



## **SYLLABUS FEEDBACK -ACTION TAKEN REPORT FOR B.Tech IT COURSE**

The action taken report is documented based on the analysis of the feedback received from 1.Students enrolled from academic year 2014 to 2018 2. Teachers 3. Alumni and 4. Employers for Regulations 2015 which is incorporated in Regulations 2019.

1. Employability- Summer Internship/project with minimum 4 weeks is introduced to facilitate the students in orientation with current employment options in industry. Apart from that the number of credits for Employability enhancement courses are also increased from 10 to 14.

2. Initiative thinking- Two week Students Induction program comprising physical activity, creative arts, universal human values, proficiency modules, lectures by eminent people, visits to local areas and familiarization to department/branch & innovations.

3. Electives- Number of professional elective courses were increased from 34 to 47 to include the technological advancements in the IT domain. Courses such as quantum computing, Mixed reality, Block chain technologies and IoT based smart systems.

4. Specialization stream- Domain wise grouping of electives is introduced to enhance breadth and depth wise knowledge among the subject content currently demanding in industry. The students can choose electives from a minimum of four domains out of five (to obtain breadth-wise knowledge), and a minimum of three electives from a single domain (to obtain depth-wise knowledge).

5. Entrepreneurship skill- Humanities and Social Sciences including management courses (HSMC) such as Technical English, Professional communication, Ethics and Holistic life and Film appreciation courses will lead to have an insight over entrepreneurship skills among the students.

9. Team spirit- Apart from working as a team in their projects, optional audit courses were introduced to enhance student's team leadership and working among heterogeneous group with content related to Stress management and Personality Development through Life Enlightenment Skills.

10. Laboratory courses –Lab courses such as Data analytics and cloud computing and embedded systems and IoT lab were introduced to meet out the current demand at industry.

## COURSE DETAILS OF REGULATIONS 2015 AND REGULATIONS 2019



S.NO	DESCRIPTION	REGULATIONS 2015	REGULATIONS 2019
1	NUMBER OF ENGINEERING SCIENCES COURSES	6	6
2	NUMBER OF PROFESSIONAL COURSES	32	24
3	NUMBER OF PROFESSIONAL ELECTIVES	34	47
4	NUMBER OF EMPLOYABILITY ENHANCEMENT COURSES	3	4
5	NUMBER OF HUMANITIES AND SOCIAL SCIENCES COURSES	2	0
6	NUMBER OF HUMANITIES AND SCIENCES COURSES INCLUDING MANAGEMENT COURSES	0	5
7	NUMBER OF AUDIT COURSES	0	7
8	NUMBER OF BASIC SCIENCE COURSES	9	7
9	TOTAL NUMBER OF COURSES	<b>86</b>	<b>100</b>
<b>DEVIATION SUMMARY- REGULATIONS 2019</b>			
DEVIATION IN TOTAL NUMBER OF COURSES FROM REGULATION 2015			<b>+14</b>
NUMBER OF NEW PROFESSIONAL ELECTIVES OFFERED			<b>18</b>
TOTAL NUMBER OF NEW COURSES			<b>35</b>
PERCENTAGE DEVIATION IN NUMBER OF NEW COURSES IN REGULATIONS 2019 FROM REGULATIONS 2015			<b>&gt;35%</b>

### NOTABLE CHANGES IN REGULATIONS 2019

- External learning components has been introduced for every subject with credits.
- Activity based learning has been introduced to make the students understand the concepts better.
- Domain wise electives are grouped to impart breadth wise and depth wise knowledge to students



## **NOTABLE SYLLABUS CONTENT CHANGES IN REGULATIONS 2019**

### **PROFESSIONAL CORE:**

#### **DATABASE MANAGEMENT SYSTEMS**

Advanced concepts like CAP theorem, Catalog information for cost estimation, NOSQL are included in Regulation 2019.

#### **SOFTWARE ENGINEERING**

New concepts like project management systems, product and process, testing for specialized environments are included in Regulation 2019.

#### **DESIGN AND CONCEPTS OF ALGORITHMS**

Advanced concepts such as diet problem, standard and slack forms of linear programming problems are introduced in Regulation 2019.

#### **WEB TECHNOLOGIES**

New concepts like JSF ,MVC architecture for JFC, Serverless and mobile based web development technologies like NodeJS, Android and Cloud have been introduced in Regulation 2019.

#### **EMBEDDED SYSTEMS AND INTERNET OF THINGS**

Internet of Things and Embedded systems are combined in such a way that new concepts like IOT and arduino programming ,IOT communication and open platforms and how to develop an application with IOT is clearly explored in the regulation 2019.

#### **MOBILE COMPUTING**

Concepts like application design such as Aspects of Mobility – Middleware and Gateways – Mobile Devices and Profiles – Generic UI Development – Multimodal and Multichannel UI – Mobile Memory Management – Design Patterns for Limited Memory – Work Flow for Application Development – Techniques for Composing Applications – Dynamic Linking – Plug-ins and Rule of Thumb for Using DLLs – Concurrency and Resource Management – Look and Feel, Intents and Services – Storing and Retrieving Data – Communication via the Web – Notification and Alarms are included in regulation 2019.



### **CRYPTOGRAPHY AND SECURITY**

Concepts like quantum cryptography, threshold cryptography, blockchain and firewall are introduced in regulation 2019.

### **EMBEDDED SYSTEMS AND INTERNET OF THINGS LABORATORY**

Concepts of embedded processor , embedded programming in C and smart IoT application development such as health care ,smart agriculture are included in regulation 2019.

### **PROFESSIONAL ELECTIVES**

#### **GRAPH THEORY**

Concepts like graphs in social and digital media is included in regulation 2019.

#### **COMPUTER GRAPHICS**

Concepts like surface design and animations are included in regulation 2019.

#### **VISUALIZATION TECHNIQUES**

Concepts like Virtual Reality, Norman's Action cycle are included in regulation 2019.

#### **SOFTWARE TESTING**

Concepts in Test Management like structures for testing teams, testing services, test planning attachments, policy development, test specialist, building a test group and in Test Automation concepts included are requirements of test tool, scope of automation are included in regulations 2019.

#### **E-LEARNING TECHNIQUES**

Concepts like learning platforms and course delivery and evaluation is explored in detail in regulation 2019.

#### **SOFT COMPUTING**

Concepts like Competitive neural networks which discusses about the SOM architecture, resonance theory are included in regulation 2019.

#### **FUNDAMENTALS OF DIGITAL IMAGE PROCESSING**

Concepts like image classifier, supervised learning, unsupervised learning, EM algorithm are included in regulation 2019.

**GAME PROGRAMMING**

Concepts like PyGame,game development,unity script,mobile gaming,game studio are included in regulation 2019.

**SOFTWARE PROJECT MANAGEMENT**

Concepts like software quality management,Gantt Chart,software project monitoring and control are included in regulation 2019.

**ADVANCED NETWORKS**

Concepts like Network function virtualization, big data, storage area networks, service locations and chaining ,Fibre Channel Topologies are included in regulation 2019.

**NETWORK PROGRAMMING AND MANAGEMENT**

Concepts like network management tools and systems with network statistics measurement systems are included in regulation 2019.

**COMPUTATIONAL LINGUISTICS**

Concepts like Chomsky hierarchy,common language theory,turing machines and models of computation,parsing and recognition,context free grammars,tree adjoining grammars,maximum entropy models,memory based learning,decision trees,artificial neural networks, evaluation of NLP systems,speech recognition,NLP generation and information extraction are included in regulation 2019.

**WIRELESS SENSOR AND MESH NETWORKS**

Concepts like zigbee standards,spin,Tiny OS, LMST Based Aggregation are introduced in regulation 2019

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