Department of Agronomy, College of Agriculture, UOS

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COURSE OUTLINE SPRING 2020

Course Title: GENERAL CROP PRODUCTION

Course Code:AGRO-5902

Credit Hours: 3(2-1)

Instructor: **Dr. Muhammad Rafi Qamar**

Email: **rafi.qamar@uos.edu.pk**

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| DESCRIPTION & OBJECTIVES |

The course provides the students theoretical and practical knowledge and skills to production of different crops and identify their characteristics and classify them according to their nature. Students practically trained to land preparation, sowing methods, nurseries transplanting methods, fertilizer application methods, weed management strategies, plant protection measures and harvesting methods. This course will help students gain an insight into the crop production and their latest techniques.

The key objectives/outcomes of this course are;

* To acquaint the students with the basic concepts of Agronomy and crop production
* To aware the students about concept of modern sowing techniques.
* To familiarize students about various steps involved in crop production e.g. land preparation, sowing methods, nurseries transplanting methods, fertilizer application methods, weed management strategies, plant protection measures and harvesting methods.

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| CONTENTS |

**THEORY**

1. Concept of crop production.
2. Classification of field crops.
3. Cropping scheme, Cropping patterns, Cropping systems, Cropping intensity.
4. Production technology of major field crops:
5. Cereals (wheat, rice, maize, barley),
6. Sugar crops (sugarcane, sugar beet)
7. Fiber crops (cotton, jute)
8. Oil seed crops (*i-Traditional*: rapes and mustards, groundnut, linseed, sesame, castor bean; *ii-Non-traditional*: sunflower, soybean, safflower)
9. Grain legumes, (chickpea, lentil, green gram, black gram)
10. Fodders (berseem, lucerne, oats, sorghums, millets, mott grass, cowpea)
11. Special crops (tobacco)
12. Green manure crops (Guara, Dhancha, Pigeon pea, Senji etc.).

**PRACTICAL**

1. Identification of crops and their seeds.
2. Demonstration of improved sowing methods of crops.
3. Delinting of cotton seed.
4. Raising of crop nurseries and transplanting.
5. Intercultural practices.
6. Seed Inoculation.
7. Seed treatment with fungicides.
8. Demonstration of harvesting and threshing operations.
9. Field visits.

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| READINGS |

1. Abbas, M.A. 2006. General Agriculture. Emporium Urdu Bazar, Lahore.
2. Balasubramaniyan. 2004. Principles and Practices of Agronomy. Agrobios, Jodhpur, India.
3. Khalil, I.A. and A. Jan. 2002. Cropping Technology. National Book Foundation, Islamabad.
4. Kirkham, M.B. (Editor). 2004. Water Use in Crop Production. Narosa Publishing House Pvt. Ltd. New Dehli, India.
5. Martin, J.H., R.P. Waldren and D.L. Stamp. 2006. Principles of Field Crop Production 4th Ed. The McMillan Co., New York.
6. Michael, A. M. 1990. Irrigation theory and practices. 2nd Ed., Vikas Pub. House Pvt. Ltd., New Delhi.
7. Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. Ed. E. Bashir & R. Bantel. National Book Foundation, Islamabad.
8. Reddy, .S.R. 2004. Principles of Crop Production. Kalyani Publishers, New Delhi.

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| COURSE SCHEDULE | | |
| WEEK | Topics and Readings Give Reading No from your list of readings above and its page nos. relevant to the topic(s) covered each week | DATES |
| 1. | Concept of crop production. Classification of field crops.  (Book 7; Chapter 1 & 2 Pg. 3-11 & 15-23) | 24-02-2020  26-02-2020 |
| 2. | Classification of field crops.  (Book 7; Chapter 2 Pg. 15-23) | 02-03-2020  04-03-2020 |
| 3. | Cropping scheme, Cropping patterns, Cropping systems, Cropping intensity.  (Book 3; Chapter 11 Pg. 87-98) | 09-03-2020  11-03-2020 |
| 4. | Production technology of major field crops: Wheat & Rice.  (Book 7; Chapter 11 & 12 Pg. 234-244 & 251-258) | 16-03-2020  18-03-2020 |
| 5. | Production technology of major field crops: Maize & Barley.  (Book 7; Chapter 12 & 11 Pg. 261-268 & 244-248) | 25-03-2020  30-03-2020 |
| 6. | Production technology of sugar crops: Sugarcane & Sugar beet.  (Book 7; Chapter 16 & 17 Pg. 421-445 & 451-463) | 01-04-2020  08-04-2020 |
| 7. | Production technology of fiber crops: Cotton & Jute.  (Book 3; Chapter 17 Pg. 256-264) | 13-04-2020  15-04-2020 |
| 8. | Production technology of oil seed crops; *i-Traditional*: Rapes and mustards, groundnut.  (Book 7; Chapter 14 Pg. 330-383) | 20-04-2020  22-04-2020 |
| 9. | **Mid Term Examination** |  |
| 10. | Production technology of oil seed crops; *i-Traditional*: Linseed, sesame, castor bean.  (Book 7; Chapter 14 Pg. 330-383) | 27-04-2020  29-04-2020 |
| 11. | Production technology of oil seed crops; *ii-Non-traditional*: Sunflower, soybean, safflower.  (Book 7; Chapter 14 Pg. 330-383) | 04-05-2020  06-05-2020 |
| 12. | Production technology of grain legumes, Chickpea, lentil, green gram, black gram.  (Book 7; Chapter 13 Pg. 285-300) | 11-05-2020  13-05-2020 |
| 13. | Production technology of fodders; Berseem, lucern, oats.  (Book 7; Chapter 15 Pg. 391-395) | 18-05-2020  20-05-2020 |
| 14. | Production technology of fodders; Sorghums, millets, mott grass, cowpea.  (Book 7; Chapter 12 & 15 Pg. 270-273 & 400-412) | 01-06-2020  03-06-2020 |
| 15. | Production technology of special crop; Tobacco.  (Book 7; Chapter 18 Pg. 467-480) | 08-06-2020  10-06-2020 |
| 16. | Green manure crops; Guara, Dhancha, Pigeon pea, Senji.  (Book 7; Chapter 13 Pg. 313-314) | 15-06-2020  17-06-2020 |

Note: You can reserve one week for sessional or mid-term exam, and if you wish, one week for student presentations of the assigned research project.

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| RESEARCH PROJECT |

State here the prerequisites of the assigned research project, including term paper or lab assignment, etc.

**Production technology of different crops will be given as Assignments**

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| ASSIGNMENT CRITERIA |

Write here the distribution of the marks. You can choose any or all from below for the purpose.

Quizzes and test: 02

Attendance: 02

Assignments and presentations: 04

Mid-term: 12

End term: 20

Practical: 20

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| RUELS AND REGULATIONS |

Write here the rules and regulations that student have to abide by in your class. Some of these rules, example 80% class attendance are standards for the university.

1. The format and due dates of the assignments and midterm will be discussed during the first and second week of classes. Late assignments will be not be accepted.
2. 80 % class attendance is required to get 2 Marks.

FINAL NOTE: The instructions above mentioned in italics and red color are for guidance only. Remove them while completing this course outline template. Your final course outline document should be in black color.