



ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH

Techno Campus, Mahalaxmi Vihar, Ghatikia, Bhubaneswar-751029.

Syllabus Structure (Effective from 2023-24)

School/ Department: School of Basic Sciences & Humanities

Course: M. Sc., Programme: Mathematics & Computing, Duration: 2 years (Four Semesters)

Abbreviation used:

AC	Audit course	LC	Lab Course	PA	Practical Assessment
PC	Professional Core	PR	Project/ Practical/ Internship	L	Lecture
PE	Professional Elective	SE	Seminar/ Expert Lecture/ Etc.	T	Tutorial
OE	Open Elective	IA*	Internal Assessment	P	Practical
MC	Mandatory/ Common Course	EA	End-Semester Assessment		

*Internal Assessment Mark (30 marks) consists of (i) Mid Semester (20 marks), (ii) Quiz/ Assignment (10 marks)

Subject Code Format:

A1	A2	B3	C4	C5	C6
School/ Dept. (Offering)		Level	0: AC	Serial Number (01 to 99)	
BH: Basic Sciences and Humanities		1: UG/ Int. Msc. (1 st Year)	1: PC	01/ 03/.../ 19: Odd Sem. (Prog-1)	
CS: Computer Sciences		2: UG/ Int. Msc. (2 nd Year)	2: PE	21/ 23/.../ 39: Odd Sem. (Prog-2)	
EE: Electrical Sciences		3: UG/ Int. Msc. (3 rd Year)	3: OE	41/ 43/.../ 59: Odd Sem. (Prog-3)	
EI: Electronic Sciences		4: UG/ Int. Msc. (4 th Year)	4: MC	61/ 63/.../ 79: Odd Sem. (Prog-4)	
IP: Infrastructure and Planning		5: UG/ Int. Msc. (5 th Year)	5: LC	81/ 83/.../ 99: Odd Sem. (Prog-5)	
MS: Mechanical Sciences		6: PG (1 st Year)	6: PR	02/ 04/.../ 20: Even Sem. (Prog-1)	
BT: Biotechnology		7: PG (2 nd Year)	7: SE	22/ 24/.../ 40: Even Sem. (Prog-2)	
TE: Textile Engineering		8: Ph.D.	8:	42/ 44/.../ 60: Even Sem. (Prog-3)	
			9:	62/ 64/.../ 80: Even Sem. (Prog-4)	
				82/ 84/.../ 98: Even Sem. (Prog-5)	

1st SEMESTER

Subject Type	Subject Code	Subject Name	Teaching Hours			Credit	Maximum Marks			
			L	T	P		IA	EA	PA	Total
PC-1	BH6141	REAL ANALYSIS	3	1	0	3	30	70	-	100
PC-2	BH6143	DIFFERENTIAL EQUATION	3	0	0	3	30	70	-	100
PC-3	BH6145	DISCRETE MATHEMATICAL STRUCTURES	3	1	0	3	30	70	-	100
PC-4	BH6147	LINEAR ALGEBRA	3	0	0	3	30	70	-	100
OE-1		DATA STRUCTURE USING C++	3	0	0	2	30	70	-	100
OE-2		FUNDAMENTALS OF COMPUTER SYSTEMS	3	0	0	2	30	70	-	100
OE Lab-1		DATA STRUCTURE USING C++ LAB	0	0	3	2	-	-	100	100
OE Lab-2		SYSTEMS LAB	0	0	3	2	-	-	100	100
Total credit=			18	2	6	20	180	420	200	800



ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH

Techno Campus, Mahalaxmi Vihar, Ghatikia, Bhubaneswar-751029.

Syllabus Structure (Effective from 2023-24)

2nd Semester

Subject Type	Subject Code	Subject Name	Teaching Hours			Credit	Maximum Marks			
			L	T	P		IA	EA	PA	Total
PC-5	BH6142	TOPOLOGY	3	1	0	3	30	70	-	100
PC-6	BH6144	NUMERICAL ANALYSIS	3	0	0	3	30	70	-	100
PC-7	BH6146	COMPLEX ANALYSIS	3	1	0	4	30	70	-	100
PC-8	BH6148	ABSTRACT ALGEBRA	3	0	0	3	30	70	-	100
PC-9	BH6150	PROBABILITY AND STOCHASTIC PROCESSES	3	0	0	3	30	70	-	100
PC Lab-1	BH6542	NUMERICAL ANALYSIS LAB	0	0	3	2	-	-	100	100
OE-3		DESIGN AND ANALYSIS OF ALGORITHM	3	1	0	4	30	70	-	100
OE Lab-3		DESIGN AND ANALYSIS OF ALGORITHM LAB	0	0	3	2	-	-	100	100
Total credit=			18	3	6	24	180	420	200	800

3rd Semester

Subject Type	Subject Code	Subject Name	Teaching Hours			Credit	Maximum Marks			
			L	T	P		IA	EA	PA	Total
PC-10	BH7141	FUNCTIONAL ANALYSIS	3	1	0	4	30	70	-	100
PC-11	BH7143	THEORY OF COMPUTATION	3	0	0	3	30	70	-	100
PC-12	BH7145	MATRIX COMPUTATION	3	0	0	3	30	70	-	100
PE-1	BH7241/ BH7243/ BH7245	NUMERICAL OPTIMIZATION / NUMERICAL SOLUTION OF DIFFERENTIAL EQUATION / DIFFERENTIAL GEOMETRY	3	0	0	3	30	70	-	100
SEMINAR	BH7741	SEMINAR	0	0	2	1	-	-	100	100
PROJECT	BH7641	PROJECT	0	0	6	6	-	-	100	100
Total credit=			12	1	8	20	120	280	200	600



ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH

Techno Campus, Mahalaxmi Vihar, Ghatikia, Bhubaneswar-751029.

Syllabus Structure (Effective from 2023-24)

4th Semester

Subject Type	Subject Code	Subject Name	Teaching Hours			Credit	Maximum Marks			
			L	T	P		IA	EA	PA	Total
PC-13	BH7142	NUMBER THEORY AND CRYPTOGRAPHY	3	1	0	3	30	70	-	100
PC-14	BH7144	COMPUTATIONAL STATISTICS	3	0	0	3	30	70	-	100
PC-15	BH7146	OPTIMIZATION THEORY	3	0	0	3	30	70	-	100
PE-2	BH7242/ BH7244/ BH7246	PARALLEL AND DISTRIBUTED COMPUTING / FUZZY AND ROUGH SET THEORY / MACHINE LEARNING / SOFT COMPUTING	3	0	0	3	30	70	-	100
PC Lab-2	BH7542	MATRIX COMPUTATION & COMPUTATIONAL STATISTICS LAB USING R	0	0	3	2	-	-	100	100
PC Lab-3	BH7544	OPTIMIZATION LAB	0	0	3	2	-	-	100	100
Total credit=			12	1	6	16	120	280	200	600

Credits and Maximum Marks

Semester	Max. Credits	Max. Marks
1 st	20	800
2 nd	24	800
3 rd	20	600
4 th	16	600
Total	80	2800