

Bachelor of Science in Information Technology (BSc. IT) [3 Years Regular/4 Years (Honours/Honours with Research)]
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Faculty of Information Technology & Computer Science

Parul University

Teaching and Examination Scheme for Batch 2023-24
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(NOTE: A credit is a unit by which the coursework is measured. It determines the number of hours of instruction required per week over the duration of a semester (Minimum 15 weeks/90 days)

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
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3. 1 Credit of Experiential learning (Field Visit/ Industry Visit)/ Assignments = 40-45 hours of engagement in a semester.
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4. Research Project/Dissertation: Entire Seventh & Eighth Semesters (12 Credits)
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T = Theory, P = Practical, CE = Continuous Evaluation
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Bachelor of Science in Information Technology with minor in
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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

				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	05010201DS01	Programming using C (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010201DS02	Programming using C (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010201DS03	Web Design and Development (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010201DS04	Web Design and Development (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Minor -1 / Interdisciplinary Course (Select any one)												
	18010501AN01	Animation: Character Design	4	2	4	-	20	20	20	60	30	40	20	150
	18010201PP01	Photography and Photo Editing: Digital Camera Mechanism		2	4	-	20	20	20	60	30	40	20	150
	18010201VV01	Videography & Video Editing: Fundamentals of Digital Videography		2	4	-	20	20	20	60	30	40	20	150
	06010101DM01	Digital Marketing: Marketing Management		4	-	-	20	-	20	60	-	40	-	100
	05010101AM01	AI&ML: Artificial Intelligence & Machine Learning-1 (Theory)		3	-	-	20	-	20	60	-	40	-	100
	05010101AM02	AI&ML: Artificial Intelligence & Machine Learning-1 (Practical)		-	2	-	-	20	-		30	-	20	50
	05010101CF01	Cyber Security & Forensic: Cyber Security & Forensic		4	-	-	20	-	20	60	-	40	-	100
		University Electives -1 (Multidisciplinary course) (Select any one)												
	06010101UE01	Digital and Mobile Media Marketing	4	4	-	-	20	-	20	60	-	40	-	100
11011401UE01	Remote Sensing & GIS	3		2	-	20	20	20	60	30	40	20	150	

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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	05010202DS01	Fundamentals of Database Management Systems (Theory)	3	3	-	-	40	-	-	60	0	40	-	100
	05010202DS02	Fundamentals of Database Management Systems (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010202DS03	Structured System Analysis and Design (Theory)	3	3	-	-	40	-	-	60	-	40	-	100
	05010202DS04	Structured System Analysis and Design (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Minor -2 / Interdisciplinary Course (Select any one)												
	18010502AN01	Animation: Story Telling & Story Boarding	4	-	6	1	-	20	20	-	60	-	40	100
	18010202PP01	Photography and Photo Editing: Characteristics of Lens		-	6	1	-	20	20	-	60	-	40	100
	18010202VV01	Videography & Video Editing: Lighting and Camera Movement		-	6	1	-	20	20	-	60	-	40	100
	06010102DM01	Digital Marketing: Fundamentals of Digital Marketing		4	-	-	20	-	20	60	-	40	-	100
	05010102AM01	AI&ML: Artificial Intelligence and Machine Learning (Theory) - II	3	3	-	-	40	-	-	60	-	40	-	100
	05010102AM02	AI&ML: Artificial Intelligence and Machine Learning (Practical) - II	1	-	2	-	-	20	-		30	-	20	50

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Semester 3

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Semester 4

				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.	
5.0		Major (Discipline Specific Course)												
	05010204DS01	Computer Networking and Security (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010204DS02	Computer Networking and Security (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010204DS03	Open Source Web Development Using PHP (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010204DS04	Open Source Web Development Using PHP (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Specialization-I (Theory + Practical) (Select Any One)												
	05010204DS05	Introduction to AI(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010204DS06	Introduction to AI(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010204DS07	Introduction to Big data Analytics(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010204DS08	Introduction to Big data Analytics(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010204DS09	Introduction to Blockchain Technology(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010204DS10	Introduction to Blockchain Technology(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010204DS11	Introduction to Cloud Computing(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010204DS12	Introduction to Cloud Computing(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010204DS13	Introduction to Cyber Security and Forensic(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010204DS14	Introduction to Cyber Security and Forensic(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010204DS15	Introduction to Full stack web development(T)	3	3	-	-	20	-	20	60	-	40	-	100

05010204DS16	Introduction to Full stack web development(P)	1	-	2	-	-	20	-	-	30	-	20	50
05010204DS17	Introduction to Gaming Technology(T)	3	3	-	-	20	-	20	60	-	40	-	100
05010204DS18	Introduction to Gaming Technology(P)	1	-	2	-	-	20	-	-	30	-	20	50
05010204DS19	Introduction to Web Technologies(T)	3	3	-	-	20	-	20	60	-	40	-	100
05010204DS20	Introduction to Web Technologies(P)	1	-	2	-	-	20	-	-	30	-	20	50
	Minor -3/ Interdisciplinary Course (Select any one)												
18010504AN01	Animation: Graphic Design	4	-	6	1	-	20	20	-	60	-	40	100
18010204PP01	Photography and Photo Editing: Aesthetics of Composition		-	6	1	-	20	20	-	60	-	40	100
18010204VV01	Videography & Video Editing: Basic Video Editing.		-	6	1	-	20	20	-	60	-	40	100
06010104DM01	Digital Marketing: Brand Management	4	4	-	-	20	-	20	60	-	40	-	100
05010104AM01	AI&ML: Introduction to Data Science using Python (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
05010104AM02	AI&ML: Introduction to Data Science using Python (Theory) (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
05010104CF01	Cyber Security & Forensic: Foundations of Cybersecurity and Information Assurance (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
05010104CF02	Cyber Security & Forensic: Foundations of Cybersecurity and Information Assurance (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	Skill Enhancement Course -4 (Select Any One)												
11019104SE01	Statistics	2	1	-	1	20	-	20	60	-	40	-	100

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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.	
5.5		Major (Discipline Specific Course)												
	05010205DS01	Introduction to ASP.NET using MVC (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010205DS02	Introduction to ASP.NET using MVC (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010205DS03	Mini Project- II (from Minor/Major Stream)	4	-	8	-	-	20	-	-	30	-	20	50
		Specialization-II (Theory + Practical) (Select Any One)												
	05010205DS04	Advanced AI(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010205DS05	Advanced AI(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010205DS06	Advanced Big data Analytics(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010205DS07	Advanced Big data Analytics(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010205DS08	Advanced Blockchain Technology(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010205DS09	Advanced Blockchain Technology(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010205DS10	Advanced Cloud Computing(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010205DS11	Advanced Cloud Computing(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010205DS12	Advanced Cyber Security and Forensic(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010205DS13	Advanced Cyber Security and Forensic(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010205DS14	Advanced Full stack web development(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010205DS15	Advanced Full stack web development(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010205DS16	Advanced Gaming Technology(T)	3	3	-	-	20	-	20	60	-	40	-	100

	05010205DS17	Advanced Gaming Technology(P)	1	-	2	-	-	20	-	-	30	-	20	50
	05010205DS18	Advanced Web Technologies(T)	3	3	-	-	20	-	20	60	-	40	-	100
	05010205DS19	Advanced Web Technologies(P)	1	-	2	-	-	20	-	-	30	-	20	50
		Minor -4 / Interdisciplinary Course (Select any one)												
	18010505AN01	Animation: 3D Visualization	4	-	6	1	-	20	20	-	60	-	40	100
	18010205PP01	Photography and Photo Editing: Experience the Metadata (Photo Editing)		-	6	1	-	20	20	-	60	-	40	100
	18010205VV01	Videography & Video Editing: Non-linear editing and Sound Design.		-	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
	05010105AM01	AI&ML: Computer Vision Using OpenCV (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105AM02	AI&ML: Computer Vision Using OpenCV (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010105CF01	Cyber Security & Forensic: Cyber Threat Intelligence and Analysis (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010105CF02	Cyber Security & Forensic: Cyber Threat Intelligence and Analysis (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Minor -5/ Interdisciplinary Course (Select any one)												
	18010505AN02	Animation: 3D Animation	4	-	6	1	-	20	20	-	60	-	40	100
	18010205PP02	Photography and Photo Editing: Experiment on Expression.		-	6	1	-	20	20	-	60	-	40	100
	18010205VV02	Videography & Video Editing: Colour Grading and Mastering.		-	6	1	-	20	20	-	60	-	40	100

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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.	
5.5		Major (Discipline Specific Course)												
	05010206DS01	Application Development using Android (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010206DS02	Application Development using Android (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010206DS03	Data warehousing and Data Mining (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010206DS04	Data warehousing and Data Mining (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010206DS05	Programming with Python (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010206DS06	Programming with Python (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Minor -6/ Interdisciplinary Course (Select any one)												
	18010506AN01	Animation: Motion Graphics	4	-	6	1	-	20	20	-	60	-	40	100
	18010206PP01	Photography and Photo Editing: Documentary Photography		-	6	1	-	20	20	-	60	-	40	100
	18010206VV01	Videography & Video Editing: Documentary Film making		-	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
	05010106AM01	AI & ML: Introduction to Data Science and Analytics- (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010106AM02	AI & ML: Introduction to Data Science and Analytics (Practical)	1	-	2	-	-	20	-	-	30	-	20	50

	05010106CF01	Cyber Security & Forensic: Fundamentals of Cyber Forensics (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010106CF02	Cyber Security & Forensic: Fundamentals of Cyber Forensics (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Ability Enhancement Course -5												
	00019306AE01	Professional Ethics and Communication	2	2	-	-	20	-	20	60	-	40	-	100
	05010206IN01	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)												
	05010207DS01	Embedded Development with IOT (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010207DS02	Embedded Development with IOT (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010207DS03	Software Testing and Quality Assurance (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010207DS04	Software Testing and Quality Assurance (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Elective I (Theory + Practical) (Select Any One)												
	05010207DS05	Image Processing (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010207DS06	Image Processing (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010207DS07	Soft Computing (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010207DS08	Soft Computing (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010207DS09	Search Engine Optimization (SEO) (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010207DS10	Search Engine Optimization (SEO) (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
	05010207DS11	Operational Research (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
	05010207DS12	Operational Research (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
		Minor -7 / Interdisciplinary Course (Select any one)												
	18010507AN01	Animation: VFX Production	4	-	6	1	-	20	20	-	60	-	40	100
	18010207PP01	Photography and Photo Editing: Business and Marketing for Photographers		-	6	1	-	20	20	-	60	-	40	100
	18010207VV01	Videography & Video Editing: Fiction Film making		-	6	1	-	20	20	-	60	-	40	100

06010107DM01	Digital Marketing: Social media analytics	4	3	2	-	20	20	20	60	30	40	20	150
05010107AM01	AI & ML: Advanced Image Processing using Python (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
05010107AM02	AI & ML: Advanced Image Processing using Python (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
05010107CF01	Cyber Security & Forensic: Advanced Cyber Investigations and Social Engineering (Theory)	3	3	-	-	20	-	20	60	-	40	-	100
05010107CF02	Cyber Security & Forensic: Advanced Cyber Investigations and Social Engineering (Practical)	1	-	2	-	-	20	-	-	30	-	20	50
05010207IN01	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 credits (for Honours Degree)	4											
	1 subject of Major/Minor discipline relevant SEC course of 2 credits (for Honours Degree)	2											
	OR												
05010207RP01	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

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	1 subject of Major/Minor discipline relevant of 4 credits (for Honours Degree)	4											
	1 subject of Major/Minor discipline relevant SEC course of 2 credits (for Honours Degree)	2											
	OR												
05010208RP01	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.