**UNIVERSITY OF SARGODHA**

**DEPARTMENT OF PLANT PATHOLOGY, UNIVERSITY COLLEGE OF AGRICULTURE**

COURSE OUTLINE FALL 2020

Course Title: Plant Quarantine and SPS Measures

Course Code: PP-405

Credit Hours: 3(2-1)

Instructor: Dr. Muhammad Usman Ghazanfar

Email: usmanghazanfar1972@gmail.com

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| **DESCRIPTION & OBJECTIVES** |

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

The basic purpose of this course is to acquaint the students about plant quarantine rules and Sanitary and phytosanitary measures (SPS) measures. The globalization of food production and distribution has enhanced potential for the dispersal of harmful organisms to new regions. Increased movement of people and commodities as a result of global population expansion and intensified trade and travel has escalated the risks to food production from exotic biosecurity threats. This course will acquaint the students with quarantine laws applicable to the import of commodities in Pakistan, the alien pests their involvement in sustainable agriculture, after the completion of course the student will be able to

* Explain what quarantine is and how Quarantine does to prevent new pests and diseases entering the country
* Explain why it is important that new pests and diseases do not enter Pakistan and why everyone should obey quarantine laws or regulations
* Describe the role Quarantine in exporting and importing goods and how the Pakistan quarantine Service helps farmers
* Describe what the people of Pakistan can do to help the Quarantine Service and explain why everybody in Pakistan should be concerned about quarantine

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| **READINGS** |

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

1. Bhutta, A.R. and I. Ahmad. 2001. Seed Pathological Techniques and their Application. National Book Foundation, Islamabad. Pakistan.

2. Ebbels, D.L. 2003. Principles of Plant Health and Quarantine. CABI Publishing.

3. FAO. 2000. Multilateral Trade Negotiations on Agriculture - A Resource Manual-III – SPS and TBT Agreement. Publ. FAO-UN Rome.

4. Osmanczyk, E.J. and A. Mango. 2003. Encyclopedia of the United Nations and International Agreements. 3rd Ed. (4 Vol. Set). Routledge, UK.

5. Rangann, S. 2007. Sanitary and Phytosanitary measures: an Introduction. University Press India

6. Kimatu., *Advances in Plant Pathology* (Intech Open. Switzerland: 2018)

7. Devorshak., *Plant Pest Risk Analysis, Concepts and Application* (CABI, International: 2012)

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| **CONTENTS** |

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

**Theory**:

Plant quarantine concepts and principles, plant and seed related issues of domestic and exotic quarantine object, domestic and International quarantine standards. Plant quarantine Act 1976 (Rules, 1967) and Seed Act, 1976 (Seed Amendment Bill-2014) and their implementation in plant and seed import/export, outbreak of some important diseases introduced into Pakistan and elsewhere during import of plant, seed and food items. Introduction to SPS measure under WTO regime and its relation to bio-security; inspection procedures and measures adopted under IPC and NAPHIS in Pakistan during import/export of agricultural commodities.

**Practical**:

Visit to port of entry (dry, air and sea ports), practical demonstration of inspection of import/export consignments and collection of samples for analysis of various plants and seed/ planting material against various diseases. Identification of diseases, inspection procedures and measures adopted under IPC and NAPHIS in Pakistan during import/export consignments. Visit to seed testing station of Federal Seed Certification & Registration Department and Department of Plant Protection.

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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 to Plant Health/Quarantine and SPS measures | 12.10.20To19.10.20 |
| 2 | Early History of Plant Health Control Measures | 19.10.20To26.10.20 |
| 3 | International Phytosanitary Controls | 26.10.20To02.11.20 |
| 4 | Biosecurity in the movement of commodities as a componentof Global Food Security | 02.11.20To09.11.20 |
| 5 | Globalisation and the Threat to Biosecurity | 09.11.20To16.11.20 |
| 6 | An Introduction to Plant Biosecurity: Past, Present and Future | 16.11.20To23.11.20 |
| 7 | Evolution of the international regulation of plant pests and challenges for future plant health | 23.11.20To30.11.20 |
| 8 | The Revised International Plant Protection, Convention – a New Context for Plant Quarantine | 30.11.20To07.12.20 |
| 9 | Mid Exam | 07.12.20To14.12.20 |
| 10 | Sanitary and Phytosanitary Issues: Where Does the WTO Go from Here | 14.12.20To21.12.20 |
| 11 | Seed-Borne Pests and Phytosanitary Issues: the Role of EPPO | 28.12.20To04.01.21 |
| 12 | WTO Agreement on Sanitary and Phytosanitary Measures (SPS) | 04.01.21To11.01.21 |
| 13 | Pakistan Plant Quarantine Act, 1976 And Plant Quarantine Rules, 1967 | 11.01.21To18.01.21 |
| 14 | Climate Change and Plant Biosecurity: Implications for Policy | 18.01.21To25.01.21 |
| 15 | The Future of Regulatory Plant Science | 25.01.21To01.02.21 |
| 16 | Examples of quarantine pests and their implication for Pakistan Agriculture, recent scenario and future prospects | 01.02.21To08.02.21 |

***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*

###### PRACTICAL SCHEDULE FOR PP-405

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| S. # | Contents to be covered | Books/Journals | **Chapter/Pages** |
| 1 | Visit to port of entry (dry, air and sea ports) |  |  |
| 2 | Practical demonstration of inspection of import/export consignments  |  |  |
| 3 | Collection of samples for analysis of various plants and seed/ planting material against various diseases |  |  |
| 4 | Collection of samples for analysis of various plants and seed/ planting material against various diseases |  |  |
| 5 | Collection of samples for analysis of various plants and seed/ planting material against various diseases |  |  |
| 6 | Identification of diseases |  |  |
| 7 | Identification of diseases |  |  |
| 8 | Inspection procedures and measures adopted under IPC and NAPHIS in Pakistan during import/export consignments |  |  |
| 9 | Inspection procedures and measures adopted under IPC and NAPHIS in Pakistan during import/export consignments |  |  |
| 10 | Visit to seed testing station of Federal Seed Certification & Registration Department and Department of Plant Protection |  |  |
| 11 | Continued  |  |  |
| 12 | Continued  |  |  |
| 13 | Continued  |  |  |
| 14 | Continued  |  |  |
| 15 | Continued  |  |  |
| 16 | Continued  |  |  |

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| **RESEARCH PROJECT** |

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

**Assignment No.1** Draw a labeled different quarantine model

**Assignment No.2** Important Biosecurity issues related to Pakistan

**Assignment No.3** Different Phytosanitary pests in Pakistan

**Assignment No.4** Name and functions of Plant Protection Institutes in Pakistan

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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: 04

Project: 02

Presentation: 01

Participation: 01

Mid: 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.*

***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.*

* Attendance 75% mandatory to sit in exam
* The practical note book should be prepared and signed