

# SETHU INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

## B.TECH INFORMATION TECHNOLOGY

### REGULATIONS 2015



### REVISED CURRICULUM AND SYLLABUS (1<sup>st</sup> SEMESTER TO 8<sup>th</sup> SEMESTER)

(FOR THOSE STUDENTS ADMITTED FROM THE ACADEMIC YEAR 2015-2016 ONWARDS)

Approved in the Academic Council Meeting held on  
25.08.2018

*S. S. R.*

**CHAIRPERSON**

Chairperson  
Board of Studies  
Information Technology  
Sethu Institute of Technology  
Kariapatti - 626 115

*[Signature]*

**CHAIRMAN  
ACADEMIC COUNCIL**

**CHAIRMAN  
ACADEMIC COUNCIL**  
Sethu Institute of Technology  
Pulloor, Kariapatti - 625 115

## Department of Information Technology

### OVERALL COURSE STRUCTURE

Category	Total No. of Courses	Credits	Percentage
Humanities and Social Sciences (HS)	5	11	7
Basic Sciences (BS)	9	27	16
Engineering Sciences (ES)	10	25	15
Professional Core (PC)	30	63	37
Employability Enhancement Course(EEC)	3	16	9
Professional Electives (PE)	6	18	11
Open Electives (OE)	3	9	5
<b>TOTAL</b>	<b>66</b>	<b>169</b>	<b>100</b>

### COURSE CREDITS – SEMESTERWISE

Branch	I	II	III	IV	V	VI	VII	VIII	TOTAL
IT	22	21	22	23	22	23	16	20	169

**Employability Courses**

**Skill Development Courses**

**Entrepreneurship Development Courses**

**Any two or all of the above**

## Semester I

<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>Prerequisite</b>
<b>THEORY</b>						
15UEN101	Technical English (Common to ALL)	2	0	0	2	Nil
15UMA102	Engineering Mathematics – I (Common to ALL)	3	2	0	4	Nil
15UPH103	Engineering Physics (Common to ALL)	3	0	0	3	Nil
15UCY105	Applied Chemistry (Common to CSE,ECE,EEE,IT and EIE)	3	0	0	3	Nil
15UCS107	Computer Programming (Common to ALL)	3	0	0	3	Nil
15UME108	Engineering Graphics (Common to ALL)	3	2	0	4	Nil
<b>PRACTICAL</b>						
15UCS109	Computer Programming Laboratory (Common to ALL)	0	0	2	1	Nil
15UCS111	Engineering Fundamental Laboratory (Common to CSE,ECE and IT)	0	0	2	1	Nil
15UGS112	Basic Sciences Laboratory I (Common to ALL)	0	0	2	1	Nil
	<b>TOTAL</b>	<b>17</b>	<b>4</b>	<b>6</b>	<b>22</b>	
<b>Total No. of Credits – 22</b>						

## Semester II

[illegible]

15UGS210	Basic Sciences Laboratory II (Common to ALL)	0	0	2	1	Nil
15UIT211	Programming Techniques Laboratory	0	0	2	1	Nil
	<b>TOTAL</b>	<b>18</b>	<b>2</b>	<b>4</b>	<b>21</b>	

**Total No. of Credits – 21**

### Semester III

Course Code	Course Title	L	T	P	C	Prerequisite
<b>THEORY</b>						
15UMA322	Probability, Statistics and Queueing Systems (Common to CSE and IT)	3	2	0	4	Nil
15UIT302	Data structures and Algorithms	3	0	0	3	15UIT209
15UCS303	Computer Organization and Architecture (Common to CSE and IT)	2	2	0	3	Nil
15UIT304	Object Oriented Programming	3	0	0	3	15UCS107
15UIT305	Operating systems (Common to CSE and IT)	3	0	0	3	Nil
15UIT306	Analog and Digital Communication	3	0	0	3	15UCS208
<b>PRACTICAL</b>						
15UIT307	Object Oriented Programming Laboratory	0	0	2	1	Nil
15UIT308	Data Structures and Algorithms Laboratory	0	0	2	1	Nil
15UIT309	Operating Systems Laboratory (Common to CSE and IT)	0	0	2	1	Nil
	<b>TOTAL</b>	<b>17</b>	<b>4</b>	<b>6</b>	<b>22</b>	

**Total No. of Credits – 22**

### Semester IV

Course Code	Course Title	L	T	P	C	Prerequisite
<b>THEORY</b>						
15UMA421	Discrete Mathematics (Common to CSE and IT)	3	2	0	4	Nil
15UCS402	Java Programming (Common to CSE and IT)	3	0	0	3	15UCS107
15UIT403	Introduction to Human Computer Interaction	3	0	0	3	Nil
15UIT404	Software Engineering Methodologies	3	0	0	3	Nil
15UIT405	Database Management Systems	3	0	0	3	Nil
15UIT406	Computer Networks	3	0	0	3	Nil

15UGS431	Reasoning and Quantitative Aptitude (Common to ALL)	1	0	0	1	Nil
<b>PRACTICAL</b>						
15UCS407	Java Programming Laboratory (Common to CSE and IT)	0	0	2	1	Nil
15UIT408	Database Management Systems Laboratory	0	0	2	1	Nil
15UIT409	Computer Networks Laboratory	0	0	2	1	Nil
	<b>TOTAL</b>	<b>19</b>	<b>2</b>	<b>6</b>	<b>23</b>	
<b>Total No. of Credits – 23</b>						

### Semester V

Course Code	Course Title	L	T	P	C	Prerequisite
<b>THEORY</b>						
15UCS501	Internet and web Technology (Common to CSE and IT)	3	0	0	3	Nil
15UIT502	Data Warehousing and Data Mining	3	0	0	3	Nil
15UIT503	Graphics and Multimedia (Common to CSE and IT)	3	0	0	3	Nil
15UIT504	Analysis and Design of Algorithm	3	0	0	3	Nil
	Elective I	3	0	0	3	-
	Elective II	3	0	0	3	-
<b>PRACTICAL</b>						
15UCS507	Internet and Web Technology Laboratory (Common to CSE and IT)	0	0	2	1	Nil
15UIT508	Data Warehousing and Data Mining Laboratory	0	0	2	1	Nil
15UIT509	Graphics and Multimedia Laboratory (Common to CSE and IT)	0	0	2	1	Nil
15UGS531	Soft Skills and Communication Laboratory (CSE,EEE, IT,ECE)	0	0	2	1	Nil
	<b>TOTAL</b>	<b>18</b>	<b>0</b>	<b>8</b>	<b>22</b>	
<b>Total No. of Credits – 22</b>						

### Semester VI

Course Code	Course Title	L	T	P	C	Prerequisite
<b>THEORY</b>						
15UIT601	Cryptography and Network Security	3	0	0	3	Nil
15UIT602	Mobile Applications Development	3	0	0	3	Nil

	(Common to CSE and IT)					
15UIT603	Compiler Design	3	0	0	3	Nil
	Elective III	3	0	0	3	-
	Elective IV	3	0	0	3	-
	Open Elective I	3	0	0	3	-
<b>PRACTICAL</b>						
15UIT607	Security Laboratory	0	0	2	1	Nil
15UIT608	Mobile Application Development Laboratory (Common to CSE and IT)	0	0	2	1	Nil
15UIT609	Technical Project	0	0	6	3	Nil
	<b>TOTAL</b>	<b>18</b>	<b>0</b>	<b>10</b>	<b>23</b>	
<b>Total No. of Credits – 23</b>						

### Semester VII

Course Code	Course Title	L	T	P	C	Prerequisite
<b>THEORY</b>						
15UME701	Project Management and Finance (Common to MECH, CSE, ECE, EEE, IT, and EIE)	3	0	0	3	Nil
15UCS702	Insight into Cloud Computing (Common to CSE and IT)	3	0	0	3	Nil
15UIT703	Fundamentals of Image Processing	2	0	0	2	Nil
	Elective V	3	0	0	3	-
	Open Elective II / Multidisciplinary Project Phase I	3	0	0	3	-
<b>PRACTICAL</b>						
15UCS706	Cloud Computing Laboratory (Common to CSE and IT)	0	0	2	1	Nil
15UIT707	Image Processing Laboratory	0	0	2	1	Nil
	<b>TOTAL</b>	<b>14</b>	<b>0</b>	<b>4</b>	<b>16</b>	
<b>Total No. of Credits – 16</b>						

### Semester VIII

Course Code	Course Title	L	T	P	C	Prerequisite
<b>THEORY</b>						
15UME801	Professional Ethics (Common to ALL)	2	0	0	2	Nil
	Elective VI	3	0	0	3	-
	Open Elective III	3	0	0	3	-
<b>PRACTICAL</b>						
15UIT804	Project Work	0	0	24	12	-
	<b>TOTAL</b>	<b>8</b>	<b>0</b>	<b>24</b>	<b>20</b>	
<b>Total No. of Credits – 20</b>						

## PROFESSIONAL ELECTIVES

Course Code	Course Title	L	T	P	C
<b>PROFESSIONAL ELECTIVES</b>					
15UIT901	Programming Paradigms	3	0	0	3
15UIT902	Formal Language and Automata	3	0	0	3
15UIT903	Artificial Intelligence and Knowledge Engineering	3	0	0	3
15UIT904	Distributed Operating System	3	0	0	3
15UIT905	Internet of Everything	3	0	0	3
15UIT906	Embedded Systems	3	0	0	3
15UIT907	Next Generation Networks	3	0	0	3
15UIT908	Paradigms in Green Computing	3	0	0	3
15UIT909	Wireless Communication	3	0	0	3
15UIT910	Building Enterprise Applications	3	0	0	3
15UIT911	Software Testing	3	0	0	3
15UIT912	Adhoc and Sensor Networks	3	0	0	3

15UIT913	Data Administration and Tuning	3	0	0	3
15UIT914	Data Analytics	2	0	2	3
15UIT915	System Software Internals	3	0	0	3
15UIT916	Intelligent Agents	3	0	0	3
15UIT917	Enterprise Architectures	3	0	0	3
15UIT918	Database Technology	2	0	2	3
15UIT919	Free and Open Source Software	2	0	2	3
15UIT920	Web Mining and Social Networking	3	0	0	3
15UIT921	Ethical Hacking and Information Forensics	3	0	0	3
15UIT922	Semantic Web Engineering	3	0	0	3
15UIT923	Neuro Fuzzy Systems	3	0	0	3
15UIT924	Agile Software Development(Common to CSE and IT)	3	0	0	3
15UIT925	Information Retrieval Methods	3	0	0	3
15UIT926	Visualization Techniques	3	0	0	3
15UIT927	Mobility Engineering	3	0	0	3
15UIT928	Nature and Bio-Inspired Computing	3	0	0	3
15UIT929	Unix Internals	3	0	0	3
15UIT930	Programming with Python	3	0	0	3
15UIT931	Object Oriented System Design	3	0	0	3
15UIT932	Organizational Behavior	3	0	0	3
15UCS902	Information Storage Management	3	0	0	3
15UCS925	Business Intelligence and its Applications	3	0	0	3

#### INTER DISCIPLINARY ELECTIVE COURSE

Course Code	Course Title	L	T	P	C
15UGM951	Smart Manufacturing (Common to IT & Mech)	3	0	0	3
15UGM953	Big Data And Iot In Medical Applications (Common to IT & Bio-Medical)	3	0	0	3

#### MULTIDISCIPLINARY ELECTIVE COURSE



Course Code	Course Title	L	T	P	C
15UGM952	Automation in Agriculture (Common to Mech, IT & Agri)	3	0	0	3

### ONE CREDIT COURSES

CourseCode	Course Title	L	T	P	C
15UIT861	IT- Infrastructure Management Service	1	0	0	1
15UCS861	Software Project Management	1	0	0	1
15UIT862	Introduction to 3D Animation	1	0	0	1
15UIT863	Web Programming with PHP	1	0	0	1
15UIT864	Android Programming – I	1	0	0	1
15UIT865	Android Programming – II	1	0	0	1
15UIT866	Foundation Program 5.0	1	0	0	1
15UIT867	Logics of Programming	1	0	0	1
15UIT868	Arduino Raspberry Pi	1	0	0	1
15UIT869	No SQL	1	0	0	1
15UIT870	PHP Fundamentals	1	0	0	1

### OPEN ELECTIVES

Course Code	Course Title	L	T	P	C
15UIT971	PC Troubleshooting	3	0	0	3
15UIT972	Social Networks	3	0	0	3
15UIT973	Cyber Forensics Technology	3	0	0	3

15UIT974	Animation Technology	3	0	0	3
15UIT975	Computer architecture	3	0	0	3
15UIT976	Fundamentals of Database Management Systems	2	0	2	3
15UIT977	Learning IT Essentials by Doing	3	0	0	3
15UIT978	Website Designing	3	0	0	3

## MANDATORY COURSES

Course Code	Course Title	L	T	P	C
15UGS331	Value Education and Human Rights	2	0	0	P/F
	Personality and Social development 1. PSD01 Sports and other Extra – Curricular Activities 2. PSD02 National Service Scheme 3. PSD03 Club Activities				P/F
	Skill Development Courses 1. SD01 Co-Curricular Activities 2. SD02 English Proficiency Certification 3. SD03 Foreign Languages 4. SD04 Soft Skills and Aptitude 5. SD05 Aptitude Proficiency Certificate 6. SD06 Intellectual Property Rights				P/F