PLANT AND ENVIRONMENTAL SCIENCES

Mark Uchanski - Associate Professor
Horticulture - Vegetable Crops
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We are:

149 undergraduate students
50 graduate students
16 professors (2 Regents, 5 Distinguished, 1 Endowed Chair)
8 associate professors
7 assistant professors
Numerous support staff positions

Also, includes faculty with research appointments from Extension Plant Sciences and faculty at Ag Science Centers.

The average teaching appointment of the faculty is 25-40% instruction and 40-75% research.
Answers to YOUR questions:

1.) Two key points:
   - Hands on learning
   - Teaching and research with a personal touch

2.) What sets you apart from other departments?
   - Our students get to work inside and out, all across the US, and also close to home
   - You will get a job and MAKE A DIFFERENCE

3.) Why do students stay in this department?
   - They are passionate about their majors
   - They feel like they are “home”; faculty and staff that care

4.) How can students stay active in your department?
   - Internships, student employment, student clubs, special topics, etc.

5.) Success rates after graduation?
   - High! 600,000 jobs open next year with only graduates 35,000 to fill them!
   - A high percentage attend graduate school
6.) What job opportunities/career paths are offered:
   - Our curriculum is more flexible than other majors, we can customize
   - Numerous: plant and soil scientist, horticulturist, golf course supervisor, E.S.

7.) What research is the departments doing that students can get involved in?
   - Biofuels, chile peppers, onions, alfalfa, cotton, peanuts, ornamentals, soils, E.S.

8.) What internship opportunities are available to students?
   - Outside NMSU: required for environmental science, local nurseries, City of L.C.
   - Cancer research, Student Gardens, Chile Pepper Institute (CPI)

9.) What kind of departmental jobs are available?
   - CPI, soil and water analysis labs, water resources, field and laboratory tech

10.) What scholarship opportunities are available in your department?
    - One of the strongest showings in the College
    - Strong donors in the department mean strong scholarship opportunities each year
WE ARE COMMITTED TO EXCELLENCE IN TEACHING AND ADVISING—AND RESEARCH OUTCOMES……

With personal care throughout
Scholarships in PES:

44 endowments dedicated to students.

32 are endowed scholarships

Which generate over $30,000 per year
PES Scholarships!

$53,000 for the 2014-2015 academic year.
‘Average’ award is $500-1,000/student.
There are also awards for incoming freshmen!

Student Clubs!

Turf club, OASIS, ESSO, GSO, Floral Judging, and Soil Judging

Job placement is 100% for some majors and job opportunities are numerous
Majors:

**Agronomy** - Options: Crop Consulting, General Agronomy

**Horticulture** – Options: Ornamental, Landscape Design, Business, Crop Consulting, General

**Soil Science** – Options: Soils, Environ. And Resource Man, Soil and Water Science


**Environmental Science** – (Internship required)

**Genetics**- often plant breeding

Minors: All of the above
Hands on experiences: Student Gardens
Student Run Store: Crimson Creations

Join us for Crimson Creations Farmers Market
Wednesday, September 17, 2014
From: 12:00 pm to 2:00 pm

USDA ORGANIC

Crimson Creations

Hours
Monday - Friday
9:00 am - 4:00 pm
(475) 646-2230

Open

USDA Organic
A final factoid!!

- A study of college graduates after 10 years in the workforce found the greatest predictor of success was:
  - Name of the university?
  - Outstanding faculty?
  - **You**

Take charge!
You are invited to our Ice Cream Social: 2:30-4pm, Tuesday Aug. 25 @ outside Skeen Hall. Free ice cream!
Production systems – learning by doing

**Action:** Students build low cost hoop houses and grow pesticide free vegetables.

Horticulture Major
Learn by Doing - Landscape Installation

Landscape option in Horticulture
Landscape Design: The Art and Science of creating beautiful landscapes

- **Action:** Design and construct an adobe ruin and install a Medicinal Plant Garden.
  - learn to identify and grow plants
  - learn design, construction, irrigation installation, and plant material

Horticulture Major
Convert a waste product into a valuable resource

**Action**: Separate graywater from ‘black water’ at the house to use on the surrounding landscape.

- Dual water use from same water
- Reduced water consumption while maintaining landscape

Co-sponsored by Aquaverde, Inc (San Diego, CA)
Department of Plant & Environmental Sciences

Floriculture/Ornamental Horticulture

- Hands-On Learning
- High Job Placement
- Undergraduate & Graduate Research
- Marketing Skills
- NMSU Intercollegiate Floral Judging Design Team
Burning pruned pecan branchwood increases greenhouse gases and atmospheric particulates

**Action:** Develop an alternative disposal method that is environmentally benign and safe for orchard.

– Over 70,000 tons/yr
Dust generated from dirt roads may be a health issue

**Action**: Determine the quantity, composition, particle size, extinction characteristic, fluxes and transport distances of fugitive dust from unpaved roads.

BS in Environmental Sciences or Soil Science Major
New Mexico ships 50% of fresh market onions during summer months

‘NuMex’ onion cultivars have increased yield and reduced the cost of production. – Students developed ‘pungency’ test
Learn by Doing - Genetics

Molecular Biology/Genetics

B.S GENETICS

Conventional Breeding & Selection
Department of Plant & Environmental Sciences

Importance of Genetics

• Improve crops through breeding
  • Quality
  • Yield
  • Disease resistance
• Preserve critical germplasm diversity
• Novel plant products
• Molecular tools
• Biotechnology
GM cotton has revolutionized cotton production worldwide

**Bt-cotton**
- Insecticides use
  - 80% decrease (1.9 million pounds)
- Increased yield
- Decreased fuel (sprays)
- Decreased labor
- Increased beneficial insects
- Decreased CO$_2$ production
- Increased income ($94/ha)
The customer is always right! (Dr. John Mexal)

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Questions?

www.nmsu.edu - Search

“Plant and Environmental Sciences”

• www.aces.nmsu.edu/academics/pes

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