

Peralta Community College District

Berkeley City College
College of Alameda
Laney College
Merritt College

Instructional Program Review Handbook

Spring 2007

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Purpose and Goals

The information gathered during the program review process provides the basis for informed decision making in the Peralta Community College District. Instructional Program Review is a systematic process for the collection, analysis, and interpretation of data concerning a program or department and its curriculum. It provides program and/or departmental accountability by collecting, analyzing and disseminating information that will inform integrated planning, resource allocation, and decision-making processes.

The primary goals are to:

- Ensure quality and excellence of academic programs.
- Provide a standardized methodology for review of instructional areas.
- Identify effective and exemplary practices.
- Strengthen planning and decision-making based upon current data.
- Identify resource needs.
- Develop recommendations and strategies concerning future directions.
- Inform integrated planning at all levels in the College.
- Ensure that educational programs reflect student needs and encourage student success.

Components in the Process

The Instructional Program Review process consists of answering a set of questions designed to aid in the examination of a discipline, department or program. These questions are consistent with the national movement toward learning assessment and the new 2002 WASC/ACCJC Accreditation Standards. They direct faculty to examine the curricular, pedagogical, and resource areas related to student success and to analyze findings in order to develop a plan that will improve the quality of teaching and learning.

The primary components in the Program Review process include:

- The Instructional Program Review Team
- Core data elements
- Completion of an Instructional Program Review Narrative Report

Additionally four templates are provided to help link the Instructional Program Review findings to annual strategic or integrated planning at each college. They can be found in the Appendix and are:

- The *Instructional Program Review Resource Needs Reporting Template* in which to summarize key resource needs.
- The *Integrated Planning Template* in which to set goals, objectives and action plans based upon the Instructional Program Review findings.
- The *Student Learning Outcomes Reporting Template (Course Level Outcomes)* for documenting learning assessment at the course level.
- The *Student Learning Outcomes Reporting Template (Program Level Outcomes)* for documenting learning assessment at the departmental/program level.

Thus, the recommendations and priorities from the Instructional Program Review process feed directly into the development of departmental and/or unit plans.

In turn, the departmental and/or unit plans serve as the driving mechanisms in formulation of updated educational, budget, technology and facilities plans.

The Instructional Program Review Team

Each discipline, department or program at the college will assemble an Instructional Program Review Team at the College that is comprised of the following members:

- Department Chair or Program Coordinator, if applicable.
- Division Dean
- Two additional faculty members, if possible.
- All faculty members within a department are encouraged to participate in the Instructional Program Review process, although participation is not mandatory.

The Instructional Program Review Team will review the core data elements and course outlines and complete the Instructional Program Review Narrative Report.

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- The Instructional Program Review Team Chair will share the recommendations and priorities with the other Colleges that have completed a comparable disciplinary program review. This will occur at District-wide disciplinary meetings.

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- Once the narrative report is completed, the Vice President of Instruction will summarize the recommendations and priorities of all instructional units and submit the summary to the College President, the College's planning and/or budget committees (if applicable) and the Vice Chancellor of Educational Services.

Core Data Elements

1. The Vice Chancellor of Educational Services, with the assistance of the Associate Vice Chancellor of Institutional Research and Planning, will provide the following data to the college. The data is to be disaggregated.
 - Degrees and certificates for each program or department awarded by major, ethnicity, and sex for the last three years.
 - Transfer rates by discipline, if applicable, for the last three years.
 - Enrollment data for each department (unduplicated) for the last three years, including the current semester, by age, gender, ethnicity and special populations.
 - Enrollment data for courses by time of day for the last three years.
 - Retention rates by course and department for the last three years.
 - Persistence rates by course and department/program for the last three years.
 - FTES per FTEF by course and department/program for the last three years.
 - Grades by course and discipline for the last three years.

2. The Office of Instruction at the college will provide the following data to each department or program.
 - A list of active courses in the department or program.
 - Copies of course outlines and syllabi.

The Instructional Program Review Narrative Report

1. College: **Merritt College**

Discipline, Department or Program: **Astronomy/Physics**

Date: **2-14-2010**

Members of the Instructional Program Review Team: **Steve Matthews, Jane Dignon, Ray Chamberlain, Andrew Combs, Randy Smith**

2. Narrative Description of the Discipline, Department or Program:

The physics program offers a variety of courses ranging from the non-technical survey level to the academically and mathematically rigorous introductory series at the calculus level. All but the survey level courses have laboratory work requirements. These courses are designed for students transferring to four year colleges and higher level institutions as well as students desiring to enhance their knowledge of science. The Merritt campus is situated in close proximity to the UC Berkeley campus and the Merritt physics program provides a valuable service to students transferring between the two colleges.

3. Curriculum:

- Is the curriculum current and effective? Have course outlines been updated within the last three years? If not, what plans are in place to remedy this?

The courses are current and effective. Course outlines were all updated this year.

- Has your department conducted a curriculum review of course outlines? If not, what are the plans to remedy this?

Yes, the department has conducted a curriculum review of course outlines.

- What are the department's plans for curriculum improvement (i.e., courses to be developed, updated, enhanced, or deactivated)? Have prerequisites, co-requisites, and advisories been validated? Is the date of validation on the course outline?

Until a full time instructor is hired curriculum improvements are limited to what can be done by part-time instructors. All required documentation is validated and the date of validation is not on the course outline.

- What steps has the department taken to incorporate student learning outcomes in the curriculum? Are outcomes set for each course? If not, which courses do not have outcomes?

Student learning outcomes are included in course outlines, course syllabi, and content is taught to emphasize them. All courses have student learning outcomes associated with them.

- Describe the efforts to develop outcomes at the program level. In which ways do these outcomes align with the institutional outcomes?

Outcomes have been developed at the program level and standardized district wide in physics.

- Recommendations and priorities.
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4. Instruction:

- Describe effective and innovative strategies used by faculty to involve students in the learning process. How has new technology been used by the department to improve student learning?

Small group learning and active participation are strongly encouraged in the classroom. Students are required to participate in laboratory sections.

- How does the department maintain the integrity and consistency of academic standards within the discipline?

The department meets occasionally to discuss course content; these meetings take place on a college- and district-wide level. Work is currently being done to develop assessment tools that will be utilized by all sections of a given course at this location.

- Discuss the enrollment trends of your department. What is the student demand for specific courses? How do you know? What do you think are the salient trends affecting enrollments?

Enrollment has been variable during the last five years. These classes are integral to medical degree programs including nursing, nutrition, physical therapy, physician assistant, veterinarian, optometry, dentistry, pharmacy, etc. The most important cause of the fluctuation in number of students is the lack of a full time instructor in the department.

Are courses scheduled in a manner that meets student needs and demand? How do you know?

Courses with sufficient demand are offered on multiple days both in the morning and evening. Class times at this location are coordinated with class times on other campuses.

- Recommendations and priorities.
Hire a full time instructor.
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5. Student Success:

- Describe student retention and program completion (degrees, certificates, persistence Rates ASK ANIKA about persistence rates 252, 201) trends in the department. What initiatives can the department take to improve retention and completion rates?

The student retention rates in the program are lower than the college average. This is primarily due to the difficulty of the subject and the lack of a foundation in mathematics.

- What are the key needs of students that affect their learning? What services are needed for these students to improve their learning? Describe the department's efforts to access these services. What are your department's instructional support needs?

Students need a stronger foundation in mathematics, an adequate number of tutors, and a support group to encourage group learning and study skills. A dedicated, physics-savvy equipment stockroom person is required to set out laboratory hardware for student laboratory classes, to organize and maintain the physics stockroom equipment and to order new physics and astronomy hardware. This requirement has become increasingly important as the UC Extension physics laboratory classes are taught at Merritt.

- Describe the department's effort to assess student learning at the course level. Describe the efforts to assess student learning at the program level. In which ways has the department used student learning assessment results for improvement?

The department is slowly working with SLOAC to develop a rigorous set of assessment tools for all courses. The lack of a full time instructor greatly limits this process. Part time instructors rarely have the time to help with this.

- Recommendations and priorities.
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6. Human and Physical Resources (including equipment and facilities)

Full time Physics/Astronomy instructor to lead program.

If not filled: A repeat of twelve years ago when Merritt went three years without a full time faculty member to lead the Physics/Astronomy program would ensue. During that period the

number of physics/astronomy students dropped significantly with most going to Laney and COA. If the number of students in the physical sciences declines, beginning with physics, then chemistry won't be far behind. A significant drop in the number of physics and chemistry students would undermine the credibility of the bio-science programs at Merritt.

A dedicated, physics-savvy equipment stockroom person is required to set out laboratory hardware for student laboratory classes, to organize and maintain the physics stockroom equipment and to order new physics and astronomy hardware. This requirement has become increasingly important as the UC Extension physics laboratory classes are taught at Merritt.

- Describe your current level of staff, including full-time and part-time faculty, classified staff, and other categories of employment.

There are 3-4 physics part time instructors and two part time astronomy instructors and one part time technician for both subjects.

- Describe your current utilization of facilities and equipment. Projects, laptops, computer labs,

There is one laboratory for physics and one designated classroom for astronomy. There are telescopes for astronomy and varied physics equipment, some old and some new. A full time instructor is needed to elucidate the future needs of the department.

- Are the human and physical resources, including equipment and location, adequate for all the courses offered by your department (or program)? What are your key staffing and facilities needs for the next three years? Why?

The facilities are barely adequate. A new lab and storeroom will be built in the new science building for physics. A designated classroom for physics and astronomy will also be included in the building. New equipment will be needed for these new facilities.

- Recommendations and priorities.

7. Community Outreach and Articulation

For vocational programs:

- Describe the department's connection with industry. Is there an Advisory Board or Advisory Committee for the program? If so, how often does it meet? Is the program adequately preparing students for careers in the field? How do you know?
- Have students completing the program attained a foundation of technical and career skills? How do you know? What are the completion rates in your program?

- What are the employment placement rates? Include a description of job titles and salaries. What is the relationship between completion rates and employment rates?
- What industry trends are most critical for the future viability of the program? How do you know? What are the implications of these trends for curriculum development and improvement?

For transfer programs:

- Describe the department's efforts in meeting with and collaborating with local 4-year institutions. Is the program adequately preparing students for upper division course work? How do you know?

Faculty attend seminars, workshops and conferences. Program is adequately preparing students for upper division course work. Numerous former students stop by every year and vouch that they were well prepared.

For all instructional programs:

- Describe the department's effort to ensure that the curriculum responds to the needs of the constituencies that it serves.

Physics teaches calculus based classes and non-calculus based classes for different majors. Astronomy teaches a basic interest class as well as a class for more interested students.

- Recommendations and priorities.

Checklist of Tasks

1. The Office of Instruction at each College will establish the schedule for completion of the Instructional Program Review at the beginning of the academic year or the semester in which the Instructional Program Review will occur. The schedule will include a timeline and deadlines for completion.
2. The Division Dean, in conjunction with the Department Chair (or lead faculty in the discipline) will assemble the Instructional Program Review Team.
3. The Instructional Program Review Team will review and analyze the Core Data Elements.
4. The Instructional Program Review Team will assemble and review the course outlines.
5. The Instructional Program Review Team will complete the Instructional Program Review Narrative Report.

6. The Instructional Program Review Chair will submit the narrative report, electronically, to the Division Dean. The Dean will review the report and forward it the Vice President of Instruction at the College.
7. The Instructional Program Review Chair will share the recommendations and priorities with the other Colleges that have completed a comparable disciplinary program review at District-wide disciplinary meetings.
8. The Instructional Program Review Team will develop an action plan based upon the recommendations and priorities from the Instructional Program Review that feeds directly into the College's integrated planning process.
9. The Vice President of Instruction will compile a summary of recommendations and priorities from all the Instructional Program Review Narrative Reports and submit the summary to the College President, the College's planning and/or budget committees (if applicable), and the Vice Chancellor of Educational Services.

Definitions

Department/Program: For the purpose of the Instructional Program Review, a department/program is defined as a course or series of courses which share a common Taxonomy of Programs (TOP) number at the four digit level of specificity. TOP is a classification system for academic programs in the California Community Colleges.

FTEF (Full Time Equivalent Faculty): Also known as load equivalency. A full-time instructor teaching 15 lecture hours per week = 1.0 FTEF. One lecture hour = 50 minute instructional period. One lab hour = .8 of one lecture hour equivalent.

FTES (Full Time Equivalent Student): This unit is used as the basis for computation of state support for California Community Colleges. One student attending 15 hours a week for 35 weeks (one academic year) generates 1 FTES.

To approximate the FTES generated by a 17.5 week semester class use the formula:

$$\text{WSCH (Weekly Student Contact Hours from the census)} / 525 \times 17.5 = \text{FTES}$$

The WSCH of “contact hour” is the basic unit of attendance for computing FTES. It is a period of not less than 50 minutes of scheduled instruction.

For example, a class of 40 students meeting 3 hours per week generates 120 WSCH. To figure the FTES for the class, the formula yields:

$$120 / 525 \times 17.5 = 4.0 \text{ FTES}$$

FTES/FTEF: The ratio of full-time equivalent students to full-time equivalent instructors.

Persistence: The percent of students who attend one semester and then attend the subsequent semester (fall and spring semesters).

Retention: After the first census, the percent of students earning any grade but a “W” in a course or series of courses. To figure retention for a class, subtract the “W”s from the total enrollment and divide the number by the total enrollment.

Student Learning Outcomes: The desired knowledge, skills, abilities, and attitude that a student attains as a result of engagement in a particular set of collegiate/academic experiences.

Appendices

Instructional Program Review Resource Needs Reporting Template

Division: II		Department/Program: <i>Physics/Astronomy</i>		Contact: R. Chamberlain, Steve Matthews, & Michali Bruni	
Item Identified in Program Review (justification)	Human Resources (Staffing)	Physical Resources (Facilities)	Technology and/or Equipment	Supplies Budget	Curriculum
	<i>New full time instructor</i>	<i>New labs, storeroom and designated classrooms for both subjects.</i>		<i>\$1000.00</i>	

Integrated Planning Template

Division: II		Department/Program: Physics/ Astronomy		Contact: R. Chamberlain, Steve Matthews, & Michali Bruni	
Strategic Direction __:					
Institutional Goal __:					
Objective:				Priority:	
Activities/Tasks	Responsibility Lead person(s)	Resources	Timeline	Comments	College Planning Link(s) *
1.					
2.					
3.					
4.					
5.					

*College Planning Links:
Budget Committee

Facilities Committee
 Technology Committee
 Curriculum Committee
 Learning Assessment (SLO) Committee

Student Learning Outcomes Reporting Template (Course Level Outcomes)

Division:		Department/Program:		Course:		Contact:
Student Learning Outcome	Outcome Measure	Definition of Data (Sample/Population)	Method of Data Collection & Source	Expected Level of Performance	Actual Level of Performance	Plan of Action

Student Learning Outcomes Reporting Template (Program Level Outcomes)

Division:		Department/Program:			Contact:		
Student Learning Outcome	Outcome Measure	Definition of Data (Sample/Population)	Method of Data Collection & Source	Expected Level of Performance	Actual Level of Performance	Plan of Action	

