

**GUJARAT TECHNOLOGICAL UNIVERSITY****Syllabus for Bachelor of Vocation (B.Voc), 5<sup>th</sup> Semester****Branch: Software Development****Subject Name: Technology Trends in IT****Subject Code: 1150201****With effective  
from academic  
year 2018-19****Type of course:** Core**Prerequisite:** Data Mining, IT Fundamentals**Rationale:** The course aims to provide an understanding IT technology trends in today's world. This course provides the basic understanding of IoT, Big Data, Cyber Security, Cloud Computing and Wearable Technology.**Teaching and Examination Scheme:**

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
3	-	0	3	50	-	-	-	50

L- Lectures; T- Tutorial/Teacher Guided Student Activity; P- Practical; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment

**Contents:**

Sr. No.	Practical / Hands on Exercise	Teaching Hrs.	Module % Weightage
1	<b>UNIT-I</b> <b>Internet of Things (IoT)</b> – Definition of IoT, History of IoT, IoT vs. similar concepts, Application/Segment overview, Technology overview	8	20
2	<b>UNIT-II</b> <b>Big Data Analytics:</b> Concepts, examples of big data analytics, benefits of big data analytics, Technologies, and Applications, requirements for being successful with big data analytics	8	20
3	<b>UNIT-III</b> <b>Cloud Computing</b> – Introduction, Why cloud services are popular, advantages, Characteristics, Service models, Deployment of cloud services, Potential privacy risks	8	20
4	<b>UNIT-IV</b> <b>Cyber Security</b> – Introduction, risks, Malicious code, Hacker, attacker or intruder, Cyber security Principles, Information Security (IS) within Lifecycle Management, Risks & Vulnerabilities, Incident Response, Future Implications & Evolving Technologies	10	20
5	<b>UNIT-V</b> <b>Wearable Technologies</b> – Introduction, Applications of Wearable Technology, Challenges to Wearable Technology, various Wearable devices.	8	20
	<b>Total</b>	<b>42</b>	

**Reference Books:**

1. Computer Today, A. Ravichandran, Khanna Publishing House
2. Internet of Things, Jeeva Jose, Khanna Publishing House
3. Big Data and Hadoop, V.K. Jain, Khanna Publishing House
4. Data Sciences and Analytics, V.K. Jain, Khanna Publishing House
5. Cyber Security, Nina Godbole, Sunit Belapure, WILEY

**Suggested Specification table with Marks (Theory): (For BVOC only)**



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<b>Distribution of Theory Marks</b>					
R Level	U Level	A Level	N Level	E Level	C Level
10	20	20	0	0	0

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above Levels (Revised Bloom's Taxonomy)

**Course Outcomes:**

Sr. No.	CO Statement	Marks % Weightage
CO-1	Understand concepts of IoT	20
CO-2	Understand concepts of Big Data	20
CO-3	Understand concepts of Cloud Computing	20
CO-4	Understand concepts of Cyber Security	20
CO-5	Understand concepts of Wearable Technology	20

**Laboratory work: NA**

**List of Open Source Software/learning website:**

Students must refer to following sites to enhance their learning ability.

- 1) Vlabs.iitb.ac.in
- 2) NPTEL tutorials
- 3) <http://www.opensourcetesting.org/>
- 4) <http://www.onestoptesting.com/>