

Academic Year 2019-20

**B.P.H.E. Society's
Ahmednagar College, Ahmednagar
Internal Quality Assurance Cell
CO, PO, and PSO Attainment Sheet**

Department Name	Botany
------------------------	---------------

Program Name	M.Sc. (PG)
---------------------	-------------------

Program Outcomes(PO)

PO1	Understand the scope and significance of the discipline.
PO2	In order to make students open-minded and curious, we try our best to enhance and develop a scientific attitude.
PO3	We make the students fit for the society by enabling them to work hard. Make the students exposed to the diverse life forms
PO4	Make them skilled in practical work, experiments, laboratory equipment and to interpret correctly on biological materials and data.
PO5	Develop interest in Biological research. Encourage the students to do research in related disciplines.
PO6	Develop a thirst to preserve the natural resources and environment.
PO7	Develop the ability for the application of acquired knowledge in various fields of life so as to make our country self-sufficient
PO8	Appreciate and apply ethical principles to biological science research and studies
PO9	Imbibe love and curiosity towards nature through the living plants.
PO10	
PO11	
PO12	

Program Specific Outcome(PSO)

PSO1	Understanding the classification of plants from cryptogams to Spermatophyte. Identification of the flora within field enhances basics of plants. Study of biodiversity in relation to habitat will correlates with climate change, land and forest degradation. Application of Botany in agriculture is through study of plant pathology.
PSO2	Understand the ultra structure and function of cell membranes, cell communications, signaling, genetics, anatomy, taxonomy, ecology and plant Physiology and biochemistry. To understand the multi functionality of plant cells in production of fine chemicals and their wide spread industrial applications.
PSO3	Molecular and Physiological adaptations in plants in response to biotic and abiotic stress. Genes responsible for stress tolerance genetic engineering of plants.

Academic Year :	2019-20
------------------------	----------------

Class		M.Sc. I		Course Outcomes	Program Outcomes									PSOs		
Subject Code	40111	PO1	PO2		PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3		
Subject Name	BOUT 111: Botany Theory Paper I-Plan	CO1	2	2	2	2	2	2	2	3	2					
Semester No	I	CO2	3	3	3	3	3	3	3	3	3	3	3	3		
Teacher Name	Dr. Sudhir Suryavanshi & Dr. Prasad	CO3	2	2	2	2	2	2	2	2	2	2	2	2		
Course Outcomes		CO4	2	2	2	2	2	2	2	2	2	2	2	2		
	CO1	Students will learn the diversity of crypt	CO5	2	2	2	2	2	2	2	2	2	2	2		
	CO2	Ability to learn the classification, general ch	Average	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.40	2.20	2.25	2.25		
	CO3	Ability to understand the core concepts of Higher crytogams														
	CO4	The students will learn basic aspects of Fungi including taxonomy														
	CO5	Students will learn charactes of various subdivisions with respect to distinguishing characters, types of Plasmodium and fruit bodies, Life cycle pattern														

Class		M.Sc. I		Course Outcomes	Program Outcomes									PSOs		
Subject Code	40112	PO1	PO2		PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3		
Subject Name	BOUT 112: Botany Theory Paper II- Cel	CO1	3	3	2	3	2	2	3	3	3	3	3	3		
Semester No	I	CO2	2	2	2	2	3	2	2	2	3	3	3	3		
Teacher Name	Mr. Sagar Bawake	CO3	2	2	2	2	2	2	2	2	3	3	3	3		
Course Outcomes		CO4	3	3	2	2	2	3	2	2	3	3	3	3		
	CO1	Students will get knowledge about plant	CO5	3	3	2	2	3	2	3	3	2	3	3		
	CO2	will learn about nucleus & its composition	Average	2.60	2.60	2.00	2.20	2.40	2.20	2.40	2.40	2.80	3.00	3.00		
	CO3	Phosphate signaling, nuclear signaling and serine threonine signaling.														
	CO4	Geting knowledge about cell cycle and cell aging process.														
	CO5	They will able to understands the earth formation, Geological time scale, Origin of cells, Concepts of natural evolution, Population genetics.														

Class		M.Sc. I		Course Outcomes	Program Outcomes									PSOs		
Subject Code	40113	PO1	PO2		PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3		
Subject Name	BOUT 113: Botany Theory Paper III-	CO1	3	2	3	2	3	2	3	2	3	2	3	3		
Semester No	I	CO2	2	2	2	2	2	2	2	2	2	2	2	3		

Teacher Name	Sudhir Bale & Dr. Nisha Godse	CO3	2	2	2	2	2	2	2	2	2	2	2	2
Course Outcomes		CO4	2	2	2	2	2	2	2	2	2	2	2	2
	CO1	Ability to understand concepts of classic	CO5	2	2	2	2	2	2	2	2	2	2	2
	CO2	Ability to understand concepts of Linkage	Average	2.20	2.00	2.20	2.00	2.20	2.00	2.20	2.00	2.20	2.00	2.40
	CO3	Ability to understand Microbial genetics, cytogenetics viz; karyotyping, chromosomal anomalies etc												
	CO4	Students will comprehend the basic concepts of plant breeding												
	CO5	Students will learn the various types, procedures, achievements, merits and demerits of plant breeding												

Class	M.Sc. I	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40114P		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BODT 114: Pomoculture and Fruit	CO1	3	3	3	3	3	3	3	3	3	3	3	3
Semester No	I	CO2	3	3	3	3	3	3	3	3	3	3	3	3
Teacher Name	Prof. A.A.Kulkarni	CO3	3	3	3	3	3	3	3	3	3	3	3	3
Course Outcomes		CO4	3	3	3	3	3	2	3	2	2	3	3	3
	CO1	Students will get the knowledge of Fruit tree	CO5	3	3	3	3	3	3	3	3	3	3	3
	CO2	Students will learn different techniques of p	Average	3.00	3.00	3.00	3.00	3.00	2.67	3.00	2.67	2.67	3.00	3.00
	CO3	Students will get acquainted with fruit maturity indices, preservation and its marketing												
	CO4	Students will learn different methods of fruit preservation												
	CO5	Students will get the knowledge of preparation of various fruit processing industry												

Class	M.Sc. I	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40114 T (B)		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BODP 114: Botany practical paper ba	CO1	3	3	3	3	3	3	3	3	3	3	3	3
Semester No	I	CO2	3	3	3	3	3	3	3	3	3	3	3	3
Teacher Name	Prof. A.A.Kulkarni	CO3	3	3	3	3	3	3	3	3	3	3	3	3
Course Outcomes		CO4	3	3	3	3	3	2	3	2	2	3	3	3
	CO1	Students will get practical knowledge of Fr	CO5	3	3	3	3	3	3	3	3	3	3	3
	CO2	Students will get hands on training on differ	Average	3.00	3.00	3.00	3.00	3.00	2.67	3.00	2.67	2.67	3.00	3.00
	CO3	Students will understand practically the fruit maturity indices, preservation and its marketing												
	CO4	Students will practically carry out different methods of fruit preservation												
	CO5	Students will get the knowledge and perform preparation of various fruit processing industry												

Class	M.Sc. I	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40115		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3

Subject Name	BOUP 115: Botany practical paper based	CO1	3	3	3	2	3	3	2	1	2	3	3	3	
Semester No	I	CO2	2	2	3	2	3	3	3	1	1	2	2	2	
Teacher Name	Dr. Prasad Y. Lamrood, Mr. Sagar Ba	CO3	2	3	2	3	2	3	1	2	2	2	2	3	
Course Outcomes		CO4	2	2	2	2	2	2	2	2	2	2	2	2	
	CO1	Students will learn fungal members from	CO5	3	3	3	2	1	1	2	1	1	2	2	3
	CO2	Getting idea and hands on training to iso	Average	2.50	2.50	2.50	2.00	1.50	1.50	2.00	1.50	1.50	2.00	2.00	2.50
	CO3	Hands on experiance of studying meiosis and mitosis.													
	CO4	comprehend the anatomical and reproductive structures froam each class of bryophytes													
	CO5	Hands on experiance of isolation of chloroplast.													

Class	M.Sc. I	Course Outcomes	Program Outcomes									PSOs				
Subject Code	40211		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3		
Subject Name	BOUT 121: Botany Theory Paper I- P	CO1	2	3	2	3	2	3	2	2	2	2	3	3		
Semester No	II	CO2	2	2	2	2	2	2	2	2	2	3	3	2		
Teacher Name	Prof. B.M. Gaykar & Dr. Nisha G	CO3	3	2	3	2	3	2	3	2	3	2	3	3		
Course Outcomes		CO4	2	2	2	2	2	2	2	2	2	2	2	2		
	CO1	Angiosperm taxonomy will be studied	CO5	2	2	2	2	2	2	2	2	2	2	2		
	CO2	Identification of flowering plants	Average	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.00	2.20	2.20	2.60	2.40
	CO3	Preparation of herbarium														
	CO4	Studcents will learn the core concepts of Spermatophytes														
	CO5	Ability to comprehend the basic concepts of Gymnosperms														

Class	M.Sc. I	Course Outcomes	Program Outcomes									PSOs			
Subject Code	40212		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3	
Subject Name	BOUT 122: Botany Theory Paper II-	CO1	3	3	3	1	2	2	3	3	3	3	3	3	
Semester No	II	CO2	2	3	2	2	3	3	2	3	3	3	3	2	
Teacher Name	Mr. Sagar Bawake	CO3	3	3	2	2	3	2	3	3	3	3	2	3	
Course Outcomes		CO4	2	2	3	3	2	3	2	2	3	3	2	2	
	CO1	Students will able to learns various enzy	CO5	3	2	1	1	3	2	2	2	3	3	2	2
	CO2	Understands the DNA structure, genome	Average	2.60	2.60	2.20	1.80	2.60	2.40	2.40	2.60	3.00	3.00	2.40	2.40
	CO3	Able to understands Gene structure, Transcription, translation and chaperon etc.													
	CO4	Understands the gene regulation as well as transposable elements in plants.													
	CO5	Able to learns genomics and proteomics with human genome projects.													

Class		M.Sc. I	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40213	PO1		PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3	
Subject Name	BOUT 123: Botany Theory Paper	CO1	2	3	2	3	2	2	2	2	2	2	2	3	
Semester No	II	CO2	2	2	2	2	2	3	2	3	2	3	2	2	
Teacher Name	Dr. Prasad Y. Lamrood	CO3	3	2	3	2	2	2	2	2	2	2	3	2	
Course Outcomes		CO4	2	2	2	2	3	2	2	2	2	2	2	2	
	CO1	Students will get to know about fundame	CO5	2	2	2	2	3	2	2	2	2	2	2	
	CO2	They will also get introduced to carbohy	Average	2.20	2.20	2.20	2.20	2.40	2.20	2.00	2.20	2.00	2.20	2.20	
	CO3	Students will learn about Protein biochemistry													
	CO4	Students will learn about enzymology and nitrogen metabolism													
	CO5	Primary, secondary metabolites, extraction, synthesis pthways will be studies.													

Class		M.Sc. I	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40214 P	PO1		PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3	
Subject Name	BODT 124 : Botany Theory Paper	CO1	3	3	3	3	3	3	3	3	3	3	3	2	
Semester No	II	CO2	3	3	3	3	3	3	3	3	3	3	3	3	
Teacher Name	Prof. A.A.Kulkarni	CO3	3	3	3	3	3	3	3	3	3	3	3	3	
Course Outcomes		CO4	3	3	3	2	3	2	3	2	3	3	3	3	
	CO1	Students will get the knowledge of differ	CO5	3	3	3	3	3	3	3	3	3	3	3	
	CO2	Students will learn various methods of p	Average	3.00	3.00	3.00	2.80	3.00	2.80	3.00	2.80	3.00	3.00	2.80	
	CO3	Students will get aquinted with the production technology of variuos mushrooms													
	CO4	Students will get the knowlege of different types of biopesticides													
	CO5	Commercialization of Biopesticides													

Class		M.Sc. I	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40214 T (B)	PO1		PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3	
Subject Name	BODT 124 : Practical Paper -IV M	CO1	3	3	3	3	3	3	3	3	3	3	3	3	
Semester No	II	CO2	3	3	3	3	3	3	3	3	3	3	3	3	
Teacher Name	Prof. A.A.Kulkarni	CO3	3	3	3	3	3	3	3	3	2	3	2	3	
Course Outcomes		CO4	3	3	3	2	3	3	3	3	3	2	3	2	
	CO1	Students will get the practical knowledge	CO5	3	3	3	3	3	2	3	3	3	3	3	
	CO2	Students will get hands on training on v	Average	3.00	3.00	3.00	2.80	3.00	2.80	3.00	3.00	2.80	2.80	2.80	
	CO3	Students will individually perform the production technology of variuos mushrooms													
	CO4	Students will get practical knowlege of different types of biopesticides													
	CO5	Learn methods Commercialization of Biopesticides by visiting Biopesticide industry													

Class		M.Sc. I		Course Outcomes	Program Outcomes									PSOs		
Subject Code	40215	PO1	PO2		PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3		
Subject Name	BOUP :125 Practical Based on BOUT	CO1	2	3	3	2	3	2	2	2	1	2	3	1		
Semester No	II	CO2	2	2	3	2	3	3	3	1	1	2	2	2		
Teacher Name	Dr. P.Y.Lamrood. Mr. Sagar Bawake, Dr. N	CO3	2	3	2	3	2	3	1	2	2	2	2	3		
Course Outcomes		CO4	3	1	3	3	3	3	2	3	2	2	3	3		
	CO1	students will understand the basic technique	CO5	3	3	2	3	2	3	3	2	3	2	3		
	CO2	Checking Effect of temperature and alkali on	Average	2.40	2.40	2.60	2.60	2.60	2.80	2.20	2.00	1.80	2.20	2.40		
	CO3	Hands on traing on SDS PAGE to separate seed storage protein, Isolation, estimation, dialysis, seperation of proteins is what they will learn														
	CO4	Students will learn the basic practicals of karyotypes														
	CO5	Students wil learn to make different solutions, TLC, Spectrophotometric analysis														

Academic Year :	2019-20
------------------------	----------------

Class		M.Sc.-II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40301			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	Spermatophytic Botany		CO1	3	3	3	3	3	3	3	3	3	3	3	3
Semester No	III		CO2	3	3	3	3	3	3	3	3	3	3	3	3
Teacher Name	Dr. A A Kulkarni & Dr. B. M Gaykar		CO3	2	2	2	2	2	2	2	2	2	2	2	2
Course Outcomes			CO4	2	2	2	2	2	2	2	2	2	2	2	3
	CO1	Students will learn about the differential characters of different spermatophytes	CO5	2	2	2	2	2	2	2	2	2	3	3	2
	CO2	Students will learn the sporophytic and Gametophytic life cycle of Gymnosperms	Average	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.60	2.60	2.60
	CO3	Students will get the knowlwdge about different fossils of gymnospers													
	CO4	Students will get the knowlwdge about different fossils of gymnospers													
	CO5	Herbarium keeping													

Class		M.Sc. II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40302			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	Developmental and Economic Botany		CO1	3	2	2	3	2	2	3	2	2	3	2	2
Semester No	III		CO2	3	2	3	2	2	3	2	2	2	2	3	3
Teacher Name	Dr. Prasad Y. Lamrood		CO3	2	2	2	2	2	2	2	3	3	2	3	
Course Outcomes			CO4	3	2	2	3	2	2	3	2	2	2	2	2
	CO1	Students will learn variouis processes involved in plant development	CO5	3	2	2	3	2	2	3	2	2	2	2	2
	CO2	They will learn various aspects of Embryological Aspects of Development	Average	2.80	2.00	2.20	2.60	2.00	2.20	2.60	2.00	2.20	2.40	2.20	2.40
	CO3	Physiological and molecular aspects of plant development will be learned by the students													

	CO4	In the economic botany aspect students will learn Source, method of cultivation of various crops
	CO5	In the economic botany aspect students will learn economic uses of various crops

Class		M.Sc. II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40303			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BO 3.3 Industrial Botany		CO1	3	3	2	3	2	2	3	3	3	3	3	3
Semester No	III		CO2	2	2	2	2	3	2	2	2	3	3	3	3
Teacher Name	Mr. Sagar Bawake		CO3	2	2	2	2	2	2	2	2	3	3	3	3
Course Outcomes			CO4	3	3	2	2	2	3	2	2	3	3	3	3
	CO1	Students will able to understands algal technology, food like Spirulina from algae, fodder from algae.	CO5	3	3	2	2	3	2	3	3	2	3	3	3
	CO2	Student will get information about biopesticide, its type and application in agriculture.	Average	2.60	2.60	2.00	2.20	2.40	2.20	2.40	2.40	2.80	3.00	3.00	3.00
	CO3	Students will able to understands biofuel technology, concept of biodisel, ources for bioethanol production, concept of Bio-hydrogen.													
	CO4	Students will able to understands Fermentation Technology, Alcohol and Beverage Industry, Organic Acid Industry, Antibiotic Industry.													
	CO5	Students will able to understands Entrepreneurship and Management, Institutional Finance to Entrepreneurs.													

Class		M.Sc. II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40309			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BO 3.46 Advanced Medicinal Botany		CO1	3	3	2	3	2	2	3	3	3	1	3	2
Semester No	III		CO2	2	2	2	3	3	2	3	3	3	3	2	3
Teacher Name	Mr. Sagar Bawake		CO3	2	3	2	2	3	2	2	2	2	2	3	2
Course Outcomes			CO4	3	3	2	3	2	3	3	3	2	3	3	1
	CO1	Students will understand the Pharmacognocny, traditional sysytem of medicine, crude drug and its classification.	CO5	3	3	2	2	3	2	3	3	2	3	3	3
	CO2	They will aquired knowledge about collection and processing drugs, drug adultration, drug evaluationits quality control.	Average	2.60	2.80	2.00	2.60	2.60	2.20	2.80	2.80	2.40	2.40	2.80	2.20

	CO3	They will able to understands pathways to produced secondary metabolites,
	CO4	able to learns about the herbal drugs and its source, cultivation, collection and there characters.
	CO5	Learning about industrial aspect of herbal plants in neutraceuticals and cosmaceuticals.

Class		M.Sc. II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40314			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BO 3.5 Practicals Based on BO 3.1, BO 3.2 and BO 3.3		CO1	2	2	2	2	2	2	2	2	2	2	2	2
Semester No	III		CO2	3	2	3	2	3	2	3	2	3	3	2	3
Teacher Name	Prof. B.M.Gaykar, Prof. A.A. Kulkarni & Dr. Prasad Y. Lamrood		CO3	2	3	2	3	3	3	2	2	3	2	2	3
Course Outcomes			CO4	2	2	2	2	2	3	2	3	2	2	2	3
	CO1	Stucture of reproductive organs of Gymnosperms studied	CO5	2	2	2	2	2	3	2	3	2	2	2	3
	CO2	Geographical distribution og plants	Average	2.20	2.20	2.20	2.20	2.40	2.60	2.20	2.40	2.40	2.20	2.00	2.80
	CO3	Studnts will get the practical knowledge about identification and economic imporatnce of Gymnosperms													
	CO4	Students will learn to isolate meristems, embryo, endosperms, development of microspore, megaspore, endosperms													
	CO5	In vitro Somatic embryogenesis will be learnt, In vitro Somatic organogenesis will be learnt													

Class		M.Sc. II	Course Outcomes										PSOs		
Subject Code	40315			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BO 3.6 Practicals based on BO 3.46 Advanced Medicinal Botany		CO1	3	3	3	3	2	2	3	1	1	1	3	3
Semester No	III		CO2	2	3	3	3	3	3	1	3	2	2	2	3
Teacher Name	Mr. Sagar Bawake		CO3	2	3	3	2	3	3	2	2	2	2	3	2
Course Outcomes			CO4	3	3	3	3	2	2	3	3	2	3	3	2
	CO1	Hands on experiance to analyze the crude drugs, its purity by characters, histochemical analysis.	CO5	3	3	2	2	3	2	3	3	2	3	3	3
	CO2	Hands on trainig on estimation of alkaloids & glycosides, studying biological activity of plants.	Average	2.60	3.00	2.80	2.60	2.60	2.40	2.40	2.40	1.80	2.20	2.80	2.60

	CO3	Learning about how to isolate essential oil & oleioresin from herbal plants,
	CO4	Hands on training for preparation of herbal foods and herbal cosmetics
	CO5	Field visit for ethnobotanic survey and industrial visit to pharmaceuticals.

Class		M.Sc. II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40401			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BO 4.1 Computational Botany		CO1	3	3	3	3	3	3	3	3	3	3	3	
Semester No	IV		CO2	3	3	3	3	3	3	3	3	3	3	3	
Teacher Name	Prof. A.A.Kulkarni & Dr. Prasad Y. Lamrood		CO3	3	3	3	3	3	3	3	3	3	3	3	
Course Outcomes			CO4	3	3	3	3	3	3	3	3	3	3	3	
	CO1	Students will get the knowledge about different staistical tests	CO5	3	2	2	2	2	2	2	2	2	2	2	
	CO2	Students will understand the importance of Tests of significsnces	Average	3.00	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	
	CO3	Students will learn different field designs which would be useful in palnning for experimental set up													
	CO4	Students would get the knowledge of analytical methods													
	CO5	students will learn the concept of Bioinformatics and its application													

Class		M.Sc. II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40402			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BO 4.2 Plant–Organism Interactions		CO1	1	1	2	3	2	1	3	3	2	2	1	1
Semester No	IV		CO2	2	2	3	2	3	3	3	2	3	3	3	
Teacher Name	Mr. Sagar Bawake		CO3	2	2	1	2	2	2	3	2	1	2	2	2
Course Outcomes			CO4	3	2	1	2	2	2	2	2	2	3	1	1
	CO1	Students will understands the plant plant intercation like allelopathy, parasitism, and epiphytic nature.	CO5	3	3	2	2	3	2	3	3	2	3	3	3
	CO2	Students will understands the plant - animal or insect intercation as well as carnivorous plants.	Average	2.20	2.00	1.80	2.20	2.40	2.00	2.80	2.40	2.00	2.60	2.00	2.00
	CO3	They will understands th symbiotic assoction of plant and other organism like algae, fungi, bacteria etc.													

	CO4	They will understand the pollination process in plants, co evolution of pollinator with flower.
	CO5	Understanding the Seed dispersal mechanisms in plants.

Class		M.Sc. II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40403			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BO 4.3 Industrial Botany		CO1	1	1	2	3	2	1	3	3	2	2	1	1
Semester No	IV		CO2	2	2	3	2	3	3	3	2	3	3	3	3
Teacher Name	Mr. Sagar Bawake		CO3	2	2	1	2	2	2	3	2	1	2	2	2
Course Outcomes			CO4	3	2	1	2	2	2	2	2	2	3	1	1
	CO1	Able to understand herbal technology, medicinal plants from Atharva veda.	CO5	3	3	2	2	3	2	3	3	2	3	3	3
	CO2	Able to understand plants used in cosmetics.	Average	3.00	2.50	1.50	2.00	2.50	2.00	2.50	2.50	2.00	3.00	2.00	2.00
	CO3	Able to understand gardening, its types and forest botany.													
	CO4	Able to understand plant tissue culture, micropropagation of banana etc.													
	CO5	Ability to understand post harvest technology of Fruits, processing etc.													

Class		M.Sc. II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40404			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BO 4.4. Plant Pathology		CO1	1	1	2	3	2	2	3	3	2	2	2	2
Semester No	IV		CO2	2	2	3	2	3	3	3	2	3	3	3	3
Teacher Name	Dr. Prasad Y. Lamrood		CO3	2	2	2	2	2	2	3	2	1	2	2	2
Course Outcomes			CO4	3	2	2	2	2	2	2	2	2	3	1	1
	CO1	Students will learn various aspects of plant pathology,	CO5	3	3	2	2	3	2	3	3	2	3	3	3
	CO2	They will learn in detailed process of pathogenesis	Average	2.20	2.00	2.20	2.20	2.40	2.20	2.80	2.40	2.00	2.60	2.20	2.20
	CO3	Process of disease development, genetics of disease development, defense mechanism will be learnt													
	CO4	Various disease management will be studied by the students													
	CO5	Various disease related aspects will be studied by the students													

Class		M.Sc. II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40405			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BO 4.5 Practicals based on BO 4.1,BO 4.2, BO 4. 3 and BO 4.4		CO1	3	3	3	3	3	3	3	3	3	3	3	3
Semester No	IV		CO2	2	2	2	2	2	2	2	2	2	2	2	2
Teacher Name	Prof. A.A.Kulkarni, Mr. Sagar Bawake, Dr.P.Y. Lamrood		CO3	3	3	3	3	3	3	3	3	3	3	3	3
Course Outcomes			CO4	3	2	2	3	3	3	2	3	2	2	3	3
	CO1	Students will get the information about use of statistical methods to solve problems related to research, agriculture and medicine	CO5	2	3	3	3	2	2	2	2	3	2	3	2
	CO2	They will isolate, culture and study Koch's postulate	Average	2.60	2.60	2.60	2.80	2.60	2.60	2.40	2.60	2.60	2.40	2.80	2.60
	CO3	Hands on experiance on observing parasitic association of plants, seed dispersal mechanism, alleopathic effect and Nodulation.													
	CO4	Able to Extraction of essential oil by Soxhlet apparatus													
	CO5	Able to learn Micropropagation of banana, sugarcane and Lilium													

Class		M.Sc. II	Course Outcomes	Program Outcomes									PSOs		
Subject Code	40406			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	BO 4.6 Practicals based on Research Methodlogy (Project)		CO1	3	3	3	3	3	3	3	3	3	3	3	3
Semester No	IV		CO2	3	3	3	3	3	3	3	3	3	3	3	3
Teacher Name	All Teachers		CO3	3	3	3	3	3	3	3	3	3	3	3	3
Course Outcomes			CO4	3	3	3	3	3	3	3	3	3	3	3	3
	CO1	Development of Reserach Idea & Literture Review	CO5	3	3	3	3	3	3	3	3	3	3	3	3
	CO2	Designing of Experiments	Average	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
	CO3	Data Collection and Analysis													
	CO4	Report writing in scientific english													
	CO5	Presenttaion and Publication.													

CO-PO Mapping

		Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
FY	FY	1 40111	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.40	2.20
		2 40112	2.60	2.60	2.00	2.20	2.40	2.20	2.40	2.40	2.80
		3 40113	2.20	2.00	2.20	2.00	2.20	2.00	2.20	2.00	2.20
		4 40114P	3.00	3.00	3.00	3.00	3.00	2.67	3.00	2.67	2.67
		5 40114 T (B)	3.00	3.00	3.00	3.00	3.00	2.67	3.00	2.67	2.67
		6 40115	2.50	2.50	2.50	2.00	1.50	1.50	2.00	1.50	1.50
		7 40211	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.00	2.20
		8 40212	2.60	2.60	2.20	1.80	2.60	2.40	2.40	2.60	3.00
		9 40213	2.20	2.20	2.20	2.20	2.40	2.20	2.00	2.20	2.00
		10 40214 P	3.00	3.00	3.00	2.80	3.00	2.80	3.00	2.80	3.00
		11 40214 T (B)	3.00	3.00	3.00	2.80	3.00	2.80	3.00	3.00	2.80
		12 40215	2.40	2.40	2.60	2.60	2.60	2.80	2.20	2.00	1.80
SY	SY	1 40301	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
		2 40302	2.80	2.00	2.20	2.60	2.00	2.20	2.60	2.00	2.20
		3 40303	2.60	2.60	2.00	2.20	2.40	2.20	2.40	2.40	2.80
		4 40309	2.60	2.80	2.00	2.60	2.60	2.20	2.80	2.80	2.40
		5 40314	2.20	2.20	2.20	2.20	2.40	2.60	2.20	2.40	2.40
		6 40315	2.60	3.00	2.80	2.60	2.60	2.40	2.40	2.40	1.80
		7 40401	3.00	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
		8 40402	2.20	2.00	1.80	2.20	2.40	2.00	2.80	2.40	2.00
		9 40403	3.00	2.50	1.50	2.00	2.50	2.00	2.50	2.50	2.00
		10 40404	2.20	2.00	2.20	2.20	2.40	2.20	2.80	2.40	2.00
		11 40405	2.60	2.60	2.60	2.80	2.60	2.60	2.40	2.60	2.60
		12 40406	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

CO-PSO MAPPING

	Course	PSO1	PSO2	PSO3
1	40111	2.25	2.25	2.25
2	40112	3.00	3.00	3.00
3	40113	2.00	2.20	2.40
4	40114P	3.00	3.00	3.00
5	40114 T (B)	3.00	3.00	3.00
6	40115	2.00	2.00	2.50
7	40211	2.20	2.60	2.40
8	40212	3.00	2.40	2.40
9	40213	2.20	2.20	2.20
10	40214 P	3.00	3.00	2.80
11	40214 T (B)	2.80	2.80	2.80
12	40215	2.20	2.40	2.40
1	40301	2.60	2.60	2.60
2	40302	2.40	2.20	2.40
3	40303	3.00	3.00	3.00
4	40309	2.40	2.80	2.20
5	40314	2.20	2.00	2.80
6	40315	2.20	2.80	2.60
7	40401	2.80	2.80	2.80
8	40402	2.60	2.00	2.00
9	40403	3.00	2.00	2.00
10	40404	2.60	2.20	2.20
11	40405	2.40	2.80	2.60
12	40406	3.00	3.00	3.00

CO-PSO ATTAINMENT

	Course	PSO1	PSO2	PSO3
	40111	2.25	2.25	2.25
	40112	1.56	1.56	1.56
	40113	1.04	1.144	1.248
	40114P	2.52	2.52	2.52
	40114 T (B)	3	3	3
	40115	2	2	2.5
	40211	2.2	2.6	2.4
	40212	3	2.4	2.4
	40213	2.2	2.2	2.2
	40214 P	3	3	2.8
	40214 T (B)	2.8	2.8	2.8
	40215	2.2	2.4	2.4
	40301	2.6	2.6	2.6
	40302	1.632	1.496	1.632
	40303	3	3	3
	40309	2.4	2.8	2.2
	40314	2.2	2	2.8
	40315	2.2	2.8	2.6
	40401	2.8	2.8	2.8
	40402	2.6	2	2
	40403	2.52	1.68	1.68
	40404	2.6	2.2	2.2
	40405	2.4	2.8	2.6
	40406	3	3	3

Percentage CO-PSO ATTAINMENT

	Course	PSO1	PSO2	PSO3
	40111	100	100	100
	40112	52	52	52
	40113	52	52	52
	40114P	84	84	84
	40114 T (B)	100	100	100
	40115	100	100	100
	40211	100	100	100
	40212	100	100	100
	40213	100	100	100
	40214 P	100	100	100
	40214 T (B)	100	100	100
	40215	100	100	100
	40301	100	100	100
	40302	68	68	68
	40303	100	100	100
	40309	100	100	100
	40314	100	100	100
	40315	100	100	100
	40401	100	100	100
	40402	100	100	100
	40403	84	84	84
	40404	100	100	100
	40405	100	100	100
	40406	100	100	100

FY

SY