

KUMARAGURU COLLEGE OF TECHNOLOGY, COIMBATORE – 641 049
REGULATIONS 2018

B.E COMPUTER SCIENCE AND ENGINEERING
CURRICULUM

Semester I										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18MAI1201	Linear Algebra and Calculus	Embedded - Theory & Lab	BS	3	0	2	0	4	
2	U18ENI1201	Fundamentals of Communication -I	Embedded - Theory & Lab	HS	2	0	2	0	3	
3	U18PHI1201	Engineering Physics	Embedded - Theory & Lab	BS	3	0	2	0	4	
4	U18CSI1201	Structured Programming using C	Embedded - Theory & Lab	ES	3	0	2	0	4	
5	U18EEI1201	Basic Electrical and Electronics Engineering	Embedded - Theory & Lab	ES	3	0	2	0	4	
6	U18INI1600	Engineering Clinic-I	Project based course with lab	ES	0	0	4	2	3	
Total Credits										22
Total Contact Hours/week										30

Semester II										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18MAI2201	Advanced Calculus and Laplace Transforms	Embedded - Theory & Lab	BS	3	0	2	0	4	U18MAI1201
2	U18ENI2201	Fundamentals of Communication-II	Embedded - Theory & Lab	HS	2	0	2	0	3	
3	U18BTI2201	Computational Biology	Embedded - Theory & Lab	BS	3	0	2	0	4	
4	U18CSI2201	Python Programming	Embedded - Theory & Lab	ES	2	0	2	0	3	
5	U18CSI2202	Digital Logic and Microprocessor	Embedded - Theory & Lab	PC	3	0	2	0	4	U18EEI1201
6	U18INI2600	Engineering Clinic-II	Project based course with lab	ES	0	0	4	2	3	U18INI1600
Total Credits										21
Total Contact Hours/week										29


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Semester III										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18MAT3102	Discrete Mathematics	Theory	BS	3	1	0	0	4	
2	U18CSI3201	Data Structures	Embedded - Theory & Lab	PC	3	0	2	0	4	
3	U18CSI3202	Object Oriented Programming	Embedded - Theory & Lab	PC	3	0	2	0	4	
4	U18CST3003	Computer Architecture	Theory	PC	3	0	0	0	3	
5	U18CSI3204	Database Management Systems	Embedded - Theory & Lab	PC	3	0	2	0	4	
6	U18INI3600	Engineering Clinic-III	Project based course with lab	ES	0	0	4	2	3	U18INI2600
Total Credits									22	
Total Contact Hours/week									28	

Semester IV										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18MAI4201	Probability and Statistics	Embedded - Theory & Lab	BS	3	0	2	0	4	
2	U18CST4001	Design and Analysis of Algorithms	Theory	PC	3	0	0	0	3	U18CSI3201
3	U18CSI4202	Operating Systems	Embedded - Theory & Lab	PC	3	0	2	0	4	U18CST3003
4	U18CST4003	Theory of Computation	Theory	PC	3	0	0	0	3	U18MAT3102
5	U18CSI4204	Software Engineering	Embedded - Theory & Lab	PC	3	0	2	0	4	U18CSI3202
6	U18INI4600	Engineering Clinic-IV	Project based course with lab	ES	0	0	4	2	3	U18INI3600
Total Credits									21	
Total Contact Hours/week									27	


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Semester V										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18CSI5201	Computer Networks	Embedded - Theory & Lab	PC	3	0	2	0	4	
2	U18CST5002	Agile Software Development	Theory	PC	3	0	0	0	3	U18CSI4204
3	U18CSI5203	No SQL Databases	Embedded - Theory & Lab	PC	3	0	2	0	4	U18CSI3204
4	U18CST5004	Social Media Marketing	Theory	PC	3	0	0	0	3	
5	U18CSI5205	Mobile Application Development using Android	Embedded - Theory & Lab	ES	1	0	4	0	3	
6	U18OE-----	Open Elective	Theory	OE	3	0	0	0	3	
7	U18CSE-----	Programme Elective- I	Theory	PE	3	0	0	0	3	
Total Credits									23	
Total Contact Hours/week									28	

Semester VI										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18CSI6201	Internet and Web Programming	Embedded - Theory & Lab	PC	3	0	2	0	4	
2	U18CST6002	Wireless Networks and Mobile Systems	Theory	PC	3	0	0	0	3	U18CSI5201
3	U18CSI6203	Data Warehousing and Data Mining	Embedded - Theory & Lab	PC	3	0	2	0	4	U18CSI5203
4	U18CST6004	Software Testing	Theory	PC	3	0	0	0	3	U18CST5002
5	U18OE-----	Open Elective	Theory	OE	3	0	0	0	3	
6	U18CSE-----	Programme Elective- II	Theory	PE	3	0	0	0	3	
Total Credits									20	
Total Contact Hours/week									22	


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Semester VII										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18CSI7201	Cloud Computing	Embedded - Theory & Lab	PC	3	0	2	0	4	U18CSI5201
2	U18CST7002	Machine Learning Techniques	Theory	PC	3	0	0	0	3	U18CSI6203
3	U18CSE----	Programme Elective-III	Theory	PE	3	0	0	0	3	
4	U18CSE----	Programme Elective-IV	Theory	PE	3	0	0	0	3	
5	U18CSP7703	Project Phase-I	Project only Course	PW	0	0	0	6	3	
Total Credits									16	
Total Contact Hours/week									20	

Semester VIII										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18CSP8701	Project Phase-II	Project only Course	PW	0	0	0	24	12	
Total Credits									12	
Total Contact Hours/week									24	

Total Credits									157
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Mandatory Courses										
S.No	Couse Code	Course Title	Course Mode	CT	L	T	P	J	C	Semester
1	U18CHT4000	Environmental Science and Engineering	Theory	MC	3	0	0	0	0	4
2	U18INT5000	Constitution of India	Theory	MC	2	0	0	0	0	5
3	U18VET4101	Universal Human Values-II	Theory	HS	3	0	0	0	0	4

Programme Electives										
S.No	Course code	Course Title	Cours e Mode	CT	L	T	P	J	C	
Data Analytics										
1.	U18CSE0001	Big Data Technologies	Theory	PE	3	0	0	0	0	3
2.	U18CSE0002	Data Visualization	Theory	PE	3	0	0	0	0	3
3.	U18CSE0003	Artificial Intelligence	Theory	PE	3	0	0	0	0	3
Networking										
1.	U18CSE0004	IoT Architecture and Protocols	Theory	PE	3	0	0	0	0	3
2.	U18CSE0005	Adhoc and Sensor Networks	Theory	PE	3	0	0	0	0	3
3.	U18CSE0006	Software Defined Networks	Theory	PE	3	0	0	0	0	3
4.	U18CSE0007	Cryptography and Network Security	Theory	PE	3	0	0	0	0	3
5.	U18CSE0012	Blockchain Technology and Applications	Theory	PE	3	0	0	0	0	3
General										
1.	U18CSE0008	Principles of Compiler Design	Theory	PE	3	0	0	0	0	3
2.	U18CSE0009	Graphics and Multimedia	Theory	PE	3	0	0	0	0	3
3.	U18CSE0010	Information Security	Theory	PE	3	0	0	0	0	3
4.	U18CSE0011	Declarative Development of Customized Applications	Theory	PE	2	0	0	0	2	3
5.	U18CSE0013	Professional Readiness for Innovation, Employability And Entrepreneurship	Theory	PE	3	0	0	0	0	3


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Courses Offered by Forge (for Protosem Students)

S.No	Course Code	Course Name	Course Type	Credits
1.	U18CSPS11	Applied Design Thinking	OE	3
2.	U18CSPS12	Electronic System Design	PE	3
3.	U18CSPS13	Embedded System Design and Development	PE	3
4.	U18CSPS14	Artificial Intelligence of Things	PC	3
5.	U18CSPS15	App Development and Android Things	PE	3
6.	U18CSPS16	Industrial Design and Product Development	PE	3
7.	U18CSPS17	Startup Fundamentals	OE	3
8.	U18CSPS18	IPR Fundamentals and Patent Drafting	OE	3
9.	U18CSPS19	MUP Product Design and Development	ES	3
10.	U18CSPS23	Computational Hardware	PE	3
11.	U18CSPS24	Coding for Innovators	PE	3
12.	U18CSPS25	Prototype Development	PE	3
13.	U18CSPS28	Data Life Cycle Management	PE	3
14.	U18CSPS29	ML/MLOps	PE	3

One Credit Courses offered by Industry

S.No	Course Code	Course Name	Industry Name
1.	U18CSIN001	Cyber Forensics	Alfa Beta Gamma Cyber Solutions, Coimbatore
2.	U18CSIN002	Augmented Reality	Meticulous Academy of Xcellence, Chennai
3.	U18CSIN003	Web Application Development using NodeJS	Teknoturf Info Services Pvt Ltd, Coimbatore

Open Elective Courses

S.No	Course Code	Course Name	Credits
1.	U18CSO0001	Data structures and Applications	3
2.	U18CSO0002	Database Application Development using Open Source Technologies	3
3.	U18CSO0003	Web Programming with XML	3
4.	U18CSO0004	Web Design	3
5.	U18CSO0005	Deep Learning for Computer Vision with Python and R	3
6.	U18CSO0006	Introduction to Internet of Things for Core Engineering	3
7.	U18CSO0007	2D Graphic Designing	3
8.	U18CSO0008	Data Analytics using Python	3
9.	U18CSO0009	Android Development with Java	3
10.	U18CSO0010	AI and Deep Learning Fundamentals	3
11.	U18CSO0011	Social Data Analytics and Visualization	3


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Bridge course (2021 batch onwards)

S.No	Course Code	Course Name	Credits
1.	U18CST0101	Basics of Computing	2

MINOR SPECIALIZATION (2019 BATCH ONWARDS)**INTERNET OF THINGS**

S.No	Course code	Course Title	Course Mode	L	T	P	J	C	Prerequisite
1.	U18CSR3001	IoT Fundamentals and Applications	Theory	3	0	0	0	3	-
2.	U18CSR4202	IoT Protocols and Programming	Embedded	2	0	2	0	3	U18CSR3001
3.	U18CSR5203	IoT Analytics	Embedded	3	0	2	0	4	U18CSR4202
4.	U18CSR6004	Industrial IoT	Theory	3	0	0	0	3	U18CSR3001
5.	U18CSR7705	Capstone Project	Project	0	0	0	4	2	-
Total credits				15					

CYBER SECURITY

S.No	Course code	Course Title	Course Mode	L	T	P	J	C	Pre-requisite
1.	U18CSR3011	Introduction to Cyber Security	Theory	3	0	0	0	3	-
2.	U18CSR4012	Network Security and cryptography	Theory	3	0	0	0	3	U18CSR3011
3.	U18CSR5213	Ethical Hacking and Network Defense	Embedded	3	0	2	0	4	U18CSR4012
4.	U18CSR6214	Cyber Forensics	Embedded	2	0	2	0	3	-
5.	U18CSR7715	Mini Project	Project	0	0	0	2	1	-
6.	U18CSR7516	Industry Interaction	Practical	0	0	2	0	1	-
Total Credits				15					

ENTERPRISE NETWORKING AND NETWORK PROGRAMMING

S. No.	Course code	Course Title	Course Mode	L	T	P	J	C	Pre-requisite
1.	U18CSR3221	CCNA - Introduction to Networks	Embedded	2	0	2	0	3	-
2.	U18CSR4222	CCNA – Switching, Routing & Wireless Essentials	Embedded	2	0	2	0	3	U18CSR3221
3.	U18CSR5223	CCNA - Enterprise Networking, Security & Automation	Embedded	2	0	2	0	3	U18CSR4222
4.	U18CSR6224	TCP/IP Socket Programming using Python	Embedded	3	0	2	0	4	U18CSI2201
5.	U18CSR7725	Mini Project	Project	0	0	0	2	1	-
6.	U18CSR7526	Industry Interaction	Practical	0	0	2	0	1	
Total Credits				15					

S. Anjali.
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