Ph.D. Program Overview
The Predictive Phenomics of Plants (P3) NSF Research Traineeship (NRT) at Iowa State University is recruiting exceptional students capable of addressing the major agronomic challenges of the 21st century. P3 fellows will be trained in Engineering, Plant Sciences, and Data Sciences. www.predictivephenomicsinplants.iastate.edu

Who is Eligible
- US citizens or permanent residents
- Biologists, statisticians, and engineers interested in plant sciences
- Admitted to a participating ISU Ph.D. graduate program
- Women, under-represented, veterans encouraged to apply

How to Apply
- Accepting applications beginning Spring 2016 for Fall 2016 admission
- Email p3@iastate.edu for application details

Funding
- $34,000 fellowship for first 12 months
- Assistantships available in subsequent years
- 100% tuition scholarship and health insurance throughout training
- Professional travel scholarships available

Participating Graduate Programs
- Agricultural and Biosystems Engineering
- Electrical and Computer Engineering
- Bioinformatics and Computational Biology
- Mechanical Engineering
- Genetics and Genomics
- Plant Biology
Engineering, Plant Sciences, and Data Sciences NSF NRT Fellows take three technical electives in the student’s discipline of focus, two courses in the second discipline, and one course in the remaining discipline during their training.

ALL TRAINEES TAKE:

<table>
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<th>Semester</th>
<th>Courses</th>
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| Fall I   | Empirical Methods (STAT 430)  
P3C Graduate Seminar  
P3 Core with Lab for T-Base Common Core  
Technical Elective |
| Spring I | Technical Elective  
P3C Graduate Seminar  
Responsible Conduct (GR ST 565)  
Technical Elective |
| Fall II  | Technical Elective  
Technical Elective  
P3C Seminar |
| Spring II| Tech-Led Entrepreneurship (BRT 507)  
Technical Elective  
P3C Seminar |

ENGINEERING TECHNICAL ELECTIVES EXAMPLES

| Fall     | Integrated Transport Phenomena (CH E 554)  
Transport Phenomena (CH E 356)  
Instrumentation for Ag & Biosystems (A B E 504)  
Biosensing (B M E 450) |
| Spring   | Digital Image Processing (E E 528)  
Modeling and Simulation (M E 475)  
MEMS and BioMEMs (E E 530M) |

PLANT SCIENCES TECHNICAL ELECTIVE EXAMPLES

| Fall     | Biotechnology in Agriculture, Food, Human Health (GDCB 5XX)  
Plant Molecular, Cell and Developmental Biology (GDCB 545)  
Plant Metabolism (GDCB 513)  
Crop Genetics (AGRON 506) |
| Spring   | Global Change (AGRON 404)  
Bacterial-Plant Interactions (PL P 477) |

DATA SCIENCES TECHNICAL ELECTIVE EXAMPLES

| Fall     | Software Tools for Large Scale Data Analysis (CPR E 419)  
Predictive Analytics (CPR E 5XX)  
Pattern Recognition (E E 547)  
Principles of Artificial Intelligence (COM S 572) |
| Spring   | High Performance Computing for Science & Engineering Apps (CPR E 425)  
Computational Functional Genomics and Systems Biology (BCB 570)  
Machine Learning (COM S 573)  
Exploratory Methods and Data Mining (STAT 503) |