

PORTERVILLE COLLEGE
PROGRAM REVIEW REPORT: INSTRUCTIONAL DIVISIONS

Name of Division: Natural Science and Mathematics

Contact Person: Richard Goode

Submission Date: Spring 2010

[Note: The information in this area will repeat on all pages.]

Porterville College Mission Statement:

With students as our focus, Porterville College provides our local and diverse communities an excellent educational experience that fosters intellectual curiosity and growth, lifelong learning, and prepares our students for personal and academic success.

In support of our values and philosophy, Porterville College will:

1. Provide quality academic programs to all students who are capable of benefiting from community college instruction.
2. Provide comprehensive support services to help students achieve their personal, vocational and academic potential.
3. Prepare students for transfer and success at four-year institutions.
4. Provide courses and training to prepare students for employment or to enhance skills within their current careers.
5. Provide developmental education to students who need to enhance their knowledge and understanding of basic skills.
6. Recognize student achievement through awarding degrees, certificates, grants, and scholarships.

Program Mission Statement:

The Division supports the mission of Porterville College and is committed to making the learning of science and mathematics interesting, meaningful and enjoyable to our students, while providing full and adequate coverage of course topics to meet the expectations of the Student Learning Outcomes in each course and program. The division does so by providing both transfer-level instruction in biological sciences, physical sciences, mathematics including Basic Skills instruction in mathematics.

Student Learning Outcomes:

Course Level: The Division currently offers 33 courses in the biological sciences, the physical sciences and mathematics. All 33 courses have Student Learning Outcomes identified and approved by the Curriculum Committee.

Program Level: There are 4 programs identified by the Division. There are 3 degrees offered: The Associate of Science degree in Biological and Physical Sciences, the Associate of Arts degree in Biological and Physical Sciences, the Associates of Arts degree in Mathematics. In addition, the Division felt that the developmental mathematics courses should be identified as a Program for assessment purposes. All 4 of these programs have Program Level Student Learning Outcomes identified. A Curriculum Map and an Assessment Plan have been instituted. The Division is in the second year of Assessment of both Program and Course SLO's. The Curriculum Maps and Assessment Plans are attached.

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Analysis of Current Performance:

The productivity of the Division decreased in the 05-06 academic year, most probably due to the departure of two full time faculty members. Other fluctuations can be attributed to adjunct availability and the readiness of full time faculty to teach overloads, especially in the area of Basic Skills math. Productivity increased in the last two years to previous levels. The Division's productivity is consistently above the campus average, even with the offering of several low enrolled classes in calculus and physics. The Division's FTES has remained fairly stable over the past five years. There was a 5.9% decrease in the 06-07 academic year but we have returned to previous levels. The Division has maintained productivity while reducing sections 25% since the 05-06 academic year. (From 134 sections to 100) These reductions were made as a result of the budget crisis the district has been under for several years.

The Division success rates are below the college average, but have increased 9% in the last five years. The student success rates have increased in all areas except for the physical sciences. The Life Science success rates have increased by 10% over the past five years, while the Physical Sciences success rates have decreased slightly. Our largest change appears in the Math Labs, where the success rates while still low has increased 28% over the past five years.

Our student retention rates have all increased over the past five years. We are continuing to close the gap in our retention rates with respect to the campus wide totals. Five years ago our retention rate was 3% below the campus wide rate and now it is less than 2% below.

The table below provides details.

Year	04-05	05-06	06-07	07-08	08-09
Division FTES	596	596.9	560.7	561.4	594.7
Division FTEF	34.6	36.8	34.9	33.6	33.5
Division Productivity (FTES/FTEF)	17.2	16.2	16.1	16.7	17.8
College Productivity	16.3	14.6	14.4	14.7	15.4
Division # of Sections	128	134	112	100	100
College Retention	88.7%	90.7%	88.5%	89.8%	90.7%
Division Retention	85.9%	89.4%	85.7%	88.5%	89.0%
Life Science Retention	87.3%	92.6%	87.2%	90.4%	89.0%
Physical Science Retention	91.4%	92.3%	87.8%	93.4%	95.5%
*Basic Skills Math Retention	82.4%	93.7%	93.4%	77.6%	85.5%
Math Lab Retention	82.9%	83.2%	84.2%	86.9%	89.5%
Transfer Math Retention	84.5%	89.4%	89.3%	90.0%	92.1%
College Success	66.7%	66.0%	66.9%	69.3%	67.9%
Division Success	57.9%	60.0%	58.4%	61.4%	63.3%
Life Science Success	67.9%	71.5%	66.9%	72.6%	75.0%

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Physical Science Success	78.1%	80.1%	72.2%	80.7%	77.5%
*Basic Skills Math Success	54.4%	50.1%	61.7%	56.9%	58.1%
Math Lab Success	26.2%	29.9%	30.3%	34.4%	33.5%
Transfer Math Success	65.7%	55.3%	64.3%	82.3%	68.6%

*For the years 04-08 Basic Skills math success was segregated into Basic skills and Associate levels.
 Here Basic Skills includes all math classes below Transfer.

Program Strengths and Areas for Improvement:

All the courses offered in the Division tie directly to the Community College core mission of Basic Skills, Core Transfer and Career and Technical Education. The Division offers courses to complete the Porterville College graduation and transfer requirements in biological sciences, physical sciences and mathematics, as well as courses required to complete Areas 2 and 5 of the Inter-segmental General Education Transfer Curriculum (IGETC), and courses to complete Area B-1, B-2, B-3, and B-4 of the CSU General Education Breadth Requirements. In addition the Division offers the courses necessary to fulfill the degree requirements for the Associate of Art Degree in Biological and Physical Science, the Associate of Science Degree in Biological and Physical Science, and the Associate of Art Degree in Mathematics. The Division is one of the largest academic divisions in terms of FTES and productivity. The Division has maintained its productivity and service to students despite the reduction of staffing as a result of the departure of two full time faculty at the end of the 04-05 academic year. This is largely a result of full time faculty willingly taking overload. Over the past five years the Division has served 2910 full time equivalent students. According to the most recent Educational Master Plan, the Division expects to exceed the enrollment growth rate of the college, especially in course offerings that are required as prerequisites for programs preparing students to enter health care related fields. This enrollment growth will be especially noticeable in those classes required for entry into the RN program. The Division offers the necessary prerequisites for students to prepare for careers in the health care related fields, (Pre-Medical and Pre-Dental programs, Pharmacy, Veterinary Medicine, Physical Therapy, Respiratory Therapy, 2 or 4-year RN programs, Radiology Technician, Dental Hygiene, Psychiatry Technician, LVN,...).

The current trend in higher education has relegated Basic Skills instruction to the community colleges. Also, students are arriving at Porterville College less and less prepared for college-level work. As a result, the Division has and will continue to offer courses in remedial mathematics and feels that these are a necessary part of the functions of the college.

The Division is committed to providing class at varied times, including evening classes, thereby allowing students to schedule their classes around other activities. This is difficult in a small college however within a two or three year period a student should be able to schedule most of the classes in the Division necessary for transfer or to complete a degree.

The Division assisted in the development of the MedPep program including the creation of three, one week courses in Trigonometry, Introductory Biology and Inorganic Chemistry.

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With the movement at the local high schools towards Academies and Pathways, the Division expects to see an increase in local students needing pre-engineering courses and health career related courses. Traditionally these classes are low enrolled. The Division needs the flexibility to offer these courses without the fear that they will be cancelled at the last minute.

The Division continues to work on the assessment of course and program level SLO's. We have discovered that our Curriculum Map and program SLO's will need revision at the end of the current assessment cycle.

It is apparent that some form of assessment tool needs to be in place to reduce the number of Basic Skills math students who are misplaced. Correcting this would increase our success and retention rates in Basic Skills math.

The Division is faced with an insufficient budget to maintain the necessary equipment for our science classes. The college budget at one time included equipment funds. The Division periodically relied on these funds to replace necessary equipment. We desperately need to begin replacing microscopes and other expensive equipment. The life expectancy of microscopes under heavy use is about 10 years. We need to replace the 13 year old outdated models that are expensive to repair. Unless we are able to replace equipment on a regular basis, we may be forced to reduce class sizes or offer fewer science classes.

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Goals			
Goal(s)	Timetable for Completion	Needed resources	Obstacles to completion (if any)
1. Hire a FT replacement math instructor.	As soon as possible.	Funding and prioritization by Academic Senate and College President	State and district budget woes.

Which of numbered items under the Mission Statement (see page 1 of this document) will be furthered if this goal is completed? (select all that apply)

Item 1 Item 2 Item 3 Item 4 Item 5 Item 6

Progress on Goal: Ongoing since 2005

Completed (Date)

Revised (Date Spring 2010)

Comments:

The Division will be without a replacement since 2005. All FT math professors are either at load or taking overload. The Division is hoping to staff the rest of the classes with PT faculty but the adjunct pool is extremely limited. The Division cannot meet the needs of mathematics students in without this position being filled.

Goal(s)	Timetable for Completion	Needed resources	Obstacles to completion (if any)
2. Hire a FT replacement chemistry professor.	As soon as Possible	Funding and prioritization by Academic Senate and College President	State and district budget woes.

Which of numbered items under the Mission Statement (see page 1 of this document) will be furthered if this goal is completed? (select all that apply)

Item 1 Item 2 Item 3 Item 4 Item 5 Item 6

Progress on Goal: Ongoing since 2006

Completed (Date)

Revised (Date Spring 2010)

Comments:

Because of budgetary problems, we have not been able to replace this instructor. This has led directly to the reduction in the number of chemistry offerings. The Division cannot provide adequate sections to meet the needs of transfer students and those needing the pre-requisites for the RN and other Health Career programs. This position has been ranked as the highest priority by the Academic Senate for the past several years but has gone unfilled.

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STAFFING REQUEST

Goals

Goal(s)	Timetable for Completion	Needed resources	Obstacles to completion (if any)
3. Return to a sustainable budget.	Unknown	Funding and prioritization by CLC	State and district budget woes.

Which of numbered items under the Mission Statement (see page 1 of this document) will be furthered if this goal is completed? (select all that apply)

Item 1 Item 2 Item 3 Item 4 Item 5 Item 6

Progress on Goal: Ongoing

Completed (Date)
 Revised (Date Spring 2010)

Comments: The availability of funds allotted to the Division has steadily eroded because of the statewide budget crisis. Because of recent state budget cuts, even more cuts were made to each division. These cuts have severely limited the Division's ability to acquire state-of-the-art equipment or to maintain current equipment. The attrition of lab equipment through normal use is beginning to effect instruction. There are several instances where there is no longer a class set of basic necessities. In addition, the cost to dispose of hazardous materials continues to rise.

Goal(s)	Timetable for Completion	Needed resources	Obstacles to completion (if any)
4. Development of a long-term Division budget.	Unknown	Funding and prioritization by CLC	State and district budget woes.

Which of numbered items under the Mission Statement (see page 1 of this document) will be furthered if this goal is completed? (select all that apply)

Item 1 Item 2 Item 3 Item 4 Item 5 Item 6

Progress on Goal: Ongoing

Completed (Date)
 Revised (Date Spring 2010)

Comments: A long-term budget needs to be developed which provides for the regular repair and replacement of equipment. For example, the equipment used for physics labs has become almost

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obsolete. We have 15 outdated monocular and 15 binocular compound microscopes. Frequently, the compound microscopes are needed in both life science lab rooms at the same time. Scheduling lab activities is difficult and the transport is rough on the microscopes. If we had 30 compound microscopes, we could at least split the number and have one microscope per student-pair in each lab. There is a need for the regular repair and replacement of substantial items: microscopes, dissecting trays and equipment, electrophoresis chambers, micropipettes, skeletons and bone sets, laptop computers, plant presses as well as Division printers and copiers

Goals

Goal(s)	Timetable for Completion	Needed resources	Obstacles to completion (if any)
5. Increase Math and Chemistry Adjunct Pools	Unknown	Available qualified Adjuncts	Locating qualified Adjuncts

Which of numbered items under the Mission Statement (see page 1 of this document) will be furthered if this goal is completed? (select all that apply)

Item 1 Item 2 Item 3 Item 4 Item 5 Item 6

Progress on Goal: New

___ Completed (Date)

___ Revised (Date)

Comments: It is difficult to find qualified adjuncts especially in Chemistry and Math.

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<u>Staff Resources:</u>				
<u>Current Staffing Levels</u>				
<u>Full-time Staff (FTE)</u>		<u>Part-time Staff (FTE)</u>		
Faculty	13	Faculty	3	
Temporary		Temporary		
Classified	1	Classified		
Management		Management		
<p><u>Request for New/Replacement Staff</u> Use one line for each position requested. Justify each position in the space below.</p>				
	Title of Position	Classification (Faculty, Classified, or Management)	Full or Part Time	New or Replacement
Position 1	Math Instructor	Faculty	FT	Replacement
Position 2	Chemistry Instructor	Faculty	FT	Replacement
Position 3	Adjunct Math Instructor	Faculty	PT	
Position 4	Adjunct Chemistry Instructor	Faculty	PT	
<p>Justification:</p> <p>Two full time staff positions need to be replaced, one for science (replacement due to retirement) and one for math (replacement due to resignation). Several full time faculty members have carried overload to help staff the classes.</p> <p>The Division has been operating without a replacement for a full-time math instructor and a full-time chemistry instructor since 2005. Because of the current budget situation, we will be unable to fill these positions. The number of lower division science and math courses that must be offered to meet the lower division requirements of students planning to enter transfer or vocational programs in science and math distinguishes the Division. For these students, completion of lower division and pre-requisite science and math courses is more important than completion of general education requirements for entry into their desired programs. Without a replacement, the Division has been forced to cancel some of the aforementioned sections of math and chemistry courses thus reducing FTES and ability of students to complete these requirements.</p> <p>Finding qualified adjuncts would ease the pressure on the waitlists for these classes in the short term.</p>				

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BUDGET REQUEST

	Current Budget	Amount of Increase	Revised Total
2000 (Student)			
4000	\$14,000	\$1,800	\$15,800
5000	\$2,750	\$500	\$3,250
Other	\$0	\$18,500	\$18,500

Justification:

Laboratory specimen, chemicals, media, labware, supplies and other instructional materials used to support quality academic programs, prepare students for transfer to four-year institutions, as well as provide skill and career training. The attrition of lab equipment through normal use is beginning to effect instruction. There are several instances where there is no longer a class set of basic necessities. We desperately need to replace broken materials.

Division rents TI 84 calculators This will generate an income that will offset this cost. Income will go back into the general fund.

Biological and chemical waste disposal costs produced from academic programs. The cost of disposing of hazardous waste increases each year.

Dionized water service and microscope maintenance costs to maintain programs.

The Divisions printers and copiers are outdated and wearing out. We would like to start replacing them as needed.

The college budget at one time included equipment funds. The Division periodically relied on these funds to replace necessary equipment. We have been without the availability to use these funds for several years. We desperately need to begin replacing microscopes and other expensive equipment. The life expectancy of microscopes under heavy use is about 10 years. We need to replace outdated models that are expensive to repair 13 years old.

See Attached Budget Worksheet for details.

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Program SLO's for AA in Biological and Physical Sciences

Students graduating with an AA in Biological and Physical Science will be able to:

1. Apply the scientific method to analyze physical and biological processes.
2. Use scientific terminology appropriately.
3. Draw appropriate conclusions from laboratory activities.
4. Critically analyze scientific information as presented in the media.
5. Describe relationships between natural science and human activities.
6. Identify levels of organization within natural systems.
7. Describe energy transfer within biological and physical systems.
8. Describe cellular structures and functions.
9. Explain basic physiological processes.
10. Describe DNA's role as the primary information-bearing molecule of life.
11. Select the appropriate qualitative and quantitative methods to analyze physical systems
12. Describe the structure and properties of matter.

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Curriculum Map for the AA Degree in Biological and Physical Sciences

SLO	1	2	3	4	5	6	7	8	9	10	11	12
ANAT P110	I	I,D,P	I,D,P	I	I,D,P	I,D,P		I,D,P	I,D	I		
BIOL P105	I, D,P	I,D,P	I,D,P	I,D	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	-	-
BIOL P106	D,P	I,D,P	I,D,P	I,D	I,D,P	I,D,P	I,D,P	D,P	I,D,P	I,D,P	-	-
BIOL P110	I,D,P	I,D,P	I,D,P	I,D	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	-	-
MICR P106		I,D,P	I,D,P		I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P		
PHYL P101		I,D,P	I,D,P		I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	-	-
BIOL P118	I,D,P	I,D,P		I,D,P	I	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P		
ASTR P101	I	I	I	I	I	I	I	-	-	-	I	I
CHEM P101A	D,P	D,P	D,P	I,D	D	I,D,P	D,P	-	-	-	I,D	D,P
CHEM P101B	P	D,P	D,P	D	D	P	P	-	-	-	P	P
CHEM P106	I,D	I,D	I,D	D	D	I,D,P	I,D	-	-	-	I,D	I,D,P
ESCI P110	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	-	-	-	I,D,P	I,D,P
GEOL P110	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	-	-	-	I,D,P	I,D,P
PHSC P112	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	-	-	-	I,D,P	I,D,P
PHYS P102A	D	D	D	I	D	I	I,D	-	-	-	I,D	I,D
PHYS P102B	D	D	D	I	D	I	I,D	-	-	-	I,D	I,D
PHYS P104A	D	D	D	I	D	I	I,D	-	-	-	I,D	I,D

I – Introduce, D- Develop, P-Proficient

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Program SLO's for AS in Biological and Physical Sciences

Students graduating with an AS in Biological and Physical Science will be able to:

1. Apply the scientific method to analyze physical and biological processes.
2. Use scientific terminology appropriately.
3. Evaluate results from laboratory activities.
4. Critically analyze scientific information as presented in the media.
5. Assess the relationships between natural science and human activities.
6. Identify levels of organization within natural systems and relate to biological and physical processes.
7. Describe energy transfer within biological and physical systems.
8. Describe cellular structures and evaluate their roles in maintaining life's processes.
9. Explain and apply basic physiological processes.
10. Describe and evaluate DNA's role as the primary information-bearing molecule of life.
11. Apply the appropriate qualitative and quantitative methods to analyze and solve problems.
12. Describe the structure and properties of matter and the relationships between matter and energy.

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Curriculum Map for the AS Degree in Biological and Physical Sciences

	1	2	3	4	5	6	7	8	9	10	11	12
BIOL P105	I, D,P	I,D,P	I,D,P	I,D	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	-	-
BIOL P106	D,P	I,D,P	I,D,P	I,D	I,D,P	I,D,P	I,D,P	D,P	I,D,P	I,D,P	-	-
MICR P106		I,D,P	I,D,P		I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P		
PHYL P101		I,D,P	I,D,P		I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	I,D,P	-	-
CHEM P101A	D,P	D,P	D,P	I,D	D	I,D,P	D,P	-	-	-	I,D	D,P
CHEM P101B	P	D,P	D,P	D	D	P	P	-	-	-	P	P
CHEM P106	I,D	I,D	I,D	D	D	I,D,P	I,D	-	-	-	I,D	I,D,P
PHYS P102A	D	D	D	I	D	I	I,D	-	-	-	I,D	I,D
PHYS P102B	D	D	D	I	D	I	I,D	-	-	-	I,D	I,D
PHYS P104A	D	D	D	I	D	I	I,D	-	-	-	I,D	I,D

I – Introduce, D- Develop, P-Proficient

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Assessment Plan for the Program SLO's of the AA and the AS Degrees in the Biological and Physical Sciences.

Rationale: Many courses are applicable to both the AA and the AS degrees. These courses will be assessed at the AS level. The SLO's are written with the assumption that while the content is similar, the AS degree will require a deeper understanding of the material. Therefore, any student seeking the AA degree will have mastered the AA SLO's when they have mastered the AS SLO's.

Assessment Cycle:

1. 3 Program level SLO's will be assessed each year in a 4 year cycle.

2008-2009	2009-2010	2010-2011	2011-2012
SLO's Assessed 1,2,8	SLO's Assessed 3,4,11	SLO's Assessed 5,6,9	SLO's Assessed 7,10,12

2. At the August Division meeting, the previous year's assessment will be discussed and plans made for changes to be assessed in the next cycle.

Criteria for assessment:

1. Because Course SLO's are tied to Program SLO's, grades in the course will be used to assess program SLO's. Each Instructor will determine assessment tools in each of their courses that will directly assess the Program SLO's for that cycle. Percentages of passing (70%) and mastery (90%) of the SLO's will be submitted to the Division Chair.

Assessment data will be kept on file with the Division Chair.

Assessment plan will be reviewed annually at the January Division meeting.

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Mathematics Program-Level Student Learning Objectives for the AA Degree in Mathematics

REQUIRED COURSES

ELECTIVES (1 COURSE)

SLOs	Math P102	Math P103	Math P104	Math P 205	Math P206		Math P122	PHYS P102A	PHYS P102B	PHYS P204A	PHYS P204B
1. Use mathematics to investigate, model, and solve a variety of real-world problems.	D,M	M	M	M	M		D,M	M	M	M	M
2. Use a variety of problem-solving methods to solve equations and related applications.	D,M	M	M	M	M		D,M	M	M	M	M
3. Use technology as a tool for exploring mathematical concepts.	D,M	D,M	D,M	D,M	D,M		I,D,M	D,M	D,M	D,M	D,M
4. Demonstrate an understanding of concepts and skills needed for future mathematics courses or courses in related disciplines.	D,M	M	M	M	M		D,M	M	M	M	M
5. Demonstrate a solid understanding of functions from multiple perspectives.	M	M	M	M	M		I,D	M	M	M	M
6. Use numerical, graphical, and symbolic representations to solve problems and communicate with others.	M	M	M	M	M		I,D,M	M	M	M	M
7. Demonstrate an ability to work with mathematical abstractions, analyze mathematical relationships, and make plausible conjectures	M	M	M	M	M		I,D,M	M	M	M	M

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Assessment Plan for the Program SLO's of the AA Degree in Mathematics.

3. 2 Program level SLO's will be assessed each year in a 4 year cycle.

2008-2009	2009-2010	2010-2011	2011-2012
1,2	3,4	5,6	7

4. At the August Division meeting, the previous year's assessment will be discussed and plans made for changes to be assessed in the next cycle.

Criteria for assessment:

2. Because Course SLO's are tied to Program SLO's, grades in the course will be used to assess program SLO's. Each Instructor will determine assessment tools in each of their courses that will directly assess the Program SLO's for that cycle. Percentages of passing (70%) and mastery (90%) of the SLO's will be submitted to the Division Chair.

Assessment data will be kept on file with the Division Chair.

Assessment plan will be reviewed annually at the January Division meeting.

PORTERVILLE COLLEGE
PROGRAM REVIEW REPORT: INSTRUCTIONAL DIVISIONS

Name of Division: Natural Science and Mathematics

Contact Person: Richard Goode

Submission Date: Spring 2010

[Note: The information in this area will repeat on all pages.]

Mathematics Program-Level Student Learning Objectives Developmental Mathematics

SLOs	Math P061	Math P055	Math P053	Math P051	Math P101
1. Use mathematics to investigate, model, and solve a variety of real-world problems.	I	I,D	D	D	M
2. Use a variety of problem-solving methods to solve equations and related applications.	I	I,D	D	D,M	M
3. Use technology as a tool for exploring mathematical concepts.	I	I,D	D	D	D
4. Demonstrate an understanding of concepts and skills needed for future mathematics courses or courses in related disciplines.	I,D	D	D	D	D,M
5. Demonstrate a solid understanding of functions from multiple perspectives.		I		I,D	D,M
6. Use numerical, graphical, and symbolic representations to solve problems and communicate with others.	I	I,D	I,D	D,M	D,M
7. Demonstrate an ability to work with mathematical abstractions, analyze mathematical relationships, and make plausible conjectures					I,D,M

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Assessment Plan for the Program SLO's for Developmental Mathematics.

5. 2 Program level SLO's will be assessed each year in a 4 year cycle.

2008-2009	2009-2010	2010-2011	2011-2012
1,2	3,4	5,6	7

6. At the August Division meeting, the previous year's assessment will be discussed and plans made for changes to be assessed in the next cycle.

Criteria for assessment:

3. Because Course SLO's are tied to Program SLO's, grades in the course will be used to assess program SLO's. Each Instructor will determine assessment tools in each of their courses that will directly assess the Program SLO's for that cycle. Percentages of passing (70%) and mastery (90%) of the SLO's will be submitted to the Division Chair.

Assessment data will be kept on file with the Division Chair.

Assessment plan will be reviewed annually at the January Division meeting.