Master Botany Study Plan

Botany & Microbiology Department

2024 – 1445H

Master Botany Study Plan

First Semester				
Course Code	**Course Title**	**Pre-Req.**	**Co-Req.**	**Credits (Lect.-Pract.)**
BOT 512	PLANT SURFACES	-	-	**2(1+1)**
BOT 521	ADVANCED ANGIOSPERM TAXONOMY	-	-	**2(1+1)**
BOT 541	ADVANCED ECOLOGY	-	-	**2(1+1)**
BOT 551	ADVANCED GENETICS	-	-	**2(1+1)**
BOT 571	BIOSYNTHESIS	-	-	**2(2+0)**
Total of Credit Hours				10

Second Semester				
Course Code	**Course Title**	**Pre-Req.**	**Co-Req.**	**Credits (Lect.-Pract.)**
BOT 514	APPLIED PLANT ANATOMY	-	-	**2(1+1)**
BOT 523	FIELD SYSTEMATICS	-	-	**2(1+1)**
BOT 543	DESERTIFICATION & NATURE CONSERVATION	-	-	**2(2+0)**
BOT 572	PLANT MINERAL NUTRITION	-	-	**3(2+1)**
BOT 591	SPECIAL TOPICS	-	-	**1(1+0)**
Total of Credit Hours				**10**

Third Semester				
Course Code	**Course Title**	**Pre-Req.**	**Co-Req.**	**Credits (Lect.-Pract.)**
BOT 553	ADVANCED CYTOGENETICS	-	-	**3(2+1)**
BOT 592	SEMINAR	-	-	**1(1+0)**
BOT 599	PROPOSAL	-	-	**1(1+0)**
Total of Credit Hours				**5**

Fourth Semester				
Course Code	**Course Title**	**Pre-Req.**	**Co-Req.**	**Credits (Thesis)**
BOT 600	RESEARCH	-	-	**6**
Total of Credit Hours				**6**

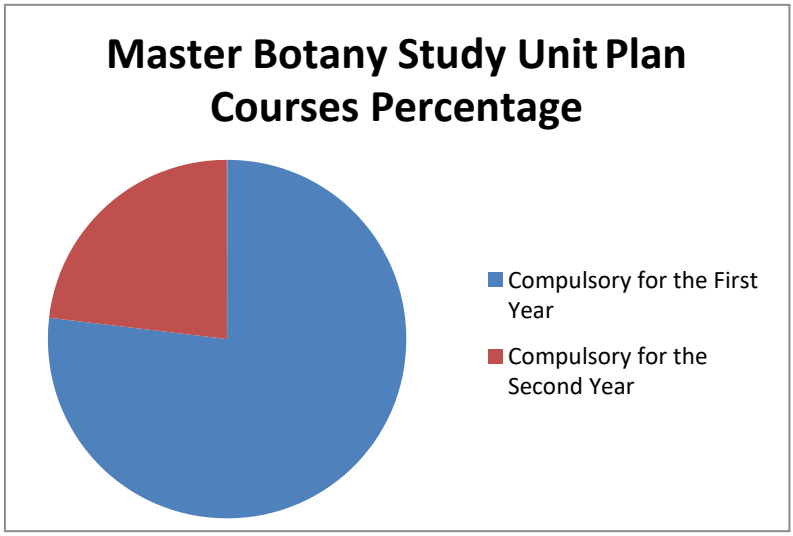
(Lect – Pract.) = (Lecture – Practical)

Master Botany Short Course Description

Course Code	Course Title	Credits (Lect. - Pract.)
BOT 512	PLANT SURFACES	2(1+1)
Introduction – plant surfaces studying techniques – surfaces fine structures – surfaces bio-construction – surfaces function – role in dissemination and reproduction		
BOT 514	APPLIED PLANT ANATOMY	2(1+1)
Introduction – Tissue systems – Root, stem, leaf histology – Meristems– Secondary xylem an phloem – Adapting characteristics – Fruits and flower anatomy – Economic importance of applied plant anatomy		
BOT 521	ADVANCED ANGIOSPERM TAXONOMY	2(1+1)
Use of anatomy in taxonomy – Biochemistry – plant geography – electron microscopy In plant taxonomy		
BOT 523	FIELD SYSTEMATICS	2(1+1)
Studying of flowering plant in Saudi Arabia – Its characteristics, classification, environment, geographic distribution – plant samples preservation (field trip for 10 days).		
BOT 541	ADVANCED ECOLOGY	2(1+1)
Seed ecology – Dissemination – Seed stores in soil as ecology indicator– Salt indicators – Ground water indicators – Rows indicators in soil – Heavy metals toxicity		
BOT 543	DESERTIFICATION & CONSERVATION OF NATURAL RESOURCES	2(2+0)
Desertification as global phenomenon – Desertification in Arabic word, reasons and aspects - Modern methods to curb desertification – Natural resources and its types, and maintenance ways		
BOT 551	ADVANCED GENETICS	2(1+1)
Chemical and genetics structure of microbial genetics element – Genes – Plasmids – Reproduction and gene expression – Transformation – Genetic engineering		
BOT 553	ADVANCED CYTOGENETICS	3(2+1)
Chromosomal apparitions in economic plants (numerical and structural) – mode of Chromosomal apparitions – importance of Chromosomal		
BOT 571	BIOSYNTHESIS	2(2+0)
Photosynthesis – Phosphorylation – Lipids and protein synthesis – Energy estimation		
BOT 572	PLANT MINERAL NUTRITION	3(2+1)
Physiological role of elements – its deficiency symptoms, mode of absorption – regulation of transportation in tissue		
BOT 591	SPECIAL TOPICS	1(1+0)
Selective topics in botany		
BOT 592	SEMINAR	1(1+0)

Presentation and discussion of selected topics in botany according to the guidance of the course instructor		
BOT 599	PROPOSAL	1(1+0)
The student must submit a written research plan to be consider by Research Committee for evaluation to be approved by Department Council		
BOT 600	RESEARCH	6
The student must submit a long thesis involving proposal research, written by a candidate for a university degree		

Required Study Courses	Number of Courses	Total Study Unit	Percentage
Compulsory for the First Year	10	20	64.5%
Compulsory for the Second Year	4	11	35.5%
Total	14	31	100 %



	Number of Courses	Total Study Units	Theory Units	Percentage of Total Units	Practical Units	Percentage of Total Units	Thesis Units	Percentage of Total Units
Compulsory Courses	14	31	17	54.8%	8	25.8%	6	19.3%