

Objectives by Planning Unit and Status

Planning Year: 2018-2019,2016-2017,2017-2018

Planning Year: 2016-2017

| Unit Code | Planning Unit | Unit Manager |
|-----------|---------------|-----------------|
| 23312 | Biology | Gilison, Daniel |

Objective Status: Incomplete

753 Increase student transfer opportunities

To offer ADT degrees in Chemistry and Biology, we would need to increase number of sections of lower-level chemistry classes (CHEM 200, 202), and offer upper-level chemistry classes (CHEM 204, 206). We would also need to increase the number of BIOL 180 and BIOL 182 sections that are offered each year. Finally, there are still impacted Biology and Chemistry classes that students are still unable to get into, so we would need to offer additional sections of those classes (BIOL 100, 200, 202, 204, 206 and CHEM 100).

Dean Nainpally's note: Dr. Nainpally is delighted with the work of the Biology faculty and Chair Daniel Gillison, (a biologist) who have worked tirelessly toward an ADT degree in Biology. After discussions between the Chair and the Dean, the Chair Dr. Gillison has initiated meeting(s) between Chemistry faculty to begin the process toward working on the ADT for Chemistry.

This goal was to "Increase student transfer opportunities" by increasing offerings in Chemistry and Biology classes through the hiring of additional full-time faculty in these disciplines. In the Spring 2016 semester, the hiring of another Chemistry instructor was approved, but the funding was removed, so no new instructor was hired. It is expected that we hire another Chemistry and Biology instructor to alleviate current faculty over load and to be able to offer ADT degrees.

754 Increase student success in classes

To increase opportunities for students to get support both in and out of the classroom to help increase student retention and success rates in science classes.

The objective of this goal was to "Increase student success in classes" by increasing tutoring options and opportunities for students. Although a STEM tutoring center has recently opened due to funding from the TALCAS grant, we are not yet sure what tutoring will be offered there and if it will fully meet the needs of our students.

755 Provide increased support to laboratory classes

Hire a new laboratory technician.

The objective of this goal was to "Provide increased support to laboratory classes" by hiring a new lab technician and providing increased budgets for instructional supplies, maintenance agreements, printing, and lab supplies. No new lab technician was hired, and no increase in the budgets occurred.

| Unit Code | Planning Unit | Unit Manager |
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| 23312 | Biology | Gilison, Daniel |

Objective Status: In Progress

954 Increase student success in classes

To increase opportunities for students to get support both in and out of the classroom to help increase student retention and success rates in science classes.

Update 12/1/2017:

Finding:

1. When comparing just Science to Math students (total enrollment count) there are 38% science students and 62% math students; specifically, there were 3791 students in science classes and 6081 students taking math. Together the Science and Math Students account for 18% of all classes attended by students, at IVC, in the time period.
2. When comparing Science, Math, and English students against the total number of students taking classes at IVC Science Students account for 7%, Science + Math account for 18% and English accounts for 19%.
3. There are 62 tutors on campus, excluding Reading, Writing, Language, and Math, of those 27 can do Chemistry 100 tutoring (44% of all tutors), 12 for Chemistry 200 (19%) and for none Chemistry 202 (0%), non for Chemistry 204 or 206 (0%). Compare this to the math lab with 78 tutors where 44 tutors are assigned to Math 91 (56%), 20 to Math 119 (26%), and 14 to Math 194 (18%). So not only are there more math tutors but of those tutors tutoring, more are tutoring upper level courses.
4. Degrees offered: Physical and Natural Sciences account for 14% of all degrees offered by IVC whereas English accounts for 1%.
5. CSU transfer (<http://asd.calstate.edu/ccct/2016-2017/index.asp>) in 2016-2017 Science Students accounted for 2% of transfers, Math 3% and English 4%.

Progress to date

1. The STEM Center was closed at the end of Spring 2017. The personal were folded into the tutoring center which tutors all students other than math, reading and writing.
2. IVC has an embedded tutoring program for the sciences. In this program, a tutor goes to the class and if there is a lab the tutor goes as well. Embedded tutors function as a Teaching Assistant during the lecture and lab. The sciences have 15 classes with embedded tutors which account for 24% of all classes with embedded tutors; English accounts for 23%, Math 27%, and ESL 26%.
3. An IVC Grant (a grant from Student Equity and TALCAS) was funded to pilot a Peer-Led-Team-Learning (PLTL) program for chemistry courses at IVC.

Problems

1. Fewer resources and greater competition exist with science students than with other students on this campus. A science student must go to the tutoring center and be assigned to science tutor. This is a serious disadvantage to science students. For instance, a math student can walk into a building dedicated to all math, called the math lab, and get help on any math problem they may have, so the student does not need to wait; the same is true for any reading or writing student, there is a building/room dedicated to just those students with personal dedicated just to those students.
2. Fewer resources exist for STEM then Math, an example: At the Math Lab there are 1-full time classified employee, 1-part time classified employee, 1-full time non tenure track faculty member, and all of their tutors are there on a walk-in basis. For the SSC(STEM) area there are: 1-full time classified (in charge of test proctoring, Embedded tutoring, walk-in, and appointment tutoring for categorical programs, 60 hours of walk-in tutoring for all non-language related tutoring (Library), 60 hours of walk-in for all language related tutoring (Building 2600).
3. We lack the necessary data to compare:
 - a. The kinds and numbers of degrees that IVC has verses the rest of the state;
 - b. What are the regional, state and regional-state demand for degrees.

Objective Status: Incomplete

953 Increase student transfer opportunities

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Update 12/1/2017:

1. ADT degree in Biology has been approved by science department in fall 2016 and was offered in fall 2017. ADT degree in Chemistry has been approved by science department in fall 2017 and will be offered in fall 2018.
2. Two new biology instructors were hired in fall 2017. Three more sections of BIOL 100 were offered in fall 2017. Additional sections of upper-level biology classes (BIOL 204) were offered in summer 2017, and fall 2017. More sections of BIOL 200, BIOL 202, and BIOL 206 will be offered in future. These additional classes will increase student transfer opportunities.
3. Upper-level chemistry classes (CHEM 204) was offered in spring 2016, fall 2016, and fall 2017, while CHEM 206 was offered in spring 2017. Additional sections of lower-level chemistry classes (CHEM 200) were offered since spring 2017. These additional classes will increase student transfer opportunities.
4. A new Chemistry faculty has not been hired in 2017. However, a decrease of student enrollment has been noticed since fall 2016. The fill rate for chemistry classes was 96.21 for academic year 2016-2017. According to these results, hiring a new Chemistry faculty does not appear to be necessary at this time. However, a new chemistry faculty might be needed in future to increase the number of sections of lower and/or upper-level chemistry classes.

955 Provide increased support to laboratory classes.

As we are increasing the number of faculty teaching lab-based science classes, we need to ensure that multiple labs at the same time can be set up and removed from the labs by the laboratory technicians, and that we have sufficient laboratory equipment to meet the needs of the students.

Update 12/1/2017:

The objective of this goal was to "Provide increased support to laboratory classes" by hiring a new lab technician and providing increased budgets for instructional supplies, maintenance agreements, printing, and lab supplies. No new lab technician was hired, and no increase in the budgets occurred.

Planning Year: 2018-2019

| Unit Code | Planning Unit | Unit Manager |
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| 23312 | Biology | Gilison, Daniel |

Objective Status: Planning

1209 Increase student transfer opportunities

To offer ADT degrees in Biology and Chemistry, we would need to increase number of sections of lower-level chemistry classes (CHEM 100, 200, 202), and offer upper-level chemistry classes (CHEM 204, 206). In addition, there are still impacted Chemistry classes that students are still unable to get into, so we would need to offer additional sections of those classes.

1210 Increase student success in classes

To increase opportunities for students to get support both in and out of the classroom to help increase student retention and success rates in science classes.

1211 Provide increased support to laboratory classes.

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