Colorado State University – Pueblo Undergraduate Program Assessment Report for AY 2011-2012

Due June 1, 2012

Program: Chemistry

Date: June 4, 2012_

Completed by: Chad Kinney

Please complete this form for <u>each undergraduate program</u> (e.g., B.A., B.S.) in your department and return it to Erin Frew, <u>erin.frew@colostate-pueblo.edu</u> as an email attachment before June 1, 2011. You'll also find the form at the assessment website at <u>http://www.colostate-pueblo.edu/Assessment/Resources/Pages/default.aspx</u>. Thank you.

I. Program student learning outcomes (SLOs) assessed in this cycle, processes, results, and recommendations.

A. Which of	B. When	C. What	D. Who was	E. What is the	F. What were	G. What were the	H. What
the program	was this	method was	assessed?	expected	the results of	department's	changes/improvements
SLOs were	SLO last	used for		achievement	the	conclusions about	are planned based on this
assessed	assessed?	assessing the		level and how	assessment?	student	assessment?
during this		SLO?		many students		performance?	
cycle?				should be at it?			
1:	Data is	Evaluation of	All students	The average	All core	Overall, student	The department engaged
Demonstrate	collected	the results of	taking core	student should	courses had	performance was	in additional assessment
knowledge	at the end	the American	chemistry	be at or above	average	good and no major	of performance in
of chemical	of every	Chemical	courses.	the 50 th	demonstrated	changes seem to	general chemistry. It was
concepts	semester.	Society		percentile.	knowledge at	be required.	determined that
and		Nationally			or above the	Although the	performance is well
theories.		normed final			50 th	performance in	correlated with Math and
		exams in			percentile	organic chemistry	Overall ACT scores
		each core			except for	was slightly below	(documentation
		course.			organic	the 50 th percentile,	attached). This has
					chemistry	this is an	prompted the following
					which came	improvement from	action:
					in at the 48 th	the previous year.	1. Review advising
					percentil, and	The lower than	protocol with 1 st year
					general	expected	program. Stressed
					chemistry	performance in	importance to enforce

					which came in at the 44 th percentile.	general chemistry coupled with the high DWF rate requires additional evaluation (described in the next column)	 pre- and co-requisite requirements. 2. Evaluate how the recently revised math placement scores influence performance. 3. Consider making MATH121 a pre- requisite rather than a co-requisite.
2: Demonstrate Problem Solving Skills	Data is collected at the end of every semester.	The Major Field Achievement Test (MFAT)	Senior chemistry majors	The average student should be at or above the 50 th percentile.	Unfortunately student performance expressed as a percentile or against a national average is not possible, because students this year took a new MFAT exam and national statistics are not available yet.	Not appropriate at this time.	The department will retroactively review the 2011-2012 student performance as measured by the MFAT when national statistics are available.
3: Evaluate,	Data is	All faculty	Senior	All students	All 5 students	Some of the	The department will
write and		evaluate the	chemistry	should be at or		student	increased emphasis are
present	at the end	senior	majors	above 70% on	achievement	presentations	increased emphasis on
chemical	of every	seminar		the scoring	level.	continued to be	preparing for the oral
topics from	semester.	using a		rubric.		shorter than the	presentation through the

the	common		faculty would have	use of practice seminars
literature.	tool.		liked, which was a	to ensure sufficient
			point of emphasis	length to the
			from last	presentations. We will
			assessment period,	continue to monitor this
			however most	issue moving forward.
			students	
			demonstrated an	
			appropriate level	
			of learning.	

Comments:

Upon completion of the Chemistry Department Program Review, the department discussed the issues/concerned raised during the review. These issues were almost exclusively related to insufficient resources and some infrastructure related issues in specific areas. There were no concerns raised that directly relate to student learning outcomes. However, some of the concerns raised in the review, if left unaddressed, may negatively impact student learning in the chemical sciences in the near future.

B. Follow-up (closing the loop) on results and activities from previous assessment cycles. In this section, please describe actions taken during this cycle that were based on, or implemented to address, the results of assessment from previous cycles.

A. What SLO(s)	B. When was this SLO	C. What were the	D. Were the	E. What were the results of the
did you	last assessed?	recommendations for change	recommendations for	changes? If the changes were not
address?		from the previous	change acted upon? If not,	effective, what are the next steps or
		assessment?	why?	the new recommendations?
1	Previous Year	Some of the ACS exams were	Where possible updated	It is too early to assess this. Some of
		out of date and need to be	ACS exams were	the exams were secured mid-year. The
		updated.	purchased. This includes	department will continue to evaluate
			Physical Chemistry, General	this.
			Chemistry, and	
			Biochemistry.	

Comments:

Supplemental Information:

- 1. ACS Exam Results
- 2. ACT scores vs. CHEM121 DWF rate
- 3. CHEM 493 Evaluation Form 2011-2012 AY (submitted as a separate file)

American Chemical Society Standardized Final Examination Data Academic Year 2004- present

			_	_				Pe	rcentile		
ACS Final	Semester		Ra	aw Scor	e Averag	je		A۱	/erage	Percentile	Difference
			Std.		CSU-	Std.					
(Exam name & year)	Given	U.S.	Dev.	N =	Р	Dev.	N =	U.S.	CSU-P	Raw	Weighted
			General	Chemis	stry Exan	าร					
1st term (2000) DL	Su 05	39.6	11		41.3	11.3	16	51	56	5	80
1st term (2000) LW	Fall 04	39.6	11		44	14	58	51	65	14	812
1st term (1997)LW	Fall 05	39	11	2000	39	12	63	51	48	-3	-189
1st term (1997)LW	Fall 06	39	11	2000	42	11	38	51	57	6	228
1st term (2000)LW	Fall 07	40	11		39	12	73	48	48	0	0
1st term (2005)LW	Fall 08	40	12	4524	38	10	56	48	45	-3	-168
1st term (2000)RF	F08	39.6	11		33.8	9.8	15	51	33	-18	-270
1st term (2000) DL	Su 07	39.6	11		39.1	10.4	16	51	49	-2	-32
1st term (2000) DL	Su 08	39.6	11		42.9	13.2	19	51	61	10	190
1st term (2000) DL	Su 09	39.6	11		45.9	15.1	10	51	70	19	190

1st term (2005) CK		40.3	40.00	4504	22.05	10.01	05	50	20	00	4 4 2 0
1st torm (2000) KP	Spring 2010	С 274	12.20	4524	32.05	10.91	65 74	50	28 54	-22	-1430
1st term (2009) RF	Spring 2010	37.1	11.4	3021 2027	აი.∠ აი ა	11.0	74	51 51	54 54	ు	222
1st term (2005) DI	FIU	37.1 10.3	11.4	3021	30.2	12.2	33	51	54	3	99
	Su 10	-0.5	12 26	4524	45 08	11 09	22	50	63	13	286
1st term (2009) DD	Curto	37.1	12.20	1021	10.00	11.00		00	00	10	200
· · · · ·	Su 11	3	11.39	3827	36.8	10.3	26	51	50	-1	-26
1st term (2009) CC		37.1									
	F11	3	11.39	3827	33.9	11.2	78	51	41.8	-9.2	-717.6
1st term (2009) CC	• • •	37.1									
	Sp12	3	11.39	3827	34.3	10.7	90	51	42.9	-8.1	-729
Full year (1999) I W		40 1									
	Spring 05	9	10.03	955	37.5	9.5	48	51	41	-10	-480
	opg oo	40.1			0.10			•			
Full year (1999) RS	Fall 04	9	10.03	955	42	12.7	33	51	59	8	264
Full year concept (2001) LW	Spring 05	33.1	11		31.9	9.9	49	53	48.5	-4.5	-220.5
		40.1									
Full year (1999) DD	Su 05	9	10.03	955	34.6	7.6	22	51	35	-16	-352
	F # 65	40.1	40.00	0.55	40.4	40.0		- 4			074
Full year (1999) RS	Fall 05	9	10.03	955	43.4	10.8	34	51	62	11	374
Full year (1999) I W	Spring 06	40.1 Q	10.03	955	37	11	/1	51	30	-12	-102
Full year concept (2001) I W	Spring 06	33	10.05	300	33	11	30	53	53	-12	-432
Full year (1999) DD	oping oo	40.1	10		55		55	55	00	0	0
	Su 06	9	10.03	955	42.4	9.1	20	51	60	9	180
Full year (2005)LW	Sp 07	35.5	11.5	1858	32.2	9.5	47	52	43	-9	-423
Full year concept (2001) LW	Sp 07	31.2	9.99		32.2	9.5	48	52	56	4	192
Full year (2005)LW	Su 07	35.5	11.5	1858	37.7	12.6	11	52	61	9	99
Full year (2005)LW	Sp 08	35.5	11.5	1858	34	11	27	51	48	-3	-81
Full year concept (2001) LW	Sp 08	31.2	9.99		35	11	26	53	60	7	182
Full year (2005)LW	Sp 09	35.5	11.5	1858	36	11	31	51	54	3	93
Full year concept (2001) LW	Sp 09	31.2	9.99		34	14	31	53	56	3	93
Full year (2005) DL	Su 08	35.5	11.5	1858	33	9.7	21	51	42	-9	-189
Full year (2005) DL	Fall 08	35.5	11.5	1858	34.1	16.4	23	51	48	-3	-69
Full year (2005) CK	Su 09	35.5	11.51	1858	36.85	14.09	20	51	58	7	140

Full year (2005) DD	Su10	35.5	11.51	1858	35	9.8	33	51	51	0	0
Full year (2005) KP	Fall 10	34.8	11.29	3201	34.07	10.9	41	53	51	-2	-82
Full year (2005) DL	Spring 11	35.5	11.5	1858	33.3	10.2	59	51	46	-5	-295
Full year (2005) KP	Fall 10	35.5	11.51	1858	31.88	10.28	41	52	42	-10	-410
					Total	Students	1497		Average	0	0
			Pre-Ge	eneral C	hemistry	,					
Toledo (1998) DL	Su 05	31.5	7.2		31.8	7.2	18	51	51	0	0
Toledo (1998) DL	Su 07	31.5	7.2		32.5	8.2	16	51	54	3	48
Toledo (1998) DL	Su 08	31.5	7.2		35.2	9.4	21	51	70	19	399
Toledo (1998) DL	Su 09	31.5	7.2		34.6	8.1	13	51	67	16	208
Toledo (1998) RF	F08	31.5	7.2		30.3	7.8	21	51	44	-7	-147
Toledo (1998) DL	F09	31.5	7.2		30.6	6	63	51	47	-4	-252
Toledo (1998) RF	F10	31.5	7.2		32	9.1	50	51	54	3	150
Toledo (1998) DL	Su10	31.5	7.2		32.7	6.4	28	51	58	7	196
					Total	Students	230		Average	5	0
			Orac	nic Che	mistry						
Organic 2002 DD	E 04	13.3	11.83		34.2	77	18	18	23	_25	
	1 04	43.3	11.05		54.2	1.1	10	40	20	-25	-430
Organic 2002 DD	S 05	8	11.83		36.3	7.3	37	48	29	-19	-703
		39.2					•				
Organic 2004 DD	F05	2	12.16	3592	32	8.8	21	50	32	-18	-378
		39.2									
Organic 2004 DD	S06	2	12.16	3592	33.1	7.1	41	50	34	-16	-656
	500	39.2	40.40	0500	05.0	40.0					004
Organic 2004 DD	F06	2	12.16	3592	35.9	10.8	29	50	41	-9	-261
Organia 2004 DD	Sp07	39.2	10.16	2502	26.0	10.0	40	50	15	F	210
Organic 2004 DD	Spur	2 30.2	12.10	3092	30.0	12.2	42	50	45	-5	-210
Organic 2004 DD	F07	2	12 16	3592	36.7	10.3	21	50	45	-5	-105
	107	39.2	12.10	0002	00.7	10.0	21	00	-0	0	100
Organic 2004 DD	Sp08	2	12.16	3592	34.7	10.8	38	50	39	-11	-418
	ľ	39.2									
Organic 2004 DD	F08	2	12.16	3592	35.5	6.9	32	50	41	-9	-288

		39.2									
Organic 2004 DD	Sp09	2	12.16	3592	38.2	10.1	28	50	48	-2	-56
Organic 2004 DD	F09	2	12.16	3592	34.8	11.8	18	50	39	-11	-198
Organia 2004 DD	Sp10	39.2	10.16	2502	27 4	10.2	25	50	46	Л	140
Organic 2004 DD Organic 2002 DD	Spil	43.2	12.10	3092	37.4	10.2	30	50	40	-4	-140
	Sp12	8	11.83		34.3	9	12	51.3	24	-27.3	-327.6
Organic 2004 DD	Sp12	39.2 2	12.16	3592	41.1	11.2	38	50	55	5	190
5	·										
		27.0									
Organic 1st 2006 DD	F06	37.8	9.81		33.8	9.2	48	50	37	-13	-624
Organia 1st 2006 DD	Sp07	37.8	0.91		21.6	6.5	24	50	20	າາ	509
Organic TSt 2006 DD	Spur	37.8	9.01		51.0	0.5	24	50	20	-22	-520
Organic 1st 2006 DD	F07	3 37 8	9.81		33.4	9	54	50	35	-15	-810
Organic 1st 2006 DD	Sp08	37.8	9.81		29.6	7.2	35	50	22	-28	-980
Organia 1 at 2006 DD	EOQ	37.8	0.91		26.2	7.0	50	50	46	Л	200
Organic TSt 2006 DD	FUO	37.8	9.01		30.3	7.9	50	50	40	-4	-200
Organic 1st 2006 DD	F09	3 37 8	9.81	1560	37.7	8.9	58	51	51	0	0
Organic 1st 2006 DD	Sp10	37.8	9.81	1560	32.6	8	29	51.3	31.8	-19.5	-565.5
Organia 1 at 2006 DD	E10	37.8	0.91	1560	25.6	0.0	47	51.2	10.1	7.0	271.2
Organic TSt 2006 DD	FIU	37.8	9.01	1560	55.0	9.9	47	51.5	43.4	-7.9	-371.3
Organic 1st 2006 PV	Sp12	3	9.81	1560	35.2	10.4	28	51.3	43	-8.3	-232.4
Organic 1st 2006 DD	F11	37.8	9.81	1560	36.3	9.6	58	51.3	51	-0.3	-17.4
					Total	Students	841		Average	-11	-10
ACS Final	Semester		Ra	aw Score	e Averag	e		Pei	rcentile	Percentile	Difference

								Av	verage		
			Std.		CSU-	Std.					
(Exam name & year)	Given	U.S.	Dev.	N =	P	Dev.	N =	U.S.	CSU-P	Raw	Weighted
			Bi	ochem	istry						
Biochemistry 2003 SB	Spring 04	35.4	9.3		29	5.7	4	50	26	-24	-96
Biochemistry 2003 SB	Spring 05	35.4	9.3		26	5.8	3	50	17	-33	-99
Biochemistry 2003 SB	Spring 06	35.4	9.3		31	1	3	50	34	-16	-48
Biochemistry 2007 SB	Spring 07	32.9	8.9		24	2.7	3	53	18	-35	-105
Biochemistry 2007 SB	Spring 09	32.9	8.9		30	4.1	7	53	39	-14	-98
Biochemistry 2007 SB	Spring 10	32.9	8.9	839	38.5	4.5	4	53	72	19	76
Biochemistry 2013 SB (beta	0 · · · · · ·				00 (
test)	Spring 12	24.5	6.41	NA	29.1	1.24	4	NA	NA	NA	NA
					Total	Students	28		Average	-17	-13
			Phys	ical Ch	emistry						
P-Chem Comp. (1995) RS	Fall 04	31.3	9.2	442	35.0		1	53	67	14	14
P-Chem Comp. (1995) RS	Spring 05 Fall	31.3	9.2	442	30.3	5.1	3	53	50	-3	-9
P-Chem Comp. (1995) RS	05/Sp06	31.3	9.2	442	38	7.8	4	53	75	22	88
P-Chem Quant. (1995) RS	Spring 05	21.6	5.8		18.7	6.2	10	53	34	-19	-190
P-Chem Quant. (1995) RS	Spring 06	21.6	5.8		19.4	7.9	7	53	40	-13	-91
P-Chem Quant. (1995) RF	Fall 08	21.6	5.8		24.8	7.4	17	53	63	10	170
P-Chem Quant. (1995) RF	Fall 09	21.6	5.8		24.9	6.9	13	53	64	11	143
P-Chem Quant. (1995) RF	Fall 10	21.6	5.8		25.6	4.2	8	53	69	16	128
P-Chem Thermo. (1996) RS	Fall 04	21.3	7.1		20.6	4.3	8	53	51	-2	-16
P-Chem Thermo. (1996) RS	Fall 05	21.3	7.1		18.4	5.4	12	53	40	-13	-156
P-Chem Thermo. (2006) RF	Spring 09	26.4	7.0		26.4	7.2	19	51	51	0	0
P-Chem Thermo. (2006) RF	Spring 10	26.4	7.0		28.2	8.8	18	51	56	5	90
					Total	Students	120		Average	-6	1

			Inorga	anic Ch	emistry						
1991 Inorganic LW	Spring 05	23.9	8	419	27.8	6.6	4	54	69	15	60
Inorganic (2002) CC	Spring 12				31.0	0.0	2		66		
					Total	Students	6		Average	15	10
			Analy	tical Ch	emistry						
Analytical Chemistry 1994 DC	Fall 04	19.5	6.3	233	18.8	5.3	12	54	51	-3	-36
Analytical Chemistry 1994 DC	Fall 05	19.5	6.3	233	17.9	4.5	18	54	45	-9	-162
		19.4									
Analytical Chemistry 1994 CK	Fall 08	7	3.37	233	18.76	4.62	18	51	51	0	0
Analytical Chemistry 2007 CK	Fall 09	27.5	7.1	707	28.8	6.7	16	52	59	7	112
Analytical Chemistry 2007 KP	Fall 10	27.5	7.1	707	33.5	5.6	6	52	81	29	174
Analytical Chemistry 1994 CK		19.4									
	Fall 11	7	3.37	233	25.9	5.0	9	51	88	37	333
					Total	Students	79		Average	10	5
			Instrur	nental /	Analysis						
Instrumental Analysis 2001 DL	Spring 05	32.8	7.8	237	29.8	6	6	47	37	-10	-60
Instrumental Analysis 2001 DL	Spring 06	32.8	7.8	237	29	11.8	13	47	36	-11	-143
Instrumental Analysis 2001 CK	Spring 07	32.8	7.8	237	30.7	8.2	11	47	38	-9	-99
Instrumental Analysis 2001 CK	Spring 09	32.8	7.8	237	29.2	7.8	15	47	36	-11	-165
Instrumental Analysis 2001 CK	Spring 10	32.8	7.8	237	34.3	7.7	12	47	56	9	108
Instrumental Analysis 2009 DL	Spring 11	24.1	6.6		28.7	8.5	10	51	78	27	270
Instrumental Analysis 2009 KP	Spring 12	24.1	6357		26.14	6.87	7	51	59.1	8.1	56.7
					Total	Students	74		Average	0	0



Use of Power Point: (5.pts) Graphies, Diagrams, Figures; (10 pts) Q Do the visual aids supplement the presentation or are they sup Are they easy to read and follow? Topic Student Presenter General Impressions: to a good r was good . (40 min) Start time 12:04 Stop time Presentation: (20 pts) $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ No. 20 $\frac{1}{2}$ $\frac{1}{2}$ Does the presenter maintain good eye contact, and use appropriate strength of voice, while engaging liste Organization: (20 pts) Does the introduction provide a good overview? Does each material appropriate for the intended audience? Appropriateness of topic: narrow eno Is it of general interest? Fopic: (10 pts) Most diagrams and Arcas There were The objective of the 50 minute talk is to illustrate the student's ability to coherently present information of a specific nature slielus lorado ate mensity undurstandoble You presented a good amount of A timely topic with broad applications thus intrest to and icnu The Carbon a good grasp of understanding SOME Slides 9 đ Lrak of deliving after presentation work-or Bryan Nanotube however 4 errors それる 10 well presented and informative good to include specific material while having breadth of interest? Is it sufficiently chen had 12:34 sources. exellent Seminar Assessment & Comments Good 220 Severa had logical fliw of topics ~ Ir.b. too much $\frac{A}{20} \underbrace{\bigcirc}_{18} \frac{B}{16} \frac{C}{14} \frac{D}{16} \frac{F}{16}$ rfluous' Do vis slowing CHEM 493: Fall 2011 ran a 00 The information 171351 Diress ۴ Date 10 ual aids fit py In Formeticus the started out very 6 pellings or 2111 Speaking 0 3 5: 4 and legibility of slides; your vieleo 32 Atopic, correct, 5 ically into presentation? Are they dis short 1-15-11 $\mathcal{D}_{\frac{B}{16}}$ minyks 8 28 Β. was Þ C D F
 S 21 18. A clearly
 well-documented and current? Is it clearly Q effective parce from the ذين lides 14 great addition, and demonstrated indyalk yet Seminar and chucking 2 of Power 243 6 9 Abstract (%) 100 point scale Þ 12 0 al though Seminar Score E (termonology) chemical 10 cal in nature? ĝ Slowick 120 detail? R the ß

too de the eau

Colorado	Seminar Score 20
Fuenco: Seminar Assessment & Comments CHEM 493: Fall 2011	Abstract (%)
Student Presenter B. Kirby	
Tople CALBON MANUTURES Date 11/15/11	
The objective of the 50 minute talk is to illustrate the student's ability to coherently present information of	y a specific nature.
Topic: (10 pts) <u>A A B C</u> Appropriatoress of topic: <i>nurruw enough</i> to include specific material while having <i>breadth of interest</i> ? Is it sufficiently is it of general interest?	D F Standard B Standard & Standar
A A- B- C- Content: (35 pts) C S S S S A B- C- Is there sufficient chemistry in the presentation? Is the material presented relevant to the topic, correct, well-documented and logically presented?	D F 27 Martin Constant and current? Is it clearly
Organization: (20 pts), 20 20 20 20 20 20 20 20 20 20 20 20 20	D F 22 June 10
Presentation (20 pts) <u>46 wind</u> 20 <u>18</u> <u>6</u> <u>6</u> Does the presenter maintain good eye contact, and use appropriate strength of voice, while engaging listeners? (40 min) Start time Stop time <u>36 min</u> <i>Trice ability to convery info ulfo diptrating to much mosticles</i> <i>speak & Stowley</i>	D F 12 10
Graphics, Diagrams, Figures: (10 pts): <u>X</u> Do the visual aids supplement the presentation or are they superfluous? Do visual aids fit logically into presentation? An Are they easy to read and follow? Are they easy to read and follow?	D F Story Association (1996) the they discussed in demity
Use of Power Point (5 pts) 1 1 200 10 10 10 10 10 10 10 10 10 10 10 10 1	D F 2. Transform (1997) 2. Power Point).
Maneretzes GPA/density/rel. shennets - nice Table	

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Topic Conveyed a kevel of comfort with making! (Folked a little by toward the end) Graphics, Diagrama, Figures (10 pts) (10 10 (10 3) (10 3) B- C- D F Do the visual aids supplement the presentation or are they superfluous? Do visual aids fit logically into presentation? Are they discussed in detuin Student Presenter Use of Power Point: (Spis) General Impressions: (40 min) Start time 12:04 Stop time_ Are they easy to read and follow? and *ingucally* presented? Topic (10 pts) <u>D</u> <u>P</u> Appropriateness of topic: *narraw emagt* to include specific material while having *broads of interest*? Is it sufficiently *chemical in nature*? Is it of general interest? opariolo The objective of the 50 minute talk is to thustrate the student's ability to coherently present information of a specific nature. THE O an excellent The sommar was well respondence and well Protein. professional ury good ; excellent, would like to have some information great use of illustrations (diagrams), color-tent of an appropriate scale) very intersting topic Robert Wisner Folding fo 901 grat dHSS 12:40 on "computational" prparing. (Always shak in a slow controlled, mather ber audience comprehension engaged-alkadees Seminar Assessment & Comments 1 excellent enthusiasm, CHEM 493: Fall 2009 Date while engaging listenens? approach to / 18 6 atall tevels of presented. You did guid upe contaci Falked a little by Abstract (%) Seminar Score ٠. 20 ₿ • 3

Gelorado Seminar Assessment & Comments CHEM 493: Fall 2011 100 point seale
Student Presenter <u>Of</u> . Wis mer Topic <u>Pole in Julding: A Vine tice Approach</u> Date <u>10/25/11</u> The objective of the 50 minute talk is to illustrate the student's ability to coherently present information of a specific non-
Topio: (10.pts): Appropriateness of topic: narrow enough to include specific material while having broadh of interest? Is it sufficiently chemical in nature?
Contente (35 ptis) (32) F Is there sufficient chemistry in the presentation? Is the material presented relevant to the ropic, correct, well-documented and current? Is it clearly and logically presented? A.L. Art dusquips apported and all states of the source of the
Organization: (20 pis)
Presentation (20, p_{18}) [C]
Oraphics, Diagrams, Figures: (10 pts) 8 B C D F Do the visual aids supplement the presentation of are they superfluous? Do visual aids fit logically into presentation? Are they discussed in detail? Are they easy to read and follow? Would Fills & bern Rice to hart Figure to If & I B pleated Fillto, etc.
May model Figure . Use of PowerPoint (S. pts) <u>F</u> How well was the visual presentation put together? (general appearance, claricy, and legibility of sildes; effective use of Power Point). General Impressions:

pictures, diagrams, are better, General Impressions: EVCellert job-Use of Power Point: (Spis) Tople Does the proventer maintain good eve contact, and the appropriate strength of voice, while ungasing littlegers? Cood, (40 min) Start time______ Stop time______ RUR COUVERSATIONED to DO. Student Presenter Presentation (20 pts) Organization: (20 pis) <u>22 VQ</u>, 21 VQ Does the *introduction* provide a good overview? Does each topic flow naturally form the previous one? Dues the presentation "left a stary"? Is the material oppropriate for the intended sudience? TopUC (10 pts) $\frac{1}{\sqrt{3}}$ \frac and logically presented? operoid The objective of the 50 minute talk is to illustrate the student's ability to coherently present information of a specific nature. France rotein ". It you consider biochemistry 100 21 NO isne Seminar Assessment & Comments Ener Bare CHEM 493: Fall 2011 Same 1 20 148 77 168 CX14 7 12 1 ⊳ Slidles . B to be chemistry! Q Q N anyation? Are they discussed in detail? $f \in \chi' \chi'' \square$ Ş, 1×10 Good projectio Ð Abstract (%) 100 point scale ø Seminar Score Egares, 5 | dart $\epsilon_{\rm eff}$ Ç F

Contraction Provensity Provensity Provensity CHEM 493: Fail 2011	Seminar Score SS
Student Presenter <u>Robert Wisnur</u>	
Topic <u>Protintolding</u> Date <u>10/25/11</u> The objective of the 50 minute talk is to illustrate the student's ability to coherently present informatic	of a specific nature.
A.A.B.C. Toplic: ((10 pld) Appropriateness of topic: narrow enough to include specific moterial while having breadth of interest? Is it sufficient is it of general interest?	DF 6 9 9 chemicul in nature?
A A B. C. Content: (35 bis)	D P 21 21 84 and current? Is it clearly
Organization: (20 pts) Does the <i>introduction</i> provide a good overview? Does each <i>topic flow naturally</i> form the previous one? Does the pre- matural appropriate for the intended audience?	D F 12 minution " <i>(ell 4 stury</i> "7 is the
A A B. C. Presentation & (20, pts) Does the presenter maintain good eye contact, and use appropriate strength of voice, while engaging interners? (40 min) Start time Stop time	р ^р 12 10
Graphies: Diagrams, Figures: (10 pis) (2.23 pis) (2.23 pis) $(10 p$	DE E E E Are they discussed in detuil?
Use of Power Point (5 pis) <u>Solutions</u> (5 pis) <u>A A B C</u> How well was the visual preventation put logether? (general appearance, clarity, and legibility of slides; effective us	DF Power Point),
General Impressions:	

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Colorado Diate Pressay		Seminar Score <u>75</u>
CHEM 493: Spring 2011	lents	Abstract (%) 95
Student Presenter Miniam Fry beages	6	
Topic Taxal vie Micelles Date 4/17/	12	÷.
The objective of the 50 minute talk is to illustrate the student's ability to coherently p	esent information	1 of a specific nature.
Topic: (10 pts) $\frac{10}{20}$ A A-	B- C-	6 5
repropriations of copic narrow enough to include specific material while having breadth of inter- is it of general interest? Used Interestivity.	<i>est</i> ? Is it sufficient	ly chemical in nature?
Content: (35 nts) 32 A A-	; ₩ ; ₩	D F
Is there sufficient chemistry in the presentation? Is the material presented relevant to the ropic, cor and logically presented? Local havelling of questions.	28 25 ect, well-document	21 18 led and current? Is it <i>elearly</i>
A A-	₽ Ç	D F
Does the introduction provide a good overview? Docs each topic flow naturally form the previous material appropriate for the intended audience? New nice integration of multiple responsels out ales	in to 14	rentation "lell a story"? Is the
A A- Presentation: (20 pts) Does the presenter maintain good eye contact, and use appropriate strength of voice, while engagin	B- C- 16 14 18 listeners?	D F 12 10
(40 min) Start time 12:01 Stop time 12:30 Vevy protessionally disessed. Tallied a little fast,		
Graphics, Diagrams, Figures: (10 pts) 10 9 Do the visual aids supplement the presentation or are they superfluous? Do visual aids fit logically Are they easy to read and follow?	B- C- 8 7 into presentation?	D F 6 5 Are they discussed in detail? Low Heaven
lumped at the ond - nice jobs		
Use of Power Point: (5 pts) $\underbrace{5}_{How well was the visual presentation put together? (general appearance, clarity, and legibility of$	B-C- 4 3 <i>lides; effective</i> usc	D F 2 I of Power Point).
General Impressions:		

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Colorado	Seminar Score
PUBBLOS PUBBLOS CHEM 493: Spring 2011	Abstract (%) 100 point scale
Student Presenter Miniam Fryderice	
Topic Date Date Date	
The objective of the 50 minute talk is to illustrate the student's ability to coherently present informat	on of a specific nature.
Topic: (10 pts) (10 pts) (10 pts) A- B- C- Appropriateness of topic: narrow enough to include specific material while having breadth of interest? 10 9 8 7 10	D F 6 5 tly chemical in nature?
Content: (35 pts) 30 $\frac{A}{2}$ $\frac{A}{2}$ $\frac{B}{2}$	D F
Is there sufficient themistry in the presentation? Is the material presented relevant to the topic, correct, well-docum	21 18 nted and current? Is it <i>clearly</i>
and regically presented i withwars graphiles of mechanism steps would be no	A
Organization: (20 pts) <u> </u>	D F
Material appropriate for the intended audience?	sentation " <i>tell a story</i> "? Is the
Presentation: (20 pts) (8	D F 12 10
Does the presenter maintain good eye contact, and use appropriate strength of voice, while engaging listeners? (40 min) Start time $12:00$ Stop time $12:30$ - 30 unit + Junition - 40 unit	;
South intro explaining how your became citiensial in their typic.	
Graphics, Diagrams, Figures: (10 pts) <u>7</u> 10 9 8 7 Do the visual aids supplement the presentation or are they superfluous? Do visual aids fit locitod, into a construction	
Are they easy to read and follow? medulary in graphiles - Sec "Condany"	Are mey ascassed in detail?
Use of Power Point: (5 pts) <u>S</u> <u>A</u> <u>A</u> <u>B</u> <u>C</u> How well was the visual presentation put together? (general appearance, clarity, and legibility of slides; effective u Sond amount J two push freephiles and figures - Legit.	D F 2 1 2 of Power Point).
General Impressions:	

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Use of Power Point: (2 How well was the <i>visual prese</i> General Impressions:	Presentation: (20 pts) Does the presenter maintain g (40 min) Start time (araphics, Diagrams, F Do the visual aids supplement Are they easy to read and foll	Content: (35 pts) Is there sufficient chemistry in and logically presented? Organization: (20 pts) Does the introduction provide inaterial appropriate for the i	Topic: (10 pts) Appropriateness of topic: <i>nai</i> Is it of <i>general interest</i> ?	Student Presenter	Colorado Diate Presta
great job protession na maion put together? (general appear C (EQ. r , 1	sod eye contact, and use appropriate s Stop time a to d of 10 ± 0.4 of gures: (10 pts) 10 the presentation or are they superfluor w?	The Starch Or 35 the presentation? Is the material presentation? and superved and superved 20 20 20 20 20 20 20 20 20 20	now enough to include specific materi	<u>ner</u> Micelles./tai	Seminar A CHE
A A B- 5 5 4 ence, clarity, and legibility of slides: eff	$\frac{A}{20} \frac{A}{16} \frac{B}{16}$ <i>thength of voice</i> , while <i>engaging listene</i> $MQ \text{ (COUSVIES)}$ $MQ $	Sented relevant to the topic, correct, well A - B. A - B. B. B. A. A. A. A. A. A. A. A. A. A. B. A. A. A. A. A. B. A. A. A. A. A. A. A. A. A. A. A. A. A. A. B. A. A. A. A. A. B. A. A. A. B. A. A. A. B. A. A. A. B. A. B. A. A. B. A. B. A. B. A. B. A. B. A. B. A. B. A. B. A. B. A. B. A. B.	al while having breadth of interest? Isi	$e^{-\frac{1}{2}}$ $e^{-\frac{1}{2}}$ $e^{-\frac{1}{2}}$ $e^{-\frac{1}{2}}$ $e^{-\frac{1}{2}}$	ssessment & Comments M 493: Spring 2011
C-DF 321 <i>eclive</i> use of Power Point).	$\frac{C}{14} = \frac{D}{12} = \frac{F}{10}$ rs^{2} $rd + b heaver C - D - F$	ect e Orchy Market $\frac{C}{25}$ $\frac{D}{21}$ $\frac{F}{18}$ documented and current? Is it clearly $\frac{D}{25}$ $\frac{F}{14}$ $\frac{D}{12}$ $\frac{F}{10}$ $\frac{14}{12}$ $\frac{10}{12}$ Is the	C-DF 765 t sufficiently <i>chemical in nature</i> ?	- 12- formation of a specific nature.	Seminar Score <u><i>G</i></u> <u></u> Abstract (%) 100 point scale



Use of Power Point: (5 pts) T (general appearance, clarity, and legibility of slides; effective use of Power Point). How well was the visual presentation put together? (general appearance, clarity, and legibility of slides; effective use of Power Point). General Impressions:	Graphics, Diagrams, Figures: (10 pts) & A. A. B. C. D. F. Do the visual aids supplement the presentation or are they superfluous? Do visual aids fit logically into presentation? Are they discussed in detai Are they easy to read and follow? A A A B- C- D F	Presentation: (20 pts) $\frac{15}{15}$ $\frac{15}{20}$ $\frac{18}{20}$ $\frac{16}{18}$ $\frac{16}{14}$ $\frac{12}{12}$ $\frac{10}{10}$ Does the presenter maintain good eye contact, and use appropriate strength of voice, while engaging listeners? (40 min) Start time 12:25 Stop time 12:25	Could war used more Green is try $\exists the the the the second start of the second start is the the the second start is the the the second start is the the the the the the the the the second start is the the the the the the the the second start is the the the the the the the the the the$	inct much chemical info. Could have expanded, the talk. Content: (35 pts) B B C D F Content: (35 pts) B B C D F Is the material presented relevant to the topic, correct, well-documented and current? Is it clearly and logically presented?	Topic: (10 pts) F F F C D F Appropriateness of topic: narrow enough to include specific material while having breadth of interest? is it sufficiently chemical in nature? Is it of general interest?	Student Presenter L'MFISU/1150/2 Topic LAHAT Finger prints Date Apr. 10, 2012 The objective of the 50 minute talk is to illustrate the student's ability to coherently present information of a specific nature. The objective of the 50 minute talk is to illustrate the student's ability to coherently present information of a specific nature.	Colorado Seminar Score (2) Entrate Seminar Assessment & Comments Seminar Score (2) Public CHEM 493: Spring 2011 Opposite Score (2)
	detail?		"? Is the	clearly			84

Colorado Intrate Presso Freesion	Seminar Score 🙀 70 Abstract (%) 🔗
Student Presenter <u>Chris Wilson</u>	
Topic Latent Fingerprint Receivery Date 2//10/12	
The objective of the 50 minute talk is to illustrate the student's ability to coherently present information	of a specific nature.
Topic: (10 pts) Z <u>A A B- C-</u> Appropriateness of topic: narrow enough to include specific material while having breadth of interest? Is it sufficiently is it of general interest? If I I is the first of the specific material while having breadth of interest?	D F 6 S 1 chemical in nature?
Aild is doing.	
A B- C- Content: (35 pts) 20 35 32 28 25 Is there sufficient chemistry in the presentation? Is the material presented relevant to the topic, correct, well-documented 35 32 28 25	D F 21 18 d and current? Is it <i>clearly</i>
Everything presented could be glanned from a tratheak, this a research topic	should be
Not much discussion of the chemistry, glassed over the real	slides.
Organization: (20 pts) <u>45 / 6</u> 20 18 16 14 Does the <i>introduction</i> provide a <i>good overview?</i> Does each <i>topic flow naturally</i> form the previous one? Does the present material appropriate for the intended audience?	12 10 12 10 ntation " <i>tell a story</i> "? Is the
<u>A</u> ABC-	D F
Presentation: (20 pts) $\frac{\partial \mathbf{r}' / \ell}{\partial \mathbf{r}'}$ 20 18 16 14 Does the presenter maintain good eye contact, and use appropriate strength of voice, while engaging listeners?	12 10
(40 min) Start time <u>12:06</u> Stop time <u>12:325</u> too short, Late to crun prosentation,	
Graphics, Diagrams, Figures: (10 pts) P S <u>10</u> 9 8 7 Do the visual aids supplement the presentation or are they superfluous? Do visual aids fit logically into presentation? A Are they easy to read and follow?	D F 6 5 vrc they discussed in detail?
cynoacylite mechanistry stickes you had. the only chemistry stickes you had.	
Use of Power Point: (5 pts) $\frac{A}{5} - \frac{B}{5} - \frac{C}{5}$ How well was the visual presentation put together? (general appearance, clarity, and legibility of slides: effective use of	D F 2 1 [Power Point).
General Impressions: Heal trouble answering questions - dich + seem to do much	research.

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$\begin{array}{c} \begin{array}{c} \label{eq:constraint} \hline \\ \hline $	Seminar Score 6 Abstract (%) 90 100 point scale of a specific nature. D F 0 F 2 chemical in nature? $(\mu\nu)\mu\nu c 0 i^{j}$ $(\mu\nu)\mu c 0$
A A. B. C. Content: (35 pts) 21 21 33 33 32 28 23 Is there sufficient chemistry in the presentation? Is the material presented relevant to the topic, correct, well-document and logically presented? NOOD TO PLESENT INSEE CITEMINAY - THEAE IS SIGNIFICANT AMOUNT OF (MANNED IN THE IMAGINE CITEMIT FINICAL PRINT, UNPOLSMINATING A MODIFIC SECTION OF LATINT FINICAL PRINT, UNPOLSMINATING A	D F 20 18 18 clearly 21 and current? Is it clearly CHismainy - The chemismy
Organization: (20 pts)	D F 12
A A B C- Presentation: (20 pts) (20 pts) 12 20 18 16 14 Does the presenter maintain good eye contact, and use appropriate strength of voice, while engaging listeners? (40 min) Start time 111 to Stop time 17.25 10 14	
Graphics, Diagrams, Figures: (10 pts) <u>S</u> Do the visual aids supplement the presentation or are they superfluous? Do visual aids fit logically into presentation? Are they easy to read and follow?	$\frac{D}{6} = \frac{F}{5}$
A A. B. C. Use of Power Point: (5 pts) 4 3 How well was the visual presentation put together? (general appearance, clarity, and legibility of slides; effective use Low Pourse Pourse Super Clarity - Clarity Super Tol. One	DF 21 Xf Power Point).
General Impressions; LATE FOLL MY OUN TALK! LINA NOT MUCH SLANSLENT THAN THE CHE PRESSURG WHZ-TO UNABLE TO ANSWEL CHEMINLY QUESTION	pasonasy.

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Seminar Assessment & Comments CHEM 493: Spring 2011

Abstract (%) 100 point scale	Seminar Score
	87

- -	Student Presenter
	Laured Spenber

Topic Kotors Date The objective of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate the student's ability to control of the 50 minute talk is to illustrate	$\frac{4}{24}$	2, resent info B-	C-	f a specij D	fc nature.
Is it of general interest. In teresting.					TRUE IN
A Content: (35 pts) 28 A Is there sufficient chemistry in the presentation? Is the material presented relevant to the and Inovically presented relevant to the second seco	A- 32 <i>le topic</i> , corr	B- 28 ect, well-dc	<u>C-</u> 25 90umented	D 21 and curre	F 18 nt? Is it clearly
Ran short >> could have shown some of t	he nat	uvel m	storrs.		
Organization: (20 pts) 18 20 Does the introduction provide a good overview? Does each topic flow naturally form 1 material appropriate for the intended audience? Fire thy good. (Heal time to make the story	A- 18 ne previous	B- 16 one? Does	14 14	D 12 1ation "rei	F 10 ' <i>l a story'</i> ?? Is the
18 A Presentation: (20 pts) 20 Does the presenter maintain good eye contact, and use appropriate strength of voice, w 20 (40 min) Start time 12:02 Stop time 12:28 >> A bit show Value got quiet & loud at times,	A- 18 hile engagin	<u> </u>	14 14	12 12	10 F
Graphics, Diagrams, Figures: (10 pts) 8 10 Do the visual aids supplement the presentation or are they superfluous? Do visual aids Are they easy to read and follow?	A . 9 fit logically	B- 8 into presen	C- 7 6 Nation? Ar	D c they <i>dis</i>	<u>F</u> 5 cussed in detail?
The evolution slides were good. Some of the wljust a few words on them.	earlier	ડ પે તેન્દ્ર	م م م	9 5. 4	Rup
Use of Power Point: (5 pts) <u>5</u> How woll was the visual presentation put together? (general appearance, clarity, and t	A- 5 egihility of s	B- 4 lides; effect	C- 3 ive use of	D 2 Power Po	
General Impressions: How can you tell the rotors are turning (lesser, et	د ⁄	·			

1 \mathbb{R}^{n} A_{i} Topic Student Presenter Graphics, Diagrams, Figures: (10 pts) - 10 (10 pts) -Use of Power Point: (5 pts) <u>5</u> 4 3 2 1 How well was the visual presentation put together? (general appearance, clarity, and tegibility of slides; effective use of Power Point). Does the presenter maintain good eye contact, and use appropriate strength of voice, while engaging listeners? (40 min) Start time $\frac{12}{2}$ Stop time $\frac{12}{2}$ General Impressions: Vouce Voo Organization: (20 pts) 1/20 (20 pts) 20 18 (17) 16 14 12 10 Does the *introduction* provide a good overview? Does each topic flow naturally form the previous one? Does the presentation "tell a story"? Is the material appropriate for the intended audience? Content: (35 pts) (32) (32) (32) (32) (32) (32) (32) (32) (32) (32) (32) (32) (33) (32) (32) (33)Appropriatoness of topic: narrow enough to include specific material while having breadth of interest? Is it sufficiently chemical in nature? Is it of general interest? Topic: (10 pts) olorado tate liversity The objective of the 50 minute talk is to illustrate the student's ability to coherently present information of a specific nature Raton 1202 low - Siffuelt to kear sometimes でく Mon Q উ \mathcal{T} Seminar Assessment & Comments ma 2 CHEM 493: Spring 2011 linee dj dj Lion al Date 82 20 5 ⊳ ୍ଚ Þ Pop ίπ 00 þ μ μ μ 딱 μ 242 K j ဂု þ 14 C iQ, o, Abstract (%) 100 point scale Seminar Score Þ U 5 Ð F Þ λ c, 5 7 H v₁ | ┯ ы X.

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Colorado Inversity Possed Seminar Assessment & Comments	Seminar Score <u>85</u> Abstract (%)
Student Presenter <u> ared specker</u>	
Topic MOLECULAR MOTORS Date 4/24	<u>6</u>
The objective of the 50 minute talk is to illustrate the student's ability to coherently present information	of a specific nature.
Topic: (10 pts) $\frac{A}{10}$ $\frac{A}{9}$ $\frac{B}{8}$ $\frac{C}{7}$ Appropriateness of topic: narrow enough to include specific material while having breadth of interest? Is it sufficiently is it of general interest?	D F 6 5 chemical in nature?
Innovative.	
INTERESTING A A. B. C.	ר זי
Content: (35 pts) 32 Is there sufficient chemistry in the presentation? Is the material presented relevant to the topic, correct, well-documento	21 18 1 and current? Is it clearly
and logically presented? Intro Overview 12:02 - 12:10	
CHEMISTRY 12:10 - 12:30	
Organization: (20 pts) Does the introduction provide a good overview? Does each topic flow naturally form the previous one? Does the present naturally form the previous one? Does the present of the intended audience?	D F 12 10 station "rell a story"? Is the
Presentation: (20 pts) 14 20 18 16 $(40 min)$ Start time 12 :30 lime 12 :30	D F 12 10
Questions 12:30-12:40	
Graphics, Diagrams, Figures: (10 pts) 8 10 9 8 7 Do the visual aids supplement the presentation or are they superfluous? Do visual aids fit logically into presentation? A Are they easy to read and follow? Supplement enter fresent tration? A Are they easy to read and follow? Supplement enter fresent tration?	D F 6 5 re they discussed in detail? Tri UV2S
Use of Power Point: (5 pts) 5 A A- B- C- How well was the visual presentation put logether? (general appearance, clarity, and logibility of slides; effective use of	D F 2 1 'Power Point).
General Impressions: Hard to hear upice, great subject Chemistry if needed but abit too sh HALF QUESTIONS answered on surface.	ort. Ugh
Good Presentation - just needed a bit mo	re details.