

**SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY,**  
**SUB CENTRE LATUR-413531**  
**School of Technology**

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**Course Structure**

**M. Sc. Computer Science**

<b>Semester</b>	<b>Course Code</b>	<b>Theory / Lab Papers</b>	<b>Credits</b>
<b>First Year</b>			
<b>First Semester</b>	CS1-1	1) Introduction to Information Technology	4
	CS1-2	2) Network Essentials	4
	CS1-3	3) Software Engineering	4
	CS1-4	4) Computational Mathematics	4
	CS1-5	5) Lab- 1	4
	CS1-6	6) Lab-2	4
			<b>24</b>
<b>Second Semester</b>	CS2-1	7) Advances in DBMS	4
	CS2-2	8) Data Structure , Analysis of Algorithms	4
	CS2-3	9) Internet and Web Development Technologies – I ( Development using Internet Platforms , Java )	4
	CS2-4	10) Artificial Intelligence	4
	CS2-5	11) Lab – 3	4
	CS2-6	12) Lab -4	4
			<b>24</b>
<b>Second Year</b>			
	CS3-1	13) Distributed Computing and Web commerce	4
	CS3-2	14) Internet and Web Development Technologies – II ( Development using	4

<b>Third Semester</b>		Internet Platforms , Java bins , Servlets)	
	CS3-3	15) GIS – I	4
	CS3-4	16) RS-I	4
	CS3-5	17) Lab - 5	4
	CS3-6	18) Lab -6	4
			<b>24</b>
<b>Fourth Semester</b>	CS4-1	19) ICT for Rural – Socio Economic Developments	4
	CS4-2	20) RS- II	4
	CS4-3	21) GIS- II	4
	CS4-4	22 ) Elective : a) Data warehousing and Data Mining b) Wireless and Mobile Computing c) Soft Computing	4
			4
			4
CS4-5	23) Lab -7	4	
CS4-6	24) Lab -8 (Seminar and Dissertation )	8	
			<b>28</b>

**Total Credits Semester 1 + Semester 2 + Semester 3 + Semester 4 = 100**

### **B.Sc. (ICT)**

<b>Semester</b>	<b>Course Code</b>	<b>Title of the Paper</b>	<b>No. of Credit</b>
<b>First Year</b>			
<b>First Semester</b>	ICT1-1 T	Communication Skills- I	4
	ICT1-2 T	Discrete Mathematics	4
	ICT1-3 T	Fundamentals of Computer	4
	ICT1-4 T	Programming in C	4

	ICT1-5 P	Desc. Math Lab	4
	ICT1-6 P	C Programming Lab	4
<b>Total</b>			<b>24</b>
<b>Second Semester</b>	ICT2-1 T	Communication Skills- II	4
	ICT2-2 T	Statistical Methods	4
	ICT2-3 T	Digital Electronics	4
	ICT2-4 T	8085 Microprocessor	4
	ICT2-5 P	Statistical Method Lab	4
	ICT2-6 P	8085 Micro. Lab	4
<b>Total</b>			<b>24</b>
<b>Second Year</b>			
<b>Third Semester</b>	ICT3-1 T	Web Technology	4
	ICT3-2 T	Advance C Programming	4
	ICT3 -3 T	Operating System	4
	ICT3 -4 T	Object Oriented Programming using C++	4
	ICT3 -5 P	Advance C programming Lab	4
	ICT3 -6 P	Object Oriented Programming Lab (C++)	4
<b>Total</b>			<b>24</b>
<b>Fourth Semester</b>	ICT4-1 T	Computer System Security	4
	ICT4-2 T	E-Commerce	4
	ICT4 -3 T	Advanced Database Management System	4
	ICT4 -4 T	Data Structure using C ++	4
	ICT4 -5 P	Advanced DBMS Lab	4
	ICT4 -6 P	Data Structure using C ++ Lab	4
<b>Total</b>			<b>24</b>

Semester	Course Code	Title of the Paper	No. of Credit
<b>First Year</b>			
<b>First Semester</b>	BIM-101 (T)	Genetics and Molecular Biology	4
	BIM-102 (T)	Bioinformatics	4
	BIM-103 (T)	Biostatistics	4
	BIM-104 (T)	DBMS Oracle	4
	BIM-105 (T)	Linux	4
	BIM-102 (P)	Bioinformatics	2
	BIM-103 (P)	Biostatistics	2
	BIM-104 (P)	DBMS Oracle	2
	BIM-105 (P)	Linux	2
<b>Total Credits</b>			<b>28</b>
<b>Second Semester</b>			
<b>Second Semester</b>	BIM-201 (T)	Advanced Molecular Biology	4
	BIM-202 (T)	Computational Biology	4
	BIM-203 (T)	Immunoinformatics	4
	BIM-204 (T)	Chemoinformatics	4
	BIM-203 (P)	Immunoinformatics	2
	BIM-204 (P)	Chemoinformatics	2
	BIM-205 (P)	Machine Intelligence in Bioinformatics	2
	BIM-206 (P)	Numerical Methods and Optimization Techniques	2
	<b>Total Credits</b>		
<b>Second Year</b>			
	BIM-301 (T)	Computer Aided Drug Design	4

<b>Third Semester</b>	BIM-302 (T)	Object Oriented Programming (OOPS) JAVA	4
	BIM-303 (T)	Microbial Genomics	4
	BIM-304 (T)	Principle of Drug Action	4
	BIM-305 (T)	Molecular Modeling	4
	BIM-301 (P)	Computer Aided Drug design	2
	BIM-302 (P)	Object oriented Programming (OOPS) JAVA	2
	BIM-303 (P)	Microbial Genomics	2
	BIM-304 (P)	Perl for Bioinformatics	2
<b>Total Credits</b>			<b>28</b>
<b>Fourth Semester</b>	BIM-401 (T)	Plant Genomics	4
	BIM-402 (T)	Metabolomics and Metabolic Engineering	4
	BIM-403 (T)	Oncogenomics and Cell Signaling	4
	BIM-404 (T)	IPR and Industrial Psychology	4
	BIM-405 (PJ)	Project	8
	BIM-401 (P)	Plant Genomics	2
	BIM-402 (P)	Metabolomics and Metabolic Engineering	2
<b>Total Credits</b>			<b>28</b>