Plant and Wildlife Sciences Department
Graduate Programs

College of Life Sciences
Brigham Young University

Environmental Science MS
Genetics, Genomics and Biotechnology MS
Wildlife & Wildlands Conservation MS, PhD
Welcome

Graduate programs in the Department of Plant and Wildlife Sciences focus on many of the great dilemmas facing mankind in the 21st century, such as harnessing biological technology to meet the needs of an expanding human population in the developing world; assessing and minimizing the impact of human activities on an increasingly vulnerable environment; and managing and conserving wildlife and wildlands.

Graduate Programs

Environmental Science MS
- Environmental protection and remediation
- Plant ecology and ecophysiology
- Environmental soil science
- Conservation of rare species
- Soil and water conservation

Wildlife and Wildlands Conservation MS, PhD
- Wildlife population assessment and management
- Wildlife behavior and habitat relationships
- Effects of disturbance and restoration on forest and rangeland ecosystems
- Management of rangeland vegetation using fire and other tools
- Landscape ecology; range and forest assessment using Geographic Information Systems (GIS)

Genetics, Genomics and Biotechnology MS
- Genetic Engineering
- Cytogenetics
- DNA marker analysis and genetic mapping
- Gene expression studies
- Comparative and functional genomics
Benefits to Graduates

- Outstanding job opportunities
- Excellent salary potential
- Highly dedicated faculty and staff
- Chance to actively solve world problems
- Engaging field research opportunities
- Lab enhanced curriculum
- Mentored research opportunities

PWS Admission Checklist

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<th>Fill Out Your Application</th>
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<tr>
<td>01</td>
<td>Go to gradstudies.byu.edu/apply</td>
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<td>02</td>
<td>Obtain an Ecclesiastical Endorsement</td>
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<td>03</td>
<td>Visit endorse.byu.edu</td>
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<td>04</td>
<td>Transcripts and Degrees</td>
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<td>05</td>
<td>Provide evidence of at least the equivalent of a 4 year US bachelor’s degree, as indicated by an unofficial transcript or academic record</td>
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<td>06</td>
<td>GPA</td>
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<td>07</td>
<td>Self-report your final degree GPA as indicated on your transcript or academic record. International applicants must convert their raw GPA to a 4.0 scale</td>
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<td>08</td>
<td>Letters of Recommendation</td>
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<td>09</td>
<td>Request three letters of recommendation from previous professors or professionals</td>
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<td>10</td>
<td>Tests</td>
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<td>11</td>
<td>Take the GRE and have your official scores sent to BYU</td>
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<td>12</td>
<td>Statement of Intent &amp; Resume</td>
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<td>13</td>
<td>Describe your educational career objectives and how graduate work will fit into those goals. Submit a copy of your resume.</td>
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<td>International Student Requirements</td>
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<td>15</td>
<td>Submit your required English proficiency exam scores (scores must be current within two years), copies of your passport biographic pages for yourself and any dependents that may accompany you, along with proof of finances.</td>
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<td>16</td>
<td>Pay &amp; Submit Your Application Fee</td>
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<td>17</td>
<td>Pay $50 application fee and submit the application before February 1st. Incomplete or late applications will automatically be denied.</td>
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<td>18</td>
<td>Admission Decision</td>
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<td>19</td>
<td>Admission decisions will be mailed out by May 31st.</td>
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Acceptance Criteria and Minimum Standards for Admission

- Submit a complete application prior to 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.
- GRE combined minimum score of 300 with a minimum score of 4.0 on the analytical writing portion is required.*
- 3.2 GPA or higher.*
- Three letters of recommendation
- It is recommended that students have applicable work experience, internships, or undergraduate research.
- 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 strongly encourage prospective students to contact faculty who might serve as potential advisors.
- The Office of Graduate Studies must receive an official transcript showing that your bachelor’s degree has been verified. Without such verification, registration will not be permitted beyond the first semester.

* 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.

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 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
  - International students are required to have an Ecclesiastical Endorsement.
  - Register for a minimum of 9 credit hours for both Fall and Winter semesters.

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-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](http://www.ierf.org)

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

- International students should keep in close contact with International Services, 1351 WSC, intloff@byu.edu, or 801-422-2695 while on campus.
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.


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.


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, Insect Genomics, Rutgers University, 2015. 5115 LSB. 422-2283. paul_frandsen@byu.edu.

Brad Geary. PhD, Plant Pathology, Washington State University, 1999. Soil microbial ecology, Seed germination and survival of native Utah plants, Potato disease control, Quinoa disease control. 4123 LSB. 422-2369. brad_geary@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.

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.


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


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.

Mikel R. Stevens. PhD, Molecular techniques in plant breeding research and plant diversity studies. University of Arkansas, 1993. Tomato and quinoa disease resistance genetics research, Quinoa molecular genetic studies, Wild indigenous species genetic research, Invasive species control studies, 5131 LSB. 422-4032. mikel_stevens@byu.edu.