Category I Proposal Transmittal Sheet
Submit proposals to: Office of Academic Planning and Assessment
110 Kerr Admin – Oregon State University

For instructions, see http://oregonstate.edu/ap/curriculum/cati.html. Please attach Proposal, Library Evaluation (performed by the library), Liaison Correspondence, Faculty Curriculum Vitae, and Budget Sheets, as appropriate.

Check one:

Full Proposal
☐ New degree program
☐ New certificate program or administrative unit
☐ Major change in existing program
☐ Establishment of a new College or Department

Abbreviated Proposal
☐ Rename of an academic program or unit
☒ Reorganization – moving responsibility for an academic program from one unit to another
☒ Merging or splitting an academic unit
☐ Termination of an academic program or unit
☐ Suspension or reactivation an academic program or unit

For proposals to establish a new center or institute, contact the Research Office (737-3437).

For requests to offer existing certificate and degree programs at new locations, use the New Location Request Form available on the Web: http://www.ous.edu/aca/aca-forms.html

Title of Proposal:
Creation of the School of Life Sciences

Effective Date:
January 1, 2013

Department/Program:
Biochemistry & Biophysics, Biology
General Science, Microbiology, Zoology

College:
Science

I certify that the above proposal has been reviewed and approved by the appropriate Department and College committees:

[Signature]
Sign (Dept Chair/Head; Director) Date

[Signature]
Sign (Dean of College) Date

Various, see Appendix A
Print (Department Chair/Head; Director)

Vincent Remcho, Interim Dean
Print (Dean of College)
Proposed School of Life Sciences Executive Summary

As part of OSU’s strategic reorganization, begun in AY2010-2011, we propose to create a School of Life Sciences (SLS) within the College of Science by integrating the Departments of Biochemistry and Biophysics, Microbiology, and Zoology, and the Biology Program and General Science Major into a single coordinated organization. The SLS will include the largest number of undergraduate majors in the College, with over 2,300 majors; 100 graduate students; and an average new grant portfolio of $6M to $9M per year.

Our goals in creating the School of Life Sciences are to:

- Lead, promote and grow the instructional and research success of the basic life sciences at OSU
- Coordinate planning for faculty hires, research clusters, and research facilities
- Coordinate and integrate curriculum in support of undergraduate and graduate degrees in the life sciences
- Coordinate advising for majors in the life sciences to provide easy access to pre-health advising, degree advising, and seamless transitions to faculty advisors
- Connect students now in the Biology Program and General Science (pre-health) Major to degrees aligned to units, moving significant numbers of students into each of the major unit areas of the School
- Develop and coordinate experiential learning opportunities for the large undergraduate population pursuing majors in the life sciences

Proposal to create the SLS changes administrative structure only: it does not include changes to curricula

- The proposal will create the School of Life Sciences, with three Departments: Biochemistry and Biophysics, Microbiology and Zoology.
- Changes in curricular structure and degrees are not part of this proposal. However related curricular proposals will modernize degree choices for students of the life sciences to provide better alignment with major subject matter areas and career options in the basic life sciences.
- The Biochemistry and Biophysics, Microbiology and Zoology undergraduate and graduate degrees remain.
- The Biology Program will be eliminated. However, the Biology Major will remain and will be administered by the Department of Zoology.
  - The continued contribution of the Department of Botany and Plant Pathology (CAS) to the instruction of courses in the Biology Major and participation in curricular decisions such as redesign and modernization will be instrumental in maintaining the strength and breadth of the major.
- A parallel Cat II proposal aims to create two options in the General Science Major: Molecular Biology and Biohealth Sciences.
  - These options will be administered within the SLS by the Departments of Biochemistry and Biophysics and Microbiology respectively.
  - The Department of Microbiology will take over the administration of the students already enrolled in the General Science Major.
- Creation of the School will be critical in developing a structure to promote coordination and integration of the 5 degrees and ~2500 life sciences undergraduate majors.
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Full Proposal
☐ New degree program
☐ New certificate program or administrative unit
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Abbreviated Proposal
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Title of Proposal:
Creation of the School of Life Sciences

Effective Date:
January 1, 2012 (Fall Term 2012)

Department/Program:
Biochemistry & Biophysics, Biology
General Science, Microbiology Zoology

College:
Science

I certify that the above proposal has been reviewed and approved by the appropriate Department and College committees:

☐ see Appendix A

Sign (Dept Chair/Head; Director) Date
Sign (Dean of College) Date

Various, see Appendix A
Print (Department Chair/Head; Director)

Vincent Remcho, Interim Dean
Print (Dean of College)
Proposal To Create A School Of Life Sciences Within The College Of Science

Including The Departments Of Biochemistry And Biophysics, Microbiology, And Zoology, The Biology Program, And The General Science Major

Oregon State University, College of Science:
Biochemistry and Biophysics, Microbiology, Zoology, Biology, General Science
CPS#: 84452
May, 2012

1. Program Description

a. Proposed Classification of Instructional Programs (CIP) number: 26.9999

CIP # 269999
Title: Biological and Biomedical Sciences, Other
Definition: Any instructional program in the biological and biomedical sciences not listed above.


b. Brief overview (1-2 paragraphs) of the proposed program, including its disciplinary foundations and connections; program objectives; programmatic focus; degree, certificate, minor, and concentrations offered.

As part of OSU’s strategic reorganization, begun in AY2010-2011, we propose to create a School of Life Sciences (SLS) within the College of Science by integrating the Departments of Biochemistry and Biophysics, Microbiology, and Zoology, and the Biology Program and General Science Major into a single coordinated organization. The SLS will include the largest number of undergraduate majors in the College, with over 2,300 majors; 100 graduate students; and an average new grant portfolio of $6M to $9M per year.

Our goals in creating the School of Life Sciences are to:

• Lead, promote and grow the instructional and research success of the basic life sciences at OSU
• Coordinate planning for faculty hires, research clusters, and research facilities
• Coordinate and integrate curriculum in support of undergraduate and graduate degrees in the life sciences
• Coordinate advising for majors in the life sciences to provide easy access to pre-health advising, degree advising, and seamless transitions to faculty advisors
• Connect students now in the Biology Program and General Science (pre-health) Major to degrees aligned to units, moving significant numbers of students into each of the major unit areas of the School
• Develop and coordinate experiential learning opportunities for the large undergraduate population pursuing majors in the life sciences
Proposal to create the SLS changes administrative structure only: it does not include changes to curricula

- The proposal will create the School of Life Sciences, with three Departments: Biochemistry and Biophysics, Microbiology and Integrative Biology.
- Changes in curricular structure and degrees are not part of this proposal. However, related curricular proposals will modernize degree choices for students of the life sciences to provide better alignment with major subject matter areas and career options in the basic life sciences.
- The Biochemistry and Biophysics, Microbiology and Zoology undergraduate and graduate degrees remain unchanged.
- The Department of Zoology will change to the Department of Integrative Biology
  - The Zoology undergraduate major and graduate degree will remain unchanged. However a departmental name change will pave the way for strategic planning discussions about the future of the Zoology undergraduate and graduate degree programs (see below for detailed description of name change).
- The Biology Program will be eliminated. However, the B.S. Biology major will remain and will be administered by the Department of Integrative Biology.
  - The continued contribution of the Department of Botany and Plant Pathology in the College of Agricultural Sciences to the instruction of courses in the Biology major and participation in curricular decisions such as redesign and modernization will be instrumental in maintaining the strength and breadth of the major.
- A series of proposals will be submitted, aimed at replacing the BS in General Science degree with two alternatives, a BS in BioHealth Sciences and a BS in Molecular Biology, modernizing the degree possibilities offered within the SLS.
  - A parallel Abbreviated Category I proposal, the first step of this process, proposes to rename the BS in General Science degree to the BS in BioHealth Sciences degree, and to move the administration of this degree from the COS Dean's Office to the Department of Microbiology.
  - The second step of the process will be submission of a Category I proposal to create a BS in Molecular Biology degree to be administered by the Department of Biochemistry and Biophysics.
- Creation of the School will be critical in developing a structure to promote coordination and integration of the 5 degrees and ~2500 life sciences undergraduate majors. Proposed changes resulting from the creation of the School are summarized in Table 1.

<table>
<thead>
<tr>
<th>Program Specification</th>
<th>Type of Change</th>
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<tr>
<td>New Administrative Unit</td>
<td>School of Life Sciences (SLS)</td>
</tr>
<tr>
<td>CPS #</td>
<td>84452</td>
</tr>
<tr>
<td>CIP #</td>
<td>269999</td>
</tr>
<tr>
<td>SIS #</td>
<td>NA</td>
</tr>
<tr>
<td>Degree Types</td>
<td>Bachelor of Science (BS), Master of Arts (MA), Master of Science (MS), Doctorate (PhD)</td>
</tr>
<tr>
<td>Program Type</td>
<td>Undergraduate and graduate</td>
</tr>
<tr>
<td>Academic Home</td>
<td>College of Science</td>
</tr>
<tr>
<td>Program Termination</td>
<td>Biology Program: However the B.S. in Biology major will remain</td>
</tr>
<tr>
<td>Majors (undergraduate and graduate)</td>
<td>No change</td>
</tr>
<tr>
<td>Options</td>
<td>No change</td>
</tr>
<tr>
<td>Areas of Concentration</td>
<td>No change</td>
</tr>
<tr>
<td>Undergraduate Minors</td>
<td>No change</td>
</tr>
</tbody>
</table>
SLS Structure
SLS Management Structure is more streamlined than the previous structure of the life sciences units in COS (Figure 1). The structure is outlined below.

1. Management duties
   a. Director. Appointed by the Dean from among the three unit Chairs in consultation. Position will rotate every 2 years. Director will receive a stipend of 1 month of summer salary. Director will manage a discretionary budget of $10,000 provided by the COS from OSU Foundation accounts to invest in seed projects within the School. The principal duties of the Director include:
      - Chair the Executive Committee (see duties below)
      - Ensure that the Curriculum Committee addresses the curricular agenda identified by the units and the Executive Committee
      - Work with College Head Advisor and lead life science advisor (if the School decides to use one) to coordinate access requests for the School
      - Manage the seed funds provided by the College
      - Coordinate with OSU Foundation on fundraising
      - The Director will not make decisions about hiring or space.
   b. Executive Committee
      - Comprised of the Director and the other two life sciences chairs.
      - Coordinate the annual development of staffing requests, developed by the three units, for the School in consultation.
      - Coordinate with the College Head Advisor and other professional advisors to maintain overall high quality and consistency of advising across the School
      - The Executive Committee will not make decisions about space
      - Insure that there are consistent and fair practices throughout the School for major policy issues. These might include GTA salaries, promotion and tenure processes, etc.
      - Tenure, personnel and programmatic decisions will remain at the department level but will be coordinated by the School through the Director, Executive Committee and Curriculum Committee.
   c. Chairs
      - Lead management of curriculum delivery in units
      - Lead the promotion and tenure process, annual reviews of faculty, periodic reviews for merit or equity raises
      - Work with unit faculty on developing staffing requests and directing strategic planning for the unit
      - Make space decisions for the unit, in coordination with the Dean
      - Manage budgets for units
      - Coordinate access requests, course planning, etc. with School Director and College Head Advisor
• Work with the life sciences advisors
• Represent unit and discipline at Chairs meetings for the College
• Manage personnel decisions and issues, consulting with the Director and Dean as necessary
• Manage initial student complaints and concerns about programs.

2. Curriculum Committee
• Two representatives from each unit and two from the Department of Botany and Plant Pathology (CAS). 2-3 year terms
• Curriculum Committee will coordinate and review curricular changes in the School and their approval will be necessary for proposals. Proposals, however, cannot advance without the approval of the faculty of the School, either through unit level committees or by faculty review.

3. Life Science and Health Professional Advising
• Comprised of
  i. COS head advisor
  ii. pre-health professional advisors
  iii. life science professional advisors embedded in each department
• Work with the Executive Committee and Director to coordinate and streamline advising practices while maintain consistency and a high quality student experience

Name change from Department of Zoology to Department of Integrative Biology

The proposed name change from Zoology to Integrative Biology is a late addition to the proposal (added 5-22-2013) and was made in response to a direct request by the Curriculum Council. The name Integrative Biology fits well with the biological processes studied by the faculty in the current Zoology Department. These areas of span evolutionary, ecological, physiological and genetic levels organization. Integrative Biology is a common unit name across the nation for departments that are similar in makeup to the current Zoology Department, for example units of Integrative Biology exist at UC Berkeley, UT Austin and University of South Florida. The name also complements the other SLS departments which focus on molecular and cellular processes, in the case of Biochemistry and Biophysics and microbial processes in the case of Microbiology. Plant sciences is well represented in the College of Agricultural Sciences and, as detailed elsewhere in the proposal, Botany and Plant Pathology faculty make critical contributions to the teaching of the Biology major.

A name change was one of the key recommendations made during the recent 2012 decadal program review of Zoology. Furthermore, the Zoology faculty has supported a name change for quite some time. The name Zoology is now considered arcane, with very few Zoology departments remaining nationwide. The future of the Zoology degrees, however, will be carefully considered by the Department and the SLS. There remains considerable support for maintaining a Zoology undergraduate degree, as it attracts students, many of them pre-vet, with a strong interest in animals.

Finally, the name Integrative Biology is a better fit for a department that will administer the Biology major and it keeps “Biology”, a centrally important discipline in the modern life sciences, in the organizational chart at OSU. These were the primary reasons the Curriculum Council gave for requesting the change.
Course of study – proposed curriculum, including course numbers, titles, and credit hours.

No changes to the existing undergraduate or graduate programs will occur as a result of the creation of the School. The School has robust and well-known graduate programs rooted in the Departments of Biochemistry and Biophysics, Microbiology, and Zoology, so those components will retain a clear identity in the proposed new School. The current degree and course designators will be retained. The degrees offered will include:
Biochemistry and Biophysics: BS, HBS, MA, MS, PhD, grad minor
Biology: BS, HBS, undergrad minor
General Science: BS, HBS
Microbiology: BS, HBS, MA, MS, PhD, grad and undergrad minor
Zoology: BA, BS, HBA, HBS, MA, MS, PhD, undergrad and grad minor

c. Manner in which the program will be delivered, including program location (if offered outside of the main campus), course scheduling, and the use of technology (for both on-campus and off-campus delivery).

There will be no changes in delivery mode. All of our current undergraduate and graduate degrees are offered face-to-face on the Corvallis campus. Courses which have been offered via Ecampus as an option for place-bound students will continue to be offered and the School will look for opportunities to expand their Ecampus offerings. The agreements in place to offer the Biology B.S. degree at OSU-Cascades will remain in place through the SLS.

d. Ways in which the program will seek to assure quality, access, and diversity.

The College of Science’s life science and health preparation degrees and programs have always attracted talented undergraduate and graduate students from Oregon, the nation, and the world. The Biology major provides the largest cohort of students to the Honors College of any program on campus. Many of OSU’s winners of prestigious scholarships (Goldwater, Udall, etc.) have come from the Biology and the Biochemistry and Biophysics programs.

The graduate programs have had long-standing success in recruiting high quality graduate students, both through their degrees and their participation in interdisciplinary programs like Molecular and Cellular Biology, and Environmental Sciences. Zoology (proposed Integrative Biology) is nationally ranked in Ecology and Evolution, Biochemistry and Biophysics has several faculty working with the Center for Healthy Aging and the Linus Pauling Institute, and Microbiology has joint faculty and projects with Veterinary Medicine and Agricultural Sciences. The graduate degree programs in the School will maintain these collaborative relationships that are a key factor in student recruiting.

The School will continue to deliver a comprehensive life science curriculum and will, as the College has in the past, provide access for all students who need the courses for their degree programs. Coordinated proposals for enhancing the degree choices for life science students are being submitted. Access will be managed through conversations between the head advisors, key administrators in the unit, and programs across campus.

Because such a large proportion of undergraduate majors in the College are in life science degree programs, those programs have always been involved in initiatives designed to improve the student experience and to increase the diversity of the student population. The large research portfolio of the SLS faculty includes commitments to student recruitment and diversity (programs like IGERTs and those with broader outreach requirements).

One of the principal goals in creating the School is to improve coordination and collaboration between the various units who have been delivering the life science curriculum. This coordination will improve assessment of courses used in common and will be a critical tool in modifying existing degrees and creating new programs in the future to improve program choices for students. A case in point is the submitted Abbreviated Category I proposal to rename the BS in General Science degree to the BS in BioHealth Sciences, to be followed by a Category I
A proposal to create a BS in Molecular Biology degree. The BioHealth Sciences and Molecular Biology degrees would be managed by the Department of Microbiology and Department of Biochemistry and Biophysics, respectively. Furthermore, the alignment of the 800 Biology and 900 General Science majors within department units will greatly improve the overall student experience by providing these students with increased opportunities to engage in department activities and to interact with faculty.

e. **Anticipated Fall term headcount and FTE enrollment over each of the next five years.**

Undergraduate enrollments have been growing at 2-8% a year, total SCH at 4-6% per year, and graduate majors at 6-9% per year (Table 2).

**Table 2** Proposed School of Life Science Headcount and SCH AY 2008-09 to AY 2011-12

<table>
<thead>
<tr>
<th></th>
<th>SLS Total</th>
<th>Biochem Biophys</th>
<th>Biology</th>
<th>General Science</th>
<th>Micro</th>
<th>Zoology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2008-2009</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergrad majors</td>
<td>2,034</td>
<td>128</td>
<td>685</td>
<td>868</td>
<td>143</td>
<td>210</td>
</tr>
<tr>
<td>Total SCH</td>
<td>51,913</td>
<td>5,507</td>
<td>26,448</td>
<td>37</td>
<td>6,644</td>
<td>13,277</td>
</tr>
<tr>
<td>Graduate majors</td>
<td>81</td>
<td>18</td>
<td>-</td>
<td>-</td>
<td>23</td>
<td>40</td>
</tr>
<tr>
<td><strong>2009-2010</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergrad majors</td>
<td>2,205</td>
<td>139</td>
<td>692</td>
<td>965</td>
<td>145</td>
<td>264</td>
</tr>
<tr>
<td>Total SCH</td>
<td>55,043</td>
<td>6,174</td>
<td>27,921</td>
<td>210</td>
<td>6,964</td>
<td>13,774</td>
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<tr>
<td>Graduate majors</td>
<td>86</td>
<td>19</td>
<td>-</td>
<td>-</td>
<td>34</td>
<td>33</td>
</tr>
<tr>
<td><strong>2010-2011</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergrad majors</td>
<td>2,328</td>
<td>163</td>
<td>737</td>
<td>1,018</td>
<td>173</td>
<td>237</td>
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<tr>
<td>Total SCH</td>
<td>57,267</td>
<td>6,141</td>
<td>28,411</td>
<td>140</td>
<td>7,317</td>
<td>15,258</td>
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<tr>
<td>Graduate majors</td>
<td>93</td>
<td>21</td>
<td>-</td>
<td>-</td>
<td>32</td>
<td>40</td>
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<tr>
<td><strong>2011-2012</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergrad majors</td>
<td>2,385</td>
<td>181</td>
<td>756</td>
<td>961</td>
<td>215</td>
<td>272</td>
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<tr>
<td>Total SCH</td>
<td>58,985</td>
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<td>N/A</td>
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<tr>
<td>Graduate majors</td>
<td>100</td>
<td>20</td>
<td>-</td>
<td>-</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>
Assuming a 3% growth in the next five years as the University’s enrollment grows, we expect to see 2,700 undergraduate and 115 graduate majors by AY 2015-2016 (Table 3).

Table 3. Fall Term Headcount and SCH AY 2011-12 to AY 2015-2016

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Undergraduate Majors</th>
<th>Total SCH</th>
<th>Graduate Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-12</td>
<td>2,385</td>
<td>58,985</td>
<td>102</td>
</tr>
<tr>
<td>2012-13</td>
<td>2,470</td>
<td>60,755</td>
<td>105</td>
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<tr>
<td>2013-14</td>
<td>2,544</td>
<td>62,580</td>
<td>108</td>
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<tr>
<td>2014-15</td>
<td>2,620</td>
<td>64,545</td>
<td>111</td>
</tr>
<tr>
<td>2015-16</td>
<td>2,700</td>
<td>66,390</td>
<td>115</td>
</tr>
</tbody>
</table>

f. Expected degrees/certificates produced over the next five years.

The programs that will contribute to the SLS have graduated 320-350 undergraduate majors, 2-5 Masters students, and 5-15 Ph.D. students over the last three years (Table 4). We expect to see growth in the graduate degree completion rates because of the recent addition of new faculty who will expand the mentoring capacity of the units. The undergraduate graduation rates will begin to grow in proportion to the undergraduate enrollments. The graduation growth has not tracked the enrollment growth precisely, because students in many of the pre-health programs transfer to professional degree completion paths at other institutions (pharmacy, nursing, therapy, etc.). An estimate of graduates from the proposed School by AY2015-16 is at least 385 baccalaureate, 6-8 masters, and 13-18 doctorate degrees awarded each year (Table 5).

Table 4. Degrees awarded: AY 2008-09 to AY 2010-11

<table>
<thead>
<tr>
<th>Year</th>
<th>SLS Total</th>
<th>Biochem</th>
<th>Biophys</th>
<th>Biology</th>
<th>General Science</th>
<th>Micro</th>
<th>Zoology</th>
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<td>2008-2009</td>
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<tr>
<td>Undergrad Degrees</td>
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<td>16</td>
<td></td>
<td>122</td>
<td>119</td>
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<td>35</td>
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<tr>
<td>Masters Degrees</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>PhD Degrees</td>
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<td>2</td>
<td></td>
<td></td>
<td></td>
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<td>3</td>
</tr>
<tr>
<td>2009-2010</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Undergrad Degrees</td>
<td>345</td>
<td>19</td>
<td></td>
<td>112</td>
<td>145</td>
<td>30</td>
<td>39</td>
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<td>Masters Degrees</td>
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<tr>
<td>PhD Degrees</td>
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<td>3</td>
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<tr>
<td>2010-2011</td>
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<tr>
<td>Undergrad Degrees</td>
<td>327</td>
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<td>107</td>
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<tr>
<td>Masters Degrees</td>
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<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>PhD Degrees</td>
<td>12</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 5. Undergraduate and graduate degrees projected AY2011-12 to AY2015-16

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Undergraduate Degrees</th>
<th>M.S. Degrees*</th>
<th>Ph.D. Degrees</th>
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</thead>
<tbody>
<tr>
<td>2011-12</td>
<td>345</td>
<td>3-5</td>
<td>10-15</td>
</tr>
<tr>
<td>2012-13</td>
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<td>2015-16</td>
<td>385</td>
<td>6-8</td>
<td>13-18</td>
</tr>
</tbody>
</table>

*Graduate programs in the SLS are predominantly Ph.D.; this assumes no addition of non-thesis M.S. degrees.

Characteristics of students to be served (resident/nonresident/international; traditional/nontraditional; full-time/part-time; etc.)

The creation of the SLS will not change the current demographics of the students. The undergraduate programs are among the most diverse in the College of Science, attracting large numbers of women and persons of color. This is due in part to the broad interest in health professional careers. The programs attract a high proportion of high-achieving students and programs like Marine Biology (an option in the Biology major) are attractive to many out-of-state students.

The graduate programs that will comprise the new School recruit nationally and internationally and bring a substantial number of non-resident students to OSU.

The coordination and visibility that the SLS will create will enhance our ability to recruit students at both the graduate and undergraduate levels.

Adequacy and quality of faculty delivering the program.

The programs that will be part of the proposed School are already strong, with a committed and talented group of faculty fully supporting the existing degrees and majors. The continuing increase in the student population at OSU will require additional faculty resources over time (as the life science degrees will continue to be in high demand).

Faculty resources – full-time, part-time, adjunct.

Faculty appointed in units of the proposed School are listed in Table 6.
Table 7. Corvallis Campus Staff (1.0 FTE unless noted) comprising the School of Life Sciences. There are additional Ecampus, summer, or term-to-term instructors as required. (Does not include FTE of faculty in BPP (CAS) who contribute to instruction in the Biology major.)

<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>9 or 12</th>
<th>FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aljets, A</td>
<td>Advisor</td>
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<tr>
<td>Colvin, C</td>
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<tr>
<td>Harvey, S</td>
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<tr>
<td>Kneecce, K</td>
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<tr>
<td>McLeod, B</td>
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<tr>
<td>Pereira, C</td>
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<td>Wolf, A</td>
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<tr>
<td>Bevandich, T</td>
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<tr>
<td>Fulton, M</td>
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<table>
<thead>
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<tr>
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<td>Partridge</td>
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<tr>
<td>Robe</td>
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<tr>
<td>Tatala, S</td>
<td>OS1</td>
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<td>0.625</td>
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</table>

* Departmental home in COS but with no COS FTE.

j. Other staff.

There are a number of staff assigned to the proposed School of Life Sciences already, because of the size of the undergraduate populations. As we see increased growth in enrollments, the addition of more advising capacity will be a high priority. Current staff include:

<table>
<thead>
<tr>
<th>Name</th>
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<th>FTE</th>
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</thead>
<tbody>
<tr>
<td>Denver, D</td>
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<tr>
<td>Hsu, V</td>
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<tr>
<td>Lytle, D</td>
<td>Assoc</td>
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<td>Warrick, D</td>
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<td>Blair, L</td>
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<tr>
<td>Bruslind, L</td>
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<td>Kayes, L</td>
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</tr>
<tr>
<td>Quick, D</td>
<td>Instr</td>
<td>13</td>
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</tr>
</tbody>
</table>
Note: Two new advising positions have been added this year to support advising of pre-Pharmacy and other life sciences students.

Facilities, library, and other resources.

As this is a reorganization of existing programs and staff, no new library or facility resources will be required. Space currently assigned to the units and programs of the proposed School will remain assigned to the School. The new School will work with Facilities Services on requests for appropriate additional space as the degree programs continue to grow.

k. Anticipated start date: January 1, 2013

2. Relationship to Mission and Goals

a. Manner in which the proposed program supports the institution’s mission and goals for access; student learning; research, and/or scholarly work; and service.

The programs that will constitute the proposed School are already critical elements of the University’s strategic goals. The creation of the School will foster improved coordination and development of undergraduate and graduate curriculum and will be attractive in recruiting faculty in the future. The clear interaction and collaboration of different parts of life sciences is an important feature of modern biological research.

b. Connection of the proposed program to the institution’s strategic priorities and signature areas of focus.

The teaching programs and component courses delivered through the proposed School comprise the core educational opportunities in the fundamental life sciences at OSU. Several Biology courses are critical service courses that are key components of many other programs at OSU, including programs in CAS, PHHS, and CEOAS. Certain courses in the Biochemistry and Biophysics, Microbiology, and Zoology majors are likewise key courses in other programs. Baccalaureate Core courses serve students from CLA and other colleges. These contributions are consistent with the core educational roles expected of the CLA/COS. The component Departments of the proposed School currently teach a variety of courses for the OSU Honors College, and are the home to many Honors College students. (Biochemistry and Biophysics, Biology, Microbiology and Zoology together have 198 Honors College students, which comprise 13% of these majors. Indeed the Biology major has the highest number of Honors students and International Degree students of any major at OSU.) The proposed School will allow us to coordinate, advertise, expand and improve Honors course offerings, and to improve the ability of OSU to attract high caliber undergraduate students.

The research programs in the proposed School will contribute directly to OSU’s strategic focus areas of “Advancing the Science of Sustainable Earth Ecosystems” and “Improving Human Health and Wellness”. Scientists in the School are engaged with colleagues at other OUS institutions and most of the research hospitals in Oregon. The undergraduate programs are the College’s major focus for “sustaining and accelerating improvements in student learning and experience through creation of outstanding academic and student engagement programs”.

Current members of the proposed School are campus leaders in efforts to: involve
undergraduates in research; head the successful HHMI summer fellowship program for over ten years; serve on the OSU URISC panel; and direct the new Office of Undergraduate Research. The proposed School will help us extend these opportunities for research and faculty interaction to students currently transiting OSU in the non-departmental Biology Program and General Science Major. College advisors cannot provide the same contact between student and faculty that department-embedded professional advisors and faculty advisors can provide.

c. **Manner in which the proposed program contributes to Oregon University System goals for access; quality learning; knowledge creation and innovation; and economic and cultural support of Oregon and its communities.**

The programs in the proposed School are already well aligned with the goals of OSU and OUS. The undergraduate programs are an important part of preparing future health professionals and are among OSU’s largest and most successful research programs. The introductory life science courses are a part of undergraduate degrees across the campus and the research programs contribute to the work in biomedical sciences, ecological and environmental sciences, and genome-enabled biology. Existing program connections to OSU-Cascades will continue, as will the close connections to the Honors College. The life sciences have always been well represented in outreach and recruiting activities such as Discovery Days.

d. **Manner in which the program meets broad statewide needs and enhances the state’s capacity to respond effectively to social, economic, and environmental challenges and opportunities.**

The undergraduate degree programs are an important part of developing the workforce Oregon needs in the health professions, including medicine, dentistry, pharmacy, nursing, physicians’ assistants and other areas, including biotechnology. Scientists and graduate students in the proposed School will be working on problems relevant to marine reserves, environmental quality, infectious diseases, biomedical sciences, nutrition and health, and other areas of critical importance to Oregon’s future.

3. **Accreditation**

   a. **Accrediting body or professional society that has established standards in the area in which the program lies, if applicable.**

   There are no accrediting bodies or societies for the proposed School’s programs. However, we do use some national tests as part of assessment in individual programs. (In recent tests, in which 40,000 students from across the nation participated, OSU Biology majors scored above the national average in every life sciences category, including an astonishing 14% above the average in Biochemistry. The proposed School and the integration of its Programs into Departments will allow us to more widely assess how effective we are in preparing students for the next stage of their careers.)

   b. **Ability of the program to meet professional accreditation standards. If the program does not or cannot meet those standards, the proposal should identify the area(s) in which it is deficient and indicate steps needed to qualify the program for accreditation and date by which it would be expected to be fully accredited.**

   Not applicable.
c. If the proposed program is a graduate program in which the institution offers an undergraduate program, proposal should identify whether or not the undergraduate program is accredited and, if not, what would be required to qualify it for accreditation.

Not applicable.

d. If accreditation is a goal, the proposal should identify the steps being taken to achieve accreditation. If the program is not seeking accreditation, the proposal should indicate why it is not.

Not applicable.

4. Need

a. Evidence of market demand.

The student numbers clearly show the demand for the programs that will constitute the proposed new School of Life Sciences. The life sciences are the gateway degrees to careers in health sciences and represent an area of high demand and of actual and potential growth.

b. If the program’s location is shared with another similar OUS program, proposal should provide externally validated evidence of need (e.g., surveys, focus groups, documented requests, occupational/employment statistics and forecasts).

Not applicable.

c. Manner in which the program would serve the need for improved educational attainment in the region and state.

The degree programs in the proposed School of Life Sciences are important for Oregon’s plan for the future, both in terms of a health care professional workforce and in the goals for growth in the biotechnology-based economic sector. These programs provide access for Oregon students to pursue degrees that prepare them for these areas. Our recent offering of the Biology degree at the OSU-Cascades campus is an effort to increase the opportunity for educational attainment in these areas.

d. Manner in which the program would address the civic and cultural demands of citizenship.

The programs in the School of Life Sciences will be responsible for delivering much of the lower-division Baccalaureate Core instruction in Biology and many of the courses in the Synthesis category. These courses provide an insight and understanding of life sciences and biology that is increasingly important to informed citizenship. Advances in biotechnology, our understanding of the human genome, and knowledge of the effects of climate change on the world’s ecosystems will increasingly raise political, ethical, and religious issues that an informed citizenry must be able to understand.

5. Outcomes and Quality Assessment

a. Expected learning outcomes of the program.
The student learning outcomes for these programs will not change due to the creation of the School. The learning outcomes for the undergraduate programs are:

**Biochemistry and Biophysics B.S.:**

**Biochemistry Specific Core Knowledge:**

- Biochemistry Specific Core Knowledge: Students will be able to acquire, articulate, retain and apply specialized language and knowledge relevant to Biochemistry.
- Biophysics Specific Core Knowledge: Students will be able to acquire, articulate, retain and apply specialized language and knowledge relevant to Molecular Biophysics.
- Biochemistry & Biophysics Specific Laboratory Knowledge: Students will participate in research laboratories and contribute meaningfully to research efforts by applying skills from coursework supplemented with laboratory-specific techniques.
- General knowledge and skills: Students will communicate scientific concepts, experimental results and analytical arguments clearly and concisely, both verbally and in writing.
- Student Engagement: Students will demonstrate engagement in the Biochemistry & Biophysics discipline through involvement in research or internship activities, the Biochemistry & Biophysics Club (BB Club) and outreach or mentoring activities specific to Biochemistry & Biophysics.

**Biology B.S.:**

**Students will understand:**

- Conceptual Understandings. Students will demonstrate competency in:
  - fundamental concepts that characterize Biology, including concepts that characterize the various life science fields.
  - how scientific knowledge develops, including the historical development of foundational theories and laws, the nature of science (particularly tentativeness and creativity), and the relationship between science, technology, and society.
  - the process of scientific inquiry, including that scientists use varied methods; scientists test ideas; scientists use creativity, critical thinking, and current knowledge; and investigations commonly lead to additional questions.
- Skills. Students will be able to:
  - conduct background research on life science topics to make informed decisions, and develop understanding of basic concepts, processes and keywords necessary to investigate topics; skills for accessing and critiquing information; decision-making steps for specific Biology issues; and ways to present and discuss potentially controversial information.
  - function successfully within laboratory and field settings, including use of basic equipment (microscopes, measurement devices, and computer technologies); developing and utilizing appropriate safety protocols; and putting into practice conceptual understandings of the research process.
  - utilize a variety of skills related to learning Biology, including thinking skills of reasoning, critical thinking, creative thinking, and problem solving; and self-regulatory behaviors of organization, self-management, and monitoring through feedback from classmates and instructors.
  - utilize a variety of skills to share knowledge effectively, including oral and written communication skills; planning skills; and implementation skills of presenting material, motivating others, clarifying concepts and confirming understandings.
- Student Engagement and Professional Development. Students will:
work, volunteer or intern as a biologist in a professional context.
- perform relevant professional activities such as laboratory and/or field research, clinical work, presentations at professional meetings, and scientific writing.
- apply conceptual understandings (LOA) and skills (LOB) learned in coursework to professional situations in biology.
- explore professional avenues in various biological disciplines.

**General Science B.S.:**

- Students will demonstrate understanding of the skill set needed for successful integration into a research university setting.
- Professional communication skills used in a health profession related career:
  - Students will communicate professionally both verbally and in writing.
- Student Engagement:
  - Students will demonstrate engagement in the General Science discipline through involvement in research or internship activities, the Pre-Health Clubs (i.e. pre-Nursing, pre-Pharmacy, pre-Medical, pre-Dental, pre-Physical Therapy, etc.) and outreach or mentoring activities specific to their health professional discipline.
- Life Sciences Specific Core Knowledge:
  - Students will be able to acquire, articulate, retain and apply specialized language and knowledge relevant to life sciences.
- Professional School Acceptance: Students will meet pre-requisite requirements for application to health professions schoo

**Microbiology B.S.:**

- Microbiology Specific Core Knowledge: Students will be able to acquire, articulate, retain and apply specialized language and knowledge relevant to microbiology.
- Microbiology Specific Laboratory Knowledge: Students will acquire and demonstrate competency in laboratory safety and in routine and specialized microbiological laboratory skills applicable to microbiological research or clinical methods, including accurately reporting observations and analysis.
- General knowledge and skills: Students will communicate scientific concepts, experimental results and analytical arguments clearly and concisely, both verbally and in writing.
- Student Engagement: Students will demonstrate engagement in the Microbiology discipline through involvement in research or internship activities, the Microbiology Student Association Club (MSA) and outreach or mentoring activities specific to microbiology.

**Zoology B.S.:**

- Students will be able to recall, integrate, and apply essential core information about key components of the zoological sciences (ecology, evolution, physiology, cell biology).
- Students will be able to effectively communicate ideas orally, graphically, and in writing.
- Students will be able to use mathematics and statistics to analyze and propose evidence based solutions to zoological problems.

The Graduate Programs in the School will use a similar approach to outcomes and assessment. As an example, the graduate learning outcomes for the Zoology M.S. and Ph.D. are:
Graduate Learning Objectives/Outcomes for Ph.D. and M.S. Programs in Zoology, College of Science

Table 8 indicates what we have identified as “universal” graduate learning objectives, by which we assess graduate learning outcomes. For each we include the broadly used means of assessment. Individual programs and Departments may have additional graduate learning objectives; most often these are explicitly stated in a Departmental Graduate Handbook, in documentation provided by a professional organization or society, or included as degree requirements. The overarching objectives in the table address what are considered to be critical areas of competency (a comprehensive appreciation of the field of study, an understanding of current issues of importance in the field, and a demonstration of creativity) at various points on the path through graduate studies (admissions, matriculation to candidacy, graduation). Some of the objectives apply to any degree program, and some are specific to the non-thesis (coursework) MS, the non-thesis (project) MS, the thesis MS, or the PhD, as indicated. Likewise there is some variation amongst the degree programs as regards means of assessment.
### Table 8. Graduate learning outcomes in Department of Zoology

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<tr>
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<th>Ph.D. Objective</th>
<th>M.S. Objective</th>
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<tbody>
<tr>
<td>Students will have met the objectives for learning outcomes in an undergraduate discipline relevant to their graduate field of study. Scoring methods: 1</td>
<td>Students will have met the objectives for learning outcomes in an undergraduate discipline relevant to their graduate field of study. Scoring methods: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Graduates will be able to summarize major central issues and current research problems in their field. Scoring methods: 2-7</td>
<td>Graduates will be able to summarize major central issues and current research problems in their field. Scoring methods: 2,4-7</td>
</tr>
<tr>
<td></td>
<td>Graduates will be able to communicate the major tenets of their field and their work orally and in writing for students, peers and the lay public. Scoring methods: 3-7</td>
<td>Graduates will be able to communicate the major tenets of their field and their work orally and in writing for students, peers and the lay public. Scoring methods: 4-7</td>
</tr>
<tr>
<td></td>
<td>Graduates will be able to explain and identify areas of uncertainty in their fields. Scoring methods: 3-7</td>
<td>Graduates will be able to explain and identify areas of uncertainty in their fields. Scoring methods: 4-7</td>
</tr>
<tr>
<td></td>
<td>Graduates will have designed, carried out and presented an original work of research at the leading edge of their discipline. Scoring methods: 4-7</td>
<td>Graduates will have completed and defended: (1) an original manuscript based on either a review and synthesis of the primary literature [non-thesis (project) MS] or original research [thesis MS]; or (2) mastery of appropriate advanced coursework in the field. [non-thesis (coursework) MS] Scoring methods: 2,5,6,7</td>
</tr>
</tbody>
</table>

**Means of assessment** referenced in the table above include:

1. minimum admission standards, assessment of application materials, admissions process interviews
2. meeting a predetermined standard in graduate level coursework (content/subject matter and GPA)
3. a pass/fail oral preliminary exam
4. written research proposal
5. written thesis or research paper
6. oral defense
7. publication of research in peer reviewed journals
b. Methods by which the learning outcomes will be assessed and used to improve curriculum and instruction.

The programs are using a wide variety of methods to assess these outcomes, depending upon the outcome and the nature of the course or program that addresses the outcome. Detailed reports on assessment activities for these degrees are available on the website for OSU’s Office of Academic Programs, Assessment, and Accreditation. http://oregonstate.edu/admin/aa/apaa/

c. Program performance indicators, including prospects for success of program graduates (employment or graduate school) and consideration of licensure, if appropriate.

The performance indicators for these programs will not change. Some important metrics include:

- Retention rates of majors
- Graduation rates
- Acceptance rates to graduate school
- Acceptance rates to health professional programs
- Percentage of students with a research experience
- Percentage of students with an international experience

d. Nature and level of research and/or scholarly work expected of program faculty; indicators of success in those areas.

The faculty members of the proposed School of Life Sciences are accomplished and visible scholars. The standards for scholarly work will not change and will be enhanced by the integration across programs. Some of the key metrics used include:

- Publication of peer-reviewed articles in high impact journals in the life sciences
- Success in securing extramural research funding
- Participation in national and international meetings, conferences, and review panels in the discipline
- Contributions to reviewing and editing disciplinary journals
- Participation in national conferences for the development of research agendas
- Mentoring and advising graduate and undergraduate students

6. Program Integration and Collaboration

a. Closely related programs in other OUS universities and Oregon private institutions.
Degrees in life sciences are a core part of programs at all universities, particularly research universities. Degrees in biology and general science type programs (pre-health professional tracks) are common at those universities and both Portland State University and the University of Oregon offer Biology degrees and tracks to allow students to enter pre-health professional programs.

b. Ways in which the program complements other similar programs in other Oregon institutions and other related programs at this institution. Proposal should identify the potential for collaboration.

Because OSU has the largest life science research and teaching program in Oregon, we have more diversity in our life science degrees. The B.S. degrees in Microbiology, Biochemistry and Biophysics, and Zoology are unique in OUS and offer unique opportunities for our students.

Many faculty members of the proposed School have had long-standing collaborations with colleagues at OSU and other OUS institutions. Those will certainly continue and will likely expand through work on collaborative facilities, programs, and statewide initiatives like the Oregon Translational Research and Drug Development Institute (OTRADI).

Courses in the Biology major serve students from several colleges and have been delivered in a collaborative manner involving faculty from the departments within the proposed School as well as the Department of Botany and Plant Pathology, which is now in the College of Agricultural Sciences. This collaborative delivery will continue and is critical to the continued diversity of course offerings.

c. If applicable, proposal should state why this program may not be collaborating with existing similar programs.

We anticipate close collaboration with colleagues throughout Oregon, as has been the case already.

d. Potential impacts on other programs in the areas of budget, enrollment, faculty workload, and facilities use.

The component programs, budgets, and staff of the proposed School already exist, so the creation of the School will not adversely impact other programs in the College or University. The improved communication will aid coordination of Life Sciences programs across campus and between colleges.

7. Financial Sustainability (attach the completed Budget Outline)

a. Business plan for the program that anticipates and provides for its long-term financial viability, addressing anticipated sources of funds, the ability to recruit and retain faculty, and plans for assuring adequate library support over the long term.

The programs that will make up the proposed School already constitute a major portion of the College’s budget. The programs have high demand and are clearly sustainable for the long-term. Growth in Summer Term, Ecampus, and returned overhead revenues have been important in meeting the needs created by constant enrollment growth.

The library support is already strong for this area, as life sciences are one of OSU’s signature
research areas. One of the goals of the proposed School is to provide coordination and integration in faculty hiring, so this will only be a plus for programs that already are very successful in recruiting some of the very best scientists in the world.

b. **Plans for development and maintenance of unique resources (buildings, laboratories, technology) necessary to offer a quality program in this field.**

The programs are strong and nothing will change with the creation of the School in regards to resources. The most pressing need remains modern laboratory space and adequate classroom space. These needs exist whether the School is created or not. The College is working with units and Facilities Services on individual issues and on a larger plan for long-term growth.

c. **Targeted student/faculty ratio (student FTE divided by faculty FTE).**

The ratio of undergraduate majors to instructional faculty is currently about 39:1. This reflects the very high demand for these programs. One of the issues to consider in faculty growth is creating adequate faculty capacity to provide research experiences for this large undergraduate population.

The ratio of equivalent student FTE (Total SCH/45) to instructional faculty is 21:1.

The ratio of graduate students to tenure-rank faculty is 2:1. There is some capacity for growth here, in large part because the faculty numbers reflect the recent recruitment of a number of junior faculty.

d. **Resources to be devoted to student recruitment.**

The recruitment of undergraduates is largely through the University’s Admissions Office. The investments in graduate recruitment made by individual units, both individually and jointly with other life science units or programs will continue as at present.

8. **External Review:**

No new graduate programs are proposed so no external review is required.
Appendices: Supporting documents

Appendix A: Support from Department and Program Liaisons and Chairs

Our signatures below certify that the proposal has been reviewed and approved by the constituent faculties of the proposed School of Life Sciences:

____________________________________________  ______________________
Gary Merrill, Biochemistry and Biophysics     Date

____________________________________________  ______________________
Robert Mason, Biology                         Date

____________________________________________  ______________________
Janine Trempy, General Science              Date

____________________________________________  ______________________
Theo Dreher, Microbiology                     Date

____________________________________________  ______________________
Virginia Weis, Zoology                         Date
Appendix B: Budget outline pages

Costs for the School are detailed below. These include:

a) One month of summer salary for the School Director (The highest salary of the current three Chairs is provided in the budget sheets as an estimate). This will be reallocated from existing budgets in the College.

b) Transfer of FTE from the Biology Program to the Integrative Biology Department for an office specialist and for Administrative FTE. The position of Head of the Biology Program will be eliminated. However Integrative Biology will appoint an Associate Chair and Director of Undergraduate Programs to run the Biology and Zoology majors.

c) Costs of $2,000 to add stationery and signage, other printing expenses and other expendable consumption as necessary (from Foundation funds).

d) Recurring commitment of $8,000 per year to the School Director for use as an investment fund to seed projects in the School for curriculum, student engagement, or research initiatives. This will be reallocated from existing budgets in the College.

e) A 4% annual inflationary increase is included in the costs after AY2012-13.
### B. Budget Outline Form: Estimated Costs and Sources of Funds for Proposed Program

Total new resources required to handle the increased workload, if any. If no new resources are required, budgetary impact should be reported as zero.

Institution: **Oregon State University**  
Program: **School of Life Sciences, College of Science**  
Academic Year: **2012-2013**

**Indicate the year:**  
X First  ____ Second  ____ Third  ____ Fourth

**Prepare one page each of the first four years**

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B. Budget Outline Form: Estimated Costs and Sources of Funds for Proposed Program

Total new resources required to handle the increased workload, if any. If no new resources are required, budgetary impact should be reported as zero.

Institution: Oregon State University
Program: School of Life Sciences, College of Science
Academic Year: 2013-2014

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Prepare one page each of the first four years
## B. Budget Outline Form: Estimated Costs and Sources of Funds for Proposed Program

Total new resources required to handle the increased workload, if any. If no new resources are required, budgetary impact should be reported as zero.

Institution: **Oregon State University**  
Program: **School of Life Sciences, College of Science**  
Academic Year: **2014-2015**

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|-----------| | | | | | 24,637 |
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| Faculty | IB Assoc. Chair 24,637 | | | | | |
| Support Staff (Include FTE) | 1.0 FTE OS 2 (35,520) | | | | | |
| Support Staff (Include FTE) | 38,419 | | | | | |
| OPE | 284 | 4,642 | | | | |
| Nonrecurring: | | | | | | |
| **Personnel Subtotal** | (796) | 20,650 | | | | |

| Other Resources | | | | | | 19,854 |
|-----------------| | | | | | 2,000 |
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| Other Expenses-stipend, support | 8,000 | | | | | |
| **Other Resources Subtotal** | | | 10,000 | | | |

| Physical Facilities | | | | | | 10,000 |
|---------------------| | | | | | 29,854 |
| Construction | | | | | | |
| Major Renovation | | | | | | |
| Other Expenses | | | | | | |
| **Physical Facilities Subtotal** | | | | 30,650 | | |

| **GRAND TOTAL** | | | | | (796) | |

26
### B. Budget Outline Form: Estimated Costs and Sources of Funds for Proposed Program

Total new resources required to handle the increased workload, if any. If no new resources are required, budgetary impact should be reported as zero.

**Institution:** Oregon State University  
**Program:** School of Life Sciences, College of Science  
**Academic Year:** 2015-2016

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**GRAND TOTAL:** 2,965 31,476 34,441
Appendix C: Campus Liaison Comments

Liaison Response to comments from Department of Botany and Plant Pathology

Liaison comments shown in blue. Responses in black.

Although many points were voiced and discussed by the faculty, the main issue of concern was dissolution of the Biology Program and transformation of this Program to a major in the Zoology Department. Pat Muir and Bruce McCune independently voice some of these additional points through this liaison process; these points will not be restated here. The consensus view of the faculty of Botany and Plant Pathology, with which I agree, is that the Department is not supportive of the dissolution of the Biology Program and the movement of Biology, as a major, into the Zoology Department. Major concerns of this action are provided below:

- **Pedagogical.** Modern education is becoming more distributed, as students need broader exposure to more interdisciplinary instruction. The intellectual and human resources necessary to offer a modern degree in Biology are not housed in one department at OSU. If anything, the program should become more inclusive of the rich strengths in biological sciences on the OSU campus, which exists across different units. This inclusive approach fits well within the National Academies Report on "The New Biology for the 21st Century" and is an approach visible at some of the major Universities in the country; e.g., The Institute for Biology Education, University of Wisconsin, http://jwww.biology.wisc.edu/

We looked extensively into the ways in which peer institutions and aspirational peer institutions structure their Life Sciences majors and we found that there is a large diversity of models that are determined in part by the history and context of the different units involved. We do not believe that creation of the School, as described in the proposal, would exclude the broad strengths in the biological sciences represented across campus. It is our intent to have BPP continue to contribute the teaching mission of the School in the Biology major, as detailed in the MOU between COS and BPP, and to contribute to curriculum design and planning. We believe the proposed changes will increase coordination between the different departments and the 5 majors offered within the School.

- **Practical.** The Department of Botany and Plant Pathology has long been committed, and remains so, to the Biology Program. It is simply unrealistic to assume, however, that a department should commit its valuable and limited human and monetary resources to another department’s major. Also, it remains a challenge to distribute and assign credit for student credits hours; the proposed move would significantly complicate an already difficult situation.

We agree that equitable distribution of credit for student credit hours is a challenge for all departments whose faculty teach in other units. In the case of the Biology major in its current form, this includes BPP, BB and Zoology. The School leadership will take every measure possible to ensure that due credit is given for the appropriate effort given, including assignment of student credit hours and allocation of graduate teaching assistantships and the concomitant graduate tuition remissions.
• Education about the biology of plants and the role of plants in human life and the entire biosphere should be enhanced in the Biology Program. Movement of Biology to a major in the Zoology Department has the grave potential to short-change the plant sciences in the minds of the students, relegating this component of their education as subsidiary to the biology of animals or bio-medical components. Biology majors need also to consider, for example, that it could be their job to find ways to feed the planet.

Faculty in the departments of the proposed School share these concerns as well and are supportive of BPP’s continued contribution to the curriculum design and delivery of teaching in the Biology major. The contribution made by faculty in BPP to the teaching mission of the Biology major would not change with administrative realignment.

• Although not part of this proposal, we understand there has been discussion related to the potential elimination of the Zoology major and folding this major under the Biology major as an "option". If this scenario were to become a reality, it would only enhance the branding problem for Biology and further exacerbate concerns addressed above.

There have indeed been multiple discussions around different curricular scenarios in the School, including elimination of the Zoology major. It is one of the scenarios discussed, but is not a part of this proposal and no decisions have been made regarding elimination of this degree. Indeed there is not agreement among Zoology faculty that elimination of the degree is a good idea.

• The extent of BPP’s involvement in the Biology Program, from our perspective, was not adequately represented in the Proposal.

The focus of the proposal is, quite intentionally, on the proposed administrative structure of the School of Life Sciences, not on the relative contributions of individuals and Departments to the Biology Program.

In summary, the Department of Botany and Plant Pathology, a unit that contributes to a substantial portion of the teaching FTE in Biology, was not sufficiently consulted on this matter prior to receiving a copy of this Abbreviated Category 1 Proposal. We recognize the faculty involved with the preparation of this Proposal spent a great deal of time and effort in its design. However, we do not agree with the curricular changes as proposed and request that additional and more extensive liaison be conducted to resolve the issues in a manner that is equitable to all parties.

BPP’s involvement is focused on the Biology degree, while the School of Life Sciences represents broader issues dealing with teaching and research in the life sciences as delivered by the three departments in COS. BPP did have representation on a curriculum planning committee that met periodically during the 2011-2012 academic year, in order to participate in discussion affecting Biology. It was felt appropriate that discussions regarding unit re-alignment and the design of the School be initiated and carried out within the College of Science, allowing the liaison process to serve as the forum in which to hear and address all reasonable concerns (such as how SLS organization may affect the Biology major and BPP participation). BPP will have equal representation with each of the three SLS units on the curriculum committee in the new School.
Liaison Response to comments from Environmental Sciences

Liaison comments shown in blue. Responses in black

I appreciate all of the hard work and thought that has gone into the development of the proposal. Fundamentally, however, I am not sure what the reorganization accomplishes besides attempting to provide General Science majors with a more concrete home and identity. I am not convinced that it will actually accomplish this, except on paper.

We agree that a major goal of the proposal is to improve the General Science major experience and to give more attention to and provide more resources for this very large group of students. This proposal takes the first step in this process by proposing changes in the administration of the degree that will result in departments taking the responsibility for administering the major and embedding advising at the department level. Subsequent proposals, still to be developed, will address curricular changes and other improvements to the student experience.

A second fundamental concern is loss of visibility for the Biology Major (formerly Program); will prospective and current students know to look for it under Zoology?

We do not foresee a loss of visibility. The web presence for the major, the primary way that students find programs, will remain the same: embedded in COS.

I do not see cost savings associated with the proposal – BI will no longer have a Chair, but there will still be an Associate Chair in Zoology to assist in running the BI major. There is also a statement that BI will no longer have a Head Advisor, but I'm not sure that there are cost savings associated with that change?

Cost savings is not a part of the goal of formation of the School.

I am concerned about the advisor:student ratio. The proposal indicated that there will be 2,300 students in the School (on page 2 – but on page 3 the number is 2,500). I see a total of 7.49 advising FTE listed on Table 7, page 10, which = 334 students per advisor using the 2,500 student number. However, that counts Claire Colvin at 1.0 FTE, and she is Head Advisor for the entire College. Take her out and you have 6.49 advisor FTE which means 385 students per advisor. This exceeds the recommended ratio (300 : 1) by a good bit, and even that ratio, while accepted by many, is unrealistic in my view. More advising FTE is badly needed.

We agree that there should be additional investment in professional advising in the future. The SLS leadership will strongly advocate for this at the College level. However, the estimation stated above for advisor:student ratios is incorrect. This is because of the significant role of faculty in the advising mission for Biology, Zoology and Biochemistry and Biophysics students. In all three of these majors, 1st and 2nd year students are advised by professional advisors and 3rd and 4th year students are given faculty advisors who assist them in planning and decisions related to continuing on to graduate school and career paths. Indeed, BPP faculty currently serve as advisors to Biology majors.
Couple this with the statement (near the bottom of page 2) that part of the point of the school is to help coordinate and develop experiential learning experiences for the huge student population of this school, and I don’t see a connect. How can the existing faculty in the various departments/programs that will comprise the school plus 6.49 advisor FTE really advance experiential learning? It seems, frankly, pretty clear to me that General Science majors will still basically be orphans, and that, at a minimum, additional advising FTE is needed.

We agree that General Science students in the present administrative configurations are not well-served or paid attention to by departments. This proposal is aimed at taking the first steps to improve their experience by structuring the units in the School to focus resources and attention on better serving the General Science students. This will result in the departments setting up student clubs, much like the existing Life Science Club, Microbiology Club and BB Club that will connect them with their peers and provide them with structured experiential opportunities. Likewise, development of a 1st year experience for General Science majors and providing advising that sets them up with research and internship experiences will be a priority once the new structure is in place.

Re advisor roles – page 12 (sic page 10), top paragraph, seems misleading – BI advisors were not college-level, but were program-level and were well equipped to guide students to appropriate advisors and faculty research mentors – that is, it seems to me that this paragraph is somewhat misleading re the roles of BI advisors.

The advising structure is laid out explicitly at the top of page 4. The pre-health advising will take place at the school level. Professional advisors for other life sciences students will be embedded in the departments. This is the current structure and there are no plans to change this. The two new hires listed on page 10 are 1 pre-health advisor, to advise at the School level, and one Biology advisor, to be housed with the other Biology advisors in Cordley Hall.

Page 4 – a 1-month summer stipend for the Director is not enough. I’ve worked way too many summers on a 2-week stipend, just directing Environmental Sciences, while working at least ½ time for the whole summer. The proposal should be realistic about this.

We believe that this will be sufficient compensation for the Director. The Director will also have administrative FTE as a Department Chair and the associated resources affiliated with that position.

I will leave comments on the BPP contributions up to Lynda to provide (she is collating departmental responses). I know that BPP feels a deep commitment to the BI Program, but I’ll just offer, without her advance approval, because I was contacted for liaison as Env Sci Director independently of my role in BPP, the following comments/questions:

(1) It seems odd to refer to this as a School of Life Sciences when it does not include plant sciences. I wonder about a name that is more reflective of the fact that the school, for the most part, is Life Sciences excluding plants? A related comment involves the statement on page 6 that a “comprehensive life science curriculum” will be delivered. Comprehensive, but excluding plants (again for the most part; I realize that some folks in Biochem/Biophysics probably study plant systems, and that some folks in MB may do the same, and that some faculty in Zoology include plants in their work).
(2) Pages 3 and 4 and org chart on page 5 – reference is made to BPP continuing to contribute to teaching and curriculum review/development in the BI major. It made good sense for BPP to contribute to an interdisciplinary BI Program, but I’m not sure that it will make as much sense to do so in a major nested within a Zoology Dept…? We have valued our contributions to the BI Program, of course; the BI major within a Zoology Dept may be more challenging, but that is not for me to weigh in on!

The proposed structural change is focused on administrative changes to the way the units are run and operated. We do not propose to change the curriculum of any of the majors in this proposal. It is our firm hope and desire that Department Botany and Plant Pathology remain a crucial contributor to the delivery of the Biology major and that they will have a voice in determining future curricular modifications within the majors in the School. This would be achieved by representation equal to the three departments in the School on the curriculum committee (see bottom of page 3).

(3) The MOU that established the continuing relationship between BPP and BI was between BPP and a Biology Program – how does the elimination of the Biology Program affect the MOU?

It is our intent to honor the existing MOU.

(4) Table 6 page 10 excludes BPP faculty FTE even though many of us teach in BI – there’s a disconnect between statements about continued BPP involvement and this table, I think?

The table list only faculty in the College of Science.

I thought of one additional comment on the Cat I re School of Life Sciences. I know from having worked through (or partially through!) the move of the Env Sci undergrad program from COS to CEOAS that changes in administrative structure, names of units, curricular re-alignments and so forth all seem simple until you start getting into “details.” These are largely, but not exclusively, associated with Registrar’s Office and OSU catalog and MyDegrees changes – there are all kinds of numeric codes that need to be changed; innumerable places emerge from the shadows, in which a program is listed as one thing but now must be listed as another (e.g., Biology Program versus Biology major)….I have been astonished by how much work is involved! The three primary Env Sci advisors and I have all spent innumerable hours over the past two terms trying to track everything down, communicate with everyone who needs to be communicated with, and get all of the needed changes made and communicated effectively, where relevant, to students.

Of course “time is money” and time spent on these sorts of things can’t be spent doing other things. The time is well spent IF the change or changes will constitute a significant improvement. In the case of Env Sci’s move to CEOAS, I believe this to be the case. I hope that will be the case with this proposal, but, as noted before, I’m not convinced of that.

We believe that the time it will take for these changes will be worth it because we believe that a change in structure will be good for the students in Life Science majors in the College.

Just one more thought about the Cat I – here’s the nutshell:

(1) I don’t see that the Biology Program as it exists now is anything that needs “fixing” – it seems to me that it functions quite well, student performances are strong as are the impressions that
they convey about their experiences in the BI Program during exit interviews. I fear that the proposed rearranging will not help it at all, and will weaken it if anything. It “ain’t broke,” in my view.

(2) I don’t see that the proposal will fix what needs fixing, which is hundreds of semi-homeless General Sciences students and their needs. Simply allocating a batch of them to MB and another batch of them to BB without also allocating significant support to help them – first year orientations, advising with an improved ratio of students to advisors, serious faculty commitment to guiding them towards experiential learning opportunities, and the oversight of a leader who really cares about THEM (not just as tacked on, possibly “second class” add ons to their departmental lists) are needed. Maybe I missed it in my quick skim of the proposal, but I didn’t see a serious commitment to them in it – frankly more as if people’s attitudes were “this General Science thing has been a problem for years – let’s just stick them in some departments!” This one IS “broke” and I don’t see the proposed arrangements as fixing what is broken.

We agree that the Biology major is on good footing. We also agree that the General Science majors are not well-served by the current structure. We believe that creation of the School will preserve the strength of the Biology major, take a first step toward committing departments and faculty to General Science majors and greatly improve coordination and future planning for all majors in the school.

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Liaison Response to comments from College of Agricultural Sciences

Liaison comments shown in blue. Responses in black.

The College of Agricultural Sciences is strongly committed to the continued success of the Biology Program. The Biology Program annually serves thousands of students including over 750 majors (2010-11). All colleges with undergraduate students utilize core biology courses offered by this program.

However, we have identified key issues with the current CAT I proposal that need addressing.

- Structure of proposed curriculum committee that may limit opportunity for meaningful input by faculty outside of the school. This is especially critical for BPP faculty, who offer over 27% of the biology program SCH.

As stated on page 3 and in Figure 1b, faculty in BPP would have representation on the School curriculum committee equal to each of the three departments in the school. They would therefore contribute fully to curriculum planning and coordination among the majors and they would be able to represent the interests of the plant sciences.

- Potential for incongruence with the Provost’s MOU (Aug 19, 2010) that moved BPP to CAS.
Faculty expertise in biological sciences at OSU is distributed among many units and colleges. It is important that OSU brings together those resources effectively to provide teaching, mentoring and research opportunities for its undergraduate students, particularly in the collaborative, interdisciplinary environment that is central to its vision.”

Creation of the School is not an attempt at exclusion. It is our full intent and hope to have BPP’s continued participation in the teaching, mentoring and undergraduate research mission of the Biology major. We fully intend to honor the MOU between COS and BPP. We are in discussion with the relevant departments and College of Science leadership to address our concerns. We anticipate reaching a mutually acceptable modified CAT I that will insure that the Biology Program continues to provide an excellent undergraduate experience.

Liaison Response to comments from College of Public Health and Human Sciences

Liaison comments shown in blue. Responses in black.

The Abbreviated Category I proposal to create a School of Life Sciences in COS was distributed to the leadership in PHHS. The proposal was reviewed and comments were collected and summarized (below).

The proposal would be stronger if the justification more specifically explained how the School of Life Sciences contributes to the University’s Healthy People Initiative beyond what appears to be a logical grouping of disciplines.

The proposal contributes to the University’s Healthy People initiative by creating administrative changes that will enhance the delivery of coursework and improving the curriculum for all students interested in pursuing careers in the health sciences. By increasing coordination between departments and decreasing overlap and redundancies in coursework, the proposed changes will allow the proposed School of Life Sciences to more efficiently deliver an evolving and dynamic curriculum.

There is concern that the proposed reorganization does not create a school in the same way that school formation has occurred in the recent past at OSU. Other colleges (Engineering, Liberal Arts, Public Health & Human Sciences) have created schools that merged existing departments into a new and larger academic unit. As proposed, this reorganization does not create a new academic unit by merging previously existing academic units. The proposed unit ‘school’ formalizes an affiliation of 3 departments which continue to have individual autonomy in the normal departmental functions of budgeting, tenure and promotion, personnel, and
program administration. The affiliation of the 3 departments is more like the affiliation of 3 colleges of a division, which were also formed to promote coordination and integration among the units. Divisions are not considered academic units and have not historically engaged the Category I curricular process.

There is more than one way to design a school. The creation of the School as a confederation of departments is endorsed by the faculty within the three departmental units and has the support of the Dean of Science and the Division Dean (see liaison support). We believe that this administrative alignment will increase coordination between units regarding strategic planning, faculty hiring and formation of research clusters or areas of concentration. It will also improve coordination of the curricula of the 5 life sciences majors within the school by aligning courses and course content, reducing redundancy and working towards a unified vision on curricular growth and planning.

By retaining the departmental academic unit structure, the Academic Systems Guidelines mandate to create academic units that have at least 20 faculty and that have 3-yr averages of graduating 5 masters and 2 doctoral students, respectively, is not met by this proposal. It appears that Biochemistry & Biophysics and Microbiology fail to meet one or more of these requirements.

With recent growth in student numbers driving recent faculty hiring that has not yet resulted in the expected increased graduate student output. The guideline numbers should be realized in the near term. Also, the guidelines of 5 MS and 2 PhD students must be considered generic, as some programs train primarily PhD candidate while others train primarily MS candidates. For example, the overwhelming majority of BB graduate students are PhD candidates.

Since this proposal does not constitute a merger of existing academic units or the creation of a new academic unit, the focus of this proposal is limited to the discontinuation of the Biology Program. The discontinuation of the Biology Program is proposed to be accomplished by moving the administration of the Biology major to Zoology, the assignment of one track of the General Science major to Biochemistry & Biophysics (Molecular Biology), and the other track to Microbiology (Biohealth), pending approval of the Category II proposal to effect this division of the major.

The use of “Health Professional” in the name of the advising office does not appear necessary (“Health” does not appear in the name of any of the units) and may cause confusion for students outside of COS looking for information about health professions. A number of locations on campus exist where health profession advising occurs; therefore, the name “Life Sciences Advising” for the proposed school’s advising office appears more appropriate.
Pre-health advising has been a major part of the advising mission in the College for years. With 800 General Science Major in the School, many of whom are pre-health in focus, pre-health advising remains an important focus in the School.
Letters of support from parties outside of OSU were deemed unnecessary for this proposal.
Dear Virginia,

RE: Category I to create a School of Life Sciences

On behalf of the College of Agricultural Sciences (CAS), we wish to enter the follow liaison comments into the record. When our initial liaison comments were submitted by the College of Agricultural Sciences, we believed that further conversations between the biological science units within the College of Science (COS) and the Department of Botany and Plant Pathology (BPP) would lead to some resolution of the issues we have raised. Whereas we have no objections to the creation of a School of Life Sciences, we have continued to raise concerns about the elimination of the biology program and the placement of those majors under the supervision of zoology. The liaison responses provided by you in late July (attached) do not address these concerns adequately. Since the subsequent conversations appear not to have changed the CAT I, we wish to add the following information to the record:

The College of Agricultural Sciences remains strongly committed to the continued success of the Biology Program which annually serves thousands of students including over 750 majors (2010-11). All colleges with undergraduate students utilize core biology courses offered by this program, and the number of colleges requiring strong plant science undergraduate training requires that the proposed School not exclude a mechanism by which additional FTE can be added in plant science.

We believe key issues with the current CAT I proposal need further addressing.

- Structure of proposed curriculum committee may appear to include a voice for Botany and Plant Pathology (BPP) but since staffing for the biological sciences is decided only by members of the COS units and approval of curriculum requires those same faculty vote, there remains a lack of opportunity for meaningful input by faculty outside of the school. This is especially critical for BPP faculty, who offer over 27% of the biology program SCH. Whereas you believe this has been addressed, as the number of biology majors increase, additional courses will be needed. At present, no process proposed would allow additional plant science FTE to be assigned to a department outside of the College of Science.

- Incongruence with the Provost’s MOU (Aug 19, 2010) that moved BPP to CAS.
  - “Faculty expertise in biological sciences at OSU is distributed among many units and colleges. It is important that OSU brings together those resources effectively to provide teaching, mentoring and research opportunities for its undergraduate students, particularly in the collaborative, interdisciplinary environment that is central to its vision.”
  - Your response that you intend to honor the MOU does not address our belief that moving the biology major to a department of zoology is not in the best interests of the students or the university.

- Based on data provided by Program director Bob Mason, in 2010-2011, 30,404 SCH were delivered by the biology program. Of those, 8,003 SCH were taught by BPP and 234 by crop and soil science (CSS). That represents 27% of the SCH offered. In addition, BPP faculty advise
undergraduate biology students and host dozens of others in research laboratories for undergraduate research experiences. Under the proposed changes, it is not clear how students would retain access to those opportunities.

- The proposed construct of having a department of zoology offer a biology degree is awkward, especially since over 27% of the SCH are offered by faculty in another college.
- Currently, as an autonomous program, the Biology Program serves a diverse undergraduate population, engages all departments in the life sciences, and provides a broad foundation in Biology education. Zoology is a sub-discipline of Biology. The plan to administer a Biology major by Zoology has the potential to change student perception of Biology into a more narrow discipline at the expense of other sub-disciplines such as Microbiology, Biochemistry, and especially Agricultural sciences, i.e., plant biology.
- In the Provost’s MOU, references are made to:
  - “The CAS will be responsible and accountable for contributing to a strong university-wide Biology Program, for participating in active advising and mentoring of undergraduate biology students, for providing Graduate Teaching Assistants for the Biology Program, and for working with the COS and other relevant academic colleges to manage and sustain a strong Biology program and curriculum at OSU”
  - “It is critical that the University continues to provide a strong Biology Program for its undergraduate students. Faculty expertise in biological sciences at OSU is distributed among many units and colleges. It is important that OSU brings together those resources effectively to provide teaching, mentoring and research opportunities for its undergraduate students, particularly in the collaborative, interdisciplinary environment that is central to its vision.”

We do not see the proposal for the School of Life Sciences providing such an opportunity for broadening and supporting a strong major in biology.

Ultimately, the importance of biological sciences and the wide distribution of faculty with expertise in this area at OSU would suggest that the biology program might be placed at the university level; this has happened at other institutions. However, we are not proposing that at this time but rather that the biology major be placed at the School level and be managed similarly to how it has been in the past. We are sure that one can find many different models for how biology is offered at other institutions but the construct proposed here is highly unusual, if not unique.

Input from faculty who have taught in the biology program includes “I do believe that this point in time is ripe for action to address the current awkwardness in the administration and curricula within the Life Science programs. There has been recent turnover in leadership in both colleges and this category I proposal as well as liaison responses may serve as nucleation points for more than just discussions, but action that can mutually benefit colleges and departments associated with the Life Sciences.” We believe that if the biology program is placed at the School level, that we can collectively work to address the concerns we have expressed.

The following Technical corrections are needed to the CAT I which we originally reviewed:
Table 6: BPP was specifically excluded from this table; further, FTE presented for MB faculty is inflated by FTE paid for by the CAS or the Center for Genome Research and Biocomputing (CGRB).

Correct COS FTE:

Dreher, T. 0.25 (0.25 CAS, 0.50 CGRB)
Giovannoni 0.8 (0.2 CAS)
Ream 0 (1.0 CAS)
Trempy 0.75 FTE (0.25 CAS)
Field 0.75 FTE (0.15 FTE paid by BRR/CAS)
Schuster 0.50 FTE (0.50 CAS)
Halsey, K. 0.75 FTE (0.25 CAS Patent funds)
Mueller, R. 0.75 FTE (0.25 CAS Patent)
Marshall, C. 0.80 FTE (0.20 CAS extension)
Fulton, M. 0.25

p. 20: Targeted student/faculty ratio (student FTE divided by faculty FTE): this calculation is not accurate; the 27% contributed by BPP is not taken into account here.
CoF supports this proposal.

Hal

From: Virginia Weis [mailto:weisv@science.oregonstate.edu]
Sent: Tuesday, May 29, 2012 1:55 PM
To: Ciuffetti, Lynda - Email Forward; Salwasser, Hal; Arp, Dan; Bray, Tammy; Flick, Larry; Zabriskie, Mark; Clarke, Cyril; Abbott, Mark Richard; Wolf, Aaron - Email Forward; Rodgers, Lawrence; Muir, Patricia; Blaustein, Andy; Weis, Virginia - Email Forward; Beach, Gary; Trempy, Janine; Remcho, Vincent; Ashford, Scott; Mason, Robert; Hacker, Marla E; Jansen, Henri; Carter, Rich; Lesser, Virginia; tpdick@math.oregonstate.edu; Dreher, Theo; Merrill, Gary - COS
Subject: Abbreviated Cat I proposal to create a School of Life Sciences in COS

The attached Abbreviated Category I Proposal describes a reorganization of several units in the College of Science to create a School of Life Sciences within the College. You may also access a draft of this proposal through the Curriculum Proposal System with this link: https://secure.oregonstate.edu/ap/cps/proposals/view/84452. (The proposal is in draft form. The signature page will be uploaded in early June. Liaison comments will be incorporated into the final draft document before submission.)

In accordance with the liaison criteria in the Curricular Procedures Handbook, this memo serves as notification to your college, department or program of our intent to make this administrative change.

Please send your comments, concern, or support to me by Friday June 15th, 2012. Your timely response is appreciated.

Please note that a lack of response will be interpreted as support.

Thank you for your time and input.

Regards,

Virginia M. Weis
Professor and Chair
Department of Zoology
3029 Cordley Hall
Oregon State University
Corvallis, OR 97331

Research ph: 541-737-4359
Chair's office ph: 541-737-5338
FAX: 541-737-0501
Weis lab URL: http://weis.science.oregonstate.edu/
Zoology URL: http://zoology.science.oregonstate.edu/
My only concern (but not a showstopper) is the placement of Biology into the Dept. of Zoology. The bio program enrollment is significantly larger than the zoology major (factor of 3-4), and it has a very large number of Honors students. Will there be a "branding" or identity problem with this restructuring?

On May 29, 2012, at 1:54 PM, Virginia Weis wrote:

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<Abbreviated Cat I prop school of life sciences final.pdf>
The Environmental Sciences Graduate Program supports the proposal of reorganization to create a school of Life Sciences.

On 5/29/2012 1:54 PM, Virginia Weis wrote:
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> Weis lab URL: <http://weis.science.oregonstate.edu/> 
> http://weis.science.oregonstate.edu/
Andrew R. Blaustein  
Director: Environmental Sciences Graduate Program & 
Professor of Zoology  
Oregon State University  
Department of Zoology  
3029 Cordley Hall  
Corvallis, Oregon 97331-2914  
Phone 541 737 5356  
FAX 541 737 8550  
e-mail blaustea@science.oregonstate.edu  
Web: http://oregonstate.edu/~blaustea/
From: tpdick@science.oregonstate.edu
To: Virginia Weis
Subject: Re: Abbreviated Cat I proposal to create a School of Life Sciences in COS
Date: Wednesday, May 30, 2012 11:50:54 AM

MTH supports the proposal.

Tom Dick
Chair

Quoting Virginia Weis <weisv@science.oregonstate.edu>:

> The attached Abbreviated Category I Proposal describes a reorganization of several units in the College of Science to create a School of Life Sciences within the College. You may also access a draft of this proposal through the Curriculum Proposal System with this link: https://secure.oregonstate.edu/ap/cps/proposals/view/84452. (The proposal is in draft form. The signature page will be uploaded in early June. Liaison comments will be incorporated into the final draft document before submission.)

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Zoology URL: <http://zoology.science.oregonstate.edu/>
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Hello Virginia,

I have looked over the proposal and, as there are no changes to undergrad or grad offerings at this point, it looks like we have no problem. Inasmuch as that many of our Environmental Science Undergrads take courses throughout the new school, we will want to stay coordinated on that front.

Anita

On May 29, 2012, at 3:52 PM, Aaron Wolf wrote:

> Thanks, Virginia. I am no longer chair of geosciences, and
> therefore no longer liaison. Anita Grunder has taken over as
> Associate Dean for CEOAS, and is the new liaison for this sort of
> issue.
>
> Thanks,
> Aaron
>
> On May 29, 2012, at 1:54 PM, Virginia Weis wrote:
> 
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> >> Department of Zoology
> >> 3029 Cordley Hall
> Aaron T. Wolf, PhD
> Professor of Geography
> College of Earth, Ocean, and Atmospheric Sciences
> Oregon State University
> 104 CEOAS Administration Building
> Corvallis, OR 97331-5503
> USA
>
> Tel: +1-541-737-2722
> Fax: +1-541-737-1200
> www.transboundarywaters.orst.edu

Anita Grunder
College of Earth, Ocean, and Atmospheric Sciences
CEOAS Admin 104
Oregon State University
Corvallis OR 97331
541 737 1249
FAX 541 737 1200
Virginia.
I support this reorganization.
Ginny

Virginia M. Lesser
Professor and Chair
Department of Statistics
Oregon State University
44 Kidder Hall
Corvallis, OR 97731-4606
PHONE: 541-737-3584
FAX: 541-737-3489

Quoting Virginia Weis <weisv@science.oregonstate.edu>:

> The attached Abbreviated Category I Proposal describes a reorganization of
> several units in the College of Science to create a School of Life Sciences
> within the College. You may also access a draft of this proposal through the
> Curriculum Proposal System with this link:
> https://secure.oregonstate.edu/ap/cps/proposals/view/84452 . (The proposal
> is in draft form. The signature page will be uploaded in early June.
> Liaison comments will be incorporated into the final draft document before
> submission.)
> In accordance with the liaison criteria in the Curricular Procedures
> Handbook, this memo serves as notification to your college, department or
> program of our intent to make this administrative change.
> Please send your comments, concern, or support to me by Friday June 15th,
> 2012. Your timely response is appreciated.
> Please note that a lack of response will be interpreted as support.
> Thank you for your time and input.

Regards,

Virginia M. Weis
Professor and Chair
Department of Zoology
Thank you for providing the opportunity to comment on the Abbreviated Category 1 Proposal.

For more than 20 years, the Department of Botany and Plant Pathology (BPP) has been and continues to be dedicated to the teaching, training, and advising of undergraduate students in the Biology Program. BPP has a substantial role in the teaching mission of the Biology Program, and is currently the second largest contributor. Thus, BPP has been a long-standing partner with the Biology Program and this is something we value a great deal.

The BI courses our faculty currently teach include the following: BI 211, BI 212, BI 213, BI 301, BI 311, BI 314, BI 370, BI 370 (Ecampus version), BI 371, BI 420, BI 445/545, BI 570/670. Our faculty serve as program-specific advisors, train a large number of Biology students in their laboratory and field research projects, and also serve as Honors Thesis advisors. The Department provides a substantial number of Graduate Teaching Assistants (GTAs) to the Biology Program, currently 25.5 quarters per year. The Department pays an unsustainable high cost (approximately 91%) for these GTAs through returned overhead.

As the Department and faculty invest substantial resources into the Biology Program, our faculty reviewed this Proposal and provided valuable insights. Although many points were voiced and discussed by the faculty, the main issue of concern was dissolution of the Biology Program and transformation of this Program to a major in the Zoology Department. Pat Muir and Bruce McCune independently voice some of these additional points through this liaison process; these points will not be restated here. The consensus view of the faculty of Botany and Plant Pathology, with which I agree, is that the Department is not supportive of the dissolution of the Biology Program and the movement of Biology, as a major, into the Zoology Department. Major concerns of this action are provided below:

- **Pedagogical.** Modern education is becoming more distributed, as students need broader exposure to more interdisciplinary instruction. The intellectual and human resources necessary to offer a modern degree in Biology are not housed in one department at OSU. If anything, the program should become more inclusive of the rich strengths in biological sciences on the OSU campus, which exists across different units. This inclusive approach fits well within the National Academies Report on “The New Biology for the 21st Century” and is an approach visible at some of the major Universities in the country; e.g., The Institute for Biology Education, University of Wisconsin, http://www.biology.wisc.edu/

- **Practical.** The Department of Botany and Plant Pathology has long been committed, and remains so, to the Biology Program. It is simply unrealistic to assume, however, that a department should commit its valuable and limited human and monetary resources to another department's major. Also, it remains a challenge to distribute and assign credit for student credits hours; the proposed move would significantly complicate an already difficult situation.

- **Education about the biology of plants and the role of plants in human life and the entire biosphere should be enhanced in the Biology Program. Movement of Biology to a major in the Zoology Department has the grave potential to short-change the
plant sciences in the minds of the students, relegating this component of their education as subsidiary to the biology of animals or bio-medical components. Biology majors need also to consider, for example, that it could be their job to find ways to feed the planet.

- Although not part of this proposal, we understand there has been discussion related to the potential elimination of the Zoology major and folding this major under the Biology major as an "option". If this scenario were to become a reality, it would only enhance the branding problem for Biology and further exacerbate concerns addressed above.

- The extent of BPP's involvement in the Biology Program, from our perspective, was not adequately represented in the Proposal.

In summary, the Department of Botany and Plant Pathology, a unit that contributes to a substantial portion of the teaching FTE in Biology, was not sufficiently consulted on this matter prior to receiving a copy of this Abbreviated Category 1 Proposal. We recognize the faculty involved with the preparation of this Proposal spent a great deal of time and effort in its design. However, we do not agree with the curricular changes as proposed and request that additional and more extensive liaison be conducted to resolve the issues in a manner that is equitable to all parties.

Sincerely,

Lynda M. Ciuffetti
Professor and Head
Department of Botany and Plant Pathology
The College of Agricultural Sciences is strongly committed to the continued success of the Biology Program. The Biology Program annually serves thousands of students including over 750 majors (2010-11). All colleges with undergraduate students utilize core biology courses offered by this program.

However, we have identified key issues with the current CAT I proposal that need addressing.

- Structure of proposed curriculum committee that may limit opportunity for meaningful input by faculty outside of the school. This is especially critical for BPP faculty, who offer over 27% of the biology program SCH.
- Potential for incongruence with the Provost’s MOU (Aug 19, 2010) that moved BPP to CAS.
  - “Faculty expertise in biological sciences at OSU is distributed among many units and colleges. It is important that OSU brings together those resources effectively to provide teaching, mentoring and research opportunities for its undergraduate students, particularly in the collaborative, interdisciplinary environment that is central to its vision.”

We are in discussion with the relevant departments and College of Science leadership to address our concerns. We anticipate reaching a mutually acceptable modified CAT I that will insure that the Biology Program continues to provide an excellent undergraduate experience.
Response to COS Category I Proposal:

The Abbreviated Category I proposal to create a School of Life Sciences in COS was distributed to the leadership in PHHS. The proposal was reviewed and comments were collected and summarized (below).

The proposal would be stronger if the justification more specifically explained how the School of Life Sciences contributes to the University’s Healthy People Initiative beyond what appears to be a logical grouping of disciplines.

There is concern that the proposed reorganization does not create a school in the same way that school formation has occurred in the recent past at OSU. Other colleges (Engineering, Liberal Arts, Public Health & Human Sciences) have created schools that merged existing departments into a new and larger academic unit. As proposed, this reorganization does not create a new academic unit by merging previously existing academic units. The proposed unit ‘school’ formalizes an affiliation of 3 departments which continue to have individual autonomy in the normal departmental functions of budgeting, tenure and promotion, personnel, and program administration. The affiliation of the 3 departments is more like the affiliation of 3 colleges of a division, which were also formed to promote coordination and integration among the units. Divisions are not considered academic units and have not historically engaged the Category I curricular process.

By retaining the departmental academic unit structure, the Academic Systems Guidelines mandate to create academic units that have at least 20 faculty and that have 3-yr averages of graduating 5 masters and 2 doctoral students, respectively, is not met by this proposal. It appears that Biochemistry & Biophysics and Microbiology fail to meet one or more of these requirements.

Since this proposal does not constitute a merger of existing academic units or the creation of a new academic unit, the focus of this proposal is limited to the discontinuation of the Biology Program. The discontinuation of the Biology Program is proposed to be accomplished by moving the administration of the Biology major to Zoology, the assignment of one track of the General Science major to Biochemistry & Biophysics (Molecular Biology), and the other track to Microbiology (Biohealth), pending approval of the Category II proposal to effect this division of the major.

The use of “Health Professional” in the name of the advising office does not appear necessary (“Health” does not appear in the name of any of the units) and may cause confusion for students outside of COS looking for information about health professions. A number of locations on campus exist where health profession advising occurs; therefore, the name “Life Sciences Advising” for the proposed school’s advising office appears more appropriate.
Virginia,

The College of Education supports this proposal to create a School of Life Sciences in COS.

Larry

Lawrence B. Flick  
Dean, College of Education  
Professor, Science and Mathematics Education  
in Partnership with College of Science  
201D Joyce Collin Furman Hall, Corvallis, OR  97331  
541-737-3664 (voice)  541-737-1817 (FAX)  
Larry.Flick@oregonstate.edu

The attached Abbreviated Category I Proposal describes a reorganization of several units in the College of Science to create a School of Life Sciences within the College. You may also access a draft of this proposal through the Curriculum Proposal System with this link: https://secure.oregonstate.edu/ap/cps/proposals/view/84452. (The proposal is in draft form. The signature page will be uploaded in early June. Liaison comments will be incorporated into the final draft document before submission.)
notification to your college, department or program of our intent to make this administrative change.

Please send your comments, concern, or support to me by Friday June 15th, 2012. Your timely response is appreciated.

Please note that a lack of response will be interpreted as support.

Thank you for your time and input.

Regards,

Virginia M. Weis
Professor and Chair
Department of Zoology
3029 Cordley Hall
Oregon State University
Corvallis, OR 97331

Research ph: 541-737-4359
Chair's office ph: 541-737-5338
FAX: 541-737-0501
Weis lab URL: http://weis.science.oregonstate.edu/
Zoology URL: http://zoology.science.oregonstate.edu/
Hi Virginia:

This has CLA's support.
Larry

Larry Rodgers, Dean
College of Liberal Arts
207 Gilkey
Oregon State University
Corvallis, OR 97331
Phone: 541-737-4581
Fax: 541-737-3910

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From: <Weis>, Virginia - Email Forward
<weisv@science.oregonstate.edu>
To: "Ciuffetti, Lynda - Email Forward"
<ciuffetl@science.oregonstate.edu>, "Salwasser, Hal"
<hal.salwasser@oregonstate.edu>, "Arp, Dan"
<Dan.J.Arpi@oregonstate.edu>, "Bray, Tammy"
<Tammy.Bray@oregonstate.edu>, "Flick, Larry"
<Larry.Flick@oregonstate.edu>, "Zabriskie, Mark"
<mark.zabriskie@oregonstate.edu>, "Clarke, Cyril"
<Cyril.Clarke@oregonstate.edu>, "Abbott, Mark Richard"
<mark@coas.oregonstate.edu>, "Wolf, Aaron - Email Forward"
<wolfa@geo.oregonstate.edu>, "Larry Rodgers"
<larry.rodgers@oregonstate.edu>, "Muir, Patricia"
<muirp@science.oregonstate.edu>, "Blaustein, Andy"
<blausstea@science.oregonstate.edu>, "Weis, Virginia - Email Forward"
<weis@science.oregonstate.edu>, "Beach, Gary"
<Gary.Beach@oregonstate.edu>, "Trempy, Janine"
<trempyj@oregonstate.edu>, "Remcho, Vincent"
<vincent.Remcho@oregonstate.edu>, "Ashford, Scott"
<Scott.Ashford@oregonstate.edu>, "Mason, Robert"
<masonr@science.oregonstate.edu>, "Hacker, Marla E"
<Marla.Hacker@oregonstate.edu>, "Janssen, Henri"
<physics.chair@science.oregonstate.edu>, "Carter, Rich"
<carteric@science.oregonstate.edu>, "Lesser, Virginia"
<lesser@science.oregonstate.edu>, "tdpick@math.oregonstate.edu"
<tpdick@math.oregonstate.edu>, "Dreher, Theo"
<theo.dreher@oregonstate.edu>, "Merrill, Gary - COS"
<merrillg@science.oregonstate.edu>
Subject: Abbreviated Cat I proposal to create a School of Life Sciences in COS

The attached Abbreviated Category I Proposal describes a reorganization of several units in the College of Science to create a School of Life Sciences within the College. You may also access a draft of this proposal through the Curriculum Proposal System with this link:
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Regards,

Virginia M. Weis
Professor and Chair
Department of Zoology
3029 Cordley Hall
Oregon State University
Corvallis, OR 97331

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Chair’s office ph: 541-737-5338
FAX: 541-737-0501
Weis lab URL: http://weis.science.oregonstate.edu/
Zoology URL: http://zoology.science.oregonstate.edu/
Dear Virginia,

I appreciate all of the hard work and thought that has gone into the development of the proposal.

Fundamentally, however, I am not sure what the reorganization accomplishes besides attempting to provide General Science majors with a more concrete home and identity. I am not convinced that it will actually accomplish this, except on paper.

A second fundamental concern is loss of visibility for the Biology Major (formerly Program); will prospective and current students know to look for it under Zoology?

I do not see cost savings associated with the proposal – BI will no longer have a Chair, but there will still be an Associate Chair in Zoology to assist in running the BI major. There is also a statement that BI will no longer have a Head Advisor, but I’m not sure that there are cost savings associated with that change?

I am concerned about the advisor:student ratio. The proposal indicated that there will be 2,300 students in the School (on page 2 – but on page 3 the number is 2,500). I see a total of 7.49 advising FTE listed on Table 7, page 10, which = 334 students per advisor using the 2,500 student number. However, that counts Claire Colvin at 1.0 FTE, and she is Head Advisor for the entire College. Take her out and you have 6.49 advisor FTE which means 385 students per advisor. This exceeds the recommended ratio (300 : 1) by a good bit, and even that ratio, while accepted by many, is unrealistic in my view. More advising FTE is badly needed.

Couple this with the statement (near the bottom of page 2) that part of the point of the school is to help coordinate and develop experiential learning experiences for the huge student population of this school, and I don’t see a connect. How can the existing faculty in the various departments/programs that will comprise the school plus 6.49 advisor FTE really advance experiential learning? It seems, frankly, pretty clear to me that General Science majors will still basically be orphans, and that, at a minimum, additional advising FTE is needed.

Re advisor roles – page 12, top paragraph, seems misleading – BI advisors were not college-level, but were program-level and were well equipped to guide students to appropriate advisors and faculty research mentors – that is, it seems to me that this paragraph is somewhat misleading re the roles of BI advisors.

Page 4 – a 1-month summer stipend for the Director is not enough. I’ve worked way too many summers on a 2-week stipend, just directing Environmental Sciences, while working at least ½ time for the whole summer. The proposal should be realistic about this.

I will leave comments on the BPP contributions up to Lynda to provide (she is collating departmental responses). I know that BPP feels a deep commitment to the BI Program, but I’ll just offer, without her advance approval, because I was contacted for liaison as Env Sci Director independently of my role in BPP, the following comments/questions:

(1) It seems odd to refer to this as a School of Life Sciences when it does not include plant sciences. I wonder about a name that is more reflective of the fact that the school, for the most part, is Life Sciences excluding plants? A related comment involves the statement on page 6 that a
“comprehensive life science curriculum” will be delivered. Comprehensive, but excluding plants (again for the most part; I realize that some folks in Biochem/Biophysics probably study plant systems, and that some folks in MB may do the same, and that some faculty in Zoology include plants in their work).

(2) Pages 3 and 4 and org chart on page 5 – reference is made to BPP continuing to contribute to teaching and curriculum review/development in the BI major. It made good sense for BPP to contribute to an interdisciplinary BI Program, but I’m not sure that it will make as much sense to do so in a major nested within a Zoology Dept…? We have valued our contributions to the BI Program, of course; the BI major within a Zoology Dept may be more challenging, but that is not for me to weigh in on!

(3) The MOU that established the continuing relationship between BPP and BI was between BPP and a Biology Program – how does the elimination of the Biology Program affect the MOU?

(4) Table 6 page 10 excludes BPP faculty FTE even though many of us teach in BI – there’s a disconnect between statements about continued BPP involvement and this table, I think?

Minor point – Table 7, page 10, some folks don’t have first initials listed.

I wish that I had time to do a more careful review – these are just the items that leaped to my attention on one relatively quick pass through the proposal.

Thanks for guiding this process, Virginia! I’m sure that the task has been challenging!

Take care,
Pat

Dear Virginia,

I thought of one additional comment on the Cat I re School of Life Sciences. I know from having worked through (or partially through!) the move of the Env Sci undergrad program from COS to CEOAS that changes in administrative structure, names of units, curricular re-alignments and so forth all seem simple until you start getting into “details.” These are largely, but not exclusively, associated with Registrar’s Office and OSU catalog and MyDegrees changes – there are all kinds of numeric codes that need to be changed; innumerable places emerge from the shadows, in which a program is listed as one thing but now must be listed as another (e.g., Biology Program versus Biology major)….I have been astonished by how much work is involved! The three primary Env Sci advisors and I have all spent innumerable hours over the past two terms trying to track everything down, communicate with everyone who needs to be communicated with, and get all of the needed changes made and communicated effectively, where relevant, to students.

Of course “time is money” and time spent on these sorts of things can’t be spent doing other things. The time is well spent IF the change or changes will constitute a significant improvement. In the case of Env Sci’s move to CEOAS, I believe this to be the case. I hope that will be the case with this proposal, but, as noted before, I’m not convinced of that.

Off to play at the coast for the day – hooray!

Take care,
Sorry, Virginia!

Just one more thought about the Cat I – here’s the nutshell:

(1) I don’t see that the Biology Program as it exists now is anything that needs “fixing” – it seems to me that it functions quite well, student performances are strong as are the impressions that they convey about their experiences in the BI Program during exit interviews. I fear that the proposed rearranging will not help it at all, and will weaken it if anything. It “ain’t broke,” in my view.

(2) I don’t see that the proposal will fix what needs fixing, which is hundreds of semi-homeless General Sciences students and their needs. Simply allocating a batch of them to MB and another batch of them to BB without also allocating significant support to help them – first year orientations, advising with an improved ratio of students to advisors, serious faculty commitment to guiding them towards experiential learning opportunities, and the oversight of a leader who really cares about THEM (not just as tacked on, possibly “second class” add ons to their departmental lists) are needed. Maybe I missed it in my quick skim of the proposal, but I didn’t see a serious commitment to them in it – frankly more as if people’s attitudes were “this General Science thing has been a problem for years – let’s just stick them in some departments!” This one IS “broke” and I don’t see the proposed arrangements as fixing what is broken.

Sorry about the multiple messages on this – I’ve just kept thinking about it!

Take care,
Pat
Appendix B: Budget outline pages

Costs for the School are detailed below. These include:

a) One month of summer salary for the School Director (The highest salary of the current three Chairs is provided in the budget sheets as an estimate). This will be reallocated from existing budgets in the College.

b) Transfer of FTE from the Biology Program to the Zoology Department for an office specialist and for Administrative FTE. The position of Head of the Biology Program will be eliminated however Zoology will appoint an Associate Chair to assist in running the Biology Major.

c) Costs of $2,000 to add stationery and signage, other printing expenses and other expendable consumption as necessary (from Foundation funds)

d) Recurring commitment of $8,000 per year to the School Director for use as an investment fund to seed projects in the School for curriculum, student engagement, or research initiatives. This will be reallocated from existing budget in the College.

e) A 4% annual inflationary increase is included in the costs after AY2012-13.
## B. Budget Outline Form: Estimated Costs and Sources of Funds for Proposed Program

Total new resources required to handle the increased workload, if any. If no new resources are required, budgetary impact should be reported as zero.

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B. Budget Outline Form: Estimated Costs and Sources of Funds for Proposed Program

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</table>

**GRAND TOTAL** | (4,414) | 30,242 | | | | 25,828 |

Indicate the year: _____ First _____ Second _____ Third _____ Fourth

**Prepare one page each of the first four years**
**B. Budget Outline Form:**  Estimated Costs and Sources of Funds for Proposed Program  
Total new resources required to handle the increased workload, if any. If no new resources are required, budgetary impact should be reported as zero.

**Indicate the year:**  
First  
Second  
X Third  
Fourth  

**Prepare one page each of the first four years**

Institution: Oregon State University  
Program: School of Life Sciences, College of Science  
Academic Year: 2014-2015

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
<th>Column C</th>
<th>Column D</th>
<th>Column E</th>
<th>Column F</th>
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</thead>
<tbody>
<tr>
<td>From Current Budgetary Unit</td>
<td>Institutional Reallocation from Other Budgetary Unit</td>
<td>From Special State Appropriation Request</td>
<td>From Federal Funds and Other Grants</td>
<td>From Fees, Sales and Other Income</td>
<td>LINE ITEM TOTAL</td>
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**Personnel**

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<thead>
<tr>
<th>Faculty</th>
<th>BI Chair Elimin. (28,616)</th>
<th>Life Science Dir. 16,008</th>
<th>(12,608)</th>
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</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>ZO Assoc. Chair 24,637</td>
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<td>24,637</td>
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<td>Support Staff (Include FTE)</td>
<td>1.0 FTE OS 2 (35,520)</td>
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<td>(35,520)</td>
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<td>Support Staff (Include FTE)</td>
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<td>OPE</td>
<td>284</td>
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<td>4,926</td>
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<td>Nonrecurring:</td>
<td></td>
<td></td>
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<td>Personnel Subtotal</td>
<td>(797)</td>
<td>20,650</td>
<td>19,853</td>
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</table>

**Other Resources**

| Supply and Svcs.; stationary, mktg | 2,000 | 2,000 |
| Other Expenses-stipend, support | 8,000 | 8,000 |
| Other Resources Subtotal | 10,000 | 10,000 |

**Physical Facilities**

| Construction | One time | |
| Major Renovation | | |
| Other Expenses | Signs, cards, etc. | |
| Physical Facilities Subtotal | (797) | 30,650 | 29,853 |

**GRAND TOTAL**
B. Budget Outline Form: Estimated Costs and Sources of Funds for Proposed Program

Total new resources required to handle the increased workload, if any. If no new resources are required, budgetary impact should be reported as zero.

Institution: Oregon State University  
Program: School of Life Sciences, College of Science  
Academic Year: 2015-2016

Prepare one page each of the first four years

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
<th>Column C</th>
<th>Column D</th>
<th>Column E</th>
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</thead>
<tbody>
<tr>
<td>From Current Budgetary Unit</td>
<td>Institutional Reallocation from Other Budgetary Unit</td>
<td>From Special State Appropriation Request</td>
<td>From Federal Funds and Other Grants</td>
<td>From Fees, Sales and Other Income</td>
<td>TOTAL</td>
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<tr>
<td>Personnel</td>
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<td></td>
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<tr>
<td>Faculty</td>
<td>BI Chair Elimin. (28,616)</td>
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<td>(11,968)</td>
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<tr>
<td>Faculty</td>
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<td>(35,520)</td>
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<td>4,828</td>
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<td>6,351</td>
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<td>Nonrecurring:</td>
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<td>Personnel Subtotal</td>
<td>2,966</td>
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<td>24,442</td>
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<td>Other Resources</td>
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<td>Supply and Svcs.; stationary, mktg</td>
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<td>2,000</td>
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<td></td>
<td>2,000</td>
</tr>
<tr>
<td>Other Expenses-stipend, support</td>
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<td>8,000</td>
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<td>Other Resources Subtotal</td>
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<tr>
<td>Physical Facilities</td>
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</tr>
<tr>
<td>Construction</td>
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</tr>
<tr>
<td>Major Renovation</td>
<td>One time</td>
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<td></td>
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<tr>
<td>Other Expenses</td>
<td>Signs, cards, etc.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Physical Facilities Subtotal</td>
<td>2,966</td>
<td>31,476</td>
<td></td>
<td></td>
<td>34,442</td>
</tr>
</tbody>
</table>

GRAND TOTAL

(11,968)  
25,622  
(35,520)  
39,956  
6,351  
24,442  
2,000  
8,000  
10,000  
34,442
See Budget Year 1 for complete budget and budget justification.
See Budget Year 1 for complete budget and budget justification.
See Budget Year 1 for complete budget and budget justification.
1. Review - College Approver - Science

Approved by Janine Trempy Assoc Dean- / College of Science Admin, December 5, 2012 5:03pm

Comments

Janine Trempy (College Approver - Science) December 5, 2012 5:03pm
College of Science Life Sciences Curriculum and Administrative Committees support and approve this proposal.

2. Review - Curriculum Coordinator

Approved by Sarah Williams Coord-Curriculum / Acad Prgms/Assess/Accred, December 6, 2012 10:10am

Comments

Sarah Williams (Curriculum Coordinator) December 6, 2012 10:10am
This proposal is ready for review by the Budgets and Fiscal Planning Committee.

3. Review - Budgets and Fiscal Planning Committee

Sent Back by Walter Loveland, December 6, 2012 10:23am

Comments

Walter Loveland (Budgets and Fiscal Planning Committee) December 6, 2012 10:23am
This is just a pro forma return to check that the Budget pages were prepared by the Arts and Science Business Center. The BFP group currently (1 January) requires this and the ASBC knows how to do it. Use of this service will greatly accelerate the approval of your proposal.

4. Originator Response

Virginia Weis Professor / Zoology, December 6, 2012 10:49am

Comments

Virginia Weis December 6, 2012 10:49am
Yes they were prepared by the ASBS.

5. Review - Budgets and Fiscal Planning Committee

Approved by Walter Loveland, January 17, 2013 9:40pm

Comments

Walter Loveland (Budgets and Fiscal Planning Committee) January 17, 2013 9:40pm
The BFP group voted to approve this proposal on the condition that the proposers describe in the proposal the financial arrangements associated with the participation of the Botany and Plant Pathology department in offering the Biology program.

6. Review - Graduate Council Chair

Sent Back by Sarah Williams Coord-Curriculum / Acad Prgms/Assess/Accred, February 6, 2013 9:45am

Comments

Sarah Williams (Graduate Council Chair) February 6, 2013 9:45am
Returning to Originator at her request. SW

7. Originator Response

Virginia Weis Professor / Zoology, February 7, 2013 4:33pm
8. Review - Graduate Council Chair

Approved by James Coakley Associate Dean / College of Business Dept, February 12, 2013 11:59am

Comments

James Coakley (Graduate Council Chair) February 12, 2013 11:59am
Since the proposal does not directly impact graduate programs, the Graduate Council supports the proposal. However, the Council asks that those involved continue to be thoughtful in their coordination with the BPP department and to assure the reorganization does not negatively impact the MCB graduate program.

9. Review - Curriculum Council Chair

Sent Back by Michael Bailey Professor / Sch Elect Engr/Comp Sci, May 9, 2013 9:09am

Comments

Michael Bailey (Curriculum Council Chair) May 9, 2013 9:09am
Sent back to Proposer for edits

10. Originator Response

Virginia Weis Professor / Zoology, May 21, 2013 12:42pm

Comments

Virginia Weis May 21, 2013 12:42pm
I have modified the proposal to include requested change from the Curriculum Council. The proposal now includes a name change for Department of Zoology to Department of Integrative Biology.