UNIVERSITY OF SARGODHA

DEPARTMENT OF AGRONOMY, COLLEGE OF AGRICULTURE

COURSE OUTLINE FALL 2020-2021

Course Title: BASIC AGRICULTURE

Course Code: AGRO-5901

Credit Hours: 3(2-1)

Instructor: **DR. MUHAMMAD RAFI QAMAR**

Email: drrafi1573@gmail.com

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| **DESCRIPTION & OBJECTIVES** |

*Write here a brief description of the course and its key objectives/outcomes (150 words)*

This course will provide basic information regarding the Agriculture. Agriculture importance and Agronomic Practices for crop production. Land resources of Pakistan, Irrigation systems of Pakistan, land use and its problems. After the completion of this course students will be equipped with the knowledge of Agriculture and its basics.

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| **READINGS** |

*Write here the list of books, articles and chapters (with full publication details) in serial numbers*

1. Abbas, M. A. 2006. General Agriculture. Emporium Urdu Bazar, Lahore

2. Balasubramaniyan. 2004. Principles and Practices of Agronomy. Agrobios, Jodhpur, India.

3. Bashir, E. and R. Bantel. 1996. Soil Science. National Book Foundation, Islamabad.

4. Cheema, Z.A. and M. Farooq. 2007. Agriculture in Pakistan. Allied Book Centre, Urdu Bazar, Lahore.

5. Khalil, I.A and A. Jan. 2002. Cropping Technology. National Book Foundation, Islamabad.

6. Khan S.R.A. 2001. Crop Management in Pakistan with Focus on Soil and Water. Directorate of Agricultural Information, Punjab, Lahore.

7. Nazir, M.S. 1994. Crop Production. National Book Foundation, Islamabad.

8. Qureshi, M.A. M.A. Zia and M.S. Qureshi. 2006. Pakistan Agriculture Management and Development. A-One Publisher, Urdu Bazar, Lahore

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| **CONTENTS** |

*Write here the complete list of your course contents in serial numbers*

**THEORY**

1. Agriculture, history, importance
2. Branches and allied sciences
3. Salient features of Pakistan's agriculture.
4. Climate, land and water resources.
5. Agro ecological zones of Pakistan.
6. Farming systems.
7. Tillage: objectives and types.
8. Seed: types and quality.
9. Crop nutrients, manures and fertilizers,
10. Sources and methods of application.
11. Irrigation: systems, types and management.
12. Crop protection measures
13. Crop rotation.
14. Harvesting, processing, storage and marketing of farm produce.
15. Agro-based industries.
16. Environmental pollution and health hazards.

**PRACTICAL**

1. Measurement of land
2. Conventional system.
3. Metric system.
4. Identification and use of hand tools and implements.
5. Recording weather data, types of thermometers and their uses,
6. Techniques and instruments for measuring rainfall, light, atmospheric humidity, etc.
7. Identification of various soil types;
8. Determination of soil moisture contents,
9. Saturation percentage,
10. Field capacity
11. Wilting point.
12. Field visits.

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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 | Introduction and general discussion about of course contents. Agriculture History. (Book # 1 Page # 2, Book # 9 Page # 2-5.) |  |
| 2 | Agriculture, importance, its branches and allied sciences. (Book # 1 Page # 2-5) |  |
| 3 | Salient features of Pakistan Agriculture. (Book # 11 Page # 439-463.) |  |
| 4 | Land resources and their utilization in Pakistan. (Book # 1 Page # 6-8, Book # 11 Page # 439-463.) |  |
| 5 | Agro-ecological zone and climate of Pakistan. (Book # 5 Page # 217-220.) |  |
| 6 | Water resources of Pakistan, surface and ground water. (Book # 5 Page # 49-51) |  |
| 7 | Tillage, types and its objectives. (Book # 9 Page # 140-144. Book # 5 Page # 147-166.) |  |
| 8 | Farming systems and its types. (Book # 5 Page # 211-214.) |  |
| 9 |  Seed- definition, types and characteristics of quality seed. (Book # 10 Page # 2-4, Book # 5 Page # 100, 110.) |  |
| 10 | Crop nutrition, manures and fertilizers; Classification of fertilizer, and their composition. (Book # 3 Page # 112-124, Book # 10 Page # 112-119.) |  |
| 11 | Sources of fertilizer, method of Application. (Book # 3, Page # 112-124, Book # 10 Page # 112-119) |  |
| 12 | Irrigation methods, types and management. (Book # 5 Page # 70-77, Book # 10 Page # 211-215.) |  |
| 13 | Crop Rotation-Principle and types. (Book # 5 Page # 206-211, Book # 10 Page # 142-150.) |  |
| 14 | Crop protection measures- Direct, indirect control measure Material will be provided. |  |
| 15 | Harvesting and storage and processing of farm produce. (Book # 5 Page # 133-138, Book # 2 Page # 432-461.) |  |
| 16 | Agro-based industry, Environmental pollution and health hazard. (Book # 11 Page # 397-399) |  |

***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.*

Lectures related topics will be given as Assignments

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| **ASSIGNMENT CRITERIA** |

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

Sessional: 02

Project: 02

Presentation: 02

Participation: 02

Mid-term: 12

Final-Exam: 20

Practical: 20

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| **RULES AND REGULATIONS** |

*Write here the rules and regulations that students have to abide in your class. Some of these rules, for 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 colors are for your guidance only. Remove them while completing this course outline template. Your final course outline document should be in black color.*