AGR 5241: Advance Modern Crop Production
Syllabus for Spring 2019 (3 credits)

Instructor: Dr. Amir Khoddamzadeh
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Class Schedule: Online

Office Hours: Monday and Wednesday 9:00 AM - 11:00 AM, walk-in and by arrangement (preferably via e-mail)

COURSE DESCRIPTION

- An advance course in agronomy applying major crop production, soil, and ecophysiological sciences in understanding agricultural systems in the world. Includes introductory concepts of plant, seed, soil, tillage, pest, environmental, and sustainable aspects of crop production.

COURSE OBJECTIVES

- At the end of this course students should understand clearly the various agronomic crops, how they relate to their environment, what are the principles of production, management of problems, and the utilization of crops. Emphasis will be placed on agronomic crops that are currently of economic significance in South Florida; and the new crops that hold promise for the future in Miami-Dade County.

- To use a systematic approach to discuss topics in current agronomic crop management practices emphasizing those that increase production, enhance efficiency, and maintain environmental integrity.

- To develop an understanding of how to obtain, evaluate, and use agronomic and other pertinent agricultural information.
TEXTBOOK

Principles of Field Crop Production

4th Edition by Martin et al. 2006 (Required)
ISBN-10: 0130259675

COURSE REQUIREMENTS AND POLICIES

Prior to coming to the theory discussion session, each student is required:

✓ Reading of the assigned chapters from the textbook and additional readings from Canvas prior to lecture is expected.

✓ If a student has a disability and needs assistance with class, please contact the Disability Resource Center (GC 190; 305-348-3532). It is the responsibility of each student to work with the Center and Instructor to make arrangements for the classroom and course activities as needed for their accommodations.

✓ Learn from the diverse group of people in the class by listening and considering what each person says and writes. You may disagree, but it must be in a way that shows respect and values each person.

INTERNET RESOURCES

✓ This is a web assisted course. A course webpage will be maintained with Canvas Learn.

Additional course materials contain this syllabus, articles, videos, lecture notes, and the announcements will be posted on Canvas.

- To access this resource, go to https://ecampus.fiu.edu/ and click on Canvas under the Login menu. In the Canvas Login window enter your FIU MyAccounts User Name and Password. Select AGR 5241: Advance Modern Crop Production - RVC - Spring 2019. For help with Canvas, click the Student menu on the e-campus website call the UTS Help Center at (305) 348-2284.
ESTIMATED POINTS

- Discussions (5) 25%
- Case Studies (I and II) 10%
- Quizzes (2) 10%
- Final Project Presentation 15%
- Mid-Term Exam 20%
- Final Exam 20%

GRADING SCALE

A: 100% - 93%; A-: 92% - 90%; B+: 89% - 87%; B: 86% - 83%; B-: 82% - 79%; C+: 78% - 76%; C: 75% - 70%; D+: 69% - 67%; D: 66 – 59; F: <58%.

HONOR CODE

Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas, and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly to demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook and through the following link:

http://academic.fiu.edu/AcademicBudget/misconductweb/1acmisconductproc.htm.

CHEATING AND PLAGIARISM are violations of the academic honesty section of the FIU student code of conduct and will be reported to Judicial Services. Plagiarism is a serious offence will not be taken lightly. Plagiarism can be intentional (copying another student’s work, collaborating too closely with another student) or unintentional (not citing all references, collaborating too closely with another student.) The best ways to avoid unintentional plagiarism are to reference all outside information, and to do all work on your own. If you have any questions about what is plagiarism, please ask the instructor. Instructors may use plagiarism detection software (such as turnitin.com) to determine if plagiarism has taken place. Suspected acts of plagiarism may be investigated and taken to the FIU Grievance Committee. Plagiarism will result in you receiving a 0 grade for your assignment (no exceptions) and may also result in your suspension or expulsion from the University.
SEXUAL HARASSMENT POLICY

FIU’s sexual harassment policy is available at:
http://hr.fiu.edu/index.php?name=sexual_harassment

QUIZZES & EXAMS:

- Quizzes and exams will consist of fill-in-the-blank, short answer essay, multiple choice, matching, true/false, problem solving, etc., covering the textbook, theory discussion sessions, lab/field experiences, and commodity tours.

- Students will make a 20 min presentation to the class. Grading will be based on quality and thoroughness of investigation, as well as delivery.

- If other required academic activity precludes a student’s taking a quiz or exam, the quiz or exam may be taken at full value prior to its scheduled time as shown on the Course Schedule; however, arrangements for taking the quiz or exam must be made in person with Dr. Khoddamzadeh at least two weeks prior to the quiz’s or exam’s scheduled time as shown on the Course Schedule, and a letter from the advisor or professor of the conflicting activity must be presented at that time.

- Field trip (Saturday): Visit USDA-ARS Subtropical Horticultural Research Station - not mandatory.
## COURSE OUTLINE AND SCHEDULE

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<th>Week</th>
<th>Topic</th>
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| 1 | Welcome and Course Overview  
Introduction and Trends of Crop Production in Florida, USA, and the World |
| 2 | Crop Plants in Relation to the Environment |
| 3 | Botany of Crop Plants |
| 4 | Tillage Practices  
Fertilizer, Green Manuring, Rotation, and Multiple Cropping Practices |
| 5 | Seed and Seedling  
Mid-Term Exam (Feb. 4 - 6) |
| 6 | Harvest and Handling of Grain, Seeds, and Hay  
Case Study I: Virtual Lab Experiment – Starch, Flours, and Gluten |
| 7 | Biotechnology Applications in Crop Production |
| 8 | Biotic and Abiotic Stresses  
Corn |
| 9 | Sorghum  
Sugarcane |
| 10 | Spring Break |
| 11 | Wheat  
Rice |
| 12 | Soybean  
Avocado |
| 13 | Banana  
Citrus  
Cacao |
| 14 | Biofuels  
Case Study II: Economic Benefits of Precision Agriculture |
| 15 | Sustainable Agriculture  
Final Project Presentation |
| 16 | Final Project Presentation |
| 17 | Final Exam date/time will be announced. |

*The Instructor reserves the right to change the outline, readings and dates of materials covered in this course.*