IMPERIAL VALLEY COLLEGE
PROGRAM REVIEW COMPLIANCE FORM AND REQUEST FOR RESOURCES

DEPARTMENT _____ SME – CS _____   ACADEMIC YR. _12-73_

rehensive Program Review   Annual Assessment   Request for Resources (check all tha

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

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

_____ 3/1/13   _____
rogram Chair/Director   Date   Signature of Area Dean   [

_____ 3-1-13   _____
rea Vice President   Date

he following documents to this Program Review Compliance form if you are requesting additional resources:
sive Program Review
sis Form
Assessments
 Resources Forms

Academic Program Evaluation – COMPUTER SCIENCE
Division – H & S
Department - SCIENCE

COMPUTER SCIENCE COURSES

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	42	58.33%	3	72	24	14	8.64	1.2	7.2	83%	64%
Spring 2010	53	73.61%	3	72	24	17.67	10.05	1.13	8.89	79%	60%
Fall 2010	38	79.17%	2	48	24	19	7.82	0.8	9.78	82%	66%
Spring 2011	47	65.28%	3	72	24	15.67	9.12	1.13	8.07	81%	66%
Fall 2011	35	72.92%	2	48	24	17.5	7.2	0.8	9	71%	57%
Spring 2012	48	66.67%	3	72	24	16	9.26	1.13	8.19	88%	73%
% Change Fall Semesters 09 - 11	-16.67%	25.01%	-33.33%	-33.33%	0.00%	25.00%	-16.67%	-33.33%	25.00%	-14.46%	-10.94%
% Change Spring Semesters 10 - 12	-9.43%	-9.43%	0.00%	0.00%	0.00%	-9.45%	-7.86%	0.00%	-7.87%	11.39%	21.67%

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	9

COMPUTER SCIENCE COURSES - A.A DEGREE

Required Courses: CS 230, 280, MATH 119, 192, 194
Select a Minimum of 9 units from: BIOL 180, 182, CHEM 200, 202, CS 170, MATH 230, 240, PHYS 200, 202, 204

COMPUTER SCIENCE COURSES - 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
CS 108														
CS 170	24		25 - 1		16 - 1		18 - 1							
CS 220	24	23 - 1	19 - 1	24 - 1	19 - 1	23 - 1	19 - 1	95.83%	37.50%	100%	79.17%	95.83%	79.17%	
CS 230	24	8 - 1	9 - 1		12 - 1		11 - 1							
CS 280	24	11 - 1		14 - 1		12 - 1								
BIOL 180	25	27 - 1		26 - 1		25 - 1		112.5%		108.33%		100%		
BIOL 182	25		20 - 1		25 - 1		25 - 1		83.3%		100%		100%	12
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%	
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 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%	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%	

COMPUTER SCIENCE COURSES - PRODUCTIVITY (FTES/FTEF)

COURSE	FTES						FTEF						Productivity					
	F09	S 10	F 10	S 11	F 11	S 12	F09	S 10	F 10	S 11	F 11	S 12	F09	S 10	F 10	S 11	F 11	S 12
CS 108																		
CS 170		4.29		2.74		3.09		0.20		0.20		0.20		21.45		13.70		15.45
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
CS 230	1.65	1.85		2.47		2.26	0.27	0.27		0.27		0.27	6.11	6.85		9.15		8.37
CS 280	2.26		2.88		2.47		0.27		0.27		0.27		8.37		10.67		9.15	
BIOL 180	5.55		5.35		5.14		0.27		0.27		0.27		20.56		19.81		19.04	
BIOL 182		4.11		5.14		5.14		0.27		0.27				15.22		19.04		
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
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 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

COMPUTER SCIENCE COURSES - COMPLETION & SUCCESS RATES

COURSE	Completion Rate						Success Rate					
	F09	S 10	F 10	S 11	F 11	S 12	F09	S 10	F 10	S 11	F 11	S 12
CS 108												
CS 170		72%		69%		89%		56%		44%		72%
CS 220	78%	84%	75%	79%	65%	89%	52%	63%	54%	68%	43%	84%
CS 230	88%	89%		100%		82%	63%	67%		92%		55%
CS 280	91%		93%		83%		91%		86%		83%	
BIOL 180	70%		62%		72%		63%		54%		68%	
BIOL 182		80%		84%		84%		55%		60%		72%
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%
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 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%

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.)

The Computer Science is in its seventh year at IVC. It is still a fairly new program, but appears to have stabilized.

In AY 2012-2013, the Computer Science program acquired 30 Android development devices and plans to introduce code development for the Android mobile platform into the Java programming curriculum.

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

The Computer Science program employs one full-time professor who is approximately 50% CS and 50% math. The core Computer Science courses, CS 220, CS 230, and CS 280 have seen stable enrollment over the past two years or so.

CS 220 is offered every semester and enjoys near full subscription. CS 220 attracts a wide variety of students, including some who are underprepared, and, at the other end of the spectrum, SDSU-IV math majors who are using CS 220 to meet their programming requirement for a BS degree in mathematics. For these reasons, CS 220 success rates do not correlate to the number of students continuing in the CS program. We began offering CS 230 and CS 280 once per year on a rotating basis to account for the dropoff in program continuation. CS 230 and CS 280 have fill rates of around 50%. However, it would be a mistake to decrease the offerings to alternate years because programming skills are quickly forgotten by students if they are not practiced.

CS 170 is an elective for the CS program, but is now offered as one of the options for the programming requirement of the CIS program. CS 170 is offered once per year and enjoys near full subscription.

Facilities continue to be a problem for the Computer Science program. The program is housed in 1705 which has only 24 computers. These computers are in varying state of repair, upgrades and maintenance. Some of the computers date from the origin of the program seven years ago. For the Computer Science program to continue to grow, upgraded facilities and equipment are needed.

Student Learning Outcomes and Program Learning Outcomes

PLOs have been identified for this program and will be assessed. SLO's have been identified for all courses and are being assessed according to the following schedule.

Course	# Credits	# SLOs Identified	SLOs in CurricUNET	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013
CS 170	3	3	Yes						1		Castrapel
CS 220	4	4	Yes						1	2	
CS 230	4	4	Yes						1		Castrapel
CS 280	4	4	Yes					1		2	

Future Goals of Program

1. Our objective in the next several years is to continue to grow and stabilize the program. We will be measuring this in terms of enrollment, success and retention, and FTES/FTEF ratios. SLO data, as it comes in, will be incorporated in the assessment of the curriculum and its effectiveness.

2. Closely related to this will be the modernization of our classroom facilities.

Resource requests from annual program review

Any Identified Needs: Staffing, Technology, Budget/Planning, Facilities, Professional Development, Marketing

- Facilities: CS needs a home with space for all the associated technology/equipment/gadgets and storage.
- Technology: CS needs to have current computer/laptop/software technology in order to teach to the level expected in any industry seeking or needing computer science skills
- Staffing: 1 instructor for CS has been working and he is shared with Math .