BIOLOGY DEPARTMENT REPORT, 2009-2010

Submitted by Mike LeMaster (July 26, 2010)

I. EXECUTIVE SUMMARY (Provide several summary paragraphs or more, as needed, that highlight the departmental and / or program accomplishments for the past year)

A. The enrollment numbers in biology continue to show robust growth (~ 2600 students taking biology-related coursework during the 2009 – 2010 academic year). The observed increase from previous year extends to coursework at both the majors and non-majors levels (see Figure 1).

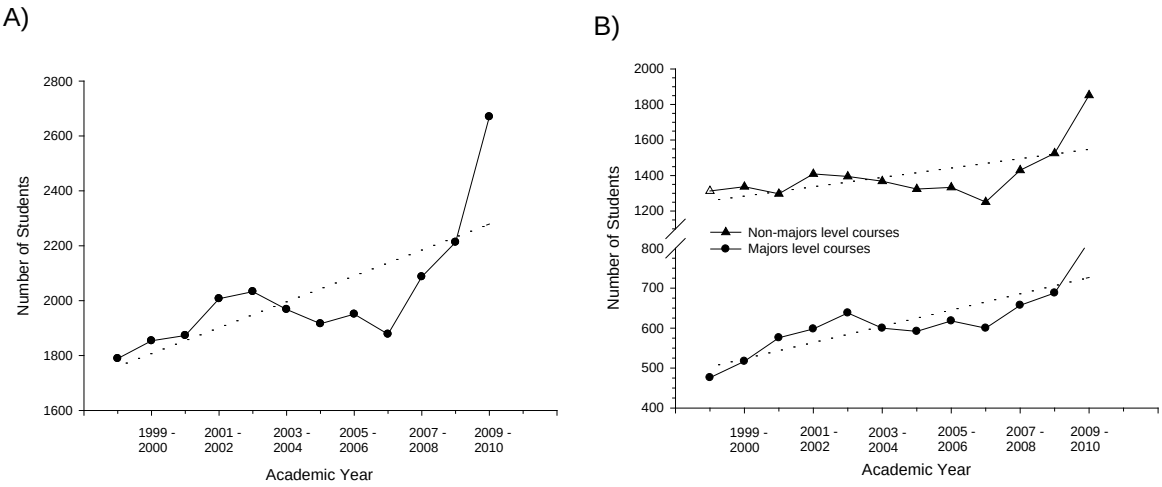

Figure 1. The annual number of students enrolled in biology courses since the 1998 – 2010 academic year (A). The observed increase is due to enrollment increases in both majors and non-majors level coursework (B: majors and non-majors level student numbers plotted separately). The dotted lines represent trend lines based on regression analysis of the data.

B. Our students (current and former) have been successful in their pursuit of biology-related careers. For example, several were accepted into professional schools and advanced degree programs. At least one graduate was admitted into a medically-related, graduate level professional school (i.e. medical school, dental school, physician's assistant and pharmacy programs), and at least one student was accepted to a graduate program in biology. In addition, 24 students were accepted into professional undergraduate programs (e.g., nursing school, dental hygiene school) both within and outside the state of Oregon. Please see the addendum at the end of this document for a complete listing of the students accepted into various programs.

C. Our department continues to pursue opportunities to enhance laboratory space and technologies. Monies made available through the university allowed for the summer 2010 remodel of the biology laboratory located in NS 004, including the addition of smart room technologies. In addition, monies were secured to purchase new microscopes (e.g., microbiology = 12 compound microscopes) and new computers for student use (e.g., NS 004 = 12 computers). Discussions are also ongoing concerning the remodeling of NS 201 (microbiology laboratory), the laboratory prep spaces, and the development of a "large" equipment room to free up space in the laboratories, prep rooms, and research spaces.

D. Collectively, our department members published six papers in peer-reviewed journals, with one other paper currently in the review process. We also were involved in presenting / preparing fourteen refereed papers at state and national meetings and workshops. Two of these papers and presentations were co-authored by current and / or former WOU students who contributed significantly to them.

E. Our faculty members continue to receive grant monies for their research. This past year, monies have been received from the Department of Justice (1 grant; ~ $685,000; co-authored with Department of Earth Sciences (WOU) and the Oregon State Police), Oregon SeaGrant (~ $73,500), and the WOU Faculty Development Committee (3 grants; ~ $8300).

F. Our faculty members contributed significantly to the governance of WOU. Biology faculty were represented on five university-wide committees, faculty senate, Institutional Review Board, and the Academic Excellence Showcase planning committee.

G. Our faculty members continued to provide individualized advising geared towards each student's interests and career goals. Our department members also continue to serve as the primary advisors for the Natural Science Club.

H. Several of our faculty served as mentors for undergraduate research projects over the last year, including serving as committee members for students in the Honors program. In addition, four student research projects mentored by biology faculty were presented during the WOU Academic Excellence Showcase.

I. Our faculty members continued to be actively involved in professional societies outside the WOU community with several taking on leadership roles at the local, regional, and national levels.

J. Our department was able to award more than $25,000 of scholarships to undergraduates pursuing a degree in biology for the 2010 – 2011 academic year.

K. Dr. Irja Galvan retired at the end of the 2009-2010 academic year after more than a decade of service to Western Oregon University. We are currently performing a search for a non-tenure short-term replacement and will be initiating a search for a tenure-track replacement during the 2010-2011 academic year.

II. ENROLLMENT TRENDS:

As noted above, there has been continued and significant growth in student enrollment in biology-related courses. Currently, the Biology Department teaching personnel includes eight tenure-track faculty (two full professors, three associate professors, and three assistant professors), and three full-time, non-tenure track faculty. The total hours in the classroom available for the current faculty, assuming 1.0 FTE for each, is 423 hours (36 hours / academic year for tenure-track faculty; 45 hours / academic year for non-tenure track faculty). However, this total does not represent the actual hours available as Department

Head release time (9 hours / academic year), faculty release time for university committee service (e.g., PURE coordinator; hours vary depending on assignment), or release time provided via monies from research / teaching grants (hours vary based on grant) are not included in this calculation. When including these releases, the available classroom FTE is 387.25 for the biology faculty. The 2009 – 2010 academic schedule of courses required 391.75 hours, over the available FTE, resulting in several non-tenure track faculty members taking on overloads. Approximately 55% of the FTE classroom hours for the year were dedicated to non-majors level coursework and 45% dedicated to majors level coursework.

While the growth in student enrollment is widespread across the biology curriculum, two areas showed significant increases this past year. First, enrollment in our majors level second year sequence (BI 314 – 316; genetics / evolution / cell biology) increased dramatically, from 122 students during the 2008 – 2009 academic year to 154 during the 2009 – 2010 academic year (21% increase; Figure 2). This growth is not surprising due to the increase in our Principles of Biology sequence (BI 211 – 213) that has been observed over the last five years. Assuming that our retention rates remain similar to previous years, we anticipate continued growth across our upper division coursework as students move from the second year sequence and expand out into the various specialized biology emphases.

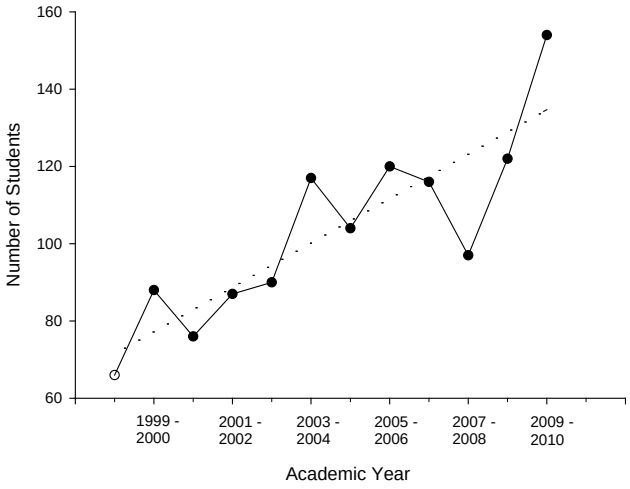

Figure 2. The annual number of students enrolled in the second year sequence for biology majors (BI 314 – 316) since the 1998 – 1999 academic year. The dotted line represents the trend line based on regression analysis of the data.

Second, enrollment in our non-major health professional service courses, primarily Human Anatomy and Physiology (BI 234 – 236) and Microbiology for Health Sciences (BI 318), continues to show double digit annual growth (for example, Figure 3). This growth has been largely due to the increase in pre-nursing students over the last several years, although there is also a large group of students interested in the Health and PE programs at WOU and the Human Biology minor, both of which require various health professional service courses. Based on data over the past five years, we expect the growth trend to continue, albeit at a slower rate as we near capacity.

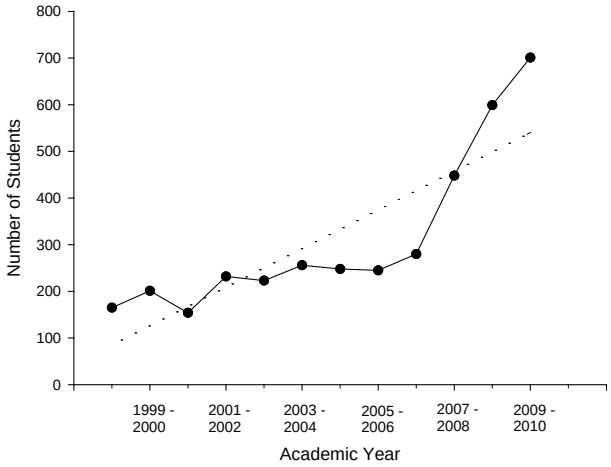

Figure 3. The annual number of students enrolled in the Human Anatomy and Physiology series (BI 234 – 236) since the 1998 – 1999 academic year. The dotted line represents the trend line based on regression analysis of the data.

III. SUMMARY OF PROGRAM CURRICULUM CHANGES: (Please provide a BULLET summary of program curriculum changes that were initiated this past year. In your summary, provide a brief short title / description of the change, the status of the change, and a list of program outcomes to which the change was linked)

Course Changes:

Course	Nature of Change	Status	Justification
BI 211 – 213	Credit Hours (from 4 to 5)	In new catalog	To better align our introductory biology sequence with biology programs across the country, we added an extra hour of lecture per week.
BI 311	Number changed to BI 314	In new catalog	A numbering modification to the second year biology sequence made in order to accommodate scheduling changes in the Organic Chemistry sequence.
BI 312	Number changes to BI 316; laboratory replaced with 1-hour discussion	In new catalog	A numbering modification to the second year biology sequence made in order to accommodate scheduling changes in the Organic Chemistry sequence; the discussion section will allow for the focusing of effort on the application of empirical data.
BI 313	Number changed to BI 315	In new catalog	A numbering modification to the second year biology sequence made in order to accommodate scheduling changes in the Organic Chemistry sequence.
BI 326	Description change	In new catalog	The description for the course, which requires Cell Biology (BI 313), was changed to reflect the numbering change for BI 313.
BI 331	Description change	In new catalog	The description for the course, which 'strongly recommends' Genetics (BI 311) and Cell Biology (BI 313), was changed to reflect the numbering change for BI BI 311 and BI 313. In addition, the terms taught were changed from Fall / Winter to Winter / Spring.
BI 431	Course deletion	Removed from catalog	Lack of student interest / FTE
BI 432	Description change	In new catalog	The description for the course, which requires Cell Biology (BI 313), was changed to reflect the numbering change for BI 313.

BI 435	Course deletion	Removed from catalog	Lack of student interest / FTE
BI 437	Course deletion	Removed from catalog	Lack of student interest / FTE
BI 441 / 541	Description Change	In new catalog	Moved from winter to spring term and taught every year to better accommodate the growing demand for the Human Biology minor.
BI 475	Description Change	In new catalog	The description for the course, which requires Genetics (BI 311) and Cell Biology (BI 313), was changed to reflect the numbering change for BI BI 311 and BI 313.

Program Changes:

Program	Nature of Change	Status	Justification
Biology Major (core courses)	Increased BI 211 – 213 credits from four to five and changed numbering for new BI 314 – 316 sequence	In new catalog	Brings major into alignment with new course changes.
General Biology emphasis	Deleted one required course; changed total credits from 20 – 24 to 16 – 19	In new catalog	Takes into account the increased credits for BI 211 – 213, maintaining the total number or credits currently required for a biology major
Botany emphasis	Deleted one required course; changed total credits from 21 – 24 to 17 – 19	In new catalog	Takes into account the increased credits for BI 211 – 213, maintaining the total number or credits currently required for a biology major
Ecology emphasis	Deleted one required course; changed total credits from 21 – 22 to 17 – 18	In new catalog	Takes into account the increased credits for BI 211 – 213, maintaining the total number or credits currently required for a biology major
Molecular / cell emphasis	Deleted one required course; changed total credits from 22 to 18 – 19	In new catalog	Takes into account the increased credits for BI 211 – 213, maintaining the total number or credits currently required for a biology major
Pre-professional emphasis	Deleted one required course; changed total credits from 23 – 25 to 19 – 21	In new catalog	Takes into account the increased credits for BI 211 – 213, maintaining the total number or credits currently required for a biology major
Zoology	Deleted one required course;	In new catalog	Takes into account the increased

emphasis	changed total credits from 22 – 23 to 18 – 19		credits for BI 211 – 213, maintaining the total number or credits currently required for a biology major
Biology minor	Increased BI 211 – 213 credits from four to five and reduced upper division course credit requirements from 15 to 12	In new catalog	Takes into account the increased credits for BI 211 – 213, maintaining the total number or credits currently required for a biology minor

IV. PROGRAM ASSESSMENT ACTIVITIES AND RESULTS: (Provide a BULLET summary of program assessment activities and results from the past year, include evidence that the assessment activities are leading to the improvement of teaching and learning. Include embedded assessment results, other embedded approaches, and exit / proficiency exams)

- Dr. Baumgartner continued program assessment of the BI 100 series. This included a revised questionnaire with demographic and attitudinal sections, content-based questions aligned to course learning outcomes, and post-course laboratory evaluation questions (results pending).
- Dr. Baumgartner developed an online survey for GS 201 (Honors Biology) focusing on assessment of learning outcomes and student attitudes (results pending).
- Dr. Boomer and Dr. Latham developed in-depth assessment of the BI 211 sequence. This included background surveys, pre/post content tests, and post-course attitudinal assessment. A review of the results and suggested actions based on these results can be found in a Biology 211 Assessment Report submitted by Dr. Boomer earlier this year. In addition, pre/post content tests were also developed and conducted for BI 212 (Dr. Haberman / Dr. LeMaster) and BI 213 (Dr. Dutton / Dr. Howard) (results pending).
- Dr. Boomer developed in-depth assessment of the BI 318 – Microbiology for Health Sciences. This included background surveys, pre/post content tests, and post-course attitudinal assessment. A review of the results and suggested actions based on these results can be found in a Biology 318 Assessment Report submitted by Dr. Boomer earlier this year.
- Dr. Bryan Dutton designed and employed a pre-/post-course survey for BI 321 (Systematic Field Botany) and BI 371 (Structure of Seed Plants), and a post-course survey for BI 312 (Evolution) (results pending).
- Dr. Karen Haberman, in conjunction with Dr. Erin Baumgartner, developed course assessment for the BI 361 course (Marine Ecology) which included Pre-/post-course content-based questions and attitudinal surveys (results pending).
- Dr. Kristin Latham developed and administered a mid-term course evaluation for BI 311 (genetics) to gain feedback on student learning related to course objections (results pending).
- The department continued to administer the Educational Testing Service's Major Field Test in Biology and a Biology Program Exit Survey for graduating seniors (results pending).

V. SWOT:

- **Strengths:**
  - We have a faculty strongly committed undergraduate education. All faculty are active in all aspects of the university, including teaching, university governance, and research. In

addition, the entire tenure-track faculty has their terminal degree as do a majority of the non-tenure faculty.

- We have made great strides towards updating our laboratories to include modernized facilities and equipment. This has allowed for the development and introduction of cutting-edge laboratory exercises preparing students for the current job market / graduate school upon graduation from Western Oregon University.
- We have embraced the concept of program assessment and are now basing program / course changes based on empirical evidence. Currently, three faculty members are actively pursuing research in the area of program / course development and assessment with all faculty actively participating in assessment strategies.

- **Opportunities**
  - We have observed steady growth in student numbers over the past decade. Much of the recent increase is attributed to students interested in the pre-professional health fields. Through this, the department has the opportunity to expand our pre-professional opportunities including the organization of new clubs (e.g., pre-medical club) and the development of new programs (e.g., practicum experiences).
  - The diverse research background of our faculty allows for the continued development of relationships with individuals / groups outside the university. For example, discussions are ongoing concerning the development of research projects at the Luckiamute Landing and opportunities for collaborations with the Bureau of Land Management (BLM) will be examined over the 2010-2011 academic year.
  - Funding opportunities for teaching / research monies outside the 'normal' channels have been met with success over the past several years (e.g., Department of Justice, Oregon SeaGrant), suggesting that monies are still available to fund smaller universities despite the current economic downturn.

- **Challenges**
  - Although listed above as an opportunity, the increase in student growth is over the past decade is also a major challenge for the department. Space issues are becoming a major concern for the department in terms of classroom availability, office / research space, and equipment storage.
  - Adequate monies to support classroom / research activities continue to be a challenge. Recent monies through the stimulus plan have greatly assisted in laboratory remodels / equipment purchases but future projects suggest that these will not remain into the new biennium.
  - Increases in faculty responsibilities outside the classroom continue to be a challenge. Increased advising loads, committee assignments, and university events often lead to less time available to devote to teaching / research obligations.

- **Vulnerabilities**
  - Increases in student growth also represent a major vulnerability to the biology department. Increases in faculty positions have not kept pace with increases in student numbers. We believe that the department has been able to build a strong reputation across the state in recent years for our programs but without investing in additional faculty positions, we foresee drops in recruitment and retention as we increase class sizes, reduce class availabilities, and potentially cut program offerings.
  - We have prided ourselves on offering a broad training in the field of biology for undergraduates. The increase in students solely interested in the pre-professional health

fields is slowly eroding the ability of the department to keep a generalized curriculum in the face of such a specialized need.

- The recent investment of monies to laboratory upgrades leads to a vulnerability of not being able to fully utilize the facilities / equipment if monies are not available for upkeep / supplies.

VI. PROGRAM PLANNING AND INITIATIVES:

The Biology department initiated and completed major revisions to our program during the last academic year (please see Program Curriculum Changes above). Currently, there are no program plans / initiatives on the table although the department will be having a work retreat early in September at which time the program will be evaluated in light of the current environment.

VII. OTHER ITEMS

- N / A

VIII. PUBLIC RELATIONS ITEMS FOR PROGRAM PROMOTION:

- N / A

APPENDIX 1: Faculty / Staff Roster

Tenure Track Faculty:

• Dr. Sarah Boomer	Professor	Years of Service = 13
• Dr. Bryan Dutton	Professor	Years of Service = 12
• Dr. Irja Galvan	Associate Professor	Years of Service = 12
• Dr. Karen Haberman	Associate Professor	Years of Service = 12
• Dr. Mike LeMaster	Associate Professor	Years of Service = 7
• Dr. Erin Baumgartner	Assistant Professor	Years of Service = 2
• Dr. Ava Howard	Assistant Professor	Years of Service = 1
• Dr. Kristin Latham	Assistant Professor	Years of Service = 2

Non-tenure Track Faculty:

• Dr. Karen Bledsoe	Assistant Professor	Years of Service = 10
• Dr. Jeff Snyder	Assistant Professor	Years of Service = 3
• Dr. Scott Macdonald	Instructor	Years of Service = 3

Lab Preparators:

• Piper Mueller-Warrant	Years of Service = 5
• Julie Grammer	Years of Service = 1

APPENDIX 1: Faculty Highlights

A. Teaching: (Include out of the ordinary type notations only, such as faculty-student collaborative scholarship, attendance with students at conferences, service learning components, etc.)

- Dr. Erin Baumgartner and Dr. Bryan Dutton reviewed various iteration of the college of education proposed curriculum changes with feedback provided to the NSM division.

- Dr. Baumgartner worked extensively with collaborators in the Division of Natural Sciences and the College of Education on the formation of a new science education course, GS 325. In addition, Dr. Baumgartner represented WOU College of LAS at a OUS Compass conference – a planning conference to develop a future OUS-wide conference to help align assessment of student learning at all OUS schools.

- Dr. Karen Haberman substantially revised her BI 361 (Marine Ecology) course to include students in her research of the Salmon River estuary funded through Oregon Sea Grant.

- Undergraduate students participated in collaborative research with multiple faculty including Dr. Irja Galvan (Michael Petrovich), Dr. Karen Haberman (Dan Keller, Joe Lewis, Stephanie Hendrix), Dr. Mike LeMaster (Rachel Hermason), and Dr. Jeff Snyder (Sarah Cole, Patrick Grennan, Joe Lewis).

- Dr. Karen Bledsoe received the Fred Fox Distinguished Service to Science Education award through the Oregon Science Teachers Association.

B. Scholarship: (Professional and / or peer-reviewed publications and presentations)

Book Chapters:

Duncan, K.D., and **Baumgartner, E.** (in press). Your students as scientists: Guidelines for teaching science through disciplinary inquiry. In: Yager, R. (ed.). *Exemplary Science Program Monograph Series*. Arlington, VA: National Science Teachers Association.

Journal Articles:

Baumgartner, E. (in press). Thinking outside the kit: Building pre-service science teacher's inquiry skills with an experiment that doesn't go as planned. *The Journal of College Science Teaching.*

Baumgartner, E., & Duncan, K.D., & Young, D.B. (2009). The role of the University of Hawaii Laboratory School in an NSF GK-12 training grant. *The National Association of Laboratory Schools Journal*, 31(2): 1-6.

Winningham, R.G., Templeton, J.H., **Dutton, B.E.**, and Scheck, S.H. (2009). A Grassroots, Faculty-Driven Initiative to Institutionalize Undergraduate Research: The Ins and Outs of Cultivating Administrative Support. *CUR Quarterly*, 30(1): 29-34.

Bledsoe, K. and Kellar, H. (2009). The OSTA Science Partnerships Grant: Lessons learned from the first year. *The Oregon Science Teacher*, 51(2), 6-12.

Presentations:

Baumgartner, E. (2010). The Nature of Science in an undergraduate biology survey course. Presented at the 69th Meeting of the Oregon Academy of Science. Portland, OR.

Baumgartner, E., Phillips, L., and Kumabe-Maynard, E. (2009). Picturing Science: Scientific Literacy meets Visual and Language Literacy. Invited workshop presentation to National Marine Educations Association. Pacific Grove, CA.

Boomer, S.M. and **Latham, K.L.** (2010). Manipulatives-based laboratory for majors biology – a hands-on approach to understanding respiration and photosynthesis. Presented at ASM-CUE. San Diego, CA.

S. M. Boomer, S.M. (2010). Assessment Strategies and Improved Learning in Non-Majors Microbiology – A Moving Target Given Soaring Pre-Nursing Demands? Presented at ASM-CUE. San Diego, CA.

Klatt, G.D., Wood, J.M., **Boomer S.M.**, Brown I.I., Bryant, D.A., Garcia-Costas, A.M., Hergaard, M., Jay, Z., Parenteau, M.N., Manning, T.*, Miller, S.R., Rusch, D.B., Tringe, S.G., Ward, D.M., and Inskeep, W.P. (2010). Exploration of the structures and biogeographical patterns of phototrophic bacterial communities inhabiting diverse geothermal habitats in Yellowstone National Park using metagenomics. Presented at the Ecological Society of America Annual Meeting. Pittsburgh, PA.

Klatt, G.D., Wood, J.M., **Boomer S.M.**, Brown I.I., Bryant, D.A., Garcia-Costas, A.M., Hergaard, M., Jay, Z., Parenteau, M.N., Manning, T.*, Miller, S.R., Rusch, D.B., Tringe, S.G., Ward, D.M., and Inskeep, W.P. (2010). Metagenomic explorations of community structure among phototrophic microorganisms inhabiting diverse thermal habitats in Yellowstone National Park. Presented at the International Society for Microbial Ecology Annual Meeting. Seattle, WA.

Parenteau, M.N., Jahnke, L.L., Green, S.J., **Boomer, S.M.**, and Pierson, B.K. (2010). Marine *Chloroflexus*-like Organisms Synthesize Mid-Chain Branched Monomethylalkanes. Presented at the Astrobiology Science Conference. League City, TX.

Dutton, E.K., Taylor, S.B., Aldrich, P., and **Dutton, B.E**. (2010). Application of Spatial Statistics to Latent Print Identifications: Towards Improved Forensic Science Methodologies. Presented at the 62nd Annual Meeting of the American Academy of Forensic Sciences. Seattle, WA.

Taylor, S.B., Stanley, R., MacNab, I., and **Dutton, B.E**. (2009). Historic Land-Cover Analysis of the Luckiamute River Basin, Central Oregon Coast Range: Preliminary Results from the Earth Science Program for Undergraduate Research at Western Oregon University. Presented at the Geological Society of America Fall 2009 Meeting. Portland, OR.

Haberman, K.L. (2009). Use of macroinvertebrates to assess low-level anthropogenic impacts on the Little Luckiamute River, western Oregon, USA. Presented at the 94th Annual Meeting of the Ecological Society of America. Albuquerque, NM.

Milton E.F., **Howard, A.R.**, van Iersel, M., Barb, J.A., and Donovan, L.A. **(**2010).Characterization of putative drought tolerance traits in wild *Helianthus argophyllus* and commercially grown *H. annuus.* Presented at Evolution annual meeting. Portland, OR.

LeMaster, M.P., Stephani, A.*, and R.T. Mason. 2010. Bigger is Better: Size-dependent Mate Selection and Pheromone Production in Garter Snakes. Presented at the Society for Integrative and Comparative Biology (SICB). Seattle, WA.

Bledsoe, K. and Kellar, H. (2010). *OSTP:* A Blended Model of Professional Development. Presented at the Department of Education Mathematics and Science Partnership Program Regional Meeting. New Orleans, LA.

Bledsoe, K., Kellar, H., and Gummer, E. (2010). Developing a Hybrid Model of Professional Development. Presented at the National Science Teachers Association annual meeting, Philadelphia, PA.

* Current / Former WOU undergraduate student

C. Service: (Include service to external organizations or student organizations; no need to list university / division / departmental committee service…)

During the past academic year:

- Dr. Erin Baumgartner served as a member of the National Marine Educators Association Ocean Literacy Committee and the National Science Teachers Association *NSTA Reports* advisory board. In addition, she was a consultant on the Teacher Profession Development for Ocean Literacy project through the University of Hawaii-Manoa. Lastly, she was also a consultant for the Teacher Professional Development for Ocean Literacy project.

- Dr. Sarah Boomer was involved in reviewing three manuscripts from different journals in the field of microbiology and was also involved in the ad hoc review of two federal grants for the National Science Foundation.

- Dr. Bryan Dutton was a co-advisor for the Natural Science Club, served as the coordinator for the Peer-led Team Learning program for the Biology Department, and served as coordinator for the Program for Undergraduate Research Experiences (PURE). In addition to his service to the WOU community, Dr. Dutton was assistant editor of the Vasculum, the Society of Herbarium Curators' official newsletter.

- Dr. Karen Haberman was involved in two working groups, "undergraduate research" and "aquatic biology", through the Ecological Society of America.

- Dr. Kristin Latham trained with the WOU Safety Zone to provide students with resources, referrals, and assistance regarding gay, lesbian, bisexual, trans, and queer concerns. In addition, she was a guest speaker at the Hillside Retirement Community and the Yamhill County Career Fair.

- Dr. Mike LeMaster was a co-advisor for the Natural Science Club, assisted in cadaver tours for high school students, and served as a guest presenter for the WOU Pre-nursing program to high-school students visiting the OHSU nursing program.

- Dr. Karen Bledsoe was a section chair for the Oregon Academy of Sciences annual meeting and also was involved in reviewing two manuscripts for science education journals.

APPENDIX 1: Student Achievements

Acceptances to Graduate Programs:

- **Travis Hoagland** Oregon State University Pharmacy Program (Pharm.D.)

Acceptances to Undergraduate Programs:

- **Trudy Hogg**
  Marley Winkleman
  Oregon Institute of Technology Dental Hygiene Program
- **Carolyn Anderson**
  Marie Bartlett
  Carie Cyphers
  Jamie Abell
  Brian Messman
  Danny Sundquist
  Tiffany Guyette
  Tara Warren
  Kim Flora
  Gianluca Costigliola
  OHSU School of Nursing
- **Whitney Langwell**
  Katherine Ramos
  Marcus Pearson
  University of Portland School of Nursing
- **Melinda Sanchez**
  Jemima Hagen
  Megan Stocks
  Cinda Schimanski
  Eva Vaquera-Contreras
  Linfield College School of Nursing
- **Jordann Gilmer** Pacific Lutheran University School of Nursing
- **Lauren Zegers** John Hopkins University School of Nursing
- **Kayla Teague** Walla Walla Community College
- **Robert Richardson** OCNE – Umpqua Communit College

Special Recognition:

- **Derek Palmer** Outstanding Achievement in Biology and Pre-professional Studies – NSM Awards Night
- **Mike Petrovich** Outstanding Achievement in Biology and Pre-professional Studies – NSM Awards Night
- **Adrienne Godshalx** Outstanding Achievement in Biology and Pre-professional Studies – NSM Awards Night
- **Jenae Perman** Outstanding Achievement in Principles of Biology – NSM Awards Night
- **Justin Karr** Outstanding Achievement in Principles of Biology – NSM Awards Night

APPENDIX 2: LAS Embedded Assessment Action Reports

LAS
Embedded Assessment Action Report
For
Program Review

Degree Program(s): ____BS_____

(BA, BS, BFA, MA, MS, LACC, etc.)

Course # / Title: ___Bi 212: Principles of Biology_____

Faculty name: __Karen Haberman, Michael LeMaster_____

Date: _____June 22, 2010_____

A) State the program **learning outcome** or **general education goal** this assessment is linked to:

Biology learning outcome:
1. Understand key concepts from the many disciplines within the biological sciences

B) Check the embedded assessment tool(s) used :

- ☐✓**Exam question**
- ☐ Essay
- ☐ Oral presentation
- ☐ Thesis
- ☐ Portfolios
- ☐ Practicum / Service Learning
- ☐ Capstone paper / project
- ☐✓Other _**Questions used for both pre and post-course evaluation**_____

Attach a copy of the actual question / assignment as it is presented to the student or a description of the embedded process.

Please submit a copy of this action report to the LAS dean's office by end of spring term. (Note: It is understood that analysis of the results of the embedded process may not be reviewed until fall term.)

LAS
Embedded Assessment Action Report

For

Program Review

Degree Program(s): ____BS_____

(BA, BS, BFA, MA, MS, LACC, etc.)

Course # / Title: ___Bi 361: Marine Ecology_____

Faculty name: __Karen Haberman (NOTE: Erin Baumgartner co-developed this assessment as part of our Sea Grant, but did not serve as course faculty member.)___

Date: _____June 22, 2010_____

A) State the program **learning outcome** or **general education goal** this assessment is linked to:

Biology learning outcomes:
1. Understand key concepts from the many disciplines within the biological sciences
2. Engage in laboratory experimentation, data analysis and interpretation, and critical thinking at all course levels.

B) Check the embedded assessment tool(s) used :

☐ Exam question
☐ Essay
☐ Oral presentation
☐ Thesis
☐ Portfolios
☐ Practicum / Service Learning
☐ Capstone paper / project
☐✓Other _**Questions used for both pre and post-course evaluation**_____

Attach a copy of the actual question / assignment as it is presented to the student or a description of the embedded process.

Please submit a copy of this action report to the LAS dean's office by end of spring term. (Note: It is understood that analysis of the results of the embedded process may not be reviewed until fall term.)

LAS
Embedded Assessment Action Report

For

Program Review

Degree Program(s): ____BA, BS_In Biology_____

(BA, BS, BFA, MA, MS, LACC, etc.)

Course # / Title: ___BI 211, Principles of Biology_____

Faculty name: ___Kristin L. Latham & Sarah M. Boomer_____
Date: _____June 14, 2010_____

A) State the program **learning outcome** or **general education goal** this assessment is linked to:

Please see the report submitted by Dr. Sarah Boomer as this is a joint assessment project.

B) Check the embedded assessment tool(s) used :

YES Exam question
☐ Essay
☐ Oral presentation
☐ Thesis
☐ Portfolios
☐ Practicum / Service Learning
☐ Capstone paper / project
* Other __**survey of student self-perceived learning and background**_____

Attach a copy of the actual question / assignment as it is presented to the student or a description of the embedded process.

Please submit a copy of this action report to the LAS dean's office.

LAS
Embedded Assessment Action Report

For

Program Review

Degree Program(s): ___LACC_____

(BA, BS, BFA, MA, MS, LACC, etc.)

Course # / Title: _Bi 101, Bi 102, Bi 103 _____

Faculty name: __Erin Baumgartner_____

Date: _____June 9, 2010_____

A) State the program **learning outcome** or **general education goal** this assessment is linked to:

1. Students will demonstrate effective critical thinking;
2. Students will demonstrate effective literacy and communication skills;
3. Students will demonstrate an ability to explore the world in integrative and synthetic ways through disciplinary study across the arts, sciences, and humanities;

B) Check the embedded assessment tool(s) used :

- ☐ Exam question
- ☐ Essay
- ☐ Oral presentation
- ☐ Thesis
- ☐ Portfolios
- ☐ Practicum / Service Learning
- ☐ Capstone paper / project
- ☐ X Other ___*Lab report/Project Outline*_____

Attach a copy of the actual question / assignment as it is presented to the student or a description of the embedded process.

Please submit a copy of this action report to the LAS dean's office.

LAS
Embedded Assessment Action Report

For

Program Review

Degree Program(s): ___LACC_____

(BA, BS, BFA, MA, MS, LACC, etc.)

Course # / Title: _Bi 101, Bi 102, Bi 103 _____

Faculty name: __Erin Baumgartner_____

Date: _____June 9, 2010_____

A) State the program **learning outcome** or **general education goal** this assessment is linked to:

4. Students will demonstrate a basic knowledge of natural, social, cultural, psychomotor, and value systems.

B) Check the embedded assessment tool(s) used :

- ☐ X Exam question (aligned to specific Bi 100 content learning outcomes)
- ☐ Essay
- ☐ Oral presentation
- ☐ Thesis
- ☐ Portfolios
- ☐ Practicum / Service Learning
- ☐ Capstone paper / project
- ☐ X Other _Survey*_____

*Although not technically an embedded assessment, this represents a significant effort to collect information on student accomplishment of learning outcomes related to scientific literacy. These questions are also embedded in student exams as indicators of learning

Attach a copy of the actual question / assignment as it is presented to the student or a description of the embedded process.

Please submit a copy of this action report to the LAS dean's office.

LAS
Embedded Assessment Action Report

For

Program Review

Degree Program(s): ___LACC_____

(BA, BS, BFA, MA, MS, LACC, etc.)

Course # / Title: _GS 201_____

Faculty name: __Erin Baumgartner_____

Date: _____June 9, 2010_____

A) State the program **learning outcome** or **general education goal** this assessment is linked to:

1. Students will demonstrate effective critical thinking;
2. Students will demonstrate effective literacy and communication skills;
3. Students will demonstrate an ability to explore the world in integrative and synthetic ways through disciplinary study across the arts, sciences, and humanities;
4. Students will demonstrate a basic knowledge of natural, social, cultural, psychomotor, and value systems.
5. Students will demonstrate a capacity for meaningful self-reflection.

B) Check the embedded assessment tool(s) used :

- ☐ Exam question
- ☐ X Essay
- ☐ X Oral presentation
- ☐ Thesis
- ☐ Portfolios
- ☐ Practicum / Service Learning
- ☐ Capstone paper / project
- ☐ Other _____

Attach a copy of the actual question / assignment as it is presented to the student or a description of the embedded process.

Please submit a copy of this action report to the LAS dean's office.

LAS
Embedded Assessment Action Report

For

Program Review

Degree Program(s): ___B Ed_____

(BA, BS, BFA, MA, MS, LACC, etc.)

Course # / Title: _GS 311_____

Faculty name: __Erin Baumgartner_____

Date: _____June 9, 2010_____

A) State the program **learning outcome** or **general education goal** this assessment is linked to:

1. Demonstrate evidence of appropriate content knowledge, skills, and dispositions necessary for attaining high achievement for all PK-12 students;

B) Check the embedded assessment tool(s) used :

- ☐ Exam question
- ☐ Essay
- ☐ Oral presentation
- ☐ Thesis
- ☐ Portfolios
- ☐ Practicum / Service Learning
- ☐ Capstone paper / project
- ☐ X Other _Lesson plan_____

Attach a copy of the actual question / assignment as it is presented to the student or a description of the embedded process.

Please submit a copy of this action report to the LAS dean's office.

LAS
Embedded Assessment Action Report

For

Program Review

Degree Program(s): Biology

(BA, BS, BFA, MA, MS, LACC, etc.)

Course # / Title: Biology 211 - Principles of Biology I

Faculty name: Sarah Boomer

Date: June 6, 2010

A) State the program **learning outcome** or **general education goal** this assessment is linked to:

Please see attached report; course learning outcomes (some overlapping with program goals) are in the syllabus.

B) Check the embedded assessment tool(s) used :

Exam question: Pre-course content, mid/final embedded questions
Other: Pre-course background survey, post-course attitudinal/efficacy

Attach a copy of the actual question / assignment as it is presented to the student or a description of the embedded process.

Please see attached report.

Please submit a copy of this action report to the LAS dean's office by end of spring term. (Note: It is understood that analysis of the results of the embedded process may not be reviewed until fall term.)

LAS
Embedded Assessment Action Report

For

Program Review

Degree Program(s): Biology Minor, Pre-Nursing and –Dental Hygiene Requirement

(BA, BS, BFA, MA, MS, LACC, etc.)

Course # / Title: Biology 318 – Microbiology for Health Sciences

Faculty name: Sarah B. Boomer

Date: June 6, 2010

A) State the program **learning outcome** or **general education goal** this assessment is linked to:

Please see attached report; course learning outcomes are in the syllabus.

B) Check the embedded assessment tool(s) used :

Exam question: Pre-course content, mid/final embedded questions
Other: Pre-course background survey, post-course attitudinal/efficacy

Attach a copy of the actual question / assignment as it is presented to the student or a description of the embedded process.

Please see attached report.

Please submit a copy of this action report to the LAS dean's office by end of spring term. (Note: It is understood that analysis of the results of the embedded process may not be reviewed until fall term.)