



Savitribai Phule Pune University
(Formerly University of Pune)

Two Year Degree Program in Botany
(Faculty of Science & Technology)

Revised Syllabi for

M.Sc. (Botany) Part-II

(For Colleges Affiliated to Savitribai Phule Pune University)

Choice Based Credit System Syllabus

To be implemented from Academic Year 2020-2021



Title of the Course: M.Sc. Botany

Structure for M. Sc. Botany Second Year:

Year	Semester	Course Type	Course code	Course Name	Credits
2	3	Core Compulsory Theory paper	BOUT 231	Botany Theory Paper 1- Computational Botany	4
			BOUT 232	Botany Theory Paper 2- Developmental Botany	4
			BOUT 233	Botany Theory Paper 3- Plant Physiology-	4
		Choice Based optional paper	BODT 234 (Any one)	Botany Theory Paper 4 a. Mycology b. Angiosperm Taxonomy- c. Plant Ecology d. Plant Biotechnology e. Genetics and Plant breeding f. Seed science	2
			BODP 234	Botany Practical Paper based on BODT 234	2
		Core Compulsory practical paper	BOUP 235	Botany Practical Paper based on BOUT 231, BOUT 232, BOUT 233	4
2	4	Core Compulsory Theory paper	BOUT 241	Botany Theory Paper 1- Botanical Techniques	4
			BOUT 242	Botany Theory Paper 2- Advanced Ecology	4
		Choice Based optional paper	BODT 243 (Any one)	Botany Theory Paper 3- a) Applied Mycology b) Advanced Medicinal Botany c) Advanced Plant Physiology d) Industrial Biotechnology- e) Seed Technology	2
			BODP 243	Botany Practical paper based on BODT 243	2
			BODT 244 (Any one)	Botany Theory Paper 4- a) Plant Tissue culture Technology b) Herbal Technology c) Research Methodology	2



			BODP 244	Botany Practical Paper based on BODT 244 Or PG Dissertation,	2
		Core Compulsory practical paper	BOUP 245	Botany Practical paper based on BOUT 241 and BOUT 242	4



M. Sc II Botany Semester IV

BOUP 244 Botany Practical paper / PG Dissertation based on BOUP 244

BOUP 244 based on BODT 244 a) Plant Tissue Technology (2Cr)

Sr. No	Title of practical (Any 12 Practical)	No.
1	Study of different Laboratory instruments used in Plant Tissue culture Laboratory	1
2	Study of different sterilization techniques used in Plant tissue culture	1
3	Preparation and sterilization of MS- medium	1
4	Study of different growth regulators and their role in PTC	1
5	Study of dedifferentiation of a suitable plant tissue to induce callus	2
6	Study of <i>invitro</i> production of haploid using suitable plant material	2
7	Study of the method of isolation of protoplast from suitable plant material for somatic hybridization	1
8	Study of production of secondary metabolites from suitable plant material using callus culture and qualitative estimation of the secondary metabolites	2
9	Studies on use of any one Biotic/Abiotic elicitor for enhancement of secondary metabolite production through Callus culture	1
10	Visit to any Commercial tissue culture laboratory and write a case study report.	1
11	Visit to <i>Ex situ Germplasm Bank</i> and write a visit report.	1
12	Studies on methods of DNA transfer in plant cell (Demonstration)	1

M. Sc II Botany Semester IV

BOUP 244 Botany Practical paper / PG Dissertation based on BOUP 244

BOUP 244 based on BODT 244 b) Herbal Technology (2Cr)

Sr. No	Title of practical	No.
1	To perform preliminary phytochemical screening of crude drugs.	2
2	Determination of Ash value and moisture content of crude drugs	1
3	Determination of the alcohol content of Asava and Arista.	2
4	Preparation of any one herbal cosmetics.	2
5	Preparation and standardization of any oneherbal formulation.	2
6	Monograph analysis of herbal drugs from recent Pharmacopoeias	1
7	Analysis of fixed oils.	1



8	Study of different processes of packaging of dry, liquid and aromatic herbal products.	1
9	Market study of herbal products- cosmetics, medicines, nutraceuticals.	1
10	Visits to industry related to herbal products and quality testing centres related to herbal products.	2

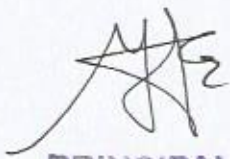
M. Sc II Botany Semester IV

BOUP 244 Botany Practical paper (2Cr)

OR PG Dissertation (2Cr)

BOUP 244 based on BODT 244 c) Research Methodology (2Cr)

Sr. No	Title of practical (Any 12 Practical)	No.
1	Experiments based on chemical calculations.	1
2	Plant microtechnique experiments.	1
3	The art of imaging of samples through microphotography and field photography.	1
4	Poster presentation on defined topics.	1
5	Technical writing on topics assigned.	1
6	Identification of different type of research in day by day life	1
7	Testing of a formulated hypothesis with type I and type II errors	1
8	Curation of relevant scientific literature from Google Scholar, NCBI PubMed etc	1
9	Poster presentation on defined topics	1
10	Demonstration for checking of plagiarism using recommended software	1
11	Technical writing on topics assigned.	1
12	More Practical may be added depending on the local habitats and available facilities	1


PRINCIPAL
 K.K.H.A. S.M.C.L. Comm
 & S.P. Science
 Chandwad Dist. Nashik





A

PROJECT REPORT

“Phytochemical analysis of some fabiaceae members”

A PROJECT SUBMITTED

TO

SAVITRIBAI PHULE UNIVERSITY OF PUNE

FOR THE FULFILMENT OF

MASTER DEGREE

IN

BOTANY

BY

Ms. Borase Sayali Sahebrao

UNDER THE GUIDANCE OF

Dr. Manoj T. Patil

POST GRADUATE DEPARTMENT OF BOTANY

***SNJB's K.K.H.A ART'S, S.M.G.L COMMERCE & S.P.H.J
SCIENCE COLLEGE, NEMINAGAR, CHANDWAD.423101***

August 2021

CERTIFICATE

This to certified that the work incorporated in the project entitled "*Phytochemical analysis of some fabiaceae members*" Being submitted by *Ms. Borase Sayali Sahebrao* for the award of M.Sc. degree in botany from Savitribai Phule University Pune during the year 2020-2021 was carried out under the guidance and supervision of Dr. Manoj T. Patil.

The matter embodied in this project as not been submitted in part or full to any other University for award of any degree. The material obtained from other sources has been duly acknowledged in project.

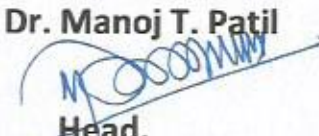


Dr. Manoj T. Patil

(Project guide)



Examiner



Dr. Manoj T. Patil

Head,

Department of Botany

HEAD

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Chandwad-423 101 Dist-Nashik



A

PROJECT REPORT

***“Selected plants contains alkaloid and its
uses”***

A PROJECT SUBMITTED

TO

SAVITRIBAI PHULE UNIVERSITY OF PUNE

FOR THE FULFILMENT OF

MASTER DEGREE

IN

BOTANY

BY

Ms. Pawar Yogita Motiram

UNDER THE GUIDANCE OF

Prof. S. D. Wagh

POST GRADUATE DEPARTMENT OF BOTANY

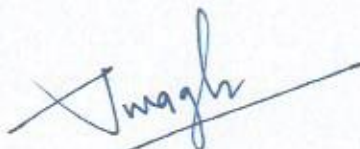
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August 2021

CERTIFICATE

This to certified that the work incorporated in the project entitled "*Selected plants contains alkaloid and its uses*" Being submitted by *Ms. Pawar Yogita Motiram* for the award of M.Sc. degree in botany from Savitribai Phule University Pune during the year 2020-2021 was carried out under the guidance and supervision of Prof. S. D. Wagh.

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Prof. S. D. Wagh

(Project guide)



Examiner



Dr. Manoj T. Patil

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A

PROJECT REPORT

***“Effect of Different concentration of IAA on
plant growth”***

A PROJECT SUBMITTED

TO

SAVITRIBAI PHULE UNIVERSITY OF PUNE

FOR THE FULFILMENT OF

MASTER DEGREE

IN

BOTANY

BY

Ms. Ghogare Pratiksha Somanath

UNDER THE GUIDANCE OF

Dr. S. C. Dalave

POST GRADUATE DEPARTMENT OF BOTANY

***SNJB's K.K.H.A ART'S, S.M.G.L COMMERCE & S.P.H.J
SCIENCE COLLEGE, NEMINAGAR, CHANDWAD.423101***

August 2021

CERTIFICATE

This to certified that the work incorporated in the project entitled *“Effect of Different concentration of IAA on plant growth”* Being submitted by *Ms. Ghogare Pratiksha Somanath* for the award of M.Sc. degree in botany from Savitribai Phule University Pune during the year 2020-2021 was carried out under the guidance and supervision of Dr. S. C. Dalave

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Dr. Sudin. C. Dalave

(Project guide)



Examiner



Dr. Manoj T. Patil

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A

PROJECT REPORT

***“Survey on oil yielding plants and its uses for
mankind”***

A PROJECT SUBMITTED

TO

SAVITRIBAI PHULE UNIVERSITY OF PUNE

FOR THE FULFILMENT OF

MASTER DEGREE

IN

BOTANY

BY

Ms. SHINDE MAYURI DNYANESHWAR

UNDER THE GUIDANCE OF

Prof. M. S. PATIL

POST GRADUATE DEPARTMENT OF BOTANY

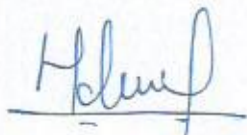
***SNJB's K.K.H.A ART'S, S.M.G.L COMMERCE & S.P.H.J
SCIENCE COLLEGE, NEMINAGAR, CHANDWAD.423101***

August 2021

CERTIFICATE

This to certified that the work incorporated in the project entitled “Survey on oil yielding plants and its uses for mankind” Being submitted by **SHINDE MAYURI DNYANESHWAR** for the award of M.Sc. degree in botany from Savitribai Phule University Pune during the year 2020-2021 was carried out under the guidance and supervision of Prof. M.S PATIL

The matter embodied in this project as not been submitted in part or full to any other University for award of any degree. The material obtained from other sources has been duly acknowledged in project.



Prof. M.S.PATIL

(Project guide)



Examiner



Dr. Manoj T. Patil

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