Master Botany Study Plan

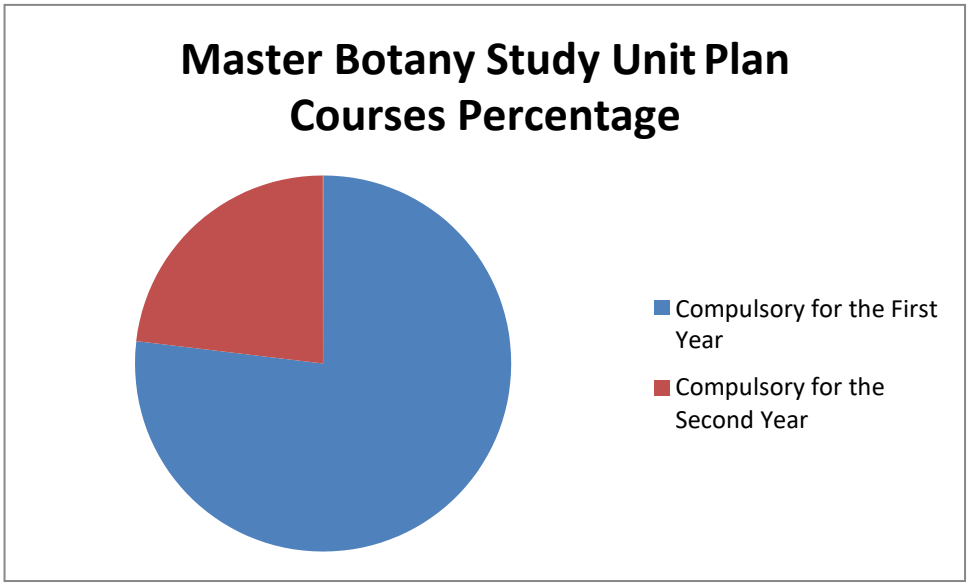
Botany and Microbiology Department

2024 – 1445H

Master Botany Study Unit Plan Courses Percentage

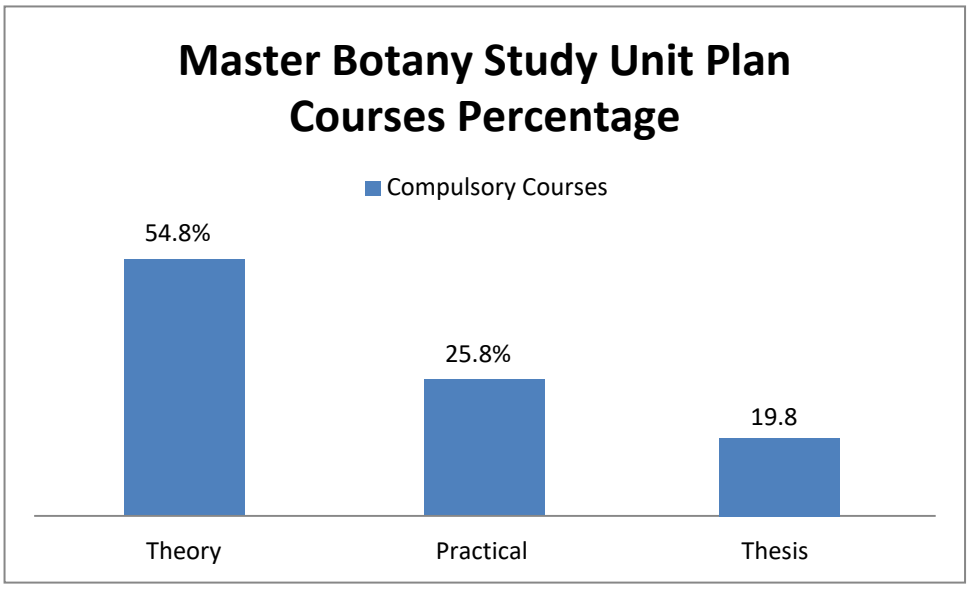
Required Study Courses	Number of Courses	Total Study Unit	Percentage from 137 Unit
Compulsory for the First Year	10	20	64.5%
Compulsory for the Second Year	4	11	35.5%
Total		31	100 %

Master Botany Study Unit Plan Courses Percentage



Master Botany Study Unit Plan Courses Percentage

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



Master Botany Study Plan

First Semester				
Course Code	**Course Title**	**Pre-Req.**	**Co-Req.**	**Credits (Lect.-Pract.)**
BOT 512	PLANT SURFACES	-	-	2(1+2)
BOT 521	ADVANCED ANGIOSPERM TAXONOMY	-	-	2(1+2)
BOT 541	ADVANCED ECOLOGY	-	-	2(1+2)
BOT 551	ADVANCED GENETICS	-	-	2(1+2)
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+2)
BOT 523	FIELD SYSTEMATICS	-	-	2(1+2)
BOT 543	DESERTIFICATION & NATURE CONSERVATION	-	-	2(2+0)
BOT 572	PLANT MINERAL NUTRITION	-	-	3(2+2)
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+2)
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)

List of the Master Compulsory Courses

Course Code	Course Title	Pre-Req.	Co-Req.	Credits (Lect.-Exre.-Pract.)
BOT 512	PLANT SURFACES	-	-	2(1+0+2)
BOT 514	APPLIED PLANT ANATOMY	-	-	2(1+0+2)
BOT 521	ADVANCED ANGIOSPERM TAXONOMY	-	-	2(1+0+2)
BOT 523	FIELD SYSTEMATICS	-	-	2(1+0+2)
BOT 541	ADVANCED ECOLOGY	-	-	2(1+0+2)
BOT 543	DESERTIFICATION & NATURE CONSERVATION	-	-	2(2+0+0)
BOT 551	ADVANCED GENETICS	-	-	2(1+0+2)
BOT 553	ADVANCED CYTOGENETICS	-	-	3(2+0+2)
BOT 571	BIOSYNTHESIS	-	-	2(2+0+0)
BOT 572	PLANT MINERAL NUTRITION	-	-	3(2+0+2)
BOT 591	SPECIAL TOPICS	-	-	1(1+0+0)
BOT 592	SEMINAR	-	-	1(1+0+0)
BOT 599	PROPOSAL	-	-	1(1+0+0)
BOT 600	RESEARCH	-	-	6

Master Botany Short Course Description

Course Code	Course Title	Credits (Lect.-Exre.-Pract.)
BOT 512	PLANT SURFACES	2(1+0+2)
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+0+2)
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+0+2)
Use of anatomy in taxonomy – Biochemistry – plant geography – electron microscopy In plant taxonomy		
BOT 523	FIELD SYSTEMATICS	2(1+0+2)
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+0+2)
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+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+0+2)
Chemical and genetics structure of microbial genetics element – Genes – Plasmids – Reproduction and gene expression – Transformation – Genetic engineering		
BOT 553	ADVANCED CYTOGENETICS	3(2+0+2)
Chromosomal apparitions in economic plants (numerical and structural) – mode of Chromosomal apparitions – importance of Chromosomal		
BOT 571	BIOSYNTHESIS	2(2+0+0)
Photosynthesis – Phosphorylation – Lipids and protein synthesis – Energy estimation		

BOT 572	PLANT MINERAL NUTRITION	3(2+0+2)
Physiological role of elements – its deficiency symptoms, mode of absorption – regulation of transportation in tissue		
BOT 591	SPECIAL TOPICS	1(1+0+0)
Selective topics in botany		
BOT 592	SEMINAR	1(1+0+0)
Presentation and discussion of selected topics in botany according to the guidance of the course instructor		
BOT 599	PROPOSAL	1(1+0+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		