

**Shree Manibhai Virani and Smt. Navalben Virani Science College, Rajkot
(Autonomous)
Affiliated to Saurashtra University, Rajkot**

**Department of Computer Science & Information Technology
M.Sc. INFORMATION TECHNOLOGY & COMPUTER APPLICATION**

OBJECTIVES OF THE PROGRAMME

The Curriculum is designed to attain the following learning goals which students shall accomplish by the time of their post graduation:

- To develop mastery of emerging technologies in IT infrastructures, software development, IT systems management including IT security and to appreciate the necessity for continuing professional development.
- To demonstrate understanding of and apply current theories, models and techniques for the software development process.
- Explain and apply appropriate information technologies to help an individual or organization to achieve its goals and objectives.
- Manage the information technology resources of an individual or organization.
- Specify, design, develop, test and manage application software systems to meet the operational and business requirements of organizations.
- Anticipate the changing direction of information technology and evaluate and communicate the likely utility of new technologies to an individual or organization.
- Demonstrate an understanding of best practices and standards and their application.
- Work in a team using common tools and environments to achieve project objectives.

SCHEME OF INSTRUCTION AND EXAMINATIONS
For Students Admitted from A.Y. 2016-2017 & Onwards

Semester - I							
Course Code	Course	Hrs. of Instruction/ week	Exam Duration (Hours)	Maximum Marks			Credits
				CIE	SEE	Total	
Part - I							
16PITCC01	Core 1: Advanced Web Development in LARAVEL	4	3	30	70	100	4
16PITCC02	Core 2: No SQL Database MongoDB	4	3	30	70	100	4
16PITDC01 / 16PITDC02	DSE-1: Application Development using J2EE / Application Development using ASP.NET	5	3	30	70	100	5
16PITCC03	Core Practical 1: Advanced Web Development in LARAVEL Practical and No SQL Database MongoDB Practical	4	3	40	60	100	2
16PITDC03 / 16PITDC04	DSE Practical 1: Application Development using J2EE Practical / Application Development using ASP.NET Practical	4	3	40	60	100	2
16PITCC04	Project	6	3	60	40	100	4
		27				600	21
Part - III							
16PVE01	Value Education	1	-	Remarks			1
		28					22

Semester - II							
Course Code	Course	Hrs. of Instruction / week	Exam Duration (Hours)	Maximum Marks			Credits
				CIE	SEE	Total	
Part - I							
16PITCC05	Core 3: Application Development using Advanced Android	4	3	30	70	100	4
16PITCC06	Core 4: Introduction to Big Data & Hadoop	4	3	30	70	100	4
16PITCC07	Core 5 : Cloud Computing	4	3	30	70	100	4
16PITDC05 / 16PITDC06	DSE 2: Web Searching Technologies & Search Engine Optimization / Wireless Communication & Mobile Programming	4	3	30	70	100	4
16PITCC08	Core Practical 2: Application Development using Advanced Android Practical	4	3	40	60	100	2
16PITCC09	Core Practical 3: Introduction to Big Data & Hadoop Practical & Cloud Computing Practical	4	3	40	60	100	2
16PITCC10	Project	6	3	60	40	100	4
		30				700	24

• **PART – I : CORE, DSE**

CORE COURSES [Theory]

S. No	Semester	Course code	Course
1.	I	16PITCC01	Advanced Web Development in LARAVEL
2.		16PITCC02	No SQL Database MongoDB
3.	II	16PITCC05	Application Development using Advanced Android
4.		16PITCC06	Introduction to Big Data & Hadoop
5.		16PITCC07	Cloud Computing

CORE COURSES [Practical]

S. No	Semester	Course code	Course
1.	I	16PITCC03	Advanced Web Development in LARAVEL and No SQL Database MongoDB
2.	II	16PITCC08	Application Development using Advanced Android
3.	II	16PITCC09	Introduction to Big Data & Hadoop & Cloud Computing

• **OTHER CORE COURSES**

S. No.	Semester	Course Code	Course
1.	I	16PITCC04	Project
2.	II	16PITCC10	Project

• **DSE CORE COURSES [Theory & Practical]**

Students are required to opt for any one of the courses offered in 1st & 2nd semesters respectively.

S. No	Semester	Theory		Practical	
		Course code	Course	Course code	Course
1.	I	16PITDC01/	Application Development using J2EE /	16PITDC03/	Application Development using J2EE /
		16PITDC02	Application Development using ASP.NET	16PITDC04	Application Development using ASP.NET
2.	II	16PITDC05/	Web Searching Technologies & Search Engine Optimization /	-	-
		16PITDC06	Wireless Communication & Mobile Programming	-	-

• **Part –III VALUE EDUCATION**

S. No.	Semester	Course Code	Course
1.	I	16PVE01	Value Education