**Program description**

The SJCC Biology Program offers lecture and lecture-laboratory classes to meet a variety of student needs. Biology course offerings provide all students with appropriate options for their individual interests. Our department’s curriculum is organized into three different academic pathways: 

- **a) majors biology courses**, 
- **b) allied health courses** for pre-professionals (e.g. pre-nursing, pre-physical therapy, etc.), and 
- **c) bioliteracy (or non-majors) courses** for general education requirements. While all coursework can be used for transfer to four year colleges and universities, the allied health pathway is in many ways a beginning Occupational Program for the health care industry -- where employment opportunities currently abound.

Biology faculty are committed to creating an encouraging learning environment open to all students regardless of gender, age, ethnicity, or culture. Biology faculty spend generous amounts of extra time with students to help clarify course-work materials, be role models, and offer educational/career advice. Biology faculty often employ multiple methods of teaching so as to reach students who may not be able to effectively learn in only a traditional lecture format.

As a result, the Biology Department is extremely successful. Our biology classes (& Environmental Science) are very popular and filled. This department’s productivity numbers (WSCH/FTEF) are among the highest in the college district (673.39) (Fig 1). This success comes almost despite the lack of support from recent administrations who have not understood the very real needs of science education.
Figure 1: WSCH to FTEF of Biology department in Fall 2013, compared to the state suggested ratio, target ratio of San Jose Evergreen Community College district and the current ratio of San Jose City College.

<table>
<thead>
<tr>
<th>PSLOs and/or SLOs Assessment process</th>
<th>Course SLO assessment process: SLOs are evaluated most frequently as short answer or multiple choice questions that are embedded in in-class tests or quizzes. SLOs that pertain to laboratory techniques and concepts are assessed as part of lab practicums, lab quizzes, and laboratory demonstrations. The assessment for each section is done by the respective instructor. All sections of the same course are evaluated by the same method that is previously agreed upon by the faculty. SLOs are evaluated on a rotating schedule. Each course is assigned to a full-time faculty member to be the faculty-contact. The data collected for all the sections are pooled by the faculty-contact. All the instructors discuss the data by meeting face to face or by email. The faculty contact then enters the course SLO assessment into &quot;Tracdat&quot;, the data collecting and tracking software currently used in SJCC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSLO assessment process: PSLOs are assessed by a number of techniques, which include surveying students and faculty, evaluating student understanding by asking questions in in-class exams, observation of laboratory procedures etc. The data is then discussed at department meetings.</td>
<td></td>
</tr>
<tr>
<td>Curriculum Information</td>
<td>All the Biology curricula are currently up to date.</td>
</tr>
</tbody>
</table>
### Staffing information

#### Vacancies:

1) Our division dean, Dr. Leandra Martin, resigned at the end of 2012-2013. Dr. Victor Krimsley, was our Dean in the Fall semester and we shared him with the Business and Technology Division. SJCC will be hiring a new administrator by this academic year (hopefully). Dr. Duncan Graham, Our VPAA is currently our Dean of record.

2) Carina Anttila-Suarez (Ph.D.) was a valuable full time faculty member, with a molecular biology orientation, who resigned in the middle of the 2012-2013 academic year. We badly need to fill this vacancy.

#### Current Staff:

Roi Ann Thompson is our fabulous administrative assistant who handles our budgeting and purchasing. She has been amazing as she copes with the current changes and challenges facing the Biology Department. The college is in the process of hiring a permanent dean for our division.

Our laboratory support staff, Dr. Anna Spokoyny, and Dr. Margarita Gasparyan are immensely professional and competent; they keep the labs running as smoothly as possible.

Our full-time faculty are:
   - Sanhita Datta (Ph.D.) – Environmental Science, Ecology and Human Biology;
   - Peter D’Eliscu (Ph.D.) Anatomy, Physiology, and Organismal Biology; Marine Biology;
   - Mark Newton (Ph.D.) – General Biology;
   - Joel Stryker (M.A.) Microbiology, Anatomy, Physiology, and Human Heredity.

Additionally, the SJCC Biology Department also has a fairly stable pool of high quality adjunct faculty. Many of these faculty have taught in the department for a substantial period of time (5+ years); they teach in all areas of our program. Ninety percent (90%) of the Biology faculty and technical staff have earned doctorates; this expertise enriches us and adds to program quality.

Staffing remains one of the Department’s greatest problems. In addition to his teaching load, M. Newton has had a long term assignment with the AFT local; consequently, he has taught only at an 80% load in biology since January 2000. (This non-instructional load is going to increase starting in spring 2014. Thus, we have effectively 3.8 full-time faculty in biology. In comparison EVC has 6 to 7 positions (one is not filled due to a recent retirement) for a program that is almost as large as ours, but not as productive. Program quality and reputation can become an issue without sufficient full-time faculty available to coordinate and assist new adjunct faculty.)
• Fill the open Division Dean position.
• We need to replace Dr. Anttila-Suarez, who had expertise in Biotechnology Botany and Cell Biology. She regularly taught and coordinated General Biology, a class which enrolls the highest number of students (10 sections). That class is now being taught by adjunct faculty. There is a dire need for a full time faculty member to coordinate these laboratory sections, assess SLO’s, and support part-time faculty for that class. She also taught in the Biology major’s sequence. Finally, she offered a Biotechnology Bootcamp in summer for nontraditional high school students which helped bridge them into our college.
• We really should add one more full-time faculty member who could coordinate the Human Physiology class.
• Biology student has steadily increased (Fig 2).

Figure 2: Total number of students in the Biology program from Fall 2007 to Spring 2012.

- Our student to Full-time faculty ratio is also very high (Fig 3) on the following page.
Figure 3: Students to full-time faculty ratio in various programs in San Jose City College.

- Add additional help in lab coordination if we are asked to expand our laboratory offerings any more. While our laboratory support staff is superb, it is important to recognize that they are really stretched. They are here nearly every weekend (unpaid) to meet the prep demands that have specific time constraints (e.g., a culture that needs to be started 24 hrs. before the class needs it). Any additional demand on laboratory support cannot be met without additional support.

<table>
<thead>
<tr>
<th>Technology information</th>
</tr>
</thead>
<tbody>
<tr>
<td>- We badly need to replace the Bio 4A microscopes in S130.</td>
</tr>
<tr>
<td>- We need new education/laboratory materials for the new Bio 4A/4B sequence (approximately $3,000). Included in this effort would be small plaques marking geological time so our students can better understand the history of life.</td>
</tr>
<tr>
<td>- We need to increase our ability to incorporate technology into our lesson plans with the purchase of specialized software programs.</td>
</tr>
<tr>
<td>- We need new DVD’s. Learning biological concepts often is a very visual study. Most of our departmental resources are old VCR tapes from televised shows. We need funds to modernize our video collection.</td>
</tr>
<tr>
<td>- Successfully running any biology program with laboratory courses requires a fully functioning prep room. This includes well-stocked supplies, well-maintained instruments and qualified and adequate staff. We are constantly struggling to stay within a supply budget that has not increased in accordance with inflation and our increase in course offerings. If any of the instruments breakdown, they need to be repaired/replaced immediately; however, our department is not adequately funded with a repair budget, nor does there seem to be any larger plan</td>
</tr>
</tbody>
</table>
to respond if we have a major piece of equipment break down.

**Budget information**

The Biology Department cannot continue to provide a quality laboratory experience with the current funding allocation. We are already rationing materials like tape, slides, and gels in the classrooms. We are not able to provide students some modern molecular experiments that are provided in local high schools. We have over filled anatomy classes without enough anatomical models for all of the students. We need to replace a substantial number of models that are very old and broken and can no longer be repaired. We have an extremely large waitlist for all sections of anatomy, however in order to add sections, we need the additional models as well as additional cadavers at a cost of approximately $3,000.00 for each cadaver. These budgetary constraints are eventually going to damage our reputation and possibly force us to decrease lab sections. The lack of sufficient financial support for the Biology Department is perhaps most vividly demonstrated if you consider the amount of money spent per WSCH (Figure 4). In this figure

![Dollars Supporting One WSCH](chart.png)

you can see that with a growing number of students and generally declining budget, we are being asked to work miracles —and we can’t for much longer. The funding levels in the 2005-2006 academic year were inadequate, and things have only gotten worse.

**Figure 4.** The decrease in monetary support for one weekly student contact hour over a seven year period. While increased productivity/efficiency could explain part of this downward trend, it probably does not as biology classes were already very full in 2005

**Other:**

A prior SJECCD Chancellor focused on equity and access; she understood that many of the good paying careers our students will someday obtain will be in science and technical fields. Under that administration funds were granted that supported a poster contest for high school students and the Biotech Bootcamp. Both efforts helped recruit nontraditional students, who might not think to go to college, to our campus. It is a shame that such support has evaporated.