

2015-2016 FULL PROGRAM REVIEWS

STUDENT ACCESS AND SUCCESS

1. Behavioral Sciences
2. Biology/Allied Health
3. Environmental Science
4. Geography
5. Geology
6. Natural History
7. Math
8. Physical Sciences
9. Early Childhood Education
10. Library

2015/2016 Full Program Review

Discipline: Behavioral Sciences

Student Access and Success

I. Access – Based on the enrollment numbers and demographic breakdown for your courses (available through the Data Dashboard), what significant factors or barriers are influencing student **access** to your courses or program? Factors could relate to issues at COM, outside of COM, or to the students' lives.

Though our department has seen a decline in enrollment since Spring 2012, from 1244 students to 959 students (a loss of 258 students) in Fall 2015, this decline has mirrored the decline in enrollment at College of Marin. Overall, the percentage of students that enroll in classes in the Behavioral Science department has remained fairly consistent at approximately 14.5% of the student population at COM between Fall 2012 and Fall 2015. This is an increase from previous years. In Fall 2008, we only enrolled 10.5% of the student population. This grew to 15.6 % in Fall 2013 with a slight decrease to 14.5% as of Fall 2015. These data indicate that despite a drop in enrollment for the College, the Behavioral Sciences department saw a 2.15% increase (we saw a 5% increase from Fall 2010) in enrollment through Fall 2013. Between Fall 2013 and Fall 2015, there has been a 1.11% drop in our enrollment to 14.49%.

Regarding, enrollment, Behavioral Science has few to no departmental access barriers. We are doing what we can to make our classes accessible to all students. We offer a variety of class in the morning as well as afternoon and evening classes to accommodate the needs of our diverse student population. In addition to evening classes, we have expanded our online sections to meet the needs of our busy student body.

Behavioral Science online offerings

- 1 section of Anth 101 Physical Anthropology
- 1 section of Anth 102 Cultural Anthropology
- 1 section of Bes 103 Human Sexuality
- 1 section of Psy 110 Introduction to Psychology
- 2 sections of Psy 114 The Psychology of the Human Development: Life Span
- 1 section of Psy 130 Introduction to Sport and Exercise Psychology
- 1 section of Soc 110 Introduction to Sociology

We will continue to grow our online offerings as needed based on student demand. All of these classes meet, degree and/or transfer requirements.

Furthermore, most classes in the behavioral sciences department do not have prerequisites and are open to general enrollments. Historically, behavioral science has had few problems filling the classes we offer across our programs. Usually most of our classes in Behavioral Science wait-list which indicates we have more students interested in Behavioral Science classes than we can accommodate—though our wait-lists have declined with the overall reduction in enrollment at COM.

We generally offer our highest enrolling degree/transfer classes at least twice a year, and rotate in lower enrolling degree/transfer and elective courses at least once a year. Scheduling based on our

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Discipline: Behavioral Sciences

blueprint and by making our scheduling blueprint available to the counseling department will facilitate student access to our program offerings.

Department Demographic Data:

Gender:

Female	1881	71.71%
Male	1364	52.00%
Not Reported	23	0.88%

Ethnicity:

American Indian or Alaska Native	8	0.30%
Asian	219	8.35%
Black or African American	248	9.45%
Hispanic	763	29.09%
Multi-Racial	400	15.25%
Native Hawaiian or Other Pacific Islander	20	0.76%
None/Unknown	67	2.55%
White	1546	58.94%

Age:

Under 18	5.99%
18 - 19	30.39%
20 - 21	23.29%
22 - 24	15.75%
25 - 29	12.12%
30 - 34	5.57%
35 - 39	3.47%
40 - 49	6.25%
50 - 64	4.00%
65 and over	0.42%

Ed Goal:

4 yr univ student taking reqs	6.82%
Advance in current job	0.84%
Complete H. S. Credits/GED	0.53%
Discover career interests	3.28%
Earn Vocational Certificate	0.76%
Educational Development	3.09%
Improve basic skills	1.03%
Maintain Certificate/ License	0.76%
Move from noncredit to credit	0.04%
Obtain 2 yr vocational degree	0.72%
Obtain AA & transfer to 4-yr	43.19%
Obtain an AA/AS degree	8.88%

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Prepare for a new career	4.88%
Transfer to 4 yr College/No AA	25.70%
Uncollected/unreported	0.08%
Undecided	1.37%

Student Type:

Continuing	63.78%
New First Time Student	17.19%
New Transfer	20.21%
Not Applicable (CCP)	2.48%
Readmitted After Dismissal	1.64%
Returning	0.88%

Receiving Financial Aid:

Y	33.70%
N	69.12%

In EOPS

Y	7.28%
N	93.82%

Using Student Accessibility Services:

Y	6.33%
N	94.17%

If there are access issues for students it is likely factors outside of our department such as transportation issues, family and or work obligations, financial barriers (i.e. expensive textbooks) or a culture of not going to college.

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Discipline: Behavioral Sciences

II. Student Success – based on course completion rates and grades in your courses (available on the Data Dashboard), and more importantly, based on you and your colleagues experiences in class, what do faculty in your discipline feel are significant factors or barriers influencing student **success** in your courses or programs?

You could begin with: “Students who don’t succeed often struggle with _____,” and then analyze what you think are the reasons behind their difficulties which could range from socio-economic factors to issues more directly related to course work or presentation.

Based on enrollment data (above), as well as retention and success data, the behavioral science department is successful at attracting, retaining and passing students, though I suspect our retention rates are a bit inflated due to failure of students to drop themselves from behavioral science courses. Between 2013 and 2015, behavioral sciences showed a 91% retention rate with a student success rate of 72.88 % almost 73%.

One possible reason why our success rates are 18% lower than our retention rates is that our retention rates are deceptively high. It is possible that students who do not succeed in our courses, stop coming to class but do not drop themselves before the appropriate drop date. Neither do they withdraw from the course. This can lead to the appearance that these students are still in class but, as they are not, they ultimately fail the class, leading to a lower success rate.

For the students who remain in our classes, those who don't succeed struggle with:

1. fulfilling their responsibilities in the classroom (i.e. don't submit assignments on time/at all, don't come to class)
2. taking notes
3. critical thinking skills
4. may have weaker English skills (most BEHS classes do not have English prerequisites).
5. do not come to class regularly
6. do not access resources provided to them by their instructor (i.e. lecture outlines, study guides etc...)

To assist our students in the classroom, many of us use a variety of approaches including power point/Prezi lectures with outlines and images of important concepts, provide lecture outlines, guest lectures, discussions, reading assignments, short writing assignments, in-class activities (including worksheets and films which reinforce important concepts) and study guides or study sessions.

As a department, we try to make sure that the worksheets and activities we use in the classroom contain explicit instructions and assignment objectives informing the students of what skills/concepts they should understand and/or be able to apply after the completion of the activity. In addition to the assortment of methods we use to present and reinforce class material, many of us also post and organize our class material (syllabus, lecture notes, assignments, study guides) and other recourses (schedule, syllabus and reminders) on Moodle.

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Overall Retention Rate 2013-2015:

Subject	Retention
ANTH	94.25%
BEHS	91.30%
PSY	89.10%
SOC	91.48%
Total	91.07%

Overall Success Rate 2013-2015:

Subject	Total Hcnt	Passed	Success Rate
ANTH	1791	1464	81.74%
BEHS	654	417	63.76%
PSY	3190	2216	69.47%
SOC	1161	856	73.73%
Total Behavioral Science	6796	4953	72.88%

Retention by Gender 2013-2015:

	Total Hcnt	Retained Hcnt	Retention
Females	4075	3716	91.19%
Males	2682	2440	90.98%
Other	44	38	86.36%

Success by Gender 2013-2015:

	Total Hcnt	Passed	Success Rate
Female	4070	3080	75.68%
Male	2682	1840	68.61%
Other/Unknown	44	33	75.00%

Retention by Ethnicity 2013-2015:

	Total Hcnt	Retained Hcnt	Retention
American Indian or Alaska Native	19	18	94.74%
Asian	500	472	94.40%
Black or African American	509	436	85.66%
Hispanic	1778	1597	89.82%
Multi-Racial	523	479	91.59%
Native Hawaiian or Other Pacific Islander	34	32	94.12%
None/Unknown	160	144	90.00%
White	3278	3016	92.01%

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Discipline: Behavioral Sciences

Success by Ethnicity 2013-2015:

	Total Hcnt	Passed	Success Rate
American Indian or Alaska Native	19	14	73.68%
Asian	500	420	84.00%
Black or African American	508	233	45.87%
Hispanic	1775	1208	68.06%
Multi-Racial	523	383	73.23%
Native Hawaiian or Other Pacific Islander	34	25	73.53%
None/Unknown	160	113	70.63%
White	3277	2557	78.03%

Retention by Age Group 2013-2015:

Age	Total Hcnt	Retained Hcnt	Retention
Under 18	307	295	96.09%
18 - 19	1884	1724	91.51%
20 - 21	1497	1377	91.98%
22 - 24	998	896	89.78%
25 - 29	775	712	91.87%
30 - 34	394	356	90.36%
35 - 39	263	235	89.35%
40 - 49	403	364	90.32%
50 - 64	264	225	85.23%
65 and over	16	10	62.50%

Success by Age Group 2013-2015:

Age	Total Hcnt	Passed	Success Rate
Under 18	306	250	81.70%
18 - 19	1882	1328	70.56%
20 - 21	1497	1104	73.75%
22 - 24	998	707	70.84%
25 - 29	774	579	74.81%
30 - 34	394	295	74.87%
35 - 39	263	194	73.76%
40 - 49	403	305	75.68%
50 - 64	263	185	70.34%
65 and over	16	6	37.50%

Retention by Student Type 2013-2015

Student Type	Total Hcnt	Retained Hcnt	Retention
Continuing	3810	3479	91.31%
New First Time Student	521	447	85.80%
New Transfer	788	714	90.61%
Not Applicable (CCP)	169	164	97.04%

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Discipline: Behavioral Sciences

Readmitted After Dismissal	59	50	84.75%
Returning	148	138	93.24%

Success by Student Type 2013-2015

	Total Headcount	Passed	Success Rate
Continuing	4842	3662	75.63%
New First Time Student	566	298	52.65%
New Transfer	912	644	70.61%
Not Applicable (CCP)	198	162	81.82%
Readmitted After Dismissal	59	31	52.54%
Returning	219	156	71.23%

Improving Student Success and Retention – please check off which of the following student support services your students have used:

- Bookstore
- Computer Labs for Student Use
- Counseling
- Student Accessibility Services
- Financial Aid
- Job Placement Center
- Library
- Transfer Center
- Tutoring
- Other

Comments:

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Discipline: Behavioral Sciences

IV. How do you make sure your students are able to get through your program in a timely fashion?

As stated above, in the student access section, our department offers classes across different days and times (morning, afternoon and evening) and modalities (face-to-face and online) to accommodate the needs of our student population.

We are also working on creating a scheduling blueprint that will allow our students to earn a degree and/or transfer in two years. Currently we offer our highest enrolling degree/transfer classes at least twice a year, and rotate in lower enrolling degree/transfer and elective courses at least once a year offer all of our degree/transfer courses within a two-year pattern. Scheduling based on our blue print and by making our scheduling blueprint available to the counseling department will facilitate student access to our program offerings and will allow them to move through to their goal faster.

2015/2016 Full Program Review
Discipline: Biology/Allied Health

Student Access and Success

I. Access – Based on the enrollment numbers and demographic breakdown for your courses (available through the Data Dashboard), what significant factors or barriers are influencing student **access** to your courses or program? Factors could relate to issues at COM, outside of COM, or to the students' lives.

Based on looking at enrollment numbers and other demographic information, the most significant factors and barriers that influence student access is the lack of extra sections of the Majors Biology courses that fill and have waitlists that could easily fill another section. Our low unit allocation that doesn't match the demand of our Biology classes 112A, 112B, 120, 224, and 240 hinders student access. Some students have to wait a number of semesters before actually getting a spot in these courses. There are some COM students who get frustrated by this problem and go to other community colleges to take classes.

Using Data Dashboard, snapshot comparisons and trends were analyzed for the semesters of Fall 2012 and Fall 2015. Even though the overall enrollment was higher in Fall 2012, the number of declared Biology majors has more than doubled (58 Biology majors in F12, 123 Biology majors in F15). There was a minimal increase of 5% in the Allied Health (registered nursing) majors from F12 to F15. Other majors within our department disciplines also showed an increase from Fall 12 to Fall 15 (Natural History, Environmental Sciences, Geography and Geology).

Even with the number of declared Biology majors doubling over a three-year period, our department has not had any extra units allocated to serve this growing population of students. Instead we have had our units cut. Biology majors do not have the option of taking any of our majors' series (Biology 112A, Biology 112B, and Biology 112C) during a given semester, since they are on a rotation basis. The data also shows that there has been an increase in Biology majors enrolling in more classes in our other disciplines in our department (Natural History, Environmental Sciences, Geology and Geography) thus helping to strengthen enrollment in those areas.

We are a small college; we can't be everything to everyone. We have many unique programs offered at COM (for example, the Natural History and Environmental Sciences programs), that attract students to come to COM vs. another community college, along with strengthening the foundation for our Biology majors. We should make sure that our existing programs are taken care of as far as unit allocations, supplies, staffing, and equipment to ensure quality programs for the students that we serve. Until that is done, it seems unwise for COM to start any new programs (that are already offered by many nearby community colleges) that will utilize even more funding for faculty, staff, and unit allocation.

2015/2016 Full Program Review
Discipline: _Biology/Allied Health

II. Student Success – based on course completion rates and grades in your courses (available on the Data Dashboard), and more importantly, based on you and your colleagues experiences in class, what do faculty in your discipline feel are significant factors or barriers influencing student **success** in your courses or programs?

You could begin with: “Students who don’t succeed often struggle with _____,” and then analyze what you think are the reasons behind their difficulties which could range from socio-economic factors to issues more directly related to course work or presentation.

Based on myself and my colleagues’ experiences in our classes, we are finding more and more students who don't succeed often struggle with mathematical understanding and critical thinking skills. The increasing demand for community colleges to offer more and more basic skills sections in math and English leads one to believe that this problem is statewide and starts early in the students' education. For example, there was a fairly recent decision by the State of California to remove Algebra from the 8th grade curriculum requirement

<http://collegeinsurrection.com/2013/02/ca-schools-give-up-teaching-algebra-in-8th-grade/>.

Whether or not one agrees with this move that is in line with the Common Core Standards, it lowers the standards for students and leaves them more underprepared for college. Since critical thinking skills and problem-solving skill are connected, it makes sense that we are seeing more students with these difficulties.

When underprepared students enroll in our classes, not only does it have a negative impact on the underprepared student by not being able to succeed, it also has a negative impact on the entire class as a whole. Also, this could put our part-time faculty in a difficult situation, since a lot of their performance evaluation is based on student evaluations, along with the entire faculty might unwittingly tend to lower the standards of the course. Many times underprepared students may blame the instructor on their own failings and go to the dean to complain. It would be more productive to have the student discuss their complaints with their instructor first before contacting the dean.

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Discipline: Biology/Allied Health

Improving Student Success and Retention – please check off which of the following student support services your students have used:

- Bookstore
- Computer Labs for Student Use
- Counseling
- Student Accessibility Services
- Financial Aid
- Job Placement Center
- Library
- Transfer Center
- Tutoring
- Other

Comments:

From communicating with the students, it seems that all these services are being provided to the satisfaction of the students. Our faculty continue to work with all of these services to provide the best services available to our students.

IV. How do you make sure your students are able to get through your program in a timely fashion?

We have a number of classes that have increasing waitlists: 112A, 112B, 112C, 120, 224, and 240. There are students who have to wait a number of extra semesters before they can get a spot in the class, not being able to pursue their educational goals in a timely manner. With our limited unit allocations, we cannot provide more student access to these classes.

We also have just recently, with the help of the Counseling Department and Dean Hernandez, started to look more at the master schedule, to make sure there are not a lot of needed classes scheduled at conflicting times. We don't have any data to look at yet, but are hopeful that these scheduling changes will help students enroll in the classes that they need to take.

2015/2016 Full Program Review
Program Review 2015/2016 L&ES
Environmental Sciences

Student Access and Success

I. Access – Based on the enrollment numbers and demographic breakdown for your courses (available through the Data Dashboard), what significant factors or barriers are influencing student **access** to your courses or program? Factors could relate to issues at COM, outside of COM, or to the students’ lives.

One Tam surveys indicate that few students are aware of the diversity of career opportunities that are available.

II. Student Success – based on course completion rates and grades in your courses (available on the Data Dashboard), and more importantly, based on you and your colleagues experiences in class, what do faculty in your discipline feel are significant factors or barriers influencing student **success** in your courses or programs?

You could begin with: “Students who don’t succeed often struggle with _____,” and then analyze what you think are the reasons behind their difficulties which could range from socio-economic factors to issues more directly related to course work or presentation.

There is a small but significant group of ENVS 138 students who believe that environmental science represents a less-rigorous or “easier” approach to science, and thus are not prepared to work hard enough to earn good grades. On the other hand, many students in the more advanced classes (ENVS 142, 143, 148) are often well-motivated and come with a good deal of life experience, but may not have had sufficient practice in expressing themselves in writing, which can prove frustrating to them.

2015/2016 Full Program Review
Program Review 2015/2016 L&ES
Environmental Sciences

Improving Student Success and Retention – please check off which of the following student support services your students have used:

- X Bookstore
- Computer Labs for Student Use
- Counseling
- Student Accessibility Services
- Financial Aid
- Job Placement Center
- X Library
- Transfer Center
- Tutoring
- Other

Comments:

There is great potential in using counselors, the Job Placement Center and the Transfer Center to increase understanding of what the program has to offer.

IV. How do you make sure your students are able to get through your program in a timely fashion?

Important goals are to make clear what the certificate can offer to students, to offer the courses in sequence, and to encourage the students to take them.

Improvement is still needed in all of these areas. Recent improvements have been distribution of the certificate requirements in all classes and maintenance of a contact list that allows faculty to inform students in the program about which courses will be offered in the following semester.

2015/2016 Full Program Review

Discipline: GEOGRAPHY

Student Access and Success

I. Access – Based on the enrollment numbers and demographic breakdown for your courses (available through the Data Dashboard), what significant factors or barriers are influencing student **access** to your courses or program? Factors could relate to issues at COM, outside of COM, or to the students’ lives.

The enrollment and demographic breakdown for the Geography courses do not reveal factors or barriers that influence student access to Geography courses. However, I am interested to know what the factors and barriers are. I believe that polling former and existing Geography course participants would not prove useful (as they would have obviously accessed the courses), thus polling students at the department or campus-wide level may reveal significant factors or barriers to the Geography program or any other program in the Life and Earth Sciences.

One issue that I believe is a factor is the college community’s awareness of the Geography Program, and the nature of the courses offered in the program. In discussions with other faculty, staff and administrative personnel, I often encounter surprise and curiosity when I explain what geography courses cover in terms of subject matter. Indeed, after distributing flyers for my courses, I’ve had colleagues approach me to tell me that had they known the nature of these courses before, that they would have taken them as a college student and/or are interested in taking them in the future. Therefore, I strongly believe awareness and understanding of the discipline of geography is one barrier to access.

II. Student Success – based on course completion rates and grades in your courses (available on the Data Dashboard), and more importantly, based on you and your colleagues experiences in class, what do faculty in your discipline feel are significant factors or barriers influencing student **success** in your courses or programs?

You could begin with: “Students who don’t succeed often struggle with _____,” and then analyze what you think are the reasons behind their difficulties which could range from socio-economic factors to issues more directly related to course work or presentation.

Data Dashboard shows for the last 5 years, the average success rates of geography courses range between 62.5% and 70.3%, with an average discipline success rate of 67.2% (Fall 2010 through Spring 2015). This is close to the overall average success rate for the Life and Earth Sciences Department over the same time period, which is 67.9%.

Based on discussion with my colleagues as well as my own experience, students who do not succeed in the courses offered through the Life and Earth Sciences department often struggle with basic math skills, as well as the requisite study skills and critical thinking skills needed for courses in the sciences. Though courses offered in Geography require only basic math skills, some

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Discipline: GEOGRAPHY

students drop the Physical Geography Lab once they learn that they must use math in the lab exercises. Many students who sign up for courses in Geography have misconceptions of what Geography is, and it may be that students who wish to avoid rigorous science courses sign up for Geography over the more well-known sciences of Biology, Chemistry, Physics or Geology, for example. Thus the actual rigorousness of Physical Geography can come as a surprise to students and some students drop out of the course or do not pass the course.

Another unfortunate impact on success rates has to do with students accessing the MyCOM web portal for resources, assignments and due dates. Though I emphasize the importance of this at the start of the semester and throughout the semester, some students do not forward their MyCOM email to one they regularly check or go online regularly.

Improving Student Success and Retention – please check off which of the following student support services your students have used:

- Bookstore
- Computer Labs for Student Use
- Counseling
- Student Accessibility Services
- Financial Aid
- Job Placement Center
- Library
- Transfer Center
- Tutoring
- Other

Comments:

I can't vouch for the job placement center.

IV. How do you make sure your students are able to get through your program in a timely fashion?

To make sure students are able to complete the geography program in a timely manner, I teach 4 different preps each semester so that all geography courses are offered each year. GEOG 101, 101L and 102 are the core courses, and they are taught every semester. I also offer GEOG 101 and 101L as night classes one semester per year, and every other year I offer GEOG 112 as a night class as students are required to take this as part of the Natural History certificate. In Fall 2016 I will also be offering GEOG 102 as a distance education course.

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Discipline: Geology

Student Access and Success

I. Access – Based on the enrollment numbers and demographic breakdown for your courses (available through the Data Dashboard), what significant factors or barriers are influencing student **access** to your courses or program? Factors could relate to issues at COM, outside of COM, or to the students’ lives.

From conversations with a number of students, I have learned that the lack of access to public transportation is an impediment to their education at CoM; several students have asked me, for example, if they may leave a few minutes early at the end of a late-night course in order to catch a scheduled bus, which if they miss will delay them an hour until the next bus.

II. Student Success – based on course completion rates and grades in your courses (available on the Data Dashboard), and more importantly, based on you and your colleagues experiences in class, what do faculty in your discipline feel are significant factors or barriers influencing student **success** in your courses or programs?

You could begin with: “Students who don’t succeed often struggle with _____,” and then analyze what you think are the reasons behind their difficulties which could range from socio-economic factors to issues more directly related to course work or presentation.

According to the Data Dashboard, the overall completion rate for all geology courses from 2010-2015 was 69.25%. This comports with the overall Life & Earth Sciences figure of 67.97%.

In my classroom experience, one barrier to success in science courses involves struggling with math. Although introductory geology labs require basic math skills, I have observed many students struggling with calculations. I’m regularly surprised at the simple calculations that some student find themselves unable to even begin to work through.

The reasons behind math deficiencies in American public education are far too complex and numerous to list in such a space; nonetheless, this is a problem I have recognized frequently. I attempt to deal with it by initially providing step-by-step breakdowns of the computations, then leading students into greater independence once they have successfully made calculations using a step-by-step process. The ultimate goal, of course, is having students independently understand the necessary steps for an unknown problem; however, achieving this goal requires some initial guidance.

In my experience, students who don’t succeed also often struggle with the transition from high school expectations to college expectations. One pervasive expectation is that “extra credit” will somehow remedy poor test scores, rather than the more effective application of greater hours spent studying to improve those test scores in the first place. They perhaps have been conditioned by a

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Discipline: Geology

high school experience where an initial missed assignment or failed test could be substituted at a much later date; certainly if that is their high school experience, then they have not been well served by it.

Students also sometimes expect that material missed by their absences can be made up; I try to emphasize, from the first day to the last, that the spontaneous give & take of classroom discussions makes regular attendance essential; one can't simply read the book when the class is about interactively exploring questions. I hope that by the end of my courses students who struggle in this regard will understand the connection between their behavior and their grading.

Improving Student Success and Retention – please check off which of the following student support services your students have used:

- Bookstore
- Computer Labs for Student Use
- Counseling
- Student Accessibility Services
- Financial Aid
- Job Placement Center
- Library
- Transfer Center
- Tutoring
- Other

Comments:

IV. How do you make sure your students are able to get through your program in a timely fashion?

As most of my students are taking single elective transfer-preparation classes, rather than pursuing an A.S. degree, this is less of an issue for Geology. I do schedule the most popular transfer-prep courses (especially the Geology 120/120L pair) every semester in order to accommodate this need.

I alternate days in which courses are offered (courses that are T-Th in Spring will run M-W in Fall, for example) and times (a course offered during day may be offered at night the following term) to maximize accessibility for student scheduling.

2015/2016 Full Program Review
Discipline: L&E Sciences Natural History Certificate Program

Student Access and Success

I. Access – Based on the enrollment numbers and demographic breakdown for your courses (available through the Data Dashboard), what significant factors or barriers are influencing student **access** to your courses or program? Factors could relate to issues at COM, outside of COM, or to the students’ lives.

Many courses are not offered frequently enough for students to complete the certificate in a timely manner. Students complain that they are misinformed frequently by counseling staff.

II. Student Success – based on course completion rates and grades in your courses (available on the Data Dashboard), and more importantly, based on you and your colleagues experiences in class, what do faculty in your discipline feel are significant factors or barriers influencing student **success** in your courses or programs?

You could begin with: “Students who don’t succeed often struggle with _____,” and then analyze what you think are the reasons behind their difficulties which could range from socio-economic factors to issues more directly related to course work or presentation.

Students who don’t succeed often struggle with the academic rigor of some of our courses. The reasons are clear when we ask them why. They often don’t realize that studying takes more time than they have planned for. Therefore we try our best to make it clear that earning a good grade takes time management skills and we offer help in this area if needed.

2015/2016 Full Program Review
Discipline: L&E Sciences Natural History Certificate Program

Improving Student Success and Retention – please check off which of the following student support services your students have used:

- Bookstore
- Computer Labs for Student Use
- Counseling
- Student Accessibility Services
- Financial Aid
- Job Placement Center
- Library
- Transfer Center
- Tutoring
- Other

Comments:

IV. How do you make sure your students are able to get through your program in a timely fashion?

Many instructors offer courses at night and on weekends to accommodate for students who are employed during the day. Many course subjects are rotated on a 2 year basis so a maximum of subject diversity is offered for a diversity of interests or needs. Field courses are offered in the summer to provide more opportunity for students that carry a full load during the spring/fall semesters.

2015/2016 Full Program Review

Discipline: Mathematics

Student Access and Success

I. Access – Based on the enrollment numbers and demographic breakdown for your courses (available through the Data Dashboard), what significant factors or barriers are influencing student **access** to your courses or program? Factors could relate to issues at COM, outside of COM, or to the students’ lives.

The only barriers influencing student access to mathematics courses are the students’ preparation for college-level courses. According to the placement test data, only 53% of the placement test results put students in Math 103 (Intermediate Algebra) or higher, which the college deems as “college ready.” The math department provides access to all students in that courses are offered at every level. No one is shut out from taking a math course at COM.

II. Student Success – based on course completion rates and grades in your courses (available on the Data Dashboard), and more importantly, based on you and your colleagues experiences in class, what do faculty in your discipline feel are significant factors or barriers influencing student **success** in your courses or programs?

You could begin with: “Students who don’t succeed often struggle with _____,” and then analyze what you think are the reasons behind their difficulties which could range from socio-economic factors to issues more directly related to course work or presentation.

There are several factors whether singly or in combination hinder student success in mathematics courses at COM. They include lack of preparation and mastery of fundamentals, difficulty with English reading comprehension, lack of attendance, poor work habits and/or commitments outside of class that prevent students from completing required work.

Our limited tutoring budget, which is significantly lower than other disciplines, is a significant factor in the lack of student success. Walk through the Math Lab any hour it is open and there is often a line of students waiting for help from a qualified tutor or instructor. A larger financial commitment (including competitive pay) for student tutors is an absolute necessity if the administration is serious about providing appropriate resources for the students who are motivated to get help. The math department needs to be able to attract and retain tutors who can tutor a variety of subjects. Currently no tutors or instructional specialists can help students with MA 115 (Statistics) which puts an undue burden on certain instructors.

We have conducted surveys and students consistently ask for more Math Lab hours. Specifically students have requested that the Lab be open in the late afternoon and on Saturday. We can better serve our students if the Math Lab were open Monday and Wednesday 4pm – 6pm and Saturday 8 am – 12 pm

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Discipline: Mathematics

The department has no control over students' personal lives and cannot require attendance. We can only help those who have intrinsic motivation to be successful.

Improving Student Success and Retention – please check off which of the following student support services your students have used:

- Bookstore
- Computer Labs for Student Use
- Counseling
- Student Accessibility Services
- Financial Aid
- Job Placement Center
- Library
- Transfer Center
- Tutoring
- Other Math Lab and office hours

Comments:

IV. How do you make sure your students are able to get through your program in a timely fashion?

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Discipline: Physical Sciences

Student Access and Success

I. Access – Based on the enrollment numbers and demographic breakdown for your courses (available through the Data Dashboard), what significant factors or barriers are influencing student **access** to your courses or program? Factors could relate to issues at COM, outside of COM, or to the students' lives.

The STEM disciplines are by nature difficult subjects and while the material transcends gender, race, or other demographic factors we still remain low enrolled in underserved races and financial groups. As the college makes an effort to connect with local high schools' STEM programs, we will be able to receive more students from these schools that have underserved students especially in COMP/ENGG. In general though, our courses require minimal, low-level math prerequisites, so students are able to enter into any introductory course upon their completion.

Some of specific barriers to student access are:

-limited offerings of ENGG and advanced COMP, MATH, and PHYS courses (usually one section per year), which limits scheduling flexibility and course sequencing options for students.

-occasional cancellation of required transfer courses due to low enrollment.

-complex, sequential, and highly specific transfer requirements that vary substantially among engineering disciplines and 4-year schools, which make academic planning difficult for students.

-low level of K-12 academic preparation in math and sciences among entering College of Marin students, makes pursuit of engineering transfer an often unreasonable goal (e.g., completion of lower division transfer requirements would take the average student 3-4 years of full-time study).

1. Relatively intensive pre-requisites for enrollment, often including lengthy chains of consecutive courses. This is particularly true of higher level COMP and ENGG courses.

2. Lack of consistency among different UC and CSU campuses, as well as among different branches of engineering, in the courses required for transfer. This not only complicates academic planning for these students, but also further reduces enrollment and thus viability of any particular course.

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Discipline: Physical Sciences

3. Limited breadth and frequency of course offerings (in part due to the two factors above). For some CHEM, most COMP and PHYS, and all ENGG courses, only one section offered per year. If course is cancelled or if student is unable to enroll in or complete course successfully, student must wait a full year until another attempt (delaying academic progression or transfer). There don't seem to be ethnic barriers beyond overall school numbers, because about 50% of our program is White, 10% Asian and 25% Hispanic, whereas about 55% are Male and 44% are Female. This is a fairly solid ratio close to one for Males to Females considering STEM is generally disproportionately Male.

II. Student Success – based on course completion rates and grades in your courses (available on the Data Dashboard), and more importantly, based on you and your colleagues experiences in class, what do faculty in your discipline feel are significant factors or barriers influencing student **success** in your courses or programs?

You could begin with: “Students who don't succeed often struggle with _____,” and then analyze what you think are the reasons behind their difficulties which could range from socio-economic factors to issues more directly related to course work or presentation.

Students who do not succeed often do not know how to study for classes having the degree of workload found in our area. They don't have good study skills, note taking skills, time management skills, the ability to form questions in office hours, or even come to office hours, they lack organizational skills and they often think by just showing up they will get a good grade.

On the other hand the students who do well have often times mastered the above-mentioned skills. Luckily we have many of them as well. Basic preparation would be helpful to all students. Overall success rate in our program is reasonably high (>75%) for most Physical Science courses, and even higher (>80%) for most of the upper level courses, most likely due to adequate preparation (and/or “filtering”) in pre-requisite math and science courses. Anecdotally, the unsuccessful students are usually perceived by instructors to have inadequate preparation from the pre-requisite courses. Note that the one physical science course with low success rates (<50%), CHEM 105, is an online G.E.-oriented course with no prereqs. In this particular course, lack of success is largely due to a lack of participation and effort by students, but may be partly due to poor reading comprehension skills.

ENGG 84%

Success rates within ENGG courses are higher and range from 72% to 100% among different ENGG courses. Because most ENGG courses have significant pre-requisites, students tend to be adequately prepared for success by the time they reach these courses.

However, success rates in the "pathway to ENGG" are significantly lower. All of the 200-level ENGG courses have pre-requisites of PHYS 207A and MATH 124, or higher.

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Discipline: Physical Sciences

These courses in turn have a pre-requisite of MATH 123 (Calculus I), which in turn has a pre-req of MATH 109 (or 104 and 105). These courses have a pre-req of MATH 103, which is still above the math level of most entering COM students. The "filtering" that takes place at each step in this pathway substantially reduces the number of students that eventually make it to a 200-level ENGG course.

As an example, using the Cohort Tracking feature of the Data Dashboard, 42 students enrolled in MATH 123 in Fall 2010; 26 (62%) passed the course. Of these successful students, 18 (69%) eventually enrolled in PHYS 207A; 12 (67%) passed the course. Of these successful students, 8 (67%) eventually enrolled in some ENGG course as of Fall 2012. Notably, 7 (88%) passed these ENGG courses.

It is worth noting that the success rates in the MATH courses below Calculus I (i.e., MATH 103, 104, 105, 109) are even lower--50% or less.

It seems likely that less than 5% of engineering majors who start at the lowest MATH levels will ever make it to an ENGG course at College of Marin.

The lesson is that if we hope to increase enrollments in ENGG courses, we must (a) attract more students that have already achieved a high math level in high school, and/or (b) provide greater academic support to math and science majors in their Pre-Calc, Calc I, and Physics 207A courses, so as to increase success rates in this pathway.

PHYS 79%

Students who don't succeed often struggle with understanding the material because they do not complete assignments, specifically problem sets and reading quizzes. Positive attendance does not always indicate success in PHYS classes. It is generally the work that students are expected to complete on their own that hinders success. It is possible that this is a time management issue in some cases. Perhaps students are working to support themselves as students and are thus not able to complete the work in a timely manner and thus stay current in the class. Other issues could be inadequate preparation. While on paper, all students have met the prerequisite requirements, not all actually fully understand the material that is necessary to succeed in class.

COMP 79%

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Discipline: Physical Sciences

Improving Student Success and Retention – please check off which of the following student support services your students have used:

- Bookstore
- Computer Labs for Student Use
- Counseling
- Student Accessibility Services
- Financial Aid
- Job Placement Center
- Library
- Transfer Center
- Tutoring
- Other

Comments:

Tutoring has limited hours for working/night students. Finding organic chemistry tutors is limited and rarely occurs. We have scheduling issues with student access to the SMN computer labs due to the need to schedule more COMP courses there (as well as biology course needs).

IV. How do you make sure your students are able to get through your program in a timely fashion?

Since it is not feasible to offer every course every semester we have to work diligently with the other STEM disciplines to make sure we have a blueprint of transfer courses that can be navigated in a two-year timeframe (with adequate high school preparation, or 2.5-3 years if "starting from scratch"). The downside of this is that unlike our department, that makes a schedule that works for students then populates it with faculty, there are times when other departments move courses around to serve a particular instructor's desire for teaching days and times. Since this issue has been "corrected" recently, we'll see how successful the new scheduling is for our STEM students.

All Physical Science courses are scheduled in close cooperation with other math and science disciplines to ensure avoidance of schedule conflicts for the widest possible range of majors. This is a difficult undertaking since many of the courses are only

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Discipline: Physical Sciences

offered once per year, and since there is a complex overlap of requirements for different science majors. The semesters in which courses are offered has also been carefully planned to allow most students to complete programs in the most time-efficient manner. For example, summer chemistry offerings permit two different options for biology and chemistry majors to complete the 5-course chemistry sequence in two academic years. Similarly, the semesters in which math, physics, and engineering courses are offered allows a smooth progression through pre-requisite sequences.

We will try to continue to offer each of the required transfer courses on a once-per-year basis according to a predictable schedule (same semester/day/time). We will also strive to avoid scheduling conflicts between any of the math, chemistry, physics, engineering, computer science, and biology courses that these students take. In the event that a course is cancelled or a student does not successfully complete it when offered, partnership and communication with other CCs have recently helped to identify quality online options for students to complete critical courses.

COMP

As enrollment numbers increase in Fall 2012 to 2015 from 47 to 63 and in Spring 2012 to 2015 from 38 to 63; increases of about 50%! Addition of another FT faculty member will help this program continue to grow.

ENGG

Advocate against cancellation of any of the required courses to the extent that is reasonable. Additionally, Engineering faculty have recently been exploring the use of student-centered flipped approaches to teaching in order to improve schedule flexibility for students. By combining students from multiple courses into a 'learning lab' environment, it may be feasible to increase the frequency and scheduling options of some courses.

2015/2016 Full Program Review
Discipline: Early Childhood Education

Student Access and Success

I. Access – Based on the enrollment numbers and demographic breakdown for your courses (available through the Data Dashboard), what significant factors or barriers are influencing student **access** to your courses or program? Factors could relate to issues at COM, outside of COM, or to the students’ lives.

A significant barrier to both access and success for ECE students is the work, family and life commitments that they have outside of school. Many students are enrolled in less than 6 units any one semester, with a large proportion of that group taking only 1 class per semester. 58% of ECE students enrolled in Fall 2014 were enrolled in less than 6 units at COM. Only 11% of ECE students that semester were enrolled in 12+ units at COM.

Most forms of financial aid are limited to students enrolled in 6 or more units per semester, so these students are usually not eligible for financial assistance, adding another barrier in their busy lives.

II. Student Success – based on course completion rates and grades in your courses (available on the Data Dashboard), and more importantly, based on you and your colleagues experiences in class, what do faculty in your discipline feel are significant factors or barriers influencing student **success** in your courses or programs?

You could begin with: “Students who don’t succeed often struggle with _____,” and then analyze what you think are the reasons behind their difficulties which could range from socio-economic factors to issues more directly related to course work or presentation.

Students who do not succeed often struggle with poor reading and writing skills, underdeveloped study habits, disorganization and challenges with time management. Of the students who are English Language Learners (ELL), many do not take placement tests. Some of the students who have immigrated from other countries are fluent speakers of English, but lack sufficient reading and writing skills needed for academic success.

Overall, ECE students are students with multiple commitments outside of school - part of the reason less than half of them take 6 or more units per semester. Faculty experience has been that the outside demands of family and work often interfere with success for students. Some enroll in more classes than they can realistically juggle and end up withdrawing from one or more of them. Others stick it out but perform poorly. Getting more ECE students to see counselors regularly and having counselors assist students in looking realistically at their commitments in order to enroll in the correct classes and number of classes to support their success would be a great help.

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Discipline: Early Childhood Education

Improving Student Success and Retention – please check off which of the following student support services your students have used:

- X Bookstore
- X Computer Labs for Student Use
- X Counseling
- X Student Accessibility Services
- X Financial Aid
- X Job Placement Center
 - X Library
- Transfer Center
 - X Tutoring
 - Other

Comments:

There are still too many ECE students who do not see a counselor. ECE faculty promote the necessity of making counseling appointments. We now have three counselors - Karen Robinson, Alex Magallanes and Luz Moreno, who have developed specialized knowledge of the complexities of the ECE program. Although some students continue to report misinformation received from some other counselors, resulting in taking the wrong classes or not taking classes that will lead to certificates or degrees, generally improved relations between counseling and departments along with annual presentation to counselors at one of their staff meetings will continue to improve and strengthen the counseling that ECE students receive.

Although ECE faculty have not specifically polled students about their satisfaction with these services, students who have reported their experiences have had positive things to say.

Spanish speaking students have reported difficulty at times in all areas of college operations due to the limited number of front line staff who are able to communicate in Spanish. Improvements seem to be coming incrementally and the ESL program staff have stepped into the breach for our students frequently.

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Discipline: Early Childhood Education

IV. How do you make sure your students are able to get through your program in a timely fashion?

ECE develops a 2-year blueprint for courses and schedules accordingly. Course offerings have been prioritized so that students can achieve professional benchmarks as well as certificates, degrees and transfer in a timely fashion. The sequence of courses that both meet the professional benchmark of Fully Qualified Teacher for Community Care Licensing and earn students a COM Core skills certificate is available over the course of the Fall and Spring semester each year. All courses required for the Certificate of Achievement and Associate degree are offered every year, in either the Fall or Spring semester. Sufficient elective offerings are also available across Fall, Spring and Summer so students can access courses meeting the elective requirements for their degree.

Special provisions were made in the blueprint for 2013-2015 to ensure that students could attain the 12 Core units for Community Care Licensing and the COM Core Skills certificate by attending classes exclusively at Kentfield, exclusively at IVC, exclusively in the evening or exclusively in the daytime over the course of 2 years.

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Discipline: Library

Student Access and Success

I. Access – Based on the enrollment numbers and demographic breakdown for your courses (available through the Data Dashboard), what significant factors or barriers are influencing student access to your courses or program? Factors could relate to issues at COM, outside of COM, or to the students’ lives.

The Library previously offered two courses:

- LIBR 110 - Introduction to Library Resources: A Self-Directed Approach
- LIBR 115 - Library Research Methods

These courses have been deactivated due to being out of date. The library does not currently have sufficient staffing to develop and offer new courses.

To measure access in the library, we look at usage of our services, including gate count, circulation, number of instructional hours delivered, usage of online services, and hours.

Gate count. Gate count refers to the number on the counting mechanism on the security gate at the library’s only entrance. We record this number every day before the library opens. This number gives us a rough sense of how many individuals visit the library each fiscal year. We have begun gathering gate count statistics for IVC. Here are the statistics for Kentfield.

Gate Count, Kentfield by Fiscal Year	
2015-2016 to date	56,805
2014-2015	111,266
2013-2014	111,368

Circulation. Access to our books and other items can be measured by number of check outs. We only have a small amount of data due to migrating to a new integrated library system in 2014. If our projections are accurate, we will see an uptick in check outs:

Fiscal Year	Kentfield	Indian Valley	Total
2014-2015	21,206	610	21,816
2015-2016 (projected)	24,684	948	25,632

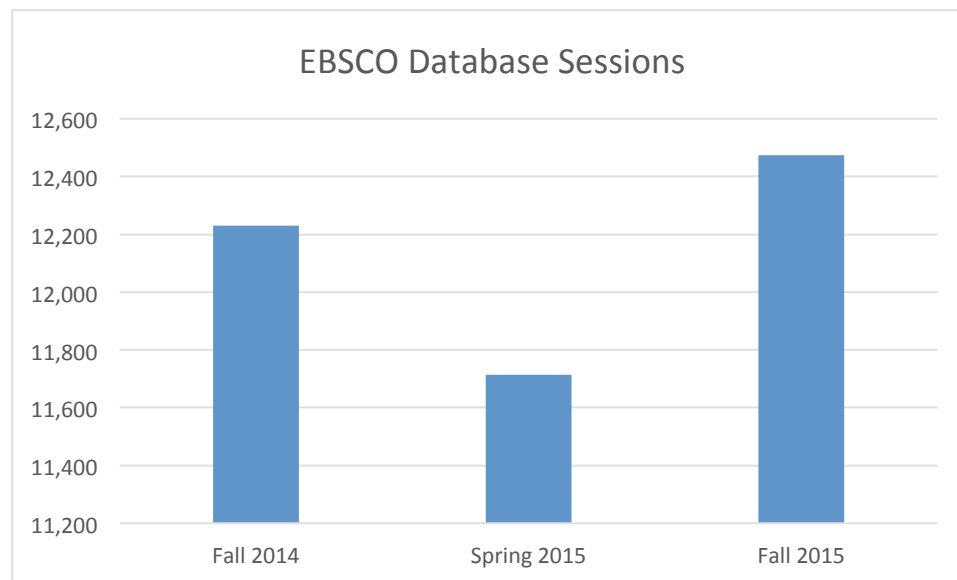
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Discipline: Library

Instructional hours. We continue to deliver many hours of instruction in the library. Sessions typically last 80 minutes, but they range in length from 20 minutes to over 2 hours, each session being custom-tailored to the needs of the course faculty member. Although Fall 2014 was our highest number of instructional hours, we are still teaching many more than in years past.

Semester	Hours of Library Instruction
Fall 2013	70
Spring 2013	79
Fall 2014	110
Spring 2015	86
Fall 2015	90

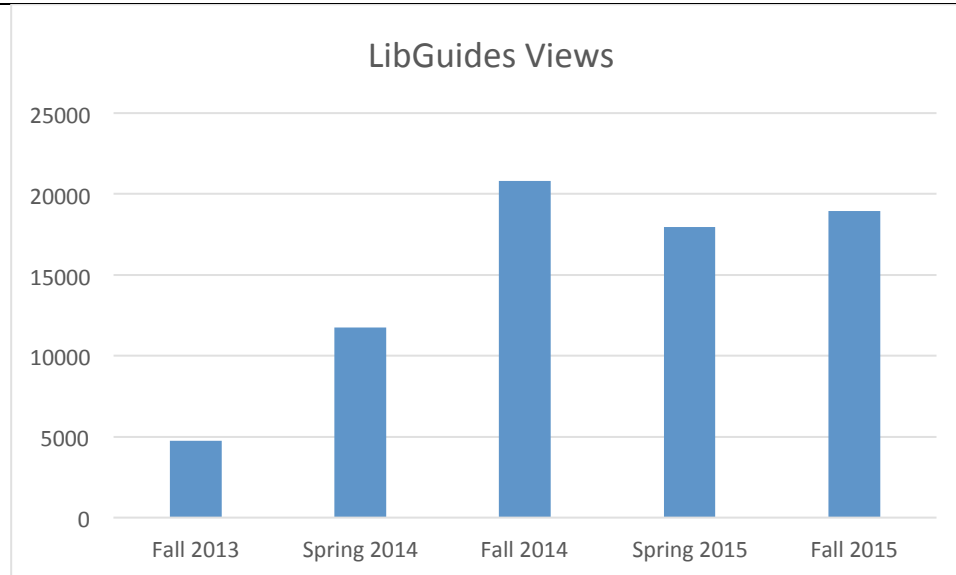
Online resources usage. Access to our online databases can be measure by number of individual research sessions. For example, if a student visits an EBSCO database to do some research, this counts as one session. Below is a graph showing EBSCO database sessions for 3 recent semesters. EBSCO is our main vendor for databases. There is an overall upward trend in usage.



LibGuides, our online research guides, were originally viewed about 5,000 times in a semester, but more recently traffic has increased to 15,000-20,000 views per semester, as shown in the graph below:

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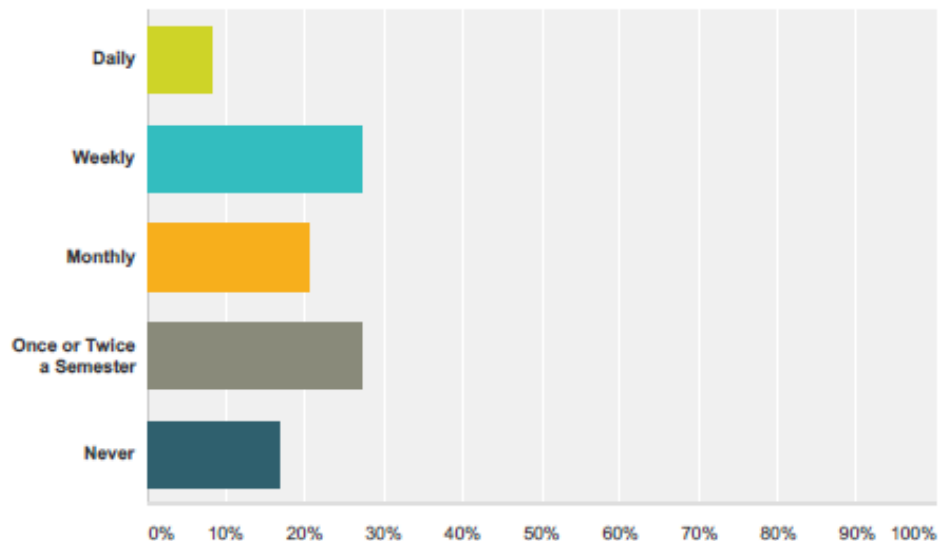
Discipline: Library



We asked students how frequently they use our online resources from off-campus. 27% of students answered weekly, 21% answered monthly, and 27% answered once or twice a semester. The results are shown below:

Q3 On average, how often do you use the library's online resources from off-campus?

Answered: 180 Skipped: 4



Hours. The Kentfield library is open 8:00 am - 8:00 pm Monday through Thursday and 8:00 am – 3:00 pm on Friday. The IVC library is open Monday and Tuesday, 10:30 am - 6:30 pm and Wednesday and Thursday: 8 am - 4 pm. The most frequent request of students is expanded hours.

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Discipline: Library

II. Student Success – based on course completion rates and grades in your courses (available on the Data Dashboard), and more importantly, based on you and your colleagues experiences in class, what do faculty in your discipline feel are significant factors or barriers influencing student **success** in your courses or programs?

You could begin with: “Students who don’t succeed often struggle with _____,” and then analyze what you think are the reasons behind their difficulties which could range from socio-economic factors to issues more directly related to course work or presentation.

Research confirms that measuring student success in terms of information literacy and of library services is notoriously difficult. With that in mind, it’s clear from observation in our classroom and at the reference desk that students struggle because research:

- is a complicated, iterative process
- requires time-management skills
- involves a great deal of reading
- entails specific reading skills, such as skimming, scanning, reading carefully, re-reading, and reading across genres
- requires critical thinking
- employs technology skills that are new to students
- necessitates a variety of writing skills, including summarizing, paraphrasing, synthesizing, and quoting

Unfortunately, students don’t necessarily arrive at College of Marin with prior experience doing academic research.

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Discipline: Library

Improving Student Success and Retention – please check off which of the following student support services your students have used:

- Bookstore
- Computer Labs for Student Use
- Counseling
- Student Accessibility Services
- Financial Aid
- Job Placement Center
- Library
- Transfer Center
- Tutoring
- Other

Comments: We refer students to all of these services.

IV. How do you make sure your students are able to get through your program in a timely fashion?

The Library does not have a traditional program of instruction. Currently, information literacy instruction is available upon faculty request. This allows for custom-tailored instruction and collaboration with faculty who are enthusiastic about involving the library in their curriculum. Although these course integrated sessions have positive impact on the development of students' information literacy proficiency (see the Student Learning Outcomes section below), there are significant drawbacks, not the least of which is that some courses do not partner with the Library in providing information literacy instruction. This lack of uniformity is especially troubling given that information literacy is one the College's five College-Wide/General Education Learning Outcomes. See Question 7 below for a possible solution.