

Plant and Wildlife Sciences Department

College of Life Sciences
Brigham Young University

The Department of Plant and Wildlife Sciences is one of seven departments in the College of Life Sciences. Within the Department there are approximately 25 full-time faculty members. Graduate degrees at the MS-level are offered in Environmental Science, Genetics, Genomics and Biotechnology, and Wildlife and Wildlands Conservation. A Ph.D. is offered in Wildlife and Wildlands Conservation.

Research Faculty

Zachary T. Aanderud. PhD, Soils and Biogeochemistry, University of California Davis, 2006. Impacts of environmental and resource variability on ecosystem services, consequences of disturbance (e.g. fire and exotic invasion) on plant-soil-microbial interactions, applications of phyto- and bioremediation. 4125 LSB. 422-4220. zachary_aanderud@byu.edu.

Ben W. Abbott. PhD, Ecosystem Ecology, University of Alaska Fairbanks, 2014. The response of carbon and nitrogen cycles to disturbance (permafrost degradation, agriculture, urbanization, and climate change). Ecohydrology, aquatic biogeochemistry, environmental and economic sustainability, expert assessment. 5113 LSB. 422-8000. benabbott@byu.edu

Phil S. Allen. PhD, Horticulture, University of Minnesota, 1990. Ecological restoration, Seed biology, Landscape management. 2123 LSB. 422-2421. phil_allen@byu.edu.

Loreen Allphin. PhD, Biology (Ecology and Evolution), University of Utah, 1996. Plant ecology, Conservation biology, and Ecological genetics. 5130 LSB. 422-5603. loreen_allphin@byu.edu.

Val J. Anderson. PhD, Range Science, Texas A&M University, 1988. Rangeland restoration methods and materials, Plant responses to environmental stress, Rangeland entomology. 5025 LSB. 422-3527. val_anderson@byu.edu.

John M. Chaston. PhD, Microbiology Doctoral Training Program, University of Wisconsin-Madison, 2011. Genetics of beneficial host-microbe interactions. 5132 LSB. 422-4553. john_chaston@byu.edu.

Craig E. Coleman. PhD, Molecular and Cell Biology, Pennsylvania State University, 1992. Plant molecular genetics and biotechnology. 5134 LSB. 422-5145. craig_coleman@byu.edu.

Paul B. Frandsen. PhD, Rutgers University, 2015. Insect genomics. 5115 LSB. 422-2283. paul_frandsen@byu.edu

Brad D. Geary. PhD, Plant Pathology, Washington State University, 1999. Endophytes in plants, Seed germination and survival of native Utah plants, Potato disease control, Quinoa disease control. 4123 LSB. 422-2369. brad_geary@byu.edu.

Neil C. Hansen. PhD, Soil Physics, University of Minnesota, 1998. Transport of Agricultural contaminants in overland flow. 5108 LSB. 422-2491. neil_hansen@byu.edu.

Bryan G. Hopkins. PhD, Plant Science, Kansas State University, 1995. Environmental implications of soil, nutrient, and water management of managed and wildland systems. 5115 LSB. 422-2185. hopkins@byu.edu.

April Huelett PhD, Wildlife and Wildland Conservation, Brigham Young University 2012. Conservation and restoration ecology, fire ecology, remote sensing and GIS applications on rangeland ecosystems. april_hulet@byu.edu

David E. Jarvis. PhD, Plant Science, University of Arizona, 2014. Plant genome sequencing and analysis, comparative genomics, mechanisms of plant salinity tolerance... 5133 LSB. 422-3093. david_jarvis@byu.edu.

Eric N. Jellen. PhD, Plant Breeding, University of Minnesota, 1992. Genome ancestry of Quinoa (*Chenopodium quinoa*), polyploid cytogenetics, crop genetic resource conservation, Cytogenetics of oat (*Avena sativa*) and related species. 5009 LSB. 422-7279. eric_jellen@byu.edu.

Randy T. Larsen. PhD, Wildlife Biology, Utah State University, 2008. Avian biology, avian ecology, wildlife habitat relationships, biostatistics. 5046 LSB. 422-2322. randy_larsen@byu.edu.



Research Faculty (continued)

Matthew D. Madsen. PhD, Wildlife and Wildlands Conservation, Brigham Young University, 2010. Methodologies and technologies for wildland restoration, seed technology, soil-plant-water relationships. 5048 LSB. 422-2458. Matthew.madsen@byu.edu

Peter J. Maughan. PhD, Molecular Genetics, Virginia Polytechnic Institute and State University, 1996. Plant genetics, Genetic marker analysis, Transgenic plants and gene expression. 5144 LSB. 422-8698. jeff_maughan@byu.edu.

Brock R. McMillan. PhD, Biology, Kansas State University, 1999. Population and community ecology of mammals and birds. Wildlife habitat associations, behavioral ecology of mammals and wildlife conservation. 4105B LSB. 422-1228. brock_mcmillan@byu.edu.

Steven L. Petersen. PhD, Rangeland resource (Rangeland ecology and management), Oregon State University, 2004. Landscape Ecology. 5027 LSB. 422-4885.

steven_petersen@byu.edu.

Todd F. Robinson. PhD, Animal Science, Cornell University, 1996. Growth biology, Metabolic processes, Wildlife nutrition, Animal diet reconstruction, Camelid nutrition. 5110 LSB. 422-6172. todd_robinson@byu.edu.

Thomas S. Smith. PhD, Wildlife Ecology, Brigham Young University, 1992. Wildlife-habitat relationships, Wildlife management practices, North American bear ecology, Bear-human conflict research, Polar bear denning ecology, Bear safety and bear deterrents research, Mountain sheep ecology. 5050 LSB. 422-2151. tom_smith@byu.edu.

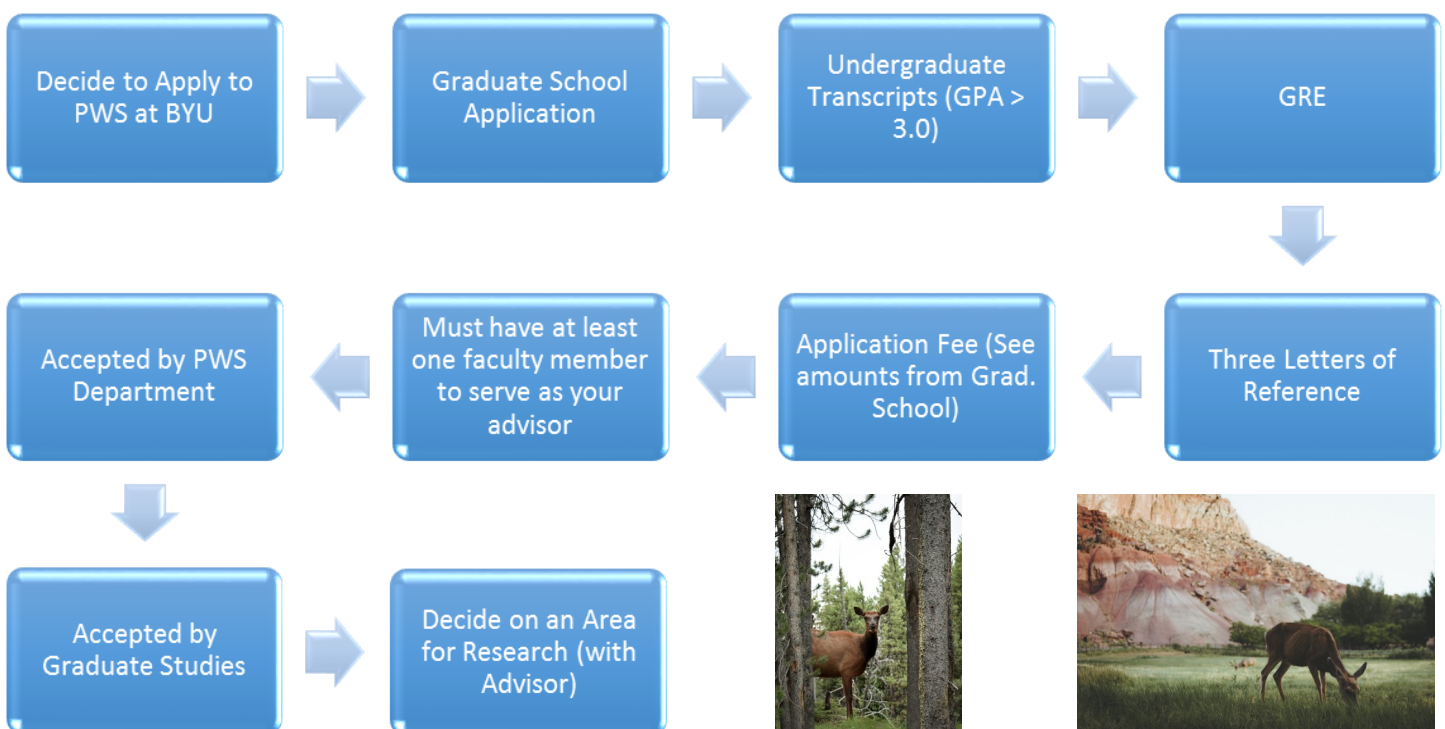
Sam St. Clair. PhD, Ecological and Molecular Plant Physiology, Penn State University, 2004. Plant physiological ecology. 293 WIDB. 4124 LSB. stclair@byu.edu.

J. Ryan Stewart. PhD, Horticulture, Iowa State University, 2005. Plant Ecophysiology. 2124 LSB. 422-7984. rstewart@byu.edu.

Application and Admission

Acceptance criteria for graduate students coincides with those published in the BYU Graduate Catalog, with those established by the College of Life Sciences, and with those described in the Graduate Council's Principles and Characteristics of Graduate Education.

PWS Acceptance Flowchart



Acceptance Criteria and Minimum Standards for Admission

Acceptance should be based on a balanced consideration of several areas of information, with strong support in one area offsetting weaker support in other areas. Faculty are encouraged to review the files of potential graduate students and to communicate directly with candidates regarding research opportunities. Faculty should feel their opinions regarding a student's candidacy will be welcomed by the Department's Graduate Committee. Acceptance Criteria and Standards include the following:

- Submit a complete application prior to the application deadline of February 1. An application is not considered complete until the Application for Graduate Admission, fees, all official transcripts, Honor Code Commitment, and Ecclesiastical Endorsement have been received. International students must also submit official transcripts, diplomas, and mark sheets to a credential evaluation agency for a comprehensive course-by-course evaluation and calculation of a grade point average (GPA). See: <http://graduatestudies.byu.edu/content/admission-information>
 - Receive at least a baccalaureate degree from an accredited US university or the equivalent from a university outside the U.S. (a four- or five-year program) before beginning graduate study at BYU. The Office of Graduate Studies must receive an official transcript showing that the degree has been conferred. Without such verification, registration will not be permitted beyond the first semester.
 - GPA, 3.0 or higher for all completed university courses.*
 - GRE combined minimum score of 300 with a minimum score of 4.0 on the analytical writing portion is required.*
 - Three letters of recommendation from people with some understanding of the applicant's abilities in relationship to the requirements of a graduate program.
 - It is highly recommended that students have professional experience in work, internships, or undergraduate research that is complementary to the graduate program to which the applicant is applying. This experience could include special projects that resulted in publications and/or presentations at professional meetings.
 - No graduate candidate will be accepted unless he or she has a departmental faculty member willing to serve as Major Advisor on a funded project. We encourage prospective students to contact faculty who might serve as potential advisors. Contact the department at
 - (801) 422-2760 or visit the website at <http://pws.byu.edu/home> for a list of faculty.
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- * *Rare exceptions may be made by petition through the Dean's office in the College of Life Sciences for students whose scores are below the minimum requirements.*

Application Deadline

Graduate student applications will be evaluated annually with a single application deadline of **February 1**. Evaluations will continue through mid-February and acceptance decisions will be made by the Graduate Committee in late February or early March. However, the Graduate Committee will consider exceptions to this timeline when coupled with funding not based on Departmental support and guaranteed for the duration of the proposed graduate program on an ad hoc basis. Faculty are strongly encouraged to communicate in writing their desires to members of the Graduate Committee to facilitate the inclusion of these desires in the reviews of applicants. Faculty should convey their desires in terms of rankings of multiple students applying to single labs, or in terms of individual candidates.



Students from Foreign Countries

In addition to academic qualifications, the following requirements apply to students from foreign countries:

- All applicants whose native language is not English and who have not received a four-year bachelor's degree from an accredited university in the U.S.—or the equivalent from a recognized university in an English-speaking country (see Guide for Applying to Graduate Study for more information)—must fulfill at least one of the following qualifications:
 - Total IELTS band score of 7.0 with at least a 6.0 in each module
 - TOEFL score of at least 237 on the computer-based test
 - TOEFL score of at least 580 on the paper-based test
 - TOEFL iBT of at least 85, with minimum scores of 22 in the Speaking section and 21 in Listening, Reading, and Writing
- An applicant whose degree is awarded outside of the United States must submit all official transcripts, diplomas, and mark sheets to one of the following agencies for a credential evaluation, which must include a comprehensive course-by-



Credit Policies

Graduate Courses

Seniors with exceptional ability may, on occasion, register for courses numbered in the 500 series but should be aware that such courses are taught at a graduate level and expectations may exceed the undergraduate's preparation.

All 600-level courses and above are reserved for graduate students. In exceptional circumstances selected post-baccalaureate students and undergraduate students may register for a 600-level course with permission from the instructor.

Appropriate Credit Enrollment

Because graduate study is more rigorous than undergraduate study, a student should not register for more than 12 hours in a semester or 6 hours in a term. In

course evaluation and calculation of grade point average (GPA):

International Education Research Foundation, Inc. (IERF)
P.O. Box 3665
Culver City, CA 90231-3665
<http://www.ierf.org>

World Education Services (WES)
P.O. Box 5087
Bowling Green Station
New York, NY 10274-5087
<http://www.wes.org>

- International students are required to have an Ecclesiastical Endorsement. If the applicant needs to make special arrangements to complete this requirement, email INTL@BYU.EDU.
- Register for a minimum of 9 credit hours for both Fall and Winter semesters.
- International students should keep in close contact with International Services, 1351 WSC, intloff@byu.edu, or 801-422-2695 while on campus.



many programs, even that may be too much. Furthermore, registration for thesis/dissertation credit and work on the thesis/dissertation should be concurrent and reasonable. It would be inappropriate, for example, for a student to register for all 18 dissertation credit hours in one semester or term. Students should consult with their committee chair in determining an appropriate and reasonable credit enrollment.

Research Credits

Research credits under the class PWS 697R may **not** be included in the 30 hours for a MS degree or the 54 credit hours for a PhD on a Program of Study. Research credits are often still useful or necessary during graduate study, but they will not be approved by the department on a Program of Study.

Restrictions on Credits That May Apply Toward a Graduate Degree

Post-Baccalaureate Studies (PBS), Senior, and Transfer Credit

With department approval, transfer, senior, and post-baccalaureate studies credit may be applied toward the degree according to the individual criteria listed below. The maximum number of transfer credit hours should constitute no more than 25 percent of the total hours required for the program, not to exceed 15 credit hours in any program. Contact Graduate Studies if you have any questions.

Post-Baccalaureate Studies Credit

Credit taken after the baccalaureate degree has been received, but before the semester of formal admission to a graduate program, is defined as PBS credit. Such credit can be considered as part of a graduate degree program only with department approval. PBS and senior credit combined cannot exceed 10 semester hours of a graduate program.

Senior Credit

In some restricted instances students seeking a master's degree may apply credit taken during the senior year at BYU toward that degree, but in no instances can this credit apply to both a baccalaureate and a graduate degree. Senior and PBS credit combined cannot exceed 10 semester hours of a graduate program.

Transfer Credit

With Department approval, credit from other universities may be applied toward a graduate degree under the following conditions.

- Graduate numbers or equivalent
- B grades or better
- No more than 10 hours
- No international credit without certification by examination
- No undergraduate credit
- No extension credit
- No "P" (pass) credit
- Credit has not already been applied to another degree

Other BYU Credit

Lower-division courses (100- and 200-level courses), Independent Study (correspondence) courses, 300- and 400-level **religion** courses, and education courses numbered 514R **may not** apply toward a graduate degree.

Upper division courses (300- and 400 level courses, non-religion) may apply toward a graduate degree, but may not exceed 9 credit hours.

No undergraduate courses may apply toward a doctoral degree (except those already applied to a master's degree).



MARIELLEN TUCKETT
GRADUATE PROGRAM ADVISOR

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