

# SETHU INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

## B.TECH INFORMATION TECHNOLOGY

### REGULATIONS 2019



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

(FOR THOSE STUDENTS ADMITTED FROM THE ACADEMIC YEAR 2019-2020 ONWARDS)

*S. S. Devi*

CHAIRMAN

Board of Studies

Information and Technology  
Sethu Institute of Technology  
Pulloor, Kariapatti- 625 115

*[Signature]*

CHAIRMAN

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



# SETHU INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

## B.TECH INFORMATION TECHNOLOGY REGULATIONS 2019

Revised Curriculum after BoS

### OVERALL COURSE STRUCTURE

Code	Category	Total No. of Courses	Credits	Percentage
BS	Basic Sciences	10	28.5	16.76
ES	Engineering Sciences	9	24.5	14.41
HSS	Humanities and Social Sciences	5	9.5	5.58
PC	Professional Core (including Lab Courses)	19	62.5	36.76
PE	Professional Elective	6	18	10.58
OE	Open Elective	4	12	7.05
PW	Project Work, Seminar & Internship	5	15	8.82
MC	Mandatory Courses	5	–	–
	<b>TOTAL</b>	<b>63</b>	<b>170</b>	<b>100</b>

### **COURSE CREDITS – SEMESTERWISE**

Branch	I	II	III	IV	V	VI	VII	VIII	TOTAL
IT	23	20.5	23	24	25.5	23	17	14	170

## Department of Information Technology

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**Employability Courses**

**Skill Development Courses**

**Entrepreneurship Development Courses**

**Any two or all of the above**

**Semester I**

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
19UEN101	English for Technical Communication	2	0	0	2	Humanities and Social Science
19UMA102	Engineering Mathematics - 1 (Common to ALL Branches)	3	1	0	4	Basic Science
19UPH103	Engineering Physics (Common to ALL Branches)	3	0	0	3	Basic Science
19UCY105	Applied Chemistry (Common to BME, ECE, EEE, CSE & IT)	3	0	0	3	Basic Science
19UCS108	Problem Solving and Python Programming (Common to ALL Branches)	3	0	0	3	Engineering Science
19UME109	Engineering Graphics (Common to ALL Branches)	3	1	0	4	Engineering Science
19UGM131	Induction Programme (Common to ALL Branches)	0	3	0	0	Mandatory Course
<b>PRACTICAL</b>						
19UGS113	Basic Sciences Laboratory	0	0	2	1	Basic Science
19UCS112	Engineering Fundamentals Laboratory (Common to CSE, ECE, IT & BME Branches)	0	0	3	1.5	Engineering Science
19UCS110	Problem Solving and Python Programming Laboratory (Common to ALL Branches)	0	0	3	1.5	Engineering Science
	<b>TOTAL</b>	<b>17</b>	<b>5</b>	<b>8</b>	<b>23</b>	
<b>Total No of Credits - 23</b>						

**Semester II**

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
19UEN201	Communication Skills for Professionals	1	0	1	1.5	Humanities and Social Science
19UMA203	Differential Equations and Complex Analysis (Common to CSE & IT)	3	1	0	4	Basic Science
19UPH205	Physics for Information Science (Common to EEE, CSE & IT branches)	3	0	0	3	Basic Science
19UCY204	Environmental Science (Common to all branches)	3	0	3	3	Humanities and Social Science
19UIT206	Introduction to Information Technology	3	0	0	3	Engineering Science

19UIT205	Programming Fundamentals using Python (Integrated Course Offered by Infosys - InfyTQ)	3	0	3	4.5	Engineering Science
<b>PRACTICAL</b>						
19UGS210	Energy and Environmental Science Laboratory(Common to ALL Branches)	0	0	3	1.5	Basic Science
<b>TOTAL</b>		<b>16</b>	<b>1</b>	<b>10</b>	<b>20.5</b>	
<b>Total No of Credits - 20.5</b>						

### Semester III

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
19UMA322	Probability, Queueing Theory and Numerical Methods (Common to CSE & IT)	3	1	0	4	Basic Science
19UIT302	Data Structures and Algorithms	3	0	0	3	Professional Core
19UIT303	C Programming (Integrated Course)	3	0	3	4.5	Professional Core
19UIT304	Digital Principles and System Design	3	0	0	3	Engineering Science
19UIT305	Principles of Operating Systems (Integrated Course)	3	0	1	4	Professional Core
19UIT306	Software Engineering Methodology	3	0	0	3	Professional Core
<b>PRACTICAL</b>						
19UIT307	Data Structures and Algorithms Laboratory	0	0	3	1.5	Professional Core
<b>MANDATORY</b>						
19UGM332	Biology for Engineering Applications	2	0	0	P/F	Mandatory Course
<b>TOTAL</b>		<b>20</b>	<b>1</b>	<b>7</b>	<b>23</b>	
<b>Total No of Credits - 23</b>						

### Semester IV

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
19UMA421	Transforms and Discrete Mathematics (Common to CSE&IT)	3	1	0	4	Basic Science
19UIT402	Design Methods and Analysis of Algorithms	3	0	0	3	Professional Core

19UIT403	Object Oriented Programming in C++ (Integrated Course)	3	0	3	4.5	Professional Core
19UIT404	Database Management Systems (Integrated Course)	3	0	3	4.5	Professional Core
19UIT405	Computer Organization and Architecture	3	0	0	3	Professional Core
19UIT406	Computer Networks (Integrated Course)	3	0	1	4	Professional Core
<b>PRACTICAL</b>						
19UIT407	Seminar	0	0	2	1	Project Work
<b>MANDATORY</b>						
19UGM431	Gender Equality	1	0	0	P/F	Mandatory Course
<b>TOTAL</b>		<b>19</b>	<b>1</b>	<b>9</b>	<b>24</b>	
<b>Total No of Credits - 24</b>						

### Semester V

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
19UIT501	Object Oriented Programming using Python (Integrated Course) Offered by Infosys - InfyTQ	3	0	3	4.5	Professional Core
19UIT502	Cyber Security Management	3	0	0	3	Professional Core
19UIT503	Mining and Analysis of Big Data	3	0	0	3	Professional Core
19UIT504	Microprocessor Based System Design	3	0	0	3	Engineering Science
	Professional Elective I	3	0	0	3	Professional Elective
	Open Elective I	3	0	0	3	Open Elective
19UGS531	Reasoning and Aptitude	1	0	0	1	Basic Science
<b>PRACTICAL</b>						
19UIT507	Creative Thinking and Innovation	0	0	2	1	Project Work
19UIT508	Mining and Analysis of Big Data Laboratory	0	0	3	1.5	Professional Core
19UIT509	Microprocessor Based System Design Laboratory	0	0	2	1	Engineering Science
19UGS532	Soft Skills Laboratory	0	0	3	1.5	Humanities and Social Science
<b>TOTAL</b>		<b>19</b>	<b>0</b>	<b>13</b>	<b>25.5</b>	
<b>Total No of Credits – 25.5</b>						

**Semester VI**

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
19UIT601	Java Programming (Integrated Course)	3	0	3	4.5	Professional Core
19UIT602	Artificial Intelligence	3	0	0	3	Professional Core
	Professional Elective II	3	0	0	3	Professional Elective
	Professional Elective III	3	0	0	3	Professional Elective
	Open Elective II	3	0	0	3	Open Elective
<b>PRACTICAL</b>						
19UIT608	Artificial Intelligence Laboratory	0	0	2	1	Professional Core
19UGS633	Interpersonal Skills Development Laboratory	0	0	3	1.5	Humanities and Social Science
19UIT607	Product Development Project (Common to all Branches)	0	0	8	4	Project Work
<b>MANDATORY</b>						
19UGM632	Indian Constitution and Essence of Indian Traditional Knowledge in Information and Communication Engineering	1	0	0	P/F	Mandatory Course
	<b>TOTAL</b>	<b>16</b>	<b>0</b>	<b>16</b>	<b>23</b>	
<b>Total No of Credits - 23</b>						

**Semester VII**

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
19UME701	Project Management and Finance	3	0	0	3	Professional Core
19UIT702	Internet of Things Systems and Applications(Integrated Course)	3	0	2	4	Professional Core
	Professional Elective IV	3	0	0	3	Professional Elective
	Professional Elective V	3	0	0	3	Professional Elective
	Open Elective III	3	0	0	3	Open Elective
<b>PRACTICAL</b>						
19UIT707	Summer Internship	0	0	0	1	Project Work
<b>MANDATORY</b>						
19UGM731	Professional Ethics and Human Values	2	0	0	P/F	Mandatory Course
	<b>TOTAL</b>	<b>17</b>	<b>0</b>	<b>2</b>	<b>17</b>	
<b>Total No of Credits - 17</b>						

**Semester VIII**

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
	Professional Elective VI	3	0	0	3	Professional Elective
	Open Elective IV	3	0	0	3	Open Elective
<b>PRACTICAL</b>						
19UIT801	Project Work	0	0	12	8	Project Work
	<b>TOTAL</b>	<b>6</b>	<b>0</b>	<b>12</b>	<b>14</b>	
<b>Total No of Credits - 14</b>						

**Professional Elective**

Course Code	Course Title	L	T	P	C
19UIT901	Machine Learning Algorithms and Applications	3	0	0	3
19UIT902	Internet Technology and Web Design (Integrated Course)	2	0	2	3
19UIT903	Insight in to Cloud Computing (Integrated Course)	2	0	2	3
19UIT904	Graphics and Multimedia (Integrated Course)	2	0	2	3
19UIT905	Introduction to Human Computer Interaction	3	0	0	3
<b>19UIT906</b>	<b>Fundamentals of Image Processing(Integrated Course)</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>3</b>
19UIT907	Mobile Application Development (Integrated Course)	2	0	2	3
19UIT908	Introduction to Embedded Systems	3	0	0	3
19UIT909	Green Information Technology	3	0	0	3
19UIT910	Wireless Communication	3	0	0	3
19UIT911	Building Enterprise Applications	3	0	0	3
19UIT912	Software Testing	3	0	0	3
19UIT913	System Software Internals	3	0	0	3
19UIT914	Enterprise Architecture	3	0	0	3
19UIT915	Free and Open Source Software	3	0	0	3
19UIT916	Web Mining and Social Networks	3	0	0	3
19UIT917	Ethical Hacking and Information Forensics	3	0	0	3
19UIT918	Neuro Fuzzy Systems	3	0	0	3
19UIT919	Information RetrievalTechniques	3	0	0	3
19UIT920	Visualization Technologies	3	0	0	3
19UIT921	Nature and Bio-Inspired Computing	3	0	0	3
19UIT922	Unix Internals	3	0	0	3
19UIT923	Object Oriented System Design	3	0	0	3
19UIT924	Robotics	3	0	0	3

**INTER DISCIPLINARY ELECTIVE COURSE**

<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
19UGM951	Smart Manufacturing (Common to IT &Mech)	3	0	0	3
19UGM953	Big Data And Iot In Medical Applications (Common to IT & Bio-Medical)	3	0	0	3

**MULTIDISCIPLINARY ELECTIVE COURSE**

<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
19UGM952	Automation in Agriculture (Common to Mech, IT &Agri)	3	0	0	3

**ONE CREDIT COURSES**

<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
19UIT861	IT- Infrastructure Management Service	1	0	0	1
19UIT862	Introduction to 3D Animation	0	0	2	1
19UIT863	Web Programming with PHP	0	0	2	1
19UIT864	Android Programming - I	0	0	2	1
19UIT865	Android Programming - II	0	0	2	1
19UIT866	Foundation Program 5.0	1	0	0	1
19UIT867	Logics of Programming	0	0	2	1
19UIT868	Arduino Raspberry Pi	0	0	2	1
19UIT869	No SQL	0	0	2	1
19UIT870	PHP Fundamentals	0	0	2	1
19UIT871	Emotional Intelligence	1	0	0	1
19UIT872	UI Design	1	0	0	1

### OPEN ELECTIVE COURSES

Course Code	Course Title	L	T	P	C
19UIT971	PC Troubleshooting	3	0	0	3
19UIT972	Social Networks	3	0	0	3
19UIT973	Cyber Forensics Technology	3	0	0	3
19UIT974	Animation Technology	3	0	0	3
19UIT975	Computer architecture	3	0	0	3
19UIT976	Fundamentals of Database Management Systems	3	0	0	3
19UIT977	Learning IT Essentials by Doing	3	0	0	3
19UIT978	Website Designing	3	0	0	3

### COURSES OFFERED TO OTHER DEPARTMENTS

Course Code	Course Title	L	T	P	C	Offered Dept
19UIT326	Fundamentals of C Programming (Integrated Course)	2	0	2	3	ECE
19UIT426	Data Structure using C (Integrated Course)	3	0	3	4.5	EEE
19UIT427	Object Oriented Programming in Python	3	0	0	3	AGRI
19UIT428	Object Oriented Programming in Python Laboratory	0	0	2	1.5	AGRI
19UIT429	Introduction to Data Structures and Algorithms (Integrated Course)	2	0	2	3	ECE
19UIT623	Object Oriented Programming and Data Structures	2	0	3	3.5	Bio-Medical