1. Instructional Program Criteria and Template

Name of Person Completing this Report: Donald Gailey
Title of Person Completing this Report: Chair, Department of Biological Sciences
College or Unit: Science
Report No.: COS 14
Programs Included: 2

Total number of service courses
0

2. Please use Tables 1-6 to prepare your write-ups for the questions in this background information section (up to 250 words in total).

I. The BIOL MS program has served CSUEB students alongside our BA/BS programs since the 1960s. Its primary structure for decades was the "Plan A" University thesis (hands-on research thesis mentored by TT fac with thesis defense), or rarely the "Plan B" Departmental Thesis track (research proposal with literature survey and defense). The department standard has been high: to support students in research and thesis writing. Concomitant with the development of our BS options program, TT fac reviewed the MS program also. It was unanimously decided to maintain focus on the "Plan A" research thesis, but to add a "Plan C" comprehensive examination option, appearing only in the 2008-10 catalog. Further evolution of the program led to its current state: the MS with only TT fac-mentored research and thesis defense (Plans B, C removed), and the newly created MA, to be awarded to students passing a comprehensive examination (effective 2010-2011 catalog). Our standard for the MS is thus "higher" than two of our sister departments, Statistics (MS by comprehensive examination only), and Chemistry (with thesis vs. comprehensive examination options for the MS, awarding many MS by examination). As a result of this standard, our degree rates are lower than other MS/MA granting departments. Expanding our MA program especially is a "work in progress" with issues of student recruitment and sustainability to resolve (see Criterion V).

[II.III.IV, N/A] V. In-person classes only with some 6000 courses co-offered with a 4000-UD counterpart. (See Criterion V). VI. Mix of lecture only vs. lecture/lab format.

4. Criterion 1

Link to Scoring Rubric

I. Institutional Learning Outcomes: (70%)

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Evidence of Current Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Graduates of CSUEB will be able to think critically and creatively and apply analytical and quantitative reasoning to address complex challenges and everyday problems</td>
<td>Provide evidence to support current and/or planned alignment for each ILO (no more than 60 words for each ILO)</td>
</tr>
<tr>
<td>2. Graduates of CSUEB will be able to communicate ideas, perspectives, and values clearly and persuasively while listening openly to others</td>
<td>NOTE: For all narratives, DEPARTMENT designates current Program Goal; quotation marks (”) show direct quote from current SLO. DEPARTMENT strives to “foster critical, creative and analytical thinking.” Master’s graduates will be able to “apply the scientific method to formulate hypotheses, analyze empirical data and synthesize results” into scientifically sound conclusions. Correspondingly, students will be able to “gather primary scientific literature and judge the value of information presented.”</td>
</tr>
<tr>
<td>3. Graduates of CSUEB will be able to apply knowledge of</td>
<td>One Master's program SLO states that graduating Master's students will be able to &quot;clearly communicate the design and results of observational or experimental analyses in various formats, including the university thesis, scientific paper, and oral presentations.&quot;</td>
</tr>
</tbody>
</table>
diversity and multicultural competencies to promote equity and social justice in our communities.

4. Graduates of CSUEB will be able to work collaboratively and respectfully as members and leaders of diverse teams and communities.

DEPARTMENT strives to "engage students in scientific inquiry, particularly through rich laboratory, field and research experiences" These type of activities are typically done in teams and thus promote teamwork and respectful collaboration.

5. Graduates of CSUEB will be able to act responsibly and sustainably at local, national, and global levels.

DEPARTMENT strives to graduate students who will act as "a life science resource for local and global communities," and who will serve as "informed citizens and advocates of sustainability and protectors of our natural world."

6. Graduates of CSUEB will demonstrate expertise and integration of ideas, methods, theory and practice in a specialized discipline of study.

DEPARTMENT strives to "provide a solid foundation in biology" with "a broad and diverse curriculum." Master's graduates should be able to "demonstrate a broad and sophisticated understanding of biological concepts and principles across all levels of biological organization" and demonstrate a high level of knowledge/competency in a specific area of the biological sciences.

Link to Scoring Rubric

II. Shared Strategic Commitments: (30%)

Biology aligns especially with SSC 1,2,3,5,8.

1,2,3. Our courses are innovative and engaging. E.g., human physiology labs use LabTutor, which emphasizes quantitative analysis and data collection using students as subjects. Cell/molecular labs typically involve independent research; two papers published with class students as co-authors.

1,2,8. Biology faculty publish regularly in peer-reviewed journals and many have external funding in research and STEM education.

2. 62% of Biology students identify as underrepresented minority. Half of faculty supervise NSF-LSAMP program students in research.

5. Many Biology faculty are committed to promoting a sustainable planet in their research (e.g., effects of desalination in Monterey Bay), grants awarded (e.g., CSU COAST, SF Bay Wildlife) and courses taught (e.g., Global Change Biology, Conservation Biology, Environmental Toxicology).

5. Criterion 2

Link to Scoring Rubric

I. FTES, Number of Majors, and Number of Degrees Awarded

BIOL

Transfer the 5-year average and the quartile for total FTES from the total program table only to the table below.

<table>
<thead>
<tr>
<th></th>
<th>5-Year Average</th>
<th>Quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remedial</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Lower Division</td>
<td>312.32</td>
<td></td>
</tr>
<tr>
<td>Upper Division</td>
<td>234.16</td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>26.65</td>
<td></td>
</tr>
<tr>
<td>TOTAL FTES</td>
<td>573.13</td>
<td>4</td>
</tr>
</tbody>
</table>
## B. Number of Majors, Options and Minors (for information only)

<table>
<thead>
<tr>
<th>Major</th>
<th>Option</th>
<th>5-Year Average</th>
<th>Quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL MS</td>
<td></td>
<td>46.2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL MS</td>
<td></td>
<td>46.2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL MA</td>
<td>Unduplicated</td>
<td>0.7</td>
<td>1</td>
</tr>
<tr>
<td>BIOL MA</td>
<td>Duplicated</td>
<td>0.7</td>
<td>1</td>
</tr>
</tbody>
</table>

## C. Number of Degrees Awarded (30%)

<table>
<thead>
<tr>
<th>Major</th>
<th>Option</th>
<th>5-Year Average</th>
<th>Quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL MS</td>
<td></td>
<td>17.4</td>
<td>3</td>
</tr>
<tr>
<td>BIOL MS</td>
<td></td>
<td>17.4</td>
<td>3</td>
</tr>
<tr>
<td>BIOL MA</td>
<td>unduplicated</td>
<td>0.7</td>
<td>1</td>
</tr>
<tr>
<td>BIOL MA</td>
<td>duplicated</td>
<td>0.7</td>
<td>1</td>
</tr>
</tbody>
</table>

[Link to Scoring Rubric](#)
D.

The data supplied are messy: “Four” programs are indicated, suggesting Master’s options. We offer no options and have but two programs, MS and MA. The MA has been in existence only since the 2010-11 catalog and the “5yr avg” has been corrected to 0.7. For a department so large, our Master’s enrollments and degrees are low; we are currently carrying out discussions for developing mechanisms/modifications to expand. Faculty are hesitant to participate in the MA because in its current state it requires “voluntary” overload participation. Exams must be written, graded and evaluated without workload compensation. The catalog course 6901 is a 2-unit exam-preparation course but is not offered because of low enrollment in the MA. Rather than the current appearance of a “stymie” TT fac are exploring alternatives. The MA is appropriate for teachers seeking higher degrees. One possibility is to create and offer more Master’s level lecture courses without lab sections and to test using a standardized exam such as the GRE Biology. We look forward to a successful program that generates many more than the present 2 MAs in 2 years.

As regards the MS, BIOL TT fac have voted unanimously to continue the standard of offering this degree only as original thesis research mentored by research faculty. The sustainability of our Master’s program is generally clouded by the “volunteer” overload in supervisory-time courses that are not calculated in the workload: 4-units BIOL 6900 (Independent Study) and 9-units BIOL 6910 (Thesis) for each MS student.

II. California State Jobs Projections for Each Program (35%)
B. Please discuss the selections you made for the total jobs in your worksheet in Appendix 3

Many eventual job categories in Biology require graduation from professional school (e.g., doctor, dentist, healthcare specialist) or a doctoral program (scientist in drug industry, academic faculty); our Master’s students do all. Consistent with this, 37.2% of our BS graduates enroll in postbaccalaureate programs at other institutions of higher learning. We believe the same is true of our Master’s students. Thus, the true relevance of a Biology Master’s is likely masked in the COEP and the California job market. The Bay Area is home to hundreds of biotech/drug development companies employing thousands of post baccalaureate scientists and technicians. We serve this concentrated job market through our Master’s program.

6. Criterion 3

1a. List average teaching evaluation scores (average for questions 1-8 of the teaching evaluation questionnaire) for all program faculty in Fall, Winter and Spring Quarters of the 2012-13 academic year.

<table>
<thead>
<tr>
<th></th>
<th>On-Ground Course Evaluations Dept Mean (Q1-8). Transfer Data from Table 11</th>
<th>On-line Course Evaluations Dept Mean (Q1-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2012</td>
<td>1.45</td>
<td>NA</td>
</tr>
<tr>
<td>Winter 2013 Dept</td>
<td>1.53</td>
<td>NA</td>
</tr>
<tr>
<td>Spring 2013 Dept</td>
<td>1.43</td>
<td>NA</td>
</tr>
</tbody>
</table>

1b. System for continuous improvement of teaching

By department vote all courses, tenure-track-and-lecturer, receive student evaluation. All probationary tenure-track members are visited in class by RTP committee members and chair and all lecturers are visited in class by departmental review committee and chair. Faculty members receive helpful mentoring by feedback and possible referral to Faculty Development Center. The department is lucky to have a faculty member with specialization in assessment of teaching effectiveness. We have initiated a process in regular faculty meetings of exploring teaching techniques that will improve our connection with students.

2. Teaching awards, teaching grants, and recognitions

NSF/Noyce Teaching Fellowship Grant (Co-PI) $1.5 million
Chancellor’s Course Redesign Grant $50K
Programmatic Excellence&Innovation in Learning
Bechtel, 3 awards for developing foundational science teacher training
Bechtel, Model Collaboration between universities on improved Science Preparation for K-8 teachers
STEM Ed Institute Faculty Grant
CSUEB Alternative Learning Solutions Grant
NSF Integrated Middle School Science Project Grant
Critical Thinking Assessment Project
Biology Scholars Research Residency Grant Program
Golden Key Honorary Faculty Member Award
CSUEB Outstanding Professor (2)

3. Faculty-supervised student projects
To review, the MS proceeds only by thesis research sponsored by a TT fac. Most Biology faculty maintain active research labs where MS students are trained in research. MS students receive unit credit for performing research by enrolling in the supervisory time courses BIOL 6900 and 6910. Department-wide this results in an average of 60 students/AY carrying out research projects with faculty supervision and about 20 students/yr completing the MS. Students write and publish the thesis and in some cases receive co-authorship for data they collected towards a publication.

4. Other evidence of quality indicators related to instruction that may not be listed elsewhere, including, for example, rigor of course syllabi and assignments, faculty diversity within the program

Although it adds significantly to the cost of course delivery, the BIOL graduate program prides itself in striving to maximize hands-on laboratory experience for students in its curriculum. This is especially important in an age where large institutions are removing lab classes to save money. No matter how great the software for virtual labs, nothing replaces the actual lab experience involving equipment and data analysis and troubleshooting. This is true whether the lab section is molecular analysis of a gene, or takes place in the field analyzing animal behavior.

1a. TT faculty contributions

<table>
<thead>
<tr>
<th></th>
<th>2008 - Total Number</th>
<th>2008 - Average per TT</th>
<th>2009 - Total Number</th>
<th>2009 - Average per TT</th>
<th>2010 - Total Number</th>
<th>2010 - Average per TT</th>
<th>2011 - Total Number</th>
<th>2011 - Average per TT</th>
<th>2012 - Total Number</th>
<th>2012 - Average per TT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer reviewed journal publication, juried exhibitions, juried/reviewed and commissioned/presented creative activities and performances, book chapters, books</td>
<td>10</td>
<td>0.63</td>
<td>15</td>
<td>0.94</td>
<td>15</td>
<td>1.00</td>
<td>12</td>
<td>0.86</td>
<td>15</td>
<td>1.1</td>
</tr>
<tr>
<td>Peer reviewed proceedings, conference presentations, abstracts, and non-refereed publications, non-juried and self-produced creative and performance activities</td>
<td>19</td>
<td>1.19</td>
<td>16</td>
<td>1.00</td>
<td>16</td>
<td>1.07</td>
<td>27</td>
<td>1.93</td>
<td>25</td>
<td>1.9</td>
</tr>
<tr>
<td>Number of TT faculty in Table1 in supplemental data package *</td>
<td>16</td>
<td>16</td>
<td>15</td>
<td>14</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1b. Comment on contributions in professional achievement by TT and FERPs (up to 50 words)

The publication rate of TT faculty has nearly doubled in the time period. BIOL requires postdoctoral research training in new TT searches so that we hire individuals with publication records who can balance teaching and research demands and continue to publish. Too, certain senior faculty serve as publication role models.

1c. Comment on contributions in professional achievement by lecturers and FERPs (up to 50 words)

One lecturer volunteers his expertise in training students in HPLC molecular separation and identification techniques, providing valuable data gathering for several research programs. Two drawbacks: only TT fac are expected to perform professional achievement by the CBA. No department funds or space available to support lecturers and FERP in research.

2. List significant examples for the following (up to 100 words):

Four NIH MBRS research grants, $1.6 million
Two NSF Research grants, $0.7 million
USDA Grant $86K
BARD Research Grant $90K
Keck Foundation $250K
3 CSU COAST awards $45K
SF Bay Wildlife grant $10K
NSF ROA Award $6K
Morgellon’s Research Award $2.5K
Six CSU Program in Education and Research in Biotechnology $150K
Numerous CSUEB RSCA small grants
NIH MBRS Grant Review Panelist, Genetics (10 ad hoc panels)
Chair, MBRS Genetics Panel, 3yr
Chair, MBRS MPRBC Oversight Panel, 4yr
NIH MBRS Grant Review Panelist, Physiology (2 ad hoc panels)
NSF Panel Review Committee (2 ad hoc panels)
FDA Science Advisor 2003-present

3. List significant professional activities (up to 100 words)
Editorial Board Member for journal Respiratory Physiology and Neurobiology and J Com Phys B
Invited Symposium Speaker, Am Physiol Soc
VP, International Symbiosis Society
Editorial Board, journal Symbiosis
Science Advisory Board of Directors, SF Bay Bird Observatory
Organizer, Bay Area Worm Meeting (Meeting of 250 Bay Area C. rhabditis researchers held at CSUEB), held two consecutive years
Invited speaker, 21st Intl C. elegans Meeting
Invited speaker, USDA
more than 20 invited departmental seminars too numerous to list individually
more than peer reviews of journal submissions too numerous to list individually

1. Describe the relevancy of your program as it aligns with internal and external needs (up to 100 words). Specifically, emphasize evidence of the following:
Especially with new advances in Biology reported constantly, we update curriculum and course content by mentoring each other especially in basic courses with shared teaching responsibility, and by departmental review in faculty meetings. Curricular updates occur by new courses and program modification: hence the 2010 catalog change to delete the variations of Plan A vs. B vs. C thesis and to establish a MA program based exclusively on comprehensive examination. No staff or departmental resources are available to track graduates; we wish we could as part of our assessment program.

2. List/describe innovations of the program curriculum (up to 100 words). Specifically emphasize the following:
Creation, ongoing assessment and modification of options and their curricula.
The department is well-equipped with state-of-the-art equipment found in the biotechnology industry and research institutions.
Computer literacy is the underlying basis of all lab sections in terms of data collection, software statistical analysis, and writeups.
Ongoing support of the postbaccalaureate Biotechnology Certificate Program, stably providing lab course training for employment in one of several hundred Bay Area biotechnology companies. We were the first campus statewide to initiate such a program (1986). The program is no-cost, sharing MS course curriculum, both 4000 and 6000 level courses.

1. Accreditation, licensure, and external recognitions; list/describe the following (up to 100 words):
We have no accreditation or licensure requirements. The Biotechnology Certificate Program director serves as liaison to Bay Area biotechnology employers who provide feedback on laboratory skill sets and molecular biology background they currently seek.

2. Effectiveness and sufficiency of current resources; list/describe the following (up to 100 words):
Prior to A2E2 the department was a train-wreck-about-to-happen regarding old and worn out equipment. With A2E2 labs are being brought up to date with state-of-the-art equipment.
Available for use in class lab sections, faculty & student research programs:
High throughput next-generation DNA sequencer (the first Bay Area CSU campus to have such a machine)
Confocal microscope at the core of a developing imaging facility.
HPLC for molecule separation and identification.
Cell sorter used in cell culture technology (major technical skill used widely in biotechnology industry).
Online scientific journal subscriptions vital to training students in literature search, citation, and experimental design.

3. Student advising, experiential learning, internships, co-op, service learning; list/describe the following (up to 100 words):
Our Master's programs are managed by a faculty Graduate Program Coordinator who receives 4WTU/AY. For the MS, advising and degree progress is based on periodic meeting with the student’s primary advisor and thesis committee, normally three faculty members. Students must pass an oral defense of the thesis before the committee and publish the thesis with the university. Advising for the MA is mediated by the Grad Coordinator. Historically, many of our MS students have current jobs in biotechnology and enter the program to advance with their companies; thesis research takes place at the job site, requiring no departmental funding.

4. Assessment of learning outcomes; list/describe evidence for the following (up to 150 words):
Early attempts at assessment involved issuing the ETS Field Test in Biology to volunteer graduating seniors. Although students were above national averages, this system was scrapped because there are no internal standards for measuring teaching effectiveness and individual learning. Now we employ continual course assessment with resulting modification--a work in progress.
Pre-course/pre-assessment testing. Guides the instructor in student prerequisite weakness and direction of class. Provides basis for post-course testing comparison, course modification. One TT piloted this program, others are employing it. To be employed department-wide.
Flipping the classroom. One TT has piloted this technique with little sign of improved outcome; others set to employ it for lab sections.
Assessment at program level. Currently developing “signature assignments” in many courses to assess specific program and student learning outcomes relevant to teaching principles of biology; reviewed at department level with rubrics. Best measure of effective teaching, curriculum relevance, student success.

5. Student success; list/describe the following (up to 100 words):
-- Table 15 reveals that in the past 5 years, 159 of our 427 total Biology B.S. graduates have enrolled in subsequent institutions of higher education for post-baccalaureate education and training. We believe this to be true also of our Master’s graduates, but have no resources for tracking to test this notion.
-- Also, the director of our Biotech Certificate program acts as liaison to Bay Area Biotechnology industry HR and Educational Outreach divisions, successfully placing essentially all individuals seeking employment, whether MS graduate or Certificate graduate. Maintaining small programs enables such “hand fit” job placement.

7. Criterion 4
A. You are given ”% Difference” value over a 5 year period, comparing your program SFR data with systemwide averages for your program. If your program SFR is higher than the systemwide for a given year, notice that the value is presented as a positive (“+”) percentage. If it is presented as a negative percentage (“-”), your program SFR for that year is lower than the systemwide average. The resulting four values are then averaged for you. Transfer the appropriate values to the template as specified. Transfer the average change SFR for lower division, upper division, and graduate SFR to the table below.

Transfer Data from Table 16.

<table>
<thead>
<tr>
<th></th>
<th>Average Change SFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Division</td>
<td>16%</td>
</tr>
<tr>
<td>Upper Division</td>
<td>23%</td>
</tr>
<tr>
<td>Graduate</td>
<td>93%</td>
</tr>
</tbody>
</table>
B. In this section you will be provided with data in Table 16 that indicate any trend of your program SFR relative to the systemwide average for your program. This is presented as the number of times in 5 years that your program SFR has exceeded the systemwide SFR for your program. Transfer the trend for lower division, upper division, and graduate SFR to the table below.

Transfer Data from Table 16.

<table>
<thead>
<tr>
<th>Trend - Number of Years Program SFR exceeded Systemwide SFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Division</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>Upper Division</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>Graduate</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

II. Instructional Costs per FTES (Department Total Annual Instructional Costs/FTES – College Year) (25%)

<table>
<thead>
<tr>
<th>Department Name</th>
<th>Average Instructional cost per FTES</th>
<th>Average Increase in instructional cost per FTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences</td>
<td>$3,340.86</td>
<td>2.66%</td>
</tr>
</tbody>
</table>

III. Narrative (up to 250 Words) (50%)

Our graduate program SFRs are distressing when compared with systemwide BIOL graduate averages. Our successive graduate SFRs for the 5yr period are 9.5, 16.1, 9.2, 14.9 and 16.5 vs. the systemwide 6.1, 7.1, 6.9, 6.9 and 7.1. This places us 5yr out of 5 above the systemwide averages by % differences of 56%, 127%, 116% and 132%. These are “new” data to the department and beg assessment for impact on the quality of our program, and to arrive at an understanding of how other campuses support their Master’s programs with significantly smaller class sizes.

As a department we are interested in carrying out a Master’s program that does not require "voluntary" (translate: "mandatory") overload for faculty participation in mentoring research, seeking a maximum credit of 4WTUJAY for such supervision. It is not reasonable nor is it equitable to run a graduate program without compensation, especially while departments on campus flourish with no graduate program at all (e.g., our sister department Psychology). This places additional burden on BIOL faculty especially in RTP expectations to sponsor Master’s students, whereas as Psychology faculty, by comparison, bear no such expectation.

It is important to note that our MA program had virtually no impact on the last 5yr of SFR data. Since we plan for it to be an exclusively lecture-format program with appropriate supervisory WTU, we see it alternatively as an efficiency-boosting program since students will not participate in more labor-intensive and costly 6000 level laboratory courses.

8. Criterion 5

I. Use of Existing Resources (Up to 125 words)

By systemwide requirement, a Master's curriculum must include a minimum of 50% (23 units) 6000-level courses. With existing resources we offer a number of—in some circles controversial—4000/6000 “co-listed” courses (UD BS students meet in the same course with MS students, but MS students get extra assignments to warrant the Master’s level distinction. These are “handy” when stand-alone 6000-level courses do not achieve the minimum 7-enrolled students. However, faculty get workload WTU just for the UG level course. Such courses are an academic compromise because the MS student gets a watered-down version of the course. But, we could expand our use of these courses to maintain, or even increase, efficiency with current resources. Particularly, in a lab-
section co-listed course, the prepping and support expenses are minimized.

II. Impact of Declining Resources (Up to 125 words)

In a word, DISASTROUS. To meet minimum enrollments of 7 students for a 6000-level course, we would have to offer courses less frequently creating a bottleneck to completion of the degree. There would be corresponding decrease in lab course offerings and significantly reduced support for supplies to carry out thesis research and to support lab-section courses. We would also increase the number of 4000/6000 co-listed course offerings. The academic experience of the MS student would be severely compromised. By comparison, the effects on expanding the MA program would be less severe, since we intend this to be an efficiently run lecture-only comprehensive-examination degree.

III. Impact of Augmentation (Up to 125 words)

The goal? To support a Master’s program (MS and MA) that would not operate by piggy-backing on the undergraduate programs. Increased resources would be used to: 1) Recruit more student applicants (internet resources, faculty research advertising, recruitment avenues for, e.g., high school teachers who would benefit from our MA program. 2) With an adequate student pool, offer predominantly 6000-only courses and avoid co-listed offerings. 3) Increase funding for supplies and services required for lab-section courses and in support of student thesis research. However, the most important provision will be to fund faculty WTU for graduate student supervision and mentoring. A starting point in line with other CSU campuses would be a maximum of 4WTU/AY at the headcount rate of 0.5WTU/6900 enrollment, and 0.5WTU/6910 thesis enrollment.

IV. Additional Information (Up to 250 words)

Points worth reinforcing:
Our faculty stand by the MS degree only through thesis research, writing, and defense. We realize this keeps our number of graduates relatively small and we are ready to suffer any financial consequences for this commitment to quality (we issued about 17 MS degrees/year for the last 5 years). A rigorous degree program gives us a good reputation especially in the Bay Area biotechnology industry.
Student mentoring in the MS proceeds with "voluntary overload." We believe this is a policy that needs to be changed with proper funding.
Our MA program is reasonably new (2010-11 catalog) and was designed to target especially teacher’s who benefit from a Master’s degree by comprehensive examination. Faculty currently do not support the program because it requires, again, more "voluntary overload" to write, issue and grade exam questions. Thus the 2 MA degrees we have issued since 2010 stick out like a sore thumb. The program is currently at a standstill while we as a department evaluate its future. So far, we believe it is sustainable as a lecture-only program with an outside testing source (such as the GRE). This will reduce the expense of the program for faculty to just teaching workload WTU, and no volunteer supervisory time.
As a result, with more students taking lecture courses, we will advocate suspense of 4000/6000-level courses for Master’s students as an inferior academic experience, and, as a source of volunteer faculty overload to manage the extra assignments for Master’s students in the class.