
57. The professor's animated demeanor and enthusiastic lectures. Also, the many resources provided.
58. I would say attending the office hours of my TA were most beneficial for me.
59. lab, I never had a professional lab before
60. The lectures were by far the most helpful.
61. All aspects of the class contributed the most to my learning.
62. The effectiveness of my professor and TA and the weekly quizzes.
63. Attending classes, doing worksheet and practice problems helped me a lot.
64. Lectures, quizzes, and the review sheets.
65. Suggested End of Chapter Questions
66. Dr. Craig's enthusiasm kept me engaged and interested in the material.
67. Going to class itself was helpful, although you could always just look at the recording online if needed. The most helpful things for me was doing the End of Chapter problems and weekly worksheets that Craig provided us with, and reading the assigned textbook chapters for each lecture.
68. review guides
69. I learned a lot on Aleks
70. Dr. Craig's enthusiasm
71. Lectures and Aleks
72. ALEKS was definitely very helpful in explaining some concepts thoroughly.
73. The lectures were really engaging and the quizzes were very relevant to the exams.
74. Unpopular opinion, I actually loved ALEKS. It truly did consume most of my time studying, but the practice problems and variable formatting of questions helped me understand concepts. As long as you spend worthwhile time on ALEKS (taking notes on explanations, writing down practice problems, etc) I found it to be very beneficial.
75. I feel that this class greatly improved my test taking and studying skills.
76. Homework, lectures, readings, and quizzes.
77. all of it i learned so much
78. Aleks. It was the one thing that helped me have a better understanding of math problems.
79. Lecture, ALEKS, and the textbook.
80. The lectures did because they highlighted what parts of the textbook reading were most important. The worksheets also helped with the quizzes.
81. ALEKS and lecture time.
82. Getting questions answered by the instructors.
83. The professor and her dedication to giving students a good learning experience.
84. Lecture, quiz sections, and ALEKS contributed most to my learning. Lecture was good for developing the basic concepts, quiz sections were good for meaningful discussion with my peers about concepts and problems relating to them, and ALEKS was a good source for practicing chemistry problems and strengthening topics I felt I struggled with.
85. Lectures and Aleks
86. The readings and weekly quiz worksheets were very helpful for my learning and success in this class.
87. I think the easy to follow classes, the practice worksheets posted online, and the examples/demonstrations used in class were helpful and contributed to my learning and understanding of the material.
88. The worksheets provided to prepare for quiz sections and exams were especially helpful and allowed me to identify what I needed to study specifically.
89. Aleks, even though I did not like the duration and organization of it.
90. I like go to classes and learn from lectures.
91. Professor Craig's enthusiasm and expertise in lecture made her lessons very effective and engaging. Her lectures were very enjoyable.
92. Going to lecture and the enthusiasm behind the professor really help and the way that she was able to convey the information in front of a class of 600 was very effective and quite impressive to watch.
93. Going over practice problems.
94. Excellent explanation by the instructor was the major contributing factor.
95. The lectures. Learning all the new material is great.
96. Professor Craig's enthusiasm, willingness and value of student questions and input, approachability, and ability to thoroughly answer questions
97. The quiz sections contributed most to my learning.
98. In class, student questions.
99. Professor Craig does a good job of explaining concepts during lecture.

100. I loved Dr. Craig's lectures. I also really liked having ALEKS for homework, it was very helpful.
101. Lectures were very engaging. The weekly worksheets really helped solidify the material.
102. lecture, end of chapter problems, quizzes, weekly worksheets.
103. The practice exam problem set and quizzes contributed most to my learning.
104. Some Aleks topics contributed to my learning as well as the lectures and quiz review packets.
105. Lectures
106. The aspects that contributed most to my learning was the amount of material the instructor provided, as well as how the instructor built off that material in terms of additional explanations.
107. n to really, I've already taken chemistry for two years in high school
108. Working on the suggested (meaning, not required) end of chapter questions and going to lecture.
109. The explanations and examples from lectures contributed most to my learning.
110. The quiz sections.
111. Lectures and labs played the biggest role in my learning, as well as learning on my own time through other sources.
112. In detail interactive lectures
113. Labs
114. reading the book
115. Practicing problems
116. The quiz, ALEK, panopto recording are really helpful.
117. Lectures
118. One aspect that contributed a lot to my learning was all the extra resources Dr. Craig provided, including worksheets and videos of concepts that she wasn't able to go into as much detail.
119. Completing the Aleks problems online.
120. The homework assignments and quizzes.
122. Aleks
123. The weekly quizzes and Aleks
125. Quizzes
126. it was like a refresher course
127. Quiz sections
128. The clarity of the textbook and the expertise of the lecturer made this class better to understand.
129. I enjoyed lectures and reading the textbook. I also like the quizzes.
130. lecture slide
131. Lectures and aleks. I hardly read the textbook because it felt like my time was better spent working on aleks.
132. Quiz sections contributed most to my learning.
133. Going to lecture, and right after, reviewing note and practicing on Aleks.
134. Lecture
135. Dr. Craig's lectures
136. weekly worksheets, review problems, aleks
137. Lectures, labs, aleks.
138. The lectures were clear and concise. The exam material provided for study was also extremely helpful.
139. I really enjoyed having quiz sections each week. It forced me to review and study the material that I had learned the week prior which I believe has helped me understand more of the content.
140. I found ALEKS particularly helpful. Despite being tedious at times, in the grand schemes of things it kept me in check and required me to continually study, preventing me from slacking off.
141. Aleks practice problems
142. The review sheets contributed the most.
143. ALEKS
144. professor 's explanation about why things happen.
145. The weekly worksheets and specific work given outside of class contributed most, as they weren't general concepts, but specific examples that I could understand.
146. Lectures
147. The parts where I got to get put of class and put my mind on something else so I could calm down and not want to cry or rage because of how much I hate the course (not the teacher).
148. ALEKs was very helpful as well as lecture and review materials
149. review materials
150. The instructors explanations were very helpful.

151. None.
152. I liked ALEKS a lot. I thought it was a great tool. I think the quizzes are a good way to keep students busy, because they force you to study every week.
153. verbal explanations in lecture and from TAs
154. Quizzes every week helped me understand what type of questions would be on the tests.
155. Practice problems
156. Lectures
157. reading book on my own
158. Aleks helped me learn how to apply the material taught in class
159. Labs and quiz sections were very helpful in my learning because I appreciate a small group environment.
160. the lectures were very clear and engaging with some visual examples along the way.
161. Lectures
162. Dr. Craig is a good lecturer, I think I learned the most from going to lectures.
163. The lectures, labs, quizzes, and ALEKS.
164. Panopto recording are by far the best thing a professor has done for me.
165. The time management skills which I honed in order to get all my homework done and put in enough study time.
166. The lecture and notes as well as outside readings.
167. ALEKS explanations were excellent
168. The lectures were very informative and I think contributed most because topics were introduced and there were also examples that were worked through.
169. The lectures, and quiz sections helped me, and some parts of aleks helped as well.
170. The Panopto Recordings. Because they are available, it is easy to go back and look at explanations over. This also ensured that there was no information absent from the curriculum.
171. Learning how much chemistry is actually involved in my everyday life was really fascinating and now helps me take notice of such things more than I used to.
172. All of it was very helpful.
173. The most useful tools for this class were the online homework, end of chapter questions, and other practice questions that allowed students to apply the concepts we learned in class.
174. Engaging with other students
175. Lectures
176. Lectures
177. The lectures, labs, and quizzes.
178. ALEKS helped most.
179. I think the homework as well as the note-taking contributed the most to my learning.
180. The lectures. Dr. Craig is fantastic.
181. The review worksheets for the quizzes and the review worksheets for the midterms were very helpful.
182. I think doing the work on ALEKS really helped enhance my learning, as well as taking the quizzes and learning how questions would be formatted on the midterm/final and how the timing of those tests would feel.
183. The textbooks and worksheets were very useful
184. Lectures
185. ALEKS
186. In class examples and problems
187. ALEKS
188. The professor was extremely helpful in giving examples throughout lectures as well as answering any questions that might arise.
189. Working through practice problems
190. Not quiz sections. I found ALEKS to be the most helpful.
191. I think the quizzes and labs contributed greatly to my learning.
192. Lab sessions.
193. ALEKS was very helpful for learning the material. Also all the material that was given for review was also very useful and helpful.
194. The lectures helped me wrap my head around some of the topics and also my TA was good as well.
195. Book problems, lab work.
196. Lectures, quiz section, and ALEKS all helped out a lot. Lectures and ALEKS were great tools to learn and practice basic topics and then the quizzes gave you a real taste of what test questions would be like.
197. Your slides are very well organized that makes things easy to understand
198. Quizzes

199. aleks, lecturez
200. The weekly worksheets and ALEKS were very helpful.
201. ALEKS problems and quizzes during quiz section.
202. Worksheets for quizzes.
203. Book reading and lectures help the most. Aleks also taught us math that is not shown in lecture.
204. The example problems and the provided practice problems contributed most of my learning because it gave me an idea of what questions she would ask as well as give me more confidence in what I was calculated.
205. Interactive tools like ALEKS and studying for quizzes in quiz section.
206. Lecture, lecture notes, labs.
207. Dr. Craig's enthusiasm and the fact that she cared about us and if we were learning the material or not contributed most to my learning.
208. ALEKS
209. The lectures
210. the ALEKS
211. Aleks was helpful but there was way too much of it
213. The lectures as well as the quizzes contributed most to my learning.
214. Many
215. The weekly ALEKS homework assignments contributed most to my learning.
216. I think lectures and labs
217. ALEKS was very helpful, as well as lab.
218. lectures were very helpful and being able to work with the quiz group was effective
219. The quiz sections
220. The weekly worksheets and ALEKS surprisingly.
221. The lectures, and how well they are put together.
223. I enjoyed ALEKS and found that it taught me a lot. I also thought that the lectures were helpful.
224. Studying with other students
225. The Aleks and exam practice questions
226. Having access to the Panapto recordings
227. The quiz sections, ALEKS, and lectures contributed most to my learning. The presentation that were presented were clear and easy to learn from.
228. The aspects that most contributed to my learning were ALEKS.
229. The lectures and homework.
230. The online resurces
231. The enthusiasm of the lectures
232. -
233. My TA's office hours, I spent most my studying time inside the chem room, getting help from my TA and other TAs. Also how organized the lectures were as in indicating which chapters to read and practice problems to look at. Also pointing out what lectures would be on the weekly quizzes. Also the in class problems that the professor worked out with the class.
234. The lectures and ALEKS really aided in my understanding of the content
235. ALEKS and Lectures.
236. The fact that lectures and testing materials were relatively on par with each other helped me streamline studying and learn a lot more objectives that way. The sheer amount of worksheets and review exams also helped a lot. Also, Panopto recordings are amazing for review.
237. Lecture
238. Lectures and the explanations in the lectures were done really well, which made us understand concepts easily.
239. I think the online worksheets and the weekly quiz sections contributed to my learning the most.
240. Quiz section, because of the automatic feedback.
241. ALEKS, quizzes, and lecture notes.
242. Lecture notes
244. The lectures were definitely the most helpful.
245. Aleks and the labs were the aspects of the class that most contributed to my learning.
246. lectures, panopto to rewatch lectures, office hours
247. The lab section was where I learned the most. My TA was excellent and very helpful in understanding materials covered in class.
248. Quizzes and ales
249. The only way I got practice was through ALEKS and it was horribly time consuming. I wish she had a normal quiz section with worksheets for us to practice so we can get more one on one time.
250. Labs and reading the textbook.
251. The weekly worksheets

252. Midterm reviews and worksheets.

253. Lectures

254. Lecture, as well as lab

255. The lectures themselves helped a lot, Dr. Craig's explanations are very clear and concise, and having access to the lecture slides to print out and bring to class really helped, since I didn't have to worry about writing down everything, just clarifying points and steps to problems. Dr. Craig's sense of humor and jokes also helped me stay engaged the whole time, even when my brain was a little slow in catching up. The quiz section was also fantastic, I love the idea of getting to see the correct answers to the quizzes immediately after taking them, since that's always been something that drives me crazy when I have to wait to find out what the right answer to a question. Having so many different office hours I could go to, Dr. Craig's as well as TA office hours really helped me feel like I could get help when I needed it, too.

256. The excitement of the teacher and the power point

257. The online homework system really helped me understand the course material. Concepts were broken down into subsections, and each subsection was addressed in a homework topic. The database in ALEKS also helped me see examples of the question I was on and also provided useful reference material if I did not know something immediately. Professor Craig provided numerous resources for studying concepts, including online worksheets and reference material inside the textbook.

258. Lectures and assigned readings contributed the most to my learning.

259. Explaining the problems during lecture

260. The professor gives the lecture in an easy-understanding and interesting way.

261. Lectures and the worksheets and extra final practice questions

262. The professor was really good and helped me settle into my first quarter of college. She gave us lots resources to work with and succeed.

263. Lectures.

264. review session (the class before mid-terms and final)

265. Lectures.

#### What aspects of this class detracted from your learning?

1. N/A

2. The stress I felt taking these exams were unreasonable because I studied bountifully, yet didn't have the opportunity to show what I know.

3. The fact that it was difficult to retain information and my ability to take tests and quizzes.

5. When time was short so the practice was rushed

6. N/A

7. Sometimes the lecture can be a little confusing for students who have never learned the related information.

8. Examples in lectures taking too long and causing there to be parts of the lecture that we wouldn't get to.

10. N/A

11. The quizzes

12. ALEKS

13. Nothing really.

14. ALEKS objectives

15. Lecture time was too early for me and sometimes I can't attend all of them.

16. We hardly ever actually finish a lecture in the class period, so the rest was usually posted on Panopto, but I learn much better in person so that detracted from my learning.

17. Honestly, nothing did.

18. Although ALEKS did help, I thought it was very time consuming and it got tiresome as I made mistakes and had to keep reviewing the topic even if I passed it

19. the various video examples because there would be a loss of attention.

20. Not really applicable.

21. There was nothing against Professor Craig or the way she taught. My morale in the class was dependent on how well I was doing on her examinations and quizzes.

22. The fact that the material on ALEKS was due as homework before the material was introduced made me feel as though I couldn't complete the homework or learn in a fashion that was beneficial.

23. Some of the labs had parts which did not seem to enhance our learning at all, and seemed to be not a productive use of time. Furthermore, there were a couple of ALEKS topics which required excessive calculation and were not particularly relevant to the course material (and the topics that were relevant to the course material were also covered in other objectives). This gave me less time to do work related to the course that I found to be actually useful.

24. N/A.

25. Reading the book, I didn't quite find it very useful for the most part. I personally like learning from an actual teacher figure, so I liked attending lectures and learning things from there.

26. The quiz sections

27. There was a lot of different assignments to be done, which was overwhelming.

28. ALEKS, ALEKS is annoying.

29. The homework is sometimes helpful but it takes most of the time during the week on top of a three hour lab and quiz section is a lot, especially when the aleks homework got harder it takes longer to complete for a very small amount of our grade.
30. Miscommunications by the TAs (these occurred sparingly) at times contributed to less than optimum preparation for certain assessments (quizzes) and less than optimum performance during these assessments, but the detraction from overall learning was almost negligible.
31. The number of people in the lecture hall was the only thing that detracted me from learning because I really don't like to study in a crowding environment.
32. Nothing about this class detracted...from my learning.
33. the labs, there was very few things of it that were actually related to quizzes and exams
34. Quiz section.
35. The size of the lecture class detracted from my learning because I felt that with 500 students, it was very easy to get distracted and not pay attention to lecture.
36. ALEKS makes me and everyone else i talk to mad. It honestly makes me loathe chemistry. I used to really like chem, but now i dont like doing any of it.
37. ALEKS and two part weekly quizzes
38. None thus far.
39. I don't know if this can really be helped but there's not enough time in quiz section to go over everything that's handed back. I guess that's what office hours are for.
41. lecture hall was HUGE which was awful. made me afraid to ask questions in such an intimidating atmosphere. Same with taking exams with 500+ other people, the environment was very stressful, not a lot of room to juggle a pencil, calculator, scantron, test booklet etc.
43. I don't think anything detracted from my learning.
44. The lab was tedious and didn't enhance my understanding of concepts.
45. Some ALEKS objectives were very tangential to coursework.
46. The labs distracted me from learning because I was so focused on success
47. The only issue I believe I had was the size of the class. This was my first really big lecture and it was a little over whelming to have all the students in the class (especially if I had felt I am not doing so well while the rest of the students seem to be doing great)
48. Aleks was not the most useful, the hw was nice, just not how Aleks does it in my opinion.
49. Sometimes lectures were super fast.
50. There were no aspect that detracted me from my learning.
52. none
53. Nothing
54. The quizzes are somewhat difficult, the scores I get makes me feel doubtful of my knowledge. I feel like the quizzes are a little too long because usually there are not enough time to redo or think carefully on a question.
55. Nothing really, it's a well refined class that you can't really remove information from or add to because it's general chem, a core/basic subject.
57. The lecture size (almost 700 people), and the frequency of quizzes made it hard to keep up.
58. Nothing
59. too early, 8:30 XD
60. The guest lecturers when Dr. Craig was absent were sub par.
61. Sometimes there were students outside of the lecture hall who talked extremely loud and it was audible through the doors. It was very disruptive and distracting.
62. None, all aspects were very helpful.
63. Overall, there was nothing that detracted from my learning.
64. Aleks was sometimes a detraction from learning, because it's format can be bland, but you do have to practice problems somehow.
65. Weekly quizzes in quiz section
66. It was pretty early and I was tired.
67. Not much detracted form my learning. Sometimes, since the class was so early, it was hard to focus during lecture if I was tired, and other times students would ask questions that I didn't understand and confused me more about the subject. Otherwise, everything was mostly beneficial.
68. aleks due dates and times. weekly quizzes.
69. Nothing
70. The questions of those who did not pay attention during class.
71. Labs
72. The lectures weren't all that helpful to me.
73. I felt that there were some labs in which a lot of people were unable to finish on time.
75. The size of the class detracted from my learning.
76. None
77. none? i learned lol
78. I wish lectures were taught differently. I would like if as a class we did a practice problem for each subject we learn that is similar to what we might see on tests or quizzes.

79. Weekly quizzes that are extremely short and also graded (either make them longer or make quiz sections a small study group time).
80. Certain parts of ALEKS were distracting. Some topics did not apply to the textbook or the exams at all, so I would spend a lot of time on ALEKS when it wasn't helping me with my final grade.
81. None
83. The size of the lecture sections. It's easy to feel like you don't matter to the teacher in such a large class. I was less motivated to ask questions because there were so many people.
84. Nothing really.
85. Stress of quizzes.
87. Nothing really detracted me from my learning except for some of my own personal habits.
88. I felt like I didn't take anything away from the labs. It was stressful and fast paced, so my mind couldn't really keep up.
89. The labs were a little confusing compared to the subjects.
90. Too many people in the lecture.
91. The tediousness and repetitiveness of ALEKS.
92. None.
93. Definitions, things just to write down. Because I was only focusing on writing everything down and not paying attention to what she was talking about.
94. No specific aspects.
95. Sometimes the labs just because I am not a kinetic learner. But I understand that they are important. Not much else detracts from my learning.
96. repetitiveness
97. Nothing.
98. None
99. The class size was one problem, but it is what it is for a gen chem course.
101. Most of the time I felt like lab was an entirely different class. I never really saw the things we did/learned in lab very useful for quizzes/exams.
102. labs
103. The lectures could sometimes get boring but that is mostly a matter of my own personal interest in the content.
104. A large number of Aleks topics detracted me from my learning . I would never know how many Aleks topics I need to complete a week because more topics could be potentially be added if I got previous topics wrong, so I found myself worrier about time and completion rather than a full understanding. Also Aleks was extremely time consuming and It was assigned the weeks we had midterms and Finals so my focus was on studying and completing Aleks when it should be focused on studying.
105. None
106. Aspects of this class that detracted from my learning was that the instructor sometimes went really quickly through slides or problems, and I could not keep up, and therefore be lost later on.
107. the type of test questions
108. Quiz section.
110. N/A
111. The quiz sections were way detracted me from my learning. I feel like they are unfair cause we don't have the chance to learn anything in our quiz sections. Normally in Chem we do worksheets which I feel improve our learning instead of decreasing our grade.
112. None
113. ALEKS
114. spending time on ALEKS when the test problems are a thousand times are harder than ALEKS
115. Aleks due dates.
116. Nothing. I honestly think this course and Professor Craig are both really great.
117. Nothing
118. Nothing comes to mind, I think that everything presented was beneficial for my learning.
120. None.
121. Aleks. Aleks is the worst and totally detracted from the class. So much time was needed to do it all and that distracted from studying actual material. In Aleks there was so many sections that we were not actually learning and it was super frustrating to have to look them up and figure it out.
122. The labs, they require a lot of work
123. N/A
125. ALEKS
126. I would like a little more time on midterms
127. Huge lectures at 8:30
128. None.
129. I did not enjoy some of the seemingly pointless topics on ALEKS.
130. teach too fast
132. The size of the class. It was easy to get distracted.
134. Book reading, repetitive



136. weekly quizzes
137. weekly quiz. I would have appreciated that time to work with peers and TA to further my learning.
138. The huge class size.
139. I have a lot of stress when it comes to high stakes testing so midterm and final exams are always really stressful for me. But I also understand how in such a large class these big test are the only efficient way to monitor our understanding.
140. There was nothing pointless in this class and I believe that everything from lectures to quizzes to labs all contributed to my learning.
141. Nothing comes to mind
142. Sometimes the ALEKS objectives took very long to do, so I was sometimes in a rush to complete them and couldn't learn the entire lesson.
143. The lectures and quiz sections
144. NO
145. Maybe how large lecture was, but that wasn't really an issue.
146. ALEKS
147. Every nook and cranny.
148. Nothing detracted
149. tests built to fail students
151. Everything about it.
152. N/A
153. ALEKS
154. Labs every week, there should be labs every other week to allow for more study time
155. The dim lights in the room so early in the morning would cause me to fall asleep.
156. Aleks
157. Alecks
158. Long lab reports
159. The only parts of class that took away from my learning were times when we had homework on Aleks that wasn't required to know for exams. These exercises shouldn't be in the Aleks website if students don't need to know them for the class.
160. sometimes at the end of lectures we would go really fast and i wouldn't understand the last couple slides
161. Nothing really.
162. Assignments outside of class were very time consumptive for me and prevented me from spending as much time as I would've liked on other course assignments.
163. When the professor was unable to get through all the material planned in the allocated time for lectures, so she went through several ideas in the last few minutes in hopes to explain them.
164. It started at 8:30 and waking up is hard.
165. Nothing really, I just wish the quizzes weren't so high stakes. The objectives are helpful in the end but some of the objectives questions are pointless.
166. None
167. None.
168. Sometimes we would run out of time at the end of class and we'd have to listen to 10-20 minutes more of lectures.
169. Nothing detracted from my learning.
171. I'm not entirely sure how much chemistry will help me as a computer science major, but it was either this or physics.
172. Having a quiz every week was extremely stressful.
173. When other students were on their phones during lecture it was sometimes distracting.
174. Large lecture classes
175. Midterms
176. Quiz section was only quizzes, no time for discussion /class
177. ALEKS
178. Quizzes every week were a little distracting
179. Missing the lectures and putting off ALEKS detracted from my learning the most because it required me to rush through both.
180. ALEKS is extremely frustrating.
181. Maybe lectures that went into too much detail.
182. N/A
183. ALEKS
184. ALEKS
185. The large lectures
186. none
187. The content from LAB isn't related to the exam

188. None
190. Quiz sections!
191. Not much of it detracted from my learning.
192. Very textbook-ish lectures.
193. Such a large class in lecture. Can't ask questions comfortably without wasting class time.
194. The class size made it hard to focus and pay attention.
195. The size of the class.
196. Nothing detracted from my learning.
197. The 8:30am timing made me skip class a lot.. but thank god for panopto
198. Lectures were great but they only covered the most basic material/examples
199. the weekly quizzes
200. Going over the quizzes in groups after taking it detracted from my learning.
201. Disconnect between lecture and lab section. Lecture material order went from brand new complicated material to lighter, Chem 110/ highschool concepts back to complex material.
202. Aleks and labs and the amount of time for tests
203. I thought the content we needed to understand for the lab was not well connected to the topics we were learning in lecture.
204. Sometimes the concepts were not clear or were rushed, which made me lost and confused at the concepts.
205. The difficulty of some concepts for me to understand.
206. ALEKS(too many irrelevant questions which don't appear in quizzes or exams).
207. Nothing
208. None, I think the class was very efficiently structured in order to give us all the material we needed to learn.
209. ALEKS
210. labs
211. The workload was so demanding that I had to sacrifice doing work from this class to finish other assignments from this class
212. That ALEKS was due on Fridays.
213. Aleks did very little in helping my understanding of the concepts.
214. No
215. The early hours detracted most from my learning, as well as the lack of involvement or from of participation in class.
216. Quizzes and problems in midterms that were tricky in wording
217. The weekly quizzes seemed to be more of a stressor than anything, and I felt like by using all of quiz section to take the quizzes, we were losing the valuable small-setting learning time that quiz section is supposed to give us. Lecture is so huge (600+ people) so I wish there were times when we could just work on worksheets with our TAs and go over lecture material.
218. I feel that the labs were not very important for me to progress my learning
219. The large class size
220. The massive class sizes.
221. Alek's.
223. I did not like the quizzes in this class. I thought that they took up a lot of time and did not allow students an opportunity to fail and learn and not have it affect our grades. I felt that I did not get the chance to ask the questions I had because the quizzes always took up the whole quiz section time.
224. Aleks. I just tried to get it done. Not enough time to fully understand each subject.
225. I was overwhelmed by the amount of aleks
226. Such a large class size
227. The only aspect that detracted from my learning was how many people would start packing their things near the end of lecture even when there was still information being presented.
228. The aspects that detracted from my learning were the early lecture times and the lack of space in the exam room.
229. I don't think any did.
230. The unnecessarily challenging questions that were altered to be harder
231. somewhat repetitive
232. -
233. Just how late the office hours were since I had early classes. Other than that, this class didn't really detract me from learning.
234. nothing
235. Quizess and Labs
236. Nothing.
237. Aleks
238. Some examples were repeats of previous ones, which didn't seem vert useful.

239. Sometimes the amount of time that had to be spent finishing long ALEKS homework topics felt unnecessary and detracted from time I could've spent studying for exams.
240. Doing bad on the tests and quizzes as that made me feel stupid.
241. Too much aleks objectives.
242. ALEKS
244. Some of the material included in the lab wasn't super relevant to the material learned in class.
245. There were no aspects of the class that distracted from my learning.
246. the time constraint. Because of this, the score on quiz/test do not correctly reflect my knowledge in the class. I know more than the score make up and its not fair that my grades suffered because I didn't have enough time to show it.
247. How large the class was (500+ students)
248. the labs
249. She had quizzes each week and the problems were so unfamiliar. Almost everyone did bad and I instead of having one on one time with our TA's to do exam practice problems we had ill written quizzes that did not line up with her lecture whatsoever.
250. The number of the students in the class is absolutely ridiculous. It was hard to get the attention necessary to succeed in class both during the class and in tutoring sessions.
251. ALEKS
252. The quantity of ALEKS topics.
253. having quizzes so late in the next week.
254. Early morning
255. I don't think there were any, I loved this class!
256. Aleks
257. I can not think of anything that detracted from my learning in this course.
258. The largeness of the class had the potential to be detracting, especially if sitting in the balcony level, since it was so far removed to the board.
259. The actual subject itself
260. nothing
261. ALEKS objectives
262. Aleks
263. Aleks was frustrating and didn't help much.
265. Number of students.

#### What suggestions do you have for improving the class?

1. More practice work
2. Make the tests more feasible. Allow the student to show what they know in a reasonable amount of time and don't try to trick them in the exam. What's wrong with students getting a good grade if they know the material?
5. Have the class meet more often for more time
6. N/A
7. It is great overall!! I would suggest my peers take this class of Craig Colleen.
8. None
9. Maybe doing more demos/examples during lecture.
10. N/A
11. Providing more study questions
13. Better testing conditions. I do not know if we need to have tiny desks that only fit our test and not our calculators or eraser, or if time needs to be so constricted.
14. N/A
15. I feel like the amount of time to do quiz should be longer.
16. Providing more examples in the class period for problems we are expected to solve.
17. Improving the exams by lowering amount of questions or increasing time. A lot of the test material are compact which requires a lot of calculations that take up most of time on exams.
18. Just to provide as many opportunities for practice problems, especially those more closely related to the midterms, maybe have more open office hours (even though I may be difficult) so that we have more opportunities to ask questions
19. none
20. If you want students to do better, really emphasize the practice problems and understanding the answers. If everyone knew they how to get to them too, then many people would do better. Just say it a few times each quarter where to find them.
21. Continue to provide as many resources as possible and maintain the organization that is already present.
22. The only improvement I can think of as I said before was doing a better job of making the homework follow the lecture material instead of vice versa.
23. Having the end-of-chapter questions be more of a requirement to motivate more people to do them and thus enhance their learning.

24. More worksheets and more resources if possible. But the amount we have right now is good if you don't want to add more.
25. The first topic we covered was brand new to me. I would want to start of with something that was familiar to students, so students feel more confident moving forward.
26. Incrementally decrease the time allowed on the quizzes before the first midterm in order to build the confidence of the students and allow them to understand the kind of questions that will be asked. This will allow them to learn how to analyze and answer before doing it at high speed.
27. Including more practice problems for the quizzes and exams.
28. None. Its supposed to be hard. that's what makes it a good class because it keeps the people who wouldn't be successful in science from wasting their time by going into advanced courses before they realized that they were struggling.
30. Completion of end of chapter questions were extremely important in achieving a good grade in this course. I am of the opinion that, although this material was compulsory, it should be mandatory, and the grade points assigned should be split between the ALEKS assignment and the end of chapter reading questions. I believe this would assure the largest amount of students are exposed to material necessary for their success in this course.
31. Nothing.
32. I love everything about this class.
33. fewer labs. More quiz sections.
34. Let the TAs teach the student instead of being test prompters
35. Involving the class in the lecture and using more visual representations of concepts.
36. Quizzes are dumb, and ALEKS is just terrible
37. Shorten the ALEKS workload and get rid of the two-part quizzes.
38. None thus far.
39. Honestly, this is a pretty solid class.
40. Please extend the ALEKS due date to a little bit later on Friday evenings, perhaps 11:30 or something. I would greatly appreciate that.
41. Many ALEKS topics were not directly relevant to material covered in class. It is very time consuming
43. We never had enough time to finish the lectures in one day, so a suggestion may be to reduce the amount of content in each lecture to have enough time.
44. More comprehensive examples.
45. It's a good class
46. Make the labs more structured and the standards more clear
47. No, it was great!
48. Find another way to do weekly hw, as Aleks wasnt the most useful.
49. If the chemistry labs were a little bit less stressful.
50. Suggestion I have is to make the exams relevant to the study guides and notes because that way the student time and effort was put into a god use.
51. There were questions on quizzes that were unnecessary in the means of; they did not test whether or not the student had a solid understanding of they material, instead these certain questions focused on minute concepts that were barley mentioned in class in order to get people to do bad on the tests to bring the curve down.
52. none
53. Nothing. Very good!!!
54. Nothing, its great.
55. Not much, Craig does a good job teaching! She makes chemistry actually bearable.
57. Less quizzes and clearer assessment of things we were taught on tests. Tests were tricky and no matter how much I studied, even doing 150 practice questions before exams sometimes, there was always some tricky problem I had never encountered before on an exam or quiz. Also, the time required for each problem on exams makes it hard to finish in time.
58. Maybe having worksheets to go over in quiz sections instead of always having a quiz.
59. its good by now
60. The first ALEKS assignment should not be 35 topics. That was a little excessive and took an excess of 20 hours to complete. Additionally, after the quizzes in quiz section, rather than answering questions about the quiz that usually only apply to one person, the TA should preview next week's lab as the labs are usually very confusing and difficult. They are so confusing that I am often not sure what we will do in lab until after the lab is done. I rarely get a chance to really understand what my calculations mean, and instead do them mechanically.
61. N/A
62. None.
63. Maybe more problems and worksheet.
64. Maybe having more interesting and varied homework problems. The review sheets from Dr. Craig were very good.
65. Replace weekly quizzes with time to ask TA questions during quiz sections.
66. Keep having weekly quizzes.
67. Go over more examples of problems in class or specify the types of problems that will be on the test. Making the EOC problems and weekly worksheets, as well as what quiz we have that week, easier to find and understand would be greatly appreciated.
68. less aleks, more time to do it. no weekly quizzes.
69. Provide a list of terms we should know the definitions for

70. More Practice problems.
71. More time to work with TA and discuss on quiz days
72. More examples in class!
74. -Give practice problems more similar to what will be on exams -Use quiz sections for going over material that was not understood in lecture/on homework instead of quizzes. Maybe the quizzes can be timed and online so students are still getting a quiz grade and idea of what exams will be like, but will still have the time in quiz sections for asking questions/getting help/broadening understanding etc.
75. Increasing the amount of time allotted for quizzes
76. None
77. maybe make the lessons related to the homework thats gonna be due the following week so that we know how to do the homework but overall love ms craig a lot
78. Lectures to have real world implications. Just learning the material with more tangible ideas. Also to do more practice problems as a class.
79. I felt like the tests were designed to have small tricks to mess you up and weren't as straightforward as the material we were given to study - the class would be greatly improved if the tests matched the study material and were longer in length and the same in time (most students can handle a time crunch if they've seen the wording/material vs. it being a time crunch because the wording of the question is completely new and the student knows that they have little room to miss a couple because of how short the test is).
80. I do not have any.
81. None.
82. More opportunities to ask instructors specific questions
83. Smaller lecture sections if possible.
84. Nothing really.
85. Have shorter quizzes and spend time in quiz section to work on problems.
86. I suggest better exam CLUE reviews.
87. I would suggest that the lectures should be a bit smaller, if that is possible.
88. More worksheets would be great since the questions on them were especially helpful for the exams.
89. Change the length of Aleks to a much shorter time and focus on discussing the main topics in lectures more.
90. Everything is great.
91. N/A
92. None, it was an amazing class. 10/10 would recommend for anyone looking to take the Gen Chem series.
93. Doing more visual presentations.
94. In general the class is excellent and everything seems fine.
95. I love the way this class is structured so I have no suggestions.
96. I don't know
97. None.
98. Keep all the lectures open to students questions, usually when one student asks a question they are not the only ones with confusion on the topic.
99. none
101. I would suggest having a quiz once every two weeks and using the other quiz section for review and questions.
102. more live experiments during lecture
103. Finishing the lecture material in the class instead of asking students to watch videos to wrap up the lecture on their own time.
104. Don't have Aleks due the weeks our midterms are scheduled and give the students a clear picture as to where they should be on their Aleks like with their pie completion and other requirements.
105. None
106. A suggestion to improve the class is to slow down when doing problems, to assure everyone is caught up.
107. offer more convent help
108. Get better TAs who are actually concerned for the students, and who actually want students to succeed. In addition, take away the quizzes in quiz section (or make them weighted less) because I don't feel that I really learned anything from taking the two-part quizzes.
110. Having the Aleks pie chart completion set to around 90% at the end of the course, because instead of 100%, this would allow kids to digest and understand teh material better, rather than just rushing to finish the whole chart.
111. I suggest worksheets instead of quizzes. Even if they prepare for exams, we don't get to stretch our knowledge on any of the topics.
112. More flexible ways of teaching the involved math
113. Make quiz sections for participation points
114. CURVE!!!!!!! Give us more time for test
115. Don't have aleks due every week. Use quiz sections for questions students have.
116. Nothing. I honestly think this course and Professor Craig are both really great.
117. No questions during lecture because they use up a lot of time and the questions are usually students just trying to show off in a way that doesn't help anyone.
118. I thought the ordering of subjects presented was not as efficient as it could be, especially in terms of lab. For example, I think the second unit and lab would have been more effective if presented first.

120. Less multiple choice questions.
121. Remove aleks. I would gladly do more practice problems or worksheets but please remove aleks.
122. Less homework
123. N/A
124. Lecture time management - fitting the lesson in one class period.
125. Replace ALEKS with a homework system that is more relevant to exams/quizzes
126. more time on tests because I always make really stupid calculation errors
127. N/A
128. None.
129. Less focus on ALEKS and more focus on practical practice.
130. sometime professor has us to watch video for material that she didn't go through in class. I hope that all class material could be done in class.
132. Having smaller classes.
134. None
136. more review material for tests, note sheet allowed on test
137. See above response.
139. I would really love to have worked out solutions to quizzes and the midterms that are posted online. That way I can see what I am doing wrong when I am working through a problem. A number or the correct answer doesn't really help me as much as a real solution.
142. Give less ALEKS homework per week.
143. Discussion rather than quiz section
144. There should be more practice problems about exams
145. None.
146. Remove ALEKS in favor of something else. In theory ALEKS could help learn the application of topics, but in reality it became quite obnoxious and seemed like a chore. The questions could be unclear in what result they expected, or the topics could not be lined up with the lectures we had that week.
147. Make things more connected, provide more guidance as to how to prepare for tests and quizzes because paying attention, taking notes, doing my homework, and getting excellent grades on labs only gets you to about a 55 to 75% on tests and quizzes.
148. Labs could be more relevant to what we are learning in class, the lab reports ask for very advanced knowledge on things that have barely been mentioned in class sometimes.
149. go back to doing worksheets in quiz section, curve to a 3.0 or 3.2 instead of a 2.6
151. Let students know you have to be really smart and be on top of your stuff in order to pass this class. Let them know quiz sections and all are both required.
152. I would maybe make quizzes slightly easier. It seemed that they got more difficult over the course of the quarter and I was caught off guard a few times.
153. Maybe homework in this class as worksheets geared toward more closely toward tests objectives, instead of ALEKS
154. The class is really well created
155. Turn the lights on!
156. Less aleks and quizzes
157. No more quizzes
158. Non
159. Maybe to improve the class, Aleks could be more specific in what it wants students to know for Chem 142.
160. More examples throughout the slides
161. Nothing
162. The lab manual is very confusing and poorly written in my opinion. Improve that?
163. Teaching less topics in one lecture period
164. None, great as is!
165. Don't grade based on pie progress, grade based on objective completion.
166. Maybe getting through all of the lecture notes and not going over.
167. None.
168. Keep teaching the same way! It's great.
169. More examples in lectures, and explain step by step.
170. Providing more in-class examples and walkthroughs to ensure grasp of the content.
171. Overall, the class was good and well organized whether or not I actually enjoyed chemistry as a subject.
172. It would be nice to know how the grading system works. I think we are all kind of confused about that.
174. Less Aleks
175. More study materials for exams
176. Quiz section was only quizzes, no time for discussion /class

177. Less stress on ALEKS.
178. Making quizzes every other week so that on the off weeks we could talk through topics or do worksheets together.
179. I have hardly any suggestions for the class really, Professor Craig seems to have it figured out pretty damn well.
180. It is good as is, but maybe considering balancing ALEKS
181. Have more practice problems available that are similar to the exams.
182. I think it would be helpful if the quiz section was available as more of a time to ask the TA questions about course material. Otherwise, a great course with interesting concepts that I really enjoyed being in!
183. Use webassign instead of ALEKS
184. Change ALEKS requirements
186. Offering less videos to watch outside of class
187. I think the ALEKS should be a material for reviewing.
188. None
190. Make the quiz sections how they used to be, where we have a TA who is there to go through worksheets and the material with us, rather than just being a proctor for quizzes.
191. More visual demonstrations.
192. Can't think of any.
193. Smaller class sizes but that's about it.
194. Break up the class into smaller sections.
195. None.
196. I think there should be some more explanation in quiz sections over the problems on the quizzes and exams.
198. It can be hard to do well on the tests even if you know the concepts well because of time constraints and losing 5%/full credit per incorrect answer because of multiple choice. Maybe shift away from multiple choice in future. Also maybe cover more challenging examples in lectures if possible.
199. aleks could be due a week earlier so students are more comfortable with lecture for the week.
200. Make ALEKS due on Sunday nights.
201. N/A
202. There is simply not enough time for the second midterm. I knew a lot of the information but didn't have time to solve everything.
203. I would shorten the lab requirements.
204. I would suggest going a little bit more slower, but I understand the instructor's need to rush because of the limited amount of time we have each session to learn a new concept.
205. Nothing.
206. Please give us less homework and not quiz us every week.
207. None, Dr. Craig is great and so is this class.
208. We skipped a lot of end-of-unit concepts that were on the notes. I am concerned that they do have some significance outside of this general chemistry class, and the fact that we did not cover them formally provokes some concern. Dr. Craig did emphasize that she is more than happy to explain anything to us if we desired such a thing, so the concern is relatively low.
209. Limit the number of ALEKS topics to those that directly pertain to the class
210. less labs
211. Make labs less stressful and decrease the workload
213. One suggestion would be to go over questions that kids have beforehand during quiz section, but obviously not on the specific questions that are being assessed that day.
214. less homework
215. A suggestion to improve the class would be to have in-class questions so that we apply our learning as we go and increase retention of content.
216. Not as many quizzes
217. above^^^
218. give more time for quizzes
219. Lower the class size
220. Make class sizes smaller.
221. Get rid of Alek's.
222. Instead of doing quizzes each quiz section, maybe doing worksheets, and have them be worksheets that we have to turn in next quiz section that gets graded. That way if we don't know the material we can get help on it during quiz section for those who can't make it to the office hours, and we are still actively engaging in the material with other classmates.
223. I would say to remove the quiz and open up the quiz sections to a time to ask questions and work on problems that were tricky.
224. Create more connections between material in Aleks, quizzes, lectures, and labs. Point them out.
225. Nothing much
226. Having more guidance on where we are in the class

227. I would suggest that on review days for midterms or the final that difficult example problems that aren't as straightforward to understand be practiced.
228. No suggestions.
229. I don't have any suggestions.
230. Make more straight forward questions
231. More example problems during lectures
232. -
233. don't really have any suggestions.
234. Possibly some free response on exams, longer exams
235. More clarification of the materials in quiz section, instead of doing a quix weekly. Doing a quiz does not help, we do not learn as much, as if we have the TA explain the lecture.
236. More worksheets?
237. Maybe lessen the amount of Aleks. It's somewhat of an unfortunate necessity though.
238. Nothing!!!! It's my favourite class.
239. Maybe work on ALEKS logarithm to distribute the amount of topics more evenly throughout the quarter.
240. Making the points less oriented on the midterms.
241. probably revising the way homework is administered so it focuses more on exam specific material.
242. Could the aleks not pay much more attention to the significant digits?
243. None
244. I don't have any suggestions.
245. The only suggestion I would have for improving the class is to better review the material before the exams so students can gauge where they are at.
246. give students more time to work on quiz/test. allow students more time to ask questions, practice concepts learned, and perform our knowledge whether that be on test, lab, or smaller discussion groups.
247. More opportunity for personal interaction between professor and students. I met with my professor several times at office hours and I am still uncertain if she knows my name. (Not unexpected in such a large class though)
249. She needs to work on her grading scale. Who makes a 20 question exam with 5 points each and each question is really long and if you miss one you basically drop a letter grade. It's like she didn't care when she created the exam. I wish I took another professor, they have averages much higher than hers
250. Lower the class sizes or increase the number of office hours to give students better access to the help they need.
251. Line ALEKS up with similar problems to the quizzes and exams.
252. None.
253. have exam time be longer or number of questions be smaller.
254. More discussion time of concepts with students
255. Also can't think of any improvement, I think everything was wonderful.
256. Provide more practice/calculations problem worksheets or mention a resource where that can be found.
257. Nope.
259. It's too hard for an intro class
260. nothing
261. Find ways to assign homework that isn't ALEKS
262. not at 8:30
263. Quizzes were stressful.
264. It would be great if we can get more practice problems. I still feel it was not enough even Dr. Craig added more problems for mid term two. There are not enough practice for finals.
265. Smaller classes.



IASystem Course Summary Reports summarize student ratings of a particular course or combination of courses. They provide a rich perspective on student views by reporting responses in three ways: as frequency distributions, average ratings, and either comparative or adjusted ratings. Remember in interpreting results that it is important to keep in mind the number of students who evaluated the course relative to the total course enrollment as shown on the upper right-hand corner of the report.

**Frequency distributions.** The percentage of students who selected each response choice is displayed for each item. Percentages are based on the number of students who answered the respective item rather than the number of students who evaluated the course because individual item response is optional.

**Median ratings.** IASystem reports average ratings in the form of item medians. Although means are a more familiar type of average than medians, they are less accurate in summarizing student ratings. This is because ratings distributions tend to be strongly skewed. That is, most of the ratings are at the high end of the scale and trail off to the low end.

The median indicates the point on the rating scale at which half of the students selected higher ratings, and half selected lower. Medians are computed to one decimal place by interpolation.<sup>1</sup> In general, higher medians reflect more favorable ratings. To interpret median ratings, compare the value of each median to the respective response scale: *Very Poor, Poor, Fair, Good, Very Good, Excellent (0-5); Never/None/Much Lower, About Half/Average, Always/Great/Much Higher (1-7); Slight, Moderate, Considerable, Extensive (1-4)*.

**Comparative ratings.** IASystem provides a normative comparison for each item by reporting the decile rank of the item median. Decile ranks compare the median rating of a particular item to ratings of the same item over the previous two academic years in all classes at the institution and within the college, school, or division. Decile ranks are shown only for items with sufficient normative data.

Decile ranks range from 0 (lowest) to 9 (highest). For all items, higher medians yield higher decile ranks. The 0 decile rank indicates an item median in the lowest 10% of all scores. A decile rank of 1 indicates a median above the bottom 10% and below the top 80%. A decile rank of 9 indicates a median in the top 10% of all scores. Because average ratings tend to be high, a rating of "good" or "average" may have a low decile rank.

**Adjusted ratings.** Research has shown that student ratings may be somewhat influenced by factors such as class size, expected grade, and reason for enrollment. To correct for this, IASystem reports **adjusted medians** for summative items (items #1-4 and their combined global rating) based on regression analyses of ratings over the previous two academic years in all classes at the respective institution. If large classes at the institution tend to be rated lower than small classes, for example, the adjusted medians for large classes will be slightly higher than their unadjusted medians.

When adjusted ratings are displayed for summative items, **relative rank** is displayed for the more specific (formative) items. Rankings serve as a guide in directing instructional improvement efforts. The top ranked items (1, 2, 3, etc.) represent areas that are going well from a student perspective; whereas the bottom ranked items (18, 17, 16, etc.) represent areas in which the instructor may want to make changes. Relative ranks are computed by first standardizing each item (subtracting the overall institutional average from the item rating for the particular course, then dividing by the standard deviation of the ratings across all courses) and then ranking those standardized scores.

**Challenge and Engagement Index (CEI).** Several IASystem items ask students how academically challenging they found the course to be. IASystem calculates the average of these items and reports them as a single index. *The Challenge and Engagement Index (CEI)* correlates only modestly with the global rating (median of items 1-4).

**Optional Items.** Student responses to instructor-supplied items are summarized at the end of the evaluation report. Median responses should be interpreted in light of the specific item text and response scale used (response values 1-6 on paper evaluation forms).

<sup>1</sup> For the specific method, see, for example, Guilford, J.P. (1965). *Fundamental statistics in psychology and education*. New York: McGraw-Hill Book Company, pp. 49-53.