

Bachelor of Computer Application (BCA) [3 Years Regular/4 Years (Honours/Honours with Research)]	
Faculty of IT and Computer Science	
Parul University	
Teaching and Examination Scheme for Batch 2023-24	
(NOTE: A credit is a unit by which the coursework is measure. It determines the number of hours of instruction required per week over the duration of a semester (Minimum 15 weeks/90days)	
1. 1 Theory Credit = 15 hours of academic activity engagement in a semester	
2. 1 Credit of (Practical/Internship/workshop-based activity/ Self-Learning-Online/Offline) = 30 Hours of engagement in a semester	
3. 1 Credit of Experiential learning (Field Visit/ Industry Visit)/ Assignments = 40-45 hours of engagement in a semester.	
4. Research Project/Dissertation: Entire Seventh & Eighth Semesters (12 Credits)	
T = Theory , P = Practical , CE = Continuous Evaluation	
Bachelor of Computer Application with Minor in	
1. Animation	
2. Photography and Photo Editing	
3. Videography & Video Editing	
4. Digital Marketing	
5. Artificial Intelligence & Machine Learning	
6.Cyber Security & Forensic	

Semester 1

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Semester 2

				Teaching Scheme (Hours / Week)			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
NCrF Credit Level	Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	
		Major (Discipline Specific Course)												
4.5	05010102DS01	Database Management Systems (Theory)	3	3	-	0	20	-	20	60	-	40	-	100
	05010102DS02	Database Management Systems (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010102DS03	System Analysis and Design (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010102DS04	System Analysis and Design (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Minor -2 / Interdisciplinary Course (Select any one)												
	05010102AM01	AI and ML: Artificial Intelligence and Machine Learning-II (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010102AM02	AI and ML: Artificial Intelligence and Machine Learning-II (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010102CF01	Cyber Security and Forensic: Advanced Cyber Security and Forensic	4	4	-	-	20	-	20	60	-	40	-	100
	18010202VV01	Videography and Video editing: Lighting and Camera Movement	4	-	6	1	-	20	20	-	60	-	40	100
	18010502AN01	Animation: Story Telling & Story Boarding	4	-	6	1	-	20	20	-	60	-	40	100
	18010202PP01	Photography and Photo editing: Character of Lens	4	-	6	1	-	20	20	-	60	-	40	100
	06010102DM01	Digital Marketing: Fundamentals of Digital Marketing	4	4	-	-	20	-	20	60	-	40	-	100

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Semester 3

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Semester 4

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Semester 5

				Teaching Scheme (Hours / Week)			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
NCrF Credit Level	Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	
		Major (Discipline Specific Course)												
5.5	05010105DS01	Front End Development with .NET (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105DS02	Front End Development with .NET (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010105DS03	Mini Project-II (from Minor/Major stream)	4	-	8	-	-	20	-	-	30	-	20	50
		Specialization - II (Theory + Practical) (Select any one)												
	05010105DS04	AI-II (T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105DS05	AI-II (P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010105DS06	Big data Analytics-II (T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105DS07	Big data Analytics-II (P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010105DS08	Blockchain Technology-II (T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105DS09	Blockchain Technology-II (P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010105DS10	Cloud Computing-II (T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105DS11	Cloud Computing-II (P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010105DS12	Cyber Security and Forensic-II (T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105DS13	Cyber Security and Forensic-II (P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010105DS14	Full stack web development-II (T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105DS15	Full stack web development-II (P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010105DS16	Gaming Technology-II (T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105DS17	Gaming Technology-II (P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010105DS18	Web Technologies-II (T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105DS19	Web Technologies-II (P)	1	-	2	-	-	20	-	-	30	-	20	50

		Minor -4 / Interdisciplinary Course (Select any one)											
05010105AM01	AI and ML: Computer Vision Using OPENCV (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
05010105AM02	AI and ML: Computer Vision Using OPENCV (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
05010105CF01	Cyber Security and Forensic: Cyber Threat Intelligence and Analysis (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
05010105CF02	Cyber Security and Forensic: Cyber Threat Intelligence and Analysis (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
18010505AN01	Animation: 3D Visualization	4	-	6	1	-	20	20	-	60	-	40	100
18010205PP01	Photography and Photo editing: Experience the Metadata (Photo Editing)	4	-	6	1	-	20	20	-	60	-	40	100
18010205VV01	Videography and Video editing: Non-linear editing and Sound Design.	4	-	6	1	-	20	20	-	60	-	40	100
06010105DM01	Digital Marketing: Social media promotion and marketing	4	3	2	-	20	20	20	60	30	40	20	150
	Minor -5/ Interdisciplinary Course (Select any one)												
05010105AM03	AI and ML: Deep Learning and Neural Network (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
05010105AM04	AI and ML: Deep Learning and Neural Network (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
05010105CF03	Cyber Security and Forensic: Cyber Security in Mobile, Cloud, and IoT (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
05010105CF04	Cyber Security and Forensic: Cyber Security: Mobile, Cloud, and IoT (Practical)	1	-	2	-	-	20	-	-	30	-	20	50

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Semester 6

				Teaching Scheme (Hours / Week)			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
NCrF Credit Level	Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	
		Major (Discipline Specific Course)												
5.5	05010106DS01	Mobile Application Development (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010106DS02	Mobile Application Development (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010106DS03	Software Engineering (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010106DS04	Software Engineering (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010106DS05	Data Processing with Python (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010106DS06	Data Processing with Python (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Minor -6/ Interdisciplinary Course (Select any one)												
	05010106AM01	AI and ML: Introduction to Data Science and Analytics (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010106AM02	AI and ML: Introduction to Data Science and Analytics (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010106CF01	Cyber Security and Forensic: Fundamentals of Cyber Forensics (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010106CF02	Cyber Security and Forensic: Fundamentals of Cyber Forensics (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	18010506AN01	Animation: Motion Graphics	4	-	6	1	-	20	20	-	60	-	40	100
	18010206PP01	Photography and Photo editing: Documentary Photography	4	-	6	1	-	20	20	-	60	-	40	100

	18010206VV01	Videography and Video editing: Documentary Film making	4	-	6	1	-	20	20	-	60	-	40	100
	06010106DM01	Digital Marketing: Content Marketing and creation	4	3	2	-	20	20	20	60	30	40	20	150
		Ability Enhancement Course -5												
	00019306AE01	Professional Ethics and Communication	2	2	-	-	20	-	20	60	-	40	-	100
	05010106IN01	Internship/Mini Project-1 (in Major Specific Course)	4	-	8	-	-	40	-	-	60	-	40	100
		Total	22											

Internship Guidelines: 30 days (120 Hrs.)

Semester 7

				Teaching Scheme (Hours / Week)			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
NCrF Credit Level	Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	
6.0		Major (Discipline Specific Course)												
	05010107DS01	Internet of Things (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010107DS02	Internet of Things (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010107DS03	Software Testing using Selenium (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010107DS04	Software Testing using Selenium (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Elective I (Theory + Practical) (Select any one)												
	05010107DS05	Computer Vision(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010107DS06	Computer Vision(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010107DS07	Soft Computing(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010107DS08	Soft Computing(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010107DS09	Software Project Management(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010107DS10	Software Project Management(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010107DS11	Open Source Software and Tools(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010107DS12	Open Source Software and Tools(P)	1	-	2	-	-	20	-	-	30	-	20	50
		Minor -7 / Interdisciplinary Course (Select any one)												
	05010107AM01	AI and ML: Advanced Image Processing using Python (T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010107AM02	AI and ML: Advanced Image Processing using Python (P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010107CF01	Cyber Security and Forensic: Advanced Cyber Investigations and Social Engineering (Theory)	3	3	-	-	20	-	20	60	-	40	-	100

	05010107CF02	Cyber Security and Forensic: Advanced Cyber Investigations and Social Engineering (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	18010507AN01	Animation: VFX Production	4	-	6	1	-	20	20	-	60	-	40	100
	18010207PP01	Photography and Photo editing: Business and Marketing for Photographers	4	-	6	1	-	20	20	-	60	-	40	100
	18010207VV01	Videography and Video editing: Fiction Film making	4	-	6	1	-	20	20	-	60	-	40	100
	06010107DM01	Digital Marketing: Social media analytics	4	3	2	-	20	20	20	60	30	40	20	150
	05010107IN01	On Job Training (OJT)- in Major Specific (for Honours Degree)	6	-	12	-	-	60	-	-	90	-	60	150
		OR												
		1 subject of Major/Minor discipline relevant of 4 credit (for Honours Degree)	4											
		1 subject of Major/Minor discipline relevant SEC course of 2 credits (for Honours Degree)	2											
		OR												
	05010107RP01	Research Project in Major Specific course (For Honours with Research degree)	6	-	12	-	-	60	-	-	90	-	60	150
		Total	22											

Research Project Guidelines:

Advanced – level disciplinary/interdisciplinary courses related to topic selection and research methodology and initial stage of research will be conducted like: determining the definition of the information needed, determining the methods of collection of qualitative and quantitative data, conducting secondary data analysis etc.

On-the-Job Training Guidelines: 45 days (180 Hrs.)

Semester 8

				Teaching Scheme (Hours / Week)			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
NCrF Credit Level	Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	
		Major (Discipline Specific Course)												
6.0	05010108DS01	Content Management System (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010108DS02	Content Management System (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010108DS03	Machine Learning (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010108DS04	Machine Learning (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010108DS05	Cross-Platform Development (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010108DS06	Cross-Platform Development (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Minor -8 / Interdisciplinary Course (Select any one)												
	05010108AM01	AI and ML: Natural Language Processing (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010108AM02	AI and ML: Natural Language Processing (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010108CF01	Cyber Security and Forensic: Advanced Cyber Forensics Investigations (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010108CF02	Cyber Security and Forensic: Advanced Cyber Forensics Investigations (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	18010508AN01	Animation: Editing & Sound Design	4	-	6	1	-	20	20	-	60	-	40	100
	18010208PP01	Photography and Photo editing: Photographers Study	4	-	6	1	-	20	20	-	60	-	40	100

	18010208VV01	Videography and Video editing: Cinematographers Study	4	-	6	1	-	20	20	-	60	-	40	100
	06010108DM01	Digital Marketing: Influencer marketing and collaborations	4	3	2	-	20	20	20	60	30	40	20	150
	05010108IN01	On Job Training (OJT) - in Major Specific (for Honours Degree)	6	-	12	-	-	60	-	-	90	-	60	150
		OR												
		1 subject of Major/Minor discipline relevant of 4 credit (for Honours Degree)	4											
		1 subject of Major/Minor discipline relevant SEC course of 2 credits (for Honours Degree)	2											
		OR												
	05010108RP01	Research Project in Major Specific course (For Honours with Research degree)	6	-	12	-	-	60	-	-	90	-	60	150
		Total	22											
Total Credit of the Programme			176											

Research Project Guidelines:

The final semester will be devoted to seminar presentation, preparation and submission of research project report/dissertation. The project work/dissertation will be on a topic in the disciplinary programme of study or an interdisciplinary topic.

On-the-Job Training Guidelines: 45 days (180 Hrs.)

Note: Course Curriculum from 4th Semester up to 8th semester may undergo revision. Any revision to this effect will be uploaded on the University Website. Students are requested to visit the University Website for any updates related to the revision in the course curriculum or shall contact Dean/HoI/Hod for the same.