

Peralta Community College District

UNIT PLAN UPDATE Template ~ November 2009

Each discipline will complete this form to update the unit plans developed in 2008. These will be reviewed at the college level and then forwarded to the district-wide planning and budgeting process. The information on this form is required for all resource requests – including faculty-staffing requests – for the 2010-11 budget year.

I. OVERVIEW:

| | | | |
|---|--|------------------------|--------------------|
| | | Date Submitted: | 11-10-09 |
| Discipline | Physical Sciences - Chemistry | Dean: | Dr. Rebecca Kenney |
| Department Chair | Ray Chamberlain | | |
| Mission/History <i>Brief, one paragraph</i> | <p>The mission of the chemistry program is to provide all students with a foundational chemistry background necessary to succeed in their chosen program of study. Chemistry has always been a central and significant program on campus. In the 1960's, Professor Arnold Lobel, former professor at Merritt College and author of the seminal volume on "Dimensional Analysis," was a nationally leading educator in teaching students how to apply math to chemistry. Lobel's work at Merritt College set the pedagogical standard for students and faculty alike in Chemistry as well as related disciplines.</p> <p>The Chemistry Program is the largest program in the Physical Science Department and it offers university-transferable classes in chemistry. The Chemistry programs offer courses in General Chemistry, Organic Chemistry, Introductory Inorganic Chemistry, and Introductory Organic and Biochemistry. Sections of these courses are offered during the day and evening. The Chemistry Program is also involved with U.C. Berkeley Extension. We teach the chemistry lab classes for Extension while they teach the lecture.</p> | | |

II. EVALUATION AND PLANNING

Please review the program review data and the CSEP review criteria and complete the following matrix.

Baseline Data

| Annual Trend Baseline Data | | | | | |
|----------------------------|-------------|--------------|-----------------|------------|-----------------------------|
| Year | Annual FTES | %FTES growth | FTEF in program | FTES /FTEF | Comments |
| 2008/09 | 108.20 | 5% | 7.52 | 14.39 | This program is productive. |
| 2007/08 | 103.17 | -1% | 7.31 | 14.11 | |
| 2006/07 | 101.96 | 10% | 7.00 | 14.56 | |
| 2005/06 | 112.94 | | 7.16 | 15.77 | |

| | Fall | | | | | | |
|---|-------|-------|-------|-------|-------|------|---------------------------------------|
| | 2004 | 2005 | 2006 | 2007 | 2008 | CODE | Comments |
| Quantitative Assessments | | | | | | | All measures are steady over 4 years. |
| 1. Enrollment (duplicated) | 223 | 243 | 246 | 234 | 235 | | |
| 2. Sections (master sections) | 2 | 7 | 7 | 8 | 7 | | |
| 3. FTEF | 3.12 | 4.00 | 3.84 | 4.16 | 3.84 | | |
| 4. FTES | 56.70 | 59.46 | 61.02 | 57.99 | 57.49 | | |
| 5. FTES/FTEF | 18.17 | 14.87 | 15.89 | 13.94 | 14.97 | | |
| 7. Program Cost (Cost methodology is under development. Please complete the remaining items. This step to be completed later.) | | | | | | | |

| Qualitative Assessments | Narrative |
|--|--|
| 8. Community and labor market relevance Present evidence of community need based on Advisory Committee input, industry need data, McIntyre Environmental Scan, McKinsey Economic Report, etc. This applies primarily to career-technical (i.e., vocational programs). | All science programs start with chemistry. It is a science pre-requisite for biology, physics, nursing, pre-med, pharmacy, nutrition, optometry, physical therapy, pre-vet., geology, radiology and many others. |

| | |
|---|--|
| 9. College strategic plan relevance | |
| Check all that apply <input type="checkbox"/> New program under development <input checked="" type="checkbox"/> Program that is integral to the college's overall strategy <input checked="" type="checkbox"/> Program that is essential for transfer <input type="checkbox"/> Program that serves a community niche. <input type="checkbox"/> Programs where student enrollment or success has been demonstrably affected by extraordinary external factors, such as barriers due to housing, employment, childcare etc. Other _____ | |

Action Plan Steps to Address CSEP Results

Please describe your plan for responding to the above data. Consider curriculum, pedagogy/instructional, scheduling, and marketing strategies. Also, please reference any cross district collaboration with the same discipline at other Peralta colleges.

10. ACTION PLAN -- Include overall plans/goals and specific action steps.

Chemistry has recently added a new full-time instructor.

The program is working to develop new classes based on community need and interest.

The program has just purchased a Nuclear Magnetic Resonance Spectrometer (NMR), an Ultraviolet-Visible spectrophotometer and two Gas Chromatography apparatuses to augment the organic chemistry class's analytical ability. All above apparatuses are installed and integrated into the Chemistry Program.

Chemistry is working with Biology to make a joint computer lab for use with the new computer based educational technology. A new science building and new Biology/Chemistry Computer lab are slated to be completed by 2013.

Chemistry does outreach to the high schools thru the California Association of Chemistry Teachers to work with the high school teachers to stay current in chemistry.

Merritt College's chemistry program joined the other campuses programs in choosing one textbook for all of the Introductory Chemistry classes in the District.

All SLO's and assessment tools for Chemistry have been standardized throughout the Peralta District Chemistry Programs.

Merritt College's Chemistry program has instituted and is modeling for the other departments in the district a new computer based laboratory system by Vernier.

Additional Planned Educational Activities

| | |
|--|--|
| 11. Health/safety/legal issues: | Renovation of existing organic lab is needed to continue its use until the new building is finished. |
|--|--|

Student Learning Outcomes (SLOs)

2008/09

12. Have you completed Student Learning Outcomes (SLO's) for all your courses?

YES X

NO _____

12a. If you answered no to question 12 then, what percentage have you completed?

13. What are you assessing this year? Please attach your assessment results and action plan. List needed resources in Section III of Unit Plan.

course outcomes
 program outcomes
 institutional learning outcomes

| BUDGET | | | |
|--------------------------|------------------------|-----------------------|------------------------|
| Budget Categories | Allocated 08/09 | Expended 08/09 | Requested 09/10 |
| Fund 1 | \$600 | \$1167.90 | \$ 1,000 |
| Fund 14 | \$8100 | \$7797.10 | \$ 6,000 |
| Fund 17 | \$6,449 | \$4,347 | \$ 4,000 |
| Measure A | | | |
| VTEA | | | |
| Total | \$15149 | \$13,312.00 | \$ 11,000 |

| ADDITIONAL REVENUE: GRANTS, PRIVATE SALES, AND DONATIONS | | | |
|---|--------------------------------|-------------------------|-----------------|
| Name of Grant/Donation/Sale | Awarded/Generated 08/09 | % Expended 08/09 | Comments |
| | | | |
| | | | |

| PERSONNEL NEEDS 09/10 | | | | | | | | | |
|------------------------------|----------------------|-----------------------|----------------------------|---------------------------|-----------------------|---------------------------------|-------------------|--------------|-------------------|
| Personnel DATA | CD Enrl F2008 | Tot FTES F2008 | Contract FTEF F2008 | Ext Srv FTEF F2008 | Tmp FTEF F2008 | Total FTEF F2008 | Contract % | FT/PT | FTES /FTEF |
| | | 235 | 57.49 | 2.0 | .44 | 1.40 | 3.84 | 52% | |
| Comments | | | | | | | | | |
| <i>Current</i> | | | | <i>If filled</i> | <i>If not filled</i> | <i># FTE (faculty assigned)</i> | | | |
| | | | | | | | | | |

*Narrative: Are PT faculty available? Can FT faculty be reassigned to this program?
Implications if not filled*

Yes, No.

Faculty Staff Requests 2010-2011:

None

**FACULTY ETHNICITY
F2008**

| Ethnicity | # of Contract | # of Adjunct | Total |
|------------------|----------------------|---------------------|--------------|
| Asian | | | |
| African American | | 1 | 1 |
| Filipino | | | |
| Hispanic/Latino | | | |
| Native American | | | |
| Other | | 1 | 1 |
| White | 2 | 1 | 3 |
| Unknown | | | |
| Total | 2 | 3 | 5 |

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**FACULTY GENDER
FALL 2008**

| Gender | # of Contract | # of Adjunct | Total |
|---------------|----------------------|---------------------|--------------|
| Male | 1 | | 1 |
| Female | 1 | 3 | 4 |
| Not Supplied | | | |
| Total | 2 | 3 | 5 |

RESOURCE NEEDS

Equipment/Material/Supply/ Classified/Student Assistant Needs:

Please describe any needs in the above categories.

Need from 1-3 student assistants to work in the stockroom with the chemistry technician every semester.

Facilities Needs (Items that should be included in our Facilities master Plan) for Measure A funding:

Please describe any facilities needs.

Chemistry is in need of renovation of all facilities related to Chemistry classrooms, labs, computer lab/study room, and stockroom. Critical repairs remain necessary for adequate safety and usage of the room until the new building is completed.

Chemistry continues to need Vernier computer based lab equipment.

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IV. ACADEMIC PERFORMANCE MEASURES AND EQUITY

| Student Demographics: Ethnicity Chemistry | | | |
|--|-------------------------------------|----------------------|--------------------|
| Ethnicity | Chemistry Baseline Fall 04-07 | Chemistry Fall 08 | College Average |
| Asian | 21% | 17% | 16% |
| African American | 32% | 25% | 36% |
| Filipino | 5% | 5% | 3% |
| Hispanic/Latino | 11% | 14% | 14% |
| Native American | 0% | 1% | 1% |
| Other | 2% | 2% | 2% |
| White | 19% | 21% | 21% |
| Unknown | 8% | 15% | 6% |

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| Student Demographics: Gender Chemistry | | | |
|---|-------------------------------------|----------------------|--------------------|
| Gender | Chemistry Baseline Fall 04-07 | Chemistry Fall 08 | College Average |
| Male | 27% | 24% | 31% |
| Female | 71% | 71% | 69% |
| Not Supplied | 2% | 5% | 0% |

| Analysis | |
|---|----------------|
| 1. What are you doing to increase access? | Nothing |

| Student Retention Rate: Ethnicity <i>Students who receive a grade other than withdraw</i> | | |
|---|-------------------------------------|----------------------|
| Ethnicity | Chemistry Baseline Fall 04-07 | Chemistry Fall 08 |
| African American | 59% | 45% (64) |
| Asian | 74% | 79% (39) |
| Filipino | 57% | 58% (12) |
| Hispanic/Latino | 61% | 63% (35) |
| Native American | 100% | 0% (1) |
| Other | 54% | 50% (6) |
| White | 73% | 77% (53) |
| Unknown | 63% | 52% (25) |
| Chemistry Average | 65% | 62% (235) |
| College Retention Rate: 72% | | |

| Student Retention Rate: Gender Chemistry | | |
|---|-------------------------------------|----------------------|
| Gender | Chemistry Baseline Fall 04-07 | Chemistry Fall 08 |
| Female | 65% | 64% (168) |
| Male | 66% | 57% (58) |
| Not Supplied | 60% | 67% (9) |

| Analysis | |
|---|--|
| 1. If your disciplines retention rate is beneath the colleges rate, then why? | Chemistry is a very difficult subject and students enter the classes with inadequate math skills. |
| 2. If your retention rate is below the college rate, then what are you doing to increase retention? | Tutoring students outside of class early in the semester to bring up their math skills. |
| 3. If your retention rate is above the college's rate do you have any best practices to share? | |

| Student Course Completion Rate (SCCR): Ethnicity Chemistry | | |
|---|-------------------------------------|----------------------|
| Ethnicity | Chemistry Baseline Fall 04-07 | Chemistry Fall 08 |
| African American | 48% | 31% (64) |
| Asian | 68% | 74% (39) |
| Filipino | 43% | 33% (12) |
| Hispanic/Latino | 50% | 51% (35) |
| Native American | 100% | 0% (1) |
| Other | 50% | 50% (6) |
| White | 68% | 70% (53) |
| Unknown | 57% | 44% (25) |
| Chemistry Average | 57% | 52% (235) |
| College SCCR Average :60% | | |

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| Student Successful Course Completion Rate (SCCR): Gender Chemistry | | |
|---|------------------------|----------------------|
| Gender | Baseline Fall 04-07 | Chemistry Fall 08 |
| Female | 57% | 52% (168) |

| | | |
|--------------|-----|----------|
| Male | 58% | 52% (58) |
| Not Supplied | 50% | 44% (9) |

| Analysis | |
|-----------------|--|
| | <p>If your disciplines successful course completion rate (SCCR) is beneath the colleges rate, then why? Chemistry is a very difficult subject and students enter the classes with inadequate math skills.</p> |
| 1. | |
| 2. | <p>If your sccr is below the college rate, then what are you doing to increase it? Tutoring students outside of class early in the semester to bring up their math skills.</p> |
| 3. | <p>If your sccr is above the college's rate do you have any best practices to share?</p> |