

# **N** CULTIVATING IANR CAREERS

Information of interest to prospective horticulture students—details on internships, scholarships, graduates, courses, and more.



## **Horticulture** About the Program

Do you see yourself in a career working with fruits, vegetables, flowers, trees, shrubs or ornamental grasses? If so, then horticulture may be the perfect major for you. Horticulture is the art and science of growing plants to sustain human diets and our living environment. Plants associated with horticulture typically require more intensive management than those associated with large-scale agronomic production. You can choose an emphasis in landscape design, entrepreneurship, sustainable food production, plant science or horticulture crop production.

*Fall 2012 Enrollment: 81 students.*

# Scholarships

In addition to UNL and College of Agricultural Sciences and Natural Resources scholarships, you have several departmental scholarship opportunities available to you. For the 2012–13 academic year, \$53,475 was awarded to horticulture students, representing 37 scholarship awards to 19 students at an average of more than \$2,800 per student. For 2013–14, more than \$42,000 was awarded in departmental scholarships to horticulture students. **As a new freshman or transfer student, your departmental scholarship application is due the first Monday in April.**

**\$42,000+** in departmental scholarships were awarded to Horticulture students in the 2013–14 academic year.



Students plant and grow poinsettias in the teaching greenhouse and sell at the annual Horticulture Club poinsettia sale in December.

If you are interested in the production, care and marketing of fruit, vegetable and ornamental plants, then **Horticulture Club** is for you! Horticulture Club is an opportunity for like-minded students to grow plants, develop production skills, explore career diversity, learn more and promote horticulture to others. It's a great venue to interact with faculty and industry members. During the 2012–13 academic year, three plant sales were held. The students conducted a foliage plant, pumpkin & gourd sale in October; **Erin Kinley** (Bladen, Neb.) was the lead grower for the poinsettia sale in December; and **Jake Beiermann** (Elkhorn, Neb.), **Erin Kinley**, and **Oswaldo Carrillo** (Fremont, Neb.) were the lead annual and vegetable plant growers for the April bedding plant sale. A portion of the proceeds from the sales helped cover expenses for 10 student members to travel to Chicago over spring break and tour various horticultural venues including Garfield Conservatory, Ball Horticultural, Millennium Park, Chicago Botanic Garden, and Morton Arboretum. *Faculty Advisors: Stacy Adams and Dave Lambe.*

**Pi Alpha Xi (PAX)** is the national honor society for horticulture. The purpose of the society is to promote high scholarship, fellowship, professional leadership and the enrichment of human life through plants. You must be invited to join the society and invitation is available to undergraduates, graduate students and faculty. Nine undergraduate students and one visiting horticulture professor were inducted in 2012–13. The students were Horticulture majors **Kristina Alas** (Omaha, Neb.),

**Christopher Behrns** (Nehawka, Neb.), **Felicia Benes** (Seward, Neb.), **Erica Hughes** (Grand Island, Neb.), **Daniel Lake** (Salix, Iowa), and **Allie Schiltmeyer** (Elgin, Neb.) and Turfgrass & Landscape Management majors **Luqi Li** (Beijing, China), **Luke Maddox** (Omaha, Neb.), and **Cole Weston** (Omaha, Neb.). Students in the honor society maintain the Scholarship Honor Wall and together with the Horticulture Club, nominate and select the President's Citation winner—an individual that has made substantial contributions to horticulture at the University. During the 2012–13 academic year, the honor society sponsored a wreath-making workshop. **Sarah Blecha** (Omaha, Neb.) received the PAX scholarship for outstanding contributions to the chapter during 2012–13.

**Allie Schiltmeyer** (Elgin, Neb.) won \$1,000 in the **Engler Agribusiness Entrepreneurship Program** quick pitch competition which required her to “pitch” her business concept to a team of professionals in three minutes. Allie's business idea was a floral firm in Norfolk with her sister as her partner—the name of the business is Stem Sisters.

**Sarah Blecha** (Omaha, Neb.) and **Rachel Stevens** (Falls City, Neb.) were part of the **UNL Soil Judging Team** that placed 2nd in the regional soil judging contest sponsored by the American Society of Agronomy and the Soil Science Society of America. The team participated in the National Collegiate Soils Contest held in Platteville, Wisconsin.

# Experiences Clubs & Activities

# Experiences

## International Travel

**H**ave you ever experienced the opportunities outside the United States? Explore the world through faculty led study abroad tours and earn college credit at the same time! Costs range from \$3,000–5,000+, and travel scholarships are available to help you defray the costs. Study tours can meet UNL's ACE 9 (Global Awareness) general education requirement. Study tours taken for credit require students to attend pre-tour meetings and complete reading and writing assignments before and after the tour. Agronomy faculty member Dr. Steve Mason co-leads the study tour to Argentina and Horticulture faculty member Dr. Paul Read leads the study tour to Australia & Tasmania. Additional study tours during 2012–2013 included Puerto Rico, France, England, Costa Rica, and Benin.

The Argentina study tour, scheduled for 12 days over spring break, took students from Buenos Aires in eastern Argentina to Mendoza near the western border of Argentina. During the tour, students participated in the culture, dance, food, geography, history and Spanish language of Argentina. Students experienced soybean, corn, wheat, peanut, wine, fruit, beef and dairy production operations; visited research stations, agricultural high school and universities, on-farm trials, and an export port; interacted with representatives from the farmer's association; and were exposed to wildlife

and natural vegetation, soil degradation issues, and herbicide resistant weeds. Seven Agronomy students participated in the study tour along with 16 other CASNR students from various majors. *Faculty Instructors: Dr. Steve Mason and Dr. Nora D'Croz-Mason.*

The Australia & Tasmania study tour arrived in Sidney, Australia and then visited the Sydney Botanical Garden, the famed Sydney Opera House, enjoyed one of Sydney's famous beaches and toured the historic waterfront before traveling to Hobart, Tasmania. The 16-day study tour between the fall and spring semesters provided the students an opportunity to explore the agriculture enterprises, wildlife, culture, and geography of the area. During the tour, students experienced the fruit and vegetable industries; commercial tulip, olive, and seafood operations; the rapidly developing opium poppy and grape industries; experimental research stations; dairy production and processing farms; the lamb and wool industry; extensive forestry and natural resources; and had the opportunity to see Tasmanian devils and kangaroos. Exiting through Melbourne provides the students with an opportunity to see another side of the diversity of this wonderful country. Nine students from various majors participated in the study tour. *Faculty Instructor: Dr. Paul Read.*



Left: Students pose for a photo in a peanut field at the Manfredi research station of the INTA (National Institute of Agricultural Technology) near Córdoba, Argentina. Right: Dr. Paul Read, Professor of Viticulture, and students tour the Frogmore Creek Wines vineyard at Richmond on the island of Tasmania, Australia.

You can be part of a team and enhance your professional skills by working 10–15 hours a week in an area of your interest. More than 200 undergraduate students are hired in the Department of Agronomy and Horticulture each year. Many students gain analytical, technical, and organizational skills by working with a researcher. Other students gain public speaking, leadership, and time management skills by assisting teaching faculty in the classroom, laboratory, or greenhouse. Below is a sampling of paid positions agronomy students held in the Department of Agronomy and Horticulture during the 2012–2013 academic year.

**Laura Armbrust** (Bertrand, Neb.) worked as an undergraduate teaching assistant in Plant Science (AGRO/HORT 131). She was responsible for teaching in 1-2 recitations per semester. Laura also worked on a project to study the responses of plants to high pH and bicarbonate stress, which is associated with the iron deficiency chlorosis that occurs in much of Nebraska. She was involved in growing plants, making nutrient solutions, and measuring enzyme activity. *Faculty supervisors: Dr. Don Lee, Professor Anne Streich and Dr. Brian Waters.*

**Sarah Blecha** (Omaha, Neb.) worked in the laboratory conducting hydroponic nutrient experiments on the effect of macro-element deficiency on leaf re-greening of Swedish ivy. This was the first year of a two year UCARE project aimed at elucidating the effects of nutrient deficiencies on root nutrient concentrations in relation to shoot nutrient concentrations. *Faculty supervisor: Dr. Ellen Pappozzi.*

**Brittney Cihal** (Valparaiso, Neb.) worked in a research farm setting to learn how to manage different research projects, from soybeans to corn in an actual farm field and the inputs needed to make a successful project. *Supervisor: Greg Teichmeier.*

**Scott Dvorak** (Lincoln, Neb.) served as undergraduate teaching assistant for Horticulture Crop Science Lab (HORT 133). Scott prepared lab materials, maintained teaching plant material and graded student worksheets and quizzes. *Faculty Supervisor: Professor Stacy Adams.*

**Bailey Foss** (Lincoln, Neb.) served as undergraduate teaching assistant for Floral Design I (HORT 261) and II (HORT 262). She has instructed floral design labs for two years and has been responsible for demonstrating floral design methods, creating lab quizzes and grading of student projects. *Faculty Supervisor: Professor Stacy Adams.*

**Laura Houfek** (Wahoo, Neb.) assisted in the teaching and research greenhouses. She propagated plants, scouted for greenhouse pests, provided tours of the Jungle greenhouse, identified and labeled plant materials, and assisted with preparing growing media. *Supervisor: Ruth Miller.*



Laura Houfek (background) assists a research technologist with the tomato harvest in the research greenhouse.

**Erin Kinley** (Bladen, Neb.) conducted greenhouse trials as part of a UCARE research project to determine alternative production environments for selected tomato cultivars. *Faculty supervisor: Professor Kim Todd.*

**Melinda Knuth** (Hartford, S.D.) worked on a wheat research project characterizing the concentration of nutritionally important minerals in grain of a diverse panel of wheat genotypes grown at multiple locations. She measured protein concentration in grain and tissue samples of wheat; operated an instrument to measure weight, diameter, moisture, and hardness of individual kernels of grain; and helped grow a greenhouse generation of wheat lines being developed to create a nested association mapping panel. *Faculty supervisor: Dr. P. Stephen Baenziger.*

**Dylan Marr** (Omaha, Neb.) assisted graduate research assistants with their data collection and sample preparation. He also helped in the greenhouse, growing and maintaining plant specimens utilized in the laboratory portion of Invasive Plants (AGRO 426). *Faculty supervisor: Dr. John Lindquist.*

**Jessie Nielsen** (Deshler, Neb.) assisted visiting Professor Donna Morrison (Guyana, located on the northern coast of South America) in growing and harvesting greenhouse strawberries. The specific purpose of the project was to determine if stolon production would affect berry harvest and if harvested stolons could be rooted. *Cooperating faculty supervisor: Dr. Ellen Pappozzi.*

**Rachel Novotny** (Lincoln, Neb.) served as undergraduate teaching assistant for Floral Design I (HORT 261). Rachel gave hands on instruction in two laboratory sections and developed lab quizzes and assisted in creating the final wedding project. *Faculty Supervisor: Professor Stacy Adams.*

**Josh Reznicek** (Omaha, Neb.) worked as an undergraduate teaching assistant in Planting Design (HORT 467). He gathered and prepared base map information for multiple student projects and provided design feedback during desk and final critiques. *Faculty supervisor: Professor Kim Todd.*

**Allie Schiltmeyer** (Elgin, Neb.) was an undergraduate teaching assistant for Landscape Plants II (HORT 213) and Herbaceous Plants (HORT 214). She prepared and monitored tests, found and collected plant specimens to supplement student learning, and assisted with teaching. *Faculty supervisor: Professor Kim Todd.*

**Rachel Stevens** (Falls City, Neb.) worked for the distance education program assisting with an English captioning project. She created transcripts for the audio of several genetics lectures and embedded the text within those pre-recorded video lecture files. This made learning the genetics concepts much easier for students and non-credit participants in which English was not their first language. This also made the on-line materials more ADA accessible. *Faculty supervisor: Dr. Deana Namuth-Covert.*

**Jake Tolliver** (Omaha, Neb.) worked as an undergraduate lab coordinator for nine labs in Introduction to Horticultural Sciences labs (HORT 1310) at UNO in the pre-horticulture program and Plant Propagation labs (HORT 221 & 2210) at UNL & UNO. He was responsible for prepping all the labs and training the new undergraduate teaching assistants. Jake is a transfer student from the pre-horticulture program at UNO. *Faculty supervisor: Dr. Bill Gustafson.*

Internships are key components of your academic experience. They allow you to explore different areas of horticulture, make connections with future employers, and experience a professional work environment. One internship is required for graduation, but students often complete more than one during their undergraduate career. Below is a listing of internships taken for credit during the summer of 2013.



Dakota Dzerk moves flowers in the freezer at Cutts, a wholesale floral company in Lincoln.

**Kristina Alas** (Omaha, Neb.) interned with an organic vegetable production farm in Costa Rica.

**Andrew Bebee** (Omaha, Neb.) worked with the landscape design and installation crews of Kinghorn Gardens in Omaha, Neb.

**Sarah Blecha** (Omaha, Neb.) interned with Dow Agro-Sciences on a corn breeding project in York, Neb.

**Kendra Bretschneider** (Springview, Neb.) interned with Lawnscape, Inc. in Lincoln, Neb.

**Dakota Dzerk** (Ceresco, Neb.) worked in distribution and handling for the wholesale floral company Cutts in Lincoln, Neb.

**Ashley Fendrich** (David City, Neb.) installed hardscapes, including patios, fire pits, and walls for residential landscapes with Pond Masters Plus in David City, Neb.

**Margaret Nielson** (Omaha, Neb.) interned with the landscape design and installation crews of Ned's landscape and Horticulture in Omaha, Neb.

# Careers

## Graduates

From landscape and floral designers, growers, and Extension professionals to continuing your education in graduate school, opportunities for Horticulture graduates are diverse. Our students are self-employed entrepreneurs or are hired by local horticultural businesses and state or federal agencies. Below are examples of positions our December 2012 and May 2013 Horticulture graduates have moved directly into.



Josh Reznicek transplants tomato plants as part of an ongoing greenhouse tomato production project.

**Laura Armbrust** (Bertrand, Neb.) is working for the USDA-NRCs Plant Materials Center in Manhattan, Kan. Horticulture option: production.

**Tyler Beene** (Omaha, Neb.) is a landscape designer for Canopy Landscapes in Omaha, Neb. Horticulture option: landscape design.

**Elias Bloom** (Omaha, Neb.) is attending graduate school at Washington State University in the Department of Entomology. Eli was a transfer from UNO's pre-horticulture program. Horticulture option: production; Insect Science double major with IPM option.

**Benjamin Eisenberg** (Lincoln, Neb.) is working in tree and shrub management at Finke Gardens and Nursery in Lincoln, Neb. Horticulture option: landscape design.

**Jenny Freed** (Loomis, Neb.) is a graduate student in the Department of Entomology at the University of Nebraska–Lincoln studying soybean insect pests. Horticulture option: Entrepreneurship; Insect Science double major with IPM option.

**Ivy Hoppes** (Fremont, Neb.) is an extension assistant in the Department of Entomology at the University of Nebraska–Lincoln. Horticulture option: production; Insect Science minor.

**Laura Houfek** (Wahoo, Neb.) is a research technologist at the University of Nebraska–Lincoln working in greenhouse and field production. Horticulture option: production; Insect Science minor.

**Brenn and Blake Kai** (Pender, Neb.) are owners of Kai Brothers Landscaping in Pender, Neb. They provide landscape design, installation, and management services to customers in northeast Nebraska. Horticulture option: landscape design.

**Brandon Poesche** (O'Neill, Neb.) is a landscape designer and crew leader for Campbell's Nursery in Lincoln, Neb. Horticulture option: landscape design.

**Josh Reznicek** (Omaha, Neb.) is a graduate student in the Department of Agronomy and Horticulture at UNL studying blossom end rot and fruit quality in greenhouse production of tomato. Horticulture option: landscape design.

**Allie Schiltmeyer** (Elgin, Neb.) is a floral designer in Omaha, Neb. Allie was a transfer from UNO's pre-horticulture program. Horticulture option: landscape design.



Ivy Hoppes graduated this May and accepted an Extension Assistant position at UNL in the Department of Entomology.

## To learn more...

To learn more about the undergraduate programs in the Department of Agronomy & Horticulture or schedule a campus visit, contact **Anne Streich** at 402-472-1640 or [astreich2@unl.edu](mailto:astreich2@unl.edu).

## Transfer Information

The transfer course equivalency website is a great resource to identify how courses taken at other post-secondary institutions will transfer to UNL. View the website at: <http://admissions.unl.edu/tequiv>.