



Karmaveer Bhaurao Patil University, Satara
Faculty of Science & Technology
M. Sc. (Botany) with specialization in Biodiversity and Plant
Protection
Programme and Credit Structure as per NEP2020

Title: The degree shall be titled as ‘**Master of Science (Botany)** under the Faculty of Science and Technology.

M.Sc. Sem. I & II: To be implemented from Academic Year 2024-25

M.Sc. Sem. III & IV: To be implemented from Academic Year 2025-26

Programme Outcomes for M. Sc. (Botany)

PO. NO	Programme Outcomes After completing M.Sc. programme the students will be able to
PO-1	expertise in the subject
PO-2	qualified to continue Ph.D. in his subject
PO-3	eligible to research scholar abroad
PO-4	qualified to appear for the examinations for jobs in government organizations, private industries, research laboratories, etc.
PO-5	eligible to appear for jobs with minimum eligibility as science post graduate.

PSO. NO	Programme Specific Outcomes After completing M.Sc. (Botany) programme the students will be able to
PSO-1	Explain, describe and discuss the concepts of plant sciences.
PSO-2	Perform and design experiments related to plant sciences
PSO-3	Decide and undertake a project based on plant sciences
PSO-4	Attain skills needed in the plant-based industries through an internship
PSO-5	Improve the research-based skills by entering into a research internship as well as in house project.
PSO-6	Present their research findings in research conglomeration like conferences and in research journals in the form of publications.

PSO-7	Critically analyze their role as an environment sustainability goals oriented citizen.
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Semester, Credit Framework NSQF Level and Exit Points

Sr. No	Semester	Year	Year	Credits	Level	Exit Points &Award
1	Sem. I & II	2024-25	1 Year	44	6	PG Diploma (Botany)
2	Sem. III & IV	2025-26	2 Year	44	6.5	PG Degree (Botany)
			Total	88		Master of Science (Botany)

Credit Distribution

Sr. No	Components	1 Year Master Degree Programme			2YearMaster Degree Programme		
		Courses	Credits	%	Courses	Credits	%
	Mandatory Courses	06	24	54.55	12	48	54.55
	Elective Courses	02	04	9.09	04	08	9.09
	Mandatory Practical	02	04	9.09	04	08	9.09
	Elective Practical	02	04	9.09	03	06	6.82
	Research Methodology	01	04	9.09	01	04	4.55
	Research Project	01	04	9.09	02	10	11.36
	OJT	--	--	--	01	04	4.55
	Total (Mandatory)-(A)	09	32	72.73	19	70	79.55
	Elective	04	08	18.18	07	14	15.91
	RM	01	04	9.09	01	04	4.55
	Total - (B)	05	12	27.27	01	04	4.55
	Grand Total (A+B)	14	44	100	27	88	100

Duration:

- The program shall be a full-time program.
- The duration of program shall be One Year / Two years.
- Students will have to exit option with: - First Year (44 Credits) - PG Diploma

Second Year (88 Credits) - Master Degree

Number of Students: A batch shall consist of not more than 20 students. An additional 20% of

seats will be allotted as per Karmaveer Bhaurao Patil University, Satara Norms.

Eligibility of the Students:

- Bachelor of Science with specialization in Botany/Plant Protection/Seed Technology.
- Bachelor of Science in Agriculture
- Any other eligibility prescribed by UGC, Government of Maharashtra, Karmaveer Bhaurao Patil University, Satara.

Medium of Instruction: The medium of instruction shall be in English.

Eligibility of the Core Faculty:

- **Assistant Professor:** Master of Science with specialization in Botany and NET/ SET/ Ph.D.
- Associate Professor: Master of Science in Physics with NET/ SET/Ph.D.
- Professor: Master of Science in Physics with NET/ SET/Ph.D.

Eligibility for Professor of Practice or Professional Trainer:

Any other eligibility as per the Guidelines and Regulations Passed by the Board of Concerned Studies, Academic Council of the College / University and Rules and Regulations of Karmaveer Bhaurao Patil University, Satara, Government of Maharashtra, and UGC norms.

Eligibility for Adjunct Professor of Practice or Professional Trainer:

As per eligibility prescribed by UGC.

Scheme of Examination & Standard of Passing:(SEE and CCE)

End Semester Exam (ESE): 60 Marks (Min 24 Marks for Passing)

Continuous Comprehensive Evaluation (CCE): 40 Marks (Min 16 Marks for Passing)

Total Marks: 100 Marks for **DSC mandatory courses**.

End Semester Exam (ESE): 30 Marks (Min 12 Marks for Passing)

Continuous Comprehensive Evaluation (CCE): 20 Marks (Min 08 Marks for Passing)

Total Marks: 50 Marks for **DSE elective courses**.

Minimum 40% Marks Required for Passing and there is a separate head of passing as per the decision of the concerned Board of Studies or Competent Authority.

Evaluation of OJT and RP:

- i. OJT: Total 100 marks for 4 credits

(Rubrics: Certificate = max 60 marks, Report = 20 marks, Viva = 20 marks)

ii. RP: Total 100 marks for 4 credits

(Rubrics: Decertation = 60 marks, Presentation & Viva = 40 marks)

M.Sc. (Botany) Part -I				
Semester –I				
Sr.	Components	Course Code	Course Title	Credits
1	Mandatory	MBT 411	Tools and Techniques in Botany	4
2	Mandatory	MBT 412	Biology and Diversity of Cryptogams (Fungi, Algae and Bryophytes)	4
3	Mandatory	MBT 413	Plant Ecology	4
4	Mandatory Lab	MBP 416	Lab – I (Based on MBT 411, MBT 412 MBT 413)	2
5	Electives	MBT 414	Biology and Diversity of Trachaeophytes (Pteridophytes and Gymnosperms) P-IV- E1 or Genetic Engineering P-IV- E2	2
6	Electives Lab	MBP 417	Lab – II (Based on MBT 414)	2
7	RM	MBT 415	Research Methodology	4
			Total	22
			Semester –II	
Sr.	Components	Course Code	Course Title	Credits
1	Mandatory	MBT 421	Cell and Molecular Biology	4
2	Mandatory	MBT 422	Taxonomy of Angiosperms	4
3	Mandatory	MBT 423	Plant Pathology	4
4	Mandatory Lab	MBP 426	Lab – II (Based on MBT 421, MBT 422, MBT 423)	2
5	Electives	MBT 424	Developmental and Reproductive Biology P-VIII- E1 or Bioinformatics P-VIII- E2	2
6	Electives Lab	MBP 427	Lab – II (Based on MBT 424)	2
7	RP	MBT 425	Research Project	4
			Total	22

EXIT OPTION: PG Diploma with **44 Credits** after Three Year UG Degree.

M.Sc. (Botany) Part -II				
Semester –III				
Sr.	Components	Course Code	Course Title	Credits
1	Mandatory	MBT 531	Cytogenetics and Plant Improvement P-IX	4
2	Mandatory	MBT 532	Biotechnology and Genetic Engineering P-X	4
3	Mandatory	MBT 533	Plant Diversity I (Introductory Biodiversity) P-XI / Plant Protection I (Crop Diseases and their Management P-XI	4
4	Mandatory Lab	MBP 536	Lab – V (based on MBT-531, 532 and 533.2)	2
5	Electives	MBT 534	Plant Diversity II (Conservation of Biodiversity) P-XII- E1 or Plant Diversity II (Global scenario of Biodiversity P-XII- E2 / Plant Protection II (Animate Pests of Crops and their Management) P-XII- E1 or Plant Protection II (Animate Pests of Crops, their Management & Industrial Entomology) P-XII- E2	2
7	RP	MBP 535	Research Project	6
			Total	22
Semester –IV				
Sr.	Components	Course Code	Course Title	Credits
1	Mandatory	MBT 541	Plant Physiology and Metabolism II P-XIII	4
2	Mandatory	MBT 542	Biodiversity conservation and Utilization P-XIV	4
3	Mandatory	MBT 543	Plant Diversity III (Conservation Biodiversity) P-XV / Plant Protection III (Recent Trends and Techniques) P-XV	4
4	Mandatory Lab	MBP 545	LAB- VI (based on MBT-541,542 and 544)	2
5	Electives	MBT 544	Plant Diversity IV (Assessment of Biodiversity) P-XVI- E1 or Plant Diversity IV (Latest techniques for Biodiversity Prediction) P-XVI- E2/ Plant Protection IV (Molecular Plant Pathology and Mycorrhizal Technology) P-XVI- E1 or Plant Protection IV (Molecular Plant Pathology and Pant Breeding) P-XVI- E2	2
6	Electives Lab	MBP 546	LAB- VII (based on MBT 544)	2
7	OJT		On Job Training	4
			Total	22

****** PG Degree with 88 credits after Three Year UG Degree.**

Chairman
BoS in Botany

Secretary
Academic Council

Chairman
Academic Council