##

## UNIVERSITY OF SARGODHA

## GUIDELINES FOR COURSE OUTLINE WRITE-UP

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| **Course Title** | RESEARCH METHODS IN HORTICULTURE |
| **Course Code** | Hort-401 |
| **Credit Hours** | 3(2-1) |
| **Pre-Requisite** | No Pre-Requisite |
| **Category** | Horticulture (Major Course) |
| **Course Instructor** | Dr. Muhammad Azher Nawaz |
| **Aims & Objectives** | To develop ability in the students to identify and address the researchable problems in different areas of Horticulture.  |
| **Syllabus** | **Theory:** Areas of research in Horticulture, Research methodology, Hypothesis and experimentation, Research parameters (morphological, physiological, bio-chemical, growth and yield characteristics), Sampling and data collection, Data processing, tabulation, analysis and interpretation of result, Computer application, word processing, graphics and data analysis packages.**Practical:** Practices in field layout of experimental design, Sampling and data collection, Laboratory practices in physico-chemical analyses, Use of computer (word processing, data processing and graphics) in horticultural research, Preparation of research proposal. |
| **Assessment Criteria** | **Sessional****(8)** | **Midterm****(8)** | **Final term****(24)** | **Total****(40)** |
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**Assignment:** Topics vary among students and student groups.

**Name of Book(s):**

* Redmond, W.A. 1992. Getting Started with Microsoft Windows. Version 3.1, One Microsoft Way 98052-6399 (1991-92), Microsoft Corporation, Washington.
* Pearce, S.C. 1976. Field Experimentation with Fruit and Other Perennial Plants. Tech. Communication No. 23.Commonwealth Bureau of Horticulture and Plantation Crops.East Malling, Kent.
* Petersen, R.G. 1994. Agricultural Field Experiments–Design and Analysis. Marcel Dekker, Inc., New York.
* Little, T.M. and F.J. Hills. 1978. Agricultural Experimentation–Design & Analysis. John Wiley and Sons, New York.
* Srivastav, M. and R.S. Yadav. 2007. Principles of Laboratory Techniques and Methods. International Book Distributing Company (Publishing Division), Ludhiana, India.

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| **WEEK** | **NAME OF BOOKS/ ARTICLES ETC.** | **CONTENTS TO BE DELIVERED** |  |
| 1st | Agricultural Field Experiments–Design and Analysis | Theory | Areas of research in Horticulture |  |
| Practical |  |
| 2nd | Agricultural Field Experiments–Design and Analysis | Theory | Areas of research in Horticulture |  |
| Practical |  |
| 3rd | Agricultural Field Experiments–Design and Analysis  | Theory | Research methodology in Horticulture |  |
| Practical |  |
| 4th | Agricultural Field Experiments–Design and Analysis | Theory | Research methodology in Horticulture |  |
| Practical |  |
| 5th | Agricultural Field Experiments–Design and Analysis | Theory | Hypothesis and experimentation |  |
| Practical |  |
| 6th | Principles of Laboratory Techniques and Methods. | Theory | Hypothesis and experimentation |  |
| Practical |  |
| 7th | Principles of Laboratory Techniques and Methods. | Theory | Research parameters (morphological, physiological, bio-chemical, growth and yield characteristics) |  |
| Practical |  |
| 8th |  | Theory | Revision of Mid-Course |  |
| Practical |  |
| 9th |  | **MID EXAMINATION** |  |
| 10th | Field Experimentation with Fruit and Other Perennial Plants | Theory | Sampling and data collection,  |  |
| Practical |  |
| 11th | Field Experimentation with Fruit and Other Perennial Plants | Theory | Sampling and data collection,  |  |
| Practical |  |
| 12th | Horticulture by M.N Malik | Theory | Data processing, tabulation, analysis and interpretation of result,  |  |
| Practical |  |
| 14th | Getting Started with Microsoft Windows | Theory | Data processing, tabulation, analysis and interpretation of result, |  |
| Practical |  |
| 15th | Statistics 8.1 | Theory | Computer application, word processing, graphics and data analysis packages. |  |
| Practical |  |
| 16th |  | Quiz/Project and Experiment reports |  |
| 17th |  | **FINAL EXAMINATION** |  |