

**Sri Sairam Engineering College**  
**Sai Leo Nagar, West Tambaram, Chennai – 600044**  
**Department of Electronics and Instrumentation Engineering**

**Minutes of the first Board of Studies meeting**

The first Board of Studies (BOS) meeting of the department of EIE was conducted on 06.06.2020 through online mode (ZOOM) at 3.30P.M (IST). Following members were present.

1. **Dr. N. Sivakumaran, M. Tech., PhD** External stakeholder  
Prof., Dept. of Instrumentation and Control Engg., (Subject Expert)  
National Institute of Technology, Trichy
2. **Dr. D. Sivakumar , M.E., PhD** External stakeholder  
Professor, (Subject Expert)  
Dept.of Electronics and Instrumentation Engg.,  
Annamalai University,  
Annamalainagar, Tamil Nadu.
3. **Dr. S. Geetha** External stakeholder  
Associate Prof., (University Representative)  
Dept. of Electrical and Electronics Engg.,  
Coimbatore Institute of Technology,  
Coimbatore.
4. **Mr. J. Vishnuvardhan** External stakeholder  
Head- ONG Projects, Vatio Energy Pvt LTD, (Industrial Expert)  
Chennai.
5. **Ms. P. Akalya, M.Tech** External stakeholder  
Assistant System Engineer, (Alumni Member)  
TCS (Sholinganallur), Chennai.
6. **Dr. C.Priya** Internal stakeholder
7. **Ms. C.Komathi** Internal stakeholder
8. **Ms. K.Thirupurasundari** Internal stakeholder
9. **Dr. Swagata Sarkar** Internal stakeholder
10. **Dr. S.Durga Devi** Internal stakeholder
11. **Ms. T.Tamilselvi** Internal stakeholder
12. **Dr K.Renganathan** **Chairman, BOS/EIE**  
Professor& Head, EIE  
Sri Sairam Engineering College

Dr. K. Renganathan, Chairman of BOS opened the meeting by welcoming and introducing the external members to the internal members. The chairman placed the following agenda for the deliberations and discussions of the members. The following are the deliberations made during the meeting (as per the items of the circulated agenda).

**BOS.EIE.20.01.01:** To review and approve the curriculum and syllabus of UG programme in EIE. The members recommended the following:

**Dr. N. Sivakumaran (Prof/ NIT, Trichy)**

- a. The total cumulative credits of 175 may be reduced according to AICTE model curriculum and compared with the same.
- b. Material Science subject may be included.
- c. English Strategies and practices included in III semester may be shifted to the earlier semester.
- d. Measurements and Transducer Lab in III semester can be made as Sensors and Transducer Lab.
- e. Electrical Machines lab need not be included separately. It could be combined with Measurements lab.
- f. Instead of Live in Lab (MATLAB based Control system Design), separate lab for control systems may be included.
- g. Without understanding Industrial Instrumentation in one semester the subject Analytical Instrumentation cannot be studied as both the subjects are offered in the same fifth semester. Hence Analytical Instrumentation may be shifted to VI semester.
- h. Microprocessor and Microcontroller subject may be included in the earlier semester (like V semester)
- i. Basically the flow of subjects should start and must be circuit based, followed by processor based, then instrumentation based and finally control based subjects must be planned respectively in the progressing semesters.
- j. OOPS subject and corresponding lab are not required in V semester and may be shifted and completed in I year itself.
- k. Communication and Soft Skills Lab should be shifted to I year.
- l. Embedded and Robotics lab (live in) couldn't be included in V semester as students will be studying microprocessor and microcontroller subject in the same semester only and hence needs to be changed accordingly.
- m. Try to include some virtual labs so that the students can practice anytime anywhere even in pandemic situations facing nowadays.
- n. Data communication and industrial networks subject to be renamed as Industrial Communication Networks (ICN). Refer to some handbooks on ICN for syllabus preparation.
- o. Intelligent Embedded System to be renamed as Embedded System.
- p. Innovative Design Project to be renamed as Product Design and Development lab.
- q. Robotics and Process Automation subject to be renamed as Robotics and Automation.

- r. Related to Instrumentation System Design lab, some theory subject covering the concepts may be included as core/ elective accordingly)
- s. Whether signals and systems could be included? It was justified that DSP subject unit I covers it. But suggested to include DSP subject as professional core instead of an elective. In that case, even electrical machines may be changed as elective.
- t. Why all professional electives contains only 5 number of subjects as options? If possible, could include more.
- u. Virtual Instrumentation could be moved to Professional elective 2 and in Professional elective 1, Smart Instrumentation may be included.
- v. Unit Operation and Control (UOC) could also be shifted to higher semester elective since it is difficult to study UOC without knowing process control.
- w. Smart Instrumentation suggested as professional elective 1 can be included in professional elective 3 instead of Advanced Instrumentation system.
- x. Digital control system in professional elective 4 is not required and instead non-linear control or some other modern control subjects may be included in professional elective 4.
- y. Applied soft computing and Machine learning listed in professional elective 4 seems to the same and hence Cyber physical system subject may be given.
- z. Artificial Intelligence in professional elective 5 can be removed since it is similar to Applied Soft Computing/ Machine Learning.
- aa. Vibration and Noise control need not be given as separate subject. Rather the concepts of it may be included in some other subject.
- bb. Computer control of process is not required in professional elective 5. System Identification and Adaptive control elective should be combined.
- cc. VLSI design in professional elective 5 should be moved as professional core subject.
- dd. Refer NIT, Trichy syllabus for choosing electives.
- ee. Safety Instrumented system in professional elective 6 to be renamed as Safety Instrumentation System. Cyber Physical System in Open Elective category can be made as a Professional Elective.

**Dr. Sivakumar (Professor/ Annamalai University)**

- a. Check the regulation of AICTE for credit spread and total credits and change accordingly (Total credits seem to exceed and PC credit need to be checked)
- b. English Strategies and practices included in III semester may be shifted to the earlier semester (I Year)
- c. Communication and soft skills lab to be shifted to I year (I semester/ II semester)
- d. Incorporate the various suggestions given by Dr. N. Sivakumaran

**Dr. Geetha (Profesor/ CIT)**

- a. CO- PO mapping need to be refined for various subjects where a particular CO maps with all the POs which is not correct. Ensure the correctness of CO-PO mapping as it is important for NBA.

**Mr. Vishnuvardhan (CEO, Space zee)**

- a. Clarified what is meant by in house internship and told it's a good idea to incorporate.
- b. Calibration lab in III semester is too early without knowing the theoretical concepts and it may be moved to 6<sup>th</sup> or 7<sup>th</sup> semester.

- c. Clarified whether there is any validation process for internship. Suggested to give list of organizations prior to the students for doing their internship. Credits to be awarded only if they have Clarified internship in the list provided.
- d. Clarified whether combining the subjects Industrial Instrumentation-1 and Industrial Instrumentation-2 is effective. It was justified the concepts of Industrial Instrumentation 1 covered in the mechanical measurements subject and hence convinced.
- e. Suggested to include calibration experiments in Industrial Instrumentation lab also.
- f. Project Management subject to be provided as professional core instead of other management subjects since it is mandate in industries.
- g. Instrumentation standards couldn't be given as a separate subject. The concepts of it could be included as a unit in some other subject.
- h. Project phase I should cover the aspects of Study of Market analysis, Design and Testing while phase II covers the prototype and product development to complete the project lifecycle
- i. Knowledge on Predictive maintenance is essential to operate the industries 24/7. Hence it should be given as a professional core elective. Concepts of vibration and noise control may be included in this subject.
- j. Safety Instrumentation System may be offered as professional core instead of elective.
- k. Digital Image processing offered as elective may be reframed as Process related image processing covering the concepts of thermal imaging/vibration control for emergency actions in industries.
- l. Drafting tools (basic CAD / other design tools) for design need to be introduced in I year

**Based on the suggestions given by the members, the Chairman of BOS replied that the fruitful suggestions would be incorporated appropriately in the curriculum and syllabi.**

**BOS resolved to make the appropriate changes in the curriculum and syllabi and recommend the following to the Academic Council for further approval. In this regard the details to be submitted are as follows:**

- a. **Curriculum and Syllabus for core courses of B.E. Electronics and Instrumentation Engineering Programme as enclosed in Annexure 1.**
- b. **List of Professional and Open Elective Courses in B.E. Electronics and Instrumentation Engineering Programme as enclosed in Annexure 2.**

**BOS.EIE.20.01.02:** To review and approve the syllabus of courses offered to ICE

The members reviewed the following syllabus of courses offered to ICE and resolved to approve the same.

BOS resolved to recommend the following to the Academic Council for further approval.

1. **20EI PC 303 - Analog Electronic circuits**
2. **20EI PC 301 - Electrical and Electronic Measurements**
3. **20EI PC 302 - Sensors and Transducers**
4. **20EI PL 302 - Analog Electronic circuits Laboratory**
5. **20EI PC 401- Electrical Machines**
6. **20EI PW 401 - Digital Electronics with lab**

7. **20EI PC 403 - Principles of Communication Engineering**
8. **20EI PC 501- Analytical Instrumentation**
9. **20EI PC 502- Microprocessor and Microcontrollers**
10. **20EI PC 503- Digital Signal Processing**
11. **20EI PL 501 - Microprocessor and Microcontroller Lab**
12. **20EI PL 601 - Embedded Systems Laboratory**
13. **20EI PC 701 - Robotics and Automation**
14. **20EI PL 701 - Industrial Automation Lab**

List of Courses offered for ICE Department from EIE as enclosed in **Annexure –III**

**BOS.EIE.20.01.02:** To review and approve the syllabus of courses offered to EEE

The members reviewed the following syllabus of courses offered to EEE and resolved to approve the same.

BOS resolved to recommend the following to the Academic Council for further approval.

#### **1. 20EI PC701-Robotics and Automation**

List of Courses offered for EEE Department from EIE as enclosed in **Annexure -III**

**In the concluding remarks, the Chairman of BOS stated that the reduction of credits in UG Curriculum and other recommendations suggested by the members would be considered.**

**Meeting then ended with vote of thanks by Dr. C. Priya, Assistant Professor/EIE.**

*(Handwritten signature)*

Dr. N. Sivakumaran, M.Tech., PhD.,  
Prof., Dept. of Instrumentation and Control Engg.,  
NIT, Trichirapalli.

*(Handwritten signature)*

Dr. D. Sivakumar, M.E., PhD.,  
Professor,  
Dept. of Electronics and Instrumentation  
Engg., Annamalai University,  
Annamalainagar, Tamil Nadu.

*(Handwritten signature)*

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Associate Prof.,  
Dept. of Electrical and Electronics Engg.,  
Coimbatore Institute of Technology,  
Coimbatore.

*(Handwritten signature)*

Mr. J. Vishnuvardhan  
Head- ONG Projects, Vase Energy Pvt. Ltd.  
Chennai

*(Handwritten signature)*

Ms. P. Akalya, M.Tech  
Assistant System Engineer,  
TCS (Sholinganallur), Chennai

*(Handwritten signature)*

Dr. C. Priya

*(Handwritten signature)*

Ms. C. Komathi

*(Handwritten signature)*  
Ms. K. Thirupurasundari

*(Handwritten signature)*  
Dr. Swagata Sarkar

*(Handwritten signature)*

Dr. G. Durga Devi

*(Handwritten signature)*

Ms. J. Tamilselvi

*(Handwritten signature)*

Dr. K. Kenganathan,  
Chairman, BOS-EI  
(Professor & Head, EIT)