	RAYAT-BAHRA UNIVERSITY									
	University School of Engineering & Technology (USET)									
	Department of Computer Science & Engineering									
	Bachelor of Technology (Computer Science & Engineering)									
		Course Structure - B. Tech. (CSE) - Four	rears -	Eigi	nt Sen	nesters				
		Sem-I (Year-I)						Category of Course		
S No	Code	Course Title		т	Р	Tota	al	As per BBU As per UGC-CBCS		
5.110.	Code			•	•	(C)	(H)			
1	AMG001	Applied Math -I	2	1	0	3	3	School Core Foundation Core		
2	ASG001/ASG002	Applied Physics*/ Industrial Chemistry*	3	0	1	4	5	School Core Foundation Core		
3 1	MEG001	Basics of Mechanical Engineering & Workshon - SEC -I	2	0	1 2	3	4	School Core Foundation Core		
4 5		Fundamentals of Computers & Languages	2	0	2 1	31	4	School Core Foundation Core		
6	CSENNN	DSE - I (or Industry Partner Course - I)	3	0	0	31	3	Dept Elective DSE		
7	OPUNNN	UE (Open) - I	2	0	0	2	2	Univ Elective Open Elective		
8	HMU101	Essentials of Management - UE (H&M) -I - GE - I	2	0	0	2	2	Univ Elective AECC		
9	MCG001	Student Mentoring & Counselling	0	0	0.5	0.5	1	Essential Comp Foundation Core		
			Cred	its =	24.5	Hours	=30			
		Sem-II (Year-I)	1		1	1		Category of Course		
S.No.	Code	Course Title	L	т	Р	Tota (C)	al (H)	As per RBU As per UGC-CBCS		
1	AMG002	Applied Math - II	2	1	0	3	3	School Core Foundation Core		
2	ASG002/ASG001	Industrial Chemistry*/ Applied Physics*	3	0	1	4	5	School Core Foundation Core		
3	ECG001	Basics of Electronics	2	0	1	3	4	School Core Foundation Core		
4	CEG001	Basics of Civil & Environmental Studies	3	0	0	3	3	School Core Foundation Core		
5	ECG401	Instrumentation for Engineers & Scientists - SEC - II	2	0	1	3	4	School Core Foundation Core/SEC		
6		Engineering Drawing and Practical Geometry - SEC - III/ Human	1/2	0	2/1	31	5/4	School Core Foundation Core/SEC		
Ŭ	MEG051/HVU100	Values and Professional Ethics - AECC - II	-/-	Ŭ	-/ -	513	,, ,			
7	CSENNN	DSE - II (or Industry Partner Course - II)	3	0	0	3	3	Dept Elective DSE		
8	CPU200	English Communication & Soft Skills - UE (C&PD) - I - AECC -I	2	0	0	2	2	Univ Elective Interdisc/Generic Elective		
9	MCG002	Student Mentoring & Counselling	0	0	0.5	0.5	1	Essential Comp Foundation Core		
		Cr Sem_III (Vear-II)	eaits=	24.5	ь но	urs= 30	/29	Category of Course		
		Sent-in (Tear-in)								
S.No.	Code	Course Title	L	Т	Р	Tota (C)	al (H)	As per RBU As per UGC-CBCS		
1	AMG003	Applied Math - III	2	1	0	3	3	School Core Foundation Core		
2	CEG058	Materials Science & Engineering	3	0	1	4	5	School Core Foundation Core		
3	MEG052	Engineering Design	3	0	0	3	3	School Core Foundation Core		
4	HVU100/MEG051	Human Values and Professional Ethics - AECC - II/ Engineering Drawing and Practical Geometry - SEC - III	2/1	0	1/2	3 4	4/5	School Core AECC		
5	CSG053	Object Oriented Programming - DSC - I	2	0	1	3	4	Dept Core DSC		
6	CSG251	Data Structures - DSC - II	2	0	1	3	4	Dept Core DSC		
/ 0		USE - III (or industry Partner Course - III)	3	0	0	3	3 7	Univ Elective Open Elective		
9	PRG001	Industrial Tour* - SEC - IV	0	0	0		2	Essential Comp SEC		
10	MCG003	Student Mentoring & Counselling	0	0	0.5	0.5	1	Essential Comp Foundation Core		
		Cr	edits=	25.5	5 Ho	urs= 30	/31			
* fror	m preceding Summe	r								
		Sem-IV (Year-II)		1	1	1		Category of Course		
S.No.	Code	Course Title	L	Т	Р	Tota (C)	al <u>(H)</u>	As per RBU As per UGC-CBCS		
2		Nanomaterials & Nanotechnology	2	0	0	2	2	School Core Foundation Core		
3	CSS100	Functional Materials in Computer Engineering - SE - I	2	0	0	3	3	School Elective Foundation Elective		
4	CSG301	Data Communication & Computer Networks DSC - III	2	0	1	3	4	Dept Core DSC		
5	CSG101	Operating System DSC - IV	3	0	1	4	5	Dept Core DSC		
6	ECG102	Microprocessor and Programming DSC - V	3	0	1	4	5	Dept Core DSC		
7	CSENNN	DSE - IV (or Industry Partner Course - IV)	3	0	0	3	3	Dept Elective DSE		
8	CSENNN	DSE - V	2	0	0	2	2	Dept Elective DSE		
9	HMUNNN	Strategic Management - UE (H&M)-II - GE-II	2	0	0	2	2	Univ Elective Interdisc/Generic Elective		
10	NICG004	Student Mentoring & Counselling		0	0.5	0.5	1	Essential Comp Foundation Core		
I			Creo	nts=	-20.5	l Hours	-30			

		Sem-V (Year-III)				-	Category of Course
S.No.	Code	Course Title	L	т	Р	Total (C) (H)	As per RBU As per UGC-CBCS
1	CSG002	Weighting & MCDM Techniques	3	1	1	5 6	School Core Foundation Core
2	CSS101	Discrete Mathematics - SE - II	2	0	1	3 4	School Elective Foundation Elective
3	CSG051	Programming in Java - DSC - VI	2	0	1	3 4	Dept Core DSC
4	<u>CSG252</u>	Theory of Computation - DSC - VII	3	1	0	4 4	Dept Core DSC
5		Cloud Computing - DSC - VIII	3	0	0	3 3	Dept Core DSC
6		USE - VI (or industry Partner Course - V)	3 2	0	0	3 3	Dept Elective DSE
/		Unione Management & Technical Skills LIE (C& DD) II. AECC III	2	0	0	2 2	
8	CPU201	Image Management & Technical Skills - OE (C&PD)-II - AECC-III	2	0	0		
9	PTG001	Industrial Training - I * - SEC - VI	0	0	0	2 0	Essential Comp SEC
10	IPG001	Fundant Mantaring & Councelling	1	0			Essential Comp Sec
12		Progression Interview by Dean & HoD	0	0	0.5		Essential Comp Foundation Core
12	DFG001	Progression interview by Dean & hob	Cred	lits=	29 5	<u> </u>	
* fron	n preceding Summe	r	0.00		2010	110010-00	
	1 0	Sem-VI (Year-III)					Category of Course
S.No.	Code	Course Title	L	т	Р	Total	As per RBU As per UGC-CBCS
	0004.00					(C) (H)	
1	CSS102	Simulation & Modeling - SE -III	2	1	0	3 3	School Elective Foundation Elective
2	<u>CSG151</u>	Relational Database Management System-I - DSC - IX	3	0	1	4 5	Dept Core DSC
3		Computer Graphics - DSC - X	2	0	1		Dept Core DSC
4	<u>CSG401</u>	Network Security and Cryptography - DSC - XI	4	0	0	4 4	Dept Core DSC
5		Nobile Application Development	<u> </u>	0	0	3 3	Dept Core DSC
0 7		DSE - VII (or industry Partner Course - VI)	<u> </u>	0	0	3 3	Dept Elective DSE
,	CSENIN	Counselling & Negotiating Skills for Managers- UE (H&M)-III - GE-	<u> </u>	0	0	3 3	
8	HMUNNN		2	0	0	2 2	
9	SPG001	Technical Seminar - SEC - VIII	1	0	0		Essential Comp SEC
10	IVICGUUB	Student Mentoring & Counselling	Crod	U Uite-	0.5 -26 E	0.5 1	Essential Comp Foundation Core
		Sem-VII (Year-IV)	CIEU	1113-	-20.5	10013-23	Category of Course
	. .			_	_	Total	
S.No.	Code	Course Title	L	Т	Р	(C) (H)	As per RBU As per UGC-CBCS
1	CSG152	Relational Database Management System - I I- DSC - XIII	2	0	1	3 4	Dept Core DSC
2	CSG453	Natural Language Processing - DSC - XIV	2	1	0	3 3	Dept Core DSC
3	CSG102	Unix and Shell Programming - DSC - XV	2	0	1	3 4	Dept Core DSC
4		DSE- IX (or Industry Partner Course -VII)	3	0	0	3 3	Dept Elective DSE
5	OPUNINN	UE (Open) - IV	2	0	0		Univ Elective Open Elective
6	HMUNNN	Leadership & Entrepreneurship - OE (H&W)- IV -GE-IV	2	0	0		Univ Elective Interdisc/Generic Elective
/	MING001	Minor Project - SEC-IX	0	0	0	4 4	Essential Comp SEC
0 0	MCG007	Student Mentoring & Councelling	0	0			Essential Comp Sec
3	WICG007	Student Mentoring & Coursening	Cred	lits=	22 5	0.5 1 Hours=23	
* fron	n preceding Summe	r	CIEU	1113-	22.5	110013-23	
		Sem-VIII (Year-IV)					Category of Course
S.No.	Code	Course Title	L	т	Р	Total	As per RBU As per UGC-CBCS
1	MIG001	Major Project & Presentation - SEC - X	0	0	0	(C) (H) 9 8	Essential Comp. SEC
2	PNG001	Internship	0	0	0		Essential Comp SEC
3	MCG008	Student Mentoring & Counselling	0	0	0.5	0.5 1	Essential Comp Foundation Core
4	DXG001	Dean & HoD's & Guide's Exit Interview	0	0	0	1 0	Essential Comp Foundation Core
		•	Cred	lits=	20.5	Hours=17	
	Т	otal No. of Credits in B.Tech. (Computer Science & Engineering) - 20	00				
PLEAS	E NOTE:						
4 5 4							
1. Eac	(Lecture and Tutor	al Credit has one Contact hour and Each Practical Credit has two	conta	τη	ours;		
2. UE	(H&IVI) = University	Elective (Humanities & Management);					
UE	(C&PD) = University	Elective (Communication & Personality Development);					
UE	(OE) = University El	ective (Open Elective);					
SC :	= SCHOOL CORE; SE = S	School Elective; DC = Department Core; DE = Department Elective;					
SEC		it course; AECC = Ability Ennancement Compulsory Course;					
	- ADINLY ENNANCEN	nem Courses (AECC dilu SEC); cific Coro: DSE - Doportmont Spocific Electivo:					
	- Department Spe	cine core, Doe – Department Specific Elective; csinlinary Elective:					
GE	GE = Generic or Interdicsiplinary Elective;						

RAYAT-BAHRA UNIVERSI

University School of Engineering & Tec

Department of Computer Science &

Bachelor of Technology (Computer Science & Engineering Course Structure - B.Tech. (CSE) - Four Year

		Sem-I (Year-I)
S.No.	Code	Course Title
1	AMG001	Applied Math -I
2	ASG001/ASG002	Applied Physics*/ Industrial Chemistry*
3	EEG001	Basics of Electrical Engineering
4	MEG001	Basics of Mechanical Engineering & Workshop - SEC -I
5	CSG001	Fundamentals of Computers & Languages
6	CSE100	Fundamentals of Android Development for Beginners (Industry Partner Course - I)
7	OPUNNN	UE (Open) - I
8	HMU101	Essentials of Management - UE (H&M) -I - GE - I
9	MCG001	Student Mentoring & Counselling
		C
		Sem-II (Year-I)

S.No.	Code	Course Title
1	AMG002	Applied Math - II
2	ASG002/ASG001	Industrial Chemistry*/ Applied Physics*
3	ECG001	Basics of Electronics
4	CEG001	Basics of Civil & Environmental Studies
5	ECG401	Instrumentation for Engineers & Scientists - SEC - II
6	MEG051/HVU100	Engineering Drawing and Practical Geometry - SEC - III/ Human Values and Professional Ethics - AECC - II
7	CSE104	Developing Android Applications (Industry Partner Course - II)
8	CPU200	English Communication & Soft Skills - UE (C&PD) - I - AECC -I
9	MCG002	Student Mentoring & Counselling
		Cre
		Som III (Voor II)

		Sem-III (Year-II)
S.No.	Code	Course Title
1	AMG003	Applied Math - III
2	CEG058	Materials Science & Engineering
3	MEG052	Engineering Design
4	HVU100/MEG051	Human Values and Professional Ethics - AECC - II/ Engineering Drawing and Practical Geometry - SEC - III
5	CSG053	Object Oriented Programming - DSC - I
6	CSG251	Data Structures - DSC - II

7	CSF105	Advanced Android App Development (Industry Partner Course - III)
8	OPUNNN	UE(Open) - II
9	PRG001	Industrial Tour* - SEC - IV
10	MCG003	Student Mentoring & Counselling
		Cred
* fron	n preceding Summ	er
		Sem-IV (Year-II)
S.No.	Code	Course Title
1	CEG060	Nanomaterials & Nanotechnology
2	ASG005	Statistical Analysis & Techniques - Sec - V
3	CSS100	Functional Materials in Computer Engineering - SE - I
4	CSG301	Data Communication & Computer Networks DSC - III
5	CSG101	Operating System DSC - IV
6	ECG102	Microprocessor and Programming DSC - V
7	CSE106	Google Play Services (Industry Partner Course - IV)
8	CSENNN	DSE - V
9	HMUNNN	Strategic Management - UE (H&M)-II - GE-II
10	MCG004	Student Mentoring & Counselling
		Sem-V (Year-III)
S No	Code	Course Title
5.110.	Coue	
3.NO.	CSG002	Weighting & MCDM Techniques
1 2	CSG002 CSS101	Weighting & MCDM Techniques Discrete Mathematics - SE - II
1 2 3	CSG002 CSS101 CSG051	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI
1 2 3 4	CSG002 CSS101 CSG051 CSG252	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII
1 2 3 4 5	CSG002 CSS101 CSG051 CSG252 CSG302	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII
1 2 3 4 5 6	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V)
1 2 3 4 5 6 7	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III
1 2 3 4 5 6 7 8	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III
1 2 3 4 5 6 7 8 9	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201 PTG001	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III Industrial Training - I * - SEC - VI
1 2 3 4 5 6 7 8 9 10	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201 PTG001 TPG001	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III Industrial Training - I * - SEC - VI Term Paper - SEC -VII
1 2 3 4 5 6 7 8 9 10 11	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201 PTG001 TPG001 TPG005	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III Industrial Training - I * - SEC - VI Term Paper - SEC -VII Student Mentoring & Counselling
1 2 3 4 5 6 7 8 9 10 11 12	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201 PTG001 TPG001 TPG001 MCG005 DPG001	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III Industrial Training - I * - SEC - VI Term Paper - SEC -VII Student Mentoring & Counselling Progression Interview by Dean & HoD
1 2 3 4 5 6 7 8 9 10 11 12	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201 PTG001 TPG001 TPG001 MCG005 DPG001	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III Industrial Training - I * - SEC - VI Term Paper - SEC -VII Student Mentoring & Counselling Progression Interview by Dean & HoD
1 2 3 4 5 6 7 8 9 10 11 12 * from	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201 PTG001 TPG001 TPG001 MCG005 DPG001	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III Industrial Training - I * - SEC - VI Term Paper - SEC -VII Student Mentoring & Counselling Progression Interview by Dean & HoD
1 2 3 4 5 6 7 8 9 10 11 12 * fron	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201 PTG001 TPG001 TPG001 MCG005 DPG001	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III Industrial Training - I * - SEC - VI Term Paper - SEC -VII Student Mentoring & Counselling Progression Interview by Dean & HoD
1 2 3 4 5 6 7 8 9 10 11 12 * fron	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201 PTG001 TPG001 TPG001 MCG005 DPG001	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III Industrial Training - I * - SEC - VI Term Paper - SEC -VII Student Mentoring & Counselling Progression Interview by Dean & HoD (Percent Sem-VI (Year-III) Course Title
1 2 3 4 5 6 7 8 9 10 11 12 * from S.No. 1	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201 PTG001 TPG001 TPG001 MCG005 DPG001 m preceding Summ	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III Industrial Training - I * - SEC - VI Term Paper - SEC -VII Student Mentoring & Counselling Progression Interview by Dean & HoD (Page Title Simulation & Modeling - SE -III
1 2 3 4 5 6 7 8 9 10 11 12 * fron \$.No. 1 2	CSG002 CSS101 CSG051 CSG252 CSG302 CSE107 OPUNNN CPU201 PTG001 TPG001 TPG001 MCG005 DPG001 m preceding Summ Code CSS102 CSG151	Weighting & MCDM Techniques Discrete Mathematics - SE - II Programming in Java - DSC - VI Theory of Computation - DSC - VII Cloud Computing - DSC - VIII Gradle for Android and Java (Industry Partner Course - V) UE (Open) - III Image Management & Technical Skills - UE (C&PD)-II - AECC-III Industrial Training - I * - SEC - VI Term Paper - SEC -VII Student Mentoring & Counselling Progression Interview by Dean & HoD Course Title Simulation & Modeling - SE - III Relational Database Management System-I - DSC - IX

4	CSG401	Network Security and Cryptography - DSC - XI
5	CSG451	Mobile Application Development
6	CSE108	Android Design for Developers (Industry Partner Course -VI)
7	CSENNN	DSE - VIII
8	HMUNNN	Counselling & Negotiating Skills for Managers- UE (H&M)-III - GE-III
9	SPG001	Technical Seminar - SEC - VIII
10	MCG006	Student Mentoring & Counselling
		Sem-VII (Year-IV)
S.No.	Code	Course Title
1	CSG152	Relational Database Management System - I I- DSC - XIII
2	CSG453	Natural Language Processing - DSC - XIV
3	CSG102	Unix and Shell Programming - DSC - XV
4	CSE109	Android Computing (Industry Partner Course -VII)
5	OPUNNN	UE (Open) - IV
6	HMUNNN	Leadership & Entrepreneurship - UE (H&M)- IV -GE-IV
7	MNG001	Minor Project - SEC-IX
8	PTG002	Industrial Training - II *
9	MCG007	Student Mentoring & Counselling
* fron	n preceding Summer	
		Sem-VIII (Year-IV)
S.No.	Code	Course Title

5.140.	Coue	course ritte
1	MJG001	Major Project & Presentation - SEC - X
2	PNG001	Internship
3	MCG008	Student Mentoring & Counselling
4	DXG001	Dean & HoD's & Guide's Exit Interview

Total No. of Credits in B.Tech. (Computer Science & Engineering) - 200

PLEASE NOTE:

1. Each Lecture and Tutorial Credit has one Contact hour and Each Practical Credit has two cont 2. UE (H&M) = University Elective (Humanities & Management);

ΓY

hnology (USET)

Engineering

g)-Android Development (Google) rs - Eight Semesters

				Category of Course
L	т	Р	Total (C) (H)	As per RBU As per UGC-CBCS
2	1	0	3 3	School Core Foundation Core
3	0	1	4 5	School Core Foundation Core
2	0	1	3 4	School Core Foundation Core
2	0	2	4 6	School Core Foundation Core/SEC
2	0	1	3 4	School Core Foundation Core
3	0	0	3 3	Dept Elective DSE
2	0	0	2 2	Univ Elective Open Elective
2	0	0	2 2	Univ Elective AECC
0	0	0.5	0.5 1	Essential Comp Foundation Core
red	its =	24.5	Hours=30	
				Category of Course
L	т	Ρ	Total (C) (H)	As per RBU As per UGC-CBCS
2	1	0	3 3	School Core Foundation Core
3	0	1	4 5	School Core Foundation Core
2	0	1	3 4	School Core Foundation Core
3	0	0	3 3	School Core Foundation Core
2	0	1	3 4	School Core Foundation Core/SEC
1/ 2	0	2/1	3 5/4	School Core Foundation Core/SEC
3	0	0	3 3	Dept Elective DSE
2	0	0	2 2	Univ Elective Interdisc/Generic Elective
0	0	0.5	0.5 1	Essential Comp Foundation Core
its=	24.	5 Ho	urs= 30/29	
				Category of Course
L	т	Р	Total (C) (H)	As per RBU As per UGC-CBCS
2	1	0	3 3	School Core Foundation Core
3	0	1	4 5	School Core Foundation Core
3	0	0	3 3	School Core Foundation Core
2/1	0	1/2	3 4/5	School Core AECC
2	0	1	3 4	Dept Core DSC
2	0	1	3 4	Dept Core DSC

3	0	0	3	3	Dept Elective	DSE
2	0	0	2	2	Univ Elective	Open Elective
0	0	0	1	1	Essential Comp	SEC
0	0	0.5	0.5	1	Essential Comp	Foundation Core
its=	25.5	5 Ho	urs= 3(0/31		
					C	ategory of Course
L	Т	Ρ	Tot (C)	al (H)	As per RBU	As per UGC-CBCS
2	0	0	2	2	School Core	Foundation Core
2	1	0	3	3	School Core	Foundation Core
3	0	0	3	3	School Elective	Foundation Elective
2	0	1	3	4	Dept Core	DSC
3	0	1	4	5	Dept Core	DSC
3	0	1	4	5	Dept Core	DSC
3	0	0	3	3	Dept Elective	DSE
2	0	0	2	2	Dept Elective	DSE
2	0	0	2	2	Univ Elective	Interdisc/Generic Elective
0	0	0.5	0.5	1	Essential Comp	Foundation Core
Cred	lits=	26.5	Hours	s=30		
			_		C	ategory of Course
L	т	Ρ	Tot (C)	ai (H)	As per RBU	As per UGC-CBCS
L 3	T 1	P 1	(C)	ai (H) 6	As per RBU School Core	As per UGC-CBCS
L 3 2	T 1 0	P 1 1	Tot (C) 5 3	al (H) 6 4	As per RBU School Core School Elective	As per UGC-CBCS Foundation Core Foundation Elective
L 3 2 2	T 1 0 0	P 1 1 1	Tot (C) 5 3 3	al (H) 6 4 4	As per RBU School Core School Elective Dept Core	As per UGC-CBCS Foundation Core Foundation Elective
L 3 2 2 3	T 1 0 0 1	P 1 1 1 0	Tot (C) 5 3 3 4	al (H) 6 4 4	As per RBU School Core School Elective Dept Core Dept Core	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC
L 3 2 3 3	T 1 0 0 1 0	P 1 1 0 0	Tot (C) 5 3 3 4 3	al (H) 6 4 4 4 3	As per RBU School Core School Elective Dept Core Dept Core Dept Core	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC
L 32233 333	T 1 0 1 0 1 0	P 1 1 1 0 0 0	Tot (C) 5 3 3 4 3 3	al (H) 6 4 4 4 3 3	As per RBU School Core School Elective Dept Core Dept Core Dept Core Dept Elective	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSE
L 3 2 3 3 3 2 2 3 3 2	T 1 0 1 0 0 0 0 0	P 1 1 0 0 0 0	Tot (C) 5 3 3 3 3 2	al (H) 6 4 4 4 3 3 2	As per RBU School Core School Elective Dept Core Dept Core Dept Core Dept Elective Univ Elective	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSE Open Elective
L 3 2 3 3 3 3 2 2 2 3 3 2 2	T 1 0 1 0 1 0 0 0 0 0	P 1 1 0 0 0 0 0	Tot (C) 5 3 3 3 3 2 2	al (H) 6 4 4 3 3 2 2	As per RBU School Core School Elective Dept Core Dept Core Dept Core Dept Elective Univ Elective Univ Elective	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSE Open Elective AECC
L 3 2 2 3 3 3 2 2 2 0	T 1 0 0 1 0 0 0 0 0 0 0	P 1 1 0 0 0 0 0 0 0	Tot (C) 5 3 3 3 3 2 2 2	al (H) 6 4 4 4 3 3 2 2 2 0	As per RBU School Core School Elective Dept Core Dept Core Dept Elective Univ Elective Univ Elective Essential Comp	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSE Open Elective AECC SEC
L 3 2 2 3 3 3 3 2 2 0 1	T 1 0 1 0 1 0 0 0 0 0 0 0 0	P 1 1 0 0 0 0 0 0 0 0 0 0	Tot (C) 5 3 3 3 3 2 2 2 2 1	al (H) 6 4 4 3 3 2 2 0 1	As per RBU School Core School Elective Dept Core Dept Core Dept Core Dept Elective Univ Elective Univ Elective Essential Comp Essential Comp	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSC Open Elective AECC SEC SEC
L 3 2 2 3 3 3 2 2 0 1 0	T 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0	P 1 1 0 0 0 0 0 0 0 0 0 0 5	Tot (C) 5 3 3 4 3 2 2 2 2 1 0.5	al (H) 6 4 4 4 3 3 2 2 0 1 1 1	As per RBU School Core School Elective Dept Core Dept Core Dept Elective Univ Elective Univ Elective Essential Comp Essential Comp	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSC DSC ABSC ABSC SEC SEC SEC Foundation Core
L 3 2 2 3 3 3 3 2 2 0 1 0 0 0	T 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0	P 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 5 0	Tot (C) 5 3 4 3 2 2 2 1 0.5 1	al (H) 6 4 4 3 3 2 2 0 1 1 1 0	As per RBU School Core School Elective Dept Core Dept Core Dept Elective Univ Elective Univ Elective Essential Comp Essential Comp Essential Comp	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSC Open Elective AECC SEC SEC Foundation Core Foundation Core
L 3 2 2 3 3 3 2 2 0 1 0 0 2 : rec	T 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Tot (C) 5 3 3 4 3 3 4 3 2 2 2 1 2 1 5 5 1 1 Hours	al (H) 6 4 4 4 3 3 2 2 0 1 1 1 0 5=30	As per RBU School Core School Elective Dept Core Dept Core Dept Elective Univ Elective Univ Elective Essential Comp Essential Comp Essential Comp	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSC DSC AECC SEC SEC Foundation Core Foundation Core
L 3 2 2 3 3 3 3 2 2 0 1 0 0 1 0 0 2 7 c	T 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0	P 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 29.5	Tot (C) 5 3 3 4 3 2 2 2 2 2 1 0.5 1 Hours	al (H) 6 4 4 3 3 2 2 2 0 1 1 1 0 s=30	As per RBU School Core School Elective Dept Core Dept Core Dept Elective Univ Elective Univ Elective Essential Comp Essential Comp Essential Comp	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSC DSE Open Elective AECC SEC SEC Foundation Core Foundation Core
L 3 2 2 3 3 3 3 2 2 0 1 0 0 2 rec	T 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Tot (C) 5 3 3 4 3 4 3 3 2 2 2 1 2 1 0.5 1 1 Hours	al (H) 6 4 4 4 3 2 2 0 1 1 1 0 5=30	As per RBU School Core School Elective Dept Core Dept Core Dept Elective Univ Elective Univ Elective Essential Comp Essential Comp Essential Comp	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSE Open Elective AECC SEC SEC Foundation Core Foundation Core
L 3 2 2 3 3 3 2 2 0 1 0 0 2 rec	T 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Tot (C) 5 3 3 4 3 3 4 3 3 2 2 2 2 1 2 1 0.5 1 1 Hours (C)	al (H) 6 4 4 4 3 2 2 0 1 1 1 0 5=30 al (H)	As per RBU School Core School Elective Dept Core Dept Core Dept Elective Univ Elective Univ Elective Essential Comp Essential Comp Essential Comp	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSE Open Elective AECC SEC SEC Foundation Core Foundation Core Foundation Core Foundation Core Ategory of Course As per UGC-CBCS
L 3 2 2 3 3 3 3 2 2 0 1 0 0 2 7 cec 2 1 0 0 2 7 2 0 1 2 2 2 3 3 3 2 2 2 3 3 3 2 2 2 3 3 3 2 2 2 3 3 3 2 2 2 2 3 3 3 2 2 2 2 3 3 3 2 2 2 2 3 3 3 2 2 2 2 3 3 3 2 2 2 2 0 1 2 1 1 2 2 2 2 3 3 3 2 2 2 2 3 3 3 2 2 2 2	T 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Tot (C) 5 3 3 4 3 2 2 2 2 2 2 1 0.5 1 Hours Fot (C) 3	al (H) 6 4 4 3 3 2 2 2 0 1 1 1 1 0 s=30 s=30 al (H) 3	As per RBU School Core School Elective Dept Core Dept Core Dept Elective Univ Elective Univ Elective Essential Comp Essential Comp Essential Comp C As per RBU School Elective	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSC DSE Open Elective AECC SEC Foundation Core Foundation Core Foundation Core Ategory of Course As per UGC-CBCS Foundation Elective
L 3 2 2 3 3 3 2 2 0 1 0 0 2 rec 2 3	T 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Tot (C) 5 3 3 4 3 4 3 3 2 2 2 2 1 2 1 2 1 0.5 1 1 1 0.5 1 1 1 0.5 1 1 3 4 4	al (H) 6 4 4 4 3 2 2 0 1 1 1 0 5 5	As per RBU School Core School Elective Dept Core Dept Core Dept Elective Univ Elective Univ Elective Essential Comp Essential Comp Essential Comp C As per RBU School Elective Dept Core	As per UGC-CBCS Foundation Core Foundation Elective DSC DSC DSC DSE Open Elective AECC SEC SEC Foundation Core Foundation Core Foundation Core As per UGC-CBCS Foundation Elective DSC

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4	0	0	4 4	Dept Core DSC
3	0	0	3 3	Dept Core DSC
3	0	0	3 3	Dept Elective DSE
3	0	0	3 3	Dept Elective DSE
2	0	0	2 2	Univ Elective Interdisc/Generic Elective
1	0	0	1 1	Essential Comp SEC
0	0	0.5	0.5 1	Essential Comp Foundation Core
Crec	lits=	-26.5	Hours=29	
				Category of Course
L	Т	Р	Total (C) (H)	As per RBU As per UGC-CBCS
2	0	1	3 4	Dept Core DSC
2	1	0	3 3	Dept Core DSC
2	0	1	3 4	Dept Core DSC
3	0	0	3 3	Dept Elective DSE
2	0	0	2 2	Univ Elective Open Elective
2	0	0	2 2	Univ Elective Interdisc/Generic Elective
0	0	0	4 4	Essential Comp SEC
0	0	0	2 0	Essential Comp SEC
0	0	0.5	0.5 1	Essential Comp Foundation Core
Crec	lits=	-22.5	Hours=23	
				Category of Course
L	т	Р	Total (C) (H)	As per RBU As per UGC-CBCS
0	0	0	9 8	Essential Comp SEC
0	0	0	10 0	Essential Comp SEC
0	0	0.5	0.5 1	Essential Comp Foundation Core
0	0	0	1 0	Essential Comp Foundation Core
Crec	lits=	-20.5	Hours=17	

act hours;

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S.No.	Code
1	AMG001
2	ASG001/ASG002
3	EEG001
4	MEG001
5	CSG001
6	CSE117
7	OPUNNN
8	HMU101
9	MCG001
J	
-	
S.No.	Code
1	AMG002
2	ASG002/ASG001
3	ECG001
4	CEG001
5	ECG401
6	MEG051/HVU100
7	CSE111
8	CPU200
9	MCG002
S.No.	Code
1	AMG003
2	CEG058
3	MEG052
4	HVU100/MEG051
5	CSG053
6	CSG251
7	CSE112
8	OPUNNN
•	

9	PRG001
10	MCG003
* fror	n preceding Summer
S.No.	Code
1	CEG060
2	ASG005
3	CSS100
4	CSG301
5	CSG101
6	ECG102
7	CSE137
8	CSENNN
9	HMUNNN
10	MCG004
10	INCOUT
S No	Codo
5.110.	Code
1	CSC002
2	CSG002 CSS101
2	CS3101 CSC051
3	CSG051
4 F	C50252
5	CSG302
0	
/	OPUNINN
0	0011204
ŏ	
9	PIGUUL
10	
11	IVICG005
12	DPG001
* •	
Tror	n preceding Summer
S.No.	Code
1	CSS102
2	CSG151
3	CSG201
4	CSG401
5	CSG451

6	CSE114
7	CSENNN
8	HMUNNN
9	SPG001
10	MCG006
S.No.	Code
1	CSG152
2	CSG453
3	CSG102
4	CSE115
5	OPUNNN
6	HMUNNN
7	MNG001
8	PTG002
9	MCG007
* fror	n preceding Summer
S.No.	Code
1	MJG001
2	PNG001
3	MCG008
4	DXG001
	То
PLEAS	E NOTE:
1. Eac	h Lecture and Tutorial Cr
2. UE	(H&M) = University Elect

RAYAT-BAHRA UNIVERSITY

University School of Engineering & Technology (USET)

Department of Computer Science & Engineering

Bachelor of Technology (Computer Science & Engineering)-iot on JAVA Course Structure - B.Tech. (CSE) - Four Years - Eight Semesters

Sem-I (Year-I)				
Course Title	L	т	Ρ	Total (C) (H)
Applied Math -I	2	1	0	3 3
Applied Physics*/ Industrial Chemistry*	3	0	1	4 5
Basics of Electrical Engineering	2	0	1	3 4
Basics of Mechanical Engineering & Workshop - SEC -I	2	0	2	4 6
Fundamentals of Computers & Languages	2	0	1	3 4
Introduction to SQL (Industry Partner Course - I)	3	0	0	3 3
UE (Open) - I	2	0	0	2 2
Essentials of Management - UE (H&M) -I - GE - I	2	0	0	2 2
Student Mentoring & Counselling	0	0	0.5	0.5 1
	Cred	its =	24.5	Hours=30
Sem-II (Year-I)				
Course Title	L	т	Р	Total (C) (H)
Applied Math - II	2	1	0	3 3
Industrial Chemistry*/ Applied Physics*	3	0	1	4 5
Basics of Electronics	2	0	1	3 4
Basics of Civil & Environmental Studies	3	0	0	3 3
Instrumentation for Engineers & Scientists - SEC - II	2	0	1	3 4
Engineering Drawing and Practical Geometry - SEC - III/ Human	. / .		• / •	
Values and Professional Ethics - AECC - II	1/2	0	2/1	3 5/4
JAVA Fundamentals (Industry Partner Course - II)	3	0	0	3 3
English Communication & Soft Skills - UE (C&PD) - I - AECC -I	2	0	0	2 2
Student Mentoring & Counselling	0	0	0.5	0.5 1
QCr	edits=	24.	5 Ho	urs= 30/29
Sem-III (Year-II)			•	
Course Title	L	т	Р	Total (C) (H)
Applied Math - III	2	1	0	3 3
Materials Science & Engineering	3	0	1	4 5
Engineering Design	3	0	0	3 3
Human Values and Professional Ethics - AECC - II/ Engineering	2/4	•	1/2	2 4/5
Drawing and Practical Geometry - SEC - III	2/1	0	1/2	3 4/5
Object Oriented Programming - DSC - I	2	0	1	3 4
Data Structures - DSC - II	2	0	1	3 4
JAVA Programming (Industry Partner Course - III)	3	0	0	3 3
UE(Open) - II	2	0	0	2 2

Industrial Tour* - SEC - IV	0	0	0	1 1
Student Mentoring & Counselling	0	0	0.5	0.5 1
Credits-25 5 Hours-20/				

Credits=25.5	Hours= 30/	/31
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Sem-IV (Year-II)				
Course Title	L	т	Ρ	Total (C) (H)
Nanomaterials & Nanotechnology	2	0	0	2 2
Statistical Analysis & Techniques - Sec - V	2	1	0	3 3
Functional Materials in Computer Engineering - SE - I	3	0	0	3 3
Data Communication & Computer Networks DSC - III	2	0	1	3 4
Operating System DSC - IV	3	0	1	4 5
Microprocessor and Programming DSC - V	3	0	1	4 5
Object Oriented Analysis and Design Using UML (Industry Partner	3	0	0	3 3
Course - IV)		Ŭ	Ŭ	515
DSE - V	2	0	0	2 2
Strategic Management - UE (H&M)-II - GE-II	2	0	0	2 2
Student Mentoring & Counselling	0	0	0.5	0.5 1
	Crea	dits=	26.5	Hours=30
Sem-V (Year-III)				
Course Title	L	т	Р	Total (C) (H)
Weighting & MCDM Techniques	3	1	1	5 6
Discrete Mathematics - SE - II	2	0	1	3 4
Programming in Java - DSC - VI	2	0	1	3 4
Theory of Computation - DSC - VII	3	1	0	4 4
Cloud Computing - DSC - VIII	3	0	0	3 3
Web Application Development (Industry Partner Course - V)	3	0	0	3 3
UE (Open) - III	2	0	0	2 2
Image Management & Technical Skills - UE (C&PD)-II - AECC-III	2	0	0	2 2
Industrial Training - I * - SEC - VI	0	0	0	2 0
Term Paper - SEC -VII	1	0	0	1 1
Student Mentoring & Counselling	0	0	0.5	0.5 1
Progression Interview by Dean & HoD	0	0	0	1 0
	Crea	dits=	29.5	Hours=30
Sem-VI (Year-III)				
Course Title	L	т	Ρ	Total (C) (H)
Simulation & Modeling - SE -III	2	1	0	3 3
Relational Database Management System-I - DSC - IX	3	0	1	4 5
Computer Graphics - DSC - X	2	0	1	3 4
Network Security and Cryptography - DSC - XI	4	0	0	4 4
Mobile Application Development	3	0	0	3 3

Mobile Application Development (Industry Partner Course -VI)	3	0	0	3 3
DSE - VIII	3	0	0	3 3
Counselling & Negotiating Skills for Managers- UE (H&M)-III - GE-III	2	0	0	2 2
Technical Seminar - SEC - VIII	1	0	0	1 1
Student Mentoring & Counselling	0	0	0.5	0.5 1
	Crea	dits=	-26.5	Hours=29
Sem-VII (Year-IV)				
Course Title	L	т	Р	Total (C) (H)
Relational Database Management System - I I- DSC - XIII	2	0	1	3 4
Natural Language Processing - DSC - XIV	2	1	0	3 3
Unix and Shell Programming - DSC - XV	2	0	1	3 4
Embedded Application Development (Industry Partner Course -VII)	3	0	0	3 3
UE (Open) - IV	2	0	0	2 2
Leadership & Entrepreneurship - UE (H&M)- IV -GE-IV	2	0	0	2 2
Minor Project - SEC-IX	0	0	0	4 4
Industrial Training - II *	0	0	0	2 0
Student Mentoring & Counselling	0	0	0.5	0.5 1
	Crea	dits=	=22.5	Hours=23
Sem-VIII (Year-IV)		•		
Course Title	L	т	Р	Total (C) (H)
Major Project & Presentation - SEC - X	0	0	0	9 8
Internship	0	0	0	10 0
Student Mentoring & Counselling	0	0	0.5	0.5 1
Dean & HoD's & Guide's Exit Interview	0	0	0	1 0
	Crea	dits=	20.5	Hours=17
tal No. of Credits in B.Tech. (Computer Science & Engineering) - 200				

edit has one Contact hour and Each Practical Credit has two contact hours; tive (Humanities & Management);

C	Category of Course
As per RBU /	As per UGC-CBCS
School Core	Foundation Core
School Core	Foundation Core
School Core	Foundation Core
School Core	Foundation Core/SEC
School Core	Foundation Core
Dept Elective [DSE
Univ Elective	Open Elective
Univ Elective	AECC
Essential Comp	Foundation Core
C	ategory of Course
As per RBU /	As per UGC-CBCS
School Core	Foundation Core
School Core	Foundation Core/SEC
School Core	Foundation Core/SEC
Dept Elective [DSE
Univ Elective	Interdisc/Generic Elective
Essential Comp	Foundation Core
• •	
C	ategory of Course
As per RBU	As per UGC-CBCS
School Core	Foundation Core
School Core	Foundation Core
School Core	Foundation Core
School Core	AECC
Dept Core	DSC
Dept Core	DSC
Dept Elective	DSE
Univ Elective	Open Elective

Essential Comp	SEC			
Essential Comp	Foundation Core			
Ca	ategory of Course			
As per RBU	As per UGC-CBCS			
School Core	Foundation Core			
School Core	Foundation Core			
School Elective	Foundation Elective			
Dept Core	DSC			
Dept Core	DSC			
Dept Core	DSC			
Dept Elective	DSE			
Dept Elective	DSE			
Univ Elective	Interdisc/Generic Elective			
Essential Comp	Foundation Core			
Ca	ategory of Course			
As per RBU	As per UGC-CBCS			
School Core	Foundation Core			
School Elective	Foundation Elective			
Dept Core	DSC			
Dept Core	DSC			
Dept Core	DSC			
Dept Elective	DSE			
Univ Elective	Open Elective			
Univ Elective	AECC			
Essential Comp	SEC			
Essential Comp	SEC			
Essential Comp	Foundation Core			
Essential Comp	Foundation Core			
Category of Course				
As per RBU	As per UGC-CBCS			
School Elective	Foundation Elective			
Dept Core	DSC			
Dept Core	DSC			
Dept Core	DSC			
Dept Core	DSC			

Dept Elective	DSE
Dept Elective	DSE
Univ Elective	Interdisc/Generic Elective
Essential Comp	SEC
Essential Comp	Foundation Core
Ca	ategory of Course
As per RBU	As per UGC-CBCS
Dept Core	DSC
Dept Core	DSC
Dept Core	DSC
Dept Elective	DSE
Univ Elective	Open Elective
Univ Elective	Interdisc/Generic Elective
Essential Comp	SEC
Essential Comp	SEC
Essential Comp	Foundation Core
Ca	ategory of Course
As per RBU	As per UGC-CBCS
Essential Comp	SEC
Essential Comp	SEC
Essential Comp	Foundation Core
Essential Comp	Foundation Core

	RAYAT-BAHRA UNIVERSITY						
	University School of Engineering & Technology (USET)						
			Department of Computer Science & Engir	neering			
			B.Tech. (CSE)				
			DEPARTMENT ELECTIVES				
		For Base Programme: (DSE-I-t	o-DSE-XII) & For Industry Partnered Progra	mmes (DSE-V, DSE-VIII, DSE-X, DSE-XI)			
Code	Specialisations	DSE-I	DSE-II	DSE-III	DSE-IV		
		(CSE101) Open Source Softwares	(CSE102) Introduction to Web Designing	(CSE124) Computer Architecture & Organization	(CSE122) Data Analysis & Algorithms		
		(CSE125) Computer Peripheral & Interfaces	(CSE110) Introduction to Programming Languages	(ECE004) Digital Electronics	(CSE116) System Programming		
		DSE-V	DSE-VI	DSE-VII	DSE-VIII		
		(CSE120) Multimedia Systems	(CSE129) Information Security	(CSE140) Software Testing & Quality	(CSE103)Artificial Intelligence & Neural Networks		
		(CSE138) Software Engineering		Assurance	(CSE121) Image Processing		
	Base Programme	(CSE130) Biometric Security	(CSE122) Advanced Computer Networks		(CSE118) Data Mining		
		(CSE136) Management Information System	(CSE125) Advanced Computer Networks		(CSE135) Soft Computing		
		DSE-IX					
		(CSE131)Cyber Security					
		(CSE158)Distributed Databases					
		For Industry Partn	ered Programmes (DSE-I, DSE-II, DSE-III, DSE	-IV, DSE-VI, DSE-VII, DSE-IX)			
*Students	that opted for Andro	id Development Speciliazation must o	opt for these DSEs				
	Android	(CSE100) Fundamentals of Android Development for Beginners - DSE-I	(CSE104)Developing Android Applications - DSE-II	·(CSE105)Advanced Android App Development - DSE-III	(CSE106)Google Play Services - DSE-IV		
	(Google)	(CSE107)Gradle for Android and Java - DSE-VI	(CSE108)Android Design for Developers - DSE-VII	(CSE109)Android Computing - DSE-IX			
*Students	that opted for IOT or	JAVA Speciliazation must opt for the	se DSEs				
	IOT on JAVA	(CSE117)Introduction to SQL - DSE-I	(CSE111)JAVA Fundamentals - DSE-II	(CSE112)JAVA Programming - DSE-III	(CSE137)Object Oriented Analysis and Design Using UML - DSE-IV		
	(Oracle University)	(CSE113) Web Application Development - DSE-VI	(CSE114) Mobile Application Development - DSE-VII	(CSE115) Embedded Application Development - DSE-IX			

CSE (Inurture)

	SEMESTER	R1				
Sr. No.	Code	Subjects	Lecture	Tutorial	Practical	Credits
1	ENG451	Technical English	3	0	0	3
2	AMG451	Matrices and Calculus	3	1	0	4
3	ASG451	Applied Physics	3	0	2	4
4	ASG452	Industrial Chemistry	3	0	2	4
5	CSG305	Computer fundamentals & organization	3	0	0	3
6	CSG052	Programming in C	3	1	4	6
7	CPU001	Introduction to Public speaking	0	0	2	1
			18	2	10	25
		Contact Hours		30		

	SEMESTER	3.2				
Sr. No.	Code	Subjects	Lecture	Tutorial	Practical	Credits
1	ENG452	Introduction to Communication Skills		0	2	3
2	AMG452	Differential Equations and Complex Analysis	3	0	0	3
3	CSG056	OOPS with C++	3	1	4	6
4	CSG109	Operating System Building Blocks	3	0	0	3
5	CSG402	Information Security – I	3	0	4	5
6	CSG057	Introduction to Web Technology	3	0	2	4
7	CPU002	Reasoning and Thinking -I	0	0	2	1
				1	14	25
		Contact Hours		32		

	SEMESTER	3				
Sr. No.	Code	Subjects	Lecture	Tutorial	Practical	Credits
1	AMG453	ourier Series and Transforms		0	0	3
2	CSG404	OSI layer & Security Protocols	3	0	0	3
3	CSG412	Network Security Basics	4	0	4	6
4	CSG253	Data structures using C	3	0	2	4
5	CSG303	Computer Networks	3	0	2	4
6	CSG108	Designing Enterprise Networks	3	0	2	4
7	CPU003	Reasoning and Thinking –II	0	0	2	1
			19	0	12	25
		Contact Hours 31				

	SEMESTER	R 4				
Sr. No.	Code No.	Subjects	Lecture	Tutorial	Practical	Credits
1	AMG454	Probability and Queuing Theory		0	0	3
2	CSG304	Introduction to Cloud Technology	3	0	0	3
3	CSG103	Introduction to Linux	3	0	4	5
4	CSG403	Information Security – II	3	0	0	3
5	CSG105	Installation and Configuration of Server	3	0	4	5
6	CSG153	Relational Database Management System	3	0	2	4
7	CPU004	Professional Skills	0	0	2	1
				0	12	24
	Contact Hours			30		

	SEMESTER	R 5				
Sr. No.	Code	Subject	Lecture	Tutorial	Practical	Credits
1	CSG452	Principles of Virtualization	4	0	4	6
2	CSG155	Fundamentals of Datacenter	3	0	0	3
3	CSG405	Cryptography Fundamentals	3	0	0	3
4	CSG154	Fundamentals of Storage	3	0	0	3
5	CSG406	Ethical Hacking Fundamentals	3	0	4	5
6	CSG502	Disaster Recovery and Business Continuity Management	3	0	0	3
7	CPU005	Employability Skills- I	0	0	2	1
8	MNG001	Mini Project	0	0	2	1
9	PTG001	PTG001 Industrial Training		-	-	2
			19	0	12	27
		Contact Hours		31		

	SEMESTER 6					
Sr. No.	Code	Subjects	Tutorial	Practical	Credits	
1	CSG104	Introduction to Cloud Computing Solutions	3	0	4	5
2	CSG106	Linux Server Administration	3	0	4	5
3	CSG407	IT Governance, Risk & Information Security Management	3	0	0	3
4	CSG408	Cyber Forensics Basics	3	0	4	5
5	CSG003	Fundamentals of Exchange Server	3	0	0	3
6	CSGNNN	Elective I	3	0	0	3
7	CPU006	Employability Skills – II	0	0	2	1
			18	0	14	25
		Contact Hours 32				

	SEMESTER	R 7				
Sr. No.	Code	Subjects	Lecture	Tutorial	Practical	Credits
1	CSG107	Administration of Server	3	0	4	5
2	CSG409	Virtualization and Cloud Security	3	0	0	3
3	CSG410	Security in Wireless, VOIP and Mobile Apps	4	0	0	4
4	CSG411	Android Security	3	0	4	5
5	CSGNNN	Elective II	3	0	0	3
6	CSG004	Fundamentals of IT Infrastructure Library	3	0	0	3
7	MNG002	Mini Project	0	0	2	1
			19	0	10	24
		Contact Hours 29				

SEMESTER 8						
Sr. No.	Code	Subjects	Lecture	Tutorial	Practical	Credits
1	PNG001	Internship/Project	-	-	-	20
			0	0	0	20

DEPARTMENT ELECTIVES

Abbreviation		Title
	CSE126	OWASP Framework
Elective - I	CSE127	ISO27001, PCIDSS and HIPAA
	CSE134	Hacktivism, Cyber warfare and Cyber Terrorism
	CSE128	Introduction to VOIP
Elective -II	CSE133	Linux Security and Forensics
	CSE141	Advanced Web Technology

Sr. No.	Domain	Level	Code	Subject
		Graduate	CSG001	Fundamentals of Computers and Languages
	Ī	Graduate	CSG002	Weighting & MCDM Techniques
	Ī	Graduate	CSG003	Fundamentals of Exchange Server
	Ē	Graduate	CSG004	Fundamentals of IT Infrastructure Library
1	Foundation Courses	Graduate	CSS100	Functional Materials for Computer Engineers
		Graduate	CSS101	Discrete Mathematics
		Graduate	CSE100	Fundamentals of Android Development for Beginners
		Graduate	CSE101	Open Source Softwares
		Graduate	CSE102	Introduction to Web Designing
		Graduate	CSG051	Programming in Java
	-	Graduate	CSG052	Programming in C
	-	Graduate	CSG052	Object Oriented Programming
	-	Graduate	CSG054	Web Technology
		Graduate	CSG055	Web Technology -I
		Graduate	CSG056	OOPS with C++
		Graduate	CSG057	Introduction to Web Technology
		Graduate	CSE103	Mobile Application Development
		Graduate	CSE104	Introduction to Cloud Computing Solutions
	Programming Languages	Graduate	CSE105	Advanced Android Application Development
2	and Application	Graduate	CSE106	Google Play Services
	Development	Graduate	CSE107	Gradle for Android and JAVA
	-	Graduate	CSE108	Android Design for Developers
	Ē	Graduate	CSE109	Android Computing
		Graduate	CSE110	Introduction to Programming Languages
		Graduate	CSE111	JAVA Fundamentals
		Graduate	CSE112	JAVA Programming
	Ī	Graduate	CSE113	Web Application Development
	-	Graduate	CSE114	Mobile Application Development using JAVA
		Graduate	CSE115	Embedded Application Development
	Ī	Graduate	CSE141	Advanced Web Technology
		Graduate	CSG101	Operating System
	[Graduate	CSG102	UNIX & Shell Programming
		Graduate	CSG103	Introduction to Linux
		Graduate	CSG104	Introduction to Windows Azure
3	System Softwares	Graduate	CSG105	Installation and Configuration of Server
5	System Softwares	Graduate	CSG106	Linux Server Administration
	_	Graduate	CSG107	Administration of Server
		Graduate	CSG108	Designing Enterprise Networks
		Graduate	CSG109	Operating System Building Blocks
		Graduate	CSE116	System Programming
		Graduate	CSG151	Relational Database Management System-I
	Database Systems	Graduate	CSG152	Relational Database Management System-II
		Graduate	CSG153	Relational Database Management System
4		Graduate	CSG154	Fundamentals of Storage
	-	Graduate	CSGI55	Fundamentals of Datacenter
	-	Graduate	CSEI1/	Introduction to SQL
	-	Graduate	CSEI18	Data Mining
		Graduate	CSEI19	Distributed Databases
		Graduate	CSG201	Computer Graphics
5	Multimedia Systems and	Graduate	CSS102	Simulation & Modeling
	Applications	Graduate	CSE120	Multimedia Systems
		Graduate	CSE121	Image Processing
		Graduate	CSG251	Data Structures
6	Algorithms &	Graduate	CSG252	Theory of Computation
	Methodologies	Graduate	CSG253	Data structures using C
		Graduate	CSE122	Data Analysis & Algorithms
		Graduate	<u>CSG301</u>	Cloud Computing
		Graduate		Computer Networks
		Graduate		Introduction to Cloud Technology
		Graduate	CSC304	Computer fundamentals & organization
7	Hardware and Networking	Graduate	CSE123	Advanced Computer Networks
/		Graduate	CSE123	Computer Architecture & Organization
		Graduate	CSE124	Computer Peripherals & Interface
		Graduate	CSE126	OWASP Framework
		Graduate	CSE127	ISO27001, PCIDSS and HIPAA
		Graduate	CSE128	Introduction to VOIP

Domains of CSE Department-Graduate

		Graduate	CSG401	Network Security & Cryptography
		Graduate	CSG402	Information Security-I
	Ī	Graduate	CSG403	Information Security-II
	Ē	Graduate	CSG404	OSI layer & Security Protocols
	Ī	Graduate	CSG405	Cryptography Fundamentals
	Ī	Graduate	CSG406	Ethical Hacking Fundamentals
		Graduate	CSG407	IT Governance, Risk and Information Security Audit
		Graduate	CSG408	Cyber Forensics Basics
o	Security	Graduate	CSG409	Virtualization and Cloud Security
0	Security	Graduate	CSG410	Security in Wireless, VOIP and Mobile Apps
		Graduate	CSG411	Android Security
		Graduate	CSG412	Network Security Basics
		Graduate	CSE129	Information Security
		Graduate	CSE130	Biometric Security
		Graduate	CSE131	Cyber Security
			CSE132	Security Threats and Trends
			CSE133	Linux Security and Forensics
			CSE134	Hacktivism, Cyber warfare and Cyber Terrorism
		Graduate	CSG451	Artificial Intelligence & Neural Networks
Q	Artificial Intelligence	Graduate	CSG452	Principles of Virtualization
)	Artificial intelligence	Graduate	CSG453	Natural Language Processing
		Graduate	CSE135	Soft Computing
10	Management Information	Graduate	CSG502	Disaster Recovery and Business Continuity Management
10	System	Graduate	CSE136	Management Information System
		Graduate	CSE137	Object Oriented Analysis and Design Using UML
11	Software Engineering	Graduate	CSE138	Software Engineering
11	Software Engineering	Graduate	CSE139	Unified Modeling Language
	[Graduate	CSE 140	Software Testing & Quality Assurance