

**IMPERIAL VALLEY COLLEGE  
PROGRAM REVIEW COMPLIANCE FORM AND REQUEST FOR RESOURCES**

DEPARTMENT SME - Physical Sci

ACADEMIC YR. 1273

Comprehensive Program Review                       Annual Assessment                       Request for Resources (check all that apply)

For your Program Review data as well as your SLO/SAO assessment findings in order to update to your Comprehensive Program Review, all changes to area needs and subsequent requests for additional resources must be reported at this time.

If you are scheduled for a Comprehensive Program Review all forms are to be completed and submitted to the appropriate Dean/VP. If you are doing an annual Program Review Assessment only and have no changes to area needs, sign below and submit this form to appropriate Dean/VP. If you have been changed as a result of your annual assessment of program review data, please complete the appropriate Request for Resource form and submit to appropriate Dean/VP.

[Signature]                      3/1/13  
Program Chair/Director                      Date

[Signature]  
Signature of Area Dean                     

[Signature]                      3-1-13  
Area Vice President                      Date

- Attach the following documents to this Program Review Compliance form if you are requesting additional resources:
- Comprehensive Program Review
  - Assessment Form
  - Assessments
  - Resources Forms

**Academic Program Evaluation – PHYSICAL SCIENCE**  
**Division – H & S**  
**Department - SME**

**PHYSICAL SCIENCE COURSES – Associate Degree**

Required Courses: CHEM 200, 202, MATH 192, 194, PHYS 200, 202, 204

Select 5 units from: AG/ENVS 110, ASTR 100, CHEM 204, 206, GEOG 100, GEOL 100, 110, MATH 119, 210, 220, 230, PHSC 110

**PROGRAM COMPLETION**

Number of certificates completed Between Fall 2009 and Spring 2012	Number of Associate Degrees Completed Between Fall 2009 and Spring 2012
N/A	5

**PHYSICAL SCIENCE COURSES – ENROLLMENT, FILL RATE & WAIT LISTS**

COURSES	Course Cap	Enrollment - # Sections						Fill Rate						Wait List 1/8/2013
		F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12	
ASTR 100	35	146 - 4	144 - 4	145 - 4	136 - 4	130 - 4	117 - 4	104.29%	102.86%	103.57%	97.14%	92.86%	83.57%	
AG/ENVS 110	30	258 - 8	288 - 9	263 - 9	229 - 8	256 - 8	193 - 7	107.5%	107.08%	97.4%	95.42%	106.7%	97.2%	5
CHEM 100	25	148 - 5	112 - 4	124 - 5	136 - 5	127 - 5	98 - 4	123.33%	116.67%	103.33%	108.80%	101.60%	98%	94
CHEM 200	25	33 - 1	28 - 1	27 - 1	23 - 1	25 - 1	19 - 1	137.50%	116.67%	112.50%	92%	100%	76%	15
CHEM 202	25	14 - 1	27 - 1	16 - 1	19 - 1	15 - 1	12 - 1	58.33%	112.50%	66.67%	76%	60%	48%	
CHEM 204	25		18 - 1						75%					
CHEM 206														
GEOG 100	40	87 - 2	137 - 3	134 - 3	137 - 3	132 - 3	121 - 3	108.8%	114.17%	111.67%	114.17%	115%	100.83%	
GEOL 100	35	83 - 2	56 - 2	64 - 2	54 - 2	46 - 2	45 - 2	115.3%	116.67%	133.33%	112.50%	92%	90%	4
GEOL 110	35	155 - 4	167 - 5	158 - 4	132 - 4	108 - 3	88 - 3	110.71%	159.05%	112.86%	188.57%	102.86%	83.81%	2
MATH 119	30	182 - 6	200 - 6	304 - 9	212 - 6	259 - 8	289 - 8	101.11%	133.33%	112.59%	141.33%	107.92%	120.42%	114
MATH 192	35	57 - 2	42 - 1	67 - 2	36 - 1	53 - 2	49 - 2	94.29%	120%	95.71%	102.86%	75.71%	70%	
MATH 194	35	33 - 1	41 - 1	34 - 1	31 - 1	21 - 1	23 - 1		117.14%	97.14%	88.57%	60%	65.71%	1
MATH 210	35		31 - 1		37 - 1		24 - 1		88.57%		105.71%		68.57%	
MATH 220	30		18 - 1		25 - 1		24 - 1		60%		83.33%		80%	
MATH 230	35	28 - 1		26 - 1		31 - 1		93.33%		86.67%		88.57%		
PHSC 110	35	32 - 1	37 - 1	61 - 2	60 - 2	60 - 2	55 - 2	91.43%	105.71%	87.14%	85.71%	100%	78.57%	
PHYS 200	25	24 - 1	24 - 1	20 - 1	24 - 1	20 - 1	21 - 1	100%	100%	83.33%	100%	80%	84%	1
PHYS 202	25	27 - 1		28 - 1		19 - 1		112.50%		116.67%		76%		
PHYS 204	25		30 - 1		29 - 1		23 - 1		125%		120.83%		92%	

**PHYSICAL SCIENCE COURSES – PRODUCTIVITY**

COURSES	FTES						FTEF						Productivity					
	F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12
ASTR 100	15.02	14.82	14.91	13.99	13.37	12.03	0.80	0.80	0.80	0.80	0.80	0.80	18.78	18.53	18.64	17.49	16.71	15.04
AG/ENVS 110	26.55	29.64	27.05	23.55	26.33	19.85	1.60	1.80	1.80	1.60	1.60	1.40	16.59	16.47	15.03	14.72	16.46	14.18
CHEM 100	30.45	23.04	25.51	27.98	26.13	20.16	1.35	1.08	1.35	1.35	1.35	1.08	22.56	21.33	18.90	20.73	19.36	18.67
CHEM 200	10.18	8.64	8.33	7.10	7.71	5.86	0.33	0.33	0.33	0.33	0.33	0.33	30.85	26.18	25.24	21.52	23.36	17.76
CHEM 202	4.32	8.33	4.94	5.86	4.63	3.70	0.33	0.33	0.33	0.33	0.33	0.33	13.09	25.24	14.97	17.76	14.03	11.21
CHEM 204		5.55						0.33						16.82				
CHEM 206																		
GEOG 100	8.95	14.1	13.78	14.09	14.19	12.45	0.40	0.60	0.60	0.60	0.60	0.60	22.38	23.50	22.97	23.48	23.65	20.75
GEOL 100	17.07	11.52	13.17	11.11	9.46	9.25	0.81	0.54	0.54	0.54	0.54	0.54	21.07	21.33	24.39	20.57	17.52	17.13
GEOL 110	15.94	17.18	16.25	13.58	11.11	9.05	0.80	1.00	0.80	0.80	0.60	0.60	19.93	17.18	20.31	16.98	18.52	15.08
MATH 119	24.97	27.43	41.69	29.08	35.51	39.63	1.62	1.62	2.43	1.62	2.16	2.16	15.41	16.93	17.16	17.95	16.44	18.35
MATH 192	9.78	7.20	11.48	6.17	9.08	8.40	0.66	0.33	0.66	0.33	0.66	0.66	14.82	21.82	17.39	18.70	13.76	12.73
MATH 194	5.66	7.03	5.83	5.31	3.6	3.94	0.33	0.33	0.33	0.33	0.33	0.33	17.15	21.30	17.67	16.09	10.91	11.94
MATH 210		5.31		6.34		4.11		0.33		0.33		0.33		16.09		19.21		12.45
MATH 220		1.85		2.57		2.47		0.20		0.20		0.20		9.25		12.85		12.35
MATH 230	2.88		2.67		3.19		0.20		0.20		0.20		14.40		13.35		15.95	
PHSC 110	3.29	3.81	6.17	6.17	7.2	5.66	0.2	0.2	0.4	0.4	0.4	0.4	16.45	19.05	15.43	15.43	18.00	14.15
PHYS 200	5.76	5.76	4.8	5.76	4.8	5.04	0.33	0.33	0.33	0.33	0.33	0.33	17.45	17.45	14.55	17.45	14.55	15.27
PHYS 202	6.48		6.72		4.56		0.33		0.33		0.33		19.64		20.36		13.82	
PHYS 204		7.2		6.96		5.52		0.33		0.33		0.33		21.82		21.09		16.73

**PHYSICAL SCIENCE COURSES – COMPLETION & SUCCESS RATES**

COURSES	Completion Rate						Success Rate					
	F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12
ASTR 100	52.0%	56.0%	51.0%	50.0%	62.0%	52.0%	29.0%	26.0%	30.0%	29.0%	31%	29.0%
AG/ENVS 110	89%	89%	87%	87%	94%	86%	66.0%	60.0%	66.0%	58.0%	69%	63.0%
CHEM 100	84%	85%	91%	93%	88%	89%	64%	68%	73%	78%	70%	57%
CHEM 200	94%	61%	85%	83%	76%	79%	82%	61%	67%	61%	48%	53%
CHEM 202	93%	63%	75%	100%	67%	83%	79%	44%	69%	74%	47%	83%
CHEM 204		78%						33%				
CHEM 206												
GEOG 100	72%	79%	78%	72%	76%	85%	53.0%	42%	57%	52%	57%	61.0%
GEOL 100	86%	88%	78%	81%	65%	87%	66%	71%	55%	57%	57%	58%
GEOL 110	82%	77%	76%	83%	77%	73%	59%	52%	43%	46%	48%	48%
MATH 119	76%	84%	79%	87%	73%	86%	58%	68%	58%	70%	54%	64%
MATH 192	81%	50%	81%	67%	74%	98%	54%	43%	54%	50%	43%	86%
MATH 194	85%	68%	85%	87%	95%	96%	52%	56%	79%	81%	57%	96%
MATH 210		74%		95%		100%		68%		84%		96%
MATH 220		89%		68%		100%		67%		68%		96%
MATH 230	100%		96%		71%		93%		77%		61%	
PHSC 110	50%	68%	69%	75%	69%	49%	28%	54%	54%	60%	46%	38%
PHYS 200	71%	83%	80%	88%	90%	81%	58%	63%	80%	75%	80%	76%
PHYS 202	78%		89%		95%		78%		86%		84%	
PHYS 204		93%		97%		100%		63%		93%		87%

<b>Recent Enrollment Demand:</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low _____
<b>Projection for Future Demand :</b>	<input type="checkbox"/> Growing	<input checked="" type="checkbox"/> Stable, but impacted	<input type="checkbox"/> Declining _____
<b>Opportunity Analysis:</b> (Successes, new curriculum development, alternative delivery mechanisms, interdisciplinary strategies, etc.)			
<p><u>Chemistry:</u> Currently, we only have 1.5 full-time chemistry instructors, with no part-time instructors. We do not offer enough CHEM 100 sections to maintain strong enrollment in CHEM 200 and CHEM 202. With an additional Chemistry instructor, both enrollment and number of sections offered for CHEM 200 and CHEM 202 could increase, giving students more opportunities to take upper-level Chemistry classes.</p> <p><u>Math:</u> Enrollment is both strong and stable, so there is no need to change Mathematics curriculum.</p> <p><u>Physics:</u> Enrollment is both strong and stable, so there is no need to change Physics curriculum.</p>			

**7 year aggregate data and course offering cycles:**

SUBJ	Crs #	% Cap	Fall Sections	Spring Sections	Prerequisites
MATH	192	83%	2	1	Math 90 to 140 to 190
MATH	194	83%	1	1	
PHYS	200	88%	1	1	Math 192
PHYS	202	68%	1	rare	
PHYS	204	88%	0	1	
CHEM	200	109%	1	1	
CHEM	202	59%	1	1	Chem 100
CHEM	100	97%	4 ( was 5)	4 (was 5)	

<b>Summary of Program "Health" Evaluation:</b> (Including consideration of size, score, productivity and quality of outcomes)
<p>We currently have 22 students who are declared as physical science majors, so we do have an expectation of awarding similar numbers of degrees, if not more, in the upcoming academic years as these students finish the program.</p> <p>As class enrollments have been stable across the board in the physical science program, this should be considered a healthy program.</p>

## Student Learning Outcomes and Program Learning Outcomes

### Student Learning Outcomes Assessment –completion

SLOs for Physical Science degree classes have been assessed consistently.

Course	# Credits	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013
MATH 192	5		3		4	4		4,5	Voldman
MATH 194	5	1					1,2	3	Voldman
CHEM200	5	old	old	Yes	1,2,3,4,5	1		1,2,3,4,5	
CHEM202	5	old	old	Yes	1,2,3,4,5	3		1,3,4,5	
PHYS200	5		old,2,3,4			1,2,3,4,5	1,2,3,4,5	1,2,3,4,5	
PHYS202	5	old,1		old,1,2,3,4		1,2,3,4,5		1,2,3,4,5	
PHYS204	5		2,3		old,2,3,4,5		2,3,4,5		Cozzani

### Program Learning Outcomes Assessment

Three (3) PLOs have been identified for the Physical Science degree, and one was assessed in the 2011-2012 academic year.

### Success Rate of Student Learning Outcomes

SLOs for Physical Science classes are assessed each year the class is offered.

### Success Rate of Program Learning Outcomes

Only one of 3 PLOs has been assessed currently, and the other 2 will be assessed this academic year.

### **Future Goals of Program**

1. As this is a healthy program, we do not anticipate any major changes to the program in the near future. With decreasing enrollment in CHEM 202, we had to cancel the class in Spring 2013.
2. Our plan is to offer two sections of CHEM 200 in the Fall 2013 semester, and then one CHEM 200 and one CHEM 202 in the Spring 2014 semester to help increase enrollment in the CHEM 202 class.

### **Resource Requests**

1. Staffing: 1 Chemistry instructor, approximately \$80,000/year. We have been requesting this every year during APR and for CPR. A new Chemistry instructor is critical to help students get through CHEM 100, which is a prerequisite for chemistry classes (CHEM 200, 202, 204, 206 – in which enrollment has been declining), and is also a prerequisite for BIOL 200, 202, 206, and 220, which are the upper-level anatomy and physiology, and microbiology, classes that are needed for students to get into the nursing program.
2. Budget: 8 analytical scales to replace old scales. Approximately \$38,800 cost total.
3. Technology: 1 Instructor laptop for class. Approximately \$1300 cost total.