



**E.G.S. PILLAY ENGINEERING COLLEGE**  
 (An Autonomous Institution, Affiliated to Anna University, Chennai)  
 Nagore Post, Nagapattinam – 611 002, Tamilnadu.



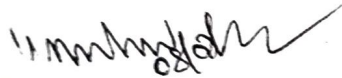
**Minutes of Board of Studies(BoS) Meeting**

Name of the Department	<b>Electrical and Electronics Engineering</b>
Name of the Programmes	B.E. Electrical and Electronics Engineering M.E. Power Electronics and Drives
Meeting No.	<b>01</b>
Date & Time	<b>08.07.2017 &amp; 10.00 A.M.</b>
Venue	Board Room


1. Chairman / BoS welcomed all members for the 1<sup>st</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - To finalize the curriculum and syllabi of first and second semester B.E. EEE Programmes and 1<sup>st</sup> to 4<sup>th</sup> Semesters M.E. PED Programmes.
  - To finalize the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> Semester B.E. EEE.
  - To discuss the question paper pattern for UG/PG Programme and Evaluation methodologies.
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies.

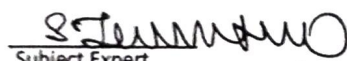
**(i) Suggestions Related to UG Regulations:**

1. Dr.N.Kumaresan and Mr.B.Ganesh has suggested that first year students of stream A & Stream B have to do both the courses Basic and Communicative English equally.
2. Fast track system requirements (Vide clause 3.7) can be made clear that, whether the students has to maintain the CGPA of 8.5 till 4<sup>th</sup> semester or 6<sup>th</sup> semester.
3. Dr.S.Jeevananthan has suggested that, the open elective may be renamed as general elective.

  
 Chairman (BoS)  
 (Dr. V. MOHAN)

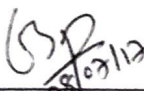
  
 University Nominee  
 (Dr. S. HASMIN THILAGAR)

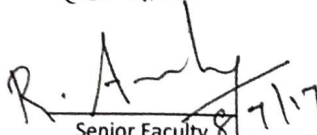
  
 Subject Expert  
 (Dr. N. KUMARESAN)

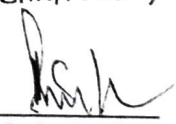
  
 Subject Expert  
 (Dr. S. JEEVANANTHAN)

  
 Industry Expert  
 (B. GANESH)

  
 Alumni  
 (Dr. SABARI PANDIYAN)

  
 Senior Faculty  
 (Dr. T. SURESH PADMANABHAN)

  
 Senior Faculty  
 (R. ANANDARAJ)

  
 Senior Faculty  
 (K. KRISHNAM)

4. Mandatory courses like NCC / NSS / YRC / RRC etc. should not be linked with appearance of end semester examinations in other semesters.
5. Dr.N.Kumaresan has suggested to mention the formation and other details related to Project assessment committee for UG (Vide Clause 3.8) & PG (Vide Clause 4.ii).
6. Dr.N.Kumaresan & Dr.S.Jeevananthan have suggested to reconsider the number of Journals / Conferences to be published by the students after completing UG / PG projects (Vide Clause 5.4) and also they have suggested that, student can publish at least one paper in International Conference / National / International Journals.
7. Dr.S.Jeevananthan has suggested to check the number of credits to be obtained by a student before registering for a PG project work ( Vide Clause 5.4)
8. Technical Seminar I and Technical Seminar II can be differentiated.
9. Clarity needed in Internship evaluation and assessment by institute / Industry level.
10. Credit can be transferred for the courses done by the students through online in other universities / NPTEL / Industries.

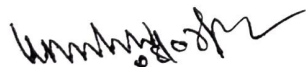
**(ii) Suggestions related to BE – EEE Curriculum and Syllabi**

a. Semester I:


1. Dr.N.Kumaresan and Dr.S.Jeevananthan have suggested to split the Basic Civil & Mechanical subject in to two courses namely, (1) Basic Civil Engineering and (2) Basic Mechanical Engineering. This course has to be included instead of Basic Electrical and Electronics Engineering (BEEE), but BEEE can be a common course for other branch of studies.


b. Semester II:


1. Dr.N.Kumaresan has suggested that instead of Basic English II, student has to select Communicative English I to equalize the course done by stream A & B at one point of time.
2. Mr.B.Ganesh has suggested to include, water treatment process in Environmental Science Course.




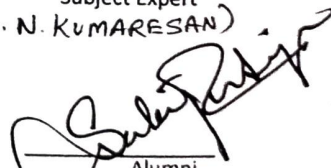
Chairman (BoS)  
(Dr. V. MOHAN)

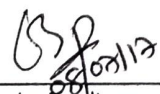
  
University Nominee  
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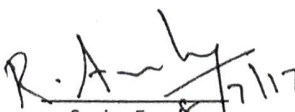
  
Subject Expert  
(Dr. N. KUMARESAN)


  
Subject Expert  
(Dr. S. JEEVANANTHAN)

  
Industry Expert  
(B. GANESH)

  
Alumni  
(D. SABARIPANDIYAN)

  
Senior Faculty  
(Dr. T. SURESH PADMANABHAN)

  
Senior Faculty  
(R. ANANDARAJ)

  
Senior Faculty  
(K. KRISHNAM)

3. Dr.S.Jeevananthan and Dr.N.Kumaresan have suggested the following in Electric Circuit Analysis Course:

(i) Unit I - Title as DC Circuits.

(ii) Unit II – Title as AC Circuits

(iii) Add the word “etc.” after theorems in Unit I & II.

(iv) J.W.Nilsson & Reydale, “Electric circuits”, Pearson Education book can be added as a reference.

c. Semester III:

1. Dr.S.Jeevananthan has suggested to swap Electrical Machines I theory & Lab from 4<sup>th</sup> to 3<sup>rd</sup> semester.

2. Similarly OOPS Theory and Lab can be swap from 3<sup>rd</sup> to 5<sup>th</sup> semester.

d. Semester IV:

1. Dr.S.Jeevananthan has suggested that to get continuity with Electrical Machines I course, Electrical Machines II Theory & Lab can be swap from 5<sup>th</sup> to 4<sup>th</sup> semester.

2. Dr.N.Kumaresan has suggested to introduce, Communication Engineering course instead of Electrical safety & Quality Management (It is added as an Elective).

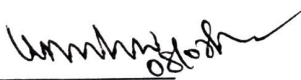
e. Semester V:

1. Swapping of electrical machine Design and microprocessor & microcontroller from 6<sup>th</sup> to 5<sup>th</sup> and vice versa has been suggested by Dr.S.Jeevananthan and Dr.N.Kumaresan.

2. Dr.N.Kumaresan gave suggestion to add “Industrial Lectures / Invited Talks “in 5<sup>th</sup> semester instead of Mini Project – I.

f. Semester VI:

1. Mini Project II is to be renamed as Mini Project I



Chairman (BoS)

(Dr. V. MOHAN)



University Nominee

(Dr. S. HOSMINI THILAGAR)



Industry Expert

(B. GANESH)



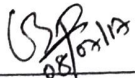
Subject Expert

(Dr. N. KUMARESAN)



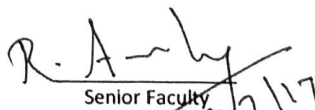
Alumni

(Dr. SABARI PANDIYAN)




Senior Faculty

(Dr. T. SURESH PADMANABHAN)



Senior Faculty

(R. ANANDARAJ)



Senior Faculty

(K. KRISHNAM)

g. Semester VII:

1. Mr.B.Ganesh has suggested to rename, The Mini Project III is to be renamed as Mini Project II which may have "workable / Demovable Models"
2. Dr.S.Jeevananthan has suggested to add High Voltage Engineering in 7<sup>th</sup> semester instead of HVDC Transmission (It is added as an elective).
3. Mr.D.Sabaripandiyan has suggested to add Computer Aided Electrical Drawing Laboratory instead of Power Electronic Simulation Laboratory.

h. Electives:

1. Mr.B.Ganesh gave suggestion to add elective namely "Industrial Plastics and Polymers".
2. He also suggested to add "Product Design Engineering" as an open Elective.
3. Dr.N.Kumaresan and Dr.S.Jeevananthan have suggested to map Professional elective courses with Professional core courses to get continuity.
4. References mentioned in the syllabus should have latest editions, IEEE paper links and NPTEL online courses.

**(iii) Suggestions related to PG – PED ( Both Full Time & Part Time ) Curriculum & Syllabi:**

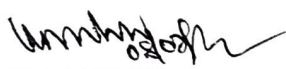


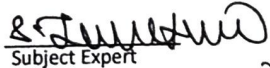

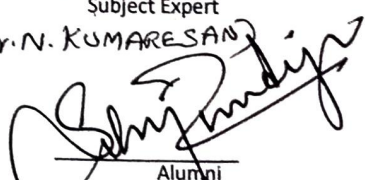
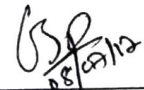
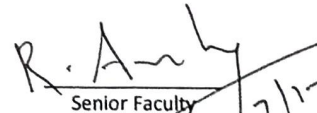
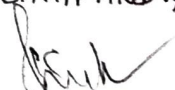
a. Semester I:

1. Dr.S.Jeevananthan insisted to rename the course "Advance Power Semiconductor Devices" as "Power Semiconductor Devices and Recent Advancements". And also he suggested to swap the course "Power Quality Issues and Solutions" in 1<sup>st</sup> semester and "Analysis of Inverters" in 2<sup>nd</sup> semester.
2. Dr.N.Kumaresan suggested to add "Power Electronic Circuits Laboratory" instead of "Electrical Drives Laboratory".

b. Semester II:

1. Electrical Drives Lab can be added instead of Power Electronic Simulation Lab II in full time and part time programmes.

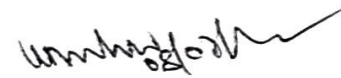
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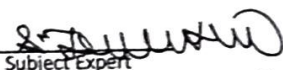
 Chairman (BoS) (Dr. V. MOHAN)	 University Nominee (Dr. S. HOSMIN THILAGAR)	 Subject Expert (Dr. N. KUMARESAN)
 Subject Expert (Dr. S. JEEVANANTHAN)	 Industry Expert (B. GANESH)	 Alumni (D. SABARIPANDIYAN)
 Senior Faculty (Dr. T. SURESH PADMANABHAN)	 Senior Faculty (R. ANANDARAJ)	 Senior Faculty (K. KRISHNAM)

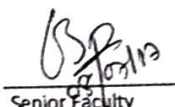
2. Dr.S.Jeevananthan suggested to shift the "Research Methodology" course as first course in the list of courses of 2<sup>nd</sup> semester.


c. Electives:

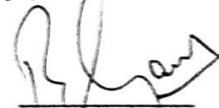
1. PG and UG Electives – Title and Syllabus can't be same.
2. References mentioned in the syllabus should have latest editions.
3. Electives can be rearranged, in such a way that the elective courses are in continuing with the professional core courses.

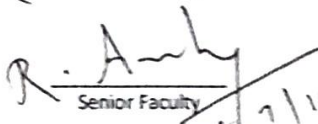
  
Chairman (BoS)  
(Dr. V. MOHAN)


  
Subject Expert  
(Dr. S. JEEVANANTHAN)

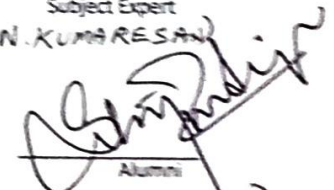
  
Senior Faculty  
(Dr. T. SURESH PADMANABHAN)

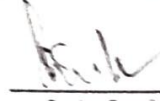
  
University Nominee  
(Dr. S. HOSAIN THILAGAR)



  
Industry Expert  
(B. GANESH)

  
Senior Faculty  
(R. ANANDARAS) 8/1/17

  
Subject Expert  
(Dr. N. KUMARESAN)

  
Alumni  
(Dr. SABARI PANDIYAR)

  
Senior Faculty  
(K. KRISHNARAM)

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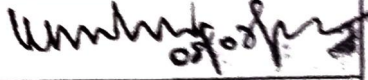
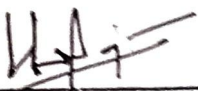

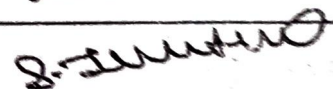

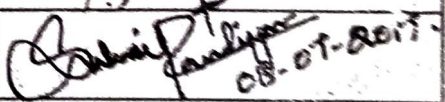

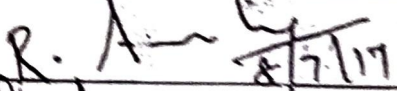
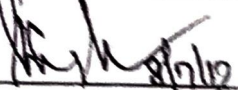
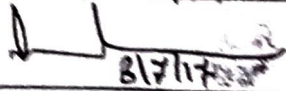
**Board of Studies Meeting****Attendance**


Name of the Department : Electrical and Electronics Engineering

Meeting No : 01

Date &amp; Time : 08-07-2017 &amp; 9.30 A.M.

Venue : Board Room

Sl.No.	Name	Category	Signature
1	Dr. V. MOHAN	Chairman	
2	Dr. S. HOSMIN THILAGAR	University Nominee	
3	Dr. N. KUMARESAN	External Expert Members	
4	Dr. S. JEEVANANTHAN		
5	Mr. B. GANESH	Industry / Corporate Sector	
6	Mr. D. SABARIPANDIYAN	Alumnus	 08-07-2017
7	Dr. T. SURESH PADMANABHAN	Internal Members	 08/07/17
8	Prof. R. ANANDARAJ		 8/7/17
9	Prof. K. KRISHNARAM		 8/7/17
10	Prof. B. NAVEEN ANTONY		 8/7/17

  
Chairman - BoS (EEE)

**Dr. V. MOHAN M.E., Ph.D.,**  
**PROFESSOR & HEAD**

 Department of Electrical & Electronics Engg.  
 E.G.S. Pillay Engineering College - Nagapattinam.



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 Nagore Post, Nagapattinam – 611 002, Tamilnadu.  
**Department of Electrical and Electronics Engineering**

Action Taken for BOS Meeting Minutes held on 08.07.2017

**The Following resolutions were passed**

- It is resolved to recommend the curriculum and syllabi of first and second semester of B.E. Electrical and Electronics Engineering and M.E. Power Electronics and Drives Programmes the syllabus was approved as presented.
- It is resolved to recommend the curriculum of 3<sup>rd</sup> - 8<sup>th</sup> Semester B.E. Electrical and Electronics Engineering and 1<sup>st</sup> - 4<sup>th</sup> Semesters M.E. Power Electronics and Drives Programmes was approved as presented.
- It is resolved to recommend the question paper pattern UG/PG Programmes and evaluation methodology was approved as presented.

List of syllabus revised Courses from Anna University R2013

Course Code	Course Name	Change Details	Revised
<b>B.E. Electrical and Electronics Engineering</b>			
1701MA101	Engineering Mathematics – I	Syllabus Revision	2 Module and some content changed
1701GE102	Basic Civil Engineering	Syllabus Revision	1 Module changed
1701GE103	Basic Mechanical Engineering	Syllabus Revision	Some content Changed
1701HS151	Physics and Chemistry Laboratory –I	Syllabus Revision	2 Module and some content changed
1701MA201	Engineering Mathematics-II	Syllabus Revision	1 Module changed

List of New Courses Introduced

Course Code	Course Name	Change Details
<b>B.E. Electrical and Electronics Engineering</b>		
1701PH101	Applied Physics for Engineers	New Course
1701EN101	Technical English	New Course
1701CH104	Applied Chemistry	New Course
1701GEX52	Communication Skills Laboratory	New Course
1701GEX53	Workshop Practice	New Course
1701PH202	Semiconductor Physics and Devices	New Course
1701CH201	Environmental Studies	New Course
1701GEX02	Engineering Graphics	New Course
1701GEX03	Programming in C	New Course
1702EE201	Electric Circuit Analysis	New Course
1701LE201	Language Elective	New Course
1701GEX51	Programming in C Laboratory	New Course
1701HS251	Physics and Chemistry Laboratory -II	New Course
<b>M.E. Power Electronics and Drives</b>		
1701PE101	Applied Mathematics for Electrical Engineers	New Course
1701PE102	Power Semiconductor Devices and Recent Advancements	New Course

**Dr. V. MERIAN M.E. Ph.D.,**  
 PROFESSOR & HEAD

Department of Electrical & Electronics Engg  
 E.G.S. Pillay Engineering College - Nagapattinam

**ATTESTED**

**Dr. S. RAMABALAN, M.E., Ph.D.,**  
 PRINCIPAL

E.G.S. Pillay Engineering College,  
 Thethi, Nagore - 611 002.  
 Nagapattinam (Dt) Tamil Nadu.

Course Code	Course Name	Change Details
1701PE103	Analysis of Power Converters	New Course
1701PE104	Analysis of Inverters	New Course
1701PE105	Modelling and Analysis of Electrical Machines	New Course
1703PE012	SOLAR AND ENERGY STORAGE SYSTEM	New Course
1704PE106	Power Electronic Circuits Laboratory	New Course
1704PE107	Power Electronics Simulation Laboratory	New Course
1704PE108	Communication Skills Lab I	New Course
1701PE201	Research Methodology	New Course
1701PE202	Solid State DC Drives	New Course
1701PE203	Solid State AC Drives	New Course
1701PE204	Power Quality Issues and Solutions	New Course
1701PE205	Modelling and Design of SMPS	New Course
1703PE002	POWER CONVERTERS FOR SOLAR AND WIND ENERGY CONVERSION SYSTEM	New Course
1701PE206	Electrical Drives Laboratory	New Course
1701PE207	Technical Seminar	New Course
1701PE208	Communication Skills Lab II	New Course

List of CBCS/Electives for / offered by B.E- Electrical and Electronics Engineering

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>ELECTIVES I &amp; II</b>									
1703EE001	Special Electrical Machines	3	0	0	3	40	60	100	PE
1703EE002	Electrical Safety and Management	3	0	0	3	40	60	100	PE
1703EE003	Digital System Design using VHDL	3	0	0	3	40	60	100	PE
1703MG002	Total Quality Management	3	0	0	3	40	60	100	PE
1703EE004	Bio-Medical Instrumentation	3	0	0	3	40	60	100	PE
<b>ELECTIVES III &amp; IV</b>									
1703EE005	Power System Stability	3	0	0	3	40	60	100	PE
1703EE006	Digital Signal Processing	3	0	0	3	40	60	100	PE
1703EE007	Advanced Control Systems	3	0	0	3	40	60	100	PE
1703EE008	Field Programmable Gate Array	3	0	0	3	40	60	100	PE
1703EE009	Power System Transients	3	0	0	3	40	60	100	PE
1703CS023	Soft Computing	3	0	0	3	40	60	100	PE
<b>ELECTIVES V &amp; VI</b>									
1703EE010	Electric and Hybrid Vehicles	3	0	0	3	40	60	100	PE
1703EE011	Micro and Smart Grid	3	0	0	3	40	60	100	PE
1703EE012	Power System Restructuring and Deregulation	3	0	0	3	40	60	100	PE
1703EE013	Power Quality	3	0	0	3	40	60	100	PE
1703EE014	High Voltage DC Transmission	3	0	0	3	40	60	100	PE
1703EE015	Embedded Systems Design	3	0	0	3	40	60	100	PE
1703EE016	Nano technology	3	0	0	3	40	60	100	PE
<b>ELECTIVES VII, VIII &amp; IX</b>									
1703EE017	Flexible AC Transmission Systems	3	0	0	3	40	60	100	PE
1703EE018	Power Electronics for Renewable Energy Systems	3	0	0	3	40	60	100	PE
1703EE019	Electrical Energy Generation Utilization and Conservation	3	0	0	3	40	60	100	PE
1703EE020	Digital Control Systems	3	0	0	3	40	60	100	PE
1703EE021	Optimization Techniques	3	0	0	3	40	60	100	PE

**ATTESTED**

*(Signature)*

**Dr. V. MOHAN M.E., Ph.D.**  
PROFESSOR & HEAD  
Department of Electrical & Electronics Engg  
E.G.S. Pillay Engineering College - Nagapattinam

**Dr. S. RAMABALAN, M.E., Ph.D.**  
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Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.




B.E.- Electrical and Electronics Engineering | E.G.S. Pillay Engineering College (Autonomous) |  
Regulations 2017

1703EE022	Advanced Insulation Systems	3	0	0	3	40	60	100	PE
1703EE023	Power Electronics Applications to Power Systems	3	0	0	3	40	60	100	PE
1703ME037	Industrial Plastics and Polymers	3	0	0	3	40	60	100	PE
1703ME038	Industrial Automation	3	0	0	3	40	60	100	PE
1703ME039	Product Design Engineering	3	0	0	3	40	60	100	PE
<b>OPEN ELECTIVES</b>									
1703EE002	Electrical Safety and Management	3	0	0	3	40	60	100	OE
1703EE010	Electric and Hybrid Vehicles	3	0	0	3	40	60	100	OE
1703ME038	Industrial Automation	3	0	0	3	40	60	100	OE
1703EE024	Renewable Energy Sources	3	0	0	3	40	60	100	OE
1703EE025	Industrial Drives and Control	3	0	0	3	40	60	100	OE
<b>ENTREPRENEURSHIP ELECTIVES</b>									
1703ED001	Startup Entrepreneurship	3	0	0	3	100	00	100	EE
1703ED002	Design Thinking for Innovation	3	0	0	3	100	00	100	EE

List of CBC S/Electives Offered for / by M.E. Power Electronics and Drives

Course Code	Course Name	L	T	P	C	Maximum Marks			
						CA	ES	Total	
<b>Programme Elective Courses</b>									
1703PE001	Recent Trends in Power Conversion Technology	3	0	0	3	40	60	100	
1703PE002	Power Converters for Solar and Wind Energy Conversion System	3	0	0	3	40	60	100	
1703PE003	Digital Controllers in Power Electronic Applications	3	0	0	3	40	60	100	
1703PE004	Nonlinear Dynamics for Power Electronic Circuits	3	0	0	3	40	60	100	
1703PE005	Industrial Control Electronics	3	0	0	3	40	60	100	
1703PE006	Applications of Power Electronics in Utility Systems	3	0	0	3	40	60	100	
1703PE007	Special Electrical Machines & Controllers	3	0	0	3	40	60	100	
1703PE008	Advanced Control of Electric Drives	3	0	0	3	40	60	100	
1703PE009	SCADA System and Applications Management	3	0	0	3	40	60	100	
1703PE010	Distributed Generation and Micro grids	3	0	0	3	40	60	100	
1703PE011	Electric Vehicles and Power Management	3	0	0	3	40	60	100	
1703PE012	Solar and Energy Storage System	3	0	0	3	40	60	100	
1703PE013	Micro Electro Mechanical Systems (MEMS)	3	0	0	3	40	60	100	
1703PE014	Modern HVDC Transmission	3	0	0	3	40	60	100	
1703PE015	Electromagnetic Field Computation and Modeling	3	0	0	3	40	60	100	
1703PE016	Electromagnetic Interference and Compatibility	3	0	0	3	40	60	100	
1703PE017	Modern Rectifiers and Resonant Converters	3	0	0	3	40	60	100	
1703PE018	Optimization Techniques	3	0	0	3	40	60	100	
1703PE019	Power System Restructuring and Pricing	3	0	0	3	40	60	100	
<b>Open Elective Courses</b>									
1703PE018	Optimization Techniques	3	0	0	3	40	60	100	
1703PE020	Energy Management and Auditing	3	0	0	3	40	60	100	
1703PE005	Industrial Control Electronics	3	0	0	3	40	60	100	
1703PE022	Renewable Energy Technology	3	0	0	3	40	60	100	

  
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**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**Board of Studies (BoS) Members**

Sl.No.	Name	Category
1	<b>Dr.V.MOHAN</b> Professor & Head Electrical and Electronics Engineering E.G.S. Pillay Engineering College Nagore Post, Nagapattinam - 611002 E-mail: veerasamy.mohan@yahoo.com Mobile:7373767221 Phone: 04365-251114	<b>Chairman</b>
2	<b>Dr.S.HOSMIN THILAGAR</b> Associate Professor Electrical and Electronics Engineering College of Engineering- Guindy Campus Anna University- Chennai-600025 E-mail: shthilagar@annauniv.edu Mobile: Phone: 044-22357806	<b>University Nominee</b>
3	<b>Dr.N.KUMARESAN</b> Associate Professor Electrical and Electronics Engineering National Institute of Technology- Tiruchirapalli Tiruchirapalli-620016 E-mail: nkumar@nitt.edu Mobile:9489089101 Phone:0431-2503257	<b>External Expert Members</b>
4	<b>Dr.S.JEEVANANTHAN</b> Professor Electrical and Electronics Engineering Pondicherry Engineering College Puducherry-605014 E-mail: drsj_eee@pec.edu Mobile:9443493599 Phone:0413-2655281-288	
5	<b>Mr.B.GANESH</b> Dy. Director of Engineering – APAC Amphenol Antennas Chennai Email ID: <a href="mailto:ganesh.b@amphenol_omni.com">ganesh.b@amphenol_omni.com</a> Mobile: 9176627895	<b>Industry / Corporate Sector</b>

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**  
**Board of Studies (BoS) Members**

Sl.No.	Name	Category
6	<b>Mr. D. SABARIPANDIYAN</b> HOD/EEE Government Polytechnic College Korukkai Thiruthuraiipoondi – 614711 Mobile: 9442345171 Email: contact2sabari@yahoo.com	<b>Alumnus</b>
7	<b>Dr.T.SURESH PADMANABHAN</b> Professor/EEE, EGSPEC. E-mail: drtsp@egspec.org Mobile: 9444025552 Phone: 04365-251114	<b>Internal Members</b>
8	<b>Mr.R.ANANDARAJ</b> Associate Professor/EEE, EGSPEC. E-mail: anandraj.r@egspec.org Mobile:9443526230 Phone: 04365-251114	
9	<b>Mr.K.KRISHNARAM</b> Assistant Professor/EEE, EGSPEC. E-mail: krishnaram@egspec.org Mobile: 9486209791 Phone: 04365-251114	
10	<b>Mr. B. NAVEEN ANTONY</b> Assistant Professor/EEE, EGSPEC. E-mail: naveenjosh839@gmail.com Mobile:7598690231 Phone: 04365-251114	



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**Minutes of Board of Studies (BoS) Meeting**

<b>Name of the Department</b>	Electrical and Electronics Engineering
<b>Names of the Programmes</b>	B.E - Electrical and Electronics Engineering M.E - Power Electronics and Drives
<b>Meeting No</b>	02
<b>Date &amp; Time</b>	21-04-2018 & 10.00 a.m.
<b>Venue</b>	Board Room

**The name of members present in the Board of Studies is given in Annexure – I**

1. Chairman / BoS welcomed all members for the 2<sup>nd</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - To finalize the syllabi of 3<sup>rd</sup> - 8<sup>th</sup> Semester B.E-EEE including core electives and open electives and also 3<sup>rd</sup> & 4<sup>th</sup> Semesters of M.E-PED Programme including electives.
  - Any other BoS matters.
4. Chairman/BoS reviewed about first BoS minutes and also expressed thanks to all the members for the suggestions given by them during the first BoS meeting.

BoS

5. Suggestions given by the member of Board of Studies.

- The Board of Studies members have gone through the curriculum of 3<sup>rd</sup> - 8<sup>th</sup> Semester of B.E-EEE and 3<sup>rd</sup> & 4<sup>th</sup> Semesters of M.E-PED Programmes and suggested the following.

**UG- B.E (Electrical and Electronics Engineering)**

**3<sup>rd</sup> Semester:**

(a) 1702EE301- Electron Devices and Circuits:

- Dr.S.Jeevananthan has suggested to add model of a diode in the Unit-I
- It is suggested to add Darlington amplifier and thermal run away/ secondary breakdown in Unit-II.
- Comparison between the devices has to be included.
- Unit-V title could be as “Amplifiers and Oscillators”

(b) 1702EE302- Digital Electronics:

- It is suggested to add booth and array multiplier in Unit-II. It is also suggested to replace the function/circuit realization by encoder and decoders.
- Unit-V may be added with basic 4 bit accumulator design

(c) 1702EE303- Electromagnetic Theory:

- It is recommended that “William Hayt” book can be added as reference book.

(d) 1702EE304-Power Plant Engineering:

- It is suggested to add “Energy scenario-National and International context” in Unit-I.

(e) 1702EE305-Electrical Machinery-I:

- In Unit-III starting methods should be renamed as starters.
- Rearrangement of topics is needed in Unit-IV.  
(Order as two winding transformer, 3 phase transformer and autotransformer)
- Remove the content “phasing of transformer” in Unit-IV.
- It is suggested to add a topic “selection of motors” in Unit-V.

(f) 1702EE351-Electrical Machinery Laboratory-I:

- Dr.N.Kumaresan has suggested to combine the experiments Swinburne’s test and Load test on DC shunt motor.
- It is also suggested to combine the experiments,”O.C.C and load test on single phase transformer.

(g) 1702EE352-Electron Devices and Circuits Laboratory:

- It is suggested to replace the Characteristics of UJT experiment by Clipper and Clamper experiment
- It is suggested to combine Characteristics of MOSFET with JFET experiment.
- It is decided to remove the realization of passive filters from the experiments list since it is not in theory course.

- “Study of DSO” experiment has to be the first experiment.

#### 4<sup>th</sup> Sem:

(a) 1702EE401-Measurements and Instrumentation:

- Dr.S.Jeevananthan has suggested to add loading effect and classification of instruments in Unit-I.
- Mr.Ganesh has suggested to add the topic “interpretation of calibration data” in Unit-I.
- Dr.N.Kumaresan has suggested to add A.K.Sawhney book in the reference list.

(b) 1702EE402-Linear Integrated Circuits:

- Members suggested to add “case study on data sheets of ICs” in Unit-V.

(c) 1702EE403-Transmission and Distribution:

- Add single line diagram of power system network in Unit-I.
- Dr.N.Kumaresan suggested to remove “Introduction to FACTS” in Unit-I and typical standard specifications is to be included in the same unit.
- It is suggested to improve the reference books list.

(d) 1702EE404- Electrical Machinery-II:

- RMF has to be abbreviated as rotating magnetic field in Unit-III.
- In Unit-II, “operation on infinite bus bars” has to be removed from the list but suggested to add “synchronous induction motor”.
- It is to be included the term “deep bar” in double cage induction motor in Unit-III.
- It is to be changed the term small “v/f” instead of “V/F”
- It is suggested to remove reluctance motor and servomotor and add fractional horse power motor instead of them in Unit-V.
- Unit-V is to be added with the content “equivalent circuit of 1 phase induction motor”

(e) 1702EE451- Electrical Machinery Laboratory-II:

- It is suggested to merge the experiments No load and blocked rotor test and load test on 1 phase induction motor.
- It is also suggested to merge the experiments No load and blocked rotor test and load test on 3 phase induction motor.

#### 5<sup>th</sup> Sem:

(a) 1702EE502- Linear Control Systems:

- It is suggested to remove root locus construction from Unit-II.

(b) 1702EE503- Power Electronics:

• Dr.S.Jeevananthan has given numerous valid suggestions for the course namely Power Electronics. In UNIT-I, he has suggested to rearrange the topics as follows,  
All power devices- working, static and dynamic characteristics, Power SCR- two transistor analogy, turn On-OFF methods, snubber circuits, series-parallel operation, driver circuits, losses and thermal management.

- It is advised to include RLE load-CCM and DCM in first line of Unit-II.

- Dr.N.Kumaresan and Dr.S.Jeevananthan have suggested to introduce the topic “Introduction to MLI-Single Phase cascaded H Bridge MLI” in Unit-IV.

- It is suggested to add “single phase and three phase” in brackets of AC voltage controller and also ACVC and Cycloconverter in separate paragraphs.

Cycloconverter- single phase to single phase, three phase to single phase, control strategies of cycloconverter, Introduction to single phase and three phase matrix converters.

(c) 1702EE551- Measurement and Control Laboratory:

- It is suggested to improve the 3rd experiment name as “Measurement of energy (1 $\phi$  and 3  $\phi$ )”
- It is suggested to specify the name of the experiment no. 7 as “Transfer function of Armature/field controlled DC motor”, “Transfer function of separately excited DC generator”
- The distinguished alumni Mr.Sabaripandian suggested to add earth resistance measurement experiment in the list.

### 6<sup>th</sup> Sem:

(a) 1702EE601- Solid State Drives:

- Dr.S.Jeevananthan suggested to include the “components of load torque” in Unit-I and also to add “characteristics of mechanical load” instead of typical load torque characteristics.
- It is also suggested to add selection of motor “rating” in the third line of Unit-I.
- Unit-III can be framed as follows, “Implementation of stator voltage control, stator frequency control, v/f control using VSI and cycloconverter drive; Introduction to Vector control-block diagram approach”.
- It is suggested to remove “cycloconverter” fed PMSM drive

(b) 1702EE603- Microprocessors, Microcontrollers and its applications:

- Unit-I can be divided into two units. Up to memory organization one unit. Second unit may contain the remaining part.
- Remove Unit-IV and reframe the syllabus accordingly.

### 7<sup>th</sup> Sem:

(a) 1702EE701- Protection and Switchgear:

- It is suggested to add “Solid State Circuit Breakers” in Unit-V

(b) 1702EE752- Computer Aided Electrical Drawing Laboratory:

- Mr.Sabaripandian has well appreciated the implementation of this course mentioned in first BoS meeting and well acknowledged the syllabus of the laboratory course. He also suggested to add a suitable experiment “Draw the layout of any one power plant” which they learned in theory course.

### Electives:

- It is noticed that the syllabus content of the elective course” Renewable Energy Sources” is so common and well suitable for common elective and may be removed from core electives.

- Industry expert Mr.Ganesh has highly appreciated and praised about the elective course “Industrial Plastics and Polymers” for its beautiful organization of syllabus content. He also suggested to motivate the maximum students to select the elective course titled “Electric and Hybrid vehicles” for the importance of future trend and employability based course content.
- Dr.S.Jeevananthan has suggested to add Arindam Ghosh book as reference book in the power quality course.
- Dr.N.Kumaresan and Dr.S.Jeevananthan have suggested to make the following changes in the syllabus of the course 1703EE020-Flexible AC Transmission Systems.
  - Change the Unit-I title as “Introduction about FACTS Devices”.
  - Unit-II revised with the contents TSC and TCR.
  - Check and revise the contents without any repetition.
- It is suggested to make the following changes in the syllabus of the course 1703EE024-Optimization Techniques
  - Unit-I title as “Classification and Principles of Optimization Techniques”. Suitably change the syllabus also.
  - Combine suitably all the five Units as-I, II, III and IV and introduce the Unit-V as “Advanced Optimization Techniques”.

## **PG- M.E (Power Electronics and Drives)**

### **1<sup>st</sup> Sem:**

#### **(a) 1702PE102- Power Semiconductor Devices and Recent Advancements:**

- Subject expert Dr.S.Jeevananthan has insisted to refine the Unit-I with Review of MOS, MCT-working and characteristics. It is also suggested to add the topics like “Estimation of device losses & design of heat sink, development of improved gate drivers(IGBT)”
- It is also recommended to revise the Unit-V with SiC devices etc.
- It is suggested add the reference book by Yaswanth Balliga.

#### **(b) 1702PE103- Analysis of Power Converters:**

- Subject expert has insisted to remove the effect of source impedance in Unit-I and suggested to keep it in Unit-II. Also add performance comparison of 1 phase and three phase power converters in Unit-II.
- It is suggested to change the Units-III, IV and V. Unit-III title as “Hard switching and soft switching converters”. Revise the Unit-III contents with Para1: Hard switching converters and para2: Soft switching converters.
- It is suggested to change the Unit-IV as “Multilevel Converters” with the contents Vienna rectifier etc.
- It is suggested to change the Unit-V as “Matrix Converters” with the contents of Matrix Converter-mode of operation and its control strategies etc.



(c) 1702PE104- Analysis of Inverters:

- It is suggested to change the contents of Unit-II “Voltage Source Inverters” as 1 phase and 3 phase VSIs, mode of operations, Control strategies like SPWM, SVPWM and harmonic injection PWMs etc.
- It is suggested to add the contents of Unit-III with McMurray and modified McMurray inverters.
- It is suggested to add the contents of Unit-IV with introduction to recent topologies of MLIs, PWM strategies of MLIs etc.

**2<sup>nd</sup> Sem:**

(a) 1702PE203- Solid State AC Drives:

- It is suggested to separate the contents of Unit-IV into direct control and indirect control

**PG Electives:**

(a) 1703PE001- Recent Trends in power Conversion Technology:

- It is suggested to revise the syllabus with application oriented contents, multistage power conversion, heating load and welding applications etc.

(b) 1703PE006- Applications of Power Electronics in Utility Systems:

- It is suggested to add custom power devices and FACTS devices
- Syllabus may contain transmission part-3 units and distribution part-2 Units.

**6. The following common suggestions were given:**

- References mentioned in the syllabus should have latest editions, IEEE paper links and NPTEL online courses with exact details of the mentor.
- Data sheet interpretation may be added in suitable lab courses.
- Extensive use of MS-Excel, Word, PPT software applications may be used for the enrichment of students’ employability skills.
- A workshop may be conducted for the faculties of EEE so as to increase the Course Plan framing skills.
- Faculty training may be arranged for simulation software like ANSYS, MAGNET etc. so as to enhance the content beyond knowledge for the learners.
- Lab courses may have the references like company reference manuals or faculty ready reference manuals instead of book references.
- If possible other departments’ open elective list may be showcased in EEE curriculum at last.
- Name of the experiments in PG labs may be revised.
- Title of the PG courses may be revised in accordance with the suitability.



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Chairman (BoS)

University Nominee

Subject Expert

Subject Expert

Industry Expert

Alumni

Senior Faculty

Senior Faculty

Senior Faculty

Senior Faculty



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**Department of Electrical and Electronics Engineering**


Action Taken for BOS Meeting Minutes held on 21.04.2018

**The Following resolutions were passed**

- It is resolved to recommend the curriculum and syllabi of first and second semester of B.E. Electrical and Electronics Engineering and M.E. Power Electronics and Drives Programmes the syllabus was approved as presented.
- It is resolved to recommend the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> Semester B.E. Electrical and Electronics Engineering and 1<sup>st</sup> – 4<sup>th</sup> Semesters M.E. Power Electronics and Drives Programmes was approved as presented.
- It is resolved to recommend the question paper pattern UG/PG Programmes and evaluation methodology was approved as presented.

List of syllabus revised Courses from Anna University R2013.

Course Code	Course Name	Change Details	Revised
<b>B.E. Electrical and Electronics Engineering</b>			
1702EE301	Electron Devices and Circuits	Syllabus Revision	2 Module and some content changed
1702EE302	Digital Electronics	Syllabus Revision	1 Module changed
1702EE303	Electromagnetic Theory	Syllabus Revision	Some content Changed
1702EE304	Power Plant Engineering	Syllabus Revision	2 Module and some content changed
1702EE305	Electrical Machinery-I	Syllabus Revision	1 Module changed
1702EE351	Electrical Machinery Laboratory-I	Syllabus Revision	2 Experiment change
1702EE352	Electron Devices and Circuits Laboratory	Syllabus Revision	3 Experiment change
1704GE351	Life Skills: Soft Skills	Syllabus Revision	Some content Changed
1701MA403	Numerical Methods and Statistics	Syllabus Revision	2 Module and some content changed
1702EE401	Measurements and Instrumentation	Syllabus Revision	1 Module changed
1702EE402	Linear Integrated Circuits	Syllabus Revision	2 Module and some content changed
1702EE403	Transmission and Distribution	Syllabus Revision	2 Module and some content changed
1702EE404	Electrical Machinery-II	Syllabus Revision	1 Module changed
1702EC406	Communication Engineering	Syllabus Revision	2 Module and some content changed
1702EE451	Electrical Machinery Laboratory-II	Syllabus Revision	2 Experiment change
1702EE452	Analog And Digital Integrated Circuits Laboratory	Syllabus Revision	3 Experiment change

  
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**List of New Courses Introduced**

Course Code	Course Name	Change Details
<b>B.E. Electrical and Electronics Engineering</b>		
1701MA301	Engineering Mathematics-III	New Course
1704EE453	Technical Seminar II	New Course
1704GE451	Life Skills: Verbal Ability	New Course
<b>M.E. Power Electronics and Drives</b>		
1703PE013	Elective III- Optimization Techniques	New Course
1703PE001	Elective IV - Recent trends in power conversion Technology	New Course
1703EV020	Elective V-Environmental Engineering and Pollution Control	New Course

**List of CBCS/Electives for / offered by B.E- Electrical and Electronics Engineering**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>ELECTIVES I &amp; II</b>									
1703EE001	Special Electrical Machines	3	0	0	3	40	60	100	PE
1703EE002	Electrical Safety and Management	3	0	0	3	40	60	100	PE
1703EE003	Digital System Design using VHDL	3	0	0	3	40	60	100	PE
1703MG002	Total Quality Management	3	0	0	3	40	60	100	PE
1703EE004	Bio-Medical Instrumentation	3	0	0	3	40	60	100	PE
<b>ELECTIVES III &amp; IV</b>									
1703EE005	Power System Stability	3	0	0	3	40	60	100	PE
1703EE006	Digital Signal Processing	3	0	0	3	40	60	100	PE
1703EE007	Advanced Control Systems	3	0	0	3	40	60	100	PE
1703EE008	Field Programmable Gate Array	3	0	0	3	40	60	100	PE
1703EE009	Power System Transients	3	0	0	3	40	60	100	PE
1703CS023	Soft Computing	3	0	0	3	40	60	100	PE
<b>ELECTIVES V &amp; VI</b>									
1703EE010	Electric and Hybrid Vehicles	3	0	0	3	40	60	100	PE
1703EE011	Micro and Smart Grid	3	0	0	3	40	60	100	PE
1703EE012	Power System Restructuring and Deregulation	3	0	0	3	40	60	100	PE
1703EE013	Power Quality	3	0	0	3	40	60	100	PE
1703EE014	High Voltage DC Transmission	3	0	0	3	40	60	100	PE
1703EE015	Embedded Systems Design	3	0	0	3	40	60	100	PE
1703EE016	Nano technology	3	0	0	3	40	60	100	PE
<b>ELECTIVES VII, VIII &amp; IX</b>									
1703EE017	Flexible AC Transmission Systems	3	0	0	3	40	60	100	PE
1703EE018	Power Electronics for Renewable Energy Systems	3	0	0	3	40	60	100	PE
1703EE019	Electrical Energy Generation Utilization and Conservation	3	0	0	3	40	60	100	PE
1703EE020	Digital Control Systems	3	0	0	3	40	60	100	PE
1703EE021	Optimization Techniques	3	0	0	3	40	60	100	PE
1703EE022	Advanced Insulation Systems	3	0	0	3	40	60	100	PE
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1703ME039	Product Design Engineering	3	0	0	3	40	60	100	PE
<b>OPEN ELECTIVES</b>									
1703EE002	Electrical Safety and Management	3	0	0	3	40	60	100	OE
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1703EE025	Industrial Drives and Control	3	0	0	3	40	60	100	OE
<b>ENTREPRENEURSHIP ELECTIVES</b>									
1703ED001	Startup Entrepreneurship	3	0	0	3	100	00	100	EE
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1703PE005	Industrial Control Electronics	3	0	0	3	40	60	100
1703PE006	Applications of Power Electronics in Utility Systems	3	0	0	3	40	60	100
1703PE007	Special Electrical Machines & Controllers	3	0	0	3	40	60	100
1703PE008	Advanced Control of Electric Drives	3	0	0	3	40	60	100
1703PE009	SCADA System and Applications Management	3	0	0	3	40	60	100
1703PE010	Distributed Generation and Micro grids	3	0	0	3	40	60	100
1703PE011	Electric Vehicles and Power Management	3	0	0	3	40	60	100
1703PE012	Solar and Energy Storage System	3	0	0	3	40	60	100
1703PE013	Micro Electro Mechanical Systems (MEMS)	3	0	0	3	40	60	100
1703PE014	Modern HVDC Transmission	3	0	0	3	40	60	100
1703PE015	Electromagnetic Field Computation and Modeling	3	0	0	3	40	60	100
1703PE016	Electromagnetic Interference and Compatibility	3	0	0	3	40	60	100
1703PE017	Modern Rectifiers and Resonant Converters	3	0	0	3	40	60	100
1703PE018	Optimization Techniques	3	0	0	3	40	60	100
1703PE019	Power System Restructuring and Pricing	3	0	0	3	40	60	100
<b>Open Elective Courses</b>								
1703PE018	Optimization Techniques	3	0	0	3	40	60	100
1703PE020	Energy Management and Auditing	3	0	0	3	40	60	100
1703PE005	Industrial Control Electronics	3	0	0	3	40	60	100
1703PE022	Renewable Energy Technology	3	0	0	3	40	60	100

  
**Dr. V. MOHAN M.E., Ph.D.**  
**PROFESSOR & HEAD**  
 Department of Electrical & Electronics Engg  
 E.G.S. Pillay Engineering College - Nagapattinam

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.**  
**PRINCIPAL**  
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**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**Board of Studies (BoS) Members**

Sl.No.	Name	Category
1	<b>Dr. V. MOHAN</b> Professor & Head Electrical and Electronics Engineering E.G.S. Pillay Engineering College Nagore Post, Nagapattinam - 611002 E-mail: veerasamy.mohan@yahoo.com Mobile: 9942986674 Phone: 04365-251114	<b>Chairman</b>
2	<b>Dr. S. HOSMIN THILAGAR</b> Associate Professor Electrical and Electronics Engineering College of Engineering- Guindy Campus Anna University- Chennai-600025 E-mail: shthilagar@annauniv.edu Mobile: 9444372244 Phone: 044-22357806	<b>University Nominee</b>
3	<b>Dr. N. KUMARESAN</b> Professor Electrical and Electronics Engineering National Institute of Technology- Tiruchirapalli Tiruchirapalli-620016 E-mail: nkumar@nitt.edu Mobile:9489089101 Phone:0431-2503257	<b>External Subject Expert Members</b>
4	<b>Dr. S. JEEVANANTHAN</b> Professor Electrical and Electronics Engineering Pondicherry Engineering College Puducherry-605014 E-mail: drsj_eee@pec.edu Mobile:9443493599 Phone:0413-2655281-288	
5	<b>Mr. BERTRAM GODWINPAUL IGNATIUS</b> Manager, Talent Development, Kone Elevator, Chennai. E-mail: bertramgodwinpaul.ignatius@kone.com Mobile: 9789777661	<b>Industry / Corporate Sector</b>



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6	<b>Mr. D. SABARIPANDIYAN</b> Lecturer/EEE, Government Polytechnic College, Kandharvakottai, Pudukkottai-613301. Mobile: 9442345171 Email: contact2sabari@yahoo.com	<b>Alumnus</b>
7	<b>Dr. T. SURESH PADMANABHAN</b> Professor/EEE, E.G.S. Pillay Engineering College E-mail: drtsp@egspec.org Mobile: 9444025552 Phone: 04365-251114	<b>Internal Members</b>
8	<b>Mr. R. ANANDARAJ</b> Associate Professor/EEE, E.G.S. Pillay Engineering College E-mail: anandraj.r@egspec.org Mobile:9443526230 Phone: 04365-251114	
9	<b>Mr. K. KRISHNARAM</b> Assistant Professor/EEE, E.G.S. Pillay Engineering College E-mail: krishnaram@egspec.org Mobile: 9486209791 Phone: 04365-251114	
10	<b>Mr. B. NAVEEN ANTONY</b> Assistant Professor/EEE, E.G.S. Pillay Engineering College E-mail: naveenjosh839@gmail.com Mobile:7598690231 Phone: 04365-251114	



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**Minutes of Board of Studies (BoS) Meeting**

<b>Name of the Department</b>	<b>Electrical and Electronics Engineering</b>
<b>Names of the Programme</b>	B.E. Electrical and Electronics Engineering
<b>Meeting No.</b>	03
<b>Date &amp; Time</b>	11.05.2019 & 10.00 A.M.
<b>Venue</b>	Board Room (SJ Block 204)

**The members present in the Board of Studies is given in Annexure – I.**

1. Chairman / BoS welcomed all the members for the 3<sup>rd</sup> meeting of Board of Studies.
2. Chairman / BoS briefed the members about the Agenda.
  - Discussion and action taken about previous BoS Meeting.
  - Briefing of AICTE Model Curriculum -2018 to all members.
  - To finalize the curriculum of B.E. EEE Programme from first to eighth semester.
  - To finalize the syllabi of first year courses offered by the EEE department.
  - Any other matters.
3. The following are the suggestions given by the members of Board of Studies.
  - The Board of Studies members have gone through the curriculum of B.E. EEE Programme and suggested the following.

**Under Graduate: B.E. - Electrical and Electronics Engineering**

- Subject experts have gone through the types of courses, credits and then suggested to combine open elective courses (OEC) with humanities and social science elec courses (HSSEC).

BoS





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- Subject experts have insisted to rename the courses “Soft skills - Reasoning, Soft skills - Aptitude and Soft skills - Aptitude 2, GD”, so as to reflect in mark sheet with proper meaning.
- Subject expert has suggested to remove the “Industrial plastics and polymers” course from the basic science courses (BSC) list.
- Subject experts have insisted to split the “Analog & digital electronics” course into two.
- Orientation courses may be conducted for Mathematics, Physics and chemistry faculties to match/correlate the department courses.
- Subject experts have suggested moving the course “Electrical machine design” from Professional core courses (PCC) to Programme specific electives courses (PEC).
- It is suggested to add “Linear integrated circuits” course in PCC list.
- Subject expert has suggested to rename the “Transmission and distribution” course as “Generation, Transmission and Distribution”.
- It is suggested to rename the course “Microprocessor, Microcontroller and its Applications” as “Microprocessor and its applications”.
- Subject experts have suggested to rename the course “Electrical Machines-I” as “DC machines and Transformers”. Corresponding laboratory name also has to be changed accordingly.
- They have also suggested to rename the course “Electrical Machines-II” as “Synchronous and Asynchronous machines”. Corresponding laboratory name also has to be changed.
- It is suggested to add the content calculation of main dimensions of the machines in the syllabi of both “DC machines and Transformers” and “Synchronous and Asynchronous machines”.
- They have suggested to rename the course “Power Electronics Laboratory” as “Power Electronics and Drives Laboratory”
- Subject experts have suggested to combine the experiments of “Measurements and Instrumentation Laboratory” and “Control Systems Laboratory” and rename it as “Control and Instrumentation Laboratory”.
- It is suggested to add the following laboratories (i) Analog electronics laboratory (ii) Digital electronics laboratory and (iii) Integrated circuits laboratory.
- It is suggested to use the conventional meters and experimental setup for demonstration purpose.



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- It is suggested to add “High voltage engineering” in the elective list.
- It is suggested to add the course “Modern transmission systems” instead of the course “High Voltage DC Transmission”.
- Subject expert has suggested to add the elective course “Advanced power semiconductor devices”.
- It is suggested to move the course “Power Electronics Applications to Power Systems” to next elective list for higher semesters.
- Subject expert has suggested to add the elective course “Embedded system for project design” in third group of electives. This course may be in theory + laboratory type.
- It is suggested to remove the course “Optimization techniques” and add the contents of it in the course called “Soft computing” in last three units/modules.
- Industry expert has suggested to add CFL and LED lighting schemes in the course “Electrical Energy Generation, Utilization and Conservation”.

**OPEN ELECTIVE COURSE:**

- Subject expert has suggested to include the open elective course (OEC) “Internet of things”.
- Subject expert has suggested to add an OEC addressing the needs of MS office, web development, Photoshop/coral draw and equation editor for the preparation of thesis, similarity check etc. This course may be in theory + laboratory type.
- Subject expert has suggested to group all electives in single list (if possible).
- It is suggested to include more OECs by consulting training and placement cell.
- Subject expert has suggested to add an OEC “Construction structures of power plants” by consulting civil department professors.
- It is suggested to include more OECs like “Computer communication, networking, pervasive and ubiquitous computing”, “Heating, ventilation and air conditioning in electrical safety point of view”, “Modern communication technologies” etc.
- OEC offered by EEE department to others may have the course titled “Troubleshooting of Electrical appliances”
- Subject expert has suggested to depute one faculty coordinator for OECs.



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**INTERNSHIP and EECs:**

- It is suggested to rename the course as “Internship” instead of “Industrial internship”.
- Alumni and subject expert suggested to depute one faculty as department internship coordinator.
- It is suggested to rename the “Competitive exams preparation” course by “Comprehensive Viva” in Employment Enhancement Courses list.

**INTERNSHIP and EECs:**

- It is suggested to keep the course “Basic Electrical and Electronics Engineering” for all programs except B.E-EEE program.
- The following suggestions are given in “**Basic Electrical and Electronics Engineering**” course:
  - i. Subject expert has suggested to remove stepper motor
  - ii. It is suggested to keep as “SCR” not SCRs
  - iii. It is suggested to add Power converters (block diagram approach only)
  - iv. It is suggested to add in CO as “ To solve very simple problems in DC and AC circuits”
- The following suggestions are given in the experiments of “**Basic Electrical and Electronics Engineering Laboratory**” course:
  - (i) “Experiments related to verification of ohm’s law and Kirchhoff’s laws”
  - (ii) “Experiments involving logic gates”
  - (iii) “ Fan and light control using regulator”
  - (iv) “ Design of 6V regulated power supply”
  - (v) “ Energy conservation demonstration experiment using Electronic energy meter”
  - (vi) “ waveform generation and calculation of rms and average values”
  - (vii) “ IC 555, 741 based experiments”
  - (viii) “Experiments in earthing”.
  - (ix) It is suggested to remove RC coupled amplifier, load test on transformer experiments.
- The following suggestions are given in “**Electrical Circuit Analysis**” course:
  - (i) Unit I - Title as “DC Circuits”, and add star-delta conversion
  - (ii) Unit II – Title as “AC Circuits” and add three phase circuits.
  - (iii) It is suggested to remove three phase circuits.
  - (iv) It is suggested to add rms, avg., form factor, peak factor for basic waveforms
  - (v) It is suggested to add ABCD parameters in two port networks



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4. The following resolutions were passed

- It is resolved to recommend the curriculum of First to eighth semesters of B.E EEE and the syllabi of First year Courses offered by the EEE department to the Academic Council for approval.

The Chairman, Board of Studies thanked all the members for their valuable suggestions and coordination.

**Date:**

**Place:**

Chairman (BoS)

University Nominee

Subject Expert

Subject Expert

Industry Expert



Alumni

Senior Faculty

Senior Faculty

Senior Faculty

Senior Faculty

	<b>E.G.S. PILLAY ENGINEERING COLLEGE</b> (An Autonomous Institution, Affiliated to Anna University, Chennai) Nagore Post, Nagapattinam - 611 002, Tamilnadu.	
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**Board of Studies Meeting**

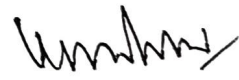
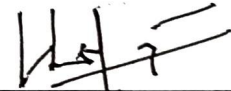
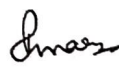
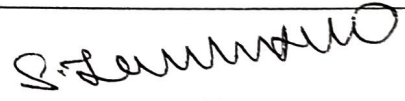
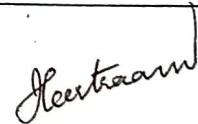
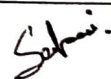
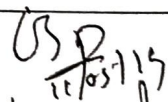
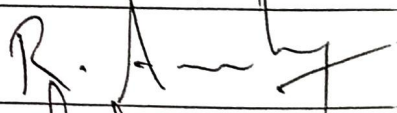

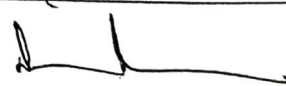
**Attendance**

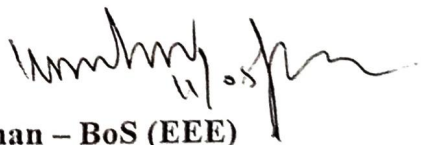
Name of the Department : Electrical and Electronics Engineering

Meeting No : 03

Date & Time : 11-05-2019 & 10:00 A.M.

Venue : Board Room (SJB 204)

Sl.No.	Name	Category	Signature
1	Dr. V. MOHAN	Chairman	
2	Dr. S. HOSMIN THILAGAR	University Nominee	
3	Dr. N. KUMARESAN	External Expert Members	
4	Dr. S. JEEVANANTHAN		
5	Mr. BERTRAM GODWINPAUL IGNATIUS	Industry / Corporate Sector	
6	Mr. D. SABARIPANDIYAN	Alumnus	
7	Dr. T. SURESH RADMANABHAN	Internal Members	
8	Prof. R. ANANDARAJ		
9	Prof. K. KRISHNARAM		
10	Prof. B. NAVEEN ANTONY		

  
Chairman - BoS (EEE)



**E.G.S. PILLAY ENGINEERING COLLEGE**  
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Nagore Post, Nagapattinam – 611 002, Tamilnadu.  
**Department of Electrical and Electronics Engineering**

**Action Taken for BOS Meeting Minutes held on 11.05.2019**

The Following resolutions were passed

- It is resolved to recommend the curriculum and syllabi of first and second semester of B.E. Electrical and Electronics Engineering and M.E. Power Electronics and Drives Programmes the syllabus was approved as presented.
- It is resolved to recommend the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> Semester B.E. Electrical and Electronics Engineering was approved as presented.
- It is resolved to recommend the question paper pattern UG/PG Programmes and evaluation methodology was approved as presented.

**List of syllabus revised Courses from Anna University R2013**

Course Code	Course Name	Change Details	Revised
<b>B.E. Electrical and Electronics Engineering</b>			
1901GE101	Electric Circuit Analysis	Syllabus Revision	2 Module and some content changed
1901CH202	Applied Chemistry	Syllabus Revision	1 Module changed
1901GEX03	Programming for Problem Solving	Syllabus Revision	2 Module and some content changed!
1901CHX51	Engineering Chemistry Lab	Syllabus Revision	Some Experiment change
1901GE253	Basic Workshop Lab	Syllabus Revision	Some Experiment change
1901HSX51	Communication Skill Lab	Syllabus Revision	Some Experiment change
1702EE501	Electrical Machine Design	Syllabus Revision	2 Module and some content changed
1702EE503	Power Electronics	Syllabus Revision	2 Module and some content changed
1702CS504	Object Oriented Programming	Syllabus Revision	2 Module and some content changed
1702CS554	Object Oriented Programming Laboratory	Syllabus Revision	Some Experiment change
1702EE551	Measurement and Control Laboratory	Syllabus Revision	Some Experiment change
1702EE601	Solid State Drives	Syllabus Revision	1 Module changed
1702EE602	Power System Analysis	Syllabus Revision	2 Module and some content changed
1702EE603	Microprocessor, Microcontroller and its Applications	Syllabus Revision	2 Module and some content changed
1702EE652	Microprocessor, Microcontroller and its Applications Laboratory	Syllabus Revision	Some Experiment change

*(Signature)*

**Dr. V. MOHAN M.E. Ph.D.,**  
**PROFESSOR & HEAD**  
Department of Electrical & Electronics Engg  
E.G.S. Pillay Engineering College - Nagapattinam

**ATTESTED**  
*(Signature)*  
**Dr. S. RAMABALAN, M.E., Ph.D.**  
**PRINCIPAL**  
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Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

**List of New Courses Introduced**

Course Code	Course Name	Change Details
<b>B.E. Electrical and Electronics Engineering</b>		
1901MA103	Engineering Mathematics – I (Calculus and Differential Equations)	New Course
1901PH102	Wave, Optics and Electromagnetism	New Course
1901GEX51	CAD Lab	New Course
1901GEX53	Basic Electrical and Electronics Engineering Lab	New Course
1901PHX51	Engineering Physics Lab	New Course
1901GE151	Engineering Intelligence-I	New Course
1901MA203	Engineering Mathematics – II (Linear Algebra, Transform Calculus and Numerical Methods)	New Course
1901ENX01	English for Engineers	New Course
1901GE201	Engineering Exploration	New Course
1901GE252	Engineering Intelligence – II	New Course
1703EE002	ELECTRICAL SAFETY AND MANAGEMENT	New Course
1701GEX51	Programming in C Laboratory	New Course
1701HS251	Physics and Chemistry Laboratory -II	New Course
1704EE552	Mini Project – I	New Course
1704GE551	Life Skills: Aptitude-I	New Course
1701MGX02	Industrial Economics	New Course
1703EE009	Power System Transient	New Course
Elective-VI (Open Elective)	Elective-VI (Open Elective)	New Course
1702EE651	Power Electronics and Drives Laboratory	New Course
1704EE653	Mini Project – II	New Course
1704EE654	Industrial Visit Presentation	New Course
1704GE651	Life Skills: Aptitude – II	New Course

**List of CBCS/Electives for / offered by B.E- Electrical and Electronics Engineering**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>ELECTIVES I &amp; II</b>										
1903EE001	Special Electrical Machines	3	0	0	3	40	60	100	PE	
1903EE002	Electrical Machine Design	3	0	0	3	40	60	100	PE	
1903EE003	Electric and Hybrid Vehicles	3	0	0	3	40	60	100	PE	
1903EE004	Micro Electro Mechanical System	3	0	0	3	40	60	100	PE	
1903EE005	Automotive Electronics	3	0	0	3	40	60	100	PE	
1903EE006	Industrial Automation	3	0	0	3	40	60	100	PE	
1903EE007	Bio-Medical Instrumentation	3	0	0	3	40	60	100	PE	
1903EE008	Power Plant Engineering	3	0	0	3	40	60	100	PE	
1903EE009	Advanced Power Semiconductor Devices	3	0	0	3	40	60	100	PE	
1903EE010	Modern Power Converters	3	0	0	3	40	60	100	PE	
<b>ELECTIVES III</b>										
1903EE011	Digital System Design using VHDL	3	0	0	3	40	60	100	PE	


  
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PROFESSOR & HEAD  
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**ATTESTED**  
  
**Dr. S. RAMABALAN**, M.E., Ph.D.,  
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1903EE012	Advanced Control Systems	3	0	0	3	40	60	100	PE
1903EE013	Soft Computing	3	0	0	3	40	60	100	PE
1903EE014	Electrical Energy Generation, Utilization and Conservation	3	0	0	3	40	60	100	PE
1903EE015	Embedded System for Project Design	3	0	0	3	40	60	100	PE
<b>ELECTIVES IV &amp; V</b>									
1903EE016	Power System Stability	3	0	0	3	40	60	100	PE
1903EE017	Power System Transients	3	0	0	3	40	60	100	PE
1903EE018	Power System Economics	3	0	0	3	40	60	100	PE
1903EE019	Micro and Smart Grid	3	0	0	3	40	60	100	PE
1903EE020	Power System Restructuring and Deregulation	3	0	0	3	40	60	100	PE
1903EE021	Modern Transmission Systems	3	0	0	3	40	60	100	PE
1903EE022	Flexible AC Transmission Systems	3	0	0	3	40	60	100	PE
1903EE023	Advanced Insulation Systems	3	0	0	3	40	60	100	PE
1903EE024	Power Quality	3	0	0	3	40	60	100	PE
1903EE025	High Voltage Engineering	3	0	0	3	40	60	100	PE
<b>OPEN ELECTIVES</b>									
1903EE026	Electronic Waste Management Issues and Challenges	3	0	0	3	40	60	100	OE
1903EE027	Troubleshooting of Electrical Appliances	2	0	2	3	50	50	100	OE
1903EE028	Energy Conservation and Energy Management	3	0	0	3	40	60	100	OE
1903EE029	Electrical Drives and Control	3	0	0	3	40	60	100	OE
1903EE005	Automotive Electronics	3	0	0	3	40	60	100	OE

**List of CBCS/Electives Offered for / by M.E. Power Electronics and Drives**

Course Code	Course Name	L	T	P	C	Maximum Marks		
						CA	ES	Total
<b>Programme Elective Courses</b>								
1703PE001	Recent Trends in Power Conversion Technology	3	0	0	3	40	60	100
1703PE002	Power Converters for Solar and Wind Energy Conversion System	3	0	0	3	40	60	100
1703PE003	Digital Controllers in Power Electronic Applications	3	0	0	3	40	60	100
1703PE004	Nonlinear Dynamics for Power Electronic Circuits	3	0	0	3	40	60	100
1703PE005	Industrial Control Electronics	3	0	0	3	40	60	100
1703PE006	Applications of Power Electronics in Utility Systems	3	0	0	3	40	60	100
1703PE007	Special Electrical Machines & Controllers	3	0	0	3	40	60	100

  
Dr. V. MOHAN KUMAR, Ph.D.,  
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E.G.S. Pillay Engineering College, Nagapattinam

**ATTESTED**  
  
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Nagapattinam (Dt) Tamil Nadu



B.E.- Electrical and Electronics Engineering | E.G.S. Pillay Engineering College (Autonomous) |

Regulations 2017 & 2019

1703PE008	Advanced Control of Electric Drives	3	0	0	3	40	60	100
1703PE009	SCADA System and Applications Management	3	0	0	3	40	60	100
1703PE010	Distributed Generation and Micro grids	3	0	0	3	40	60	100
1703PE011	Electric Vehicles and Power Management	3	0	0	3	40	60	100
1703PE012	Solar and Energy Storage System	3	0	0	3	40	60	100
1703PE013	Micro Electro Mechanical Systems (MEMS)	3	0	0	3	40	60	100
1703PE014	Modern HVDC Transmission	3	0	0	3	40	60	100
1703PE015	Electromagnetic Field Computation and Modeling	3	0	0	3	40	60	100
1703PE016	Electromagnetic Interference and Compatibility	3	0	0	3	40	60	100
1703PE017	Modern Rectifiers and Resonant Converters	3	0	0	3	40	60	100
1703PE018	Optimization Techniques	3	0	0	3	40	60	100
1703PE019	Power System Restructuring and Pricing	3	0	0	3	40	60	100
<b>Open Elective Courses</b>								
1703PE018	Optimization Techniques	3	0	0	3	40	60	100
1703PE020	Energy Management and Auditing	3	0	0	3	40	60	100
1703PE005	Industrial Control Electronics	3	0	0	3	40	60	100
1703PE022	Renewable Energy Technology	3	0	0	3	40	60	100

*V. Mohan*

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**Minutes of Board of Studies (BoS) Meeting**

<b>Name of the Department</b>	<b>Electrical and Electronics Engineering</b>
<b>Names of the Programme</b>	B.E. Electrical and Electronics Engineering
<b>Meeting No.</b>	04
<b>Date &amp; Time</b>	11.06.2020 & 11.00 A.M.
<b>Venue/Platform</b>	Zoom App ( Online mode)

**The members present in the Board of Studies is given in Annexure – I.**

1. Dr.T.Suresh Padmanabhan, Professor/EEE welcomed all the members for the 4<sup>th</sup> meeting of Board of Studies and mentioned about members from different states of south India.
2. Chairman / BoS briefed the members about the Agenda.
  - Discussion and action taken about previous BoS Meeting.
  - Briefing of AICTE Model Curriculum - 2018 to all members.
  - Briefing of Regulations 2019, course categories and credits.
  - To finalize the syllabus of the courses of II year third and fourth semester B.E EEE Programme.
  - Any other related matters.
3. The following are the suggestions given by the members of Board of Studies.
  - BoS members have appreciated the initiatives taken by the department to conduct the meeting during COVID19 pandemic situation.
  - The Board of Studies members have gone through the curriculum and syllabi of B.E EEE Programme and suggested the following.

**Under Graduate: B.E. - Electrical and Electronics Engineering**

- Subject experts have gone through details of courses, credits and then suggested/commented the following



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- Anna University nominee clarified about mathematics subjects and their contents of usage to B.E-EEE courses.

### III Semester:

	• The following suggestions are given in “Analog Electronics” course:
(i)	Subject expert member suggested to change “application “into“ Applications”
(ii)	Subject expert member suggested to add “and” in module-II title as <b>“BIPOLAR JUNCTION TRANSISTOR AND CIRCUITS “</b>
(iii)	They have also suggested the following in Module-II: “Secondary breakdown” in second line, Analysis “and comparison” in third line
(iv)	Subject expert member suggested to add “high frequency equivalent circuit” in third line of Module-III and also to change “model” as “models” in the same line.
(v)	It is suggested to remove the Module-VI and keep them in course plan as an assessment activity. It is suggested for all the courses wherever suitable accordingly.

	• The following suggestions are given in “Digital Electronics” course:
(i)	Subject expert member suggested to add “Boolean postulates: laws, rules & theorems; Standard forms of Boolean expressions-conversions; Simplification using K-maps-3, 4 and 5 variables “in the module-I as separate paragraph.
(ii)	It is suggested to add “Simplification using Quine Mccluskey Method” in further reading.

	• The following suggestions are given in “DC Machines and Transformers” course:
(i)	Subject expert member suggested to insert “To study the construction, working and governing equations of dc machines and transformers” in the objectives.
(ii)	It is suggested to keep the module-I as: “Rekindling of magnetic circuit fundamentals; DC generator- Construction, Materials for different parts, development of lap and wave winding, EMF equation, excitation types, Commutation, Armature reaction, Compensating winding, and characteristics; Simulation study on dc separately excited dc generator.”
(iii)	It is suggested to add “Energy saving options.” as last part of Module-III.
(iv)	It is suggested to keep module-IV as two paragraphs Para-1: single phase transformer Para-2: Three phase transformer



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	(v) They have suggested to change the Module-V title as “Performance evaluation of Transformers”
	(vi) It is suggested to add “Calculation of All day efficiency” in module-V

<ul style="list-style-type: none"> <li>The following suggestions are given in “DC Machines and Transformers Laboratory” course:</li> </ul>	
(i)	Subject expert members suggested to combine “Swinburne’s test and Load test on DC shunt motor” as one experiment.
(ii)	It is suggested to add “parallel operation of single phase transformers” experiment.

<ul style="list-style-type: none"> <li>The following suggestions are given in “Analog and Digital Electronics Laboratory” course:</li> </ul>	
(i)	Subject experts have suggested to split the “Analog and Digital Electronics Lab” into two for the importance of fundamentals of electronics and named them as (1) Analog Electronics Lab (2) Digital Electronics Lab
(ii)	It is suggested to include the experiments of Digital electronics Lab in the IV semester laboratory course “Analog and Digital Integrated Circuits Lab”
(iii)	They have also verified the experiments of both laboratory courses named (i) Analog Electronics Lab (in III semester) (ii) Analog and Digital Integrated Circuits Lab (in IV semester)

### IV Semester:

<ul style="list-style-type: none"> <li>The following suggestions are given in “Generation, Transmission and Distribution” course:</li> </ul>	
(i)	<p>University nominee and subject expert members have suggested to change the content of Module-I as:</p> <p>Structure of electric power system - Single line diagram, different operating voltages of generation, transmission and distribution.</p> <p>Types of energy and classification of power plants; Present Power position in India, Future Planning for Power Generation.</p> <p>Power Generation From Non-Renewable Energy Sources– Thermal and Nuclear based power generation</p> <p>Power Generation From Renewable Energy Sources – Solar, Wind, Hydro, Tidal, Geothermal, Fuel cell and Bio-mass based power generation.</p>
(ii)	They have suggested to change the Module-II as:



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	<p><b>MODULE-II: MECHANICAL DESIGN OF LINES, AND INSULATORS</b>          Mechanical design of OH lines – Line Supports, Types of towers, Stress and Sag Calculation-Towers at equal heights – Unequal heights, Effects of Wind and Ice loading, stringing chart.          Insulators-Types, voltage distribution in insulator string, improvement of string efficiency, testing of insulators.</p>
(iii)	Mr.B.Vinoth (Alumnus) has appreciated the syllabus contents of the course mainly renewable energy sources.
(iv)	<p>Subject expert members have suggested to change the Module-III as:</p> <p><b>MODULE-III : PARAMETERS OF TRANSMISSION LINES, AND UNDERGROUND CABLES</b>          Parameters of single and three phase transmission lines; Resistance, inductance and capacitance of symmetrical and unsymmetrical transposed solid, stranded and bundled conductors; self and mutual GMD.          Underground cables - constructional features of LT and HT cables, capacitance of single-core cable, grading of cables, power factor and heating, capacitance of 3- core belted cable; DC cables; Cable faults and testing.</p>
(v)	<p>Subject expert members have suggested to change the Module-IV as:</p> <p><b>MODULE-IV: PERFORMANCE OF TRANSMISSION LINES</b>          Performance of Transmission lines - short line, medium line and long line, equivalent circuits, Phasor diagram, attenuation constant, phase constant, surge impedance; transmission efficiency and voltage regulation; Real and reactive power flow in lines; surge impedance loading; Power Circle diagrams; Skin and proximity effects; Ferranti effect; Interference with neighboring communication circuits; Corona discharge characteristics, Critical voltage and corona loss; Methods of voltage control</p>
(vi)	<p>Subject expert members have suggested to change the Module-Vas:</p> <p><b>MODULE-V: DISTRIBUTION SYSTEMS AND SUBSTATION</b>          Distribution Systems – General Aspects, Radial and Ring main systems; Calculation of voltage in distributors with concentrated and distributed loads, Kelvin's law; Techniques of voltage control and power factor improvement; Substation-Types, typical key diagram of a 11kV / 400V substation; Grounding; Recent trends in transmission and distribution: EHVAC, HVDC and FACTS (Qualitative treatment only).</p>

<ul style="list-style-type: none"> <li>The following suggestions are given in “Synchronous and Asynchronous Machines” course:</li> </ul>
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(i)	Subject expert members have suggested to add “Power transfer equations and capability curves” in second line of Module-I
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• The following suggestions are given in “Linear Integrated Circuits” course:	
(i)	Subject member expert suggested to rename the Module-IV title as “ SIGNAL CONVERSION APPLICATIONS” and also suggested to add the contents of the same module with the following: “Active filters-Low pass, High pass, Band pass and Band reject filters; First, second and higher order filters.”
(ii)	Industry expert member suggested to add the book “Microelectronic circuits-by A.S.Sedra and K.C.Smith” in reference list.

• The following suggestions are given in “Synchronous and Asynchronous Machines Laboratory” course:	
(i)	It is suggested to combine the experiments as “ No load , blocked rotor test and load test on single phase induction motor”
(ii)	It is also suggested to combine the experiments as “ No load , blocked rotor test and load test on three phase induction motor”
(iii)	Subject expert member suggested to add the experiment “ Parallel operation of alternators/ synchronization of alternator with infinite bus bar”
(iv)	It is suggested to add the experiment “Synduction motor”

• The following suggestions are given in “Integrated Circuits Laboratory” course:	
(i)	Subject experts have suggested to rename this course as “Analog and Digital Integrated Circuits Laboratory” and also suggested to add the experiments of Digital Electronics Lab.
(ii)	They have also verified all the experiments of this laboratory.

- Subject expert members suggested to revise the references of all courses in standard format.
- Industry expert member suggested to consider the addition of laboratory experiments with comparison of simulation results with hardware output results.
- Industry expert member suggested to introduce the PC based measurements in one or two experiments so as to access the labs by students during pandemic/unusual situations.
- Subject expert member suggested to add the content of Environmental engineering course with “Sustainable Engineering” concepts.
- University nominee suggested to use “Virtual Labs” and also suggested to record the lab experiments and stream it to students through social media.



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### 4. The following resolutions were passed

- It is resolved to recommend the revised curriculum of B.E EEE and the syllabi of second year (III and IV semester) courses offered by the EEE department to the Academic Council for further approval.

The Chairman, Board of Studies thanked all the members for their valuable suggestions and coordination.

**Date:** 11.06.2020

**Place:** Nagapattinam

Chairman (BoS)

University Nominee

Subject Expert

Subject Expert

Industry Expert

Alumni

Senior Faculty

Senior Faculty

Senior Faculty



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**Board of Studies Meeting**

**Attendance**

**Name of the Department** : Electrical and Electronics Engineering  
**Meeting No** :04  
**Date & Time** :11-06-2020 & 11.00 A.M  
**Venue** : Zoom App (Online mode)

S.No	Name	Category	Signature
1	Dr.V.MOHAN	Chairman	
2	Dr.V.SANKARANARAYANAN	University Nominee	ONLINE MODE
3	Dr.C.SREEKANTH	External Expert Members	ONLINE MODE
4	Dr.S.JEEVANATHAN		
5	Mr.VISWESWARAN JAGADEESAN	Industry/ Corporate Sector	ONLINE MODE
6	Mr. B.VINOTH	Alumnus	ONLINE MODE
7	Dr.T.SURESH PADMANABHAN	Internal Members	
8	Prof. R.ANADARAJ		
9	Prof. K.KRISHNARAM		
10	Prof. B.A. NAVEEN ANTONY		

Chairman-BOS (EEE)

**Dr. V. MOHAN M.E., Ph.D.,**  
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**Department of Electrical and Electronics Engineering**

Action Taken for BOS Meeting Minutes held on 11.02.2020

The Following resolutions were passed

- It is resolved to recommend the curriculum and syllabi of first and second semester of B.E. Electrical and Electronics Engineering and M.E. Power Electronics and Drives Programmes the syllabus was approved as presented.
- It is resolved to recommend the curriculum of 3<sup>rd</sup> – 3<sup>th</sup> Semester B.E. Electrical and Electronics Engineering was approved as presented.
- It is resolved to recommend the question paper pattern UG/PG Programmes and evaluation methodology was approved as presented.

List of syllabus revised Courses from R2017

Course Code	Course Name	Change Details	Revised
<b>B.E. Electrical and Electronics Engineering</b>			
1901MA303	Engineering Mathematics III (Complex Variables, Vector Calculus and Transforms)	Syllabus Revision	2 Module and some content changed
1902EE302	Digital Electronics	Syllabus Revision	1 Module changed
1902EE303	DC Machines and Transformers	Syllabus Revision	Some content Changed
1902CS503	Object Oriented Programming	Syllabus Revision	2 Module and some content changed
1902EE351	Analog Electronics Laboratory	Syllabus Revision	Some experiment change
1902EE352	DC Machines and Transformers Laboratory	Syllabus Revision	Some experiment change
1902CS554	Object Oriented Programming Laboratory	Syllabus Revision	Some experiment change
1904GE351	Life Skills: Soft Skill	Syllabus Revision	2 Module and some content changed
1902EE401	Generation, Transmission and Distribution	Syllabus Revision	1 Module changed
1902EE402	Synchronous and Asynchronous Machines	Syllabus Revision	1 Module changed
1902EE403	Linear Integrated Circuits	Syllabus Revision	2 Module and some content changed
1902EE451	Synchronous and Asynchronous Machines Laboratory	Syllabus Revision	Some experiment change
1902EE452	Analog and Digital Integrated Circuits Laboratory	Syllabus Revision	Some experiment change
1701MGX01	Professional Ethics	Syllabus Revision	1 Module changed
1702EE701	Protection and Switchgear	Syllabus Revision	Some content Changed
1702EE702	Power System Operation and Control	Syllabus Revision	2 Module and some content changed
1702EE703	High Voltage Engineering	Syllabus Revision	1 Module changed
1702EE751	Power System Simulation Laboratory	Syllabus Revision	Some experiment change

*[Signature]*  
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Course Code	Course Name	Change Details	Revised
1703EE019	Electrical Energy Generation Utilization and Conservation	Syllabus Revision	2 Module and some content changed

**List of New Courses Introduced**


Course Code	Course Name	Change Details
<b>B.E. Electrical and Electronics Engineering</b>		
1901MCX02	Constitution of India	New Course
1901GEX04	Biology for Engineers	New Course
1703EE010	Electric and Hybrid Vehicles	New Course
	Elective-VI (Open Elective)	New Course
1702EE752	Computer Aided Electrical Drawing Laboratory	New Course
1704EE753	Mini Project-III	New Course
1704GE751	Life Skills: Competitive Exams Preparation	New Course
1704EE754	Implant / Internship Training Presentation	New Course

**List of CBCS/Electives for / offered by B.E. Electrical and Electronics Engineering**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>ELECTIVES I &amp; II</b>										
1903EE001	Special Electrical Machines	3	0	0	3	40	60	100	PE	
1903EE002	Electrical Machine Design	3	0	0	3	40	60	100	PE	
1903EE003	Electric and Hybrid Vehicles	3	0	0	3	40	60	100	PE	
1903EE004	Micro Electro Mechanical System	3	0	0	3	40	60	100	PE	
1903EE005	Automotive Electronics	3	0	0	3	40	60	100	PE	
1903EE006	Industrial Automation	3	0	0	3	40	60	100	PE	
1903EE007	Bio-Medical Instrumentation	3	0	0	3	40	60	100	PE	
1903EE008	Power Plant Engineering	3	0	0	3	40	60	100	PE	
1903EE009	Advanced Power Semiconductor Devices	3	0	0	3	40	60	100	PE	
1903EE010	Modern Power Converters	3	0	0	3	40	60	100	PE	
<b>ELECTIVES III</b>										
1903EE011	Digital System Design using VHDL	3	0	0	3	40	60	100	PE	
1903EE012	Advanced Control Systems	3	0	0	3	40	60	100	PE	
1903EE013	Soft Computing	3	0	0	3	40	60	100	PE	
1903EE014	Electrical Energy Generation, Utilization and Conservation	3	0	0	3	40	60	100	PE	

**ATTESTED**

  
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1903EE015	Embedded System for Project Design	3	0	0	3	40	60	100	PE
<b>ELECTIVES IV &amp; V</b>									
1903EE016	Power System Stability	3	0	0	3	40	60	100	PE
1903EE017	Power System Transients	3	0	0	3	40	60	100	PE
1903EE018	Power System Economics	3	0	0	3	40	60	100	PE
1903EE019	Micro and Smart Grid	3	0	0	3	40	60	100	PE
1903EE020	Power System Restructuring and Deregulation	3	0	0	3	40	60	100	PE
1903EE021	Modern Transmission Systems	3	0	0	3	40	60	100	PE
1903EE022	Flexible AC Transmission Systems	3	0	0	3	40	60	100	PE
1903EE023	Advanced Insulation Systems	3	0	0	3	40	60	100	PE
1903EE024	Power Quality	3	0	0	3	40	60	100	PE
1903EE025	High Voltage Engineering	3	0	0	3	40	60	100	PE
<b>OPEN ELECTIVES</b>									
1903EE026	Electronic Waste Management Issues and Challenges	3	0	0	3	40	60	100	OE
1903EE027	Troubleshooting of Electrical Appliances	2	0	2	3	50	50	100	OE
1903EE028	Energy Conservation and Energy Management	3	0	0	3	40	60	100	OE
1903EE029	Electrical Drives and Control	3	0	0	3	40	60	100	OE
1903EE005	Automotive Electronics	3	0	0	3	40	60	100	OE

List of CBCS/Electives Offered for / by M.E. Power Electronics and Drives

Course Code	Course Name	L	T	P	C	Maximum Marks		
						CA	ES	Total
<b>Programme Elective Courses</b>								
1703PE001	Recent Trends in Power Conversion Technology	3	0	0	3	40	60	100
1703PE002	Power Converters for Solar and Wind Energy Conversion System	3	0	0	3	40	60	100
1703PE003	Digital Controllers in Power Electronic Applications	3	0	0	3	40	60	100
1703PE004	Nonlinear Dynamics for Power Electronic Circuits	3	0	0	3	40	60	100
1703PE005	Industrial Control Electronics	3	0	0	3	40	60	100
1703PE006	Applications of Power Electronics in Utility Systems	3	0	0	3	40	60	100
1703PE007	Special Electrical Machines & Controllers	3	0	0	3	40	60	100
1703PE008	Advanced Control of Electric Drives	3	0	0	3	40	60	100
1703PE009	SCADA System and Applications Management	3	0	0	3	40	60	100
1703PE010	Distributed Generation and Micro grids	3	0	0	3	40	60	100
1703PE011	Electric Vehicles and Power Management	3	0	0	3	40	60	100
1703PE012	Solar and Energy Storage System	3	0	0	3	40	60	100

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1703PE013	Micro Electro Mechanical Systems (MEMS)	3	0	0	3	40	60	100
1703PE014	Modern HVDC Transmission	3	0	0	3	40	60	100
1703PE015	Electromagnetic Field Computation and Modeling	3	0	0	3	40	60	100
1703PE016	Electromagnetic Interference and Compatibility	3	0	0	3	40	60	100
1703PE017	Modern Rectifiers and Resonant Converters	3	0	0	3	40	60	100
1703PE018	Optimization Techniques	3	0	0	3	40	60	100
1703PE019	Power System Restructuring and Pricing	3	0	0	3	40	60	100
<b>Open Elective Courses</b>								
1703PE018	Optimization Techniques	3	0	0	3	40	60	100
1703PE020	Energy Management and Auditing	3	0	0	3	40	60	100
1703PE005	Industrial Control Electronics	3	0	0	3	40	60	100
1703PE022	Renewable Energy Technology	3	0	0	3	40	60	100

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**Board of Studies (BoS) Members**

Sl.No.	Name	Category
1	<b>Dr. V. MOHAN</b> Professor & Head Electrical and Electronics Engineering E.G.S. Pillay Engineering College Nagore Post, Nagapattinam - 611002 E-mail: mohan@egspec.org Mobile: 9942986674 Phone: 04365-251114	<b>Chairman</b>
2	<b>Dr.V.SANKARANARAYANAN</b> Professor, Department of Electrical and Electronics Engineering, National Institute of Technology, Tiruchirappalli, Tamil Nadu. Mobile: 9487627002 Phone : 0431 - 250 3268 Email : sankariitb@gmail.com	<b>University Nominee</b>
3	<b>Dr.C.SREEKANTH</b> Principal, College of Engineering Muttathara, CAPE-Govt. of Kerala, St.Sebastin Church Road, Vallakadavu P.O -695008, Thiruvananthapuram, Kerala. Mobile: 9994174075 Email: srikanthcnair@gmail.com	<b>External Subject Expert Members</b>
4	<b>Dr. S. JEEVANANTHAN</b> Professor, Department of Electrical and Electronics Engineering, Puducherry Technological University, (Formerly Pondicherry Engineering College) Puducherry-605014 E-mail: drsj_eee@pec.edu Mobile:9443493599 Phone:0413-2655281-288	

Sl.No.	Name	Category
5	<b>Mr. VISWESWARAN JAGADEESAN</b> Country Manager – Academic Programs, ARK Info Solutions Pvt. Ltd, Bengaluru. Mobile: 99860 28517 Email ID: visweswaran.jagadeesan@ni.com	<b>Industry / Corporate Sector</b>
6	<b>Mr. B.VINOTH</b> Area Manager, Principle ACS Engineering India Pvt. Ltd., Hyderabad. Phone no: 9994199854 Email id: vinoth.b@principleacs.com	<b>Alumnus</b>
7	<b>Dr. T. SURESH PADMANABHAN</b> Professor/EEE, E.G.S. Pillay Engineering College E-mail: drtsp@egspec.org Mobile: 9444025552 Phone: 04365-251114	<b>Internal Members</b>
8	<b>Mr. R. ANANDARAJ</b> Associate Professor/EEE, E.G.S. Pillay Engineering College E-mail: anandraj.r@egspec.org Mobile:9443526230 Phone: 04365-251114	
9	<b>Mr. K. KRISHNARAM</b> Assistant Professor/EEE, E.G.S. Pillay Engineering College E-mail: krishnaram@egspec.org Mobile: 9486209791 Phone: 04365-251114	
10	<b>Mr. B. NAVEEN ANTONY</b> Assistant Professor/EEE, E.G.S. Pillay Engineering College E-mail: naveenjosh839@gmail.com Mobile:7598690231 Phone: 04365-251114	

# E.G.S. PILLAY ENGINEERING COLLEGE

(Autonomous)

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Accredited by NAAC with 'A' Grade | Accredited by NBA (CIVIL, CSE, ECE, EEE, IT, MECH)  
NAGAPATTINAM – 611 002

## Department of Electrical and Electronics Engineering

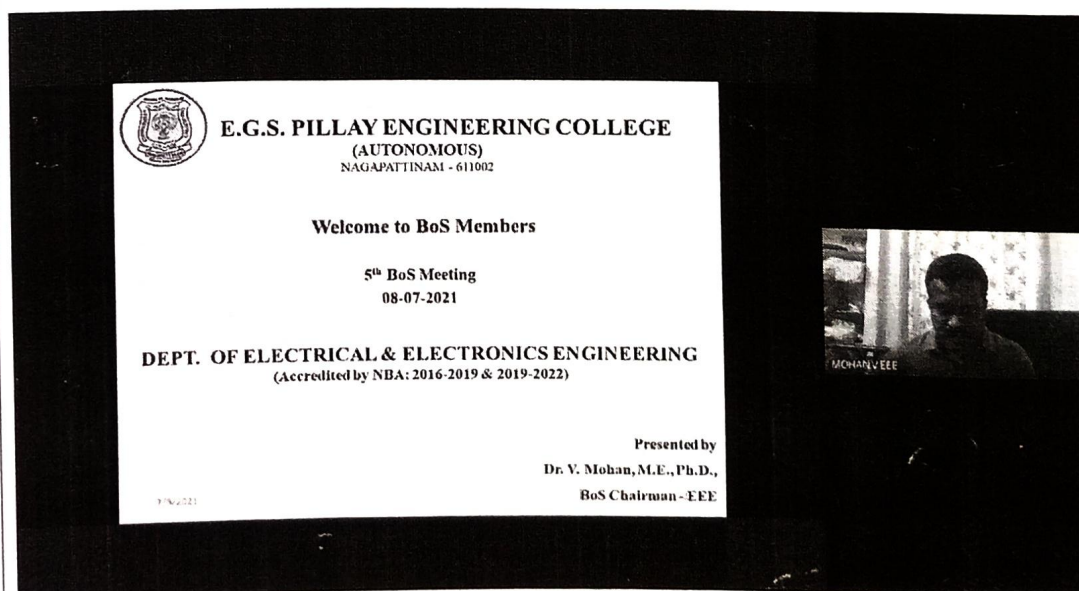
### Minutes of Board of Studies (BoS) Meeting

Name of the Department	Electrical and Electronics Engineering
Names of the Programme	B.E. Electrical and Electronics Engineering
Meeting No.	05
Date & Time	08.07.2021 & 10.00 A.M.
Venue/Platform	Google Meet ( Online mode)

The members present in the Board of Studies is given in Annexure – I.

1. Dr.V.Mohan, Professor & Head/EEE welcomed all the members for the 5<sup>th</sup> meeting of Board of Studies and mentioned about members from different states of south India.

Bos Chairman/ Meeting snapshot



2. **Chairman / BoS briefed the members about the Agenda.**

- Discussion and action taken about previous BoS Meeting.
- Department profile
- Dissemination of department vision, mission, PEOs and PSOs
- Briefing of AICTE Model Curriculum -2018 to all members.
- Briefing of UG Regulations 2019, PG Regulations 2021, course categories and credits.
- To finalize the syllabus of the courses of III year fifth and sixth semester B.E-Electrical and Electronics Engineering Programme.
- To finalize the curriculum and syllabus of the courses of M.E-Power Electronics and Drives Programme.

3. **The following are the suggestions given by the members of Board of Studies.**

- BoS members have appreciated the initiatives taken by the department to conduct the online meeting during COVID19 pandemic situation.
- The Board of Studies members have gone through the curriculum and syllabi of B.E-Electrical and Electronics Engineering (R2019), M.E-Power Electronics and Drives (R2021) programs and suggested the following.

**Under Graduate: B.E. -Electrical and Electronics Engineering**

- Subject experts have gone through details of courses, credits and then suggested/commented the following
- Anna University nominee clarified about problem oriented/analytic subjects and their credits in B.E-EEE courses.
- It is recommended to swap the Basic Civil and Mechanical Engineering (Fifth semester) and Object Oriented Programming theory and laboratory (Third semester) courses for 2020 admitted students and thereof.

**V Semester:**

- The following suggestions are given in “**Measurement and Instrumentation**” course:
  - (i) In Module-I, subject expert member suggested to change “Errors” into “**Errors- types, measurements, remedial methods, numerical problems**”
  - (ii) Subject expert member also suggested to add “**National and international standards**” in module-I
  - (iii) It is also suggested to add “**Extension of range**” in third line of module-II and “**phase sequence indicators, power factor meters**” in the last line.
  - (iv) Subject expert member suggested to change Module-III title as “**COMPARISON TYPE MEASURING INSTRUMENTS**”
  - (v) It is suggested to add “**Principle of comparison type instruments**” in first line of module-III.



- (vi) It is suggested to add **“Interpretation of datasheet of commercially available storage and display devices”** in last line of module-IV.
  - (vii) It is suggested to add **“Case study”** in Elements of data acquisition system.
  - (viii) It is suggested to add **“Interpretation of datasheet of commercially available transducers and DAS”** in last line of module-V.
- The following suggestions are given in **“LINEAR CONTROL SYSTEMS”** course:
    - (i) University nominee has suggested to change Module-V title as **“DESIGN OF COMPENSATORS AND CONTROLLERS”**
    - (ii) He has suggested to change/add module-V content as **“Compensators - Lag, lead and lag-lead networks, design procedure; Simple problems in MATLAB”**.  
Next line add the content as **“Controllers- P, PI and PID control, design procedure, tuning of controllers, Simple problems in MATLAB”**.
    - (iii) It is suggested to add the recent edition of the reference books
- The following suggestions are given in **“POWER ELECTRONICS”** course:
    - (i) Subject expert member suggested to insert **“Thermal characteristics; losses in the devices”** in the second line of the module-I.
    - (ii) It is suggested to add the content of the module-I as:  
**“SCRs- Symbol, construction, static and dynamic characteristics; Two transistor analogy”** and also insert **“Data sheet interpretation of commercially available SCRs”** in the last line of the module.
    - (iii) It is suggested to add **“Applications”** as last part of module-II.
    - (iv) It is suggested to add **“SMPS; Voltage and current commutated choppers; Multiphase chopper; LUO converter; SEPIC converter; Applications”** as last part of module-III
    - (v) They have suggested to add **“CSIs- Auto sequential CSI; Introduction to MLIs”** in second line of module-IV
    - (vi) It is suggested to add **“Establishment and solving of NR method based SHEPWM equations”** in PWM techniques of module-IV
    - (vii) It is suggested to add **“Applications”** as last part of module-IV.
    - (viii) Subject expert member suggested to insert **“cycloconverters-Step-down and step-up cycloconverters; Introduction to matrix converters; Applications”** in the last part of module-V.
- The following suggestions are given in **“CONTROL AND INSTRUMENTATION LABORATORY”** course:
    - (i) Subject expert members suggested adding **“phase measurement”** in the list of experiments.

- (ii) It is suggested to add **“Temperature/pressure/displacement sensors”** experiment.
- (iii) It is suggested to add **“Extension of range of voltmeters and Ammeters”** as experiment.
- (iv) University nominee suggested to include the experiment **“Closed loop control system using PI/PID controller/ Flow controller”**.

### VI Semester:

- The following suggestions are given in the **“SOLID STATE DRIVES”** course:
  - (i) Subject expert members have suggested to add the content of Module-I with:
    - “Thermal overloading, load variations”** in second line
    - “Thermal model of electrical motors and load equalization”** in third line
  - (ii) They have suggested to change the Module-II beginning as: **“History of DC drives; Ward-Leonard control; Constant torque and constant HP operation of DC drives”**  
It is also suggested to include **“Armature control, field control and regenerative braking in DC motors using phase angle control”** in the same module.
  - (iii) Mr.B.Vinoth (Alumnus) has appreciated the syllabus contents of the course mainly solid state drives.
  - (iv) Subject expert member has suggested adding **“Slip power recovery schemes”** in the last line of Module-IV.
  - (v) Subject expert member has suggested adding the reference book titled, Bimal K. Bose **“Modern Power Electronics and AC Drives”**.
  - (vi) Subject expert member has suggested adding the reference book titled, P.C Sen **“Thyristor DC Drives”**.
  
- The following suggestions are given in **“POWER SYSTEM ANALYSIS”** course:
  - (i) Subject expert member has suggested changing module-I title as **“MODELING OF POWER SYTEM COMPONENTS”**.
  - (ii) It is suggested to add **“comparison of methods”** in the last part of module-II.
  - (iii) It is suggested to add **“Methods to improve the stability”** in the last part of module-V.
  
- The following suggestions are given in **“MICROPROCESSORS AND MICROCONTROLLERS”** course:
  - (i) Subject member expert suggested to add **“Introduction to Zilog and Motorola based 8-bit processors-features”** in the last part of module-I.
  - (ii) It is suggested to add **“Comparison- Process and control, programming of 8085 and 8051”** in the last part of module-III.

The following suggestions are given in "BIO-MEDICAL INSTRUMENTATION" elective course:

- (i) It is suggested to revise the module-V with more contents

### M.E- POWER ELECTRONICS AND DRIVES

The members of the board have well appreciated the PG program curriculum framing as per AICTE guidelines.

Members also have discussed about first semester and second semester courses and compared with previous regulations' (R2017) course list.

University nominee has verified the curriculum contents with credits allotment.

It is suggested to identify/train the faculty to handle the Audit courses.

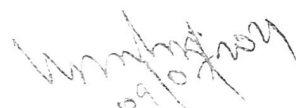
#### 4. The following resolutions were passed


- It is resolved to recommend the revised curriculum of B.E EEE (R2019) and the syllabi of third year (V and VI semester) courses and Curriculum and syllabi of M.E- Power Electronics and Drives (Regulations 2021) offered by the EEE department to the Academic Council for further approval.


The Chairman, Board of Studies thanked all the members for their valuable suggestions and coordination.

Date: 09.07.2021

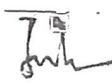
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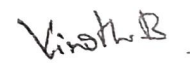
  
Chairman (BoS)


  
University Nominee

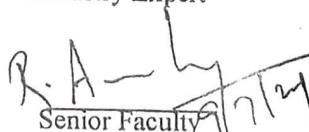
  
Subject Expert

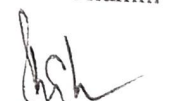
  
Subject Expert

  
Industry Expert

  
Alumni

  
Senior Faculty

  
Senior Faculty

  
Senior Faculty



**E.G.S. PILLAY ENGINEERING COLLEGE**  
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**Department of Electrical and Electronics Engineering**

Action Taken for BOS Meeting Minutes held on 08.07.2021

The Following resolutions were passed

- It is resolved to recommend the curriculum and syllabi of first and second semester of B.E. Electrical and Electronics Engineering and M.E. Power Electronics and Drives Programmes the syllabus was approved as presented.
- It is resolved to recommend the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> Semester B.E. Electrical and Electronics Engineering and 1<sup>st</sup> – 4<sup>th</sup> Semesters M.E. Power Electronics and Drives Programmes was approved as presented.
- It is resolved to recommend the question paper pattern UG/PG Programmes and evaluation methodology was approved as presented.

List of syllabus revised Courses from R2017

Course Code	Course Name	Change Details	Revised
<b>B.E. Electrical and Electronics Engineering</b>			
1903EE002	Electrical Machine Design	Syllabus Revision	2 Module and some content <b>changed</b>
1902EE551	Control and Instrumentation Laboratory	Syllabus Revision	Some Experiments <b>Changed</b>
1902EE601	Solid State Drives	Syllabus Revision	1 Module and some content <b>changed</b>
1902EE603	Microprocessors and Microcontrollers	Syllabus Revision	2 Module and some content <b>changed</b>
1902EE652	Microprocessors and Microcontrollers Laboratory	Syllabus Revision	Some Experiments <b>Changed</b>
<b>M.E. Power Electronics and Drives</b>			
2103PE004	Program Elective – I Solar And Energy Storage System	Syllabus Revision	2 Module and some content changed
2102PE105	Power Electronics Simulation Laboratory	Syllabus Revision	1 Module and some content changed
2102PE201	Solid State DC Drives	Syllabus Revision	2 Module and some content <b>changed</b>
2102PE202	Solid State AC Drives	Syllabus Revision	1 Module and some content <b>changed</b>

List of New Courses Introduced

Course Code	Course Name	Change Details
<b>B.E. Electrical and Electronics Engineering</b>		
1901GE301	Basic Civil and Mechanical Engineering	New Course
1901MCX03	Essence of Indian Traditional Knowledge	New Course
1902EE602	Power System Analysis	New Course
1901MGX01	Total Quality Management	New Course

*Ummhm*  
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**ATTESTED**  
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Course Code	Course Name	Change Details
	Elective-IV (Open Elective-I)	New Course
1904GE651	Life Skills: Aptitude- II	New Course
<b>M.E. Power Electronics and Drives</b>		
2101PE101	Modelling and Analysis of Electrical Machines	New Course
2102PE102	Analysis and Design of Power Converters	New Course
2103PE006	Program Elective – II Power Quality	New Course
2101AU005	Audit Course – I CONSTITUTION OF INDIA	New Course
2103PE011	Program Elective – III Special Machines and Their Controllers	New Course
2103PE015	Program Elective – IV Electric Vehicles and Power Management	New Course
2101RMX01	Research Methodology and IPR	New Course
2101AU002	Audit Course – II DISASTER MANAGEMENT	New Course
2102PE203	Digital Control of Power Electronic Circuits Laboratory	New Course
2104PE205	Mini Project with Seminar	New Course

**List of CBCS/Electives for / offered by B.E.- Electrical and Electronics Engineering**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>ELECTIVES I &amp; II</b>									
1903EE001	Special Electrical Machines	3	0	0	3	40	60	100	PE
1903EE002	Electrical Machine Design	3	0	0	3	40	60	100	PE
1903EE003	Electric and Hybrid Vehicles	3	0	0	3	40	60	100	PE
1903EE004	Micro Electro Mechanical System	3	0	0	3	40	60	100	PE
1903EE005	Automotive Electronics	3	0	0	3	40	60	100	PE
1903EE006	Industrial Automation	3	0	0	3	40	60	100	PE
1903EE007	Bio-Medical Instrumentation	3	0	0	3	40	60	100	PE
1903EE008	Power Plant Engineering	3	0	0	3	40	60	100	PE
1903EE009	Advanced Power Semiconductor Devices	3	0	0	3	40	60	100	PE
1903EE010	Modern Power Converters	3	0	0	3	40	60	100	PE
<b>ELECTIVES III</b>									
1903EE011	Digital System Design using VHDL	3	0	0	3	40	60	100	PE
1903EE012	Advanced Control Systems	3	0	0	3	40	60	100	PE
1903EE013	Soft Computing	3	0	0	3	40	60	100	PE
1903EE014	Electrical Energy Generation, Utilization and Conservation	3	0	0	3	40	60	100	PE
1903EE015	Embedded System for Project Design	3	0	0	3	40	60	100	PE
<b>ELECTIVES IV &amp; V</b>									
1903EE016	Power System Stability	3	0	0	3	40	60	100	PE

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1903EE017	Power System Transients	3	0	0	3	40	60	100	PE
1903EE018	Power System Economics	3	0	0	3	40	60	100	PE
1903EE019	Micro and Smart Grid	3	0	0	3	40	60	100	PE
1903EE020	Power System Restructuring and Deregulation	3	0	0	3	40	60	100	PE
1903EE021	Modern Transmission Systems	3	0	0	3	40	60	100	PE
1903EE022	Flexible AC Transmission Systems	3	0	0	3	40	60	100	PE
1903EE023	Advanced Insulation Systems	3	0	0	3	40	60	100	PE
1903EE024	Power Quality	3	0	0	3	40	60	100	PE
1903EE025	High Voltage Engineering	3	0	0	3	40	60	100	PE
<b>OPEN ELECTIVES</b>									
1903EE026	Electronic Waste Management Issues and Challenges	3	0	0	3	40	60	100	OE
1903EE027	Troubleshooting of Electrical Appliances	2	0	2	3	50	50	100	OE
1903EE028	Energy Conservation and Energy Management	3	0	0	3	40	60	100	OE
1903EE029	Electrical Drives and Control	3	0	0	3	40	60	100	OE
1903EE005	Automotive Electronics	3	0	0	3	40	60	100	OE

**List of CBCS/Electives Offered for / by M.E. - Communication Systems**

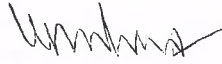
Course Code	Course Name	L	T	P	C	Maximum Marks		
						CA	ES	Total
<b>Programme Elective Courses</b>								
PEC I-01	Optimization Techniques	3	0	0	3	40	60	100
PEC I-02	Advanced Power Electronic Circuits	3	0	0	3	40	60	100
PEC I-03	Electromagnetic Field Computation and Modeling	3	0	0	3	40	60	100
PEC I-04	Solar and Energy Storage System	3	0	0	3	40	60	100
PEC II-01	Modern Control Theory	3	0	0	3	40	60	100
PEC II-02	Power Quality	3	0	0	3	40	60	100
PEC II-03	Modern HVDC Transmission	3	0	0	3	40	60	100
PEC II-04	Finite Element Analysis of Electrical Machines	3	0	0	3	40	60	100
PEC III-01	Industrial Control Electronics	3	0	0	3	40	60	100
PEC III-02	SCADA System and Applications Management	3	0	0	3	40	60	100
PEC III-03	Special Machines and Their Controllers	3	0	0	3	40	60	100
PEC III-04	Digital Controllers in Power Electronic Applications	3	0	0	3	40	60	100
PEC IV-01	Digital Control Theory	3	0	0	3	40	60	100
PEC IV-02	Nonlinear Dynamics for Power Electronic Circuits	3	0	0	3	40	60	100
PEC IV-03	Electric Vehicles and Power Management	3	0	0	3	40	60	100

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B.E.- Electrical and Electronics Engineering | E.G.S. Pillay Engineering College (Autonomous) |  
Regulations 2019

PEC IV-04	Micro Electro Mechanical Systems	3	0	0	3	40	60	100
PEC V-01	Distributed Generation and Micro Grids	3	0	0	3	40	60	100
PEC V-02	Power Converters for Solar and Wind Energy Conversion System	3	0	0	3	40	60	100
PEC V-03	Applications of Power Electronics in Utility Systems	3	0	0	3	40	60	100
PEC V-04	Computer Aided Design of Power Electronics Circuits	3	0	0	3	40	60	100
<b>Auditcourses(Ac)</b>								
2101AU001	EnglishforResearchPaperWriting	2	0	0	0			
2101AU002	DisasterManagement	2	0	0	0			
2101AU003	SanskritforTechnical Knowledge	2	0	0	0			
2101AU004	ValueEducation	2	0	0	0			
2101AU005	ConstitutionofIndia	2	0	0	0			
2101AU006	PedagogyStudies	2	0	0	0			
2101AU007	StressManagementbyYoga	2	0	0	0			
2101AU008	Personality Development through LifeEnlightenmentSkills	2	0	0	0			
2101AU009	Unnat Bharat Abhiyan	2	0	0	0			
<b>Open Elective Courses</b>								
2103PE021	Energy Management and Auditing	3	0	0	3	40	60	100
2103PE022	Renewable Energy Technology	3	0	0	3	40	60	100
2103PE023	Electric and Hybrid Vehicles	3	0	0	3	40	60	100
2103PE024	Industrial Control Electronics	3	0	0	3	40	60	100



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