Karmaveer Bhaurao Patil University, Satara
Faculty of Science and Technology
M. Sc. (Computer Science)

Programme and Credit Structure as per NEP2020

Title: The degree shall be titled as **'Master of Science (Computer Science)** 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. (Computer Science)

PO. NO	Programme Outcomes After completing M.Sc. (Computer Science) 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 service etc. or become an entrepreneur with precision, analytical thinking, innovative ideas, clarity through, expression, and systematic approach.

PSO. NO	Programme Specific Outcomes After completing M.Sc. (Computer Science) programme the students will be able to …….
PSO-1	Understand the basics and advances topics of Computer Science.
PSO-2	Apply their programming knowledge to plan and perform experiments in the computer labs to prove the ideas, values and theories learned in the classrooms.
PSO-3	Prepare the students to take up career in highly competitive IT industry with

		research and development skills acquired through major project.
PSO-4		Design and develop computer programs in the area related to algorithms, networking, web design, cloud computing and artificial intelligence.
PSO-5		Provide freedom to choose subject of interest from the list of specialized courses and to allow the students to fallow the career path they have dreamt of.

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 (Computer Science)**
2	Sem.III & IV	2025-26	2Year	44	6.5	**PG Degree (Computer Science)**
			Total	**88**		**Master of Science (Comp Sci)**

Credit Distribution

Sr. No	Components	1 YearMaster 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 B.Sc. Computer Science (Entire/ Optional)/ B.Sc. IT/ BCS/ B.Voc (Software Development) / BCA (Science), B.E / B.Tech (Computer Science)
- 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 Computer Science and NET/ SET/ Ph.D.
- Associate Professor: Master of Science in Computer Science with NET/ SET/Ph.D.
- Professor: Master of Science in Computer Science 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 08Marks 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)

Sr.	Components	Course Code	Course (Subject)	Credits
M.Sc. (Computer Science) Part -I **Semester –I**				
1	Mandatory	MCST 411	Design and Analysis of Algorithm	4
2	Mandatory	MCST 412	Principle of programming Languages	4
3	Mandatory	MCST 413	Advanced Database Management Systems	4
4	Electives	MCST 414	Advanced Networking-E-I or Blockchain Technology- E-II	2
5	RM	MCST 415	Research Methodology	4
6	Mandatory Lab	MCSP 416	Computer Science Practical Course I	2
7	Electives Lab	MCSP 417	Computer Science Practical Course II	2
-			**Total**	**22**
Semester –II				
Sr.	Components	Course Code	Course (Subject)	Credits
1	Mandatory	MCST 421	Python programming	4
2	Mandatory	MCST 422	Cloud Computing	4
3	Mandatory	MCST 423	Cyber Security and Laws	4
4	Electives	MCST 424	Digital Image Processing E-I or Mathematical And Statistical Foundations E-II	2
5	RP	MCSP 425	Research Project	4
6	Mandatory Lab	MCSP 426	Computer Science Practical Course III	2
7	Electives Lab	MCSP 427	Computer Science Practical Course IV	2
-			**Total**	**22**

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

			M.Sc. (Computer Science) Part -II **Semester –III**	
Sr.	**Components**	**Course Code**	**Course (Subject)**	**Credits**
1	Mandatory	MCST 531	Emerging Technologies in Computer Science	4
2	Mandatory	MCST 532	Data Mining	4
3	Mandatory	MCST 533	Data Visualization using Tools	4
4	Electives	MCST 534	Artificial Intelligence- E-I or Control Systems- E-II	2
5	Mandatory Lab	MCSP 535	Computer Science Practical Course V	2
6	RP	MCSP 536	Research Project	6
			Total	**22**
			Semester –IV	
Sr.	**Components**	**Course Code**	**Course (Subject)**	**Credits**
1	Mandatory	MCST 541	Big Data Analytics	4
2	Mandatory	MCST 542	Machine Learning	4
3	Mandatory	MCST 543	Deep Learning	4
5	Electives	MCST 544	Fundamentals of IOT- E-I or Microcontrollers and IOT- E-II	2
4	Mandatory Lab	MCSP 545	Computer Science Practical Course VI	2
6	Elective Lab	MCSP 546	Computer Science Practical Course VII	2
7	OJT	MCSP 547	On Job Training	4
			Total	**22**

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

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