

## Course Details for Department of Basic Sciences, CoF, UHF Nauni

### Courses for M.Sc.(Agri)Microbiology

1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
MICRO-502 (3+1) Principles of Microbiology	MICRO-503(3+1) Microbial Physiology and Metabolism
MICRO-504 (2+1) Microbial Genetics	MICRO-506 (2+1) Microbial Biotechnology
MICRO-505 (2+1) Soil Microbiology	MICRO-511 (2+1) Biofertilizer Technology
MICRO-507 (2+1) Food Microbiology	MICRO-591 (1+0) Master's Seminar
	MICRO-599 (30) Master's Research

### Courses for M.Sc. (Agri) Statistics

1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
STAT-502 (3+1) Statistical Methods for Applied Sciences	STAT-502 (3+1) Statistical Methods for Applied Sciences
STAT-551 (2+0) Mathematics-I	STAT-511 (2+1) Experimental Designs
STAT-552 (2+0) Probability Theory	STAT-556 (2+0) Econometrics
STAT-553 (2+1) Statistical Methods	STAT-561 (2+0) Mathematics-II
STAT-562 (2+1) Statistical Inference	STAT-564 (2+1) Sampling Techniques
STAT-565 (2+1) Statistical Genetics	STAT-571 (2+1) Multivariate Analysis
STAT-501 (2+0) Mathematics for Applied Sciences	STAT-572 (1+1) Regression Analysis
STAT-591 (0+1) Seminar	STAT-563 (2+1) Design of Experiments
STAT-573 (1+1) Statistical Computing	STAT-512 (2+1) Basic Sampling Techniques
	STAT-599 (0+30) Master's Research

### Courses for M.Sc.(Agri)Plant Physiology

1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
PP-501 (2+1) Principles of Plant Physiology-I: Plant Water Relations and Mineral Nutrition	PP-504 (2+1) Physiological and Molecular Responses of Plants to Abiotic Stresses
PP-502 (2+1) Principles of Plant Physiology-II: Metabolic Processes and Growth Regulation	PP-505 (2+1) Hormonal Regulation of Plant Growth and Development
PP-503 (2+1) Plant Developmental Biology: Physiological and Molecular Basis	PP-506 (2+1) Physiological and Molecular Mechanisms of Mineral Nutrient Acquisition and their Functions
PP-509 (2+0) Physiology of Horticulture Crops	PP-507 (2+1) Photosynthetic Processes, Crop Growth and Productivity and Concepts of Crop Modelling
PP-512 (2+0) Crop Growth Regulation and Management	PP-511 (2+0) Phenotyping Physiological Processes
PP-508 (2+0) Physiology of Field Crops	PP-510 (2+1) Seed Physiology
	PP-591 (1+0) Master's Seminar
	PP-599 (0+30) Master's Research

## Courses for M.Sc.(Agri) Biochemistry

1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
BIOCHEM-501 (3+1) Basic Biochemistry	BIOCHEM-507 (3+0) Plant Biochemistry
BIOCHEM-503 (2+1) Enzymology	BIOCHEM-502 (3+0) Intermediary Metabolism
BIOCHEM-505 (2+2) Techniques in Biochemistry	BIOCHEM-504 (2+1) Molecular Biochemistry
BIOCHEM-509(2+1) Nutritional Biochemistry	BIOCHEM-591 (1+0) Master's Seminar
	BIOCHEM-599 (0+30) Master's Research

## PGS Courses for M.Sc.

1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
PGS-502 (0+1) Technical Writing and Communication Skills	PGS-502 (0+1) Technical Writing and Communication Skills

## Courses for Ph.D. (Agri) Microbiology

1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
MICRO-601(2+1) Improvement in fermentation Technology	MICRO-603 (2+0) Recent Developments in Soil Microbiology
MICRO-602 (2+0) Microbial Physiology & regulation	MICRO-604(2+0) Recent approaches in environmental Microbiology
MICRO-605 (2+1) Plant Microbial interactions	MICRO-692 (1+0) Doctoral Seminar II
MICRO-691 (1+0) Doctoral Seminar I	MICRO-699 (75) Doctoral Research

## Courses for Ph.D.(Agri)Statistics

STAT-601 (1+2) Advanced Data Analysis	STAT-602 (1+1) Simulation Techniques
STAT-611 (2+0) Bayesian Inference	STAT-603 (2+0) Linear Models
STAT-612 (2+1) Advanced Design of Experiments	STAT-604 (2+1) Advanced Statistical Methods
STAT-613 (2+1) Advanced Sampling Techniques	
STAT-691 (0+1) Doctoral Seminar I	STAT-692 (0+1) Doctoral Seminar II
STAT-605 (2+1) Modelling Techniques for Forecasting	STAT-699 (45+0) Doctoral Research

## Courses for Ph.D.(Agri) Plant Physiology

Functional Genomics and Genes Associated with a Few Physiological Processes <b>PP 601 Cr 2+0</b>	Doctoral Seminar I <b>PP 691 Cr 1+0</b>
Signal Perceptions and Transduction and Regulation of Physiological Processes <b>PP 602 Cr2+0</b>	Global Climate Change and Crop Response <b>PP 606 Cr. 2+0</b>
Molecular Approaches for Improving Physiological Mechanisms Through Trait Introgression <b>PP 603 Cr 2+1</b>	
Physiological and Molecular Aspects of Source-sink Capacity for Enhancing Yield <b>PP 607 Cr 3+0</b>	
Doctoral Seminar II <b>PP 692 Cr 1+0</b>	

**PGS Courses for Ph.D.**

PGS-502 (0+1) Technical Writing and Communication Skills	PGS-502 (0+1) Technical Writing and Communication Skills
--	--