

Incoming Assessment Questions Responses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	4	4	4	4	3	3	4	1	3	4	1	4	4	4	1	3	5	1
2	5	5	4	3	2	3	4	4	4	3	4	4	4	5	5	3	3	2
3	4	3	3.5	2	2	3	4	4	5	4	3	3.5	4	5	3	3.5	4	2
4	4	4	3	4	2	3	4	3	3	2	3	3	5	5	5	4	4	4
5	4	3	3	3	3	3	4	3	3	3	4	3.5	4	5	4	4	4	2
6	4	4	4	3	3	3	4	4	4	3	3	3	4	4	3	3	3	3
7	5	5	4	4	4	4	5	5	3	3	4	4	4	5	4	5	4	3
8	5	5	5	5	4	4	5	5	5	5	5	4	4	4	5	5	3	5
9	4	4	4	4	4	4	4	5	4	4	4	3	4	5	3	4	5	4
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11	3	3	2	5	3	3	2	3	2	3	3	4	5	4	2	3	1	2
12	3	2	2	2	1	3	3	3	3	2	3	3	4	4	3	3	3	2
13	2	3	2	2	3	2	2	3	3	3	2	2	1	3	1	1	1	1
14	4	5	5	4	4	3	5	5	4	3	3	3	4	5	4	4	3	4
15	5	5	4	3	2	3	5	4	3	2	2	3	5	5	4	4	4	3
16	5	5	5	5	5	4	4	5	4	3	4	5	4	5	3	4	3	2
17	4	4	4	3	2	3	3	3	4	3	4	4	3	4	2	3	3	2
18	4	4	4	3	4	3	4	3	3	4	3	3	3	5	4	3	4	2
19	4	5	4	5	3	3	5	5	4	3	3	4	4	5	4	4	5	4
20	5	5	4	4	4	4	3	4	4	3	2	3	5	5	4	4	5	4
21	4	4	4	4	4	3	3	4	3	4	3	4	4	5	3	4	2	1
22	4	4	4	3	2	3	3	2	2	2	2	2	3	4	2	2	2	2
23	5	4	4	3	3	3	3	3	3	2	2	4	4	4	4	3	4	4
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25	5	5	4	5	3	2	3	3	1	1	1	3	5	5	5	4	4	4
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27	5	5	5	5	4	4	5	5	3	3	4	5	3	5	3	4	4	3
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29	5	4	4	4	3	3	3	4	4	3	3	4	4	5	5	4	5	5
30	4	4	4	4	4	3	4	4	4	2	3	3	4	5	3	3	4	3
31	4	3	4	2	5	5	4	3	5	3	2	1	4	2	5	5	2	1
32	5	4	4	3	2	3	3	3	3	2	4	4	2	4	3	3	3	4
33	3	3	3	2	2	2	2	2	1	1	1	2	2	4	3	3	3	1
34	5	4	4	4	3	3	3	3	4	3	3	4	4	4	4	3	3	3
35	5	5	4	4	4	4	5	4	4	3	5	4	5	5	3	4	4	3
36	3	3	2	2	2	2	3	4	2	3	4	4	3	4	4	3	5	4
37	4	4	3	3	2	3	4	4	4	3	4	3	4	5	5	3	3	2
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43	4	5	3	2	1	5	3	4	4	5	3	2	3	5	4	3	1	2
44	5	4	4	4	3	3	4	3	3	3	3	3	5	5	4	4	2	3
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46	4	4	4	4	3	4	4	4	3	3	4	3	4	5	5	3	2	3
47	4	3	3	4	4	4	3	4	4	4	4	4	5	5	4	4	4	4
48	4	3	3	2	2	2	3	4	3	3	2	2	4	5	4	3	4	5
49	4	4	4	1	1	2	3	2	2	2	3	3	2	5	4	3	3	2
50	5	5	4	4	3	3	4	4	3	3	4	4	3	2	1	4	1	1
51	1	2	2	1	1	1	1	1	1	1	1	2	1	4	3	1	2	3
ave	4.1	4.0	3.6	3.4	2.9	3.1	3.6	3.5	3.3	2.9	3.0	3.4	3.7	4.5	3.5	3.4	3.4	2.7
stdev	0.8	0.8	0.8	1.1	1.0	0.9	0.9	1.0	1.0	0.9	1.0	0.9	1.0	0.8	1.1	1.0	1.1	1.2

Areas of below average preparation

- 5 aqueous reactions
- 10 orbital hybridization/molecular orbitals
- 18 how to use computational tools

Areas of greatest diversity in current background

- 4 chemical equations and stoichiometry
- 15 conversions/modifications of ln, log, and ex
- 17 how to research literature
- 18 how to use computational tools

Incoming Assessment Questions Responses

	a		b		c		d		e		f		g		h		i		j		k		major	status	importance	interest	
1	2	5	1	5	1	5	1	5	1	5	1	5	1	5	2	5	1	5	1	5	1	5	BYS	3	5	5	
2	3	4	2	4	2	4	2	4	2	4	2	5	1	5	1	4	1	4	2	5	3	5	PH	1	4	3	
3	3	4	2	4	2.5	4	2	4	3	4.5	3	4	3	4.5	3	4	2	4	2	4.5	2	5		3		5	
4	2	3	3	3	3	3	3	3	3	3	4	4	3	3	2	2	2	2	2	2	3	3	MAE	4	4	4	
5	2	4	1	4	2	4	3	5	2	4	2	4	3	4	2	4	2	4	2	4	3	4		2	4	4	
6	3	5	3	4	3	4	3	5	3	5	3	4	3	4	3	5	3	4	2	4	4	5	BYS	2	5	5	
7	3	5	3	5	3	5	3	5	3	5	3	5	3	5	3	5	3	5	3	5	4	5	CH	1	5	5	
8	3	5	3	5	4	5	4	5	3	5	3	5	4	5	4	5	3	5	2	5	4	4	CH	1	5	5	
9	2	5	2	5	1	5	3	5	3	5	2	5	2	5	3	5	3	5	1	5	3	5	MAE	1	3	4	
10	2	4	2	4	2	4	2	4	1	4	2	4	2	4	2	4	2	4	4	4	4	3	CHE	1	5	5	
11	2	4	1	4	2	4	3	4	2	3	1	4	3	4	3	5	2	4	1	4	2	5	MAE	3	2	3	
12	2	4	1	4	1	3	1	3	1	3	1	3	1	3	1	3	2	4	2	5	1	3	MAE	2	5	4	
13	2	5	1	5	2	5	3	5	2	5	2	5	2	5	2	5	1	5	1	5	3	5	BYS	3	4	4	
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22	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5				3	3
23	2	3	2	3	2	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	2	4	MAE	4	4	3	
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31	1	5	5	5	2	5	2	5	3	5	4	5	4	5	4	5	4	5	4	5	5	5	BYS	2	5	4	
32	3	4	1	1	3	2	3	5	3	2	1	1	4	2	2	2	3	1	2	1	2	1	MAE	2	3	2	
33	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1	2	2	2	MAE	2	4	4	
34	3	4	2	3	2	3	3	4	2	3	3	4	2	3	3	3	2	3	1	3	4	4	MAE	3	4	3	
35	4	3	3	3	4	3	4	3	3	3	2	5	2	5	4	2	3	3	3	3	4	2	BYS	2	4	4	
36	2	4	1	4	1	4	1	4	1	4	1	4	3	4	1	5	1	4	1	5	1	5	BYS	4	4.5	4	
37	4	3	2	3	3	3	2	3	2	3	3	3	4	4	4	3	3	3	3	3	3	3	MAE	1	3	3	
38	1	2	2	3	3	3	3	1	1	1	1	1	3	3	4	4	1	1	1	1	3	3		1	4	3	
39	3	4	1	3	3	4	3	4	1	3	1	3	2	4	2	4	2	4	1	4	4	5	MAE	1	4	4	
40	3	2	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	MAE	1	3	3	
41	3	4	2	4	2	4	2	4	2	4	1	4	2	4	1	4	1	4	1	4	2	5	CE	2	4	4	
42	2	3	2	3	2	4	3	5	2	4	3	5	2	5	2	5	2	5	2	5	3	5	MAE	3	3	3	
43	4	5	3	5	2	5	1	5	4	5	4	5	4	5	3	5	4	5	2	5	3	5	PH	1	4	3	
44	1	4	1	4	1	4	1	4	1	4	1	4	2	4	2	4	1	4	1	4	2	4	MAE	1	3	4	
45	3	5	4	5	3	5	3	5	2	5	4	5	4	5	4	5	3	5	3	5	1	5	BYS	3	5	4	
46	3	4	2	3	2	3	3	4	2	3	2	4	3	4	3	4	3	4	2	4	2	5	CH	1	4	4	
47	3	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	BYS	2	4	4	
48	3	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	MAE	3	4	3	
49	2	4	2	5	2	5	2	4	1	4	1	4	2	5	2	5	1	4	2	5	5	5	MAE	3	5	5	
50	3	2	2	2	2	2	2	1	1	3	3	3	3	4	4	2	2	3	3	4	4	4					
51	1	3	1	3	1	4	2	4	1	3	1	2	1	2	1	2	1	5	1	3	2	5	MAE	2	3	3	
ave	2.5	4.2	2.1	4.0	2.3	4.0	2.5	4.3	2.1	3.9	2.3	4.1	2.6	4.2	2.6	4.2	2.3	4.2	1.9	4.1	2.9	4.4			2.1	4.0	3.7
stdev	0.9	0.7	0.9	0.9	1.0	0.9	0.9	0.8	1.0	1.0	1.1	1.0	1.0	0.9	1.0	0.9	0.9	0.8	1.0	0.9	1.1	0.9			1.0	0.8	0.9
	1.7		1.9		1.7		1.8		1.8		1.8		1.6		1.6		1.9		2.2		1.4						

Strongest interests in course
 d acid/base chemistry
 k relevance of chemistry in world today

Areas of strongest apparent need
 j nuclear chemistry

Areas of least diversity in what is desired from this course
 a solutions and their behavior

Areas of greatest diversity in what is desired from this course
 e chemical equilibria
 f entropy and free energy