AGR 5241: Advance Modern Crop Production
AGR 4240: Modern Crop Production (MCP)

Syllabus for Spring 2020 (3 credits)

Instructor: Dr. Amir Khoddamzadeh
AHC-5 391, Phone: 305-348-3083
Email: akhoddam@fiu.edu

Office Hours: Tuesday and Thursday 10:00 AM-12:00 PM and by arrangement (via e-mail).

Course Description

- A foundation course with advanced theories 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

✓ All assigned readings and online material used in class is provided in Canvas. Students do not need to purchase any additional material unless they so desire*.

Principles of Field Crop Production (*Recommended)
4th Edition by Martin et al. 2006
ISBN-10: 0130259675

You may purchase your textbook online at the FIU Bookstore.

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.

✓ 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.

Prerequisites

✓ General Biology I (BSC 1010) and General Biology II (BSC 1011) or equivalent or permission of the instructor.

Internet Resources and Communication

✓ 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. For help with Canvas, click the Student menu on the e-campus website call the UTS Help Center at (305) 348-2284.
• Communication in this course will take place via Messages. Emailing the professor using FIU Email outside of Canvas is unlikely to be viewed. Use ONLY the Canvas Messages. Messages is a private and secure text-based communication system which occurs within a course among its Course members. Users must log on to Canvas to send, receive, or read messages. The Messages tool is located on the Course Menu, on the left side of the course webpage. It is recommended that students check their messages routinely to ensure up-to-date communication.

• Visit the Writing Resources webpage for more information on professional writing and technical communication skills.

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%.

Disability Resource Center

The Disability Resource Center (DRC) collaborates with university faculty to provide inclusive learning environments. If you have a disability and plan to utilize academic accommodations, additional information may be found in the DRC's website: drc.fiu.edu.

PANTHERS CARE

If you are looking for help for yourself or a fellow classmate, Panthers Care encourages you to express any concerns you may come across as it relates to any personal behavior concerns or worries you, for the classmate’s well-being or yours; you are encouraged to share your concerns with FIU’s Panthers Care website: http://PanthersCare.fiu.edu/. Counseling and Psychological Services (CAPS) offers free and confidential help for anxiety, depression, stress, and other
concerns that life brings. Learn more about CAPS at caps.fiu.edu Professional counselors are available for same-day appointments. Don’t wait to call 305-348-2277 to set up a time to talk or visit the online self-help portal.

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 record a 20 min presentation and will post the YouTube link to the class blog. Grading will be based on quality and thoroughness of investigation, as well as delivery (rubric will be provided).

- 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; 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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<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Welcome and Course Overview</td>
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<td>Introduction and Trends of Crop Production in Florida, USA, and the World</td>
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<tr>
<td>2</td>
<td>Crop Plants in Relation to the Environment</td>
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<td>3</td>
<td>Botany of Crop Plants</td>
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<td>4</td>
<td>Tillage Practices</td>
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<td></td>
<td>Fertilizer, Green Manuring, Rotation, and Multiple Cropping Practices</td>
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<td>5</td>
<td>Seed and Seedling</td>
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<td>Mid-Term Exam (Feb. 4-5)</td>
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<td>6</td>
<td>Harvest and Handling of Grain, Seeds, and Hay</td>
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| 7 | Case Study I: Virtual Lab Experiment – Starch, Flours, and Gluten  
Biotechnology Applications in Crop Production  
Create your LinkedIn page |
| 8 | Spring Break |
| 9 | Biotic and Abiotic Stresses  
Corn |
| 10 | Sorghum  
Sugarcane |
| 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 Exam Apr. 22-23 |

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