

UNIVERSITY OF KERALA

THIRUVANANTHAPURAM

**MSc Degree in Botany (Semester System)
Revised Course structure and Syllabus**

January 2012

PG BOARD OF STUDIES IN BOTANY

UNIVERSITY OF KERALA
MSc Degree in Botany (Semester System)
Revised Course structure

Semester	Paper Code	Title of the paper	Hours/ semester	Hours / week		ESA hours	Maximum Marks			
				L	P		CA	ESA	Total	
I	BO 211	Phycology, Mycology & Plant Pathology	108	6	2	3	25	75	100	
	BO212	Bryophyta, Pteridophyta & Gymnosperms	108	6	2	3	25	75	100	
	BO213	Microbiology, histology, Microtechnique & histochemistry	108	6	3	3	25	75	100	
	BO214	Practical I	126		7	4	25	75	100	
	Total for Semester I			450	18	7	13	100	300	400
	II	BO 221	Taxonomy, Economic Botany & Ethnobotany	108	6	2	3	25	75	100
BO 222		Environmental Biology, Phytogeography, Conservation Biology & Evolution	108	6	2	3	25	75	100	
BO 223		Cell and Molecular Biology & Genetics	108	6	3	3	25	75	100	
BO224		Practical II	126		7	4	25	75	100	
Total for Semester II			450	18	7	13	100	300	400	
III	BO 231	Plant Breeding, Horticulture & Reproductive Biology	108	6	1.5	3	25	75	100	
	BO232	Biophysics, biochemistry & Plant physiology	108	6	3	3	25	75	100	
	BO233	Research Methodology, Biostatistics Plant Biotechnology	108	6	2.5	3	25	75	100	
	BO234	Practical III	126		7	4	25	75	100	
	Total for Semester III			450	18	7	13	100	300	400
IV	BO241	Special Paper –I Bioinformatics	144	8	2	3	25	75	100	
	BO242	special Paper –II Elective	144	8	5	3	25	75	100	
	BO243	Practical IV	126		7	4	25	75	100	
	BO201	Dissertation	36	2				100	100	
	BO202	Submissions					25	75	100	
	BO203	Comprehensive Viva Voce						100	100	
	Total for Semester IV			450	18	7	10	100	500	600
Grand Total							400	1400	1800	

L-Lecture, P-practical, ESA-End Semester Assessment, CA-Continuous Assessment(internal)

SCHEDULE OF WORK LOAD

Semester	Paper code	Subject	Total hours		T Hours/week	P Hours/week
			T	P		
I	BO 211	Phycology	54	27	3	1.5
		Mycology	36	9	2	0.5
		Plant pathology	18	0	1	0
	BO 212	Bryophyta	27	9	1.5	0.5
		Pteridophyta	45	18	2.5	1
		Gymnosperms	36	9	2	0.5
	BO 213	Microbiology	36	9	2	0.5
		Histology	27	9	1.5	0.5
		Microtechnique & histochemistry	45	36	2.5	2
II	BO 221	Taxonomy	72	27	4	1.5
		Economic botany	9	9	.5	.5
		Ethnobotany	9	0	.5	0
		Evolution	18	0	1	0
	BO 222	Environmental Biology	72	36	4	2
		Phytogeography	18	0	1	0
		Conservation Biology	18	0	1	0
	BO 223	Cell & Molecular Biology	54	36	3	2
		Genetics	54	18	3	1
III	BO 231	Plant Breeding	63	9	3.5	0.5
		Horticulture	18	9	1	0.5
		Reproductive biology	27	9	1.5	0.5
	BO 232	Biophysics	27	9	1.5	0.5
		Biochemistry	36	18	2	1
		Plant Physiology	45	27	2.5	1.5
	BO 233	Research Methodology	18	0	1	0
		Biostatistics	27	9	1.5	0.5
		Plant Biotechnology	63	36	3.5	2
IV	BO 241	Special Paper – I Bioinformatics	144	36	8	5
	BO242	Special paper – II Elective	144	90	8	0
		Dissertation	18	0	2	0

Elective Special Papers

BO 242a : Biotechnology

BO 242b : Environmental Biology

BO 242c : Plant Biochemistry and Enzymology

BO 242d : Cytogenetics

The special paper comprises detailed studies in certain areas of a subject. Normally a department shall offer one of the above subjects as special paper. There shall be provision for change of subject for special paper, if necessary, in the ensuing years.

Study Tour

Study tour in the 2nd and 4th semesters of the PG programme is compulsory.

2nd Semester : minimum three one day field trips or 3 to 4 day study tour for flora awareness.

4th Semester : Visit to at least two regional and two national research institutions.

Submissions (4th Semester Practical Examination)

1. Detailed report on visit to research institutions and the type of research works undertaken by these centers
2. A Model research proposal seeking fund to carry out research on a specific problem
3. Power Point presentation of the dissertation carried out by the student before the examiner.

Dissertation/ Project work

Topic of the dissertation may be chosen from any area of botany and may be laboratory based, field based or both or computational, with emphasis on originality of approach. It may be started during 2nd/3rd semester and shall be completed by the end of the 4th semester. It should be duly signed by the research guide and the head of the Department and submitted for evaluation. The dissertation to be submitted should include:

- Introduction
- Objectives of the study
- Materials and methods
- Results and discussion
- Summary and conclusion
- References

Scheme for Practicals	Duration	CA	ESA	Total Marks
Practical I (BO 214) includes all the topics under papers BO 211, 212 & 213	4 hrs	25	75	100
Practical II (BO 224) includes all the topics under papers BO 221, 222 & 223	4 hrs	25	75	100
Practical III (BO 234) includes all the topics under papers BO 231, 232 & 233	4 hrs	25	75	100
Practical IV (BO 243) includes all the topics under papers BO 241 & 242	4 hrs	25	75	100

The practical examinations are conducted at the end of the semester II and Semester IV. Practical I and II examinations will be conducted at the end of the Semester II and Practical III and IV examinations will be conducted at the end of the Semester IV. Certified records of practical works done and submissions, if any, should be submitted at the time of each practical examinations.

SCHEME OF EXAMINATION AND MARK DISTRIBUTION

Semester	Paper code	Paper	Hours/ Semester	ESA hours	Maximum marks		
					CA	ESA	Total
I	BO211	Paper 1	108	3	25	75	100
	BO212	Paper 2	108	3	25	75	100
	BO213	Paper 3	108	3	25	75	100
	BO214	Practical I	126	4*	25	75*	100
	Total for Semester I			450	13	100	300
II	BO221	Paper 1	108	3	25	75	100
	BO222	Paper 2	108	3	25	75	100
	BO223	Paper 3	108	3	25	75	100
	BO224	Practical II	126	4	25	75	100
	Total for Semester II			450	13	100	300
III	BO231	Paper 1	108	3	25	75	100
	BO232	Paper 2	108	3	25	75	100
	BO233	Paper 3	108	3	25	75	100
	BO234	Practical III	126	4	25	75	100
	Total for Semester III			450	13	100	300
IV	BO242	Special Paper I	144	3	25	75	100
	BO243	Special Paper II	144	3	25	75	100
	BO244	Practical IV	126	3	25	75	100
	BO201	Dissertation	36			100	100
	BO202	Viva voce				100	100
		Submissions			25	75	100
	Total for Semester IV			450	13	100	500
Grand Total					400	1400	1800

Distribution of marks in each Semester Examination

Semester	Continuous Assessment		End Semester Assessment		Total marks
	Theory	Practical	Theory	Practical	
I	75	25	225	--	325
II	75	25	225	150(75+75)	475
III	75	25	225	--	325
IV	50	25	150	150(75+75)	375
	Dissertation				100
	Submissions				100
	Comprehensive Viva Voce				100
	Grand Total				1800

Distribution of Marks in Practical Examination

Practical Exam	Total Marks	Examination	Record/Submission
I	75	55	Record – 10 submission – 10
II	75	55	Record – 10 Herbarium/Field note-10
III	75	65	Record – 10
IV	75	65	Record-10