Table of Contents

Part 1: Department Information
  Introduction ____________________________________________ 3
  Department Facts ______________________________________ 4
  Contact Information ______________________________________ 4

Part 2: General Information
  Student Responsibilities ________________________________ 5
  Scholarships ___________________________________________ 6
  Awards ________________________________________________ 6
  Teaching Opportunities __________________________________ 7
  Botany Ambassadors _____________________________________ 7
  Student Organizations ____________________________________ 7
  Student Resources ________________________________________ 8
  Undergraduate Timeline __________________________________ 9

Part 3: Curriculum Information
  Academic Advisor and Faculty Mentors _____________________ 11
  Questions to ask Faculty Mentors __________________________ 12
  Plan of Study: Plant Science ______________________________ 13
  Course Prerequisites ____________________________________ 14
  University Core Requirements ______________________________ 15
  College of Agriculture Requirements ________________________ 15
  Focus Selective List ______________________________________ 16
  Botany (BTNY) Course List ________________________________ 19
  Minors _________________________________________________ 22
  Grades _________________________________________________ 24
  Academic Probation Policy _________________________________ 25

Appendices
  Appendix A: Graduate School Application Timeline ____________ 26
  Appendix B: Informational Interviewing ______________________ 27
  Appendix C: Boiler Dictionary _______________________________ 29
Introduction

Welcome to the Department of Botany and Plant Pathology and to the College of Agriculture at Purdue University! You are about to begin some of the most important years of your life. College is a fun and educational time that will provide the basis for your future career. You should take your education seriously and tap into all the great resources that Purdue has to offer.

This manual is a useful tool that can help you take control of your college career and guide you towards your goals. You should read this manual and keep it for reference. This handbook is also available online.

Plant Science is a very exciting and diverse field of study. Your generation of scientists will be responsible for figuring out new and innovative ways to feed a growing world; while protecting and preserving the planet at the same time. There has never been a better time to join the ranks of Plant Scientists!

I look forward to getting to know you and helping you on your way to a successful career! If you have any questions, please contact me at mowp@purdue.edu.
Department Facts

The Department of Botany and Plant Pathology was founded in 1887. The very first Ph.D. degree awarded from Purdue University was to a student in our department in 1897 named Daniel MacDougal for his thesis titled, “Curvature of Roots”.

Today the department consists of 37 faculty member who perform research in Plant Pathology, Plant Biology, and Weed Science. We have 58 graduate students and 53 undergraduate students. Our department also manages the Joseph C. Arthur Herbarium, the Plant and Pest Diagnostic Lab, and Purdue Pesticide Programs.

Our undergraduate program consists of one major; Plant Science. This major has built in Focus Selective classes that allow each student to select classes based on their unique interests and goals. We also offer two minors for Plant Science majors; Plant Pathology, and Weed Science.

Contact Information

Department Head
Dr. Christopher Staiger staiger@purdue.edu

Lilly Hall of Life Sciences, Room 1446
915 W. State Street
West Lafayette, IN 47907
765-494-0352
Student Responsibilities

Success in college requires that you take ownership for your educational and professional development. Your academic advisor and faculty mentor will inform you of deadlines, help you meet degree requirements, and give advice. However, you are ultimately responsible for meeting those deadlines and keeping track of your degree progress. You should also do the following:

Check your purdue.edu email – Your purdue.edu email is the official method of communication used by the University, the department, and your advisor. You are responsible for the materials and information sent to your email, even if you choose not to read them.

**If you choose not to use the Purdue University email system as your primary email account, be sure to have your email forwarded and regularly check your email so you receive information in a timely fashion. Periodically check your purdue.edu email to make sure all messages have forwarded correctly.

Understand your degree requirements – It is your responsibility to read and understand this manual and the requirements within. If you have questions, please do not hesitate to ask.

Keep track of your degree progress – You should regularly maintain and update your own advising file and plan of study.

Take action – You are required to follow up on any academic or financial actions that have been requested. Failure to do so can result in termination of your registration or a hold placed on your account. Remember, it is easier to remain in good standing than to try to correct oversights for the simple reason that some may not be correctable.
Scholarships

Scholarships can be awarded at the university, college, or departmental level. You can view a full list of scholarships and application information on the College of Agriculture Scholarship website. Applications for most scholarships become available in the fall semester.

Department Scholarships

Botany Scholarship – Awarded to selected students in each grade level.

John Robert Mitchell, Sr. Memorial Scholarship – Created in 2012 by former Botany employee, Robert Mitchell, Jr., in memory of his father. This scholarship is awarded to selected in-state students in the Plant Science major.

Awards

Outstanding Student – One student from each grade level (freshman, sophomore, junior, senior), will be selected as the department Outstanding Students. These four students will move on for consideration in the college level Outstanding Student awards.

Best Undergraduate Poster – Undergraduate level research posters submitted to the Department Research Showcase in November are judged by a group of faculty and/or graduate students. The top student receives a cash award and certificate.
Teaching Opportunities
During the Fall and Spring semesters the Department of Botany and Plant Pathology hires graduate students and undergraduate students to serve as teaching assistants in some of the Botany (BTNY) courses. These are paid positions and can give you valuable experience in teaching.

Teaching assistants may grade papers, administer exams, and even teach a lab section. Experienced TAs may be asked to teach a class in a teacher’s absence. If you are interested in becoming a TA please speak with John Cavaletto, the department lab coordinator.

Botany Ambassadors
Sophomores and Juniors may apply each spring to become a Botany Ambassador. Ambassadors communicate with applicants, give tours, and assist in department events.

2018-2019 Ambassadors

<table>
<thead>
<tr>
<th>Stacey Brittsan - Senior</th>
<th>Brandon Garver - Senior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morgan Ritzi - Senior</td>
<td>Jenni Fishburn - Senior</td>
</tr>
<tr>
<td></td>
<td>Monica Haughan - Junior</td>
</tr>
</tbody>
</table>

Student Organizations
Purdue University has over 1,000 clubs covering a massive variety of interests. For a full list of clubs visit: boilerlink.purdue.edu.

Botany Club – Open to all majors, this club brings together those students with a passion for plants. Activities and fundraisers take place throughout the year.

2018-2019 Botany Club Officer Team

- President: Brandon Garver
- Vice President: Monica Haughan
- Treasurer: Stacey Brittsan
- Social Media Representative: Anjali Muruleedhara
Student Resources
Purdue has many resources available for students to use. Many are provided without cost. Visit www.purdue.edu for a full list.

**Emotional Health Resources** – Counseling and Psychological Services, or CAPS, allows you access to therapists and psychologists who are specifically trained in college mental health. Students are entitled to 6 free visits a semester. Visit www.purdue.edu/CAPS/ or call 765-494-6995 for an appointment.

**Physical Health Resources** – The Purdue University Student Health center, or PUSH, is a doctor’s office and Urgent Care facility right on campus. Visit www.purdue.edu/PUSH/ or call 765-494-1700 for an appointment.

**Office of Dean of Students** – ODOS can assist you in many ways. The most common is helping you notify professors of an absence due to illness or the death of a relative. They also assist students who are withdrawing from the university or need short term, interest free loans.

**Disability Resource Center** – The DRC ensures qualified students with disabilities equal access to all University programs, services, and activities. Services include exam accommodations, note takers, closed captioning, and more. Visit www.purdue.edu/drc to learn about all their services.

**Student Success** – The Student Success office provides students with resources, workshops, and study sessions. They run a peer mentoring program and match students with tutors. Visit www.purdue.edu/studentsuccess to learn more.

**Job Placement Assistance** – The Center for Career Opportunities, or CCO, offers workshops, resume writing help, job counseling, and job placement assistance. Visit www.cco.purdue.edu or call 765-494-3981.
Undergraduate Timeline

Freshman Year – Self-Exploration

Fall Semester
- Review your online presence with future employers in mind
  - Revise your online profiles or adjust privacy settings
  - Be mindful of future comments you make and pictures added
- Create a resume and your myCCO account
  - CCO or your advisor can help with this
- Attend the Agriculture Career Fair
- Join clubs and organizations; Get Involved!
- Ask about research opportunities in a lab, field, and/or greenhouse

Spring Semester
- Evaluate your workload
  - How did you do 1st semester?
  - Do you need to drop some club involvements or responsibilities?
  - Should you take fewer credits a semester?
- If you are undecided in your career, visit CCO
- Finalize your summer plans; work, internship, classes

Sophomore Year – Career Exploration

Fall Semester
- Evaluate your summer job/internship
  - Identify likes/dislikes
- Update your resume
- Attend the Agriculture Career Fair
- Perform Informational Interviews to learn about jobs
  - See Appendix B for forms

Spring Semester
- Work with your advisor to form a semester plan for your last two years
- Continue performing Informational Interviews to learn about jobs
- Finalize your summer plans; work, internship, classes
Junior Year – Gaining Experience

Fall Semester
- Evaluate your summer job/internship
  - Identify likes/dislikes
  - Compare to last summer
  - Consider what jobs might incorporate your “likes”
- Update your resume
- Attend the Agriculture Career Fair
  - Look for Out-of-State internships

Spring Semester
- Take a serious look at your career interests
  - Evaluate the job market and research the industry
- Decide if you want to attend Graduate School
  - If yes, see Appendix A for a Graduate School Timeline
- Finalize your summer plans; work, internship, classes

Senior Year – Job Searching

Fall Semester
- Evaluate your summer job/internship
  - Was this job closer to what you want to do?
- Update your resume
- Attend Agriculture Career Fair
  - Take this career fair seriously, employers are more selective and interviews are tougher for full time jobs vs. internships
  - Visit CCO for interviewing tips or workshops
- Fill out Graduate School applications

Spring Semester
- Follow up with companies, schedule interviews
- Research competitive pay levels and benefits
  - Be educated when negotiating and comparing job offers
- Prepare for the “real world”
  - Talk to your parents, get advice
    - Should you rent an apartment or buy a house
    - How do you make a budget
    - How should you save for retirement
    - When can you no longer use your parents’ insurance
- Monitor Graduate School applications
  - Visit schools
  - Talk to professors about working in their labs
In addition to meeting with UG Student Services Coordinator each semester, you will also meet with a faculty mentor. These faculty members serve as a mentor for the research and professional development side of your Purdue career.

<table>
<thead>
<tr>
<th>Dr. Cathie Aime</th>
<th>Dr. Jody Banks</th>
<th>Dr. Peter Goldsbrough</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lilly 1335</td>
<td>WSLR B028</td>
<td>Lilly 1422</td>
</tr>
<tr>
<td><a href="mailto:maime@purdue.edu">maime@purdue.edu</a></td>
<td><a href="mailto:banksj@purdue.edu">banksj@purdue.edu</a></td>
<td><a href="mailto:goldsborough@purdue.edu">goldsborough@purdue.edu</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Mike Mickelbart</td>
<td>Dr. Chris Oakley</td>
<td>Dr. Chris Staiger</td>
</tr>
<tr>
<td>WSLR B24</td>
<td>Lilly 1329</td>
<td>Lilly 1446</td>
</tr>
<tr>
<td><a href="mailto:mickelbart@purdue.edu">mickelbart@purdue.edu</a></td>
<td><a href="mailto:oakleyc@purdue.edu">oakleyc@purdue.edu</a></td>
<td><a href="mailto:staiger@purdue.edu">staiger@purdue.edu</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Charlie Woloshuk</td>
<td>Dr. Bryan Young</td>
<td>Dr. Yun Zhou</td>
</tr>
<tr>
<td>Lilly 1420</td>
<td>Lilly 1347</td>
<td>Lilly B472</td>
</tr>
<tr>
<td><a href="mailto:woloshuk@purdue.edu">woloshuk@purdue.edu</a></td>
<td><a href="mailto:BryanYoung@purdue.edu">BryanYoung@purdue.edu</a></td>
<td><a href="mailto:zhouyun@purdue.edu">zhouyun@purdue.edu</a></td>
</tr>
</tbody>
</table>
Questions to ask Faculty Mentors

Freshman Year
Fall
• What types of careers can I get with my degree?
• How can I get more involved in research as a freshman?
Spring
• Should I get a minor in anything? Will it be beneficial?
• What type of BTNY or plant science electives should I take?

Sophomore Year
Fall
• What should I look for in an internship or summer job?
• Are there any professional organizations or groups that I should join?
Spring
• My interests are in __________. My goal is __________. Can we discuss my options and how I can reach my goals?
• For undergraduate research, which professor’s work would best fit with my interests?

Junior Year
Fall
• Do you think Graduate School would be a good option for me?
• What are the advantages/disadvantages of getting a MS or PhD degree?
Spring
• What are the differences between working for government and private companies?
• Should I take some graduate level courses?

Senior Year
Fall
• I’ve been looking at jobs and wanted to talk about my job search plan.
• Are there any opportunities for me to publish or show off my research results?
## Plan of Study

### Plant Science

**Bachelor of Science in Agriculture (120 Credits)**

<table>
<thead>
<tr>
<th>Student Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Semester:</td>
</tr>
</tbody>
</table>

### Freshman Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 AGR 10100 Intro to Agri And Poultry</td>
<td>4 TNY 11100 Principles of Plant Biology</td>
</tr>
<tr>
<td>1 AGR 12500 Intro to Plant Science Program</td>
<td>3 TNY 20700 The Microbial World</td>
</tr>
<tr>
<td>4 BTNY 11000 Introduction to Plant Science</td>
<td>3 CHM 11000 General Chemistry</td>
</tr>
<tr>
<td>3 CHM 11000 General Chemistry</td>
<td>3 COM 11000 Fund of Speech or COM 21700</td>
</tr>
<tr>
<td>4 ENGR 10000 First Year Composition or ENGR 104</td>
<td>3 Unrestricted Elective</td>
</tr>
<tr>
<td>3 MA 16010 Applied Calculus I</td>
<td>16 0</td>
</tr>
</tbody>
</table>

### Sophomore Year

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 BTNY 30700 Fundamental Plant Classification</td>
<td>3 AGRY 30000 Genetics</td>
</tr>
<tr>
<td>4 CHM 23500 Organic Chemistry</td>
<td>3 AGRY 31100 Genetics Lab</td>
</tr>
<tr>
<td>1 CHM 25701 Organic Chemistry Lab</td>
<td>3 BTNY 30200 Plant Ecology</td>
</tr>
<tr>
<td>3 Focus selective</td>
<td>3 PHYS 21400 The Nature of Physics</td>
</tr>
<tr>
<td>3 UCC Humanities selective</td>
<td>3 Science, Technology, &amp; Society Selective</td>
</tr>
<tr>
<td>3 Focus selective</td>
<td>16 0</td>
</tr>
</tbody>
</table>

### Junior Year

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 BChEM 30000 Biochemistry</td>
<td>4 AGRY 30100 Plant Physiology</td>
</tr>
<tr>
<td>4 BTNY 40000 Plant Anatomy</td>
<td>3 STAT 30100 Elementary Statistical Methods</td>
</tr>
<tr>
<td>3 Economics elective</td>
<td>3 Focus elective</td>
</tr>
<tr>
<td>3 Focus elective</td>
<td>3 Humanities or Social Science elective</td>
</tr>
<tr>
<td>1 BTNY 49700 Research Seminar</td>
<td>3 Unrestricted Elective</td>
</tr>
<tr>
<td>14 0</td>
<td>16 0</td>
</tr>
</tbody>
</table>

### Senior Year

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 BTNY 40000 Research in Plant Science</td>
<td>3 Written or Oral Communication Selective</td>
</tr>
<tr>
<td>3 Focus selective</td>
<td>3 Focus selective (300)</td>
</tr>
<tr>
<td>3 Humanities or Social Science elective</td>
<td>3 Humanities or Social Science elective</td>
</tr>
<tr>
<td>3 Unrestricted Elective</td>
<td>3 Unrestricted Elective</td>
</tr>
<tr>
<td>3 Unrestricted Elective</td>
<td>1.5 Unrestricted Elective</td>
</tr>
<tr>
<td>15 0</td>
<td>13.5 0</td>
</tr>
</tbody>
</table>

**Required Number of Credits:** 120

**Number of Credits Earned:** 0
# Course Prerequisites

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRY 320</td>
<td>Undergraduate level AGRY 32000 Minimum Grade of D- [may be taken concurrently]</td>
</tr>
<tr>
<td>BCHM 307</td>
<td>Undergraduate level CHM 25600 Minimum Grade of D- or Undergraduate level CHM 26050 Minimum Grade of D- or Undergraduate level MCMP 20500 Minimum Grade of D-</td>
</tr>
<tr>
<td>BTNY 207</td>
<td>Undergraduate level BTNY 11000 Minimum Grade of D- or (Undergraduate level BIOL 11000 Minimum Grade of D-)</td>
</tr>
<tr>
<td>BTNY 302</td>
<td>Undergraduate level BIOL 11000 Minimum Grade of D- or Undergraduate level BIOL 11100 Minimum Grade of D-</td>
</tr>
<tr>
<td>BTNY 305</td>
<td>Undergraduate level BIOL 11000 Minimum Grade of D- or Undergraduate level BIOL 11100 Minimum Grade of D-</td>
</tr>
<tr>
<td>BTNY 316</td>
<td>Undergraduate level BTNY 11000 Minimum Grade of D-</td>
</tr>
<tr>
<td>BTNY 497</td>
<td>Undergraduate level BTNY 49800 Minimum Grade of D-</td>
</tr>
<tr>
<td>CHM 112</td>
<td>Undergraduate level CHM 11100 Minimum Grade of D- or Undergraduate level CHM 11500 Minimum Grade of D- or (Undergraduate level CHEM C1010 Minimum Grade of D- and Undergraduate level CHEM C1210 Minimum Grade of D-)</td>
</tr>
<tr>
<td>CHM 257</td>
<td>Undergraduate level CHM 11200 Minimum Grade of D- or Undergraduate level CHM 11600 Minimum Grade of D- or Undergraduate level CHM 12600 Minimum Grade of D- or Undergraduate level CHM 13600 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or (Undergraduate level CHEM C1020 Minimum Grade of D and Undergraduate level CHEM C1220 Minimum Grade of D) or (Undergraduate level CHEM C1060 Minimum Grade of D and Undergraduate level CHEM C1260 Minimum Grade of D) or Undergraduate level CHM 10901 Minimum Grade of D- or Undergraduate level CHM 12901 Minimum Grade of D-</td>
</tr>
<tr>
<td>CHM 25700</td>
<td>Undergraduate level CHM 25700 Minimum Grade of D [may be taken concurrently]</td>
</tr>
<tr>
<td>HORT 301</td>
<td>(Undergraduate level BIOL 11000 Minimum Grade of D- or Undergraduate level BTNY 11000 Minimum Grade of D-) or (Undergraduate level BIOL 13100 Minimum Grade of D- or Undergraduate level BIOL 13200 Minimum Grade of D-) or Undergraduate level CHEM C3410 Minimum Grade of D- or Undergraduate level CHM 26100 Minimum Grade of D- or Undergraduate level CHEM C3420 Minimum Grade of D-)</td>
</tr>
<tr>
<td>MA 15910</td>
<td>ALEKS Math Assessment 060 or Undergraduate level MA 15300 Minimum Grade of C- or Undergraduate level MA 15800 Minimum Grade of C- or Undergraduate level MA 15900 Minimum Grade of C-</td>
</tr>
</tbody>
</table>

## Selectives

**Economics Selectives:** AGEC 203, AGEC 204, AGEC 217, ECON 210, ECON 251, or ECON 251

**Focus Selectives:** A complete list of courses eligible as Focus Selectives is available in the Undergraduate Manual

**Unrestricted Electives:** This can be almost any course. Ask Tyson for course approval.

The most current approved course lists for College of Agriculture Core requirements, including humanities, social sciences, written or oral communications, science/tech & society, international understanding, and multicultural awareness, are available at: https://agg.purdue.edu/osp/Pages/core_requirements.aspx
University Core Requirements

Purdue University requires each student to satisfy the University Core by taking a course to satisfy each of the categories below. Most of these will be satisfied with courses currently listed on the plan of study.

- Humanities
- Behavioral/Social Science
- Information Literacy
- Science #1
- Science #2

- Science, Technology, and Society
- Written Communication
- Oral Communication
- Quantitative Reasoning

College of Agriculture Requirements

The College of Agriculture has set the following requirements that must be met, in addition to department plan of study requirements, before a degree can be awarded.

- Students must maintain a 2.0 cumulative GPA
- At least 2 semesters of coursework must be completed at Purdue
- 32 credits of upper division courses must be taken from Purdue (Upper division courses are classified as courses with numbers at the 30000-level or higher)
- Of the 15 credits of Humanities/Social Science, 9 must be from outside the College of Agriculture
- Students must complete 9 credits of International Understanding
- Student must complete 3 credits of Multicultural Awareness

Course lists for the University Core Requirements, International Understanding, and Multicultural Awareness can be found online at https://ag.purdue.edu/oap/Pages/core_requirements.aspx.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABE 32500</td>
<td>Soil and Water Resource Engineering</td>
</tr>
<tr>
<td>AGEC 25000</td>
<td>Economic Geography of World Food and Resources</td>
</tr>
<tr>
<td>AGEC 34000</td>
<td>Economics of World Development</td>
</tr>
<tr>
<td>AGEC 41000</td>
<td>Agricultural Policy</td>
</tr>
<tr>
<td>AGRY 10500</td>
<td>Crop Production</td>
</tr>
<tr>
<td>AGRY 12000</td>
<td>Water and Food Security</td>
</tr>
<tr>
<td>AGRY 12500</td>
<td>Environmental Science and Conservation</td>
</tr>
<tr>
<td>AGRY 25500</td>
<td>Soil Science</td>
</tr>
<tr>
<td>AGRY 28500</td>
<td>World Crop Adaptation and Distribution</td>
</tr>
<tr>
<td>AGRY 29000</td>
<td>Introduction to Environmental Science (see AGRY 125)</td>
</tr>
<tr>
<td>AGRY 33500</td>
<td>Weather and Climate</td>
</tr>
<tr>
<td>AGRY 34900</td>
<td>Soil Ecology</td>
</tr>
<tr>
<td>AGRY 35000</td>
<td>Global Awareness</td>
</tr>
<tr>
<td>AGRY 38500</td>
<td>Environmental Soil Chemistry</td>
</tr>
<tr>
<td>AGRY 45000</td>
<td>Soil Conservation and Water Management</td>
</tr>
<tr>
<td>AGRY 48000</td>
<td>Plant Genetics</td>
</tr>
<tr>
<td>AGRY 52000</td>
<td>Principles and Methods of Plant Breeding</td>
</tr>
<tr>
<td>AGRY 52500</td>
<td>Crop Physiology and Ecology</td>
</tr>
<tr>
<td>AGRY 53000</td>
<td>Advanced Plant Genetics</td>
</tr>
<tr>
<td>AGRY 54400</td>
<td>Environmental Organic Chemistry</td>
</tr>
<tr>
<td>AGRY 54500</td>
<td>Remote Sensing of Land Resources</td>
</tr>
<tr>
<td>AGRY 58500</td>
<td>Soils and Land Use</td>
</tr>
<tr>
<td>ASM 23600</td>
<td>Environmental Systems Management</td>
</tr>
<tr>
<td>BCHM 22100</td>
<td>Analytical Biochemistry</td>
</tr>
<tr>
<td>BCHM 56100</td>
<td>General Biochemistry I</td>
</tr>
<tr>
<td>BCHM 56200</td>
<td>General Biochemistry II</td>
</tr>
<tr>
<td>BIOL 24100</td>
<td>Biology IV: Genetics and Molecular Biology</td>
</tr>
<tr>
<td>BIOL 41500</td>
<td>Introduction to Molecular Biology</td>
</tr>
<tr>
<td>BIOL 41600</td>
<td>Viruses and Viral Diseases</td>
</tr>
<tr>
<td>BIOL 43800</td>
<td>General Microbiology</td>
</tr>
<tr>
<td>BIOL 48100</td>
<td>Eukaryotic Biology</td>
</tr>
<tr>
<td>BIOL 51700</td>
<td>Molecular Biology: Proteins</td>
</tr>
<tr>
<td>BIOL 58000</td>
<td>Evolution</td>
</tr>
<tr>
<td>BIOL 59500</td>
<td>Cell Biology of Plants</td>
</tr>
<tr>
<td>BTNY 11100</td>
<td>Principles of Plant Biology</td>
</tr>
<tr>
<td>BTNY 20100</td>
<td>Plants and Civilizations</td>
</tr>
<tr>
<td>BTNY 20400</td>
<td>Crop and Weed Identification</td>
</tr>
<tr>
<td>BTNY 28500</td>
<td>Plant and Civilizations</td>
</tr>
</tbody>
</table>
BTNY 30100  Introductory Plant Pathology  
BTNY 30400  Introductory Weed Science  
BTNY 35000  Biotechnology in Agriculture  
BTNY 39000  Selected Topics in Plant Science  
BTNY 42000  Plant Cellular and Developmental Biology  
BTNY 44300  Arthropods and Diseases  
BTNY 44600  Ornamental Plant Health  
BTNY 50400  Advanced Weed Science  
BTNY 50500  Advanced Biology of Weeds  
BTNY 52500  Intermediate Plant Pathology  
BTNY 53500  Plant Disease Management  
BTNY 55000  Biology of Fungi  
BTNY 55200  Molecular Approaches to Plant Pathology  
BTNY 55300  Plant Growth and Development  
EAPS 10000  Planet Earth  
EAPS 11100  Physical Geology  
EAPS 11300  Environmental Geology (see EAPS 125)  
EAPS 12500  Environmental Science and Conservation  
ENGL 23400  Ecological Literature  
ENTM 20600  General Entomology  
ENTM 20700  General Entomology Laboratory  
ENTM 31100  Insect Ecology  
ENTM 41000  Insect Pest Management  
EPICS  Agriculture Related Projects  
FNR 10300  Introduction to Environmental Conservation (see FNR 125)  
FNR 12500  Environmental Science and Conservation  
FNR 20100  Marine Biology  
FNR 21000  Natural Resource Information Management  
FNR 22500  Dendrology  
FNR 23000  The World’s Forests and Society  
FNR 30500  Conservation Genetics  
FNR 33100  Forest Ecosystems  
FNR 33300  Fire Effects in Forest Environments  
FNR 34100  Wildlife Habitat Management  
FNR 35300  Natural Resources Assessment  
FNR 35700  Fundamental Remote Sensing  
FNR 36500  Natural Resources Issues, Policy, and Administration  
FNR 40600  Natural Resources and Environmental Economics  
FNR 43400  Tree Physiology  
FNR 43500  Physiological Ecology of Woody Plants
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNR 48800</td>
<td>Global Environmental Issues</td>
</tr>
<tr>
<td>FNR 50100</td>
<td>Limnology</td>
</tr>
<tr>
<td>FNR 50200</td>
<td>Watershed Hydrology, Ecology, and Management</td>
</tr>
<tr>
<td>FNR 50500</td>
<td>Molecular Ecology and Evolution</td>
</tr>
<tr>
<td>FNR 54000</td>
<td>Wetlands Ecology</td>
</tr>
<tr>
<td>FNR 54200</td>
<td>Ecology and Management of Declining, Rare, and Endangered Species</td>
</tr>
<tr>
<td>FNR 55800</td>
<td>Digital Remote Sensing and GIS</td>
</tr>
<tr>
<td>HORT 20100</td>
<td>Plant Propagation</td>
</tr>
<tr>
<td>HORT 40300</td>
<td>Tropical Horticulture</td>
</tr>
<tr>
<td>HORT 51500</td>
<td>Plant Cell, Tissue, and Organ Culture</td>
</tr>
<tr>
<td>HORT 55100</td>
<td>Biophysical Plant Physiology</td>
</tr>
<tr>
<td>HORT 59000</td>
<td>Weed Management in Turfgrass and Landscape Ecosystems</td>
</tr>
<tr>
<td>NRES 25500</td>
<td>Soil Science</td>
</tr>
<tr>
<td>NRES 12500</td>
<td>Environmental Science and Conservation</td>
</tr>
<tr>
<td>NRES 28000</td>
<td>Hazardous Waste Handling</td>
</tr>
<tr>
<td>NRES 29000</td>
<td>Introduction to Environmental Science (see NRES 125)</td>
</tr>
<tr>
<td>POL 22300</td>
<td>Introduction to Environmental Politics</td>
</tr>
<tr>
<td>POL 30000</td>
<td>Introduction to Political Analysis</td>
</tr>
<tr>
<td>POL 32700</td>
<td>Global Green Politics</td>
</tr>
<tr>
<td>POL 42300</td>
<td>International Environmental Policy</td>
</tr>
<tr>
<td>SFS 30100</td>
<td>Agroecology</td>
</tr>
<tr>
<td>STAT 50300</td>
<td>Statistical Methods of Biology</td>
</tr>
<tr>
<td>STAT 51100</td>
<td>Statistical Methods</td>
</tr>
</tbody>
</table>
## Botany (BTNY) Course List

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTNY 11000</td>
<td>Introduction to Plant Science</td>
<td>4</td>
<td>Fall/Spring</td>
</tr>
<tr>
<td>BTNY 11100</td>
<td>Principles of Plant Biology</td>
<td>4</td>
<td>Spring</td>
</tr>
<tr>
<td>BTNY 20100</td>
<td>Plants and Civilization</td>
<td>3</td>
<td>Spring</td>
</tr>
<tr>
<td>BTNY 20700</td>
<td>The Microbial World</td>
<td>3</td>
<td>Spring</td>
</tr>
<tr>
<td>BTNY 30100</td>
<td>Introductory Plant Pathology</td>
<td>3</td>
<td>Fall/Spring</td>
</tr>
</tbody>
</table>

### BTNY 11000
An introduction to the major groups in the plant kingdom, their origin, classification, and economic importance. The areas of anatomy, morphology, cytology, physiology, biochemistry, molecular biology, genetics, and ecology will be explored as they relate to plant sciences and agriculture.

### BTNY 11100
The overall objective is to provide the students with a solid foundation in essential concepts in plant biology in order to better prepare them for more specialized study. Lectures and laboratory exercises will cover mechanisms and processes of plant genetics, physiology, and ecology. Topics will focus on mechanisms and processes that are fundamental to integrative cell, tissue, and organ functions as well as responses by plants to climatic and edaphic factors. Throughout the course, an emphasis will be made on the means by which scientific data is collected and interpreted, and key experiments performed in the lab component will be used to illustrate this process.

### BTNY 20100
This course, intended primarily for non-majors, covers the history of agriculture, with focus on the centers of origin of our major food, fiber, and medicinal plants, and their historical, cultural, and economic relevance. The course also surveys the biology of crop plants, with respect to taxonomy, anatomy, cell structure, physiology, development, and genetics. Discussions also center on the roles plant biotechnology may play in sustainable agriculture and in helping to alleviate problems caused by overpopulation and ecological stress.

### BTNY 20700
This course delivers a broad synthesis of microbiology, discussing all taxa of the microbial world. The course also discusses a wide range of subjects related to microbiology, including medical microbiology, but it has a strong emphasis on the botanical and environmental sciences. One particular characteristic that separates it from other microbiology courses is the reduced emphasis upon bacteriology, with discussions of the protists and viruses and, especially of the fungi, occurring in greater detail than the other general microbiology courses available.

### BTNY 30100
Basic principles of plant pathology, including etiology, symptomatology, control, and epidemiology of representative diseases of plants.
**BTNY 30200  Plant Ecology  3  Spring**
This course will provide an introduction to the broad field of plant ecology. Through lectures and lab assignments, students will gain an in-depth understanding of ecological concepts regarding the occurrence and distribution of plant species and populations. Students will also gain insights into the application of these concepts to the conservation and management of plant species and populations.

**BTNY 30400  Introductory Weed Science  3  Fall**
A survey of the scientific principles underlying weed control practices; emphasis is on the ecology of weeds and control in crop associations.

**BTNY 30500  Plant Classification  3  Fall**
The principles of classification of seed plants, with emphasis on methods of identification in laboratory and field. Requires class trips. Students will pay individual lodging or meal expenses when necessary.

**BTNY 31600  Plant Anatomy  4  Fall**
The internal structure of seed plants. Description and recognition of cell and tissue types, tissue systems, and their interrelations in vegetative and reproductive structures. Developmental changes of the plant body from embryo to mature plant and from meristems to mature tissues. Experimental approaches where relevant to structure-function relationships and to development will be introduced.

**BTNY 35000  Biotechnology in Agriculture  3  Spring**
A study of the methods used to produce genetically modified organisms, primarily using gene transfer technology, and the application of these organisms in agriculture. The uses of microbes, plants, and animals in agricultural biotechnology are examined. Social, economic, and ethical issues related to biotechnology are discussed.

**BTNY 39000  Selected Topics in Plant Science  1-3  Fall/Spring**
This research based course deals with special topics in botany not covered in regular undergraduate coursework. Credit depends upon work done. May be repeated once for credit. Permission of instructor required.
BTNY 42000  Plant Cell and Dev. Biology  3  Spring
This course will focus on the fundamentals of plant cellular and developmental biology. Topics to be covered include: the structure and function of plant organelles and membranes; the cell cycle; DNA, RNA and protein synthesis; the secretory pathway, and the cellular basis of development and whole plant morphogenesis.

BTNY 49700  Undergraduate Seminar  1  Spring
Problem-based seminar drawing on students' experience in undergraduate research. Preparation of seminar and poster presentations based on problem analysis relevant to careers in plant biology, environmental plant science, and crop protection. Instruction on problem analysis, scientific writing, and presentation skills are combined with career development activities, including invited speakers from industry, academia, and government. With prior approval and in consultation with the instructor, a student may substitute a problem based on study abroad, an undergraduate course project, or supervised internship or other supervised work-related experience.

BTNY 49800  Research in Plant Science  1-3  Fall/Spring
Supervised individual laboratory or field research. A written report of work accomplished will be required. Each credit hour equates to 3 hours of work per week. May be repeated once for credit. Permission of instructor required.

BTNY 49900  Thesis Research  1-3  Fall/Spring
Thesis research. Admission to the honors program required. Permission of instructor required.
Minors

A minor is not required for the Plant Science major, but it can be a great way to diversify your knowledge base. There are hundreds of minors available across the university and you can work with your advisor to fit minor course requirements into your plan of study. A full list of minors offered at Purdue can be found online.

Botany and Plant Pathology Department Minors:

**Plant Pathology (16 credits required)**

- **Required Courses:**
  - BTNY 11000 – Introduction to Plant Science
  - BTNY 30100 – Introductory Plant Pathology
  - BTNY 52500 – Intermediate Plant Pathology

- **Additional Courses (6 credits):**
  - BTNY 20700 – The Microbial World
  - BTNY 49800 – Research in Plant Science
  - BTNY 51700 – Diseases of Agronomic Crops
  - BTNY 53500 – Plant Disease Management
  - BTNY 55000 – Biology of Fungi

**Weed Science (15 credits required)**

- **Required Courses:**
  - BTNY 30400 – Introductory Weed Science
  - BTNY 50400 – Advanced Weed Science
  - OR
  - BTNY 50500 – Advanced Biology of Weeds

- **Additional Courses (9 credits):**
  - BTNY 30200 – Plant Ecology
  - BTNY 30500 – Fundamentals of Plant Classification
  - BTNY 31600 – Plant Anatomy
  - BTNY 35000 – Biotechnology in Agriculture
  - BTNY 49800 – Research in Plant Science
  - HORT 30100 – Plant Physiology
### College of Agriculture Minors:

<table>
<thead>
<tr>
<th>Minor</th>
<th>Minor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Systems Management</td>
<td>Insect Biology</td>
</tr>
<tr>
<td>Animal Sciences</td>
<td>International Studies in Agriculture</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>Landscape and Turf</td>
</tr>
<tr>
<td>Crop Science</td>
<td>Landscape Management</td>
</tr>
<tr>
<td>Farm Management</td>
<td>Nat. Resources and Enviro. Science</td>
</tr>
<tr>
<td>Fisheries and Aquatic Sciences</td>
<td>Pet Food Processing</td>
</tr>
<tr>
<td>Food and Agribusiness Management</td>
<td>Soil Science</td>
</tr>
<tr>
<td>Food Science</td>
<td>Sustainable Environments</td>
</tr>
<tr>
<td>Forensic Science</td>
<td>Turf Management</td>
</tr>
<tr>
<td>Forest Ecosystems</td>
<td>Urban Forestry</td>
</tr>
<tr>
<td>Furniture Design</td>
<td>Wildlife Science</td>
</tr>
<tr>
<td>Horticulture</td>
<td>Wood Products Manufac. Technology</td>
</tr>
</tbody>
</table>
Grades
To earn a Bachelor degree a student must complete 120 credits, meet all university, college, and departmental major requirements, and maintain at least a 2.0 GPA.

Dean’s List
At the conclusion of each semester, the Registrar shall indicate which undergraduate students are scholastically eligible to be included on the Dean’s List. To qualify one must:
1. Have at least 12 credit hours included in the cumulative GPA
2. Have at least 6 credit hours included in the semester GPA
3. Attain at least a 3.5 cumulative GPA
4. Have at least a 3.0 current semester GPA

Semester Honors
At the conclusion of each semester, the Registrar shall indicate which undergraduate students are scholastically eligible for Semester Honors. To be eligible one must:
1. Have at least 6 credit hours included in the semester GPA
2. Attain at least a 3.5 semester GPA
3. Have at least a 2.0 overall GPA

Pass/Not-Pass Option
The College of Agriculture allows up to 21 credit hours in a student’s plan of study to be taken under the pass/not-pass option. Students must be classified as sophomore or higher and have at least a 2.0 cumulative GPA. Courses listed on a plan of study that are required by number (i.e. CHM 111, BTNY 110) cannot be taken as pass/not-pass. Students must earn a C- or higher to earn a “Pass” grade.
Academic Probation Policy

A. Academic Probation
A student at Purdue University shall be placed on academic probation if his/her fall or spring semester or cumulative GPA at the end of any fall or spring semester is less than a 2.0.

A student on academic probation shall be removed from that standing at the end of the first subsequent fall or spring semester in which he/she achieves semester and cumulative GPAs equal to or greater than 2.0.
Any grade change due to a reporting error will result in a recalculation of the GPA and determination of probation standing.

Academic standing is assessed during Fall and Spring semesters only.

B. Dropping of Students for Academic Deficiency
A student on academic probation shall be dropped from the University at the close of any fall or spring semester in which his/her semester and cumulative GPA is less than a 2.0.

Any grade change due to a reporting error will result in a recalculation of the index and determination of drop status.

C. Readmission
A student who is academically dropped from the University for the first time is not eligible to enroll for at least one fall or spring semester. A student who is academically dropped for the second time is not eligible to enroll for at least one year.

A student dropped by this rule must apply to the appropriate office or readmission committee for the Purdue campus of choice. A fee is assessed for processing the readmission application (Board of Trustees Minutes, June 5-6, 1970). Readmission is not guaranteed, but any student who gains readmission is readmitted on probation and is subject to stipulations in effect as a condition of readmission. (For more detailed information about readmission, visit the following Web site: http://www.purdue.edu/readmission)
Appendix A
Graduate School Application Timeline

Spring of Junior Year
- Explore programs of interest; discuss strengths and weaknesses of programs with your professors
- Identify faculty within those programs who are doing research that interests you
- Contact those faculty to introduce yourself and express specific interest in their research; ask if they have any funding available
- Research admission and financial aid deadlines and requirements, read all instructions carefully and thoroughly
- Identify faculty or mentors who could provide letters of recommendation
- Register for required exams (GRE/TOEFL), study, and take exams during the summer if possible

Fall of Senior Year
- Use Purdue’s Online Writing Lab (OWL) to help with your Statement of Purpose and resume; visit their office to have your materials proofread and critiqued
- Complete each application thoroughly and submit materials well before deadlines
- Ask faculty or mentors to write recommendation letters. Ask 4-6 weeks before deadline and politely remind them as the deadline gets closer
- Check with all programs before deadlines to ensure your application is complete
- Once your application is complete, contact faculty again to remind them of your interest and to direct them to view your completed application

Spring of Senior Year
- Visit campuses for a tour and to meet possible faculty mentors
- Research funding packages and options; consider cost of living
- When you accept a program’s offer, contact the other universities so they may admit students on their wait list
Appendix B

Informational Interviewing

An informational interview is a meeting with an individual in a career field you would like to explore. It provides an opportunity to gather information and guidance about the people, environment, and skills involved in that field.

1. Identify a career field or specific job that you want to learn more about.
2. Ask your advisor, professors, or other contacts for names of possible contacts.
3. Do some basic research on your contact to see what their job title is and who they work for.
4. Get in touch with your contact. Explain who you are and that you want to learn more about their career and get advice. If possible, request an in-person interview at the job location. This will allow you to see the working environment.
5. Dress and act professionally. Be sure to follow any safety or dress codes.
6. Be confident and courteous during the interview. You can use the questions on the following page or come up with your own questions.
7. Send a thank-you note within a few days of the interview. Be sure to keep their contact information on file; this person may be an important job contact in the future.
Informational Interview Questions

Name of Contact ________________________________
Job Title _______________________________________
Employer _______________________________________
E-mail ____________________________ Date: __________

How do you spend a typical day or week in this job/organization?

What do you find the most/least satisfying about your job?

What kinds of college degree / credentials / skills are needed?

What kinds of part-time jobs or internships are helpful for entering this field?

What types of entry-level jobs are available in this field and what is the salary range?

What is the employment outlook (locally, regionally, and nationally)?

Are you active in any professional organizations? Are students able to join?

Do you have any advice for someone interested in this field?

Can you suggest anyone else I might contact?
Appendix C
Boiler Dictionary

Success is facilitated by your ability to express yourself effectively. The following terms, abbreviations, and acronyms are frequently used on this campus. Learn them and add to the list as you encounter other words and phrases that may be unique to the university environment.

**Academic Advisor:** Person in the department who is responsible for providing academic information and advice, helping students to follow their plan of study and select courses, and also provides information and assistance in course registration, revision, etc.

**AGIT:** Agriculture Information Technology is agriculture’s branch of ITaP.

**Ambassadors:** Students who represent their department or college at various recruitment and alumni events. It’s a great resume builder and a wonderful way to get involved at Purdue.

**BGR:** Boiler Gold Rush is the orientation program for freshman held every August.

**Big Ten:** 12 universities in the Midwest that make up an athletic conference; the “Big Ten” name stuck despite the addition of 2 extra teams (Purdue, Northwestern, Michigan State, Ohio State, Penn State, Univ. of Illinois, Univ. of Iowa, Univ. of Michigan, Univ. of Minnesota, Indiana, Univ. of Wisconsin, Univ. of Nebraska)

**Blackboard:** An e-learning course management system that allows teachers to post specific information for each class. Students log in using their Purdue career accounts.

**Boiler Connect:** An online system to schedule appointments with your advisor and other offices around campus.

**Boilermaker:** This Purdue student or athlete nickname originated in 1889 when discouraged coaches hired several husky boilermakers from the Monon Railroad and a few burly policemen to play football. After enrolling in one course, the men started playing and won one game after another. Angry Crawfordsville newspapermen wrote uncomplimentary stories, calling the team “sluggers”, “cornfield sailors”, and “boilermakers”. The last name stuck and has been a nickname ever since.

**Boilermaker Special:** This unique locomotive (train), cared for by the Reamer Club to promote Purdue spirit, is the official University mascot.

**Boilermaker X-Tra Special:** A smaller version of the Boilermaker Special.

**Breakfast Club:** Student costume party held in the early mornings at campus bars before each home football game and before Grand Prix.
**CAPS:** Counseling & Psychological Services helps students deal with the stress and pressure of being a student.

**CCO:** The Center for Career Opportunities a place where student can learn about career options and get help searching for a job or internship.

**Chauncey Hill:** A shopping center and popular student hang out located just east of campus.

**CODO:** Change Of Degree Objective, or officially changing from one college/school to another at Purdue. It is used both as a noun ("CODO") and a verb ("to CODO" and "CODO'ing")

**Co-Rec:** Cordova Recreational Sports Center, which offers gymnasium facilities to students and staff. Organized intramural competitions and workout classes are also offered.

**CRN** – Stands for “Course Registration Number.” It’s the 5-digit number that represents a single, unique section of a course.

**Dead Week:** The last week of classes before finals.

**Den Pop:** A large, cheap pop/soda from The Discount Den, a popular store on Chauncey Hill. A Purdue tradition.

**Exponent:** The independent newspaper published by Purdue students and distributed free at many locations.

**FERPA:** The Family Educational Rights and Privacy Act of 1974 stipulates that your academic information cannot be released or shared with anyone without your consent.

**Grand Prix:** A go-kart race held every spring. “The Greatest Spectacle in College Racing!”

**Hold:** A lock on your academic records that prevents you from registering, ordering transcripts, and many other functions.

**ISS:** International Students & Scholars is located in Schleman room 136 and helps international students with their visas and other paperwork.

**ITaP:** Information Technology at Purdue is located Stewart Center (STEW), room G-65 or call 48333 from a campus phone.

**John Purdue:** Donated money and land to found Purdue University and have it selected as the state’s land grant university.
**Mortar Board:** A calendar published each fall by the Mortar Board Honor Society. It lists important Purdue events, holidays, library hours, call-outs, etc.. It’s sold at most stores near campus and all proceeds go to the Mortar Board Scholarships.

**myPurdue:** Purdue’s student web portal, with access to registration, financial aid, bursar, and student organizations resources.

**myPurdue Plan:** Online tool for monitoring Undergraduate Plans of Study.

**Old Oaken Bucket:** A traveling trophy awarded to the winner of the Purdue-Indiana football game; dating back to 1925.

**OWL:** Online Writing Lab, designed to help students work on writing assignments via the Internet.

**PMO:** Purdue Musical Organizations. It includes the Glee Club, Purduettes, All-Campus Chorale, and Bell Choir.

**PSG:** Purdue Student Government, an all-campus student government that represents and provides service for undergraduate students. Graduate students have their own student government, PGSG.

**PSUB** (pronounced "p-sub"): The Purdue Student Union Board plans student activities in the Purdue Memorial Union and Stewart Center.

**PUID:** PUID (Purdue Identification) refers to both your identification card and the 10-digit unique identification number printed on it. Use your PUID Card as a residence hall identification and meal card; check out items from the library; purchase convocation and theater tickets; visit the Co-Rec; and ride the CityBus.

**Purdue Pete:** Purdue’s athletic mascot.

**PUSH:** The Purdue University Student Health Center is a place for students to go for medical care.

**RA:** Research Assistant or Resident Hall Assistant.

**Recitation/PSO:** A small group discussion class that meets once or twice weekly in addition to a large lecture. It allows the instructor to work with students to clarify lecture material and review homework and assignments. Quizzes are sometimes given in recitations, as well. Also called Practice, Study, Observation (PSO).
**Rush:** Rush (or "recruitment") activities are held by sororities, fraternities, and cooperative houses to select new members. Participate in rush if you are interested in joining a Greek or co-op house.

**TA:** Teaching Assistant. A TA is usually a graduate student who instructs a lecture, a recitation, or assists a professor with a class.

**The Union:** The Purdue Memorial Union (PMU) is the center for many student activities. The Union houses restaurants, shops, the Purdue Welcome Center, an Amazon facility, an eye doctor, bowling facility, lounges, bank machines, and the Union Club Hotel.