

IMPERIAL VALLEY COLLEGE
PROGRAM REVIEW COMPLIANCE FORM AND REQUEST FOR RESOURCES

DEPARTMENT SME - ^{Math} Pre Engineering ACADEMIC YR. 12-13

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 only 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 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] 3-1-13
Area Vice President Date

[Signature]
Signature of Area Dean I

- Attach the following documents to this Program Review Compliance form if you are requesting additional resources:
- Comprehensive Program Review
 - Request for Resources Form
 - SLO/SAO Assessments
 - Request for Resources Forms

Academic Program Evaluation - MATHEMATICS
Division - H & S
Department - MATH

MATH COURSES - OVERALL SUCCESS RATE

TERM	Enrollment	Fill Rate	# of Sections	Mass Cap	Avg. Class Cap	Avg. Class Size	FTES	FTEF	Productivity (FTES/FTEF)	Completion Rate	Success Rate
Fall 2009	2407	103.30%	68	2330	34.26	35.4	285.32	15.88	17.97	56%	80%
Spring 2010	2281	98.96%	67	2305	34.4	34.04	276.87	15.68	17.66	53%	77%
Fall 2010	2551	107.41%	69	2375	34.42	36.97	311.68	16.49	18.9	55%	83%
Spring 2011	2388	106.13%	65	2250	34.62	36.74	289.32	15.35	18.85	55%	81%
Fall 2011	2346	105.91%	64	2215	34.61	36.66	282.06	15.28	18.46	60%	84%
Spring 2012	2190	96.26%	66	2275	34.47	33.18	268.42	15.88	16.9	58%	84%
% Change Fall Semesters 09 - 11	-2.53%	2.53%	-5.88%	-4.94%	1.02%	3.56%	-1.14%	-3.78%	2.73%	7.14%	5.00%
% Change Spring Semesters 10 - 12	-3.99%	-2.73%	-1.49%	-1.30%	0.20%	-2.53%	-3.05%	1.28%	-4.30%	9.43%	9.09%

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	27

MATHEMATICS COURSES - A.S. DEGREE

Required Courses: Math 192, 194, 210

Select 3 units from: Math 220, 230

Select 9 units from: CIS 210, CS 220, Math 119, Math 220, Math 230, Math 240, Math 241, PHYS 200, 202, 204

MATHEMATICS COURSES (TRANSFER LEVEL) - ENROLLMENT, FILL RATES & 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	S 13
MATH 110	35	47 - 2	60 - 2	59 - 2	62 - 2	55 - 2	57 - 2	67.14%	171.43%	84.29%	177.14%	78.57%	81.43%	1
MATH 112	35	35 - 1	32 - 1	34 - 1	37 - 1	32 - 1	27 - 1	100%	91.43%	97.14%	105.71%	91.43%	77.14%	2
MATH 114	30	29 - 1	37 - 2	28 - 1	25 - 1	32 - 1	27 - 1	96.67%	61.67%	93.33%	83.33%	106.67%	90%	
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 122	30	25 - 1	21 - 1	26 - 1	18 - 1				70%		60%			
MATH 140	35	72 - 2	76 - 2	72 - 2	76 - 2	103 - 3	92 - 3	102.86%	108.57%	102.86%	108.57%	98.10%	87.62%	25
MATH 150	35	30 - 1	38 - 1	32 - 1	37 - 1	33 - 1	37 - 1	85.71%	108.57%	91.43%	105.71%	94.29%	105.71%	9
MATH 170	30		18 - 1		14 - 1		16 - 1	77.14%	60%		46.67%		53.33%	
MATH 190	35	54 - 2	59 - 2	51 - 2	41 - 1	62 - 2	58 - 2	81.43%	84.29%	72.86%	117.14%	88.57%	82.86%	
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%		
MATH 240	30	25 - 1		23 - 1		28 - 1		71.43%		65.71%		93.33%		
PHYS 200	25	24 - 1	24 - 1	20 - 1	24 - 1	20 - 1	21 - 1	100.00%	100.00%	83.33%	100.00%	80.00%	84.00%	1
PHYS 202	25	27 - 1		28 - 1		19 - 1		112.50%		116.67%		76.00%		
PHYS 204	25		30 - 1		29 - 1		23 - 1		125.00%		120.83%		92.00%	
CS 220	24	23 - 1	19 - 1	24 - 1	19 - 1	23 - 1	19 - 1	95.83%	37.50%	100.00%	79.17%	95.83%	79.17%	
CIS 210	28	30 - 1	24 - 1	26 - 1	28 - 1	28 - 1	19 - 1	107.14%	85.71%	9286.00%	89.29%	10000.00%	71.41%	

MATHEMATICS COURSES (TRANSFER LEVEL) - 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
MATH 110	4.83	6.17	6.07	6.37	5.66	5.86	0.40	0.40	0.40	0.40	0.40	0.40	12.08	15.43	15.18	15.93	14.15	14.65
MATH 112	3.6	3.29	3.5	3.81	3.29	2.78	0.20	0.20	0.20	0.20	0.20	0.20	18.00	16.45	17.50	19.05	16.45	13.90
MATH 114	0.99	1.27	0.96	0.86	1.1	0.93	0.07	0.07	0.07	0.07	0.07	0.07	14.14	18.14	13.71	12.29	15.71	13.29
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 122	2.57	2.16	2.67	1.85			0.20	0.20	0.20	0.20			12.85	10.80	13.35	9.25		
MATH 140	7.41	7.82	7.41	7.81	10.59	9.46	0.40	0.40	0.40	0.40	0.60	0.60	18.53	19.55	18.53	19.53	17.65	15.77
MATH 150	4.11	5.21	4.39	5.07	4.53	5.07	0.27	0.27	0.27	0.27	0.27	0.27	15.22	19.30	16.26	18.78	16.78	18.78
MATH 170		2.47		1.92		2.19		0.27		0.27		0.27		9.15		7.11		8.11
MATH 190	9.25	10.12	8.74	7.03	10.63	9.95	0.66	0.66	0.66	0.33	0.66	0.66	14.02	15.33	13.24	21.30	16.11	15.08
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	
MATH 240	2.57		2.37		2.88		0.20		0.20		0.20		12.85		11.85		14.40	
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
CS 220	4.73	3.91	4.94	3.91	4.73	3.91	0.27	0.27	0.27	0.27	0.27	0.27	17.52	14.48	18.30	14.48	17.52	14.48
CIS 210	3.09	2.47	2.67	2.57	2.88	1.95	0.2	0.2	0.2	0.2	0.2	0.2	15.45	12.35	13.35	12.85	14.40	9.75

MATHEMATICS COURSES (TRANSFER LEVEL) - 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
MATH 110	79%	83%	83%	95%	84%	88%	70%	63%	71%	68%	62%	75%
MATH 112	94%	88%	88%	92%	94%	89%	91%	81%	79%	81%	94%	78%
MATH 114	79%	84%	96%	100%	94%	93%	79%	78%	82%	96%	81%	93%
MATH 119	76%	84%	79%	87%	73%	86%	58%	68%	58%	70%	54%	64%
MATH 122	84%	67%	96%	78%			80%	48%	81%	72%		
MATH 140	71%	71%	86%	78%	81%	80%	47%	42%	50%	59%	64%	57%
MATH 150	73%	74%	84%	81%	94%	70%	60%	53%	53%	78%	82%	62%
MATH 170		94%		86%		94%		94%		71%		69%
MATH 190	76%	83%	92%	88%	94%	74%	61%	63%	61%	51%	87%	66%
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%	
MATH 240	96%		87%		86%		92%		78%		71%	
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%
CS 220	78%	84%	75%	79%	65%	89%	52%	63%	54%	68%	43%	84%
CIS 210	67%	67%	77%	76%	89%	79%	30%	42%	46%	48%	71%	37%

Recent Enrollment Demand: High Medium Low

Projection for Future Demand: Growing Stable Declining

Opportunity Analysis: (Successes, new curriculum development, alternative delivery mechanisms, interdisciplinary strategies, etc.)

In 2010 the IVC Math Dept. increased the developmental sequence from three courses: 70, 80, 90; to four courses: 61, 71, 81, 91; and the total units for students taking the entire sequence, from 10 units to 15 units. While this is a short-term drain on FTEF, the hope is that the new sequence will eventually reduce the failure rates and ultimately result in fewer sections needed.

In AY 2012-2013, the Math Lab became a part of the Math Dept. Previously it had belonged to Learning Services.

Currently there are no DE courses being offered by the Math Dept. This is due to pending approval for the DE Substantive Change Proposal affecting the entire college.

Summary of Program "Health" Evaluation: (Including consideration of size, score, productivity and quality of outcomes)

Currently we have 8 full-time math professors. We also share a professor with physics and another with computer science. This is the rough equivalent of a ninth professor. One full-time professor has 6 units of release time to be the coordinator. Another professor has 9 units of release time between Academic Senate President and coach for the women's track team. We have a number of adjunct professors, teaching a variety of loads. We added one adjunct professor in AY 2012-2013. We lost one full-time professor who became Institutional Researcher in the Presidents Office. We have two fewer teaching professors than during 2008-2009. We need a position to meet the staffing demand. In particular, we have not been able to meet the student demand for Math 119 (statistics).

The Computer Science Lab and the Math Lab are both in need of upgraded computers and software.

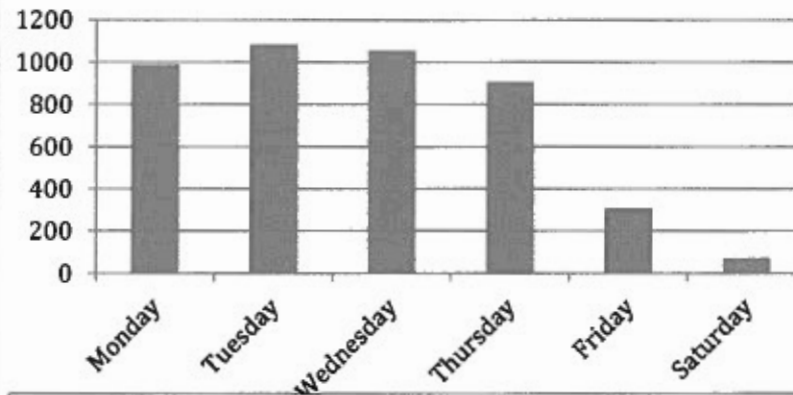
The Math Lab needs more tutors in order to meet student demand. Discussion follows:

Math Lab Usage: Fall 2012

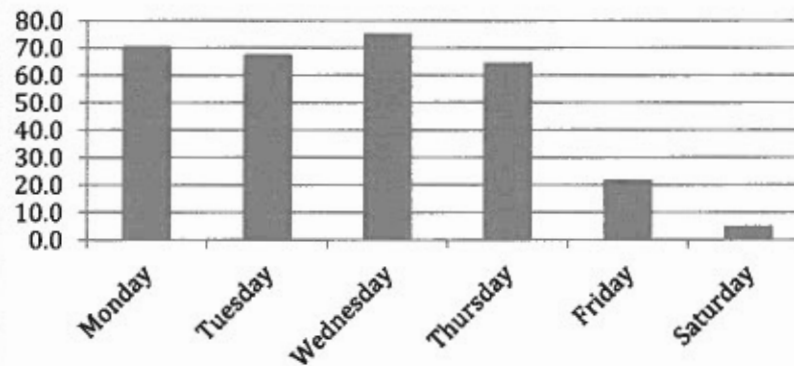
Total visits:	4414
Total hours:	30,787.6 2
Total students:	583

Number of Log-ins by Day		
Day of Week	Total	Average
Monday	990	70.7
Tuesday	1083	67.7
Wednesday	1054	75.3
Thursday	906	64.7
Friday	307	21.9
Saturday	71	5.1

Total Number of Logins



Average Number of Logins



Math Lab Tutoring Needs

Unit: One tutor at 15 hours/week, \$8/hour costs IVC \$3600 per academic year* (summer excluded).

Due to the current pay freeze, all current tutors are earning \$8/hour. If this freeze is lifted in the future, student workers earn a pay raise of \$0.50/hour for each consecutive year working at IVC. Therefore, projections using \$8.50/hour are included as well.

Satisfactory operation

(Adequate walk-in coverage during peak hours)

- **4 tutors, to work 10 - 15 hours per week**

- Maximum 60 tutor work hours per week, each at \$8/hour = \$480 per week
- \$480/week × 30 weeks* = **\$14,400/year**
- Maximum 60 tutor work hours per week, each at \$8.50/hour = \$510 per week
- \$510/week × 30 weeks = **\$15,300/year**

Ideal for maximum student benefit

(Adequate walk-in coverage during peak hours, tutor assistance for math workshops, some individual tutoring appointments possible)

- **6 tutors, to work 10 – 15 hours per week**

- Maximum 90 tutor work hours per week, each at \$8/hour = \$720 per week
- \$720/week × 30 weeks = **\$21,600/year**
- Maximum 90 tutor work hours per week, each at \$8.50/hour = \$765 per week
- \$765/week × 30 weeks = **\$22,950/year**

- OR -

- **8 tutors, to work 10 hours per week**

- 80 tutor work hours per week, each at \$8/hour = \$640 per week
- \$640/week × 30 weeks = **\$19,200/year**
- 80 tutor work hours per week, each at \$8.50/hour = \$680 per week
- \$680/week × 30 weeks = **\$20,400/year**

* "One academic year" is rounded down to 30 weeks here, since tutors typically do not work full hours during the first and last weeks of classes (plus, unpaid sick days).

Future Goals of Program

Resource requests from annual program review

Math Lab needs updated computers. Math Lab needs student (peer) tutors.

Math Dept. is unable to meet the demand for certain classes (developmental math and statistics) because we need another FT faculty. Jill Nelipovich has become Institutional Researcher and is not teaching any math classes. Eric Lehtonen is 75% reassigned.

If and when the State mandates that math 61, 71, and 81 become non-credit, we will be able to meet some of our need with new PT faculty. We need at least a FT faculty split 50% engineering and 50% math.

