

BCA Detail Syllabus (CBCS Pattern) 2015

BCA SEMESTER 1

Course Code:	Course Title	L-T-P	Credits	Hours	Mark
INFT0101C	Fundamentals of IT - I	3-1-0	4	4	100
INFT0102C	Environmental Studies	3-0-0	3	3	100
INFT0103C	Mathematics	3-1-0	4	4	100
INFT0104P	English and Functional Communication	3-1-0	4	4	100
INFT0105P	Soft Skill & Communication Laboratory	0-0-2	2	4	100
INFT0106P	Computer Fundamental Lab	0-0-2	2	4	100
Total Credits	3 Theory, 3 Laboratories	12-1-4	19	23	600

BCA SEMESTER 2

Course Code:	Course Title	L-T-P	Credits	Hours	Mark
INFT0201C	Fundamentals of IT- II	3-0-0	3	3	100
INFT0202C	ICT Workshop	0-0-2	2	4	100
INFT0203C	Basic Electronics	3-1-0	4	4	100
INFT0204C	C Programming	3-1-0	4	4	100
INFT0205P	Electronics Laboratory	0-0-2	2	4	100
INFT0206P	C Programming Laboratory	0-0-2	2	4	100
Total Credits	4 Theory, 2 Laboratories	9-2-6	17	23	600

BCA SEMESTER 3

Course Code:	Course Title	L-T-P	Credits	Hours	Mark
INFT0301C	Computer Organization	3-1-0	4	4	100
INFT0302C	Data Structures & Algorithm	3-1-0	4	4	100
INFT0303C	Operating System	3-1-0	4	4	100
INFT0304P	Data Structures & Algorithm Laboratory	0-0-3	3	6	100
INFT0305P	Introduction to Unix/ Linux Laboratory	0-0-2	2	4	100
Total Credits	3 Theory, 2 Laboratories	9-3-5	17	22	500

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BCA SEMSTER 4

Course Code:	Course Title	L-T-P	Credits	Hours	Mark
INFT0401C	Fundamentals of Software Engineering	3-0-0	3	3	100
INFT0402C	Database Management Systems	3-1-0	4	4	100
INFT0403P	Elective I Laboratory	0-0-2	2	4	100
INFT0404P	Database Management Systems Lab	0-0-2	2	4	100
INFT04**E	Elective I	3-1-0	4	4	100
INFT04**E	Elective II	3-1-0	4	4	100
Total Credits	4 Theory, 2 Laboratories	12-3-4	19	24	600

BCA SEMESTER 5

Course Code:	Course Title	L-T-P	Credits	Hours	Mark
INFT0501C	Introduction to OOPS	3-0-0	3	3	100
INFT0502C	Data Communication and Computer Networks	3-0-0	3	3	100
INFT0503C	Web Technology	3-0-0	3	3	100
INFT0504P	Computer Network Laboratory	0-0-2	2	4	100
INFT0505P	Web Technology Laboratory	0-0-2	2	4	100
INFT0506P	OOP Lab	0-0-2	2	4	100
INFT05**E	Elective III (Common Elective)	3-1-0	4	4	100
Total Credits	4 Theory, 3 Laboratories	11-2-6	19	25	700

BCA SEMESTER 6

Course Code:	Course Title	L-T-P/S	Credits	Hours	Marks
INFT0601P	Project and Viva Voce	0-0-16	16	--	400
INFT0602P	Seminar	0-0-2	2	4	100
INFT06**E	Elective IV	4-0-0	4	4	100
Total Credits	1 Project, 1 Theory, 1 Seminar	0-0-18	22	8	600

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CHOICE BASED ELECTIVES

SEMESTER 4: ELECTIVE I

Course	Course Title	Credits	Semester No
INFT0401E	Computer Architecture	4	4
INFT0402E	Microprocessor	4	4

SEMESTER 4: Elective II

Course	Course Title	Semester	Credits
INFT0403E	Computer Graphics	4	4
INFT0404E	Data Mining and Data Warehousing	4	4
INFT0405E	Discrete Mathematics	4	4
INFT0406E	Image Processing	4	4
INFT0407E	Sensor Networks	4	4
INFT0408E	Software Project Management	4	4

SEMESTER 5: Elective III (Common Elective)

Course	Course Title	Credits	Semester
INFT0501E	Yoga	4	5
INFT0502E	Music	4	5
INFT0503E	Fine Arts	4	5
INFT0504E	Communicative English	4	5
INFT0505E	NSS	4	5

SEMESTER 6: Elective IV

Course	Course Title	Credits	Semester
INFT0601E	Advanced Website Designing	4	5
INFT0602E	Advanced DBMS	4	5
INFT0603E	Computer Vision	4	5
INFT0604E	Cryptography	4	5
INFT0605E	Formal Language and Automata Theory	4	5
INFT0606E	Mobile Computing	4	5
INFT0607E	Pattern Recognition	4	5

MCA Detail Syllabus (CBCS Pattern) 2015

MCA SEMESTER 1

Course Code:	Course Title	L-T-P	Credits	Hours	Mark
INFT0701C	Mathematical Foundations of Computer Applications	3-0-0	3	3	100
INFT0702C	Programming in C	3-1-0	4	4	100
INFT0703C	Computer Organization & Assembly Language Programming	3-1-0	4	4	100
INFT0704P	Programming in C Laboratory	0-0-3	3	6	100
INFT0705P	Assembly Language Programming Laboratory	0-0-3	3	6	100
Total Credits	<i>3 Theory, 2 Laboratories</i>	<i>9-2-6</i>	17	23	500

MCA SEMESTER 2

Course Code	Course Title	L-T-P	Credits	Hours	Mark
INFT0801C	Data Structures & Algorithm	3-0-0	3	3	100
INFT0802C	Operating System	3-0-0	3	3	100
INFT0803F	Computer Skill III (Java Programming)	4-0-0	4	4	100
INFT0804P	Data Structures & Algorithm Laboratory	0-0-2	2	4	100
INFT0805P	Unix Laboratory	0-0-2	2	4	100
INFT0806P	Computer Skill III (Java Programming) Lab	0-0-2	2	4	100
INFT08**E	Elective I (Non Departmental Elective)	3-0-0	3	3	100
Total Credits	<i>3 Theory, 3 Laboratories</i>	<i>13-0-6</i>	19	25	700

MCA SEMESTER 3

Course Code:	Course Title	L-T-P	Credits	Hours	Mark
INFT0901C	Database Management Systems	3-0-0	3	3	100
INFT0902C	Object Oriented Programming	3-1-0	4	4	100
INFT0903C	Data Communication & Computer Network	3-1-0	4	4	100
INFT0904P	Object Oriented Programming Laboratory	0-0-2	2	4	100
INFT0905P	Computer Network Laboratory	0-0-2	2	4	100
INFT0906P	Database Management Systems Laboratory	0-0-2	2	4	100
INFT09**E	Elective II	3-0-0	3	3	100
Total Credits	<i>4 Theory, 3 Laboratories</i>	<i>12-3-8</i>	20	26	700

MCA SEMESTER 4

Course Code:	Course Title	L-T-P	Credits	Hours	Mark
INFT1001C	Software Engineering	3-1-0	4	4	100
INFT1002C	Web Technology	3-1-0	4	4	100
INFT1004P	Web Technology Laboratory	0-0-2	2	4	100
INFT1005P	Application Development Lab	0-0-2	2	4	100
INFT10**E	Elective III	3-0-0	3	3	100
INFT10**E	Elective IV	3-0-0	3	3	100
INFT1006P	Lab for Elective	0-0-1	1	2	100
Total Credits	<i>4 Theory, 3 Laboratories</i>	<i>12-4-8</i>	19	24	700

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MCA SEMESTER 5

Course Code	Course Title	L-T-P	Credits	Hours	Mark
INFT1101C	Information System Security	3-1-0	4	4	100
INFT11**E	Elective V	3-0-0	3	3	100
INFT11**E	Elective VI	3-0-0	3	3	100
INFT11**E	Common Elective VII	2-1-0	3	3	100
INFT1101P	Seminar & Technical Writing	0-0-2	2	4	100
INFT1102P	Project Phase I	0-0-3	3	6	100
Total Credits	<i>4 Theory Courses, 2 Laboratories</i>	11-2-5	18	23	700

MCA SEMESTER 6

Course Code:	Course Title	L-T-P/S	Credits	Marks
INFT1201P	Project and Viva Voce	0-0-18	10	500
Total Credits	<i>1 Project and Viva Voce</i>	0-0-18	10	500

CHOICE BASED ELECTIVES

SEMESTER 2: Elective I (Non Departmental)

Course Code	Course Title	Credits	Semester
INFT0801E	Accounting and Financial Management	3	2
INFT0802E	Business Management	3	2
INFT0803E	Entrepreneurship Development	3	2
INFT0804E	Organization Behavior	3	2

SEMESTER 3: Elective II

Course Code	Course Title	Credits	Semester
INFT0901E	Digital logic and Basic Electronics	3	3
INFT0902E	Internet Technology	3	3
INFT0903E	Discrete Mathematical Structures	3	3
INFT0904E	Numerical Methods	3	3

SEMESTER 4: Elective III

Code	Subject	Credit	Semester
INFT1001E	Adhoc& Sensor Networks	3	4
INFT1002E	Distributed Computing	3	4
INFT1003E	Formal Language and automata Theory	3	4
INFT1004E	Soft Computing	3	4

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SEMESTER 4: Elective IV

Code	Subject	Credit	Semester
INFT1005E	Image Processing	3	4
INFT1006E	Data Mining and Data Warehousing	3	4
INFT1007E	Network Synthesis	3	4
INFT1008E	Advanced Networking	3	4
INFT1009E	Software Project Management	3	4

SEMESTER 5: Elective V

Code	Subject	L-T-P	Credits
INFT 1101E	TCP/IP Network Programming	3-0-0	3
INFT 1102E	Information Retrieval and Web Mining	3-0-0	3
INFT 1103E	Advances in Database	3-0-0	3
INFT 1104E	Artificial Intelligence	3-0-0	3

SEMESTER 5: Elective VI

Code	Subject	L-T-P	Credits
INFT 1105E	Multimedia Technology	3-0-0	3
INFT 1106E	Pattern Recognition	3-0-0	3
INFT 1107E	Object Oriented Analysis and Design	3-0-0	3
INFT 1108E	Cloud Computing	3-0-0	3
INFT 1109E	Digital Signal Processing	3-0-0	3

SEMESTER 5: Elective VII (Common Elective)

Code	Subject	L-T-P	Credits
INFT 1110E	Soft Skill for MCA	2-1-0	3
INFT 1111E	Yoga	2-1-0	3
INFT 1112E	Music	2-1-0	3
INFT 1113E	Fine Arts	2-1-0	3
INFT 1114E	Communicative English	2-1-0	3
INFT 1115E	NSS	2-1-0	3

Course Structure for Master of Computer Application (MCA)

(Effective for batches admitted from Session 2019-20)

Note.: C –Core, E- Elective, P – Practical, L- Lectures, T- Tutorial ;

MCA SEMESTER 1

Course Code	Course Title	L-T-P	Credits	Hours	Mark	MOOC
MCA0701C	Mathematical Foundations of Computer Applications	3-0-0	3	3	100	
MCA0702C	Programming in C	3-1-0	4	4	100	Yes
MCA0703C	Computer Organization & Assembly Language Programming	3-1-0	4	4	100	
MCA0704C	Programming in C Laboratory	0-0-3	3	6	100	
MCA0705C	Assembly Language Programming Laboratory	0-0-3	3	6	100	
Total Credits	<i>3 Theory, 2 Laboratories</i>	<i>9-2-6</i>	<i>17</i>	<i>23</i>	<i>500</i>	

MCA SEMESTER 2

Course Code	Course Title	L-T-P	Credits	Hours	Mark	MOOC
CSK-III	Computer Skill-III	4-0-0	4	4	100	
CSK-III L	Computer Skill-III Lab	0-0-2	2	4	100	
MCA0801C	Data Structures & Algorithm	3-0-0	3	3	100	Yes
MCA0802C	Operating System	3-0-0	3	3	100	Yes
MCA0803C	Data Structures & Algorithm Laboratory	0-0-2	2	4	100	
MCA0804C	Unix Laboratory	0-0-2	2	4	100	
	Open Elective (Non Departmental)	2-0-0	2	2	100	
Total Credits	<i>3 Theory, 3 Laboratories</i>	<i>12-0-6</i>	<i>18</i>	<i>24</i>	<i>700</i>	

MCA SEMESTER 3

Course Code	Course Title	L-T-P	Credits	Hours	Mark	MOOC
MCA0901C	Database Management Systems	3-1-0	4	4	100	Yes
MCA0902C	Object Oriented Programming	3-1-0	4	4	100	Yes
MCA0903C	Data Communication & Computer Network	3-1-0	4	4	100	
MCA0904C	Database Management Systems Laboratory	0-0-2	2	4	100	
MCA0905C	Object Oriented Programming Laboratory	0-0-2	2	4	100	
MCA0906C	Computer Network Laboratory	0-0-2	2	4	100	
MCA00XXE	Elective I	3-0-0	3	3	100	
Total Credits	<i>4 Theory, 3 Laboratories</i>	<i>12-3-6</i>	<i>21</i>	<i>27</i>	<i>700</i>	

MCA SEMESTER 4

Course Code	Course Title	L-T-P	Credits	Hours	Mark	MOOC
MCA1001C	Software Engineering	3-1-0	4	4	100	
MCA1002C	Web Technology	3-1-0	4	4	100	
MCA1003C	Web Technology Laboratory	0-0-2	2	4	100	
MCA1004C	Application Development Lab	0-0-2	2	4	100	
MCA00XXE	Elective II	3-0-0	3	3	100	
MCA00XXE	Elective III	3-0-0	3	3	100	
Total Credits	<i>4 Theory, 3 Laboratories</i>	<i>12-4-8</i>	<i>18</i>	<i>22</i>	<i>600</i>	

MCA SEMESTER 5

Course Code	Course Title	L-T-P	Credits	Hours	Mark	MOOC
MCA1101C	Information System Security	3-1-0	4	4	100	
MCA1102C	Seminar & Technical Writing	0-0-2	2	4	100	N/A
MCA1103C	Project Phase I	0-0-3	3	6	100	N/A
MCA00XXE	Elective IV	3-0-0	3	3	100	
MCA00XXE	Elective V	3-0-0	3	3	100	
	Open Elective (Non Departmental)	4-0-0	4	4	100	
Total Credits	<i>4 Theory Courses, 2 Laboratories</i>	<i>12-2-5</i>	<i>19</i>	<i>24</i>	<i>700</i>	

MCA SEMESTER 6

Course Code:	Course Title	L-T-P/S	Credits	Marks	MOOC
MCA1201C	Project and Viva Voce	0-0-18	10	500	N/A
	<i>1 Project and Viva Voce</i>	<i>0-0-18</i>	<i>10</i>	<i>500</i>	

Total Credit= 103, Core Credit= 76 (Theory=41, Practical=35), Foundation=6, Elective= 21 (Departmental Elective= 15, Non Departmental Elective= 06)

ELECTIVE SUBJECTS (DEPARTMENTAL) (15 Credits)

Course Code	Course Title	L-T-P	Credits	MOOC
MCA0001E	Adhoc & Sensor Networks	3-0-0	3	Yes
MCA0002E	Advanced Networking	3-0-0	3	
MCA0003E	Advances in Database	3-0-0	3	
MCA0004E	Artificial Intelligence	3-0-0	3	Yes
MCA0005E	Cloud Computing	3-0-0	3	Yes
MCA0006E	Cryptography and Network Security	3-0-0	3	
MCA0007E	Data Mining	3-0-0	3	Yes
MCA0008E	Data Science	3-0-0	3	Yes
MCA0009E	Deep Learning	3-0-0	3	Yes
MCA0010E	Digital logic and Basic Electronics	3-0-0	3	
MCA0011E	Digital Signal Processing	3-0-0	3	Yes
MCA0012E	Discrete Mathematical Structures	3-0-0	3	
MCA0013E	Distributed Computing	3-0-0	3	
MCA0014E	Formal Language and Automata Theory	3-0-0	3	Yes
MCA0015E	Image Processing	3-0-0	3	Yes
MCA0016E	Information Retrieval and Web Mining	3-0-0	3	
MCA0017E	Internet of Things	3-0-0	3	Yes
MCA0018E	Internet Technology	3-0-0	3	
MCA0019E	Machine Learning	3-0-0	3	Yes
MCA0020E	Multimedia Technology	3-0-0	3	
MCA0021E	Natural Language Processing	3-0-0	3	Yes
MCA0022E	Network Synthesis	3-0-0	3	
MCA0023E	Numerical Methods	3-0-0	3	Yes
MCA0024E	Object Oriented Analysis and Design	3-0-0	3	
MCA0025E	Pattern Recognition	3-0-0	3	
MCA0026E	Social Networks	3-0-0	3	Yes
MCA0027E	Soft Computing	3-0-0	3	Yes
MCA0028E	Software Project Management	3-0-0	3	
MCA0029E	Speech and Natural Language Processing	3-0-0	3	Yes
MCA0030E	TCP/IP Network Programming	3-0-0	3	

OPEN ELECTIVE (NON-DEPARTMENTAL) SUBJECTS (6 Credits)

* As offered by other departments of Tripura University in respective semester under CBCS.