



Karmaveer Bhaurao Patil University, Satara
Faculty of Science & Technology
M. Sc. (Drug Chemistry)

Programme and Credit Structure as per NEP2020

Title: The degree shall be titled as ‘**Master of Science (Drug Chemistry)**’ 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. (Drug Chemistry)

PO. NO	Programme Outcomes
	After completing M.Sc. (Drug Chemistry) programme the students will be able to
PO-1	Understand the fundamentals and advancements of subject
PO-2	Study, plan, and conduct experiments in the labs to validate the ideas principles, and theories acquired in the classrooms
PO-3	Enhance scientific knowledge of the subject.
PO-4	Define their area of focus in academia, research, and development.
PO-5	Pursue careers in various fields such as science, engineering, education, banking, business, public services, etc. or become an entrepreneur with precision, analytical thinking, innovative ideas, clarity thought, expression, and systematic approach.

PSO. NO	Programme Specific Outcomes
PSO-1	Analyze the classification of microbes.
PSO-2	Explain the relationship between structure & reactivity of organic compounds.
PSO-3	Formulate a hypothesis & design an experiment to test this hypothesis in a contest of coordination chemistry
PSO-4	Explain the Gibbs-Duhem equation and its applications in thermal reactions.
PSO-5	Collect data about their research.

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 (Drug Chemistry)
2	Sem. III & IV	2025-26	2 Year	44	6.5	PG Degree (Drug Chemistry)
			Total	88		Master of Science(Drug Chemistry)

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 50 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 Drug Chemistry.
- Bachelor of Science with specialization in Microbiology & Biotechnology.
- 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 specializing in Drug Chemistry, Organic Chemistry 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.

M.Sc. (Drug Chemistry) Part -I			
Semester –I			
Sr.	Components	Course (Subject)	Credits
1	Mandatory	Introduction to Microbiology P-I	4
2	Mandatory	Fundamental Organic Chemistry P-II	4
3	Mandatory	Coordination Chemistry P-III	4
4	Mandatory Lab	Lab - I	2
5	Electives	Basics of Physical Chemistry P-IV- E1 or Analytical Techniques P-IV- E2	2
6	Electives Lab	Lab - I	2
7	RM	Research Methodology	4
		Total	22
Semester –II			
Sr.	Components	Course (Subject)	Credits
1	Mandatory	Immunology & Virology P-V	4
2	Mandatory	Reactive Intermediates & Rearrangements P-VI	4
3	Mandatory	Bio-Inorganic Chemistry P-VII	4
4	Mandatory Lab	Lab - II	2
5	Electives	Physicochemical Theories & Equations P-VIII- E1 or Advanced Analytical Techniques P-VIII- E2	2
6	Electives Lab	Lab - II	2
7	RP	Research Project	4
		Total	22

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

M.Sc. (Drug Chemistry) Part -II			
Semester –III			
Sr.	Components	Course (Subject)	Credits
1	Mandatory	Drug Design & Development P-IX	4
2	Mandatory	Heterocyclic chemistry of Biologically active compounds P-X	4
3	Mandatory	Organic reaction mechanism P-XI	4
4	Mandatory Lab	Lab - III	2
5	Electives	Disease & their targets P-XII- E1 or Pharmaceutical chemistry P-XII- E2	2
7	RP	Research Project	6
		Total	22
Semester –IV			
Sr.	Components	Course (Subject)	Credits
1	Mandatory	Photochemical & Pericyclic reactions P-XIII	4
2	Mandatory	Spectroscopy (IR, NMR & Mass)P-XIV	4
3	Mandatory	Synthetic strategies for complex drug molecules P-XV	4
4	Mandatory Lab	Lab - IV	2
5	Electives	Biostatistics & cheminformatics P-XVI- E1 or Pharmacokinetic study of drugs P-XVI- E2	2
6	Electives Lab	Lab - III	2
7	OJT	On Job Training	4
		Total	22

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

Chairman
BoS in Drug Chemistry

Secretary
Academic Council

Chairman
Academic Council