LEARNING SUPPORT CENTERS PROGRAM REVIEW: SPRING 2013 SUBMISSION CYCLE

Program Name: Integrated Science Center   Academic Year: 2012-2013
Center Contacts: Kathleen Diamond, Dean Drumheller   Program Review Submission Date: March 25, 2013

I. Description of Center

Provide a brief description of the program and how it supports the college's [College Mission and Diversity Statements](#), [Institutional Priorities, 2008-2013](#), [5 in 5 College Strategies, Spring 2011](#), and other [institutional planning documents](#) as appropriate.

The Integrated Science Center (ISC) in 36-110 provides a study support environment to help CSM students succeed in their science courses, addressing the first Institutional Priority: 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). The ISC consists of two spaces: one large room with 9 tables seating a total of about 45 students, science textbooks, anatomy and geology models, specific course textbooks and supplements, and a faculty desk with a computer; a smaller adjoining room with 20 computers for student research, TBA (to-be-arranged hours) assignments, and printing of course materials. In the larger room 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, Engineering, Mathematics). Non-science students are welcome to the ISC, and the log-in choice of classes is not limited to science. However, from student "reasons" given when logging in, about 95% of student hours are spent on science courses (Fall 2012, 12% of hours were for Astronomy, 33% for Biology, 21% for Chemistry, and 25% for Physics).

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-Friday during daytime hours, and an effort is made to be open 9-4. Faculty staffing is required for the student hours to be used for course TBA work. The management of the ISC facility, including scheduling, keeping up supplies, assistance with computers and printer, and many other supporting and technical tasks are performed by classified staff at 25%. The ISC is available for meetings of student organizations. During summer session the ISC is open Monday-Thursday, 11-1.

II. Summary of Student and Center Data

A. Student Learning Outcomes Assessment

Summarize recent SLO assessments, identify trends, and discuss areas in need of improvement.

In November 2012, new SLOs were developed for the ISC. This was done in collaboration with all the Learning Support Centers at CSM, and a common SLO was adopted by every center. These new SLOs will be assessed in Spring, 2013. The ISC SLOs are:

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

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 Spring 2012 there were 11,144 visits by 1052 different students. In Fall 2012 there were 9244 visits by 897 different students (the decrease can be attributed to the opening of the Learning Center). In Fall 2012 the 9244 visits totaled 8294 hours (this is an average of 10-11 visits per student and 9-10 hours per student). 94% of the hours were designated for science courses (123 courses were listed by students using the ISC, 40 of which were science courses). In Spring 2013 through mid-March 778 students had used the ISC (up from 696 through February); this suggests new ISC users are added during the semester, as more students become aware of the benefits, and in some cases requirements, of using the resources offered.

   PRIE data for Spring 2012 (the only semester provided) shows that the percentage of ISC users who were full-time students was higher than the college as a whole. This is not surprising because these students generally spend more time on campus, but it also suggests ISC users are more invested in their programs/majors (or individual classes). 85% of ISC users were enrolled in more than 6 units compared to 46% of the college (83% of ISC users took at least 3 classes compared to 40% of the college). Measurements of student success: ISC users showed higher success and retention than the college across most ethic groups, genders and ages: 77.3% success compared to 70.9%; 87.7% retention compared to 84.7%. African American students benefitted dramatically (88.3% compared to 61.8% collegewide); Filipino did not benefit compared to college figures (66.4% versus 69%); Hispanic and Pacific Islander improved substantially (73.9 and 77.8% versus 66.1 and 65.8% respectively). This shows the importance of the ISC to the success of students in general, but especially to most underrepresented ethnic groups. This is because underrepresented groups have lower success rates in science courses than other students. In Biology, for example, age and gender and most ethnic groups fall within the department's 4% difference from the College in success and retention, but Black, Filipino and Hispanic students have at least 10% lower success and retention in Biology than the College overall.

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. In Fall 2012 123 courses were listed by students using the ISC, 40 of which were science courses, and 94% of total hours were for science courses. Among those science courses listed:

   Individual sections of courses with multiple sections are not specified in SARS, but some courses have online sections in addition to on-campus sections. This includes Biology 100 and 130. Biology 310 and 184 are exclusively online. All sections of Biology 210, 220 and 260 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.*

Since Fall 2009 the ISC has been staffed by faculty at all times. Management of the ISC facility, scheduling, supplies, assistance with computers and printer, and many other supporting and technical tasks are performed by classified staff at 25%. The ideal hours of the ISC are M-F 8-5, assuming other student support centers are open evenings and Saturdays. Unfortunately it is very difficult to staff even 9-4 hours with faculty. The majority of staffing hours depend on faculty willing to do office hours in the ISC instead of their offices, and obviously faculty have limited availability much of the day due to class time. Pay for faculty hours in the ISC: almost all faculty are paid to work in the ISC. Full-time faculty work hourly on a "one-for-one" basis: one hour unpaid for each hour paid; adjunct faculty also work "one-for-one" though they cannot be paid for hours in excessive of adjunct load limit. Adjuncts are automatically paid for one office hour for each 3 classroom hours. It would benefit students if adjuncts held their office hours in the ISC. Only about half of the full-time and adjunct instructors in the sciences hold office hours in the ISC, many not realizing how rewarding the experience is for both students and themselves.

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 Learning Center science tutors could spend some of their hours in the ISC.

The ISC cycles during the day between being filled to capacity (about 65 students) and occupied by 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. By the end of Spring 2013 semester the 21 (20 student and one faculty) computers in the ISC will be replaced with new ones.

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.

D. *Course Outline Updates (if applicable)* NOT APPLICABLE

E. *Website Review*
Review the center's website(s) annually and update as needed.

The ISC website has information on operating hours and the attending faculty, resources, and is updated as needed.

Contact(s)	Date of next review/update
Dean Drumheller	Spring 2013
Kathy Diamond	

III. Student Learning Outcomes Scheduling and Alignment

A. *Course SLO Assessment (if applicable)* NOT APPLICABLE

B. *Center SLO Assessment*

Explain any recent or projected modifications to the Center SLO assessment process or schedule.

In November 2012, new SLOs were developed for the ISC. This was done in collaboration with all the Learning Support Centers at CSM, and a common SLO was adopted by every center. The SLOs will be assessed by a survey that will also assess student satisfaction for PRIE. This questionnaire will be given in hard copy at a dedicated station beside the log-in table in the ISC during all open hours in the first two weeks of May, 2013. Faculty in the ISC will encourage all students to complete the survey. It will be short, consisting of 5-6 questions. Results of the SLO assessment will be compiled and entered into Tracdat (and satisfaction results entered electronically for PRIE).

SLO Alignment (as applicable)

Discuss how Center SLOs support Program SLOs. Discuss how Course and/or Center SLOs support Institutional/GE SLOs. Refer to TracDat related program and institutional SLOs reports.

In general the ISC SLOs support science course SLOs by offering resources for students to pursue their course studies. More specifically: ISC SLOs and their relationship to CSM GE SLOs:

1. Students will have knowledge of the ISC's resources, including how to access them. This supports Quantitative Skills by providing resources for quantitative analysis, problem solving.
2. Students will demonstrate awareness of study strategies for science courses. This supports critical thinking by providing a milieu for analyzing information and critical reasoning.
3. Students will express increased optimism about their abilities to pursue science learning. This supports all GE SLOs insofar as it provides an opportunity for success in developing Effective communication, Quantitative skills and Critical thinking for the related courses.

IV. 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.

The main issue for the ISC is staffing. Budget constraints that prevent hiring of all needed full-time faculty and payment to adjunct and full-time faculty for additional hours keep the center from operating a full day schedule Monday-Friday. Coordination with CSM's Learning Center is a positive new development, with the Learning Center providing tutors and evening hours. If the Learning Center had course textbooks and Saturday hours it would fill further gaps. Since TBA hours require faculty it does not seem that the Learning Center can be used instead of the ISC for science class TBA hours. Continuous student demand and usage plus information and requests from science faculty identify resource needs of the students, including hours of operation of the ISC.

The ISC could also benefit from increased staff hours, since primary responsibility of current staff is support of the Astronomy department. An additional 50% staff will greatly enhance efficiency of the ISC operations and allow faculty to focus more on student needs.

V. Institutional Planning

A. *Results of Plans and Actions*

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

In the first (2009) program review of the ISC the following action steps were identified:
1. Continue to evaluate student usage every semester, feedback every year
2. Increase hours of operation from 9-4 to at least 8-5
3. Increase faculty staffing to expand hours and so that two faculty are present during peak hours.
4. Investigate funds and means to provide tutoring
5. Seek funding to upgrade computers

Usage evaluation has improved with greater capability of SARS to identify specific courses students worked on in the ISC, and more details of other aspects of usage. Satisfaction evaluation is in the process of improvement, especially in terms of the percentage of users participating in the survey. In Spring 2012 PRIE conducted an ISC satisfaction survey by email. There were 63 respondents, which is less than 7% of the semester's usage number of students. (In Spring 2009 a similar survey had 58 respondents.) In both cases students expressed satisfaction with the ISC's services, staff and procedures.

Hours of operation and faculty staffing have not improved, as already noted. The ISC needs more faculty staffing and additional staff support.

Tutoring has become an established program at the college's Learning Center, so while the ISC has no tutors, there are trained tutors available to students. The number of science tutors is still small however.

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, 2008-2013, and other institutional planning documents as appropriate. Address trends in the SLO

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assessment results and student usage and data noted in Section II. Summary of Student and Program Data.

The ISC will actively participate as part of a network of student support centers at the college. Over the next six years, the Learning Support Centers Coordinating Committee, as a standing committee of the Academic Senate, will continue its regular meetings to maximize the ability of all centers to serve student needs. The committee will strategize to align hours of operation, computer and technology resources, staffing, and other services to create comprehensive learning support network for all students. 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.

The ISC SLO assessment to be conducted in May 2013 should give us a better evaluation of the specific success of the center, but usage data clearly shows the importance of the ISC to students, especially students taking at least 6 units and enrolled in transfer-level courses. 900-1000 different students using the ISC each semester represents a substantial proportion of the college's student body. Over the next six years the ISC's goal will be to ensure that the center is open at least from 9-4 Monday-Friday, that textbooks for courses are available, that computers are able to support course assignments, including TBA work, and that faculty are present for academic assistance.

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 and staff welcome the opportunity to participate in the Academic Senate Reading Apprenticeship initiative and other academic or support services activities, such as those associated with CSM Cares, the college's mental health grant.

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.*

The faculty lead of the ISC is an active participant in the Learning Support Centers Coordination Committee. The committee's work in the past year has given us a much better understanding of the roles played by the many centers on campus and has led to discussion of how we might better serve students, including making sure at least the Learning Center is open at times when our individual labs are not: late afternoons, evenings and Saturdays. This idea needs further investigation especially with respect to increased funding for staff and faculty assignments and the logistics of collecting SARS

data for TBA. Continued cooperation between all the centers through the coordinating committee will make sure student needs are addressed.

An important goal for the coming year and future years for the ISC is reliable staffing by faculty and additional staff support, to ensure it can be open 9-4 if not 8-5.

Examination of data clearly indicates that students from across the college are accessing the resources of the ISC. Therefore, over the next six years, the center needs to enter into discussions about collaborating with other divisions and departments on support of all students in the ISC.

3. *To guide the* <u>*Institutional Planning Committee*</u> *(IPC) in long-range planning, discuss any major changes in resource needs anticipated in the next six years. Examples: faculty retirements, equipment obsolescence, space allocation. Leave sections blank if no major changes are anticipated. Specific resource requests for the next academic year should be itemized in Section VI.A below.*

Equipment and Technology: NA

Instructional Materials: To date the ISC has only offered specific textbooks for science courses in which the instructor can provide a copy. In the next six years the goal is to purchase specific texts for all science courses identified by students who use the ISC. The texts are for usage in the ISC only. Checking out of texts is very popular but most instructors do not have extra texts to provide to the ISC. If instructors will plan to use texts over several years they may be purchased by the ISC and kept for use in-house.

Classified Staff: The ISC needs more staffing, as described in part IV. The goal is to add 50% to the current 25%. Management of the ISC in general, including stocking the printer and copier, monitoring log-ins, checking out texts, assisting students with computer use, and providing transition coverage between in-coming and out-going faculty, overwhelm the current level of staffing in the ISC.

Student Assistant: NA

Facilities: Need 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 <u>*Institutional Priorities, 2008-2013*</u>*. For each plan, list actions and measurable outcomes.*

Plan 1

Title:

Faculty Participation

Description

Greater 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 an important goal for the coming year is to encourage more involvement of Math-Science Division Faculty, or at least Science 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 and put into action over the next year.

Action(s)	Completion Date	Measurable Outcome(s)
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.		Increased faculty scheduling in ISC and more complete coverage of ISC hours.
Add 50% staff to ISC for management of everyday operations, so faculty are more inclined to conduct office hours in the ISC.		Hiring of new 50% staff. Increased faculty scheduling in ISC and more complete coverage of ISC hours.
Purchase textbooks for all ISC users' science courses, to support ISC faculty ability to assign TBA work in the ISC and to work with their own students.		Increased faculty scheduling in ISC and more complete coverage of ISC hours.

Plan 2

Title:

Satisfaction and SLO Survey

Description

Satisfaction & SLO Survey: SARS data shows that about 900-1000 different students use the ISC each semester. In Spring 2012 11,144 visits by 1052 different students were made; in Fall 2012 9244 visits by 897 different students (the decrease can be attributed to the opening of the Learning Center). In any given week about 360 different students use the ISC. Beginning this semester the goal of the SLO and satisfaction survey will be to achieve a response of least 30% of the weekly ISC visitors.

Action(s)	Completion Date	Measurable Outcome(s)
The SLOs will be assessed by a survey that will also assess student satisfaction for PRIE. This questionnaire will be given in hard copy at a dedicated station beside the log-in table in the ISC during all open hours in the first two weeks of May, 2013. Faculty in the ISC will encourage all students to complete the survey. It will be short, consisting of 5-6 questions. Results of the SLO assessment will be compiled and entered into Tracdat (and satisfaction results entered electronically for PRIE).		Significant percentage of weekly ISC users will complete survey so that satisfaction data and SLOs will be assessed.
Add 50% staff to ISC for management of everyday operations; staff can assist in encouraging student participation in surveys.		Significant percentage of weekly ISC users will complete survey so that satisfaction data and SLOs will be assessed.
4T		4T

Plan 3

Title:

Add 50% Staff

Description

> The ISC could also benefit from increased staff hours, since primary responsibility of current staff is support of the Astronomy department. An additional 50% staff will greatly enhance efficiency of the ISC operations and allow faculty to focus more on student needs. The goal is to add 50% to the current 25%. Management of the ISC in general, including stocking the printer and copier, monitoring log-ins, checking out texts, assisting students with computer use, and providing transition coverage between in-coming and out-going faculty, overwhelm the current level of staffing in the ISC.

Action(s)	Completion Date	Measurable Outcome(s)
Hire 50% staff position to increase staff from current 25% level to 75%.		Increased efficiency of the ISC, including student survey participation, increased student satisfaction with ISC resources and increased staffing by faculty to fulfill ISC weekly hours.
4T		4T

Plan 4

Title:

Textbooks for Science Courses

Description

To date the ISC has only offered specific textbooks for science courses in which the instructor can provide a copy. The goal is to purchase specific texts for all science courses identified by students who use the ISC. The texts are for usage in the ISC only. Checking out of texts is very popular but most instructors do not have extra texts to provide to the ISC. If instructors will plan to use texts over several years they may be purchased by the ISC and kept for use in-house.

Action(s)	Completion Date	Measurable Outcome(s)
Purchase current textbooks for science courses with heaviest ISC usage.		Increased usage of textbooks by students in the ISC; student survey results should show increased satisfaction with ISC resources and increased optimism about success in science courses.
Purchase current textbooks for science courses with any ISC usage.		Same as above.
4T		4T

Plan 5

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		Increased efficiency and safety; student survey results should show increased satisfaction with ISC resources and increased usage.

[Note: Itemize in Section VI.A. Any additional resources required to implement plans.]

VI. Resource Requests

A. *Itemized Resource Requests*

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

Equipment and Technology NA

Instructional Materials

Description (for ongoing program operation)	Cost
Textbooks for ISC users' science courses: 40 different courses include many with multiple sections that may have different textbooks (40 @ $125/text)	$5000

Description (for prioritized plans)	Plan #(s)	Cost
Textbooks for ISC users' science courses; additions each semester for courses identified by ISC users or suggested by faculty who anticipate greater student usage due to faculty investment of hours in the ISC; multiple copies of in-demand textbooks.	1, 4	$2000

Classified Staff

Description (for ongoing program operation)	Cost
Hire 50% staff position to increase staff from current 25% level to 75%.	tbd by dean

Description (for prioritized plans)	Plan #(s)	Cost
Hire 50% staff position to increase staff from current 25% level to 75%.	1, 3	

Student Assistant NA

Facilities ongoing + plans

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

Description (for prioritized plans)	Plan #(s)	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).	5	tbd by Facilities

B. *Cost for Prioritized Plans*

Use the resources costs from Section VI.A. above to provide the total cost for each plan.

Plan #	Plan Title	Total Cost
1	Faculty participation includes more classified staff and textbooks	
3	New 50% staff	
4	Textbooks	$7000
5	Power outlets	