FACULTY OF AGRICULTURAL SCIENCES
UNIVERSITY OF THE PUNJAB, LAHORE

Program	B.Sc. (Hons.) Agriculture	**Course Code**	Agr– 101	**Credit Hours**	3(2-1)
Course Title	**BASIC AGRICULTURE**				

Course Introduction

This course will provide basic information regarding Agriculture. Students will be introduced to the impact of different weather elements on crops, the Land resources of Pakistan, the Irrigation systems of Pakistan, and land use and its problems.

Learning Outcomes

On the completion of the course, the students will:

1. Thorough understanding of the basics of Agriculture.
2. Sufficient knowledge of weather elements with regard to crops.
3. Substantial understanding of the land resources of Pakistan.
4. Appreciation of the social and ethical issues related to Pakistan's Agriculture.

	Course Content	**Assignments/Readings**
Week 1	Course Introduction Introduction of the students, teacher, course and books recommended	General Discussion
	Practical Work Introduction	
Week 2	Agriculture, history importance; Branches & allied sciences	Cropping technology by I. A. Khalid. Pages4-9

	Definition, history, prehistoric, Historic through Roman period feudal, scientific ages, importance, agronomy, horticulture, forestry, animal husbandry, allied sciences	
	Practical Work Land measuring units	
Week 3	Climate, Salient features of Pakistan agriculture Weather and climate, components of climate, classification of climate, climatic factors and crop production, agricultural land area, crops, seasons,	Crop management in Pakistan by S. R. A. Khan. Pages 31-36 Internet
	Practical Work Demonstration of hand tools	
Week 4	Agro-ecological zones of Pakistan; Farming system Physiographic and climatic characters of agroecological zones of Pakistan, definition of farming system, crops classification, factors affecting farming system,	Crop Production by Nazir, S. pages 205-211
	Practical Work Demonstration of tillage implements	

Week 5	Tillage; Objectives of tillage Economic importance Tillage, positive & negative effects of tillage, objectives of tillage	Crop Production by Nazir, S. pages 147-174
	Practical Work Primary tillage operations demonstration and practical implementation	
Week 6	Types of tillage Primary, secondary and tertiary tillage, hoeing, blind hoeing, earthing up.	Crop Production by Nazir, S. pages 147-174
	Practical Work Secondary tillage operations demonstration and practical implementation	
Week 7	Seed; Types of seed Seed, monocot and dicot seed, phases of seed production	Crop Production by Nazir, S. pages 99-146
	Practical Work Tertiary tillage operations demonstration and practical implementation	
Week 8	Quality seed and its uses; Crop nutrients	Crop Production by Nazir, S. pages 99-146

	Quality seed, characters of quality seed, varietal purity, seed lot characters, seed viability, quality vs poor seed, causes of seed deterioration, nutrient, essentiality of nutrient, structural, primary, secondary and micro nutrients	
	Practical Work Identification of crop plants	
Week 9	MID TERM EXAM	
Week 10	Manure and fertilizers; Sources and methods of application Definitions and difference of manure and fertilizer, classification of fertilizer, composition of manure, sources of manures, application methods of solid and liquid fertilizers	A text book of Agronomy by Chandrasekaran et al. Pages 432-454
	Practical Work Identification of seeds	
Week 11	Irrigation; Irrigation system Definition of irrigation and drainage, uses of irrigation, irrigation system,	A text book of Agronomy by Chandarasekaran et al. Pages 343-430
	Practical Work Studies on phenological development of crops	
Week 12	1.11. Types and management of irrigation	A text book of Agronomy by Chandarasekaran et al. Pages 343-430

	1.11.1. Surface, subsurface surface, basin, border, furrow, drip, sprinkler irrigation systems, their positives and negatives, crops suitable for these systems	
	Practical Work Identification of organic and inorganic fertilizers	
Week 13	1.12. Crop protection measures; Crop rotation 1.12.1. Crop and plant protection, causes of crop infection, plant protection approaches, pest control methods, crop rotation, monoculture, principles of crop rotation, factors affecting rotation.	Crop Production by Nazir, S. pages 175-204
	Practical Work Field study tour	
Week 14	1.13. Harvesting, processing, storage and marketing of farm produce 1.13.1. Harvesting, harvesting losses, factors affecting post-harvest losses, packing house handling 1.13.2. GAPs in packing house, storage, old vs new storage systems, storage problems in Pakistan, precautionary measures for safe storage	A text book of Agronomy by Chandarasekaran et al. Pages 511-519

	Practical Work Calculation of nutrient cum fertilizer unit value	
Week 15	1.14. Agro-based Industries Economic Importance 1.14.1. Agro-based industries, role and importance of area-based industries, cotton textile industry, sugar industry, tobacco industry, vegetable ghee industry, and other industries.	Internet
	Practical Work Calculation of nutrient cum fertilizer unit value	
Week 16	1.15. Environmental pollution and health hazards Economic importance 1.15.1. Origin 1.15.2. History 1.15.3. Adaptation 1.15.4. Distribution and production technology	Internet
	Practical Work Demonstration of various irrigation methods	

Textbooks and Reading Material

1. Textbooks.

In the detailed course outline, one may mention chapters of the textbook with the content topics

2. Suggested Readings

2.1. Books

1. Nazir,M.S.1994. Crop production. Ed. E. Bashir & R Bantel, National Book Foundation, Islamabad.
2. Khalil I.A. & Amanullah Jan. 2002. cropping technology, National Book Foundation, Islamabad.

3. Sardar Riaz Ahmad Khan, 2001, Crop Management in Pakistan Published by Directorate of Agriculture Information, Punjab, Lahore.
4. Akhtar Abbas M. 2001, General Agriculture, 2nd Edition, Publishers Emporium Ahata Shahdarian, 22-Urdu Bazar, Lahore.
5. J.H. Martin and W.H. Leonard.1957 Principals of field crop production. Macmillan company. Newyork
6. V.N. Sahai. 1992. Principals and practices of crop production. M.C. Mittal. Inter-India- Publications D -17, Raja Garden New Dehli. India
7. Chandrasekaran, B., Annadurai, K. and Somasundaram, E. 2010. A text book of Agronomy. New Age International (P) Limited, Publishers 4835/24, Ansari Road, Daryaganj, New Delhi – 110002

2.2. Journal Articles/ Reports

Note:

1. It is preferable to use the latest available editions of books. Mention the publisher & year of publication.
2. The References/ bibliography may be by the typing manual of the concerned faculty/subject. Preferably follow the APA 7th Edition publication manual.

Teaching Learning Strategies

1. White board and markers
2. Slide projector or multimedia
3. Overhead projector
4. Photocopy machine or photocopying facilities
5. Reference books
6. Journals
7. Internet (web sited literature)
8. Field Tours

Assignments: Type s and Number with Calendar

1. Assignment (10 Marks)
2. Continuous assessment (Quizzes) (10 Marks)
3. Class participation Discussion, field trip, regularity punctuality (5 Marks)

Assessment			
Sr. No.	**Elements**	**Weightage**	**Details**
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on activities, short tests, projects, practicals, reflections, readings, quizzes, etc.
3.	Final Assessment	40%	There is a Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course, the teacher may assess their students based on term papers, research proposal development, field work, report writing, etc.