St. Xavier's Catholic College of Engineering, Chunkankadai, Nagercoil – 629003

(An Autonomous Institution)

Department of Electronics and Communication Engineering

Board of Studies Meeting

Date : 27/05/2023   Venue : Board Room

MEMBERS PRESENT

Sl. No.	Name & Designation	Signature
1	J. Sheeba Rani, Associate Professor	Sheeba Ra.
2	E. S. GOPI, ASSOCIATE PROF	SSh
3	SAHAYA SHINY A, ASSOCIATE TECH LEAD	Shiny
4	R Solomon Roach, Senior Design Lead	R.Solu
5	DR. J. MAHESWARAN, PRINCIPAL	27/5/23
6	Dr. S. CAROLINE , AP / ECE	30/5/23
7	A. C. Jenisha, AP /ECE	at
8	Dr. Y.R Annie Bessant	
9	Dr. T. Ajitha	
10	Dr. R. P. Anio Kumar	
11	Dr. A. MILTON	Amilu
12	Dr. V. Vijimon Moni	
13	Dr. D. JUDSON, Prof / ECE	Jhacan
14	Dr. Sija A. Alex	
15	M. C. Sheeba, AP / CSE	

16	Dr. S. Mary Vasanthi, A P / ECE	
17	k Baby Lisa , A P / ECE	
18	p Anitha , AP/ECE	
19	V. Femila Savio , A P / ECE	
20	T. Mary Little Flower, AP / ECE	
21	Dr. C Sheeja Herobis Rani, AP/ECE	
22	Dr. S. Maria Seraphin Sujitha	
23	M. Starwin, AP/ECE	
24	Dr. J. Femila AP/ECE	
25	C. Rewit	
26	Dr. B. C. Preethi AP/ECC	
27	Dr. T. LATHA	
28	Dr. D Jeraldin Auxillia	
29	Dr. c. Helen Sulochana	
30		

St. Xavier's Catholic College of Engineering, Chunkankadai, Nagercoil – 629003

(An Autonomous Institution)

Department of Electronics and Communication Engineering

Board of Studies Meeting Minutes # 02

Date : 27/05/2023

Time : 11.00 am – 2.00 pm

Venue : Hybrid Mode(PG Lab)

The Second BoS meeting of the department of ECE, SXCCE was conducted on 27/05/2023 at 11.00 am in the PG Lab. All the faculty members of the department attended the meeting along with a university nominee, two expert members in the subject from outside the college, one representative from industry and one Postgraduate Meritorious Alumna. Dr. S. Mary Vasanthi /Asst.Prof/ Department of ECE delivered the welcome address. Our Principal Dr.J.Maheswaran gave an introductory talk. Dr.S.Caroline, HoD Department of ECE presented the Curriculum and Syllabi of UG. Dr.D. Jeraldin Auxillia, PG Co-ordinator/Applied Electronics presented the Curriculum and Syllabi of M.E - Applied Electronics. Dr. T. Latha, PG Co-ordinator/ Communication Systems presented the Curriculum and Syllabi of M.E - Communication Systems. Dr.C.Helen Sulochana PG Co-ordinator/Medical Electronics presented the Curriculum and Syllabi of M.E - Medical Electronics.

University Nominee for BoS [ONLINE]

1. Dr.B.Sathyabama, Professor, Department of Electronics and Communication, Thiagarajar

   College of Engineering, Madurai-625015.

Expert Members in the Subject from outside the college

1. Dr.E.S.Gopi, Associate Professor, Department of ECE, NIT, Trichy.

2. Dr.J.Sheeba Rani, Associate Professor, Department of Avionics, Indian Institute of Space

Science and technology (IIST), Trivandrum.

Representative from Industry

1. Dr.R.Solomon Roach, Senior Design Lead Engineer, Tessolve Semiconductor Pvt. Ltd.,

Chennai.

Postgraduate Meritorius Alumna

1. Ms.A.Sahaya Shiny, Associate Tech Lead, CapeStart Software Pvt Ltd

Agenda for the Meeting

02.01. Confirmation of First BoS meeting minutes held on 12/11/2022 and Decision/Action taken report.

02.02. Discussion on the Suggestions / Recommendations offered by the members in the first Academic Council meeting and the first Governing Body meeting.

02.03. Presentation of the proposed curriculum and getting recommendation for approval for the II year detailed draft syllabi of both UG and PG Programmes for regulation 2022.

02.04. Ratification for including Naan Mudhalvan courses and Tamil courses as per the directions of Anna University & Government of Tamilnadu

02.05. Other matters if any.

02.01. Confirmation of First BoS meeting minutes held on 12/11/2022 and Decision/Action taken report

1st Board of Studies Meeting minutes and Decision/Action Taken report

Suggestions	Action Taken
Draft curriculum, credits, distribution of courses for UG	
• Categorize the subjects based on Electronics, Communication and allied.	The subjects were categorized based on Electronics, Communication and allied.
• CO-PO mapping should be refined.	For 1st and 2nd semester subjects, CO-PO mapping was refined.
• Recent text books should be included. • NPTEL links can also be added in reference. • Recent trends related elective subject should be included. • Make the students to do Python programming on UNIX platform. • System C can be included in the soft skill subject. • Few concepts of OOPs can be added.	Recent text books and NPTEL links are included in reference. Recent trends related subject are included as core and electives. Python programming uses UNIX platform. Concepts of OOPs will be included in 3rd semester. Since learning OOPS requires the knowledge of C++, it was not included (as syllabus may become vast)
Electrical and Instrumentation Engineering	
• Reduce the content of the syllabus. Difficult to learn this in the first semester. • We can give suggestion to EEE department to change the topics.	It was communicated to the EEE department. The syllabus was reduced by getting approval from the BoS, EEE department.

Electronic Devices and Circuits • Very fundamental topics can be clubbed into a single module. • Reduce the content of the syllabus. • Reduce lecture hours for fundamental modules and increase the lecture hours for other modules. • Basic two-port networks can be included in the syllabus.	As per the suggestions given by the BoS members of ECE department, lecture hours for fundamental modules were reduced and the lecture hours for other modules were increased. The content of the syllabus was reduced. Basic two-port networks were included in the syllabus.
Electronic Devices and Circuits Lab • Shift all circuit experiments first then diode based experiments according to the theory syllabus.	Experiments are rearranged as per theory syllabus (circuit experiments first then diode based experiments)
Matrices and Calculus • Transforms should be included. Since we have to apply different transform concepts in core subjects. • Give a generic title for this subject.	This suggestion was given by the BoS members of ECE department. This was communicated to the Maths department and transforms topic is included in the 3rd semester syllabus.
General • MPMC can be added as a 2 credit subject with practical sessions. • Industrial training should be arranged through Placement Cell. • Change the title of the subject Transmission Lines and RF Systems into RF Communication. • Include antenna based subject in Professional Electives.	As per the suggestion given, MPMC subject is included as (T+P) Industrial training is arranged through Placement Cell. The title of the subject Transmission Lines and RF Systems is changed into RF Communication. The concepts of antenna will be included in RF communication subject.
M.E-Applied Electronics • Department faculty should give the topics to be included in the mathematics subject based on the need of the mathematical concept in the course. • Include Power Electronics as a core subject in this curriculum. • Semiconductor for MOSFETs can also be included.	Based on the need of the mathematical concept, the syllabus was modified by Maths department Power Conversion Circuits for Electronics subject is included as core subject in the curriculum. The subject Semiconductor Devices and Modeling is included in the course.

• Research Tool course can be included along with the research methodology. • If the students are attending a NPTEL course, they should get the Elite grade and the credit will be transferred to the academic.	Since Research Tool course and research methodology is a common subject and recommended in few dept. BoS meetings, it is not modified
ME Communication Systems	
• In Research Methodology subject include research tool also.	Since Research Tool course and research methodology is a common subject and recommended in few dept. BoS meetings, it is not modified.
• Change the subject Name Technical Seminar to Mini Project.	Since Technical Seminar is a common subject, it is not modified.
• Modify Maths syllabus common for all PG programmes.	The syllabus for Maths is modified and approved by BoS of Maths department

• Microwave integrated circuit syllabus majority of the topics are from microwave circuit , so change the subject name as microwave circuits. Prerequisite needed(basics of CMOS/Analog VLSI)
• Subjects to be included as Electives:
    Advance communication network
    Advance information theory and coding
    VLSI Signal Processing/Architecture
    MATHS include optimization as a unit
	The title Microwave integrated circuit is changed as Microwave Circuits.
	
	As suggested in the meeting,
	
	Advanced Wireless Communication and
	
	VLSI for Wireless Communication (elective) subjects are included.

ME Medical Electronics	
• Get the suggestions from the experts in the field of medical. • Human anatomy subject can be included as core paper.	As per the suggestions, opinion from experts was received and Human anatomy subject is included as core paper in the syllabus.

02.02. Discussion on the Suggestions / Recommendations offered by the members in the I Academic Council meeting and the I Governing Body meeting.

The first Academic Council meeting of St. Xavier's Catholic College of Engineering was conducted on 09.12.2022(Friday) at 10:00 am at Einstein Hall.

Suggestions / Recommendations	Decisions / Actions taken	BOS Recommendations
It is suggested to get approval from the BoS for the online courses that are going to be offered from	The online courses will be offered from the Fifth Semester. It is decided to get the approval from BoS in the	The department identified the NPTEL / SWAYAM courses which are equivalent to 5th and 6th semesters

NPTEL/SWAYAM platform before offering them to the students.	next meeting.	Professional Elective courses for UG Programmes and 3rd semester PG programmes and got the recommendation from BoS. IIT Spoken tutorial courses with assessment and grade sheet with credits can also be considered.
It is suggested to have One Credit Courses to be handled by Industry Experts.	It will be discussed in the next BoS meetings.	Two credits Naan Mudhalvan courses on cutting edge technologies are offered to the students by industrial experts in each semester. which is one of the initiatives of Tamilnadu Government. In addition to this seminar by Industrial experts can be arranged as per the requirement
It is recommended to have the Journal Publication as optional instead of Mandatory for the Programmes.	Changed in the Regulation.	The BoS recommended to make the Journal / Conference publications as Desirable and those students who are doing that can be honoured by providing higher grades in the particular course. It should not be made as a mandate since it requires more time.

Suggestions / Recommendations	Decisions / Action taken	BOS Recommendations
It is suggested to use Bloom's Taxonomy Keywords while formulating the Course Outcomes.	Incorporated in the syllabi.	Confirmed
It is recommended to include the latest versions of the text books.	Incorporated in the syllabi.	Confirmed

The total credit for the PG programmes may be increased	Will be discussed in the next BoS meeting.	As per the Anna University the Total Credits for : M.E. Programmes – Applied Electronics, Communication Systems, Medical Electronics is : 70 - 75 Our Curriculum Credit for M.E. Programmes – Applied Electronics, Communication Systems, Medical Electronics is : 71 The BOS recommended not to change the minimum total credit required to complete the programme.
It is suggested to avoid 1.5 credits Laboratory Courses.	Will be presented in the next BoS meeting.	For the detailed Hands on Experience it is suggested to have 2 credit Laboratory Courses
It is suggested not to offer NPTEL/SWAYAM online course for P.G. Programmes	Will be presented in the next BoS meeting.	Anna university is offering this facility. On considering the benefit of the students it is recommended to offer NPTEL/SWAYAM online courses to P.G. students also.
It is suggested to rename the course "Research Tools in Engineering to "Research Tool Laboratory" for the P.G. Programmes.	Modified in the Curriculum and Syllabi.	Confirmed
It is suggested to change label for the elective courses track from "Verticals" to some other appropriate label.	Will be presented in the next BoS meeting.	"Verticals" is the generic name used by the Anna University. To avoid the confusion the same terminology is recommended. It is recommended to have a unique name for each verticals and it should be clearly bifurcated from the other verticals.

It is suggested to have two text books and five reference books for UG courses and five reference books for PG courses	Incorporated in the syllabi.	Confirmed.
It is suggested to change the course title of Placement training courses.	Will be presented in the next BoS meeting.	It is recommended to rename the "Placement training course" to "Skill Development Courses".
It is observed that the number of courses in the 3rd semester of the U.G. Programmes is high in number.	Will be discussed in the next BoS meeting and will do the needful.	The course "Value Education" is made as a 0 credit mandatory course.
It is suggested to change the title of the course "Higher Order Thinking"	Will be presented in the next BoS meeting.	The syllabus of this course includes both Critical Thinking and Creative thinking. So "Higher Order Thinking" is the right title for this course.

- General suggestions were offered by the members and there were No Programme specific suggestions.

02.03 Presentation of the proposed curriculum and getting recommendation for approval for the II year detailed draft syllabi of both UG and PG Programmes for regulation 2022

After the presentation of proposed curriculum for both B.E. and M.E. courses, the following suggestions were given by the External members.

DISCUSSION

- Journal publications for PG students need not be mandatory. If they publish an article in a journal, it can be taken for awarding O grade in Project Phase II.

- Regarding NPTEL course for PG, we should check whether they have undergone the same course in their UG. The course should not be a repetition of the courses learnt in UG.

- NPTEL course can be made optional.

- Follow a separate methodology for grading NPTEL and the credit transfer as the students are competing with outside people

B.E. ECE Semester III

- Foundation of Data structures subject is mandatory for third semester
- The syllabus of Soft skills and Coding I course need not be the same for all branches. The syllabus can be modified (for ECE and EEE common) on discussion with industrial experts.
- If possible, Embedded C can be included in Soft Skills course.

B.E. ECE Semester IV

- Include Machine learning concepts in the curriculum.
- Include Statistical theory of communication subject in the higher semesters.
- In Digital communication, Baye's algorithm, Min Max technique, Bayesian method, Naïve method, Information theory and coding, Statistical signal processing, detection, MSME, Estimation topics should be included.
- The syllabus of Soft skills and Coding II can be Programme specific.
- Check whether all communication related topics are included in the curriculum.

M.E. Applied Electronics

- Open elective subject may be pure theoretical course. Check the curriculum template of Open elective.
- Any subject can be chosen as open elective. The prerequisite for choosing open elective must be clearly defined in the curriculum.
- Prepare the approved open elective list by collecting the list from all departments and approval of HoD.
- Consider PCB design as a skill development course instead of having it as a professional elective subject. Either reduce the lecture hours from 3 to 1 or change the syllabus with advanced topics based on existing credit.
- As Deep learning is a common subject for both Medical electronics and Applied Electronics, suggestions given in Medical Electronics should be reflected in the curriculum.

Need Updation

- Advanced Digital Image Processing subject:
    - As Advanced Digital image Processing syllabus contain only fundamental topics change the subject name to Digital Image processing.
    - Can include a reference book "Digital Image Processing with MATLAB" by Dr.E.S.Gopi in the Digital Image processing syllabus.
    - Texture feature based segmentation should be removed from second unit because texture description is in third unit. Unit 2 and 3 can be swapped.

- - Can include advanced topics like Computer Graphics basics, Video processing, 2D concepts, cost estimation, Image fusion, Graph imaging and basics relevant to Applied Electronics.
- Change the subject name of Signal Integrity & high speed design to Digital High Speed Design.
- **Advanced Microprocessor and Microcontroller**
  - Instead of expanding the syllabus like data format addressing modes etc just give a generic name as Introduction to microprocessor.
  - Can limit the syllabus need not be detailed (Unit I)
  - Check whether the latest versions of reference books are available with same content.

M.E Communication Systems

- In Image Processing subject
  - Syllabus is too vast. First and second unit overlapping topics can be removed.
  - Syllabus needs to be crisp.
- In Radar Signal Processing subject
  - Include some hardware set up in RADAR syllabus
  - Software Defined Radio (SDR) can be added in practical session.
- In practical subjects instead of using inbuilt function make the students to design from the scratch

M.E Medical Electronics

- Anna university representative suggested that 3D printing in Medicines subject can be changed as 3D printing for Medical Models.
- In Medical Imaging systems and radio therapy, concepts of Radio therapy should be included or can change the subject as Medical Imaging Systems.
- In Pattern Recognition, include some advanced topics in unit V. In unit V one topic can be kept as flexible and the current trending topic can be added.

02.04 Ratification for including Naan Mudhalvan courses and Tamil courses as per the directions of Anna University & Government of Tamilnadu

- Naan Mudhalvan courses – OK

02.05 Other matters

- MOOC courses can be developed and planned for Vertical courses.
- Finalize awarding of honours for vertical courses in the degree certificate in the forthcoming academic audit meetings.

- There should be a separate NPTEL Co-ordinator / mentor
- Need focus on credit transfer upon successful completion of NPTEL course
- NPTEL marks can be highlighted in mark sheet.

HoD 27/5/23

Dean (Academics)

Principal

Dr.B.Sathyabama

(University Nominee for BoS)

Dr.E.S.Gopi

(Expert Member)

Dr.J.Sheeba Rani
27/5/2023

(Expert Member)

Dr.R.Solomon Roach

(Representative from Industry)

Ms.A.Sahaya Shiny

(Meritorius Alumna)