Ph.D. Genetics and Plant Breeding
Syllabus Scheme Semester Wise

Semester I

SN	Course Code	Course Title	Credit hours
	Major Compulsory Courses		
1	GPB-601	Advances in Plant Breeding Systems	(3+0) = 3
2	GPB-605	Genomics in Plant Breeding	(3+0) = 3
	Major Optional Courses		
1	GPB-603	Molecular Cytogenetics for Crop Improvement	(2+0) = 2
2	GPB-604	Plant Genetics Resources, Conservation and Utilization	(2+0) = 2
3	GPB-606	Population Genetics	(2+0) = 2
	Note-Student has to select minimum of 02 credits in optional courses from the above list in this semester.		
	#Minor courses		
		Note-Student has to select minimum of 03 credits in minor courses from the below list in this semester	
	Supporting courses		
1	MBB 504	Techniques in Molecular Biology I	(3+0) = 3
2	AGRON-501	Modern Concepts in Crop Production	(3+0) = 3
3	PL. PATH.-514	Integrated Disease Management	(2+1) = 3
	Note-Student has to select minimum of three credits in supporting courses from the above list in this semester.		
	Compulsory Non-Credit Courses (Common Courses)*		
1	PGS-501	Library and Information Services	(0+1) = 1
2	PGS-502	Technical Writing and Communications Skills	(0+1) = 1
	Doctoral Research		
1	GPB-699	Doctoral Research	(0+2) = 2
	Total	**8+3+3+2+2**	**18**

#Minor courses

SN	Course Code	Course Title	Credit hours
1	PL PATH-505	Principles of Plant Pathology	(2+1) = 3
2	MBB 601	Plant Molecular Biology	(3+0) = 3
3	MBB 504	Techniques in Molecular Biology I	(3+0) = 3
4	VSC-504	Principles of Vegetable Breeding	(2+1) = 3
5	ENT-505	Biological Control of Insect Pests and Weeds	(2+1) = 3

Semester II

SN	Course Code	Course Title	Credit hours
	Major Compulsory Courses		
1	GPB-609	IPR and Regulatory Mechanism (e-course)	(1+0) = 1
	Major Optional Courses		
1	GPB-602	Advances in Biometrical Genetics	(2+1) = 3
2	GPB-607	Crop Evolution	(3+0) = 3
	Note-Student has to select minimum of 03 credits in optional courses from the above list in this semester.		
	#Minor courses		
		Note-Student has to select minimum of 03 credits in minor courses from the below list in this semester	
	Supporting courses		
1	STAT-511	Experimental Designs	(2+1) = 3
2	AGRON-508	Agronomy of Medicinal, Aromatic & Underutilized Crops	(2+1) = 3
3	MBB 507	Techniques in Molecular Biology II	(0+3) = 3
	Note-Student has to select minimum of three credits in supporting courses from the above list in this semester.		
	Compulsory Non-Credit Courses (Common Courses)		
1	PGS-503	Intellectual Property and Its Management in Agriculture	(1+0) = 1
2	PGS-504	Basic Concepts in Laboratory Techniques	(0+1) = 1
	Doctoral Seminar I		
1	GPB-691	Doctoral Seminar I	(1+0) = 1
	Doctoral Research		
1	GPB-699	Doctoral Research	(0+3) = 3
	Total	**4+3+3+2+1+3**	**16**

#Minor courses

SN	Course Code	Course Title	Credit hours
1	PL PATH-507	Principles of Plant Disease Management	(2+1) = 3
2	MBB 602	Plant Genome Engineering	(3+0) = 3
3	VSC-508	Seed Production of Vegetable Crops	(2+1) = 3
4	MBB 507	Techniques in Molecular Biology II	(0+3) = 3
3	ENT-510	Pests of Horticultural and Plantation Crops	(2+1) = 3

Semester III

SN	Course Code	Course Title	Credit hours
	Compulsory Non-Credit Courses (Common Courses)*		
1	PGS-505	Agricultural Research, Research Ethics and Rural Development Programmes	(1+0) = 1
	Doctoral Seminar II		
1	GPB-692	Doctoral Seminar II	(1+0) = 1
	Doctoral Research		
1	GPB-699	Doctoral Research	(0+10) = 10
	Total	**1+1+10**	**12**

Semester IV

SN	Course Code	Course Title	Credit hours
	Doctoral Research		
1	GPB-699	Doctoral Research	(0+10) = 20
	Total	**20**	**20**

Semester V

SN	Course Code	Course Title	Credit hours
	Doctoral Research		
1	GPB-699	Doctoral Research	(0+10) = 20
	Total	**20**	**20**

Semester VI

SN	Course Code	Course Title	Credit hours
	Doctoral Research		
1	GPB-699	Doctoral Research	(0+10) = 20
	Total	**20**	**20**
	Grand Total	**12+6+6+5+2+75**	**106**

***Compulsory Non-Credit Courses (Common Courses):** Ph.D. students may be exempted from these courses if already studied during Master's degree.