

PARUL UNIVERSITY

R/Notification-1466/2024-25

Office of the Registrar
January 20, 2025

NOTIFICATION

Sub: Syllabus and course structures of 2nd to 4th year UG Programme(s) viz, BCA Honours, B.Sc. IT Honours offered by FITCS (under NEP Framework)

Ref: (i) Proceedings of the Eighteenth Meeting of the Governing Body held on December 2, 2024

(ii) Orders of the Provost

PREAMBLE:

Dean, Faculty of IT and CS proposed Syllabus and course structures of 2nd to 4th year UG Programme(s) viz, BCA Honours, B.Sc. IT Honours offered by FITCS (under NEP Framework) during the Eighteenth Meeting of the Governing Body held on December 2, 2024 which was approved by the Governing Body. Hence, the Order.

ORDER:

Syllabus and course structures of 2nd to 4th year UG Programme(s) viz, BCA Honours, B.Sc. IT Honours offered by FITCS (under NEP Framework) are as follows:

Programme: BCA (Hons.) Single Major - Single Minor

Sr. No.	Subject title	Credits	Subject Category
BCA (Hons.) Semester 3			
1	MEL-1	2	AEC
	Advanced English - I		
	Basic German		
	Basic French		
2	VAC-3 (IPDC including history and culture of India and IKS - 2)	2	VAC
3	SEC-3 (Artificial Intelligence) [Excluding AI & ML Minor students]	2	SEC
4	University Elective - 2	4	Multidisciplinary
5	Core 5 - Object Oriented Development with JAVA (Theory)	3	DSC
	Core 5 - Object Oriented Development with JAVA (Practical)	1	DSC
6	Core 6 - Data Structure (Theory)	3	DSC
	Core 6 - Data Structure (Practical)	1	DSC
7	Core 7- Operating System with Linux & Shell Programming (Theory)	3	DSC
	Core 7- Operating System with Linux & Shell Programming (Practical)	1	DSC
BCA (Hons.) Semester 4			
1	MEL-2	2	AEC
	Advanced English - II		
	Advanced German		

	Advanced French		
2	VAC-4 Psychology Of Stress, Health And Well-Being / Physical Education: Yoga/Sports/NCC	2	VAC
3	SEC-4	2	SEC
	Statistics		
	Probability And Statistics (NPTEL)		
4	Minor sub 3	4	Minor
5	Core-10- Data Communication and Networking (Theory)	3	DSC
	Core-10- Data Communication and Networking (Practical)	1	DSC
6	Core 9 - Open Source Technology using PHP (Theory)	3	DSC
	Core 9 - Open Source Technology using PHP (Practical)	1	DSC
7	Core 8 - Specialization - I (Theory)	3	DSC
	AI-I (T)		
	Big data Analytics-I (T)		
	Blockchain Technology-I (T)		
	Cloud Computing-I (T)		
	Cyber Security and Forensic-I (T)		
	Full stack web development-I (T)		
	Gaming Technology-I (T)		
	Web Technologies-I (T)		
	Core 8 - Specialization - I (Practical)	1	DSC
	AI-I (P)		
	Big data Analytics-I (P)		
	Blockchain Technology-I (P)		
	Cloud Computing-I (P)		
	Cyber Security and Forensic-I (P)		
	Full stack web development-I (P)		
	Gaming Technology-I (P)		
	Web Technologies-I (P)		
BCA (Hons.) Semester 5			
1	Core 11 - Front End Development with .NET (Theory)	3	DSC
	Core 11 - Front End Development with .NET (Practical)	1	DSC
2	Core 12 - Specialization - II (Theory)	3	DSC
	AI-II (T)		
	Big data Analytics-II (T)		
	Blockchain Technology-II (T)		
	Cloud Computing-II (T)		
	Cyber Security and Forensic-II (T)		
	Full stack web development-II (T)		
	Gaming Technology-II (T)		
	Web Technologies-II (T)		
	Core 12 - Specialization - II (Practical)	1	DSC

	AI-II (P)		
	Big data Analytics-II (P)		
	Blockchain Technology-II (P)		
	Cloud Computing-II (P)		
	Cyber Security and Forensic-II (P)		
	Full stack web development-II (P)		
	Gaming Technology-II (P)		
	Web Technologies-II (P)		
3	Minor sub 4	4	Minor
4	Core 13 - Mini Project-II (from Minor/Major stream)	4	DSC
5	Minor sub 5	4	Minor
6	SEC-5	2	SEC
	SAC-5 Digital Literacy		
	SAC-5 Finance for Everyone		
BCA (Hons.) Semester 6			
1	Core 14 - Mobile Application Development (Theory)	3	DSC
	Core 14 - Mobile Application Development (Practical)	1	DSC
2	Core 15 -Software Engineering (Theory)	3	DSC
	Core 15 -Software Engineering (Practical)	1	DSC
3	Core-16- Data Processing with Python (Theory)	3	DSC
	Core-16- Data Processing with Python (Practical)	1	C
4	Internship/Mini Project-I (from Major Stream)	4	Internship/Project
5	AEC-5 Professional ethics and communication	2	AEC
6	Minor sub 6	4	Minor
BCA (Hons.) Semester 7			
1	Major -17 (DSC-17) Elective I (Theory + Practical) (Select any one)	4	DSC
	Computer Vision(T)	3	
	Computer Vision(P)	1	
	Soft Computing(T)	3	
	Soft Computing(P)	1	
	Software Project Management(T)	3	
	Software Project Management(P)	1	
	Open Source Software and Tools(T)	3	
	Open Source Software and Tools(P)	1	
2	Major -18 (DSC-18) Internet of Things (Theory)	3	DSC
	Major -18 (DSC-18) Internet of Things (Practical)	1	
3	Major-19 (DSC-19) Software Testing using Selenium (Theory)	3	DSC
	Major-19 (DSC-19) Software Testing using Selenium (Practical)	1	
4	Minor Sub 7	4	Minor
5	On Job Training (OJT)- in Major Specific (for Honours Degree)	6	OJT

	OR		
5	Research Project in Major Specific course (For Honours with Research degree)	6	RP
BCA (Hons.) Semester 8			
1	Major -20 (DSC-20) Content Management System (Theory)	3	DSC
	Major -20 (DSC-20) Content Management System (Practical)	1	
2	Major -21 (DSC-21) Machine Learning (Theory)	3	DSC
	Major-21 (DSC-21) Machine Learning (Practical)	1	
3	Major-22 (DSC-22) Cross-Platform Development (Theory)	3	DSC
	Major-22 (DSC-22) Cross-Platform Development (Practical)	1	
4	Minor Sub 8	4	Minor
5	On Job Training (OJT) - in Major Specific (for Honours Degree)	6	OJT
	OR		
5	Research Project in Major Specific course (For Honours with Research degree)	6	RP

Programme: B.Sc. IT (Hons.) Single Major - Single Minor

Sr. No.	Subject title	Credits	Subject Category
B.Sc. (IT) (Hons.) Semester 3			
1	MEL-1	2	AEC
	Advanced English - I		
	Advanced Gujarati - I		
	Advanced Hindi - I		
2	VAC-3 (IPDC including history and culture of India and IKS - 2)	2	VAC
3	SEC-3 (Artificial Intelligence) AI Specialization students	2	SEC
4	University Elective - 2	4	Multidisciplinary
5	Core 5 - JAVA Programming (Theory)	3	DSC
	Core 5 - JAVA Programming (Practical)	1	DSC
6	Core 6 - Fundamentals of Data Structure (Theory)	3	DSC
	Core 6 - Fundamentals of Data Structure (Practical)	1	DSC
7	Core 7- Operating System and Shell Programming (Theory)	3	DSC
	Core 7- Operating System and Shell Programming (Practical)	1	DSC
B.Sc. (IT) (Hons.) Semester 4			
1	MEL-2	2	AEC
	Advanced English - II		

	Advanced Gujarati - II		
	Advanced Hindi - II		
2	VAC-4 Psychology Of Stress, Health And Well-Being / Physical Education: Yoga/Sports/NCC	2	VAC
3	SEC-4	2	SEC
	Statistics		
	Probability And Statistics (NPTEL)		
4	Minor sub 3	4	Minor
5	Core-10- Computer Networking (Theory)	3	DSC
	Core-10- Computer Networking (Practical)	1	DSC
6	Core 9 - Open Source Web Development Using PHP (Theory)	3	DSC
	Core 9 - Open Source Web Development Using PHP (Practical)	1	DSC
7	Core 8 - Specialization - I (Theory)	3	DSC
	Introduction to AI(T)		
	Introduction to Big data Analytics(T)		
	Introduction to Blockchain Technology(T)		
	Introduction to Cloud Computing(T)		
	Introduction to Cyber Security and Forensic(T)		
	Introduction to Full stack web development(T)		
	Introduction to Gaming Technology(T)		
	Introduction to Web Technologies(T)		
	Core 8 - Specialization - I (Practical)	1	DSC
	Introduction to AI(P)		
	Introduction to Big data Analytics(P)		
	Introduction to Blockchain Technology(P)		
	Introduction to Cloud Computing(P)		
	Introduction to Cyber Security and Forensic(P)		
	Introduction to Full stack web development(P)		
	Introduction to Gaming Technology(P)		
	Introduction to Web Technologies(P)		
B.Sc IT (Hons.) Semester 5			
1	Core 11 -Introduction to ASP.NET using MVC (Theory)	3	DSC
	Core 11 - Introduction to ASP.NET using MVC (Practical)	1	DSC
2	Core 12 - Specialization-II (Theory)	3	DSC
	Advanced AI (T)		
	Advanced Big data Analytics (T)		
	Advanced Blockchain Technology (T)		
	Advanced Cloud Computing (T)		
	Advanced Cyber Security and Forensic (T)		
	Advanced Full stack web development (T)		
	Advanced Gaming Technology (T)		
	Advanced Web Technologies (T)		
	Core 12 - Specialization-II (Practical)	1	DSC

	Advanced AI (P)		
	Advanced Big data Analytics (P)		
	Advanced Blockchain Technology (P)		
	Advanced Cloud Computing (P)		
	Advanced Cyber Security and Forensic (P)		
	Advanced Full stack web development (P)		
	Advanced Gaming Technology (P)		
	Advanced Web Technologies (P)		
3	Minor Sub - 4	4	Minor
4	Core 13 - Mini Project- II (from Minor/Major Stream)	4	DSC
5	Minor Sub - 5	4	Minor
6	SEC - 5	2	SEC
	Digital Literacy		
	Finance for everyone		
B.Sc IT (Hons.) Semester 6			
1	Core 14 - Application Development using Android (Theory)	3	DSC
	Core 14 - Application Development using Android (Practical)	1	DSC
2	Core 15 - Data warehousing and Data Mining (Theory)	3	DSC
	Core 15 - Data warehousing and Data Mining (Practical)	1	DSC
3	Core 16 - Programming with Python (Theory)	3	DSC
	Core 16 - Programming with Python (Practical)	1	DSC
4	Internship/Mini Project-I (from Major Stream)	4	Internship/Project
5	AEC-5 Professional ethics and communication	2	AEC
6	Minor sub 6	4	Minor
B.Sc IT (Hons.) Semester 7			
1	Major -17 (DSC-17) Elective I (Theory + Practical) (Select any one)	4	DSC
	Image Processing (T)	3	
	Image Processing (P)	1	
	Soft Computing(T)	3	
	Soft Computing(P)	1	
	Search Engine Optimization (SEO) (T)	3	
	Search Engine Optimization (SEO) (P)	1	
	Operational Research (T)	3	
	Operational Research (P)	1	
2	Major -18 Embedded Development with IOT (T)	3	DSC
	Major -18 Embedded Development with IOT (P)	1	
3	Major -19 Software Testing and Quality Assurance (T)	3	DSC
	Major -19 Software Testing and Quality Assurance (P)	1	
4	Minor Sub 7	4	Minor
5	On Job Training (OJT)- in Major Specific (for Honours Degree)	6	OJT

	OR		
	Research Project in Major Specific course (For Honours with Research degree)	6	RP
B.Sc IT (Hons.) Semester 8			
1	Major -20 Advanced Open-Source Framework (T)	3	DSC
	Major -20 Advanced Open-Source Framework (P)	1	
2	Major -21 IOS Development (T)	3	DSC
	Major -21 IOS Development (P)	1	
3	Major-22 Java Spring Framework (T)	3	DSC
	Major-22 Java Spring Framework (P)	1	
4	Minor Sub 8	4	Minor
5	On Job Training (OJT) - in Major Specific (for Honours Degree)	6	OJT
	OR		
	Research Project in Major Specific course (For Honours with Research degree)	6	RP

Dean, FIT & CS is requested to arrange to upload Syllabus and course structures of 2nd to 4th year UG Programme(s) viz, BCA Honours, B.Sc. IT Honours offered by FITCS (under NEP Framework) on MIS.

By Order


Registrar

To,
Dean, Faculty of IT & CS and Principal, PICA

Copy to,
1) The Controller of Examinations
2) Director (IQAC)
3) PUMIS Coordinator

Submitted to,
1) The President
2) The Provost