PLS 3004C: Principles of Plant Science
Fall 2023 (Online)

Instructor:
Dr. James Estrada
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Office hours: by appt via Zoom (email for meeting request)

Course Description: Introduction to the principles and practices of plant production systems. An overview of plant evolution, anatomy, physiology, improvement, pest, water and nutrient management as applied to a variety of plant production systems. Course prerequisite: BOT 2010C or BSC 2010.

Justification: The purpose of this course is to prepare students with specific competencies they need for a fundamental understanding of plant biology and production. The course is designed to provide the student with basic knowledge of plant anatomy, genetics, physiology, soils, plant diseases and production practices of various crops. Upon completion of this course, the student will possess an understanding of plant production systems and the impacts they have on the ecosystems they occupy

Course Objectives: Upon successful completion of this course the student should be able to:

- Apply the theoretical knowledge covered in the course to production situations and make scientifically sound recommendations.
- Formulate hypotheses about the processes that impact plant growth and develop and propose experiments that could be developed to test hypotheses based on the scientific method.
- Communicate in both oral and written forms about key scientific concepts related to plant anatomy, plant genetics, plant physiology, soils and crop production practices to different audiences to inform them about issues of concern related to agricultural production.
- Assess future agricultural production needs and opportunities to identify potential career paths in the agricultural sciences.

Course Schedule: All due dates/times are listed in EDT

Dates Open	Module	Topics	Assignments	Due
1/9-29	**1**	1. History, Experimentation, and Food		
		2. Plant Classification and Crops	**Activity 1**	**1/13 @ 11:59pm**
		3. Climate and Soils		
		4. Ecosystems	**Exam 1**	**1/27 @ 11:59pm**
1/30-2/26	**2**	5. Plant Structure	**Activity 2**	**2/10 @ 11:59pm**
		6. Plant growth and Development		
		7. Plant Chemistry and Metabolism	**Project 1**	**2/17 @ 11:59pm**
		8. Genetics and Propagation	**Exam 2**	**2/24 @ 11:59pm**
2/27-3/26	**3**	9. Carbon Cycle and Light Energy	**Activity 3**	**3/10@ 11:59pm**
		10. Photosynthesis and Respiration		
		11. Plant Water Relations	**Activity 4**	**3/17 @ 11:59pm**
		12. Plant Nutrition	**Exam 3**	**3/24 @ 11:59pm**
3/27-4/30	**4**	13. Nitrogen Fixation		
		14. Soil and Water Management	**Activity 5**	**4/21 @ 11:59pm**
		15. Integrated Pest Management (IPM)	**Project 2**	**4/28 @ 11:59pm**
5/1-5/4		**Finals Week**	**Final Exam**	**5/4 @ 11:59pm**

Required Text (for students with limited or no plant science background)**:**
Plant Science- Growth, Development and Utilization of Cultivated Plants, McMahon, M.J., Kofranek, A.M., and Rubatzky. V.E. eds. 5th Edition.   Pearson Higher Ed Publishing:
http://www.mypearsonstore.com/bookstore/plant-science-growth-development-and-utilization-of-9780135014073
Available used and new from several sources, including the UF library.

Evaluation of Grades:

Requirement	Points each	Total Points
Activities (5)	20	100
Exams (3)	100	300
Projects (2)	100	200
Final Exam (Cumulative)	100	100
Total Points		**700**

Grading Scale:

Final course grades will be on a percentage basis of total points:

A =	93-100%	C =	73-76.9
A- =	90-92.9	C- =	70-72.9
B+ =	87-89.9	D+ =	67-69.9
B =	83-86.9	D =	63-66.9
B- =	80-82.9	D- =	60-62.9
C+ =	77-79.9	E =	<60
		I =	Incomplete

General UF Information

Absences and Make-up Work:
> Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:
> https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Academic Honesty, Software Use, Campus Helping Resources, Services for Students with Disabilities:
> **Academic Honesty**
> As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "*We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.*" You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment*."
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> It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/
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> **Software Use**

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Course Evaluation:
Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/."

Campus Helping Resources
Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, http://www.counseling.ufl.edu/cwc/*

  Counseling Services
  Groups and Workshops
  Outreach and Consultation
  Self-Help Library
  Training Programs
  Community Provider Database

- *Career Connections Center,* First Floor JWRU, 392-1601, http://www.career.ufl.edu/

Resources for Students with Disabilities:
The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. 0001 Reid Hall, 352-392-8565, **www.dso.ufl.edu/drc/**

Student Complaints on Distance Learning:
Each online distance learning program has a process for, and will make every attempt to resolve, student complaints within its academic and administrative departments at the program level. See http://distance.ufl.edu/student-complaints for more details.