



# KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE

Opp : Yerragattu Gutta, Hasanparthy (Mandal), WARANGAL - 506 015, Telangana, INDIA.

काकतीय प्रौद्योगिकी एवं विज्ञान संस्थान, वरंगल - ५०६ ०१५ तेलंगाना, भारत

కాకతీయ సాంకేతిక విజ్ఞాన శాస్త్ర విద్యాలయం, వరంగల్ - ౫౦౬ ౦౧౫ తెలంగాణ, భారతదేశము

(An Autonomous Institute under Kakatiya University, Warangal)

(Approved by AICTE, New Delhi; Recognised by UGC under 2(f) & 12(B); Sponsored by EKASILA EDUCATION SOCIETY)

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## DEPARTMENT OF INFORMATION TECHNOLOGY

### B.Tech - INFORMATION TECHNOLOGY

#### URR-18-R1

*(Applicable from the Academic Year 2020-21)*

#### SCHEME (III to VIII SEMESTERS)



**DEPARTMENT OF INFORMATION TECHNOLOGY**  
**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL - 15**  
*(An Autonomous Institute under Kakatiya University, Warangal)*

**SCHEME OF INSTRUCTION AND EVALUATION**  
**III-SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

**[6Th+3P+1MC]**

Sl. No.	Course Category	Course Code	Course Title	Hours per Week			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
						TA	MSE	Total				
1	BSC	U18MH301	Engineering Mathematics-III	3	1	-	4	10	30	40	60	100
2	HSMC	U18MH302	Professional English	-	-	2	1	100	-	100	-	100
3	PCC	U18IT303_R1	Advanced Data Structures	3	-	-	3	10	30	40	60	100
4	BSC	U18MH304	Discrete Mathematics	3	-	-	3	10	30	40	60	100
5	PCC	U18IT305	Computer Architecture and Organization	3	-	-	3	10	30	40	60	100
6	ESC	U18EC306	Switching Theory and Logic Design	3	-	-	3	10	30	40	60	100
7	PCC	U18IT307	Operating Systems	3	-	-	3	10	30	40	60	100
8	PCC	U18IT308_R1	Advanced Data Structures Laboratory	-	-	2	1	40	-	40	60	100
9	PCC	U18IT309	Operating Systems Laboratory	-	-	2	1	40	-	40	60	100
10	MC	U18MH315	Essence of Indian Traditional Knowledge*	2	-	-	-	10	30	40	60	100
<b>Total</b>				<b>20</b>	<b>1</b>	<b>6</b>	<b>22</b>	<b>250</b>	<b>210</b>	<b>460</b>	<b>540</b>	<b>1000</b>

**L= Lecture, T = Tutorials, P = Practicals & C = Credits**

**Contact hours per week : 27**

**Total Credits : 22**



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**SCHEME OF INSTRUCTION AND EVALUATION**  
**IV-SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

**[5Th+4P+1MC]**

Sl. No.	Course Category	Course Code	Course Title	Hours per Week			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	OE	U18OE401	Open Elective-II	3	1	-	4	10	30	40	60	100
2	HSMC	U18TP402	Soft and Interpersonal Skills	-	-	2	1	100	-	100	-	100
3	OE	U18OE403	Open Elective-I	3	-	-	3	10	30	40	60	100
4	PCC	U18IT404	Theory of Computation	3	-	-	3	10	30	40	60	100
5	PCC	U18IT405	Database Management Systems	3	1	-	4	10	30	40	60	100
6	PCC	U18IT406	Java Programming	3	-	-	3	10	30	40	60	100
7	PCC	U18IT407	Java Programming Lab	-	-	2	1	40	-	40	60	100
8	PCC	U18IT408	Database Management Systems Laboratory	-	-	2	1	40	-	40	60	100
9	OE	U18OE411	Open Elective-I based Lab	-	-	2	1	40	-	40	60	100
10	MC	U18CH416	Environmental Studies*	2	-	-	-	10	30	40	60	100
<b>Total</b>				<b>15/17*</b>	<b>2</b>	<b>8</b>	<b>21</b>	<b>270/280*</b>	<b>150/180*</b>	<b>420/460*</b>	<b>480/540*</b>	<b>900/1000*</b>

**L= Lecture, T = Tutorials, P = Practicals & C = Credits**

**\* indicates mandatory non-credit course for Lateral Entry Students only Contact hours per week: 25/27\* Total Credits : 21**

<b>Open Elective-I</b> U18OE403B: Fluid Mechanics & Hydraulic Machines (CE) U18OE403C: Mechatronics (ME) U18OE403E: Microprocessors (ECE) U18OE403F: Strength of Materials (CE)	<b>Open Elective-II</b> U18OE401A: Applicable Mathematics (M&H) U18OE401B: Basic Electronics Engineering (ECE) U18OE401C: Elements of Mechanical Engineering (ME) U18OE401D: Measurements & Instrumentation (EIE) U18OE401F: Renewable Energy Sources (EEE)	<b>Open Elective-I based Laboratory</b> U18OE411B: Fluid Mechanics & Hydraulic Machines Laboratory (CE) U18OE411C: Mechatronics Laboratory (ME) U18OE411E: Microprocessors Laboratory (ECE) U18OE411F: Strength of Materials Laboratory (CE)
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**SCHEME OF INSTRUCTION AND EVALUATION**

**V-SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME [6Th+3P+1 Seminar]**

Sl. No.	Course Category	Course Code	Course Title	Hours per Week			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	HSMC	U18TP501	Quantitative Aptitude and Logical Reasoning	2	-	-	1	10	30	40	60	100
2	PE	U18IT502	Professional Elective-I/MOOCs-I	3	-	-	3	10	30	40	60	100
3	PCC	U18IT503	Design and Analysis of Algorithms	3	-	-	3	10	30	40	60	100
4	PCC	U18IT504	Web Technologies	3	-	-	3	10	30	40	60	100
5	PCC	U18IT505	Computer Networks	3	-	-	3	10	30	40	60	100
6	PCC	U18IT506	Compilers	3	-	-	3	10	30	40	60	100
7	PCC	U18IT507	Design and Analysis of Algorithms Lab	-	-	2	1	40	-	40	60	100
8	PCC	U18IT508	Web Technologies Laboratory	-	-	2	1	40	-	40	60	100
9	PCC	U18IT509	GUI Programming Laboratory	-	-	2	1	40	-	40	60	100
10	PROJ	U18IT510	Seminar	-	-	2	1	100	-	100	-	100
<b>Total:</b>				<b>17</b>	<b>-</b>	<b>8</b>	<b>20</b>	<b>280</b>	<b>180</b>	<b>460</b>	<b>540</b>	<b>1000</b>
<i>Additional Learning*:</i> Maximum credits allowed for Honours/Minor				-	-	-	7	-	-	-	-	-
<i>Total credits for Honours/Minor students:</i>				-	-	-	20+7	-	-	-	-	-

\* List of courses for additional learning through MOOCs towards Honours/Minor in Engineering shall be prescribed by the department under Honours/ Minor Curricula

**L= Lecture, T = Tutorials, P = Practicals& C = Credits; Contact hours per week : 25**

**Professional Elective-I/ MOOCs-I:**  
 U18IT502A: Principles of Programming Languages  
 U18IT502B: Neural Networks  
 U18IT502C: Computer Graphics & Multimedia  
 U18IT502M: MOOCs- I Course



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**SCHEME OF INSTRUCTION AND EVALUATION**  
**VI-SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

**[6Th+2P+1MC+1Mini Project]**

Sl. No.	Course Category	Course Code	Course Title	Hours per Week			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	MC	U18MH601	Universal Human Values-II	2	-	-	-	10	30	40	60	100
2	OE	U18OE602	Open Elective-III	3	-	-	3	10	30	40	60	100
3	PE	U18IT603	Professional Elective-II/MOOCs-II	3	-	-	3	10	30	40	60	100
4	PCC	U18IT604	Cryptography and Network Security	3	-	-	3	10	30	40	60	100
5	PCC	U18IT605	Artificial Intelligence	3	-	-	3	10	30	40	60	100
6	PCC	U18IT606	Data Warehousing and Data Mining	3	-	-	3	10	30	40	60	100
7	PCC	U18IT607	Software Engineering	3	-	-	3	10	30	40	60	100
8	PCC	U18IT608	Data Mining using Python Laboratory	-	-	2	1	40	-	40	60	100
9	PCC	U18IT609	Software Testing Laboratory	-	-	2	1	40	-	40	60	100
10	PROJ	U18IT610	Mini Project	-	-	2	1	100	-	100	-	100
<b>Total:</b>				<b>20</b>	<b>-</b>	<b>6</b>	<b>21</b>	<b>250</b>	<b>210</b>	<b>460</b>	<b>540</b>	<b>1000</b>
<i>Additional Learning*: Maximum credits allowed for Honours/Minor</i>				-	-	-	7	-	-	-	-	-
<i>Total credits for Honours/Minor students:</i>				-	-	-	21+7	-	-	-	-	-

\* List of courses for additional learning through MOOCs towards Honours/Minor in Engineering shall be prescribed by the department under Honours/ Minor Curricula

**L= Lecture, T = Tutorials, P = Practicals & C = Credits ; Contact hours per week : 26**

<b>Open Elective-III</b> U18OE602A : Disaster Management U18OE602B : Project Management U18OE602C : Professional Ethics in Engineering U18OE602D : Rural Technology and Community Development	<b>Professional Elective-II / MOOCs-II</b> U18IT603A: Distributed Computing U18IT603B: Information Retrieval Systems U18IT603C: Advanced Databases U18IT603M: MOOCs- II Course
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**SCHEME OF INSTRUCTION AND EVALUATION**  
**VII-SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

**[4Th+2P+1MC+1 Major Project]**

Sl. No.	Course Category	Course Code	Course Title	Hours per Week			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	HSMC	U18MH701	Management, Economics & Accountancy	3	-	-	3	10	30	40	60	100
2	PE	U18IT702	Professional Elective-III/MOOCs-III	3	-	-	3	10	30	40	60	100
3	PE	U18IT703	Professional Elective-IV/MOOCs-IV	3	-	-	3	10	30	40	60	100
4	PCC	U18IT704	Internet of Things	3	-	-	3	10	30	40	60	100
5	PCC	U18IT705	Scripting Languages Laboratory	-	-	2	1	40	-	40	60	100
6	PCC	U18IT706	Modeling and Project Management Laboratory	-	-	2	1	40	-	40	60	100
7	PROJ	U18IT707	Major Project Work <i>Phase-I</i>	-	-	6	3	100	-	100	-	100
8	MC	U18IT708	Internship Evaluation	-	-	2	-	100	-	100	-	100
<b>Total:</b>				<b>12</b>	<b>-</b>	<b>12</b>	<b>17</b>	<b>320</b>	<b>120</b>	<b>440</b>	<b>360</b>	<b>800</b>
<i>Additional Learning*:</i> Maximum credits allowed for Honours/Minor				-	-	-	7	-	-	-	-	-
<b>Total credits for Honours/Minor students:</b>				-	-	-	<b>17+7</b>	-	-	-	-	-

\* List of courses for additional learning through MOOCs towards Honours/Minor in Engineering shall be prescribed by the department under Honours/Minor Curricula

**L= Lecture, T = Tutorials, P = Practicals & C = Credits ; Contact hours per week : 24**

<b>Professional Elective-III / MOOCs-III</b> U18IT702A: Advanced Data Mining U18IT702B: Cloud Computing U18IT702C: Adhoc and Sensor Networks U18IT702M: MOOCs-III Course	<b>Professional Elective-IV / MOOCs-IV</b> U18IT703A: Machine Learning U18IT703B: Service Oriented Architecture U18IT703C: Digital Image Processing U18IT703M: MOOCs-IV Course
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**SCHEME OF INSTRUCTION AND EVALUATION**  
**VIII-SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

**[3Th+1 Major Project]**

Sl. No.	Course Category	Course Code	Course Title	Hours per Week			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	PE	U18IT801	Professional Elective-V/MOOCs-V	3	-	-	3	10	30	40	60	100
2	PE	U18IT802	Professional Elective-VI/MOOCs-VI	3	-	-	3	10	30	40	60	100
3	OE	U18OE803	Open Elective - IV/MOOCs-VII	3	-	-	3	10	30	40	60	100
4	PROJ	U18IT804	Major Project Work <i>Phase-II</i>	-	-	14	7	40	-	40	60	100
<b>Total:</b>				<b>9</b>	<b>-</b>	<b>14</b>	<b>16</b>	<b>70</b>	<b>90</b>	<b>160</b>	<b>240</b>	<b>400</b>
<i>Additional Learning*: Maximum credits allowed for Honours/Minor</i>				-	-	-	7	-	-	-	-	-
<i>Total credits for Honours/Minor students:</i>				-	-	-	<b>16+7</b>	-	-	-	-	-

\* List of courses for additional learning through MOOCs towards Honours/Minor in Engineering shall be prescribed by the department under Honours/Minor Curricula

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<b>Open Elective-IV/ MOOCs-VII</b> U18OE803A: Operations Research U18OE803B: Management Information Systems U18OE803C: Entrepreneurship Development U18OE803D: Forex and Foreign Trade U18OE803M: MOOCs-VII Course	<b>Professional Elective-V/ MOOCs-V</b> U18IT801A: Computer Forensics U18IT801B: Big Data Analytics U18IT801C: Blockchain Technologies U18IT801M: MOOCs-V Course	<b>Professional Elective-VI / MOOCs-VI</b> U18IT802A: Data Science U18IT802B: Predictive Analytics U18IT802C: Cyber Security U18IT802M: MOOCs-VI Course
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