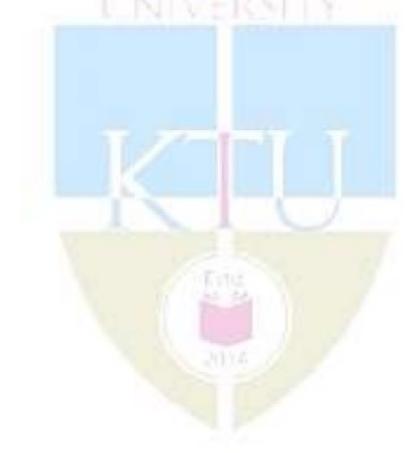**ANNEXURE 1**

Regulation for B.Tech, 2019

R3.7	Every course of B. Tech. Program shall be placed in one of the nine categories as listed in table below.		

S. No.	Category	Code	Breakup of Credits
1	Humanities and Social Sciences including Management courses	HSMC	8
2	Basic Science courses	BSC	26
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc	ESC	22
4	Professional core courses	PCC	76
5	Professional Elective courses relevant to chosen specialization/branch	PEC	15
6	Open subjects – Electives from other technical and /or emerging subjects ` as specified in the curriculum concerned.	OEC	03
7	Project work, seminar and internship in industry or elsewhere	PROJ	10
8	Mandatory Courses [Environmental Sciences, Induction training, Indian Constitution, Essence of Indian Traditional Knowledge]	MC	Non credit
9	Mandatory Student Activities (Pass/Fail)	SA	2
	Total Credits		162

CURRICULUM I TO VIII: ELECTRICAL & ELECTRONICS ENGINEERING

Every course of B. Tech. Program shall be placed in one of the nine categories as listed in table below.

Sl. No	Category	Code	Credits
1	Humanities and Social Sciences including Management courses	HMC	8
2	Basic Science courses	BSC	26
3	Engineering Science Courses	ESC	22
4	Program Core Courses	PCC	76
5	Program Elective Courses	PEC	15
6	Open Elective Courses	OEC	3
7	Project work and Seminar	PWS	10
8	Mandatory Non-credit Courses (P/F) with grade	MNC	-----
9	Mandatory Student Activities (P/F)	MSA	2
	Total Mandatory Credits		**162**
10	Value Added Course (Optional)	VAC	20

KERALA TECHNOLOGICAL UNIVERSITY

CET Campus, Thiruvananthapuram, Kerala-695016

ORDINANCE

For

Bachelor of Technology B.Tech./B.Tech. (Honours)

B.Tech. Programme.

Knowledge Segments	Credits
Design Project	2
Project	6
Student's Activities	2 [Audit- Pass/ Fail]

a) DESIGN PROJECT

Each student or a group of students has to take up a design project. The project topic could be arrived at in consultation with any faculty member in the department. The Evaluation of the project is to be done in two stages. Two project progress evaluations each carrying 20 marks and a final report evaluation and presentation of the project for 60 marks. The project supervisor and two other faculty members from the same or any other department, nominated by the Head of the Department form the evaluation board.

b) FINAL SEMESTER PROJECT

Students, either individually or in a small batch not exceeding four, have to do a project approved by their faculty supervisor.

The evaluation scheme is given below:-

i) Two progress assessments   20% by the faculty supervisor/s

ii) Final Project Report   30% by the Assessment Board

iii) Project presentation and Viva 50% by the Assessment Board

If the project work is not completed satisfactorily, the student has to put in more work and appear again for assessment on a specified date, not earlier than one month after the first evaluation. If the student fails in the project, a fresh registration for the project for one semester is mandatory.

The project assessment board shall consist of the following members. Chairman: Head of the Department

Members: Project supervisor/s of the student

One faculty member from the Department

(c) Student Activities Points:

To be an engineer capable of competing globally, in addition to technical knowledge and skills, students should develop excellent soft skills, nurture teamwork and leadership qualities, and have an entrepreneurial and trailblazing outlook. To achieve this, in addition to academics, students are to actively engage in co-curricular and extracurricular activities. For such activities, points are allotted. On getting a minimum of 100 activity points the student passes the course and earns 2 credits which do not count for the CGPA but are mandatory for the award of the degree. Listing of these activities and the maximum points that could be earned by engaging in them are given at the end of this document. Additional activities could be included in the list with the approval of the Academic Committee

(d) Curriculum, List of Courses, and Syllabi

i)   Every branch of study in the B.Tethe ch., program will have a curriculum, list of courses, syllabi and course plans approved by the Academic Committee of the University.
ii)   Courses are categorized as Core Theory (CT), Core Practice (CP), and Electives (EL).
iii)   Each course has a course number. Course number includes the offering department or knowledge segment code and a three-digit number. Knowledge segment code is used when a course is offered by any one or more departments with the same course content and syllabus. Details on this are given under Rule, RU-1.

Thiruvanthapuram
26-6-2015   **Registrar**

BRANCH: *Computer Science & Engineering*

SEMESTER - 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
CS301	Theory of Computation	3-1-0	4	A
CS303	System Software	2-1-0	3	B
CS305	Microprocessors and Microcontrollers	2-1-0	3	C
CS307	Data Communication	3-0-0	3	D
CS309	Graph Theory and Combinatorics	2-0-2	3	E
	Elective 1	3-0-0	3	F
CS341	Design Project	0-1-2	2	S
CS331	System Software Lab	0-0-3	1	T
CS333	Application Software Development Lab	0-0-3	1	U

Total Credits = 23   Hours: 29   Cumulative Credits= 117

Elective 1:-   1. CS361   Soft Computing

2. CS363   Signals and Systems

3. CS365   Optimization Techniques

4. CS367   Logic for Computer Science

5. CS369   Digital System Testing & Testable Design

BRANCH: *Computer Science & Engineering*

SEMESTER - 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
CS302	Design and Analysis of Algorithms	3-1-0	4	A
CS304	Compiler Design	3-0-0	3	B
CS306	Computer Networks	3-0-0	3	C
CS308	Software Engineering and Project Management	3-0-0	3	D
HS300	Principles of Management	3-0-0	3	E
	Elective 2	3-0-0	3	F
CS332	Microprocessor Lab	0-0-3	1	S
CS334	Network Programming Lab	0-0-3	1	T
CS352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23   **Hours: 27**   **Cumulative Credits= 140**

Elective 2:-

1. CS362   Computer Vision

2. CS364   Mobile Computing

3. CS366   Natural Language Processing

4. CS368   Web Technologies

5. CS372   High Performance Computing

4

BRANCH: *Computer Science & Engineering*

SEMESTER - 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
CS401	Computer Graphics	4-0-0	4	A
CS403	Programming Paradigms	3-0-0	3	B
CS405	Computer System Architecture	3-0-0	3	C
CS407	Distributed Computing	3-0-0	3	D
CS409	Cryptography and Network Security	3-0-0	3	E
	Elective 3	3-0-0	3	F
CS451	Seminar & Project Preliminary	0-1-4	2	S
CS431	Compiler Design Lab	0-0-3	1	T

Total Credits = 22   **Hours: 27**   **Cumulative Credits= 162**

Elective 3:-

1. CS461   Computational Geometry

2. CS463   Digital Image Processing

3. CS465   Bio Informatics

4. CS467   Machine Learning

5. CS469   Computational complexity

BRANCH: *Computer Science & Engineering*

SEMESTER - 8

Course Code	Course Name	L-T-P	Credits	Exam Slot
CS402	Data Mining and Ware Housing	3-0-0	3	A
CS404	Embedded Systems	3-0-0	3	B
	Elective 4	3-0-0	3	C
	Elective 5 (Non Departmental)	3-0-0	3	D
CS492	Project		6	S

Total Credits = 18   Hours: 30   Cumulative Credits= 180

Elective 4:-

1. CS462   Fuzzy Set Theory and Applications

2. CS464   Artificial Intelligence

3. CS466   Data Science

4. CS468   Cloud Computing

5. CS472   Principles of Information Security

KERALA TECHNOLOGICAL UNIVERSITY

ERNAKULAM- I CLUSTER

SCHEME AND SYLLABI

FOR

M. Tech. DEGREE PROGRAMME

IN

COMPUTER AIDED STRUCTURAL ENGINEERING

(2015 ADMISSION ONWARDS)

SCHEME AND SYLLABI FOR M. Tech. DEGREE PROGRAMME IN COMPUTER AIDED STRUCTURAL ENGINEERING

SEMESTER-1

Exam Slot	Course No:	Name	L-T -P	Internal Marks	End Semester Exam		Credits
					Marks	Duration (hrs)	
A	06CE6011*	Advanced Structural Design	4-0-0	40	60	3	4
B	06CE6021*	Structural Dynamics	4-0-0	40	60	3	4
C	06CE6031	Theory of Elasticity	4-0-0	40	60	3	4
D	06CE6041*	Numerical Methods in Civil Engineering	3-0-0	40	60	3	3
E	06CE6X51	Elective – I	3-0-0	40	60	3	3
F	06CE6061****	Research methodology	1-1-0	100	0	0	2
G	06CE6071	Seminar I	0-0-2	100	0	0	2
H	06CE6081	Computer Applications Lab	0-0-2	100	0	0	1

Credits: 23

	Elective I (06CE6X51)
06CE6151	Advanced Analysis of Structures
06CE6251	Soft Computing Tools for Engineering
06CE6351	Random Vibrations

* - Common to Structural Engineering and Construction Management

****- Common to Structural Engineering and Construction Management,   Construction Engineering and Management, Geo-Mechanics and Structures and Environmental Engineering.

SEMESTER-II

Exam Slot	Course No:	Name	L- T – P	Internal Marks	End Semester Exam		Credits
					Marks	Duration (hrs)	
A	06CE6012	Advanced Finite Element Methods	4-0-0	40	60	3	4
B	06CE6022	Prestressed Concrete	3-0-0	40	60	3	3
C	06CE6032	Theory of Plates and shells	3-0-0	40	60	3	3
D	06CE6X42	Elective II	3-0-0	40	60	3	3
E	06CE6X52	Elective III	3-0-0	40	60	3	3
F	06CE6062	Mini Project	0-0-4	100	0	0	2
G	06CE6072	Structural Engineering Design Studio	0-0-2	100	0	0	1

Credits: 19

Elective II - (06CE6X42)		Elective III- (06CE6X52)	
06CE6142**	Bridge Engineering	06CE6152	Structural Stability
06CE6242	Structural Reliability	06CE6252	High Rise Structures
06CE6342	Design of Substructures	06CE6352	Experimental Stress Analysis

** - Common to Structural Engineering and Construction Management and Geo-Mechanics and Structures.

SEMESTER-III

Exam Slot	Course No:	Name	L- T – P	Internal Marks	End Semester Exam		Credits
					Marks	Duration (hrs)	
A	06CE7X11	Elective IV	3-0-0	40	60	3	3
B	06CE7X21	Elective V	3-0-0	40	60	3	3
C	06CE7031	Seminar II	0-0-2	100	0	0	2
D	06CE7041	Project(Phase 1)	0-0-8	50	0	0	6

Credits: 14

Elective-IV(06CE7X1)		Elective-V(06CE7X21)	
06CE7111	Advanced Metal Structures	06CE7121	Concrete Material Science
06CE7211	Analysis of Composite Structures	06CE7221	Engineering Fracture Mechanics
06CE7311	Structural Optimization	06CE7321	Forensic Engineering

SEMESTER-IV

Exam Slot	Course No:	Name	L- T – P	Internal Marks	End Semester Exam		Credits
					Marks	Duration (hrs)	
A	06CE7012	Project (Phase 2)	0-0-21	70	30	0	12

Credits: 12

Total Credits for all semesters: 68