



**JAGADGURUKUL**  
UNIVERSITY

**Faculty of Engineering & Technology**

**M. Tech.**

**(Computer Science & Engineering)**

**(2015-16)**

**Program Structure**

## M.Tech. (CSE) Course Structure (2015-16)

### SEMESTER I

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTCSCS 101	Advanced Computer Architecture	3	0	1	50	100	150	4
MTCSCS 102	Advanced Communication Networks	3	0	1	50	100	150	4
MTCSCS 103	Data Mining & Data Warehousing	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTCSCS 104A	Distributed Computing	3	0	1	50	100	150	4
MTCSCS 104B	Advanced Topics In Algorithms	3	0	1	50	100	150	4
MTCSCS 104C	Advanced Compilation Techniques	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTCSCS 105	Advanced Commnication Networks Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>4</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>

## SEMESTER II

### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTCSCS 201	Distributed Algorithms	3	0	1	50	100	150	4
MTCSCS 202	Cloud Computing	3	0	1	50	100	150	4
MTCSCS 203	Real Time Systems	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTCSCS 204A	Artificial Intelligence	3	0	1	50	100	150	4
MTCSCS 204B	Advanced Database Systems	3	0	1	50	100	150	4
MTCSCS 204C	Multimedia Computing	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTCSCS 205	Cloud Computing Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>4</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>

### SEMESTER III

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTCSCS 301	E-Business Systems	3	0	1	50	100	150	4
MTCSCS 302	Soft computing	3	0	1	50	100	150	4
MTCSCS 303	Information System Security	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTCSCS 304A	Grid Computing	3	0	1	50	100	150	4
MTCSCS 304B	Parallel Computing	3	0	1	50	100	150	4
MTCSCS 304C	Object Oriented Analysis and Design	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTCSCS 305	Seminar	0	-	-	60	40	100	2
<b>Total</b>		<b>12</b>	<b>00</b>	<b>4</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>18</b>

**SEMESTER IV**

<b>Code</b>	<b>Title Of Subject</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>IA</b>	<b>EA</b>	<b>Total</b>	<b>Credits</b>
<b>MTCSCS 401</b>	<b>Dissertation</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>300</b>	<b>400</b>	<b>700</b>	<b>12</b>
<b>Total</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>300</b>	<b>400</b>	<b>700</b>	<b>12</b>



**JAGADGURUKUL**  
UNIVERSITY

**Faculty of Engineering & Technology**

**M. Tech.**

**(Computer Science & Engineering)**

**(2016-17)**

**Program Structure**

## M.Tech. (CSE) Course Structure (2016-17)

### SEMESTER I

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTCSCS 101	Advanced Computer Architecture	3	0	1	50	100	150	4
MTCSCS 102	Advanced Communication Networks	3	0	1	50	100	150	4
MTCSCS 103	Data Mining & Data Warehousing	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTCSCS 104A	Distributed Computing	3	0	1	50	100	150	4
MTCSCS 104B	Advanced Topics In Algorithms	3	0	1	50	100	150	4
MTCSCS 104C	Advanced Compilation Techniques	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTCSCS 105	Advanced Commnication Networks Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>4</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>

## SEMESTER II

### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTCSCS 201	Distributed Algorithms	3	0	1	50	100	150	4
MTCSCS 202	Cloud Computing	3	0	1	50	100	150	4
MTCSCS 203	Real Time Systems	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTCSCS 204A	Artificial Intelligence	3	0	1	50	100	150	4
MTCSCS 204B	Advanced Database Systems	3	0	1	50	100	150	4
MTCSCS 204C	Multimedia Computing	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTCSCS 205	Cloud Computing Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>4</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>



### SEMESTER III

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTCSCS 301	E-Business Systems	3	0	1	50	100	150	4
MTCSCS 302	Soft computing	3	0	1	50	100	150	4
MTCSCS 303	Information System Security	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTCSCS 304A	Grid Computing	3	0	1	50	100	150	4
MTCSCS 304B	Parallel Computing	3	0	1	50	100	150	4
MTCSCS 304C	Object Oriented Analysis and Design	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTCSCS 305	Seminar	0	-	-	60	40	100	2
<b>Total</b>		<b>12</b>	<b>00</b>	<b>4</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>18</b>

**SEMESTER IV**

<b>Code</b>	<b>Title Of Subject</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>IA</b>	<b>EA</b>	<b>Total</b>	<b>Credits</b>
<b>MTCSCS 401</b>	<b>Dissertation</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>300</b>	<b>400</b>	<b>700</b>	<b>12</b>
<b>Total</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>300</b>	<b>400</b>	<b>700</b>	<b>12</b>



**Faculty of Engineering & Technology**

**M. Tech.**

**(Computer Science & Engineering)**

**(2017-18)**

**Program Structure**

## M.Tech. (CSE) Course Structure (2017-18)

### SEMESTER I

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTCSCS 101	Advanced Computer Architecture	3	0	1	50	100	150	4
MTCSCS 102	Advanced Communication Networks	3	0	1	50	100	150	4
MTCSCS 103	Data Mining & Data Warehousing	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTCSCS 104A	Distributed Computing	3	0	1	50	100	150	4
MTCSCS 104B	Advanced Topics In Algorithms	3	0	1	50	100	150	4
MTCSCS 104C	Advanced Compilation Techniques	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTCSCS 105	Advanced Commnication Networks Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>4</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>

## SEMESTER II

### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTCSCS 201	Distributed Algorithms	3	0	1	50	100	150	4
MTCSCS 202	Cloud Computing	3	0	1	50	100	150	4
MTCSCS 203	Real Time Systems	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTCSCS 204A	Artificial Intelligence	3	0	1	50	100	150	4
MTCSCS 204B	Advanced Database Systems	3	0	1	50	100	150	4
MTCSCS 204C	Multimedia Computing	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTCSCS 205	Cloud Computing Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>4</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>

### SEMESTER III

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTCSCS 301	E-Business Systems	3	0	1	50	100	150	4
MTCSCS 302	Soft computing	3	0	1	50	100	150	4
MTCSCS 303	Information System Security	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTCSCS 304A	Grid Computing	3	0	1	50	100	150	4
MTCSCS 304B	Parallel Computing	3	0	1	50	100	150	4
MTCSCS 304C	Object Oriented Analysis and Design	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTCSCS 305	Seminar	0	-	-	60	40	100	2
<b>Total</b>		<b>12</b>	<b>00</b>	<b>4</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>18</b>

**SEMESTER IV**

<b>Code</b>	<b>Title Of Subject</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>IA</b>	<b>EA</b>	<b>Total</b>	<b>Credits</b>
<b>MTCSCS 401</b>	<b>Dissertation</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>300</b>	<b>400</b>	<b>700</b>	<b>12</b>
<b>Total</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>300</b>	<b>400</b>	<b>700</b>	<b>12</b>



**JAGADGURUKUL**  
UNIVERSITY

**Faculty of Engineering & Technology**

**M. Tech.**

**(Computer Science & Engineering)**

**(2018-19)**

**Program Structure**



## M.Tech. (CSE) Course Structure (2018-19)

### SEMESTER – I

Code	Title of Subject	L	T	P	IA	EA	Total	Credits
MTCSCS 101	Mathematical foundations of Computer Science	3	0	0	50	100	150	3
MTCSCS 102	Advanced Data Structures	3	0	0	50	100	150	3
<b>Elective -1 (Any One)</b>								
MTCSCS 103A	Machine Learning	3	0	0	50	100	150	3
MTCSCS 103B	Wireless Sensor Networks	3	0	0	50	100	150	3
MTCSCS 103C	Introduction to Intelligent Systems	3	0	0	50	100	150	3
<b>Elective -2 (Any One)</b>								
MTCSCS 104A	Data Science	3	0	0	50	100	150	3
MTCSCS 104B	Distributed Systems	3	0	0	50	100	150	3
MTCSCS 104C	Advanced Wireless and Mobile Networks	3	0	0	50	100	150	3
MTCSCS 105	Research Methodology and IPR	2	0	0	50	100	150	2
MTCSCS 106	Audit Course – 1 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
<b>Practical/Viva Voce</b>								
MTCSCS 107	Advanced Data Structures Lab	0	0	4	60	40	100	2
MTCSCS 108	Distributed Systems Lab	0	0	4	60	40	100	2
Total		16	0	8	370	580	950	18

## SEMESTER – II

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCSCS 201	Information Security System	3	0	0	50	100	150	3
MTCSCS 202	Soft Computing	3	0	0	50	100	150	3
<b>Elective -1 (Any One)</b>								
MTCSCS 203A	Data Preparation and Analysis	3	0	0	50	100	150	3
MTCSCS 203B	Secure Software Design & Enterprise Computing	3	0	0	50	100	150	3
MTCSCS 203C	Computer Vision	3	0	0	50	100	150	3
<b>Elective -2 (Any One)</b>								
MTCSCS 204A	Advanced Communication Network	3	0	0	50	100	150	3
MTCSCS 204B	GPU Computing	3	0	0	50	100	150	3
MTCSCS 204C	Digital Forensics	3	0	0	50	100	150	3
MTCSCS 205	Audit Course – 2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
<b>Practical/Viva Voce</b>								
MTCSCS 206	Information Security System Lab	0	0	4	60	40	100	2
MTCSCS 207	Advanced Communication Network Lab	0	0	4	60	40	100	2
MTCSCS 208	Mini Project with Seminar	2	0	0	60	40	100	2
Total		14	0	8	380	520	900	18

### SEMESTER – III

Course Number	Subject	L	T	P	IA	EA	Total	Credits
<b>Elective -1 (Any One)</b>								
MTCSCS 301A	Mobile Applications and Services	3	0	0	50	100	150	3
MTCSCS 301B	Compiler for HPC	3	0	0	50	100	150	3
MTCSCS 301C	Optimization Techniques	3	0	0	50	100	150	3
<b>Elective -2 (Any One)</b>								
MTCSCS 302A	Business Analytics	3	0	0	50	100	150	3
MTCSCS 302B	Industrial Safety	3	0	0	50	100	150	3
MTCSCS 302C	Operations Research	3	0	0	50	100	150	3
MTCSCS 302D	Cost Management of Engineering Projects	3	0	0	50	100	150	3
MTCSCS 302E	Composite Materials	3	0	0	50	100	150	3
MTCSCS 302F	Waste to Energy	3	0	0	50	100	150	3
<b>Practical/Viva Voce</b>								
MTCSCS 303	Dissertation-I /Industrial Project	0	0	20	60	40	100	10
Total		6	0	20	160	240	400	16

### SEMESTER - IV

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCSCS 401	Dissertation II	0	0	32	300	400	700	16
Total		0	0	32	300	400	700	16



**JAGADGURUKUL**  
UNIVERSITY

**Faculty of Engineering & Technology**

**M. Tech.**

**(Computer Science & Engineering)**

**(2019-20)**

**Program Structure**

## M.Tech. (CSE) Course Structure (2019-20)

### SEMESTER – I

Code	Title of Subject	L	T	P	IA	EA	Total	Credits
MTCSCS 101	Mathematical foundations of Computer Science	3	0	0	50	100	150	3
MTCSCS 102	Advanced Data Structures	3	0	0	50	100	150	3
<b>Elective -1 (Any One)</b>								
MTCSCS 103A	Machine Learning	3	0	0	50	100	150	3
MTCSCS 103B	Wireless Sensor Networks	3	0	0	50	100	150	3
MTCSCS 103C	Introduction to Intelligent Systems	3	0	0	50	100	150	3
<b>Elective -2 (Any One)</b>								
MTCSCS 104A	Data Science	3	0	0	50	100	150	3
MTCSCS 104B	Distributed Systems	3	0	0	50	100	150	3
MTCSCS 104C	Advanced Wireless and Mobile Networks	3	0	0	50	100	150	3
MTCSCS 105	Research Methodology and IPR	2	0	0	50	100	150	2
MTCSCS 106	Audit Course – 1 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
<b>Practical/Viva Voce</b>								
MTCSCS 107	Advanced Data Structures Lab	0	0	4	60	40	100	2
MTCSCS 108	Distributed Systems Lab	0	0	4	60	40	100	2
Total		16	0	8	370	580	950	18

## SEMESTER – II

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCSCS 201	Information Security System	3	0	0	50	100	150	3
MTCSCS 202	Soft Computing	3	0	0	50	100	150	3
<b>Elective -1 (Any One)</b>								
MTCSCS 203A	Data Preparation and Analysis	3	0	0	50	100	150	3
MTCSCS 203B	Secure Software Design & Enterprise Computing	3	0	0	50	100	150	3
MTCSCS 203C	Computer Vision	3	0	0	50	100	150	3
<b>Elective -2 (Any One)</b>								
MTCSCS 204A	Advanced Communication Network	3	0	0	50	100	150	3
MTCSCS 204B	GPU Computing	3	0	0	50	100	150	3
MTCSCS 204C	Digital Forensics	3	0	0	50	100	150	3
MTCSCS 205	Audit Course – 2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
<b>Practical/Viva Voce</b>								
MTCSCS 206	Information Security System Lab	0	0	4	60	40	100	2
MTCSCS 207	Advanced Communication Network Lab	0	0	4	60	40	100	2
MTCSCS 208	Mini Project with Seminar	2	0	0	60	40	100	2
Total		14	0	8	380	520	900	18

### SEMESTER – III

Course Number	Subject	L	T	P	IA	EA	Total	Credits
<b>Elective -1 (Any One)</b>								
MTCSCS 301A	Mobile Applications and Services	3	0	0	50	100	150	3
MTCSCS 301B	Compiler for HPC	3	0	0	50	100	150	3
MTCSCS 301C	Optimization Techniques	3	0	0	50	100	150	3
<b>Elective -2 (Any One)</b>								
MTCSCS 302A	Business Analytics	3	0	0	50	100	150	3
MTCSCS 302B	Industrial Safety	3	0	0	50	100	150	3
MTCSCS 302C	Operations Research	3	0	0	50	100	150	3
MTCSCS 302D	Cost Management of Engineering Projects	3	0	0	50	100	150	3
MTCSCS 302E	Composite Materials	3	0	0	50	100	150	3
MTCSCS 302F	Waste to Energy	3	0	0	50	100	150	3
<b>Practical/Viva Voce</b>								
MTCSCS 303	Dissertation-I /Industrial Project	0	0	20	60	40	100	10
Total		6	0	20	160	240	400	16

### SEMESTER - IV

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCSCS 401	Dissertation II	0	0	32	300	400	700	16
Total		0	0	32	300	400	700	16