College of San Mateo

Program Review Submission

2014-2015 Learning Support Centers Program Review

Program Name: **Integrated Science Center**
Program Contact: **Diamond, Kathy**
Academic Year: **2014-2015**
Status: **Submitted for review**
Updated on: **03/29/2015 07:09 PM**

1. Description of Center

Provide a brief description of the program and how it supports the college's **College Mission and Diversity Statements**, **Institutional Priorities, 2013/14-2015/16**, **5 in 5 College Strategies, Spring 2011**, and other **Institutional Program Planning** as appropriate.

The Integrated Science Center (ISC) in 36-110 and 110A provides a study support environment to help CSM students succeed in their science courses, addressing College Mission 1: student success (including course completion, retention and persistence), Mission 2: academic excellence, and Mission 3: responsive programs and services. The ISC enhances the College 5-in-5 Strategy of Enhancing Transfer Services for STEM students.

The ISC consists of two spaces: 36-110 is a large room with 9 tables seating a total of about 45 students, with a library of science textbooks, anatomy and geology models, specific course textbooks and supplements, and a faculty desk with a computer; 36-110A is an adjoining room with 20 computers for student research, TBA assignments, and printing of course materials. In 36-110 students have access to a kitchenette.

The ISC resources are targeted to students enrolled in any science course at CSM. This includes Astronomy, Biology, Chemistry, Engineering, Geology, Health Science, Nursing, Oceanography, Paleontology, and Physics. These are all transfer-level courses. The ISC also supports other Math-Science course offerings (Architecture, Dental Assisting, Mathematics). Non-science students are welcome in the ISC, and log-in choice of courses is not limited to science.

Faculty-staffed, the ISC offers a friendly, comfortable atmosphere, accessible to and popular with students. It provides students the opportunity to consult with faculty, work with other students in study groups, or work individually in an academically stimulating environment. The ISC is open Monday-Thursday 8-4 and 8-12 Friday. The ISC is available for meetings of student organizations. During summer session the ISC is open Monday-Thursday, 11-1.

For TBA credit for students, faculty staffing is required. Many faculty do regular office hours in the ISC while others volunteer additional time or are given load. There may be a change in Fall 2015 due to the reduction in the number of science courses with TBA requirements. Student staffing of the ISC has been provided part-time and may increase in hours Fall 2015. It remains to be determined whether all ISC hours will be faculty-staffed or not.

Management of the ISC is multi-faceted, and has changed somewhat over the 2014-2015 academic year. Printing is now performed by a private company (Pinnacle) instead of in-house, and attendance tracking has changed from SARS to Accudemia. These two changes have relieved some duties but introduced others for ISC management. Management is performed by 25% Staff and a faculty volunteer through Spring 2015. As of Fall 2015 all tasks will be performed by two full-time faculty with a total of 4 units reassigned time.

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2. Student Learning and Center Data

A. Discuss Student Learning Outcomes Assessment

Reflect on recent SLO assessment results for courses and degrees and certificates offered by the program.

SLO assessment demonstrates success overall. SLOs were assessed in Fall 2014. The ISC SLOs are:

1. Students will have knowledge of the ISC's resources, including how to access them.
    1. Students will demonstrate awareness of study strategies for science courses.
    2. Students will express increased optimism about their abilities to pursue science learning.

The most recent assessment was performed using a survey given in the ISC over several weeks in Fall, 2014. There were 100 responses, 13.7% of the total number of (unique) users for the semester.

- SLO 1: Survey asked if student was able to access the resources needed this semester. Success criterion: 80% yes.
Results: 96% yes

- SLO 1: Survey asked if student is familiar with resources in the ISC. Success criterion: 80% yes.
Results: 99% yes

- SLO 2: Survey asked if coming to the ISC helped the student develop study strategies for science courses. Success criterion: 75% yes
Results: 9__% yes

- SLO 3: Survey asked if coming to the ISC increased student's confidence in succeeding in science courses. Success criterion: 75% yes
Results: 9__% yes

Assessment of GE SLOs was performed by a PRIE survey in Spring-Fall 2014, with student self-reporting on progress made toward College GE SLOs. For most of the 12 SLOs listed, about half of the respondents judged that it does not apply, and the remainder reporting moderate to major progress about 85% of the time. Examples include:

GE SLO "Express ideas and provide supporting evidence effectively in writing" 85.7% moderate-major progress; "Comprehend, interpret, and analyze information I read" 80.8%.

B. Center Usage Indicators

1. Review center usage and discuss any differences across demographic variables. Refer to **Planning, Research and Institutional Effectiveness (PRIE) reports**, SARS records, and other data sources as appropriate.

In Fall 2014 there were 7881 visits for 7333 minutes, almost one hour average per visit (56 minutes, longer than a class hour). The length of visit has increased slightly as the total number of visits has decreased from the previous year, possibly due to reduction in the number of Biology classes with TBA hours. In the first half of Spring 2014, 92% of student visits were for science courses (7.5% for Astronomy, 14% for Biology, 30.7% for Chemistry, 36.1% for Physics, 3.5% for Engineering, Geology and Oceanography combined), plus 5.3% of visits for Math.

PRIE data for Fall 2014 shows that the percentage of ISC users who were full-time students (12.5 units and above) was dramatically higher than the college as a whole, 44.2% compared to 18.8%. This is not surprising because full-time students spend more time on campus, but it also emphasizers the role of the ISC users the 5-in-5 strategy of enhanced transfer services and the College Missions 1 and 2 of student success and academic excellence. STEM students are almost all planning to transfer. The transfer focus is also reflected in the age groups

using the ISC: 82.2% are 24 years old or younger compared to 63.6% collegewide.

It is not surprising that the percentage of day-only students using the ISC is higher than the college (64.7% versus 49.1%) since the center is only open during daytime hours. Additionally it is not unexpected that, in contrast to the Math Resource Center and other learning support centers on campus, the percentage of Basic Skills enrolled students is smaller in the ISC than collegewide: 4.3% versus 9.1% B.S. Math and 0.5% versus 1.2% B.S. English. This can be attributed to prerequisites or recommended preparation above Basic Skill levels for many science courses, especially in the majors.

Measurements of student success from PRIE student profile Fall 2014: ISC users showed higher GPA and success and retention than the college overall, with a GPA of 3.0 or higher of 46.7% for ISC students compared to 41.7% collegewide and success (GPA of 2.0 or higher) of 90% for ISC users compared to 77.7% collegewide.

ISC usage among ethnic groups varies somewhat from the college demographic profile, with higher representation of Asian students (22.4% versus 16.6%) and lower representation of African American and Hispanic students (18.9% versus 23.2% for the two groups combined). Data was not made available for Fall 2014, but past data have shown the importance of the ISC to the success of students in general, but especially to most underrepresented ethnic groups. Data from Spring 2012: African American students who used the ISC benefitted dramatically in success rates (88.3% compared to 61.8% collegewide); Hispanic and Pacific Islander improved substantially (73.9 and 77.8% versus 66.1 and 65.8% respectively).

2. Discuss any differences in student usage of center across modes of delivery. If applicable, refer to **Delivery Mode Course Comparison**.

Students taking online courses use the ISC for course work. Individual sections of courses with multiple sections are not specified in SARS, but some courses have online sections in addition to on-campus sections. For example, in Biology some courses are currently only offered online (BIOL 102, 145), while some have both on-campus and online sections (BIOL 100, 310, HSCI 100).**[TM1]** All sections of Biology 210, 220 and 260 are web-assisted and have online components.

C. Center Efficiency. Is the center efficient in meeting student needs?

Discuss center efficiency, including staffing, hours of operation, tutorial and other services, space utilization, equipment, or technology as appropriate.

For TBA credit for students, faculty staffing is required. Many faculty do regular office hours in the ISC while others volunteer additional time or are given load. There may be a change in Fall 2015 due to the reduction in the number of science courses with TBA requirements. Student staffing of the ISC has been provided part-time and may increase in hours Fall 2015. It remains to be determined whether all ISC hours will be faculty-staffed or not.

Management of the ISC is multi-faceted, and has changed somewhat over the 2014-2015 academic year. Printing is now performed by a private company (Pinnacle) instead of in-house, and attendance tracking has changed from SARS to Accudemia. These two changes have relieved some duties but introduced others for ISC management. The duties of managing the ISC include the following:

1. Scheduling faculty and student staffing hours
2. Printer Management, especially troubleshooting
3. Login Computer / Accudemia
4. Website upkeep
5. Substitution for Absentees

6. Summer Hours
7. Learning Support Centers Coordinating Committee
8. SLO Assessment and Tracdat reporting
9. Best Practices Assessment
10. Data Analysis and Program Review

Tasks 1-6 have been performed by 25% Staff through Spring 2015; tasks 7-10 by a faculty volunteer. As of Fall 2015 all tasks will be performed by two full-time faculty with a total of 4 units reassigned time.

Faculty office hour staffing depends on full-time and adjunct faculty willing to do office hours in the ISC instead of their offices, which is not easy considering the limited availability of Science faculty much of the day due to class time. Some faculty are given load to work in the ISC. The more faculty who hold regular office hours in the ISC, the more students can benefit. Working in the ISC can also be a very rewarding experience for faculty. In Spring 2015 15 faculty are working in the ISC: 8 full-timers and 7 adjuncts. There has been some success with recruiting faculty at Math-Science Division meetings and by email. With a reduction in compensation for faculty hours in the ISC due to fewer TBA hours in science courses it may become more difficult to recruit faculty. If the requirement for 100% faculty staffing is reduced the times may be filled with student assistants.

The ISC is open Monday-Thursday 8-4 and 8-12 Friday. The ISC is available for meetings of student organizations. During summer session the ISC has been open Monday-Thursday, 11-1. With a change in staffing after Spring 2015 the status of Summer hours is as yet unestablished. Beginning Fall 2015 a Biology and a Physics full-time faculty will be taking on management of the ISC. The Biology faculty has been volunteering in the ISC for several years, and both will be meeting with the outgoing Staff manager Spring 2015 to determine how to accomplish efficient operations of the ISC.

Since the Learning Center has established a tutor training program the ISC does not engage in formal or informal tutoring by students. It would be very beneficial and convenient for science students if there were an increase in the number of science tutors and if Learning Center science tutors could spend some of their hours in the ISC.

Usage of the ISC ranges during the day between a maximum of about 65 students to a dozen or fewer students. There are often flurries of students printing course materials and large study groups for particular classes. The 20 computers serve the needs of the students for study and printing. There is no waiting for computers. In Fall 2013 ISC computers were all replaced with new ones. Printing was transferred to an automated system using Pinnacle, the company that provides printing in the Learning Center, Fall 2014. New equipment was provided by the college. Printing troubleshooting requires the staff or faculty management of the ISC, or a call to Pinnacle. ITS no longer has any responsibility for printing issues. The means that the managers of the ISC must be available and aware of steps to solve student problems with printing, several of which have arisen Spring 2015.

The ISC still has a severe shortage of power outlets for student computers. There are only a few outlets in the room and it is hazardous to run power cords across the floor. The original construction of the ISC somehow overlooked standards of outlet placement, perhaps due to the three walls of windows in the design of the space. A solution to this shortage is highly desirable, possibly with floor-mounted outlets or several stationary tables with built-in outlets, as in lab benches in lab classrooms.

The Learning Support Centers Coordinating Committee has worked with the Dean of Academic Support and Learning Technologies Division to improve assessment of all college Learning Support Centers. The ISC now assesses and reports SLOs both Fall and Spring semesters, and is using a set of four modes of assessment (PRIE user profile; PRIE satisfaction survey; Best Practices Inventory; Unique assessment).

PRIE conducts satisfaction surveys of Learning Support Centers, including the ISC. The results of the Spring-Fall 2014 survey (78 respondents) show 92% rate the services good-excellent, 88% rate the staff helpful, 87% consider the ISC available most of the time when needed, 100% of faculty meetings were helpful, and several other features of usefulness rating at least 90% satisfaction.

In Fall 2014 the Learning Support Centers Coordinating Committee agreed to use a cycle so that 1-2 Best Practices are assessed each year with all assessed at least once within a six-year cycle (except for those that do not apply to a particular center). The list of Best Practices is:

1. The LSC has a mission statement congruent with department and institutional missions.

2. The LSC has adequate resources, including but not limited to budget, space, staff and faculty, furniture, equipment/software, technology, and IT support.

3. The LSC serves a targeted, well-defined campus community.

4. The LSC offers services that support student learning amongst the target audience.

5. The LSC uses technology effectively to capture, analyze, and report usage data.

6. The LSC uses technology effectively to enhance individual student learning.

7. LSC partners with other instructional programs and/or support services (EOPS, DSPS, Veterans, Learning Communities, etc.) as appropriate.

8. The LSC assesses its SLOs and prepares and disseminates a program review.

The fourth mode of assessment, unique to the center, is a set of interviews or focus groups. Because the success of the ISC depends so much on faculty participation, faculty surveys are included in unique assessment, especially as part of the Best Practices points 3 and 4, serving a well-defined community and offering services that support that target group. In Fall 2014 two science faculty surveys were performed, one for all faculty with just two questions: have you worked in the ISC and what do you think is the ISC's main function.

Respondents' (17) replies to the second question: 6/17 consider the main function to support STEM/science students; 6/17 to provide for students to work in study groups, and 5/17 the combination of the first two purposes. The faculty considers the ISC to have a unique service by providing help to students in science classes.

In working to develop Best Practices for all Learning Support Centers, the second survey was performed, asking the faculty who were working in the ISC Fall 2014 to complete a more in-depth survey. Seven of the 15 faculty responded. The questions were:

1. Why do you work in the ISC?

2. What are two things you think are good (positive for faculty or students) about the ISC?

3. What are two things you think are bad (missing, need improvement, not useful for faculty or students) about the ISC?

4. What would you like to see the ISC offer in terms of services or resource materials?

5. In what ways do you think the Math/Science division should support the ISC?

6. Have you any additional comments about the ISC?

Responding faculty emphasized the importance of providing academic support to science students in the Science Building itself, providing a neutral place for students to interact one-on-one with faculty and other students. They commented on the need for maximum hours and faculty presence in the ISC, and support from the College for its operation.

3. Additional Factors

Discuss additional factors as applicable that impact the center, including changes in student populations, state-wide initiatives, transfer

requirements, advisory committee recommendations, legal mandates, workforce development and employment opportunities, community needs. See **Institutional Research** as needed.

In 2014 Program Review additional staffing of 50% (25% more staff + 25% faculty) was requested to manage the ISC. Since then plans for management of the ISC have changed to faculty with reassigned time, as of Summer, 2015. It is as yet undetermined whether the faculty will be able to carry out all necessary tasks that have been handled so well by the 25% staff plus volunteer faculty. It is quite likely that there will be more "volunteer" work than the reassigned units will cover. The greatest concerns will be 1-"checking in" on ISC operations during the day, which the current staff does several times a day, and 2-function of the ISC in Summer Session.

The second issue of concern is the number of hours faculty will be present in the ISC beginning Fall 2015 and the number of hours required to be staffed by faculty, both of which will depend on the proportion of science courses with TBAs and agreement between the Dean of Math/Science and the Vice President of Instruction on the number of paid hours for faculty work in the ISC. At least it is clear the college supports the operations of the ISC and will support it at least with student assistants.

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4. Planning

Note: For centers that serve a single department, a portion of the information included in a departmental program review may be referred to or inserted here.

A. Results of Plans and Actions

Describe results, including measurable outcomes, from plans and actions in recent program reviews.

In the 2014 program review of the ISC the following action steps were identified:

1- Add 25% Staff (instructional aide) + 25% faculty hours (adjunct special rate hours)

2-Improve faculty participation in ISC staffing

3-Improve Assessment of ISC programs

Results:

1- Add 25% Staff (instructional aide) + 25% faculty hours (adjunct special rate hours)

This is moot since the VPI will support two full-time faculty with a total of 4 units reassigned time to carry out all management of the ISC. The outcome of this change will be seen in the 2015-2016 academic year and will be discussed in next year's Program Review.

2-Improve faculty participation in ISC staffing

This was successful and the ISC is open Monday-Thursday 8-4 and Friday 8-12, longer hours than in the past. It is not clear if this will be sustained with fewer TBA requirements and concomitant reduction in funding of faculty hours. However, if student assistants can fill the gaps the hours may be maintained.

3-Improve Assessment of ISC programs

This has seen substantial improvement, with SLO assessment twice a year instead of once, PRIE survey data that provides for alignment with GE SLOs, development of Best Practices assessment plans with LSC3 and the Academic Support and Learning Technologies Division, and further work with Unique Assessment tools such as faculty surveys.

B. Center Vision

What is the program's vision for sustaining and improving student learning and success during the *next six years*? Make connections to the **College Mission and Diversity Statements**, **Institutional Priorities, 2013/14-2015/16**, and other **Institutional Program Planning** as appropriate. Address trends in the SLO assessment results and student usage and data noted in Section 2.
[**Note:** Specific plans to be implemented in the *next year* should be entered in Section 4C.]

The ISC will continue its participation on the Learning Support Centers Coordinating Committee, with monthly meetings to coordinate and maximize centers' services to student academic success. The combined work of the ISC and other learning support centers serves four Institutional priorities: 1: improve the academic success of all students (completion, retention, persistence), by increasing student participation in academic support services and improving such services; 2: promote academic excellence (improve transfer rates), by offering study opportunities and faculty consultation in a supportive environment; 4: promote integrated planning, fiscal stability and the efficient use of resources (support decision making in institutional planning that is informed by evidence, research and use of outcome measures), by basing decisions on data from all learning support centers; 5: enhance institutional dialogue (improve campus-wide communication), by the collaboration between the learning support centers.

SLO assessment, ISC usage data, and PRIE data clearly show the importance of the ISC to students, especially students taking at least 12 units and enrolled in transfer-level courses. Faculty who will take over management of the ISC will strategize to make sure the Center is run as efficiently and successfully as it has been in the past. It may take some time to develop the most practical means of managing the ISC.

1. To guide future faculty and staff development initiatives, describe the professional enrichment activities that would be most effective in carrying out the program's vision to improve student learning and success.

Centers faculty welcome the opportunity to participate in all initiatives that provide academic or support services activities.

2. To guide future collaboration across student services, learning support centers, and instructional programs, describe the interactions that would help the program to improve student success.

Continued participation in LSC3. With two faculty managers of the ISC, there will be more input to the Committee as well as more dialog addressing ISC issues and strategies. The 25% staff that has been managing the ISC has had a schedule that did not provide for committee participation. The outcome is unknown, but possible impacts include increased innovation and student success as well as coordination among Learning Support Centers.

3. To guide the **Institutional Planning Budget Committee** (IPBC) in long-range planning, identify any major changes in resource needs anticipated during the next three years. Examples: faculty retirements, equipment obsolescence, space allocation.

Equipment and Technology

Instructional Materials

Classified Staff

A major change will result from the retirement of the 25% staff as manager of the ISC as discussed above. As of Fall 2015 all tasks will be performed by two full-time faculty with a total of 4 units reassigned time. The issues associated with this change have been addressed in previous sections.

Student Assistant

It is anticipated that an increase in student assistant hours will be needed to allow the ISC to function with its current schedule: part of this need is due to the loss of the staff member, who has been able to substitute for absent faculty, and part is due to the likely loss of some paid faculty hours to staff the ISC. Ideally students will staff the ISC all of its open hours, with as many faculty hours as possible. Currently the ISC runs best with both a student assistant and a faculty member present, so the faculty may attend to student questions while the student assistant tends to practical operations (logging in, assistance with printing, etc).

Facilities

The ISC needs multiple additional, accessible 110 outlets to support student computer use and remove the hazard of cords running through the room (across the floor).

C. Plans and Actions to Improve Student Success

Prioritize the plans to be carried out next year to sustain and improve student success. Briefly describe each plan and how it supports the **Institutional Priorities, 2013/14-2015/16**. For each plan, list actions and measurable outcomes. (Plans may extend beyond a single year.)

Plan 1

Title:

Use two full-time faculty with a total of 4 units reassigned time to manage the ISC

Description

The ISC management is multifaceted, with a list of ten duties to keep the Center operating successfully.

1. Scheduling faculty and student staffing hours
2. Printer Management, especially troubleshooting
3. Login Computer / Accudemia
4. Website upkeep
5. Substitution for Absentees
6. Summer Hours
7. Learning Support Centers Coordinating Committee
8. SLO Assessment and Tracdat reporting
9. Best Practices Assessment
10. Data Analysis and Program Review

The new faculty managers will need all the support the college can provide in terms of funds for student assistants and faculty office hours.

Action(s)	Completion Date	Measurable Outcome(s)
Two full-time faculty take over management of the ISC	Summer-Fall 2015	Maintenance of efficiency and function of the ISC.

Plan 2

Title:
Continued Improvement of Assessment

Description
This has seen substantial improvement, with SLO assessment twice a year instead of once, PRIE survey data that provides for alignment with GE SLOs, development of Best Practices assessment plans with LSC3 and the Academic Support and Learning Technologies Division, and further work with Unique Assessment tools such as faculty surveys.

Action(s)	Completion Date	Measurable Outcome(s)
Assess SLOs both Fall and Spring semesters; use additional modes of assessment, including PRIE user profiles both semesters, best practices inventory and interviews or focus groups specific to the ISC.	Ongoing	More complete understanding of ISC service results and comparison of learning support centers, so successful practices in one center may be modeled in others.

Plan 3

Title:
Faculty Participation

Description
Continued faculty participation in the ISC is needed to address the first and second Institutional Priorities: to improve the academic success of all students (including course completion, retention and persistence), and the second: to promote academic excellence (and improve transfer rates). Thus a constant goal is to encourage more involvement of Math-Science Division Faculty in the ISC. There is a relatively small number of faculty who support the ISC by working in it. The goal is to encourage faculty whose students use the ISC to spend hours in the ISC. Some students who may be hesitant to visit faculty in their offices find it comfortable to consult with the same faculty in the ISC. Since the ISC is part of the Science building and

requires staffing by science faculty, the more faculty involved in staffing the ISC the more it will be able to serve student needs. Strategies to engage more science faculty in the working and planning of the ISC need to be developed.

Action(s)			Completion Date
Share ISC program review, especially usage data, with Math-Science faculty, showing the number of students in each science course who use the ISC and suggesting faculty whose students use the ISC should consider doing office hours in the ISC.			Ongoing

Plan 4

Title:
Power outlets

Description
There is a severe shortage of power outlets for student computers in the ISC. Students who bring their own computers to the ISC have no place to plug in power cords. There are only a few outlets in the room and it is hazardous to run power cords across the floor. The original construction of the ISC somehow overlooked standards of outlet placement, perhaps due to the three walls of windows in the design of the space. A solution to this shortage is highly desirable, possibly with floor-mounted outlets or several stationary tables with built-in outlets, as in lab benches in lab classrooms.

Action(s)	Completion Date	Measurable Outcome(s)
Rewire ISC for safe outlet (110) availability throughout the main room	Fall 2015	Increased efficiency and safety; student survey results should show increased satisfaction with ISC resources and increased usage.

5. Resource Requests

Itemized Resource Requests

List the resources needed for ongoing program operation and to implement the plans listed above.

Equipment and Technology

Description	Cost

Instructional Materials

Description	Cost

Classified Staff

Description	Cost
Cost	

Student Assistant

Description	Cost
It is anticipated that an increase in student assistant hours will be needed to allow the ISC to function with its current schedule: part of this need is due to the loss of the staff member, who has been able to substitute for absent faculty, and part is due to the likely loss of some paid faculty hours to staff the ISC. Ideally students will staff the ISC all of its open hours, with as many faculty hours as possible. Currently the ISC runs best with both a student assistant and a faculty member present, so the faculty may attend to student questions while the student assistant tends to practical operations (logging in, assistance with printing, etc).	

Facilities
For immediate or routine facilities requests, submit a CSM Facility Project Request Form.

Description	Cost
Need multiple additional, accessible 110 outlets to support student computer use and remove the hazard of cords running through the room (across the floor).	Cost

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6. Program Maintenance

A. Course Outline Updates

Review the **course outline update record**. List the courses that will be updated in the next academic year. For each course that will be updated, provide a faculty contact and the planned submission month. See the **Committee on Instruction website** for **course submission instructions**. Contact your division's **COI representatives** if you have questions about submission deadlines.

Courses to be updated	Faculty contact	Submission month

B. Website Review

Review the program's website(s) annually and update as needed.

Faculty contact(s)		Date of next review/upda
	Faculty contact(s)	Date of next review/update
Dean Drumheller		Spring 2015

Kathy Diamond & David Locke	Fall 2015	

C. SLO Assessment Contacts

Faculty contact(s)	Date of next review/upda

Faculty contact(s)	Date of next review/update
Kathy Diamond	Spring 2015
Kathy Diamond & David Locke	Fall 2015