

**Third Meeting of  
Academic Council  
Agenda  
07.09.2018**

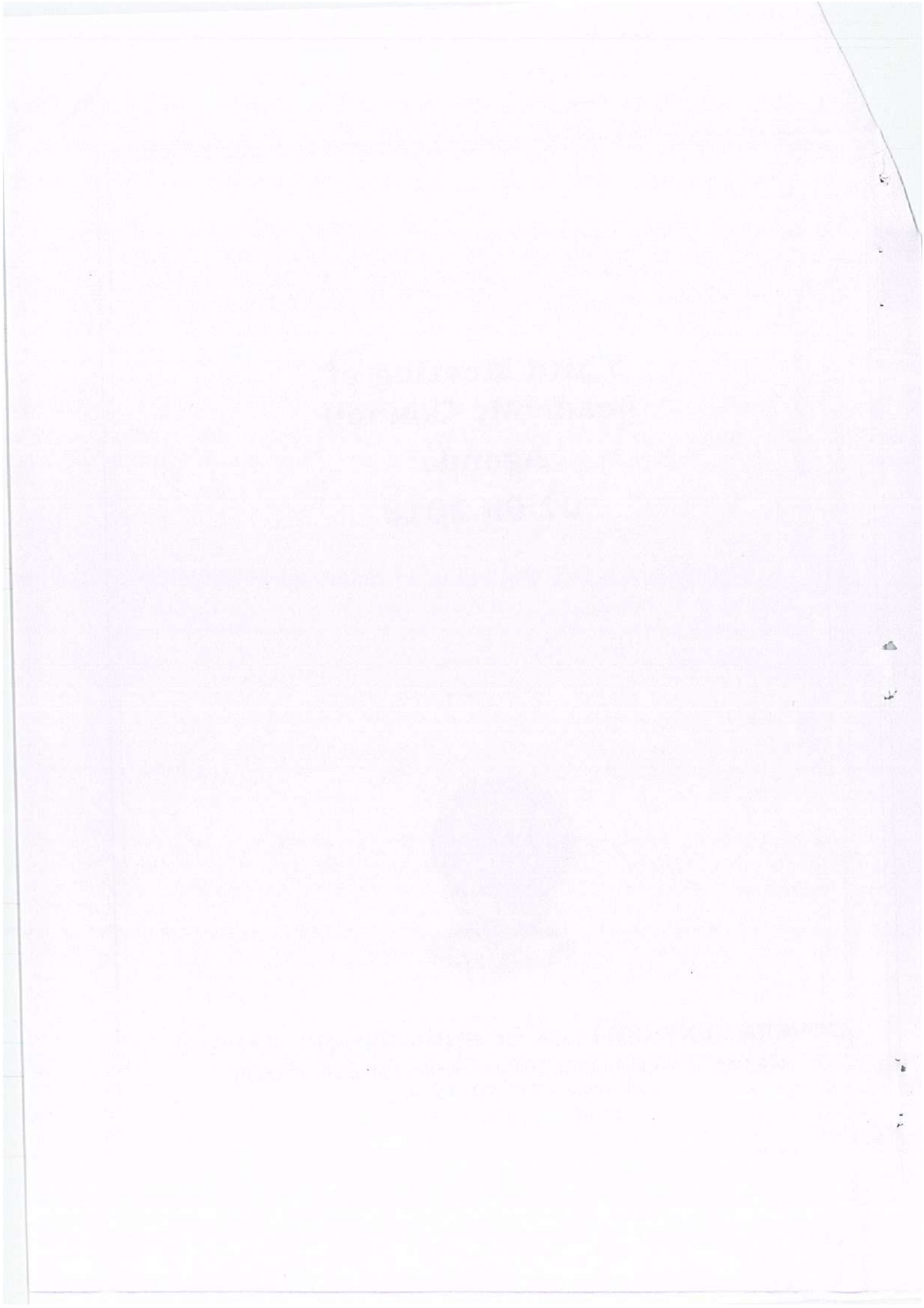


**GOVERNMENT COLLEGE OF ENGINEERING, BARGUR**

(An Autonomous Institution, Affiliated to Anna University, Chennai)

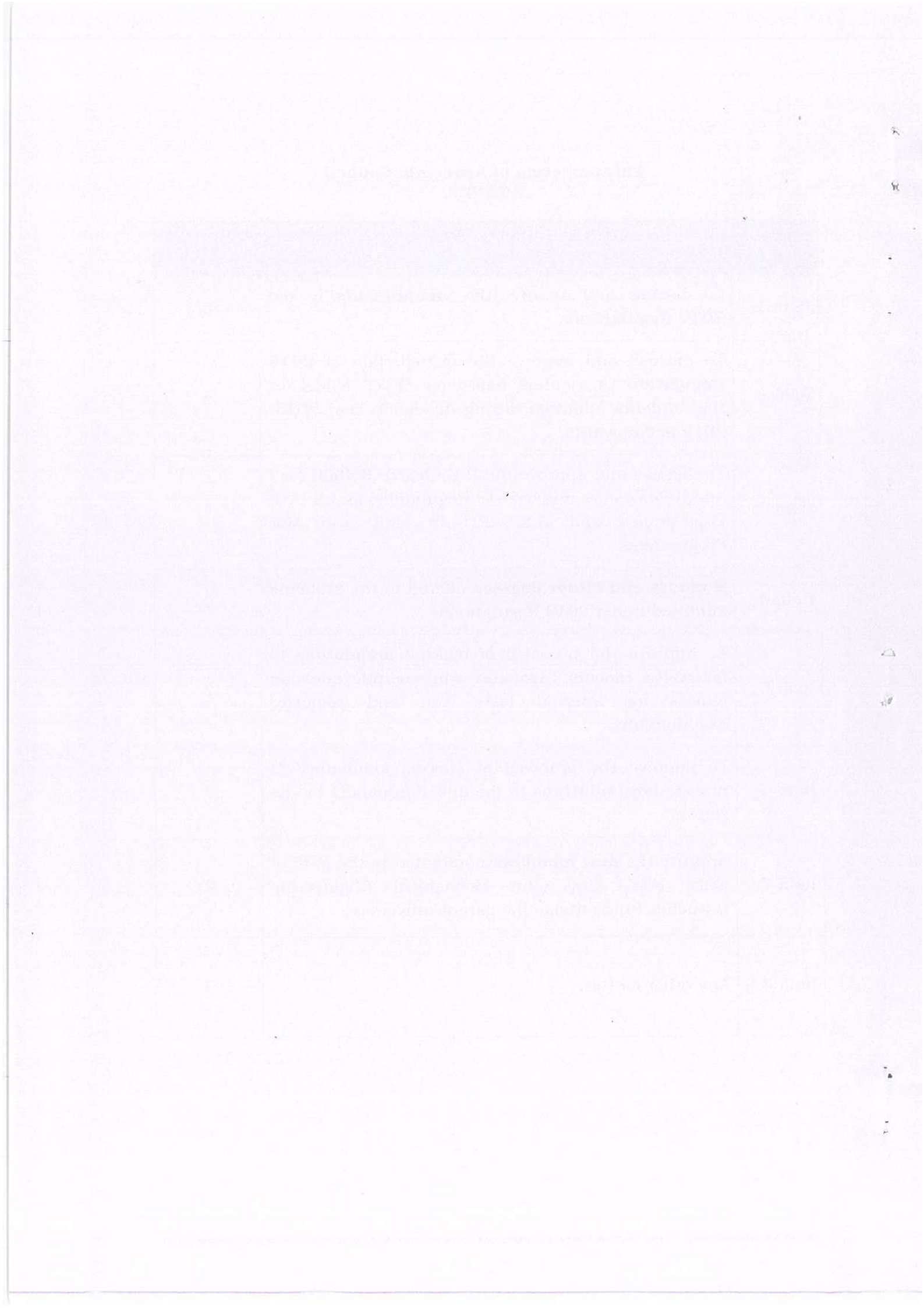
Krishnagiri - 635 104, Tamilnadu

Website : [www.gcebargur.ac.in](http://www.gcebargur.ac.in)



**Third meeting of Academic Council**  
**AGENDA**

<b>Item No.</b>	<b>Particulars</b>	<b>Page</b>
Item 1	To discuss and approve the <b>amendments</b> in the <b>2017 Regulations</b> .	3
Item 2	To discuss and approve the introduction of <b>2018 Regulation</b> Curriculum based on AICTE Model for the students admitted during Academic Year 2018-2019 and onwards.	4
Item 3	To discuss and approve the B.E. degree <b>Syllabi</b> for I and II Semesters under 2018 Regulations for all U.G. Programmes and B.E. (PT) in EEE and M.E Programmes.	4
Item 4	<b>Honours and Minor degrees</b> offered to the students admitted under 2018 Regulations.	5
Item 5	To approve the proposal of making <b>mandatory</b> to follow the Blooms Taxonomy while setting question papers for internal tests and end semester examinations.	7
Item 6	To approve the proposal of making mandatory to provide <b>key/solutions</b> to the question papers by the setters.	7
Item 7	Approve the <b>new members</b> nominated to the BOS of ECE, EEE, CSE and Mechanical Engineering Branches from outside the parent university.	8
Item 8	Any other matter	9



### Annexure

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IV	B.E. Degree (FT) Mechanical Engineering - Curriculum for I to VIII Semesters.	41
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**ITEM:1 To discuss and approve the amendments in the 2017 Regulations**

Amendment I

Total credits to be registered in each semester are **limited to 36**.

Amendment II

If a student **fails to register** for the courses in a semester by not paying the examination fees, he is **not permitted to write the end semester** examination. In such cases he may be permitted to register the same in the next semester.

Amendment III

Rules for **re-valuations:**

If the difference in marks between original and revaluation is **15 and above** then second re-valuation is done;

Final Mark: **Average** of two marks which are **closer to each other**.

Amendment IV

Framing and approving the guidelines to refund the revaluation fee paid by a student:

In the cases of '**fail to pass**' in a course, the fees paid by the student is refunded. The refund amount is only **50% or 100%** of the fee paid for that particular course (to be approved).

Amendment V

To follow the guidelines of Anna University for **challenging** the valuation by the students.

Amendment VI

For Re-Appearance courses, the number of Internal Tests for awarding Internal Marks may be reduced to **TWO**.





**ITEM:2**

**To discuss and approve the introduction of 2018 Regulation Curriculum based on AICTE Model for the students admitted during Academic Year 2018-2019 and onwards.**

In accordance with AICTE and UGC guidelines, this institution is introducing 2018 Regulation Curriculum based on Model Curriculum recommended by AICTE.



**ITEM:3 To discuss and approve the B.E. degree Curriculum and Syllabi for I and II Semesters under 2018 Regulations for all U.G. Programmes and B.E.(PT) in EEE and M.E Programmes**

The syllabi of all the courses from I to VIII semester of the B.E. Degree programmes in CSE, ECE, EEE and Mechanical Engineering and B.E. (PT) in EEE are discussed in the respective Board of Studies meeting and recommended by the members for approval of the Academic Council.

The recommended syllabi are placed for discussion and approval of the Academic Council.

- **I INVITE Dr.J.Nafeesa Begum CHAIRMAN OF BOS (CSE) TO PRESENT THE CURRICULA FOR FT B.E (CSE) and PG TO THE BOARD AND SYLLABI FOR THE COURSES OFFERED BY CSE TO THE FIRST YEAR (Except S & H COURSES).**
  
- **I INVITE Prof.M.Elangovan CHAIRMAN OF BOS (ECE) TO PRESENT THE CURRICULA FOR FT B.E (ECE) and PG TO THE BOARD AND SYLLABI FOR THE COURSES OFFERED BY ECE TO THE FIRST YEAR (Except S & H COURSES).**
  
- **I INVITE Prof.K.Mohan CHAIRMAN OF BOS (EEE) TO PRESENT THE CURRICULA FOR F.T B.E & P.T B.E (EEE) and PG TO THE BOARD AND SYLLABI FOR THE COURSES OFFERED BY EEE TO THE FIRST YEAR (Except S & H COURSES).**
  
- **I INVITE Dr.P.K.Palani CHAIRMAN OF BOS (MECH) TO PRESENT THE CURRICULA FOR FT B.E (MECH) TO THE BOARD AND SYLLABI FOR THE COURSES OFFERED BY MECHANICAL TO THE FIRST YEAR (Except S & H COURSES).**
  
- **I INVITE Dr.G.Saraswathy, CHAIRMAN OF BOS (H & S) TO PRESENT THE SYLLABI OF S & H COURSES OFFERED IN I and II SEMESTERS OF ALL BRANCHES TO THE BOARD**



<b>ITEM:4</b>	<b>To discuss and approve the Honours and Minor degrees offered to the students admitted under 2018 Regulations</b>
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### **Honours**

- A student willing to obtain honours in his program, has to complete 5 courses meant for Honours and earn extra 20 credits in addition to the minimum credits requirement. The courses can be from MOOC, NPTEL and SWAYAM also.
- The student will be eligible for this only if he has 8.0 or above CGPA till 5<sup>th</sup> Semester.
- He should not have any history of arrears.

### **Minor degrees**

- A student willing to obtain minor degree in a branch other than his parent branch, has to complete 5 courses (offered by other branches) meant for Minor degree (Minor elective stream) and earn extra 20 credits in addition to the minimum credits requirement.
- The student will be eligible for this only if he has 8.0 or above CGPA till 5<sup>th</sup> Semester.
- He should not have any history of arrears



<b>ITEM:5</b>	<b>To approve the proposal of making mandatory to follow the Blooms Taxonomy while setting question papers for internal tests and end semester examinations.</b>
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<b>ITEM:6</b>	<b>To approve the proposal of making mandatory to provide key/solutions to the question papers by the setters.</b>
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**ITEM:7** To discuss and approve the new members nominated to the BOS of ECE, EEE, CSE and Mechanical Engineering Branches from outside the parent university.

**DEPT. OF MECHANICAL ENGG.**

1	Dr. R. Elansezhian	Professor, Department of Mechanical Engineering, Pondicherry Engg. College (PEC), Puducherry - 605 014
2	Dr. U.S. Mallik	Professor, Department of Mechanical Engineering, Siddaganga Institute of Technology (S.I.T), Tumkur - 572 103, Karnataka.

**DEPT. OF COMPUTER SCIENCE AND ENGG.**

1	Dr.Siddaraju	Professor/Head, Department of CSE, Dr.Ambedkar Institute of Technology, Bangalore - 560056
2	Dr.M.Sakthivel	Associate Professor, Department of CSE, Sree Vidyanikethan Engineering College, Tirupathi - 517102

**DEPT. OF EEE.**

1	Dr.YR Manjunatha	Associate Professor, Dept. of Electrical Engineering, University Visvesvaraya College of Engineering, Bangalore University, KR Circle, Bangalore-560001 Karnataka
2	Dr.S.Subramaniam	Professor/EEE, Faculty of Engineering, Annamalai University, Chidambaram-608002. Tamilnadu



**DEPT. OF ECE**

1	Dr.M.Bhaskar	Associate Professor, Department of ECE, NIT Trichy.
2	Dr.P.Palanisamy	Associate Professor, Department of ECE, NIT Trichy.

**S & H BOARD**

1	Dr. B.Vennila	Associate Professor, SRM Univesrity, Chennai.
2	Dr.C.Gajendran	Associate Professor, Karunya University, Coimbatore

**Twinning Institute Nominee**

1	Medalson Ronghang, PhD	Assistant Professor Civil Engineering Department Bineswar Brahma Engineering College Bujuleebari, Kokrajhar BTAD, Assam-783370  Coordinator-TEQIP-III, RUSA and Ishan Vikash (Twinning Institute Nominee)
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<b>ITEM:8</b>	<b>Any other matter</b>
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# **Annexure – I**

## **B.E. – Full-Time Curriculum (CSE)**



**GOVERNMENT COLLEGE OF ENGINEERING  
BARGUR  
Regulations-2018  
AUTONOMOUS  
Curriculum for B.E. COMPUTER SCIENCE AND ENGINEERING  
[FULL TIME]  
I TO VIII SEMESTER CURRICULUM**

**SEMESTER I**

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18SBS101	Engineering Chemistry	BS	3	1	0	4
2.	18SBS102	Engineering Mathematics - I	BS	3	1	0	4
3.	18SES103	Basic Electrical Engineering	ES	2	1	0	3
4.	18SES104	Engineering Graphics and Design	ES	1	0	4	3
5.	18ZMC105	Induction Programme	MC	0	0	0	0
<b>PRACTICALS</b>							
6.	18SBS105	Chemistry Laboratory	BS	0	0	3	1.5
7.	18SES106	Basic Electrical Engineering Laboratory	ES	0	0	4	2
<b>TOTAL</b>				9	3	11	17.5

**SEMESTER II**

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18SBS201	Engineering Physics	BS	3	1	0	4
2.	18SBS202	Engineering Mathematics-II	BS	3	1	0	4
3.	18SHS203	Technical English	HS	3	0	0	3
4.	18SES204	Programming in C	ES	3	0	0	3
5.	18ZMC205	Constitution of India	MC	0	0	0	0
<b>PRACTICALS</b>							
6.	18SBS206	Physics Laboratory	BS	0	0	3	1.5
7.	18SHS207	Communication English Lab	HS	0	0	4	2
8.	18SES208	Programming in C Lab	ES	0	0	4	2
9.	18SES209	Workshop Practices	ES	1	0	4	3
<b>TOTAL</b>				12	2	15	22.5

**SEMESTER III**

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	<b>18SBS301</b>	Transforms and Partial Differential Equations	<b>BS</b>	3	1	0	4
2.	<b>18SES302</b>	Digital Principles and Systems Design	<b>ES</b>	3	0	0	3
3.	<b>18SPC303</b>	Object Oriented Programming Using C++ and Java	<b>PC</b>	3	0	0	3
4.	<b>18SPC304</b>	Data Structure and Algorithms	<b>PC</b>	3	0	0	3
5.	<b>18SMC305</b>	Environmental Science and Engineering	<b>MC</b>	0	0	0	0
<b>PRACTICALS</b>							
6.	<b>18SES306</b>	Digital Principles and Systems Design Laboratory	<b>ES</b>	0	0	4	2
7.	<b>18SPC307</b>	Object Oriented Programming Lab	<b>PC</b>	0	0	4	2
8.	<b>18SPC308</b>	Data Structure and Algorithms Laboratory	<b>PC</b>	0	0	4	2
<b>TOTAL</b>				<b>12</b>	<b>1</b>	<b>12</b>	<b>19</b>

**SEMESTER IV**

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	<b>18SBS401</b>	Probability and Queuing Theory	<b>BS</b>	3	1	0	4
2.	<b>18SPC402</b>	Computer Architecture and Organization	<b>PC</b>	3	0	0	3
3.	<b>18SPC403</b>	Operating Systems	<b>PC</b>	3	0	0	3
4.	<b>18SPC404</b>	Design and Analysis of Algorithms	<b>PC</b>	3	0	0	3
5.	<b>18SPC405</b>	Database Management System	<b>PC</b>	3	0	0	3
6.	<b>18SMC406</b>	Python Programming	<b>MC</b>	0	0	0	0
<b>PRACTICALS</b>							
7.	<b>18SPC407</b>	Operating Systems Laboratory	<b>PC</b>	0	0	4	2
8.	<b>18SPC408</b>	Database Management System Lab	<b>PC</b>	0	0	4	2
<b>TOTAL</b>				<b>15</b>	<b>1</b>	<b>8</b>	<b>20</b>



### SEMESTER V

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	<b>18SBS501</b>	Discrete Mathematics	<b>BS</b>	3	1	0	4
2.	<b>18SHS502</b>	Professional Ethics and Human Values	<b>HS</b>	3	0	0	3
3.	<b>18SPC503</b>	Computer Networks	<b>PC</b>	3	0	0	3
4.	<b>18SPC504</b>	Embedded Computing Systems	<b>PC</b>	3	0	0	3
5.	<b>18SPC505</b>	Theory of Computation	<b>PC</b>	3	0	0	3
6.		<b>Professional Elective – 1</b>	<b>PE</b>	3	0	0	3
<b>PRACTICALS</b>							
7.	<b>18SPC506</b>	Computer Networks Laboratory	<b>PC</b>	0	0	4	2
8.	<b>18SPC507</b>	Embedded Computing Systems Laboratory	<b>PC</b>	0	0	4	2
9.	<b>18SEE508</b>	Soft Skills and Interpersonal Communication Laboratory	<b>EEC</b>	0	0	4	2
10.	<b>18SMC509</b>	Biology for Engineers	<b>MC</b>	0	0	0	0
<b>TOTAL</b>				18	1	12	25

### SEMESTER VI

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	<b>18SPC601</b>	Compiler Design	<b>PC</b>	3	0	0	3
2.	<b>18SPC602</b>	Mobile Computing	<b>PC</b>	3	0	0	3
3.	<b>18SPC603</b>	Object Oriented Software Engineering	<b>PC</b>	3	0	0	3
4.		<b>Professional Elective - 2</b>	<b>PE</b>	3	0	0	3
5.		<b>Open Electives - 1 (Humanities)</b>	<b>HS</b>	3	0	0	3
6.		<b>Open Electives - 2</b>	<b>OE</b>	3	0	0	3
<b>PRACTICALS</b>							
7.	<b>18SPC604</b>	Compiler Laboratory	<b>PC</b>	0	0	4	2
8.	<b>18SPC605</b>	Mobile Application development Laboratory	<b>PC</b>	0	0	4	2
9.	<b>18SEE606</b>	CASE tools ( <b>Project – Design</b> )	<b>EEC</b>	0	0	4	2
10	<b>18SSI607</b>	Summer Industry Internship	<b>SI</b>	0	0	0	0
<b>TOTAL</b>				18	0	12	24

### SEMESTER VII

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18SPC701	Cloud Computing	PC	3	0	0	3
2.	18SPC702	Cryptography and Network Security	PC	3	0	0	3
3.		Professional Elective-3	PE	3	0	0	3
4.		Professional Elective-4	PE	3	0	0	3
5.		Open Elective - 3	OE	3	0	0	3
<b>PRACTICALS</b>							
6.	18SPC703	Cloud Computing Laboratory	PC	0	0	4	2
7.	18SEE704	Security Laboratory (Project - Implementation)	EEC	0	0	6	3
<b>TOTAL</b>				15	0	10	20

### SEMESTER VIII

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.		Professional Elective - 5	PE	3	0	0	3
2.		Professional Elective - 6	PE	3	0	0	3
3.		Open Elective - 4	OE	3	0	0	3
<b>PRACTICALS</b>							
4.	18SEE801	Project Work	EEC	0	0	12	6
<b>TOTAL</b>				9	0	12	15

**TOTAL NUMBER OF CREDITS: 163**

### CREDIT SUMMARY

S.No	Subject Area	Credits Per Semester								Credits Total	% of Total Credits	AICTE Suggested Breakup of Credits(Total 159)
		1	2	3	4	5	6	7	8			
	HS		5			3	3			11	4.8	12
	BS	9.5	9.5	4	4	4				31	21.1	24
	ES	8	8	5						21	12.7	29
	PC			10	16	13	13	8		60	39.2	49
	PE					3	3	6	6	18	10.8	18
	OE						3	3	3	9	3.6	12
	EEC					2	2	3	6	13	7.8	15
	MC	√	√	√	√	√				(non credit)	-	-
	SI						√			(non credit)	-	-
		17.5	22.5	19	20	25	24	20	15	163*	100	159*

### LIST OF MANDATORY COURSES

S.NO	COURSE CODE	COURSE TITLE	SEMESTER
1.	18ZMC105	Induction Programme	I
2.	18ZMC205	Constitution of India	II
3.	18SMC305	Environmental Science and Engineering	III
4.	18SMC406	Python Programming	IV
5.	18SMC509	Biology for Engineers	V
6.	18SSI607	Summer Industry Internship	VI

## LIST OF PROFESSIONAL ELECTIVES

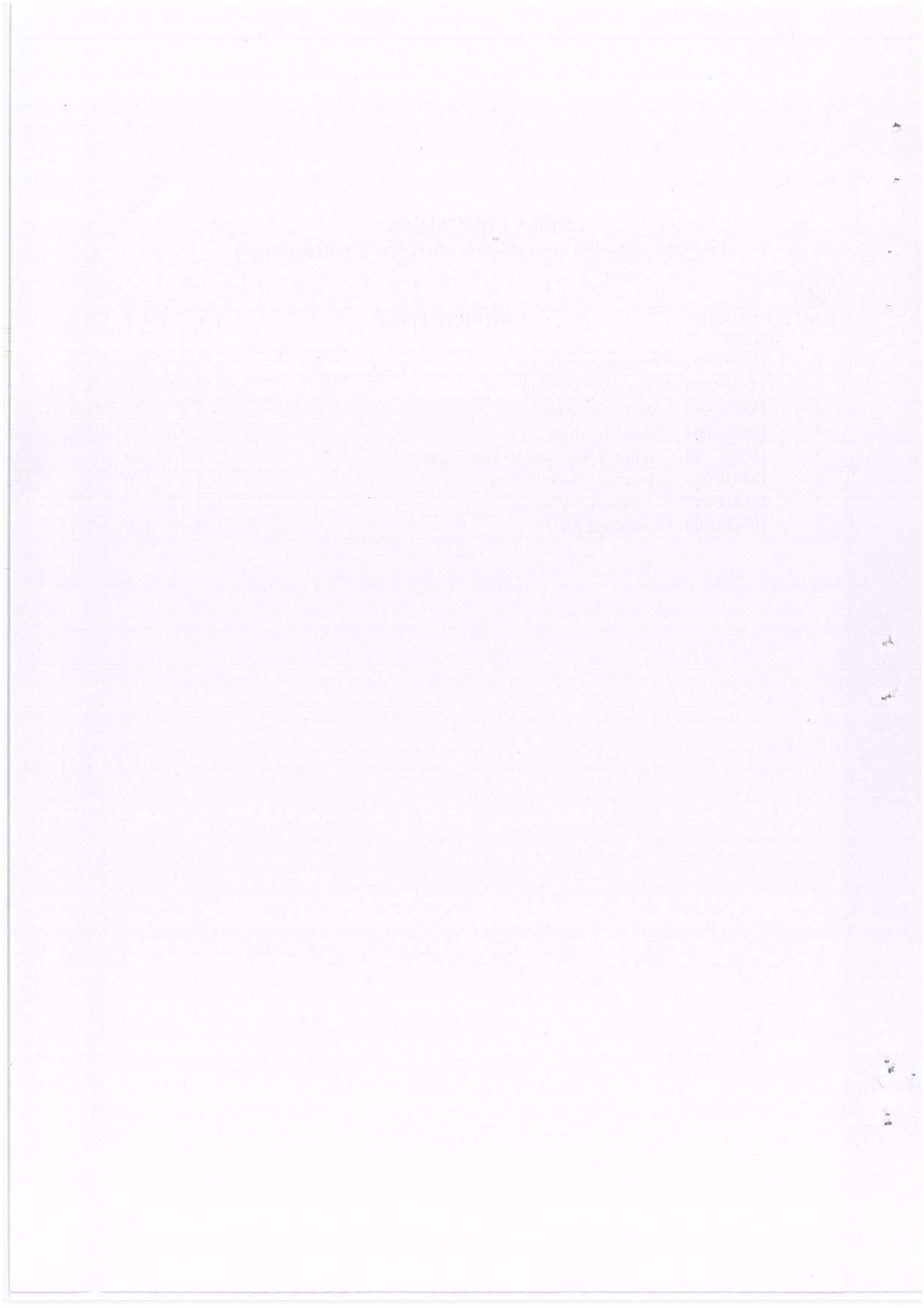
S.NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	18SPE001	Fundamentals of Image Processing	3	0	0	3
2.	18SPE002	Advanced Data Structures	3	0	0	3
3.	18SPE003	Project Management	3	0	0	3
4.	18SPE004	Essentials of Information Technology (Infosys)	3	0	0	3
5.	18SPE005	Data Mining	3	0	0	3
6.	18SPE006	C # and .NET Framework	3	0	0	3
7.	18SPE007	Green Computing	3	0	0	3
8.	18SPE008	Agile Software Development (Infosys)	3	0	0	3
9.	18SPE009	Software Defined Networks	3	0	0	3
10.	18SPE010	Social Networks Analysis	3	0	0	3
11.	18SPE011	Pattern Recognition	3	0	0	3
12.	18SPE012	Building Enterprise Applications (Infosys)	3	0	0	3
13.	18SPE013	Natural Language Processing	3	0	0	3
14.	18SPE014	Information Retrieval Techniques	3	0	0	3
15.	18SPE015	GPU Architecture and Programming	3	0	0	3
16.	18SPE016	Business Intelligence and its Applications (Infosys)	3	0	0	3
17.	18SPE017	Internet of Things	3	0	0	3
18.	18SPE018	Game Theory	3	0	0	3
19.	18SPE019	Open Source Systems	3	0	0	3
20.	18SPE020	Big Data and Analytics (Infosys)	3	0	0	3
21.	18SPE021	Machine Learning	3	0	0	3
22.	18SPE022	Geographical Information Systems	3	0	0	3
23.	18SPE023	Service Oriented Architecture	3	0	0	3
24.	18SPE024	Soft Computing	3	0	0	3
25.	18SPE025	Web Technology	3	0	0	3
26.	18SPE026	Computer Graphics and Multimedia	3	0	0	3
27.	18SPE027	Artificial Intelligence	3	0	0	3
28.	18SPE028	Parallel and Distributed Systems	3	0	0	3

## OPEN ELECTIVES

[Students can select open electives offered by any Department]

### CSE:

S.NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	18SOE001	Programming in C++	3	0	0	3
2.	18SOE002	Java Programming	3	0	0	3
3.	18SOE003	Database Concepts	3	0	0	3
4.	18SOE004	Web Designing	3	0	0	3
5.	18SOE005	Android Application Development	3	0	0	3
6.	18SOE006	Computer Architecture	3	0	0	3
7.	18SOE007	Computer Networks	3	0	0	3
8.	18SOE008	Linux and RTOS	3	0	0	3



# **Annexure – II**

## **B.E. – Full-Time Curriculum (ECE)**





**GOVERNMENT COLLEGE OF ENGINEERING  
BARGUR**

**Regulation – 2018**

**AUTONOMOUS**

**Curriculum for Full Time – B.E (ECE)  
From the Academic Year 2018-2019 onwards**

**SEMESTER - I**

SL. No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18ZBSC101	Engineering Chemistry	BSC	3	1	0	4
2.	18ZBSC102	Mathematics I	BSC	3	1	0	4
3.	18ZHSMC103	Technical English I	HSMC	2	0	0	2
4.	18ZESC104	Engineering Graphics	ESC	1	0	4	3
5.	18ZMC105	Induction Program	MC				
<b>PRACTICALS</b>							
6.	18ZBSC106	Chemistry Laboratory	BSC	0	0	3	1.5
7.	18ZHSMC107	Communicative English Laboratory	HSMC	0	0	2	1
<b>TOTAL</b>				<b>10</b>	<b>2</b>	<b>9</b>	<b>15.5</b>

**SEMESTER - II**

SL. No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18ZBSC201	Engineering Physics	BSC	3	1	0	4
2.	18ZBSC202	Mathematics II	BSC	3	1	0	4
3.	18ZESC203	Programming in C	ESC	3	0	0	3
4.	18LPC204	Circuit Theory	PC	3	0	0	3
5.	18ZMC205	Constitution of India	MC				
<b>PRACTICALS</b>							
6.	18ZBSC206	Physics Laboratory	BSC	0	0	3	1.5
7.	18ZESC207	Programming in C Laboratory	ESC	0	0	3	1.5
8.	18ZESC208	Engineering Practices Laboratory	ESC	0	0	6	3
<b>TOTAL</b>				<b>12</b>	<b>2</b>	<b>12</b>	<b>20</b>

**SEMESTER- III**

SL.No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18ZBSC301	Transforms and Partial Differential Equations	BSC	3	1	0	4
2.	18LPC302	Electronic Devices and Applications	PC	3	0	0	3
3.	18LPC303	Electromagnetic Fields	PC	3	0	0	3
4.	18ZESC304	Data Structures and Object-Oriented Programming Language	ESC	3	0	0	3
5.	18ZESC305	Basic Electrical and Control System Engineering	ESC	3	0	0	3
6.	18ZMC306	Environmental Science	MC				
<b>PRACTICALS</b>							
7.	18ZESC307	Data Structures and Object Oriented Programming Language Laboratory	ESC	0	0	3	1.5
8.	18LPC308	Circuits and Devices Laboratory	PC	0	0	3	1.5
9.	18LPC309	Electrical Engineering Laboratory	ESC	0	0	3	1.5
<b>TOTAL</b>				<b>15</b>	<b>1</b>	<b>9</b>	<b>20.5</b>

**SEMESTER- IV**

SL.No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18ZBSC401	Probability and Random Processes	PC	3	1	0	4
2.	18LPC402	Electronic Circuits	PC	3	0	0	3
3.	18ZBSC403	Problem Solving using Python	ESC	2	0	2	3
4.	18LPC404	Signals and Systems	PC	3	0	0	3
5.	18LPC405	Linear and Digital Circuits	PC	3	0	0	3
6.	18ZMC406	Essence of Indian Traditional Knowledge	MC				
<b>PRACTICALS</b>							
7.	18LPC407	Electronic Circuits Laboratory	PC	0	0	3	1.5
8.	18LPC408	Analog and Digital Circuits Laboratory	PC	0	0	3	1.5
<b>TOTAL</b>				<b>14</b>	<b>1</b>	<b>8</b>	<b>19</b>

**SEMESTER- V**

SL.No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18LPC501	Digital Signal Processing	PC	3	0	0	3
2.	18LPC502	Embedded Systems	PC	3	0	0	3
3.	18LPC503	Analog and Digital Communication	PC	3	1	0	4
4.	18LPC504	Transmission Lines and Waveguides	PC	3	0	0	3
5.		Open Elective I	OE	3	0	0	3
6.		Professional Elective I	PE	3	0	0	3
<b>PRACTICALS</b>							
7.	18LPC505	Analog and Digital Communication Laboratory	PC	0	0	3	1.5
8.	18LPC506	Embedded Laboratory	PC	0	0	3	1.5
<b>TOTAL</b>				<b>18</b>	<b>1</b>	<b>6</b>	<b>22</b>

**SEMESTER- VI**

SL.No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18LPC601	VLSI Design	PC	3	0	0	3
2.	18LPC602	Antenna and Wave Propagation	PC	3	0	0	3
3.	18LPC603	Microwave and RF system	PC	3	0	0	3
4.		Open Elective II	OE	3	0	0	3
5.		Professional Elective II	PE	3	0	0	3
6.	18ZHSMC604	Management Theory and Practice	HSMC	3	0	0	3
<b>PRACTICALS</b>							
7.	18LPC605	DSP and VLSI Laboratory	PC	0	0	3	1.5
8.	18LECP0606	Mini Project	ECP0	0	0	4	2
<b>TOTAL</b>				<b>18</b>	<b>0</b>	<b>7</b>	<b>21.5</b>

**SEMESTER- VII**

SL. No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18ZHSMC701	Professional Ethics	HSMC	3	0	0	3
2.	18LPC702	Fiber Optic Communication	PC	3	0	0	3
3.	18LPC703	Wireless Communication	PC	3	0	0	3
4.		Professional Elective III	PE	3	0	0	3
5.		Professional Elective IV	PE	3	0	0	3
6.		Open Elective III	OE	3	0	0	3
<b>PRACTICALS</b>							
7.	18LPC704	Microwave and Optical Laboratory	PC	0	0	3	1.5
8.	18LECP1705	Project Work Phase I	ECP1	0	0	6	3
<b>TOTAL</b>				<b>18</b>	<b>0</b>	<b>9</b>	<b>22.5</b>

**SEMESTER- VIII**

SL. No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.		Professional Elective V	PE	3	0	0	3
2.		Professional Elective VI	PE	3	0	0	3
3.		Open Elective IV	OE	3	0	0	3
4.		Open Elective V	OE	3	0	0	3
<b>PRACTICALS</b>							
5.	17LECP2801	Project Work and Viva Voce	ECP2	0	0	12	6
<b>TOTAL</b>				<b>12</b>	<b>0</b>	<b>12</b>	<b>18</b>

**INTERNSHIP**

SL.No.	COURSE TITLE	CATEGORY	C
1.	Internship	ECP3	3
<b>TOTAL</b>			<b>3</b>

**TOTAL NUMBER OF CREDITS: 159**

**LIST OF PROFESSIONAL ELECTIVES**

SL.No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18LPE001	Wireless Networks	PE	3	0	0	3
2.	18LPE002	Wireless Sensor Networks	PE	3	0	0	3
3.	18LPE003	AD-HOC Networks	PE	3	0	0	3
4.	18LPE004	Network Security	PE	3	0	0	3
5.	18LPE005	Information and Coding Theory	PE	3	0	0	3
6.	18LPE006	Statistical Theory of Communication	PE	3	0	0	3
7.	18LPE007	Spread Spectrum Techniques	PE	3	0	0	3
8.	18LPE008	Communication Electronic Circuits	PE	3	0	0	3
9.	18LPE009	Telecommunication Switching Networks	PE	3	0	0	3
10.	18LPE010	Software Defined Radio	PE	3	0	0	3
11.	18LPE011	Automotive Electronic Systems	PE	3	0	0	3
12.	18LPE012	Advanced Display Devices	PE	3	0	0	3
13.	18LPE013	Digital Speech Processing	PE	3	0	0	3
14.	18LPE014	Advanced Digital Signal Processing	PE	3	0	0	3
15.	18LPE015	DSP Architectures and Programming	PE	3	0	0	3
16.	18LPE016	Digital Image Processing	PE	3	0	0	3
17.	18LPE017	MEMS	PE	3	0	0	3
18.	18LPE018	Nano Electronics	PE	3	0	0	3
19.	18LPE019	Optoelectronics	PE	3	0	0	3
20.	18LPE020	Radar Systems	PE	3	0	0	3
21.	18LPE021	Smart Antennas	PE	3	0	0	3
22.	18LPE022	Wavelet Transform and Applications	PE	3	0	0	3
23.	18LPE023	Soft Computing	PE	3	0	0	3
24.	18LPE024	VLSI Testing	PE	3	0	0	3
25.	18LPE025	ARM System Design	PE	3	0	0	3
26.	18LPE026	Internet of Things	PE	3	0	0	3
27.	18LPE027	Analog Integrated Circuits Design	PE	3	0	0	3
28.	18LPE028	Microwave Integrated Circuits	PE	3	0	0	3

## MANDATORY COURSE

SL.No.	COURSE CODE	COURSE TITLE
1.	18ZMC105	Induction Program
2.	18ZMC205	Indian Constitution
3.	18ZMC306	Environmental Sciences
4.	18ZMC406	Essence of Indian Traditional Knowledge

HSMC – Humanities and Sciences

BSC – Basic Sciences

ESC – Engineering Sciences

PC – Program Core

PE – Professional Elective

OE – Open Elective

ECP – Employability Enhancement Course

## OPEN ELECTIVES

### ECE:

S.NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	18LOE001	Real Time Systems	3	0	0	3
2.	18LOE002	Wireless Sensor Networks	3	0	0	3
3.	18LOE003	Industrial Automation and Robotics	3	0	0	3
4.	18LOE004	Principles of VLSI design	3	0	0	3
5.	18LOE005	Applied Electronics	3	0	0	3
6.	18LOE006	Wireless Networks	3	0	0	3

### CREDIT BREAK-UP (ECE)

SL. NO	SUBJECT AREA	CREDITS PER SEMESTER								CREDITS ACTUAL	CREDIT S AICTE	% OF CREDITS	TOTAL NO. OF COURSES
		I	II	III	IV	V	VI	VII	VIII				
1.	HSMC	3					3	3		9	12	5.66	4
2.	BSC	9.5	9.5	4						23	25	14.46	7
3.	ESC	3	7.5	9	3					22.5	25	14.15	9
4.	PC		3	7.5	16	16	10.5	7.5		60.5	48	38.05	23
5.	PE					3	3	6	6	18	18	11.32	6
6.	OE					3	3	3	6	15	18	9.43	5
7.	ECP						2	3	6	11	15	6.91	3
8.	<b>TOTAL</b>	<b>15.5</b>	<b>20</b>	<b>20.5</b>	<b>19</b>	<b>22</b>	<b>21.5</b>	<b>22.5</b>	<b>18</b>	<b>159</b>	<b>160</b>	<b>100</b>	<b>57</b>



# **Annexure – III**

## **B.E.–Full-Time& Part- Time Curriculum (EEE)**



**GOVERNMENT COLLEGE OF ENGINEERING, BARGUR**

**Regulation – 2018**

**AUTONOMOUS**

**Curriculum for Full Time – B.E. -EEE**

From the Academic Year 2018-2019 onwards

**I. Induction Program**

Induction program (mandatory)	3 Weeks Duration
Induction program for students to be Offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**Semester I**

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
<b>THEORY</b>								
1	BS	18EBS101	Engineering Physics	3	1	0	4	4
2	BS	18EBS102	Engineering Mathematics I	3	1	0	4	4
3	HS	18EHS103	Technical English	2	0	0	2	2
4	ES	18EES104	Programming in C	3	0	0	3	3
5	MC	18ZMC105	Induction Program	0	0	0	0	0
<b>PRACTICALS</b>								
5	BSC	18EBS106	Physics Laboratory	0	0	3	3	1.5
6	HSMC	18EHS107	Communication English Laboratory	0	0	2	2	1
7	ESC	18EES108	Programming in C Laboratory	0	0	4	4	2
<b>Total Credits</b>								17.5

## Semester II

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
<b>THEORY</b>								
1	BS	18EBS201	Engineering Chemistry	3	1	0	4	4
2	BS	18ZBS202	Engineering Mathematics II	3	1	0	4	4
3	PC	18EPC203	Electric Circuit Analysis	2	1	0	3	3
4	ES	18EES204	Engineering Graphics and Design	1	0	4	5	3
5	MC	18ZMC205	Constitution of India	0	0	0	0	0
<b>PRACTICALS</b>								
5	BS	18EBS206	Chemistry Laboratory	0	0	3	3	1.5
6	PC	18EPC207	Electric Circuits Laboratory	0	0	4	4	2
7	ES	18EES208	Workshop Practices Laboratory	1	0	4	5	3
<b>Total credits</b>								<b>20.5</b>

### Semester III

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
<b>THEORY</b>								
1	BS	18EBS301	Transforms and Partial Differential Equations	3	1	0	4	4
2	ES	18EES302	Object Oriented Programming	3	0	0	3	3
3	PC	18EPC303	DC Machines and Transformers	3	1	0	4	3
4	PC	18EPC304	Analog Electronics	3	0	0	3	3
5	PC	18EPC305	Electromagnetic Theory	2	1	0	3	3
6	MC	18ZMC306	Environmental Science and Engineering	0	0	0	0	0
<b>PRACTICALS</b>								
7	PC	18EPC307	Analog Electronics Laboratory	0	0	4	4	2
8	PC	18EPC308	DC Machines and Transformers Laboratory	0	0	4	4	2
<b>Total credits</b>								20

### Semester IV

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
<b>THEORY</b>								
1	BS	18EBS401	Numerical Methods	3	1	0	4	4
2	PC	18EPC402	Digital Logic Circuits	2	1	0	4	3
3	PC	18EPC403	Synchronous and Asynchronous Machines	2	1	0	4	3
4	PC	18EPC404	Linear Integrated Circuits and Applications	3	0	0	3	3
5	PC	18EPC405	Transmission and Distribution	2	1	0	3	3
6	PC	18EPC406	Measurements and Instrumentation	3	0	0	3	3
<b>PRACTICALS</b>								
7	PC	18EPC407	Synchronous and Asynchronous Machines Laboratory	0	0	4	4	2
8	PC	18EPC408	Linear and Digital Integrated Circuits Laboratory	0	0	4	4	2
<b>Total credits</b>								23

### Semester V

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs,	Credits
				L	T	P		
<b>THEORY</b>								
1	PC	18EPC501	Power System Analysis	2	1	0	3	3
2	PC	18EPC502	Control Systems	2	1	0	3	3
3	PC	18EPC503	Microprocessors, Microcontrollers and Applications	2	1	0	3	3
4	HSM	18EPC504	Principles of Management	3	0	0	3	3
5	PE		Professional Elective I	3	0	0	3	3
6	OE		Open Elective I	3	0	0	3	3
<b>PRACTICALS</b>								
7	PC	18EPC507	Control and Instrumentation Laboratory	0	0	4	4	2
8	PC	18EPC508	Microprocessors, Microcontrollers and Applications Laboratory	0	0	4	4	2
<b>Total Credits</b>								<b>22</b>

### Semester VI

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs,	Credits
				L	T	P		
<b>THEORY</b>								
1	PC	18EPC601	Power Electronics	3	0	0	3	3
2	PC	18EPC602	Protection and Switchgear	3	0	0	3	3
3	PE		Professional Elective II	3	0	0	3	3
4	PE		Professional Elective III	3	0	0	3	3
5	OE		Open Elective II	3	0	0	3	3
6	MC	18EMC606	Summer Internship	-	-	-	-	0
<b>PRACTICALS</b>								
7	PC	18EPC607	Power Electronics Laboratory	0	0	4	4	2
8	PC	18EPC608	Power System Lab I	0	0	4	4	2
9	PC	18EPC609	Mini Project Lab	0	0	4	4	2
<b>Total credits</b>								<b>21</b>

### Semester VII

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
<b>THEORY</b>								
1	PC	18EPC701	Power System Operation and Control	2	1	0	3	3
2	PC	18EPC702	Digital Signal Processing	2	1	0	3	3
3	HSM	18EHS703	Professional Ethics	3	0	0	3	3
4	PE		Professional Elective IV	3	0	0	3	3
5	PE		Professional Elective V	3	0	0	3	3
6	OE		Open Elective III	3	0	0	3	3
<b>PRACTICALS</b>								
7	PC	18EPC707	Power System Laboratory II	0	0	4	4	2
<b>Total credits</b>								20

### Semester VIII

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
1	PE		Professional elective VI	3	0	0	3	3
2	OE		Open Elective IV	3	0	0	3	3
3	Proj	18EEE803	Project Work	0	0	20	20	10
<b>Total credits</b>								16

Grand total Credits: 160

### Professional Electives Courses

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
1.	PE	18EPE001	Applied Soft Computing	3	0	0	3	3

2.	PE	18EPE002	Wind and Solar Energy Systems	3	0	0	3	3
3.	PE	18EPE003	Biomedical Instrumentation	3	0	0	3	3
4.	PE	18EPE004	Fundamentals of Nano science	3	0	0	3	3
5.	PE	18EPE005	High Voltage Engineering	3	0	0	3	3
6.	PE	18EPE006	Advanced Control System	3	0	0	3	3
7.	PE	18EPE007	Power Quality and FACTS	3	0	0	3	3
8.	PE	18EPE008	Microcontroller Based System Design	3	0	0	3	3
9.	PE	18EPE009	High Voltage Direct Current Transmission	3	0	0	3	3
10.	PE	18EPE010	Electrical Machine Design	3	0	0	3	3
11.	PE	18EPE011	Power Electronics for Renewable Energy Systems	3	0	0	3	3
12.	PE	18EPE012	Advanced Electric Drives	3	0	0	3	3
13.	PE	18EPE013	Power System Dynamics and Control	3	0	0	3	3
14.	PE	18EPE014	Electrical and Hybrid Vehicles	3	0	0	3	3
15.	PE	18EPE015	Computer Aided Design of Electrical Apparatus	3	0	0	3	3
16.	PE	18EPE016	Power System Transients	3	0	0	3	3
17.	PE	18EPE017	Internet of Things	3	0	0	3	3
18.	PE	18EPE018	Special electrical machines	3	0	0	3	3
19.	PE	18EPE019	Industrial Electrical Systems	3	0	0	3	3



20.	PE	18EPE020	Energy utilization, conservation and auditing	3	0	0	3	3
21.	PE	18EPE021	Solid State Drives	3	0	0	3	3
22.	PE	18EPE022	Smart Grid	3	0	0	3	3

### Open Electives

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
1	OE	18EOE001	Matlab Programming	2	0	2	4	3
2	OE	18EOE002	Renewable Energy Sources	3	0	0	3	3
3	OE	18EOE003	Energy Management and Auditing	3	0	0	3	3
4	OE	18EOE004	Reliability Engineering	0	0	3	3	3
5	OE	18EOE005	Disaster Management and Mitigation	0	0	3	3	3
6	OE	18EOE006	Power Electronics and Drives	0	0	3	3	3

### One Credit Courses

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
1	OC	18EOC001	Spice Simulation for circuits	0	0	2	2	1
2	OC	18EOC002	Yoga and meditation	0	0	2	1	1
3	OC	18EOC003	Stress Management	1	0	0	1	1
4	OC	18EOC004	PCB design and Fabrication	0	0	2	1	1
5	OC	18EOC005	Personality Development	1	0	0	1	1
6	OC	18EOC006	Entrepreneurship Development	1	0	0	1	1
7	OC	18EOC007	Solar PV System Design	1	0	0	1	1

**CREDIT SPLIT UP**

S.No	Subject Category/ Semester	1	2	3	4	5	6	7	8	Total Credits	Credits as per AICTE
1.	HSM	3				3		3		9	12
2.	BS	9.5	9.5	4	4					27	26
3.	ES	5	6	3						14	20
4.	PC		5	13	19	13	12	8		70	53
5.	PE					3	6	6	3	18	18
6.	OE					3	3	3	3	12	18
7.	PROJ								10	10	11
TOTAL										160	158

**GOVERNMENT COLLEGE OF ENGINEERING, BARGUR**

**Regulation – 2018**

**AUTONOMOUS**

**Curriculum for Part Time – B.E (PT) -EEE**

From the Academic Year 2018-2019 onwards

**Semester-I**

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
<b>THEORY</b>								
1	BSC	18PTEBS101	Mathematics	3	0	0	3	3
2	BSC	18PTEBS102	Physics	3	0	0	3	3
3	BSC	18PTEBS103	Chemistry	3	0	0	3	3
4	PCC	18PTEPC104	Electric Circuit Analysis	2	1	0	3	3
<b>PRACTICALS</b>								
5	ESC	18PTEES105	Programming in C Laboratory	0	0	3	3	1.5
<b>Total credits</b>								13.5

**Semester-II**

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
<b>THEORY</b>								
1	PCC	18PTEPC201	DC Machines and Transformers	3	0	0	3	3
2	PCC	18PTEPC202	Electromagnetic Theory	2	1	0	3	3
3	PCC	18PTEBS203	Environmental Science and Engineering	3	0	0	3	3
4	PCC	18PTEPC204	Analog Electronics	2	1	0	3	3
5	PCC	18PTEPC205	Digital Logic Circuits	2	1	0	3	3
<b>Total credits</b>								15

### Semester III

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
<b>THEORY</b>								
1	PCC	18PTEPC301	Synchronous and Asynchronous Machines	2	1	0	3	3
2	PCC	18PTEPC302	Control Systems	2	1	0	4	3
3	PCC	18PTEPC303	Linear Integrated Circuits and Applications	3	0	0	3	3
4	PCC	18PTEPC304	Transmission and Distribution	2	1	0	3	3
<b>PRACTICALS</b>								
5	PCC	18PTEPC305	Electrical Machines Laboratory	0	0	3	3	1.5
<b>Total credits</b>								13.5

### Semester IV

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
<b>THEORY</b>								
1	PCC	18PTEPC401	Protection and Switchgear	3	0	0	3	3
2	PCC	18PTEPC402	Power Electronics	3	0	0	3	3
3	PCC	18PTEPC403	Measurements and Instrumentation	2	1	0	3	3
4	PCC	18PTEPC404	Power System Analysis	3	0	0	3	3
<b>PRACTICALS</b>								
5	PCC	18PTEPC405	Control and Instrumentation Laboratory	0	0	3	3	1.5
<b>Total credits</b>								13.5

### Semester V

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs,	Credits
				L	T	P		
<b>THEORY</b>								
1	PCC	18PTEPC501	Microprocessors, Microcontrollers and Applications	2	1	0	3	3
2	PCC	18PTEPC502	Power System Operation and Control	3	0	0	3	3
3	PCC	18PTEPC503	Electrical Machine Design	3	0	0	3	3
4	PEC		Professional Elective I	3	0	0	3	3
<b>PRACTICALS</b>								
5	PCC	18PTEPC505	Power Electronics and Power System Laboratory	0	0	3	3	1
<b>Total Credits</b>								13.5

### Semester VI

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs,	Credits
				L	T	P		
<b>THEORY</b>								
1	PCC	18PTEPC601	Special Electrical machines	2	1	0	3	3
2	PCC	18PTEPC602	High Voltage Engineering	3	0	0	3	3
3	PEC		Professional Elective II	3	0	0	3	3
4	PEC		Professional Elective III	3	0	0	3	3
<b>PRACTICALS</b>								
5	PCC	18PTEPC605	Microprocessors, Microcontrollers and Applications Laboratory	0	0	3	3	1.5
<b>Total credits</b>								13.5

### Semester VII

S. No.	Category	Course Code	Course Title	Hours per week			Total Contact hrs	Credits
				L	T	P		
<b>THEORY</b>								
1	PCC	18PTEPC701	Energy utilization, conservation and auditing	3	0	0	3	3
2	PEC		Professional elective IV	3	0	0	3	3
3	PEC		Professional elective V	3	0	0	3	3
<b>PRACTICALS</b>								
4	Proj	18PTEEE704	Project Work	0	0	9	9	4.5
<b>Total credits</b>								13.5

Grand total credits: 96

**Professional Electives Courses**

S. No.	Category	Course Code	Course Title	Hours per Week			Total Contact hrs	Credits
				L	T	P		
1.	PEC	18PTEPE001	Applied Soft Computing	3	0	0	3	3
2.	PEC	18PTEPE002	Wind and Solar Energy Systems	3	0	0	3	3
3.	PEC	18PTEPE003	Biomedical Instrumentation	3	0	0	3	3
4.	PEC	18PTEPE004	Fundamentals of Nano science	3	0	0	3	3
5.	PEC	18PTEPE005	Advanced Control System	3	0	0	3	3
6.	PEC	18PTEPE006	Power Quality and FACTS	3	0	0	3	3
7.	PEC	18PTEPE007	Microcontroller Based System Design	3	0	0	3	3
8.	PEC	18PTEPE008	High Voltage Direct Current Transmission	3	0	0	3	3
9.	PEC	18PTEPE009	Total Quality Management	3	0	0	3	3
10	PEC	18PTEPE010	Power Electronics for Renewable Energy Systems	3	0	0	3	3
11	PEC	18PTEPE011	Principles of Management	3	0	0	3	3
12	PEC	18PTEPE012	Power System Dynamics and Control	3	0	0	3	3
13	PEC	18PTEPE013	Electrical and Hybrid Vehicles	3	0	0	3	3
14	PEC	18PTEPE014	Computer Aided Design of Electrical Apparatus	3	0	0	3	3
15	PEC	18PTEPE015	Power System Transients	3	0	0	3	3
16	PEC	18PTEPE016	Internet of Things	3	0	0	3	3
17	PEC	18PTEPE017	Solid State drives	3	0	0	3	3
18	PEC	18PTEPE018	Industrial Electrical Systems	3	0	0	3	3
19	PEC	18PTEPE019	Fibre Optics and Laser Instruments	3	0	0	3	3
20	PEC	18PTEPE020	Micro Electro Mechanical Systems	3	0	0	3	3

# **Annexure – IV**

## **B.E. – Full-Time Curriculum (MECH)**





**B.E MECHANICAL ENGINEERING  
2018 REGULATIONS**

**FIRST SEMESTER**

Sl.No	Subject Code	Course Title	CAT	CA Marks	End sem Marks	Total Marks	Credits			
							L	T	P	C
		<b>THEORY</b>								
1	18ZBS101	Engineering Physics	BSC	50	50	100	3	1	0	4
2	18ZBS102	Mathematics I	BSC	50	50	100	3	1	0	4
3	18ZES103	Basic Electrical Engineering	ESC	50	50	100	3	1	0	4
4	18ZES104	Engineering Graphics	ESC	50	50	100	1	0	4	3
5	18ZMC105	Induction Program	MC	Non Credit (Mandatory Subject)						
		<b>PRACTICAL</b>								
6	18ZBS106	Physics Laboratory	BSC	50	50	100	0	0	3	1.5
7	18ZES107	Basic Electrical Engineering Laboratory	ESC	50	50	100	0	0	2	1
		<b>TOTAL</b>		300	300	600				17.5

**SECOND SEMESTER**

Sl.No	Subject Code	Course Title	CAT	CA Marks	End sem Marks	Total Marks	Credits			
							L	T	P	C
		<b>THEORY</b>								
1	18MBS201	Applied Chemistry	BSC	50	50	100	3	1	0	4
2	18ZBS202	Mathematics II	BSC	50	50	100	3	1	0	4
3	18ZES203	Programming in Python	ESC	50	50	100	3	0	0	3
4	18ZHS204	Technical English	HSMC	50	50	100	2	0	0	2
5	18ZMC205	Constitution of India	MC	Non Credit (Mandatory Subject)						
		<b>PRACTICAL</b>								
6	18ZHS206	Communication Laboratory	HSMC	50	50	100	0	0	2	1
7	18ZBS207	Chemistry Laboratory	BSC	50	50	100	0	0	3	1.5
8	18ZES208	Programming in Python Laboratory	ESC	50	50	100	0	0	4	2
9	18ZES209	Workshop Practice	ESC	50	50	100	1	0	4	3
		<b>TOTAL</b>		400	400	800				20.5

### THIRD SEMESTER

Sl.No	Subject Code	Course Title	CAT	CA Marks	End Sem Marks	Total Marks	Credits			
							L	T	P	C
		<b>THEORY</b>								
1	18MPC301	Engineering Mechanics	PCC	50	50	100	3	0	0	3
2	18BSC302	Mathematics III	BSC	50	50	100	3	1	0	4
3	18MPC303	Manufacturing Technology I	PCC	50	50	100	3	0	0	3
4	18MPC304	Engineering Thermodynamics	PCC	50	50	100	3	0	0	3
5	18MPC305	Fluid Mechanics and Fluid Machinery	PCC	50	50	100	3	0	0	3
6	18MSC306	Basic Electronics Engineering	ESC	50	50	100	3	0	0	3
		<b>PRACTICAL</b>								
7	18MPC307	Fluid Mechanics and Fluid Machinery Laboratory	PCC	50	50	100	0	0	3	1.5
8	18MPC308	Machine Drawing	PCC	50	50	100	0	0	4	2.0
		<b>TOTAL</b>		350	350	700				<b>22.5</b>

### FOURTH SEMESTER

Sl.No	Subject Code	Course Title	CAT	CA Marks	End Sem Marks	Total Marks	Credits			
							L	T	P	C
		<b>THEORY</b>								
1	18MPC401	Thermal Engineering	PCC	50	50	100	3	0	0	3
2	18MPC402	Biology for Engineers	HSMC	50	50	100	3	0	0	3
3	18MPC403	Strength of Materials	PCC	50	50	100	3	0	0	3
4	18MPC404	Engineering Materials and Metallurgy	PCC	50	50	100	3	0	0	3
5	18MPC405	Kinematics of Machines	PCC	50	50	100	3	0	0	3
6	18ZMC406	Environmental Science and Engineering	MC	Non Credit (Mandatory Subject)						
		<b>PRACTICAL</b>								
7	18MPC407	Strength of Materials Laboratory	PCC	50	50	100	0	0	3	1.5
8	18MPC408	Thermal Engineering Laboratory	PCC	50	50	100	0	0	3	1.5
		<b>TOTAL</b>		350	350	700				<b>18.0</b>

**FIFTH SEMESTER**

Sl.No	Subject Code	Course Title	CAT	CA Marks	End sem Marks	Total Marks	Credits			
							L	T	P	C
		<b>THEORY</b>								
1	18MPC501	Design of Machine Elements	PCC	50	50	100	3	0	0	3
2	18MPC502	Heat and Mass Transfer	PCC	50	50	100	3	0	0	3
3	18MPC503	Manufacturing Technology II	PCC	50	50	100	3	0	0	3
4	18MPC504	Metrology and Measurements	PCC	50	50	100	3	0	0	3
5	18ZOE505	Open Elective I (Humanities)	OEC	50	50	100	3	0	0	3
6	18ZMC506	Essence of Indian Traditional Knowledge	MC	<b>Non Credit (Mandatory Subject)</b>						
		<b>PRACTICAL</b>								
7	18MPC507	Manufacturing Processes and Metrology Laboratory	PCC	50	50	100	0	0	3	1.5
8	18MPC508	Heat and Mass Transfer Laboratory	PCC	50	50	100	0	0	2	1.5
9	18MPR509	Project I / Summer Internship	PROJ	50	50	100	0	0	2	1.5
		<b>TOTAL</b>		350	350	700				<b>19.5</b>

**SIXTH SEMESTER**

Sl.No	Subject Code	Course Title	CAT	CA Marks	End sem Marks	Total Marks	Credits			
							L	T	P	C
		<b>THEORY</b>								
1	18MPC601	Dynamics of Machinery	PCC	50	50	100	3	0	0	3
2	18MPC602	Finite Element Analysis	PCC	50	50	100	3	1	0	4
3	18MPC603	Professional Elective I	PEC	50	50	100	3	0	0	3
4	18MPC604	Professional Elective II	PEC	50	50	100	3	0	0	3
5	18OEC605	Open Elective II (Humanities)	OEC	50	50	100	3	0	0	3
		<b>PRACTICAL</b>								
6	18MPC606	Simulation Laboratory	PCC	50	50	100	0	0	3	1.5
7	18MPC607	Dynamics of Machinery Laboratory	PCC	50	50	100	0	0	3	1.5
8	18HSC608	Soft skills and Personality Development Laboratory	HSMC	50	50	100	0	0	3	1.5
9	18MPR609	Project II / Winter Internship	PROJ	50	50	100	0	0	6	2
		<b>TOTAL</b>		350	350	700				<b>22.5</b>

**SEVENTH SEMESTER**

Sl.No	Subject Code	Course Title	CAT	CA Marks	End sem Marks	Total Marks	Credits			
							L	T	P	C
		<b>THEORY</b>								
1	18MPC701	Automation in Manufacturing	PCC	50	50	100	3	0	0	3
2	18MPE702	Professional Elective III	PEC	50	50	100	3	0	0	3
3	18MPE703	Professional Elective IV	PEC	50	50	100	3	0	0	3
4	18MOE704	Open Elective III	OEC	50	50	100	3	0	0	3
5	18MOE705	Open Elective IV	OEC	50	50	100	3	0	0	3
		<b>PRACTICAL</b>								
6	18MPE706	CAD/CAM and Mechatronics Laboratory	PCC	50	50	100	0	0	3	1.5
7	18MPR707	Project III	PROJ	50	50	100	0	0	10	5
		<b>TOTAL</b>		350	350	700				<b>21.5</b>

**EIGHTH SEMESTER**

Sl.No	Subject Code	Course Title	CAT	CA Marks	End sem Marks	Total Marks	Credits			
							L	T	P	C
		<b>THEORY</b>								
1	18MPE801	Professional Elective V	PEC	50	50	100	3	0	0	3
2	18MPE802	Professional Elective VI	PEC	50	50	100	3	0	0	3
3	18MOE803	Open Elective V (SWAYAM / NPTEL)	OEC	50	50	100	3	0	0	3
4	18MOE804	Open Elective VI (SWAYAM / NPTEL)	OEC	50	50	100	3	0	0	3
		<b>PRACTICAL</b>								
5	18MPR805	Project IV	PROJ	50	50	100	0	0	12	6
		<b>TOTAL</b>		250	250	500				<b>18</b>

**TOTAL NO. OF CREDITS: 160.0**

## MECHANICAL ENGINEERING (UG) CURRICULUM DESIGN

### CREDIT SUMMARY

Name of the UG Programme: **B.E - MECHANICAL ENGINEERING**

Sl. No.	Subject Area	Credits per Semester								Credits Total	% of Total Credits	Total no. of subjects	Suggested Breakup of Credits (Total 160)*
		I	II	III	IV	V	VI	VII	VIII				
1	HSMC		3		3		1.5			7.5	5	4	12
2	BSC	9.5	9.5	4						23	14	7	25
3	ESC	8	8	3						19	12	7	24
4	PCC			15.5	15	15	10	4.5		60	36	24	48
5	PEC						6	6	6	18	12	6	18
6	OEC					3	3	6	6	18	12	6	18
7	PROJ					1.5	2	5	6	14.5	9	4	14.5
8	MC	0	0		0	0						4	
	<b>Total</b>	<b>17.5</b>	<b>20.5</b>	<b>22.5</b>	<b>18</b>	<b>19.5</b>	<b>22.5</b>	<b>21.5</b>	<b>18</b>	<b>160</b>	<b>100</b>	<b>62</b>	<b>160*</b>

\*Minor variation is allowed as per need of the respective disciplines

**OPEN ELECTIVES FOR V and VI SEMESTERS**

**HUMANITIES AND SOCIAL SCIENCES INCLUDING MANAGEMENT COURSES FOR SEMESTER V AND VI**

Sl.No	Subject Code	Course Title	CAT	CA Marks	End sem Marks	Total Marks	Credits			
							L	T	P	C
1		Industrial Psychology	OEC	50	50	100	3	0	0	3
2		Operations Research	OEC	50	50	100	3	0	0	3
3		Engineering Economics	OEC	50	50	100	3	0	0	3
4		Industrial Engineering	OEC	50	50	100	3	0	0	3
5		Entrepreneurship Development	OEC	50	50	100	3	0	0	3

**OPEN ELECTIVES FOR SEMESTER VII AND VIII**

Sl.No	Subject Code	Course Title	CAT	CA Marks	End sem Marks	Total Marks	Credits			
							L	T	P	C
1		Introduction to Nanotechnology and Surface Engineering	OEC	50	50	100	3	0	0	3
2		Automobile Engineering	OEC	50	50	100	3	0	0	3
3		Renewable Energy Sources	OEC	50	50	100	3	0	0	3
4		Introduction to Composite Materials.	OEC	50	50	100	3	0	0	3
5		Industrial Refrigeration and Air-Conditioning	OEC	50	50	100	3	0	0	3

### PROFESSIONAL ELECTIVES

Sl. No	Subject Code	Course Title	CAT	CA Marks	End sem Marks	Total Marks	Credits			
							L	T	P	C
1	PECMEL321	Internal Combustion Engines	PEC	50	50	100	3	0	0	3
2	PECMEL322	Mechatronic Systems	PEC	50	50	100	3	0	0	3
3	PECMEL323	Microprocessors in Automation	PEC	50	50	100	3	0	0	3
4	PECMEL324	Processing of Composite Materials	PEC	50	50	100	3	0	0	3
5	PECMEL325	Computer Aided Design	PEC	50	50	100	3	0	0	3
6	PECMEL326	Design of Transmission systems	PEC	50	50	100	3	0	0	3
7	PECMEL327	Theory of Metal cutting	PEC	50	50	100	3	0	0	3
8	PECMEL328	Welding Technology	PEC	50	50	100	3	0	0	3
9	PECMEL421	Refrigeration and Air Conditioning	PEC	50	50	100	3	0	0	3
10	PECMEL422	Power Plant Engineering	PEC	50	50	100	3	0	0	3
11	PECMEL423	Gas Dynamics and Jet Propulsion	PEC	50	50	100	3	0	0	3
12	PECMEL424	Process Planning and Cost Estimation	PEC	50	50	100	3	0	0	3
13	PECMEL425	Lean Manufacturing	PEC	50	50	100	3	0	0	3
14	PECMEL426	Design of Jigs, Fixtures and Press Tools	PEC	50	50	100	3	0	0	3
15	PECMEL427	Mechanical Vibrations	PEC	50	50	100	3	0	0	3
16	PECMEL428	Principles of Management	PEC	50	50	100	3	0	0	3
17	PECMEL431	Automobile Engineering	PEC	50	50	100	3	0	0	3
18	PECMEL432	Total Quality Management	PEC	50	50	100	3	0	0	3
19	PECMEL433	Energy Conservation and Management	PEC	50	50	100	3	0	0	3
20	PECMEL434	Industrial Robotics	PEC	50	50	100	3	0	0	3
21	PECMEL435	Computational Fluid Dynamics	PEC	50	50	100	3	0	0	3
22	PECMEL436	Design for Manufacture	PEC	50	50	100	3	0	0	3
23	PECMEL437	Nano Technology	PEC	50	50	100	3	0	0	3
24	PECMEL438	Surface Engineering	PEC	50	50	100	3	0	0	3
25	PECMEL439	Additive Manufacturing	PEC	50	50	100	3	0	0	3
26	PECMEL440	Optimisation Techniques	PEC	50	50	100	3	0	0	3

<b>Honors Core Courses</b>	<b>Minor Core Courses</b>
L-3 ,T-1, P-0     4 Credits	L-3 ,T-1, P-0     4 Credits
<ol style="list-style-type: none"> <li>1. Product Design and Development</li> <li>2. Artificial Intelligence and Expert System in manufacturing</li> <li>3. Surface Engineering</li> <li>4. Material Testing and Characterization</li> <li>5. Advanced Thermodynamics</li> </ol>	<ol style="list-style-type: none"> <li>1. Introduction to Thermal Engineering</li> <li>2. Machine Design</li> <li>3. Manufacturing Technology</li> <li>4. Process planning and Cost analysis</li> <li>5. Engineering metrology and Quality Control</li> </ol>



# **Annexure – V**

## **M.E. – Full-Time Curriculum (Applied Electronics)**



**GOVERNMENT COLLEGE OF ENGINEERING  
BARGUR**

**Regulation – 2018**

**AUTONOMOUS**

**Curriculum for Full Time M.E.–Applied Electronics**

**(Department of ECE)**

From the Academic Year 2018 -2019 onwards

**SEMESTER-I**

SL.No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18AEFC01	Mathematical Foundations for Electronics Engineers	FC	4	0	0	4
2.	18AEPC02	Advanced Digital System Design	PC	3	0	0	3
3.	18AEPC03	Advanced Digital Signal Processing	PC	3	2	0	4
4.	18AEPC04	Embedded System Design	PC	3	0	0	3
5.	18AEPC05	Modern communication techniques	PC	3	0	0	3
6.		Professional Elective I	PC	3	0	0	3
<b>PRACTICALS</b>							
7.	18AEPC06	Embedded System Design Laboratory	PC	0	0	4	2
<b>TOTAL</b>				<b>12</b>	<b>2</b>	<b>4</b>	<b>22</b>

**SEMESTER-II**

SL.No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18AEPC07	Soft Computing and Optimization Techniques	PC	3	0	0	3
2.	18AEPC08	VLSI System Design	PC	3	0	0	3
3.	18AEPC09	Hardware – Software Co-design	PC	3	0	0	3
4.	18AEPC10	Internet of Things	PC	3	0	0	3
5.		Professional Elective II	PE	3	0	0	3
6.		Professional Elective III	PE	3	0	0	3
<b>PRACTICALS</b>							
7.	18AEPC11	VLSI System Design Laboratory	PC	0	0	4	2
8.	18AEEE12	Term Paper Writing and Seminar	EEC	0	0	2	1
<b>TOTAL</b>				<b>18</b>	<b>0</b>	<b>6</b>	<b>21</b>

**SEMESTER-III**

SL.No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18AEPC13	Electronic Product design and development	PC	3	0	0	3
2.		Professional Elective IV	PE	3	0	0	3
3.		Professional Elective V	PE	3	0	0	3
<b>PRACTICALS</b>							
4.	17AEEE14	Project Work Phase I	EEC	0	0	12	6
<b>TOTAL</b>				<b>12</b>	<b>0</b>	<b>12</b>	<b>15</b>

**SEMESTER-IV**

SL.No.	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>PRACTICALS</b>							
1.	18AEEE15	Project Work Phase II	EEC	0	0	24	12
<b>TOTAL</b>				<b>0</b>	<b>0</b>	<b>24</b>	<b>12</b>

**TOTAL NO. OF CREDITS: 70**

**EMPLOYABILITY ENHANCEMENT COURSE (EEC)**

SL.NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	18AEEE12	Term Paper Writing and Seminar	0	0	2	1
2.	18AEEE14	Project Work Phase I	0	0	12	6
3.	18AEEE15	Project Work Phase II	0	0	24	12

**PROFESSIONAL ELECTIVES (PE)**

**SEMESTER I**

**ELECTIVE I**

SL.NO	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
1.	18AEPE01	Digital Control Engineering	PE	3	0	0	3
2.	18AEPE02	Computer Architecture	PE	3	0	0	3
3.	18AEPE03	Digital VLSI design	PE	3	0	0	3
4.	18AEPE04	Electromagnetic Interference and Compatibility	PE	3	0	0	3

**SEMESTER II**

**ELECTIVE II**

SL.NO	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
1.	18AEPE05	CAD for VLSI	PE	3	0	0	3
2.	18AEPE06	Nano Electronics	PE	3	0	0	3
3.	18AEPE07	Sensors and measurement systems	PE	3	0	0	3
4.	18AEPE08	MEMS and NEMS	PE	3	0	0	3

**SEMESTER II****ELECTIVE III**

SL.NO	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
1.	18AEPE09	DSP processor Architectures and Programming	PE	3	0	0	3
2.	18AEPE10	RF System Design	PE	3	0	0	3
3.	18AEPE11	Speech Signal Processing	PE	3	0	0	3
4.	18AEPE12	Solid State Device Modeling and simulation	PE	3	0	0	3

**SEMESTER III****ELECTIVE IV**

SL.NO	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
1.	18AEPE13	Advanced Microprocessor and Microcontroller Architecture	PE	3	0	0	3
2.	18AEPE14	System on Chip Design	PE	3	0	0	3
3.	18AEPE15	Robotics	PE	3	0	0	3
4.	18AEPE16	Physical Design of VLSI Circuits	PE	3	0	0	3
5.	18AEPE17	High Performance Networks	PE	3	0	0	3

**SEMESTER III****ELECTIVE V**

SL.NO	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
1.	18AEPE18	Pattern Recognition	PE	3	0	0	3
2.	18AEPE19	Secure Computing Systems	PE	3	0	0	3
3.	18AEPE20	Signal Integrity for High Speed Design	PE	3	0	0	3
4.	18AEPE21	Wireless AD-HOC and Sensor Networks	PE	3	0	0	3

# **Annexure – VI**

## **M.E. – Full-Time Curriculum (CSE)**





**GOVERNMENT COLLEGE OF ENGINEERING  
BARGUR**

**Regulation – 2018**

**AUTONOMOUS**

**Curriculum for M.E. - CSE**

For the candidates admitted from the Academic Year 2018-2019

**SEMESTER – I**

S.NO	COURSE CODE	COURSE TITLE	CAT EGO RY	L	T	P	C
<b>THEORY</b>							
1.	18CSPC01	Mathematical Foundations of Computer Science	PC	3	1	0	4
2.	18CSPC02	Advances in Data Structures and Algorithm Analysis	PC	3	0	0	3
3.	18CSPE1X	Program Elective I	PE	3	0	0	3
4.	18CSPE2X	Program Elective II	PE	3	0	0	3
5.	18CSAC01	Research Methodology	AC	2	0	0	2
6.	18CSAC1X	Audit Course I	AC	2	0	0	0
<b>PRACTICALS</b>							
7.	18CSPC03	Laboratory 1 (Advances in Data Structures and Algorithm Analysis Lab)	PC	0	0	4	2
8.	18CSPC04	Laboratory 2 (Based on Electives I)	PC	0	0	4	2
<b>TOTAL</b>				<b>16</b>	<b>1</b>	<b>8</b>	<b>19</b>

**SEMESTER – II**

S.NO	COURSE CODE	COURSE TITLE	CATEG ORY	L	T	P	C
<b>THEORY</b>							
1.	18CSPC05	Cloud and Virtualization Techniques	PC	3	0	0	3
2.	18CSPC06	Data storage Technologies and Networks	PC	3	0	0	3
3.	18CSPC07	Compiler Optimization Techniques	PC	3	0	0	3

4.	18CSPE3X	Program Elective III	PE	3	0	0	3
5.	18CSPE4X	Program Elective IV	PE	3	0	0	3
6.	18CSAC2X	Audit Course - II	AC	2	0	0	0
<b>PRACTICALS</b>							
7.	18CSPC08	Laboratory 3 ( Cloud and Virtualization Techniques Lab)	PC	0	0	4	2
8.	18CSPC09	Laboratory 4 (Based on Electives III)	PC	0	0	4	2
9.	18CSPC10	Mini Project with Seminar	PC	0	0	4	2
<b>TOTAL</b>				<b>17</b>	<b>0</b>	<b>12</b>	<b>21</b>

### SEMESTER – III

S.NO	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
<b>THEORY</b>							
1.	18CSPE5X	Program Elective V	PE	3	0	0	3
2.	18CSOE0X	Open Elective	OE	3	0	0	3
<b>PRACTICALS</b>							
4	18CSEE01	Project Phase 1	EEC	0	0	20	10
<b>TOTAL</b>				<b>6</b>	<b>0</b>	<b>20</b>	<b>16</b>

### SEMESTER – IV

S.NO	COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	C
1.	18CSEE02	Project Phase II	EEC	0	0	32	16
<b>TOTAL</b>				<b>0</b>	<b>0</b>	<b>32</b>	<b>16</b>

**TOTAL CREDITS: 72**

**Note:**

**FC - Foundation Core, PC - Professional Core, PE - Professional Elective,**

**EEC - Employability Enhancement Course, AC- Audit course, OE - Open Elective**

**GOVERNMENT COLLEGE OF ENGINEERING , BARGUR**

**Regulation – 2018**

**AUTONOMOUS**

**Curriculum for M.E. - CSE**

For the candidates admitted from the Academic Year 2018-2019

**COMPARISON OF CREDITS**

<b>SEMESTER</b>	<b>As per AICTE Model curriculum CREDITS</b>	<b>AUTONOMOUS CREDITS</b>
SEMESTER I	18	19
SEMESTER II	16	21
SEMESTER III	16	16
SEMESTER IV	16	16
<b>TOTAL</b>	<b>68</b>	<b>72</b>

<b>S.NO</b>	<b>CATEGORY</b>	<b>As per AICTE Model curriculum CREDITS</b>	<b>AUTONOMY CREDITS</b>
1.	Program Core (PC)	22	26
2.	Program Elective (PE)	15	15
3.	Audit Course (AC) (Mandatory)	2	2
	Audit Course 1 & 2 (AC)	0	0
4.	Open Electives (OE)	3	3
5.	Employability Enhancement Course (EEC)	26	26
	<b>TOTAL CREDITS</b>	<b>68</b>	<b>72</b>

**GOVERNMENT COLLEGE OF ENGINEERING  
BARGUR**

**Regulation – 2018**

**AUTONOMOUS**

**Curriculum for M.E. - CSE**

For the candidates admitted from the Academic Year 2018-2019

S.NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>PROGRAM CORES</b>						
1.	18CSPC01	Mathematical Foundations of Computer Science	3	1	0	4
2.	18CSPC02	Advances in Data Structures and Algorithm Analysis	3	0	0	3
3.	18CSPC03	Laboratory 1 (Advances in Data Structures and Algorithm Analysis Laboratory)	0	0	4	2
4.	18CSPC04	Laboratory 2( Based on Electives - I)	0	0	4	2
5.	18CSPC05	Cloud and Virtualization Techniques	3	0	0	3
6.	18CSPC06	Data Storage Technologies and Networks	3	0	0	3
7.	18CSPC07	Compiler Optimization Techniques	3	0	0	3
8.	18CSPC08	Laboratory 3 (Cloud and Virtualization Techniques Laboratory)	0	0	4	2
9.	18CSPC09	Laboratory 4 ( Based on Electives - III)	0	0	4	2
10.	18CSPC10	Mini Project with Seminar	0	0	4	2
		<b>TOTAL</b>	15	0	20	26
<b>TOTAL CREDITS: 26</b>						
<b>PROGRAM ELECTIVES</b>						
S.NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>Program Electives - I</b>						
1.	18CSPE11	Machine Learning	3	0	0	3
2.	18CSPE12	Wireless Sensor Networks	3	0	0	3
3.	18CSPE13	Multicore Architecture	3	0	0	3

<b>Program Electives - II</b>						
4.	18CSPE21	Ethical Hacking	3	0	0	3
5.	18CSPE22	Network on Chip	3	0	0	3
6.	18CSPE23	Internet of Things	3	0	0	3
<b>Program Elective III</b>						
7.	18CSPE31	Big Data Analytics	3	0	0	3
8.	18CSPE32	Computer Vision	3	0	0	3
9.	18CSPE33	Linux Systems Programming	3	0	0	3
<b>Program Elective IV</b>						
10.	18CSPE41	Cognitive Science	3	0	0	3
11.	18CSPE42	GPU Computing	3	0	0	3
12.	18CSPE43	Digital Forensics	3	0	0	3
<b>Program Elective V</b>						
13.	18CSPE51	Mobile Applications and Services	3	0	0	3
14.	18CSPE52	Software Project Management	3	0	0	3
15.	18CSPE53	Bio Informatics	3	0	0	3
<b>OPEN ELECTIVES</b>						
16.	18CSOE01	Total Quality Management (mech)	3	0	0	3
17.	18CSOE02	Software for Circuit Simulation (eee)	3	0	0	3
18.	18CSOE03	Operations Research ( Maths)	3	0	0	3
19.	18CSOE04	Nano Computing(Physics)	3	0	0	3
20.	18CSOE05	Embedded systems( ECE)	3	0	0	3
21.	18CSOE06	Waste to energy ( Chemistry)	3	0	0	3
<b>TOTAL CREDITS: 18</b>						
<b>EMPLOYABILITY ENHANCEMENT COURSES</b>						
S.NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	18CSEE01	Project Phase I	0	0	20	10
2.	18CSEE02	Project Phase II	0	0	32	16
<b>TOTAL CREDITS: 26</b>						

<b>AUDIT COURSES I &amp; II</b>						
1.	18CSA001	Research Methodology	2	0	0	2
<b>Audit Course I</b>						
1.	18CSAC11	English for Research Paper Writing	2	0	0	0
2.	18CSAC12	Intellectual Patent Rights	2	0	0	0
3.	18CSAC13	Principles of Management	2	0	0	0
4.	18CSAC14	Software Quality Assurance	2	0	0	0
<b>Audit Course II</b>						
5.	18CSAC21	Stress Management	2	0	0	0
6.	18CSAC22	Professional Ethics in Engineering	2	0	0	0
7.	18CSAC23	Engineering Economics and Financial Accounting	2	0	0	0
8.	18CSAC24	Industrial Automation and Robotics	2	0	0	0
<b>TOTAL CREDITS: 2</b>						
<b>OVERALL TOTAL CREDITS : 72</b>						

# **Annexure – VII**

## **M.E. – Full-Time Curriculum (PED)**





**GOVERNMENT COLLEGE OF ENGINEERING, BARGUR****Regulation – 2018****AUTONOMOUS****Curriculum for Full Time – M.E. –Power Electronics and Drives**

From the Academic Year 2018-2019 onwards

<b>Semester I</b>							
<b>Sr. No.</b>	<b>Course Category</b>	<b>Course Code</b>	<b>Course Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	PCS	18PEPC01	Power Semiconductor Devices	3	0	0	3
2	PCS	18PEPC02	Power Electronic Converters and DC Drives	3	0	0	3
3	PES		Professional Elective I	3	0	0	3
4	PES		Professional Elective II	3	0	0	3
5		18PEEE03	Research Methodology and IPR	2	0	0	2
6	PCS	18PEPC04	Advanced Power Electronics Laboratory	0	0	4	2
7	PCS	18PEPC05	Power Electronic Converters and DC Drives Laboratory	0	0	4	2
8	Audit-I	18PEAC06	Audit I	2	0	0	0
Total Credits				<b>18</b>			

<b>Semester II</b>							
<b>Sr. No.</b>	<b>Course Category</b>	<b>Course Code</b>	<b>Course Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	PCS	18PEPC07	Power Electronic Inverters and AC Drives	3	0	0	3
2	PCS	18PEPC08	Digital Control of Power Electronic and Drive Systems	3	0	0	3
3	PES		Professional Elective III	3	0	0	3
4	PES		Professional Elective IV	3	0	0	3
5		17PEEE09	Mini Project with Seminar	0	0	4	2
6	PCS	18PEPC10	Power Electronic Inverters and AC Drives Lab	0	0	4	2
7	PCS	18PEPC11	Digital Control of Power Electronic System Lab	0	0	4	2
8	Audit-II	18PEAC12	Audit II	2	0	0	0
Total Credits				<b>18</b>			

<b>Semester III</b>							
Sr. No.	Course Category	Course Code	Course Name	L	T	P	Credits
1	PES		Professional Elective V	3	0	0	3
2	OES		Open Elective Course	3	0	0	3
3	Project	17PEEE13	Project Phase I	0	0	20	10
<b>Total Credits</b>				<b>16</b>			

<b>Semester IV</b>							
Sr. No.	Course Category	Course Code	Course Name	L	T	P	Credits
1	Project	17PEEE14	Project Phase II	0	0	32	16
<b>Total Credits</b>				<b>16</b>			

**GRAND TOTAL CREDITS: 68**

**PROFESSIONAL ELECTIVES**

Sr. No.	Course Category	Course Code	Course Name	L	T	P	Credits
1.	PES	18PEPE01	Advanced Power Electronic Circuits	3	0	0	3
2.	PES	18PEPE02	Modeling and Analysis of Electrical Machines	3	0	0	3
3.	PES	18PEPE03	Dynamics of Electrical Machines	3	0	0	3
4.	PES	18PEPE04	Electromagnetic Interference and Compatibility	3	0	0	3
5.	PES	18PEPE05	Soft Computing Techniques	3	0	0	3
6.	PES	18PEPE06	Electric Vehicles and Power Management	3	0	0	3
7.	PES	18PEPE07	Solar and Energy Storage System	3	0	0	3
8.	PES	18PEPE08	Wind energy Conversion System	3	0	0	3
9.	PES	18PEPE09	PWM converter and Applications	3	0	0	3
10.	PES	18PEPE10	Electric Drives System	3	0	0	3
11.	PES	18PEPE11	Switched Mode and Resonant Converters	3	0	0	3
12.	PES	18PEPE12	Advanced Digital Signal Processing	3	0	0	3
13.	PES	18PEPE13	Industrial Load Modeling and Control	3	0	0	3

14.	PES	18PEPE14	Advanced Microcontroller based Systems	3	0	0	3
15.	PES	18PEPE15	Distributed Generation	3	0	0	3
16.	PES	18PEPE16	Smart Grids	3	0	0	3
17.	PES	18PEPE17	SCADA Systems and Applications	3	0	0	3
18.	PES	18PEPE18	FACTS and Custom Power Devices	3	0	0	3
19.	PES	18PEPE19	HVDC	3	0	0	3
20.	PES	18PEPE20	Power Quality	3	0	0	3

### OPEN ELECTIVES

Sr. No.	Course Category	Course Code	Course Name	L	T	P	Credits
1.	OES	18PEOE01	Business Analytics	3	0	0	3
2.	OES	18PEOE02	Industrial Safety	3	0	0	3
3.	OES	18PEOE03	Operations Research	3	0	0	3
4.	OES	18PEOE04	Cost Management of Engineering Projects	3	0	0	3
5.	OES	18PEOE05	Composite Materials	3	0	0	3
6.	OES	18PEOE06	Waste to Energy	3	0	0	3
7.	OES	18PEOE06	Machine Learning	3	0	0	3
8.	OES	18PEOE06	Electromagnetic Interference and Compatibility	3	0	0	3

### AUDIT COURSES I & II

Sr. No.	Course Category	Course Code	Course Name	L	T	P	Credits
1.	ACS	18PEAC01	English for Research Paper Writing	2	0	0	0
2.	ACS	18PEAC02	Disaster Management	2	0	0	0
3.	ACS	18PEAC03	Sanskrit for Technical Knowledge	2	0	0	0
4.	ACS	18PEAC04	Value Education	2	0	0	0
5.	ACS	18PEAC05	Constitution of India	2	0	0	0
6.	ACS	18PEAC06	Pedagogy Studies	2	0	0	0
7.	ACS	18PEAC07	Stress Management by Yoga	2	0	0	0
8.	ACS	18PEAC08	Personality Development through Life Enlightenment Skills	2	0	0	0



# **Annexure – VIII**

**Minutes of the Meeting  
09.05.2018**

10

# THE HISTORY OF THE

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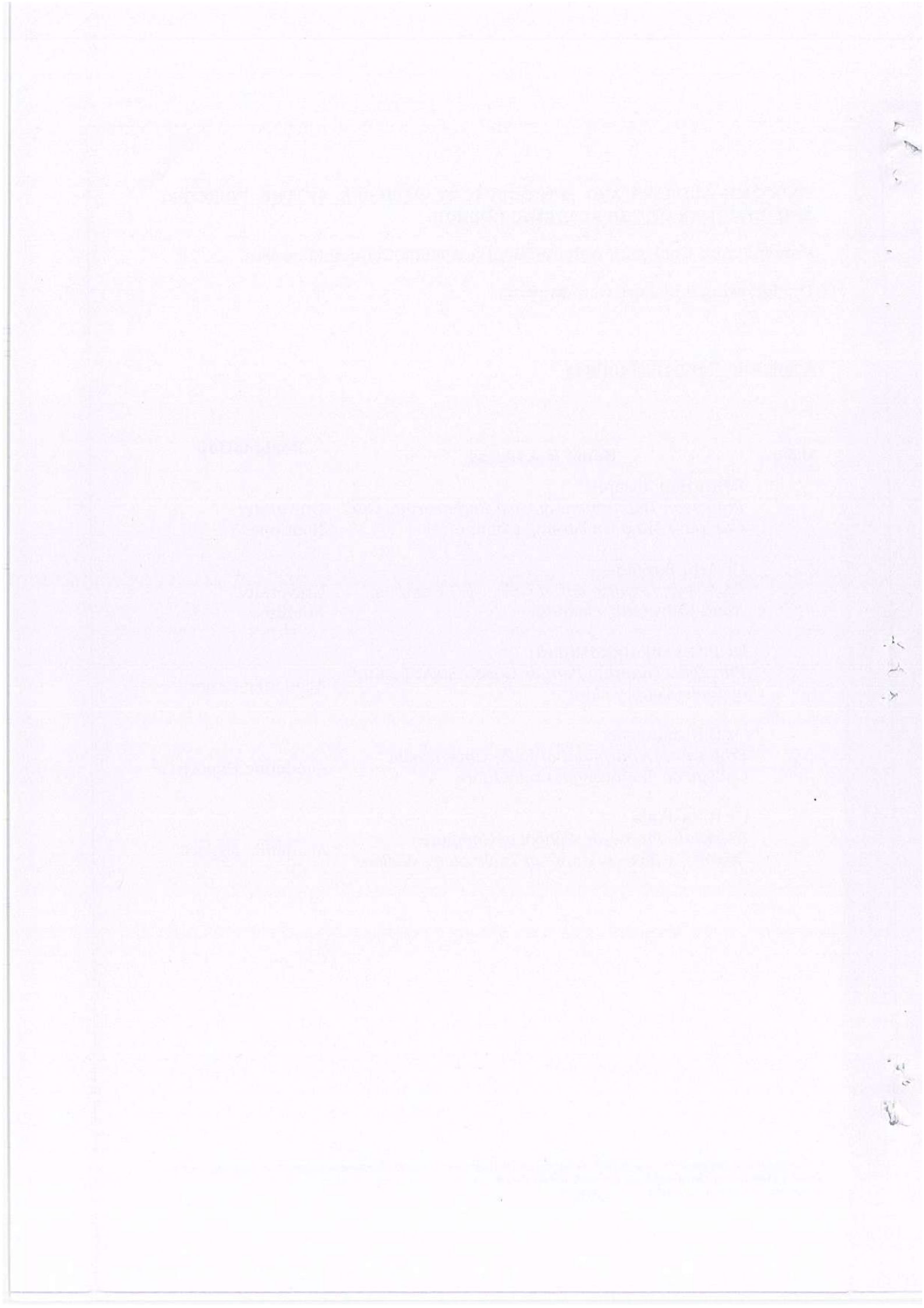
**WELCOME ADDRESS AND INTRODUCTORY REMARKS BY THE PRINCIPAL AND CHAIRMAN OF THE ACADEMIC COUNCIL**

Principal and Chairman **welcomed** all Academic Council Members.

The following members were **present**.

**Academic Council Members**

<b>S.No.</b>	<b>Name &amp; Address</b>	<b>Designation</b>
1.	Dr.Kurian Joseph <i>Professor, Department of Civil Engineering, CEG Campus, Anna University, Chennai</i>	University Nominee
2.	Dr.Arul Siromoney <i>Professor, Department of CSE, CEG Campus, Anna University, Chennai</i>	University Nominee
3.	Dr.P.G.Venkatakrishnan <i>Principal, Thanthai Periyar Government Institute of Technology, Vellore</i>	Academic Expert
4.	Dr.S.Kumaresan <i>Professor, Department of ECE, Government College of Technology, Coimbatore</i>	Academic Expert
5.	Dr.R.Sasikala <i>Associate Professor, School of Computer Science, Vellore Institute of Technology, Vellore</i>	Academic Expert





### **Internal Members**

<b>S.No.</b>	<b>Name of the Faculty</b>	<b>Designation</b>
1.	Dr.M.Chandrasekaran	Principal & Chairman
2.	Dr.P.Thirumal	Chairman, BoS Mech, HOD/MECH
3.	Dr.J.Nafeesa Begum	Chairman, BoS CSE, HOD/CSE
4.	Prof.M.Elangovan	Chairman, BoS ECE, HOD/ECE
4.	Prof.K.Mohan	Chairman, BoS EEE, HOD/EEE
5.	Dr.T.Govindan	HOD/Maths
6.	Dr.G.Saraswathy	HOD/Chemistry
7.	Prof. Jesu Steephan Samy	HOD/English
8.	Dr.I.Thangaraju	Asst.Prof/ EEE. COE(i/c)
9.	Prof.S.Selvi	Asst.Prof/CSE
10.	Dr.I.Rahamathullah	Asst.Prof/Mech
11.	Prof.P.Natarajan	Asst.Prof/Mech

The following members expressed their **inabilities** to attend the meeting.

### **Academic Council Member**

<b>S.No.</b>	<b>Name &amp; Address</b>	<b>Designation</b>
1.	Dr.N.SelvaKumar <i>Professor, Department of Textile Technology, ACT Campus, Anna University, Chennai</i>	University Nominee
2.	Mr.R.Pandian <i>DGM (Marketing), SAIL, Salem Steel Plant, Salem</i>	Industrial Expert

### **Internal Members**

<b>S.No.</b>	<b>Name of the Faculty</b>	<b>Designation</b>
1.	Prof.M.B.Usha	HOD/Physics

Principal and Chairman briefed the **agenda** to be discussed followed by introduction of all members present.

**ITEM:1 To discuss and approve the introduction of mandatory Induction Programme as per AICTE norms for the first years from the Academic Year 2018-2019**

The introduction of Induction Programme is discussed in Academic Council, the members suggested the following,

Planning and Scheduling is to be done for finding the experts and completing the regular first year courses comfortably.

The Academic Council **resolved to approve** the introduction of Induction Programme **from** the Academic Year **2018-2019**.

**ITEM:2 To discuss and approve the B.E. degree Syllabi from V to VIII Semesters under 2017 Regulations for all U.G. Programmes and B.E.(PT) in EEE from V to VII semester**

Principal and Chairman requested all the **BOS Chairman** to present their Curriculum and Syllabi for the U.G. Courses from V to VIII semesters and U.G. (Part Time) – EEE from V to VII semesters for discussion and approval;

**2.1 Dr.T.Govindan**, HOD/Mathematics presented the various subjects offered by the **Department of Mathematics** to the U.G. Degree Programmes,

S.No.	Sem	Course Code	Course Name	Department to which to be offered
1.	III	17ZBS301	Transforms and Partial Differential Equations	Common to all Branches
2.	IV	17SBS401	Probability and Queuing Theory	CSE
		17LBS401	Probability and Random Processes	ECE
		17EBS401	Numerical Methods	EEE
		17MBS401	Statistics and Numerical Methods	MECH
3.	V	17SBS501	Discrete Mathematics	CSE
4.	VI	17SBS602	Resource Management Techniques	CSE

The content of the Syllabi are discussed by the members and **suggested** the following;

- Some additional Mathematics subjects can be offered as **Open Electives**.
- **“Graph Theory”** may be included for the **U.G. CSE** in the **forthcoming** regulations.

The Academic Council **has approved** the above curriculum and syllabi.

**2.2 Dr.P.Thirumal**, HOD/Mechanical presented the Syllabi and Curriculum for B.E. (FT) Degree Programme in **Mechanical Engineering**,

The content of the Syllabi are discussed by the members and suggested the following;

- To **include** financial accounting **contents** in the 5<sup>th</sup> unit of Open Elective course titled **“Engineering Economics and Financial Accounting”** of 7<sup>th</sup> semester.
- To **modify** the one credit course **titled** “Design of Experiments **using** Taguchi Techniques” as “Design of Experiments **and** Taguchi Techniques”.
- To **replace** the Text books listed in the courses “Metrology and Measurements”, “Nano Materials and Technology” and “Composite and Smart Materials” by **latest versions**.

The Academic Council **has approved** all the courses and syllabi from V to VIII semesters, Professional Electives, Open Electives and One Credit Courses of B.E. (FT) Mechanical Engineering brought forward by the Chairman **incorporating** the **above changes**.

**2.3 Dr.J.Nafeesa Begum**, HOD/CSE presented the Syllabi and Curriculum for B.E. (FT) Degree Programme in **Computer Science and Engineering**,

The content of the Syllabi are discussed by the members and suggested the following;

- **List of Experiments** in the course titled as **“Embedded Computing Systems Laboratory”** of V Semester can be considered in order to **cover** the **theoretical part** will be taught in the course titled **“Embedded Computing Systems”**.
- To give a **working** experience on **GPU architecture**.
- To **include Text book** “Object Oriented Programming with C++” authored by E.Balaguruswamy, 6<sup>th</sup> Edition, in the course titled **“Programming in C++”** of **Open Elective** offered by the dept. of CSE.
- To **have** a course **“Project Based Learning”** in the curriculum of **forthcoming** regulations.

The Academic Council **has approved** all the courses and syllabi from V to VIII semesters, Professional Electives, Open Electives and One Credit

Courses of B.E. (FT) Computer Science and Engineering brought forward by the Chairman **incorporating** the **above changes**.

**2.4 Prof.K.Mohan**, HOD/EEE presented the Syllabi and Curriculum for B.E. (FT) Degree Programme in **Electrical and Electronics Engineering** and B.E. (PT) Degree Programme in Electrical and Electronics Engineering,

The content of the Syllabi are discussed by the members and suggested the following;

- To have **industrial expert** to cover some of the topics of course **“High Voltage Engineering”** to the students.

The Academic Council **has approved** all the courses and syllabi from V to VIII semesters, Professional Electives, Open Electives and One Credit Courses of B.E. (FT) Electrical and Electronics Engineering and all the courses and syllabi from V to VII semesters, Professional Electives of B.E. (PT) Electrical and Electronics Engineering.

**2.5 Prof.M.Elangovan**, HOD/ECE presented the Syllabi and Curriculum for B.E. (FT) Degree Programme in **Electronics and Communication Engineering**,

The content of the Syllabi are discussed by the members and suggested the following;

- To **modify** the title of the course **“Project Phase I”** as **“Mini Project”**.
- To include **Latest versions of text books** for each courses.

The Academic Council **has approved** all the courses and syllabi from V to VIII semesters, Professional Electives, Open Electives and One Credit Courses of B.E. (FT) Electronics and Communication Engineering.

**ITEM:3** To discuss and approve the question paper pattern and remuneration for setting of question paper to the course 17EES204-Basic Civil and Mechanical Engineering for End-Semester Examination

The Academic Council **reviewed** the Question Paper Pattern and remuneration for setting of question paper the course 17EES204-Basic Civil and Mechanical Engineering for End-Semester Examination and suggested modifications;

### 3.1 Question Paper Pattern (Existing)

#### Part – I : Basic Civil Engineering

Sections	Number of Questions	Marks Allotted	Total Marks
PART-A	5	2 Marks (for each Question)	10
PART-B	3	10 Marks for Q.No.: 6 15 Marks each for Q.No.: 7 & 8	40
<b>Total Marks</b>			<b>50</b>

#### Part – II : Basic Mechanical Engineering

Sections	Number of Questions	Marks Allotted	Total Marks
PART-A	5	2 Marks (for each Question)	10
PART-B	3	10 Marks for Q.No.: 6 15 Marks each for Q.No.: 7 & 8	40
<b>Total Marks</b>			<b>50</b>

and **recommended** as

**Part - I : Basic Civil Engineering**

Sections	Number of Questions	Marks Allotted	Total Marks
PART-A	5	2 Marks (for each Question)	10
PART-B	3	<b>8</b> Marks for Q.No.: 6 <b>16</b> Marks each for Q.No.: 7 & 8	40
<b>Total Marks</b>			<b>50</b>

**Part - II : Basic Mechanical Engineering**

Sections	Number of Questions	Marks Allotted	Total Marks
PART-A	5	2 Marks (for each Question)	10
PART-B	3	<b>8</b> Marks for Q.No.: 6 <b>16</b> Marks each for Q.No.: 7 & 8	40
<b>Total Marks</b>			<b>50</b>

The Academic Council **resolved to approve** the Question Paper Pattern for the course titled Basic Civil and Mechanical Engineering brought forward by the Chairman **incorporating** the **above changes**.

3.2 Remuneration for setting Question Paper

**Part - I : Basic Civil Engineering**

Details	Rate
Question paper setting	Rs.750/-
Detailed Answer Key	Rs.750/-

**Part - II : Basic Mechanical Engineering**

Details	Rate
Question paper setting	Rs.750/-
Detailed Answer Key	Rs.750/-

The Academic Council **reviewed** and **resolved** the remuneration for setting Question Paper Pattern for the course titled Basic Civil and Mechanical Engineering.

**ITEM:4 Any other matter – Two Subject experts for BoS to be nominated outside the Parent University**

4.1 Recommended **additionally** to include two **subject experts** for BoS nominated from **outside** the Parent University.

4.2 **Student Representatives** are to be included in the **BoS**.

4.3 And suggested to

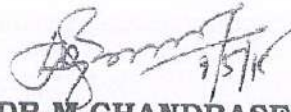
- Include **Course Objectives** uniformly for each course.
- Frame the **Outcomes** of each course using **Bloom's taxonomy**.
- Include either two week / one month **industrial training** for **P.G.** Degree Programme from the **next** regulations.
- Have the **syllabus** content for **one credit** course with the consultancy of **industrial experts**.



**CONCLUDING REMARKS BY THE PRINCIPAL AND CHAIRMAN OF THE ACADEMIC COUNCIL**

The Chairman **summarized** the various decisions taken by the Academic Council and **thanked** all the members for their active participation and valuable suggestions on various points discussed in the meeting.

The Meeting came to a **close** by **4.00 pm**.



**DR.M.CHANDRASEKARAN**  
**PRINCIPAL and CHAIRMAN**  
**ACADEMIC COUNCIL**

To

All the members of the Academic Council (As per the list enclosed)

Copy to:

The Controller of Examinations (Member Secretary)  
Controller's Office - Academic File  
Standing Committee File

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DEPARTMENT OF CHEMISTRY  
5800 S. UNIVERSITY AVENUE  
CHICAGO, ILLINOIS 60637

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