

Meeting No. 37

Date: 22/07/2023

Time: 9:30 A.M

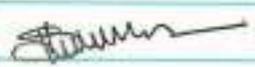
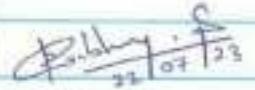
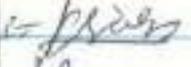
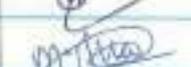
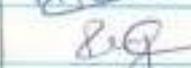
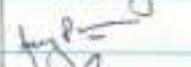
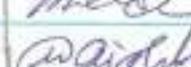
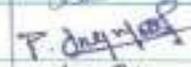
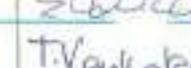
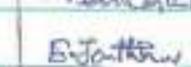
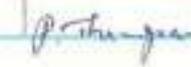
Minutes of the Board of Studies meeting held on Saturday, 22nd July 2023 at 9:30 A.M @ library block Conference Hall

Agenda:

To discuss about

1. To discuss and finalize the Curriculum structure for 2023 Revision and Syllabi (Both UG+PG)
2. To discuss & finalize the curriculum structure (I+II-2023) for Post-UG B.E Civil Engineering
3. Revision of B.E Honours Subjects & Syllabi

S.No	Name	Signature
1	Dr. V. G. Suresanth - Chairperson Professor & Head Department of Civil Engineering, CIT.	V. G. Suresanth 22/07/2023
2	Dr. R. Thenmozhi - Anna University Nominee Professor & Head Department of Civil Engineering, G.C.T	R. Thenmozhi 22/07/23
3	Dr. K. Baskar Professor of Civil Engineering National Institute of Technology, Coimbatore - 641 013	Online

S.NO	Name	Signature
4.	Dr. A. Sudhakar, Chief Consultant, No. 57, Krishnaaswamy Street Rs puram, Coimbatore - 641002	
5.	Dr. S. Prabhu Founder, Synergy Coimbatore, No. 10, West Vinayagar Kovil Street, Coimbatore - 641028	
6.	V. NAGARAJAN - /PROFESSOR/ civil	
7.	P. Vinayagam / Professor / ^{CIT} / civil	
8.	R. SATHYANARAYAN Sridhar	
9.	G. Arulselvam	
10.	M. KARATHIL	
11.	M. P. MUTHURAJ	
12.	Col Jawar Srinivasa (Retd)	
13.	UBALAVIGNESH	
14.	P. Leoban Joseph	
15.	T. KARTHIK PRABHU	
16.	M. Gowri Shankar	
17.	T. Balasubramanian	
18.	P. Jagadeesh	
19.	C. Shankar	
20.	J. CYRIL SANTHOSH	
21.	Dr. A. Mohammed Saif Ansari	
22.	S. Karthik Kumar	
23.	Dr. T. Venkatesh Kumar	
24.	E. JAYANTHIMANI	
25.	S. Shanmugasri	
26.	V. G. KALPANA	
27.	P. Shanmugasri	

28. Dr. R. Laxanya R. Laxanya
29. Karthika Devi S. Karthika Devi S
30. Dr. S. Brindha Dr. S. Brindha
31. M. HANNAH ANGELIN M. Hannah Angelin
32. Dr. P. SANTI P. SANTI
33. V. Padma Peran V. Padma Peran
34. Dr. R. Saraswathi R. Saraswathi
35. Dr. Nithyapriya Dr. Nithyapriya
36. Arul D Arul D
37. Dr. N. Saranya Dr. N. Saranya
38. Anugayathra Ind (B.E. CIVIL - 7th semester) Anugayathra Ind
39. S. Swathi (B.E. CIVIL - 7th semester) S. Swathi
40. V. Logan Praveen Kumar (ME - Structural 4th Semester) V. Logan Praveen Kumar
41. R. Divyanshi (ME Construction Management 2nd Sem) R. Divyanshi
42. ARAVIND S (B.E. CIVIL - 7th SEMESTER) Aravind S
43. N. Venkubang Sai Sakthivel (B.E. CIVIL - 7th SEMESTER) N. Venkubang Sai Sakthivel
44. Balasubramanian P.P. (M.E. Envt Engg & Mgmt IVth Sem) Balasubramanian P.P.
45. Sujan M. (M.E. Envt Engg & Mgmt) IVth Sem Sujan M.

Minutes of the 37th Board of Studies Meeting

- Minutes of the meeting of the Board of Studies in Civil Engineering was held on Saturday, the 22nd July, 2023 at 9.30 A.M at Coimbatore Institute of Technology, Coimbatore -641014 to review the 2023 curriculum (for the student's admitted during 2023-24 onwards) and syllabi of B.E Civil Engineering (Regular and Part-Time) and PG programs.
- Dr.V.G.Srisanthi, HOD, Civil Engineering Department welcomed the expert members and initiated the discussions by requesting the external members Dr.R.Thenmozhi, Dr. K. Baskar, Dr. A.Sudhakar and Er.S.Prabhu and all the internal members to review the syllabus for both UG and PG courses as per agenda and to suggest changes/modifications if any and for approval.
- Dr.V.G.Srisanthi first presented Vision and Mission of the Department of Civil Engineering with Programme Educational Objectives (PEO), Programme Outcomes (PO) and Programme Specific Outcomes of UG course.
- The curriculum structure of UG and PG was presented in the meeting for approval. The expert committee then discussed in length about the syllabus content of each course as per new 2023 curriculum
- The students admitted from 2021 onwards can earn honours degree by earning extra 18 credits from their 5th semester. In this regard the list of verticals and the syllabus to be offered for the BE Honors was discussed

The following suggestions were made by external members for B.E Civil Engineering programme:

- a) The external member Dr.R.Thenmozhi suggested having 3 weeks students induction program as per AICTE guidelines. She also suggested to categorise the course "Physics for Civil Engineers" under basic science instead of engineering science and informed to check the percentage of course category in the curriculum with the AICTE norms. She also suggested to have construction management and project planning laboratory under Human sciences and management category. Further, Dr. R. Thenmozhi suggested to implement 4 weeks of practical training for internship instead of 2 weeks. In addition, it was also suggested to have "3D printing" in construction technology.
- b) Dr.K.Baskar suggested considering the possibility of including both survey lab and theory in the same semester. He also insisted to check the possibility of combining construction

N.G.F

V. G. S.
H.O.D., (CIVIL)
C.I.T., Coimbatore-14.

technology and concrete technology as one subject and offer the same as construction materials and technology. He also suggested to check the feasibility of including the FMB sketch concept in surveying. It was also recommended to offer "Waste Water Engineering" as core subject instead of elective course.

- c) Dr.A.Sudhakar mentioned to include skill development course as mandatory course and he also suggested to initiate the process of making partnership with stakeholder/organisations to offer such courses. He further added that the student undergoing certified department/industry oriented mandatory course, will have an added credit to his career by making them as a skilled civil engineer to the industry
- d) The external member Er.S.Prabhu proposed to include 3D printing technology in the curriculum for M.E. construction management and it was also recommended to change Construction materials as Modern construction materials.
- e) Further the suggestion of including more laboratory courses for part time B.E Civil Engineering was put forward by the BoS committee members.
- f) Dr.K.Baskar recommended to combine the course content of "Matrix methods" and "FEM analysis of structural members" and offer it as one subject for M.E. Structural Engineering. He also suggested to include stability of structures as core subject for M.E structural engineering.
- All these suggestions were discussed in the meeting and it was decided that efforts would be made by the chairperson Dr.V.G.Srisanthi to enact all the suggestions wherever possible.
 - The meeting came to the end with vote of thanks proposed by Dr.V.G.Srisanthi, Head of Department, and Civil Engineering.

V. G. a

H.O.D., (CIVIL)
C.I.T., Coimbatore-14.

N S F

MINUTES OF THE 42 MEETING OF THE
BOARD OF STUDIES OF MECHANICAL ENGINEERING

22-07-2023

The minutes of the meeting of the Board of Studies
of Mechanical Engineering held on 22-07-2023 at 9:30 am
in IT Block 213 Conference hall

The following members were present in the meeting

SL NO	NAME	DESIGNATION	SIGNATURE
1	Dr. N. Rajam Dama Swamy	Chairman	
2	Dr. A. P. Sathya Ganam	University Nominee (UG & PG)	
3	Dr. S. Vinadh	Expert Member - Academic	
4	Dr. A. Valan Arasu	Expert Member - Academic	ONLINE
5	Dr. N. Kulasekaran	Expert Member - Industry	Pre occupied
6	Mr. N. Mani	Expert Member - Industry	
7	Dr. K. Manimuthu	Member	
8	Dr. R. Rajesh	Member	
9	Dr. A. S. Krishnan	Member	
10	Dr. G. Suresh Kannan	Member	
11	Dr. G. Sivakumar	Member	
12	Mr. P. Ramakrishnan	Member	
13	Dr. M. Velliangiri	Member	
14	Dr. G. Suganya Priyadarshini	Member	
15	Mr. M. Karthikeyan	Member	
16	Dr. C. Balaji Ayyanar	Member	
17	Mr. K. Karthik	Member	
18	Dr. S. Selvam	Member	
19	Dr. A. Karthikeyan	Member	
20	Dr. A. Thangarasu	Member	
21	Dr. S. Balamurugan	Member	

SL NO

22. Dr. G. V.

23. Dr. P.

24. Dr. D. P.

25. Dr. P.

26. Dr. R.

27. Dr. G.

28. Mr. R. S.

29. Dr. C.

30. Dr. H. S.

31. Dr. S.

32. Dr. S.

33. Dr. G.

34. Dr. B.

35. Dr. B.

36. Dr. C. F.

37. Mrs. J.

38. Dr. S. A.

39. Dr. K.

The

Dr. A. S.

curric

Regul

The fo

Item 1

Item 2: To discuss and finalize the Curriculum structure for R2023 Regulations of B.E Mechanical Engineering (I to VII Semesters)

The curriculum structure for Regulations R2023 was recommended and approved by the BoS Members.

Item 3: To discuss and conclude the course contents of proposed I to VII semesters of Regulations R2023 of B.E. Mechanical Engineering program.

After due consultations and the suggestions of BoS experts, the proposed course contents from I to III semesters are finalized.

Item 4: To discuss and finalize the list of "Verticals" proposed to offer for the students admitted after 2021 during their course of study from their V semester onwards.

The recommended list of verticals and the courses provided within each vertical are finalized after extensive consultations and comments from BoS members.

DISCUSSIONS ON THE CURRICULUM STRUCTURE AND COURSE CONTENTS:

1. Expert members suggested including any one numerical method in the course in Mathematics offered in the third semester.
2. Dr. S. Vinodh suggested including material selection topic and Ashby's chart in Materials and Metallurgy course.
3. Dr. S. Vinodh suggested including "Zigbee" networking techniques in the Basic Electrical and Electronic course.
4. Dr. S. Vinodh suggested adding "Reliability Curve" in the course on Metrology and Quality Control.

5. Mr. D. Mater Compu
6. Dr. S. topic Comp
7. Mr. of Pa Comp
8. Dr. S. Non- Dril gives
9. Expe Sher Mat
10. Expe Autr cou
11. Dr. Criti Syst
12. The Com as addi
13. Dr. cou
14. Dr. Phy for
15. Dr.

Curriculum structure
Mechanical Engineering

Proposals R2023
by the BoS Members
to revise contents of
syllabus R2023
program.
Suggestions of BoS
from I to III

of "Verticals"
is admitted
study from

and the courses
realized after
from BoS members.

IE AND

any one
Mathematics

Material selection
and Metallurgy

"bee" networking
and Electronic

"Ability Course" in
of Control.

5. Mr. N. Mani suggested including a topic on Bill of Materials (BoM) after 3D modeling in the course on Computer Aided Machine Drawing.
6. Dr. S. Vinodh suggested including an introduction of a topic on Process Chart/Planning Chart in the course on Computer Aided Machine Drawing.
7. Mr. K. Karthik suggested an experiment on generation of Part Drawing from 3D components in the course on Computer Aided Machine Drawing.
8. Dr. S. Vinodh suggested including a module on Non-traditional Machining and that the topic on Drilling, Milling and Grinding could be combinedly given as a single module.
9. Expert members suggested adding an experiment on Shore-D Hardness in the Laboratory course on Material Characterization.
10. Expert members suggested adding an experiment on Automated part programming language in the laboratory course on Computer Aided Manufacturing.
11. Dr. A. P. Sathiyaguram suggested adding "Routh Stability Criteria" before "Bode Plot" in the course on Control System and Mechatronics.
12. The expert members suggested renaming the course on Computer Aided Design and Manufacturing Management as Computer Integrated Manufacturing (CIM) and suggested adding some topics in manufacturing.
13. Dr. S. Vinodh suggested adding the "KV Mapping" in the course on Fluid Power Control System.
14. Dr. A. Valan Arasu suggested adding the course on Physics for Mechanical Engineers II as a pre-requisite for the course on Engineering Thermodynamics.
15. Dr. A. Valan Arasu suggested renaming the Unit III as

Pipe flow and Measurement in the course on Fluid Mechanics and Machinery.

16. Dr. A. Valan Arasu suggested that Unit IV shall be named as Radiation and Heat Exchanger and the contents shall be rearranged in course on Heat Transfer.
17. Dr. S. Vinodh suggested including topics of applications pertaining to Mechanical Engineering in the courses on Chemistry and Physics for Mechanical Engineers.
18. Expert members suggested that 15 hours of manual drawing in Engineering Graphics I and II is required. Expert Members too recorded and suggested not to include the name of software packages in the title of experiments in the course contents.
19. Dr. S. Vinodh suggested adding "Evaluation of Process Capability" in the Module on Control, in the course on Metrology and Quality Control.
20. Expert members suggested rephrasing experiment 9 and 10 in the laboratory course on Metrology. They also suggested including inference from the experiments in the report.
21. Dr. S. Vinodh suggested renaming experiments from 6 to 9 in the laboratory course on Lathe and Special Machines.

DISCUSSIONS ON THE VERTICALS AND LIST OF COURSES:

1. Dr. S. Vinodh suggested moving the course on Advanced Statistics and Data Analytics from the vertical on Computational Engineering to Engineering Management.
2. Mr. N. Mani suggested that the Artificial Intelligence course does not fit in the Robotics and Automation vertical.

3. Dr. S
on
4. Dr.
IoT
from
5. Mr
in
6. Dr.
Elec
7. Dr.
ver
as
GENE
1. Ex
the
ma
2. Dr.
an
of
3. Dr
ma
4. Dr
col
ins
5. Dr
Ele
in
6. M
del
an
7. M

we on Fluid

unit IV shall be

in and the

on Heat Transfer

of applications

in the courses

ical Engineers.

work of manual

and IT is required.

suggested not to

in the title

uation of Process

in the course

experiment 9 and

logy. They also

experiments in

periments from

Labre and Social

OF COURSES:

course on

ics from the

to Engineering

cial Intelligence

and Automation

2. Dr. S. Vinodh suggested renaming the title of Vertical on Manufacturing Sciences as Manufacturing Technology.
4. Dr. S. Vinodh suggested that Digital Manufacturing and IoT be shifted to the vertical on Robotics and automation from the vertical on Engineering Management.
5. Mr. N. Mani suggested removing Manufacturing Planning in vertical six and have it as Manufacturing Cost Estimation.
6. Dr. G. Ramkumar suggested offering the course on Finite Element Analysis (FEA) as program core.
7. Dr. A. Valan Arasu suggested reviving the title of the vertical on Engineering Management, if it is offered as a Minor Vertical to other programs.

GENERAL DISCUSSIONS:

1. Expert members insisted on five units by reassembling the units such that two and half units covered for mid-semester tests.
2. Dr. S. Vinodh suggested giving insights of topics (that are removed in the syllabus) from an application point of view in the class.
3. Dr. A. P. Sathiyagnanam opined that six COs are too many for the courses.
4. Dr. B. Gayatri suggested offering the mandatory course on "Environment Science" in the second semester instead of first semester.
5. Dr. S. Vinodh suggested offering the course on Electrical Machines and Drives earlier, preferably in third or fourth semester.
6. Mr. N. Mani suggested introducing the students to robotic welding in the laboratory course on Molding and Welding.
7. Mr. N. Mani suggested educating students on

Thermal Cutlog.

8. Mr. N. Mari suggested having small projects from the third semester onwards and integrating these for the final year project.
9. Dr. S. Vinodh opined that giving micro projects every semester is very difficult for students and that a mini project is a feasible solution. He added that the students can be asked to carry out a micro project and mini project during their vacation after second and third year respectively.
10. Dr. A. Valan Arasu suggested that the unit pattern in syllabus may be removed, since Course Outcomes replace the units in OBE style.
11. Dr. A.P. Sathiyagnanam expressed his concern on rearranging the contents into four units since it does not align with the format followed in Anna University. He suggested exploring alternatives to facilitate the ease of learning.
12. Dr. S. Vinodh suggested to ensure that no topics are missed during this reorganization.
13. The Board would like to record that
 - The number of units has been reduced to four from five in all the courses for all semesters. However, it is insisted that a minimum of five units shall be followed.
 - Some topics have been removed in some of the courses in the process of rearranging the content from five units to four units. It is felt that this has made the contents weak.
 - The need for rearranging the contents was not well defended and the expert members expressed their concern on the same.

Dr. Rajeev
conclude

Dr. Rajesh Ranganathan proposed the Vote of Thanks and concluded the meeting.



CHAIRMAN

Board of Studies

Dr. N. Rajam Ramasamy, Ph.D.,
Head i/c,
Department of Mechanical Engineering,
Coimbatore Institute of Technology,
Coimbatore - 641 014, INDIA.

projects from
degrading these

20 projects every
1 and that a
be added that
out a micro
in vacation after

the unit pattern
Course Outcomes

his concern on
units since it
followed in
doing alternative

that no topic
ion.

it
duced to four
all semesters,
minimum of five

in some of the
aging the content
It is felt that

students was not
members expressed

MINUTES OF THE 40TH MEETING OF THE
BOARD OF STUDIES OF MECHANICAL ENGINEERING

19-11-2022

The minutes of the meeting of the Board of Studies of Mechanical Engineering held on 19-11-2022 at 10:50 AM in Main Building A/C Conference Hall.

The following members were present in the meeting

Sl. NO	NAME	DESIGNATION	SIGNATURE	Sl. NO	NAME
1.	Dr. N. Rajam Ramaswamy	Chairman		22.	Dr. C. V
2.	Dr. D. Noonullah	University Nominee (U&P)		23.	Dr. P. M
3.	Dr. P.K. Palani	Expert Member - Academic	Pre-Occupied	24.	Dr. S. S
4.	Dr. P.R. Thyla	Expert Member - Academic		25.	Dr. D. P
5.	Mr. A. S. Shiva Kumar	Expert Member - Industry		26.	Dr. P. M
6.	Mr. N. Sampath Kumar	Expert Member - Industry	Pre-Occupied	27.	Dr. R. V
7.	Dr. K. Marimuthu	Member		28.	Dr. G. B
8.	Dr. T. Sridhar	Member		29.	Mr. R. S
9.	Dr. R. Rajesh	Member		30.	Dr. C. M
10.	Dr. G. Sureshbannan	Member		31.	Dr. H. S
11.	Dr. A. S. Krishnan	Member		32.	Dr. S. V
12.	Dr. G. Sivakumar	Member		33.	Dr. R. S
13.	Mr. P. Ramakrishnan	Member		34.	Mr. G.
14.	Dr. M. Velliangiri	Member			
15.	Dr. A. Suganya Piyadhaashini	Member			
16.	Mr. M. Karthibayan	Member			
17.	Dr. C. Babji Ayyanar	Member			
18.	Mr. K. Karthik	Member			
19.	Dr. A. Karthibayan	Member			
20.	Dr. A. Thangaraju	Member			
21.	Dr. S. Balaraman	Member			

Chairman
Assoc
Teach
Insti
in M
Rama
in A
to P
follow
and
Iter
follow
of

THE	SL. NO	NAME	DESIGNATION	SIGNATURE
ERINA	22.	Dr. C. Vivek	MEMBER	
19-11-2022	23.	Dr. P. Mohan	Member	
	24.	Dr. S. Selvam	Member	
ard of Studies	25.	Dr. D. P. Sam Solomon	Member	
at 10:30 AM in	26.	Dr. P. Manivel	Member	
	27.	Dr. R. Vishnu	Member	
the meeting.	28.	Dr. A. Balamurugan	Member	
	29.	Mr. R. S. Mohankumar	Member	Pre-Occupied.
	30.	Dr. C. Manivannan	Member	
SIGNATURE	31.	Dr. H. Sivarathinamorthy	Member	
Chandramany	32.	Dr. S. Vellingiri	Member	
Onwards 19/11/22	33.	Dr. R. Sathiskumar	Member	
Pre-Occupied.	34.	Mr. G. Ramkumar	Member	
PR				

The 40th Board of Studies meeting chaired by Dr. N. Rajam Ramasamy, Associate Professor and Head of Department - Incharge, Mechanical Engineering, Coimbatore Institute of Technology, was held on 19.11.2022 in Main Block Conference Hall. Dr. N. Rajam Ramasamy welcomed the members (attached in Annexure) and invited Dr. A. S. Krishnan to Present the agenda of the meeting. The following table lists the items resolved and approved:

Item No: 1 :- Resolved and approved the following vision of the best Department Of Mechanical Engineering

The department aims to become one of the best mechanical engineering departments in the country in preparing engineers capable of working innovatively and creatively towards a better world.

Item NO: 2:- Resolved and approved the following mission of the Department of Mechanical Engineering

1. Impart fundamental knowledge in Mechanical engineering through effective teaching - learning methods.
2. Prepare students to address current and impending challenges faced by our nation and world
3. Provide an environment to foster and nurture innovation and research.

Item NO: 3:- Resolved and it be a recommendation that the following NPTEL Courses be included as Professional Electives for BE Program in Mechanical Engineering:

1. 19MEE44 - Fundamentals of Automotive Systems
2. 19MEE45 - Product Design and Manufacturing
3. 19MEE46 - The Joy of Computing with Python.
4. 19MEE47 - Introduction to Aerospace Engineering Flight
5. 19MEE48 - Work System Design
6. 19MEE49 - Classical Sociological Theory
7. 19MEE50 - Industrial Safety Engineering
8. 19MEE51 - Data Structure and Algorithms using JAVA

Item NO: 4:- Resolved and it be a recommendation that the following

Item NO

the y
Mecha
Courses
Progr
Sugg
for N
Char
Socio
and t
repor
Dr. A.
Course
Adva
apps

addr

NPTEL Courses be Included as Professional Electives for ME Program in Advanced Manufacturing Technology.

1. Techniques of Material Characterization
2. Metal Additive Manufacturing.

Item No: 5:- Resolved and it be a recommendation that the following component be added to Experiments on welding in 19MEL47B (Manufacturing Process Laboratory)

1. Identification and measurement of welding defects in specimen weld beads and workpieces.

Discussions on the following points took place

1. Dr. A. S. Krishnan Presented the revised vision and mission of the B.E Mechanical Engineering Program and NPTEL courses for the BE Mechanical Engineering Program. Dr. P. R. Thyia and Dr. Noorullah suggested having different course codes for NPTEL courses and also requested to check the title of the course Classical Sociological. The same has been checked and the correct title of the course is reported as classical Sociological Theory. Dr. A. S. Krishnan also Presented NPTEL Courses Proposed for the M.E Program in Advanced Manufacturing Technology for approval of the committee.

2. Dr. C. Manivanan Proposed adding a new experiment in the

19MEL478 Manufacturing Process by for 2019 Regulation Dr. P. R. Thyia enquired about the facilities available for the same, and Dr. Noorullah sought for justification of the addition. Dr. C. Manivannan confirmed the facilities required and the significance of the investigation from an industry perspective.

3. Dr. A. S. Krishnan presented the R2019 curriculum of the BE Program in Mechanical to seek suggestions for construction of the curriculum of R2023. Dr. Noorullah suggested that the Physics for Mechanical Engineers' course be taught by a faculty member from the department of Mechanical Engineering itself. He also suggested implementing Python programming.

4. Dr. P. R. Thyia suggested correcting 0.5 credit for two laboratory course hours as one credit course. Dr. P. R. Thyia also asked to ensure that lab classes are handled in the same semester for all the students.

5. Dr. P. R. Thyia suggested mentioning two weeks of mandatory internship in the curriculum with 0 contact hours and one credit for the internship. Dr. P. Thyia suggested having 0 credits for Personality Skills, which is not counted for GPA. Dr. Noorullah and Dr. P. R. Thyia urged to frame the curriculum with credit distribution for different categories.

equi:
Modu
6. T
Inte
distai
in th
Four
Nume
Prop
Thylo
the
revis
7. E
havi
to be
aske
Gra
Send
8. D
havi
and
Cour
9. E
OF
agr
last
10.]
the
and
fac
Mec
tha

is bb for
enquired
for the
t for
Dr. C.
ities
of the
Perspective
the R2019
in Mechanical
ction of
Noorullah
Mechanical
a faculty
Mechanical
ggested
ning
recting
ourse
P.R.Thyia
asses
for all
oning two
the
nd one
Thyia
Personality
GPA
a urged
th Credit
omes

equivalent to Anna university and AICTE Model curriculum.

6. The Chairman Proposed to drop the course Introduction to Mechanical Sciences and distribute its contents to courses on Physics in the first and second Semester. Further Four courses on Mathematics, including Numerical Methods and Statistics, were Proposed for the 2023 Curriculum Dr. P. R Thyia and Dr. Noorullah suggested sending the Proposed syllabus and curriculum for review.

7. Dr. P. R. Thyia and Dr. Noorullah Suggested having total Credits of Professional Electives to be not less than 18. Dr. P. R. Thyia also asked to frame the syllabus for Engineering Graphics I and Engineering Graphics II and Send it for review.

8. Dr. Sridhar Thyageswaran Suggested having a theory course on Engineering Materials and Metallurgy and its respective laboratory Course in the third semester.

9. Export members discussed the evaluation of one credit course, and the members agreed to have a continuous assessment test at the end for evaluation.

10. Mr. K. Karthik. Proposed to have the course on Strength of Materials and Fluid Mechanics be taught by the faculty members from the Dept. of Mech. Engineering. The Chairman responded that the suggestion would be taken

into due consideration.

11. Dr. K. Marimuthu suggested renaming the course Hydraulics and Pneumatics as Fluid Power Control or Fluid Power Systems. He further suggested having the list of courses in each semester in the order of highest to lowest credits.

12. Dr. K. Marimuthu and Dr. C. Balaji Ayyanar suggested having Design of Machine elements and Design of Transmission Systems as two separate courses in the 5th and 6th semesters respectively. The idea was supported by expert members too after a discussion on the contents of the courses.

13. Mr. G. Ramkumar proposed having an exclusive course on Mechatronics in the 6th semester. Instead of combining it with the course on control Theory.

Dr. P. R. Thyia and Dr. K. Marimuthu suggested having the course on Mechatronics as a Professional Core Course to be offered along with the laboratory course on mechatronics. Control Theory was recommended to be offered as a professional elective course.

14. Dr. P. R. Thyia and Dr. Noorullah suggested having the title of Project work course to be in accordance with Anna University. Prof. K. Marimuthu suggested having a minimum of 10 credits for the

main
Secur
15. F
Course
as a
curr
it. T
to c
OF C
STRE
it A
16. M
the
prof
curr
17. D
offe
in a
Sugg
for
18. M
lab
into
for
19. F
Sugg
in a
SES
for
20.
the
Dre

main project work and expert members seconded the same.

15. Dr. S. Balamurugan Proposed to have the course on Refrigeration and Air Conditioning as a professional core course in 2023 curriculum and expert members discussed it. The Chairman suggested Dr. S. Balamurugan to develop the framework and syllabi of core and elective courses of thermal stream in the 2023 curriculum and present it for a review.

16. Mr. A. S. Shivakumaran Proposed to have the course Alternative Energy as a professional core course in the 2023 curriculum.

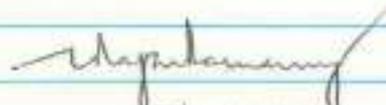
17. Dr. Sridhar Thyageswaran Proposed to offer the course on Finite Element Analysis in an earlier semester. Prof. P. R. Thyla suggested having a laboratory component for this course.

18. Mr. K. Karthick Proposed to split the laboratory course on Manufacturing Process into two semesters as the contact hours for each batch are less than the required.

19. Dr. P. R. Thyla and Dr. Sridhar Thyageswaran suggested introduction of computer aided drawing in the first year. After a few sessions on manual drafting initially for the course on Engineering Graphics.

20. Dr. P. R. Thyla suggested renaming the course on computer-aided Machine Drawing as Machine Drawing.

21. The members agreed to offer their suggestion on the contents of the courses.
22. The chairman proposed the vote of Thanks and concluded the meeting.


Chairman

Board of Studies
Dr. N. Rajam Ramasamy, Ph.D.,
Head i/c,
Department of Mechanical Engineering,
Coimbatore Institute of Technology,
Coimbatore - 641 014, INDIA.

The Board of Studies Meeting for B.E., CSE and B.Tech AI & DS was held on 11-03-2022 at 2:30 PM and it was resolved to approve the Curriculum and syllable of B.Tech AI & DS and the NPTEL Course Approval for B.E., CSE from 2021-2022.

MEMBERS PRESENT

BOS Chairman

1. Dr. G. Kousalya *G.K.*

BOS External Members

- | | | | |
|----|---------------------------------------|---------|-------------------|
| 1. | Dr. J. Cynthia - Anna University | Nominee | <i>J. Cynthia</i> |
| 2. | Dr. T. Purushothaman - Academic | Expert | Present |
| 3. | Dr. S. Venkatesan - Academic | Expert | Present |
| 4. | Dr. L. Ramesh Naidu - Industry | Expert | Present |
| 5. | Mr. V. Anilkumar - Industry | Expert | Present |
| 6. | Mr. Srinivasan Padmanabhan - Industry | Expert | Pre-Ocupied |

BOS Internal Members

- | | | | |
|-----|----------------------------|----------------|-------------------------------|
| 1. | Dr. R. Prabhakar | subject Expert | |
| 2. | Dr. R. Nedunchezhiyan | Member | <i>R. Nedunchezhiyan</i> |
| 3. | Dr. A. Kunthavai | Member | <i>A. Kunthavai</i> |
| 4. | Dr. A. N. Senthivel | Member | <i>A. N. Senthivel</i> |
| 5. | Prof. D. Mohana | Member | <i>D. Mohana</i> |
| 6. | Dr. K. Amal Kala | Member | <i>K. Amal Kala</i> |
| 7. | Dr. M. Mohana Priya | Member | <i>M. Mohana Priya</i> |
| 8. | Dr. A. Priyadharshini | Member | <i>A. Priyadharshini</i> |
| 9. | Ms. S. Sangeetha Maniammal | Member | <i>S. Sangeetha Maniammal</i> |
| 10. | Mr. S. Ravisankar | Member | <i>S. Ravisankar</i> |
| 11. | Mrs. S. Saranya-Rubini | Member | <i>S. Saranya-Rubini</i> |

12.	Mrs. R. Pavithra	Members	Members
13.	Mr. M. Maranco	Members	Members
14.	Ms. A. Punidha	Members	Members
15.	Dr. S. P. Abirami	Members	Members
16.	Dr. S. Priya	Members	Members
17.	Mr. B. Arunkumar	Members	Members
18.	Mrs. K. Sathya	Members	Members
19.	Ms. R. Saveeth	Members	Members
20.	Ms. G. Priyadharshini	Co-opted Members	Members
21.	Ms. M. Prabhavathy	Co-opted Members	Members
22.	Ms. K.N. Apinaya Prethi	Co-opted Members	Members
23.	Mr. S. Hariharan	Co-opted Members	Members
24.	Ms. S. Nithya	Co-opted Members	Members
25.	Mr. G. Karthikeyan	Co-opted Members	Members
26.	Ms. S. Saranya	Co-opted Members	Members

B.Tech AI & DS

1.	Dr. Valliappan Raman	Members	Members
2.	Dr. T. Ramraj	Members	Members

Dr. G. Kousalya, Chairman BOS welcomed the BOS members. The following suggestions were made by Board of Studies members.

BOS meeting is conducted to seek board approval for revised subjects of study (Semester II - Semester VIII) and syllabus for new subjects in Semester I - Semester IV for AI and DS.

The following suggestions were made in the meeting

1. In Semester III, Panel members suggested to rename the subject title "Artificial Intelligence" into "Principles of Artificial Intelligence"
2. In Semester VII, Anna University nominee, Dr. Cynthia suggested changing the subject title "Fundamentals of IoT", not to name it as fundamental due to the subject offered in final year.
3. In Semester II, subject "Fundamentals of IR4.0", Panel members suggested maintaining the introductory concepts of emerging technologies.
4. In Semester I, subject "Probability and Statistics", the committee recommended to include basis of R programming, where as students can implement the statistical modelling concepts.
5. In Semester III, subject "Introduction to

"Artificial Intelligence", panel members suggested adding a module on "Explainable AI" which is gaining more awareness in industry sectors due to raising of legal, ethical and social issues in AI applications.

6. In Semester III, for the subject "Software Engineering Principles and Practices", Industry experts recommended to include a module on software lifecycle model for AI projects i.e. AI software development life cycle. Anna University nominee suggested a module on agile practices.
7. In Semester III, for the subject "Web Development Technologies", the panel suggested a module on Bootstrap, UI framework for building websites.
8. In Semester IV, in the subject "Machine Learning Techniques", the committee members suggested a module on ensemble methods, which is widely used in industry for improving the predictive performance results.
9. In Semester IV, "Data Communication and Networking", Dr. Cynthia recommended to include a module on 5G, 4G & 3G standards.
10. In Semester IV, for the subject "Principle of Computer Systems", Panel members suggested to include ARM architecture.

11. In Semester IV, for Database Management System Laboratory, Panel suggested to include NOSQL database, which is widely used in industry for providing high level of scalability.
12. For BE Computer Science and Engineering the Committee approved TWO NPTEL courses:
- Ethical Hacking
 - Data Analysis and Decision Making - I

Gm

(Dr. G. Kouralya)

Chairman - BOS

The Board of Studies meeting for B.E(CSE) was held on 5th Dec 2020 at 5:00pm (Online Meeting)

MEMBER'S PRESENT

- | | | | |
|-----|----------------------------|--------------------|-------------------------|
| 1. | DR. G. KOUSALYA | CHAIRMAN. | GMY |
| 2. | DR. J. CYNTHIA | UNIVERSITY NOMINEE | Present |
| 3. | DR. T. PURUSHOTHAMAN | MEMBER. | Present |
| 4. | DR. S. VENKATESAN | MEMBER. | Present |
| 5. | DR. L. RAMESH NAIDU | MEMBER. | Present |
| 6. | MR. V. ANILKUMAR | MEMBER. | Present |
| 7. | MR. SRINIVASAN PADMANABHAN | MEMBER. | Present |
| 8. | DR. R. PRABHAKAR | SUBJECT EXPERT | Pre occupied. |
| 9. | DR. R. NEDUNCHEZHIAN | MEMBER. | <i>R. Nedunchezhan</i> |
| 10. | MRS. D. MOHANA | MEMBER. | <i>D. Mohana</i> |
| 11. | DR. A. KUNTHAVAI | MEMBER. | <i>A. Kunthavai</i> |
| 12. | DR. A. N. SENTHILVEL | MEMBER. | <i>A. N. Senthilvel</i> |
| 13. | DR. K. AMSHAKALA | MEMBER. | <i>K. Amshakala</i> |
| 14. | DR. P. KUMUDHA | MEMBER. | <i>P. Kumudha</i> |

- | | | | |
|-----|-----------------------------|---------|---------------|
| 15. | DR. M. MOHANA PRIYA | MEMBER | Ph |
| 16. | MS. A. PRIYADHARSHINI | MEMBER. | A. Priyale |
| 17. | DR. T. RAMRAJ | MEMBER. | Ramraj |
| 18. | MRS. S. SANGEETHA MARIAMMAL | MEMBER. | S.S.M |
| 19. | MR. S. RAVISANKAR. | MEMBER. | S |
| 20. | MRS. S. SARANYA RUBINI | MEMBER. | Pre occupied |
| 21. | MRS. R. PAVITHRA | MEMBER. | R |
| 22. | MR. M. MARANCO | MEMBER. | M. Maranco |
| 23. | MRS. N. GIAYATHRIY | MEMBER. | N. Gayathri |
| 24. | MRS. A. PUNIDHA | MEMBER. | A. Punidha |
| 25. | MRS. S. P. ABIRAMI | MEMBER. | S. P. Abirami |
| 26. | MRS. S. PRIYA | MEMBER. | S. Priya |
| 27. | MR. B. ARUNKUMAR. | MEMBER. | B. Arunkumar |
| 28. | MRS. K. SATHYA | MEMBER. | K. Sathya |
| 29. | MRS. R. SAVEETH. | MEMBER. | R. Saveetha |

The following suggestions are made by Board of Studies members:

1. Dr. T. Purusothaman, Academic Expert, suggested to include full stack development course as an elective.
2. Dr. T. Purusothaman suggested that the number of courses offered for electives may be reduced.
3. Dr. J. Cynthia, Anna University Nominee, suggested cloud technology may be moved to core.
4. Dr. L. Ramesh Naidu, Industry Expert, suggested Mapper ML may be introduced as elective.
5. Dr. L. Ramesh Naidu, suggested Agile Technologies may be introduced as elective.
6. Dr. L. Ramesh Naidu, suggested removing semantic web from electives.
7. Dr. S. Venkatesan, Academic Expert, suggested that since cryptography and Network Security is added as core paper, Information Security may be removed from elective.
8. Dr. S. Venkatesan suggested that the Angular Js concept may be added in web technology.
9. Dr. J. Cynthia recommended to include more analytical topics in computer networks.

10. Dr. Padmanabhan Srinivasan, Industry Expert (Alumni) suggested tutorials using R can be introduced in statistical analysis
11. Dr. J. Cynthia recommended including open source tools for networks Lab. In continuation to that, Dr. G. Kowalya, Chairman, BOS mentioned that open source tools for Network Analysis is added as one credit course in the curriculum
12. Dr. Padmanabhan Srinivasan suggested including IoT protocols in the syllabus of Internet of Things
13. Dr. L. Ramesh Naidu suggested that few topics of decision tree concepts may be removed and ensemble learning methods such as ADABOOST, Random Forest may be included in Machine Learning
14. Dr. L. Ramesh Naidu suggested to improve the correlation between IoT theory and IoT Laboratory course.
15. Dr. L. Ramesh Naidu suggested implementing Machine Learning algorithms using Python.
16. Dr. Padmanabhan Srinivasan suggested to include Block chain as one topic in Cryptography and Network Security.
17. Dr. J. Cynthia suggested to include selective adhoc network protocols not all. In continuation

with that Dr. G. Kousalya, informed that more emphasis will be given on Security and Energy management in Adhoc Networks.

18. Dr. T. Purusothaman suggested that configuration of cloud services may be added in the cloud and virtualization course to incorporate practical knowledge for students. In continuation to that Dr. G. Kousalya informed that cloud and virtualization may be separated as individual courses.
19. Dr. J. Cynthia suggested more focus on the Bitcoin and Smart Contract may be given to Blockchain Technology.
20. Dr. S. Venkatesan suggested adding three versions 1.0 (Blockchain), 2.0 (Ethereum) and 3.0 (Hyperledger) may be added.
21. Dr. T. Purusothaman recommended including simple case study in Blockchain Technology course.
22. Dr. T. Purusothaman suggested removing Digital Image Processing from electives.
23. Dr. Padmanabhan Srinivasan suggested including popular NLP agents in Natural Language Processing course.
24. Dr. Padmanabhan Srinivasan suggested including

AR and VR concepts. In continuation with that Dr. G. Kousalya informed, AR and VR concepts will be included in Graphics and Multimedia Systems course. Also Multimedia applications will be given as case studies.

25. Dr. Padmanabhan Keenivasan recommended including tools for OOAD. In continuation with that Dr. G. Kousalya informed Rational Rose tool is available.

26. Dr. V. Anilkumar suggested Quantum Computing course may be offered as an elective.

COIMBATORE INSTITUTE OF TECHNOLOGY

(A Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

COIMBATORE - 641014

DEPARTMENT OF CHEMICAL ENGINEERING

MINUTES OF BOARD OF STUDIES MEETING

Date: 19.03.2021 (Saturday)

Dr.M. Thirumarimurugan, the chairman, Board of Studies extended a warm welcome to all the participants present in the virtual meet held on 19th March by 10:30 am and he thanked every member for sparing their precious time to participate in the meeting.

Google Meet ID: <https://meet.google.com/mnr-naze-sea>

At the outset chairman gave brief introduction about University Nominee, Subject Experts and experts and proposed the agenda of meeting. The main agenda of meeting was to scrutinize the Professional /Open Electives & One credit courses of B.Tech. Chemical Engineering Curriculum and syllabi (Regulation -2019).

The following are the comments and suggestions were provided by the external experts during the meeting:

1. As per the suggestions proposed by Internal members and Expert members, the following subjects are included in the B.Tech. Chemical Engineering, Curriculum as Professional Electives

- ❖ E31 Carbon Capture
- ❖ E32 Material Science and Technology
- ❖ E33 Bioprocess Technology
- ❖ E34 Pilot Plant Scaleup Methods

2. It has been recommended by Dr.T.K. Radhakrishnan to change the tile of OC07 as 'Environmental Impact Assessment and Audit' and He also recommended to

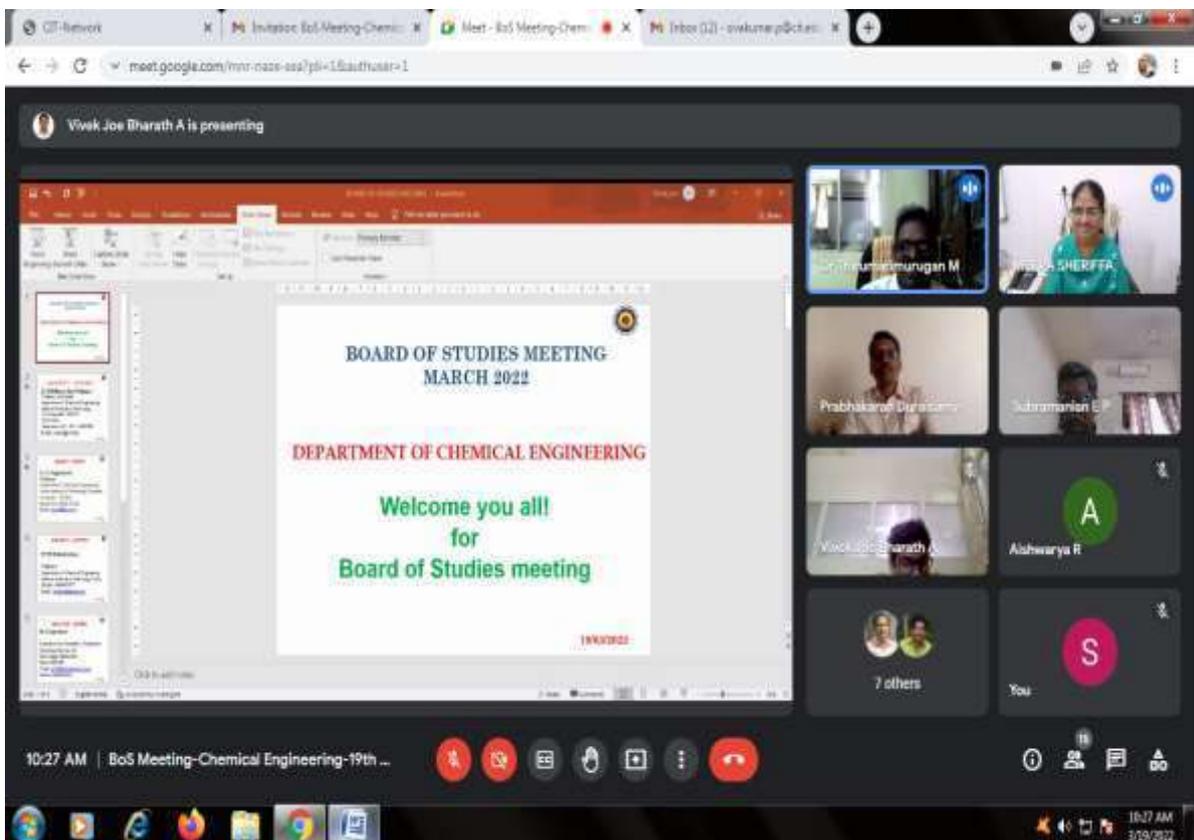
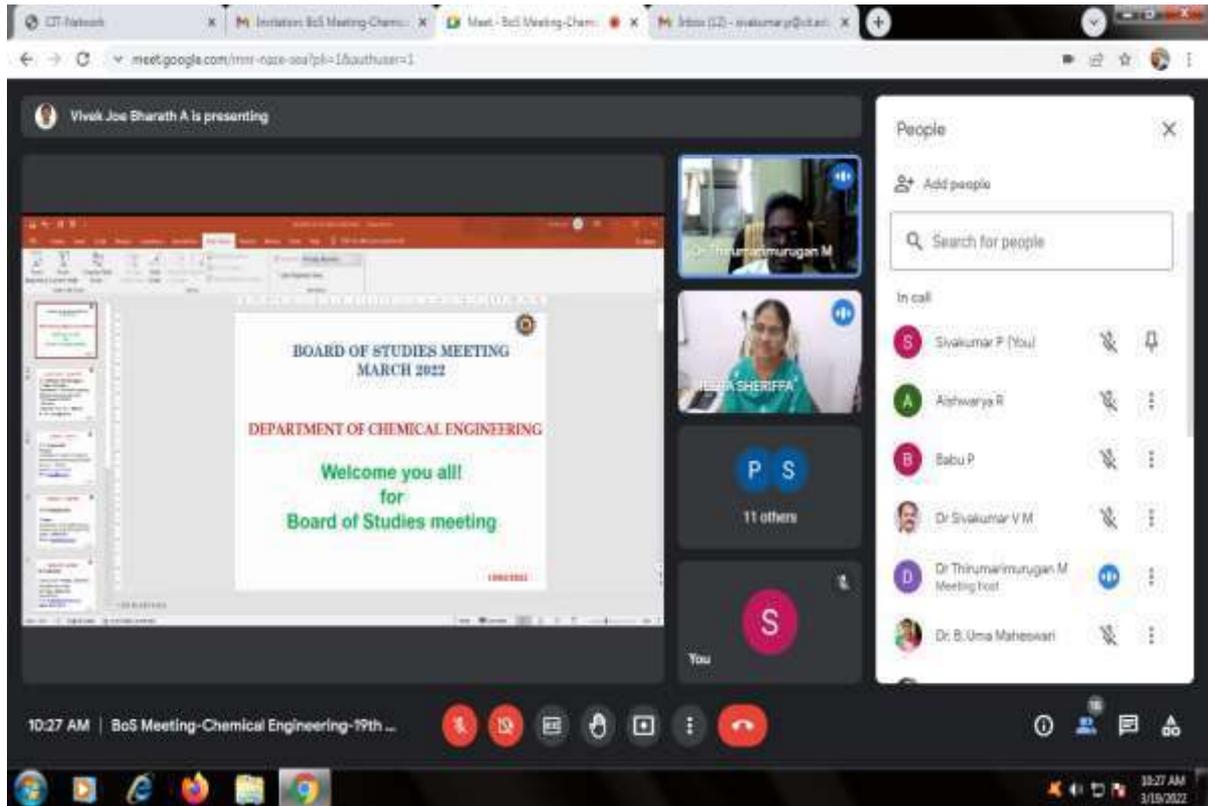
move OC-30 Pinch Technology under the category 'Energy-nano Technology Courses (Group-IV)'.

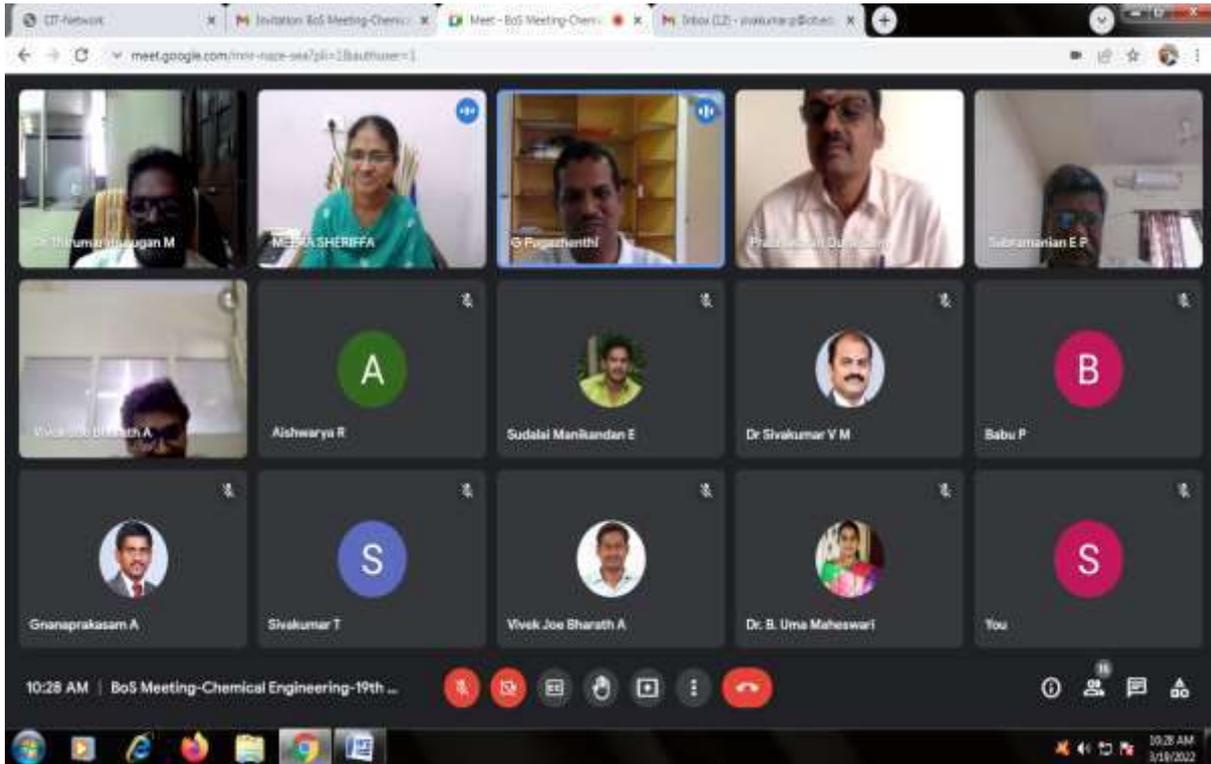
3. M.K.V.Meera Shreya Begum has suggested to move one credit course named 'OC-37 Drug Delivery Systems' under the category 'Energy-Nano Technology Courses (Group-IV)'
4. Dr.G.Pugazhenthii have recommended to change one credit course 'OC38' as NPETL/MOOC Certification Courses.

In addition to the above recommendations and suggestions, following amendments were proposed by expert members to implement in the next syllabus book revision.

1. Title of the Unit-5 in the Elective subject 'E05 Renewable Energy' should be renamed as 'Energy Conservation Techniques' instead of 'Energy Conversion Techniques'.
2. It was suggested to include the emerging topic on 'Fuel Cell' in the subject 19CH74 Electrochemical Engineering.
3. Title of Professional Elective 'E-23' should be changed as 'Energy Resources and Management' instead 'Energy Technology'.
4. Moreover, there was a suggestion to include topic named 'Photolysis' in the elective 'E-23'.
5. It was suggested to include 'Simulation based Process Control Experiments' in the Laboratory named '19CHL77 Process Control and Simulation Laboratory'.
6. There was a suggestion to introduce an experiment relevant to absorption in '19CHL67-Mass Transfer Laboratory'

Dr.M.THIRUMARIMURUGAN
Chairman
Board of Studies
Department of Chemical Engineering





BoS Meeting-Chemical Engineering-19th March 2022

- * Meeting code: mn-r-naze-sea
- * Created on 2022-03-19 10:11:37
- * by <https://chrome.google.com/webstore/detail/google-meet-attendance-li/appcnhiefcidclcdjeahgklghghihfok>

Full Name	First Seen	Time in Call
Aishwarya R	19-03-2022 10:19	01:26:44
Babu P	19-03-2022 10:22	01:29:58
Dr Ganesamoorthy K	19-03-2022 10:29	01:22:45
Dr Sivakumar V M	19-03-2022 10:23	01:29:09
Dr Thirumarimurugan M	19-03-2022 10:13	01:38:53
Dr. B. Uma Maheswari	19-03-2022 10:25	01:25:14
Dr.Azarudeen R	19-03-2022 10:28	01:23:30
G Pugazhenth	19-03-2022 10:27	01:24:58
Gnanaprakasam A	19-03-2022 10:26	01:24:28
MEERA SHERIFFA	19-03-2022 10:24	01:26:26
Nisha Subash	19-03-2022 10:37	01:14:37
Prabhakaran Duraisamy	19-03-2022 10:22	01:29:38
Sasikumar B	19-03-2022 10:30	01:21:27
Sivakumar P	19-03-2022 10:13	01:38:20
Sivakumar T	19-03-2022 10:23	01:28:46
Subramanian E P	19-03-2022 10:17	01:33:20
Sudalai Manikandan E	19-03-2022 10:24	01:34:03
T.K. Radhakrishnan	19-03-2022 10:29	01:22:41
Vivek Joe Bharath A	19-03-2022 10:11	01:40:59

DEPARTMENT OF CHEMICAL ENGINEERING

BOARD OF STUDIES

MINUTES OF THE MEETING

DATE: 28.01.2023

VENUE: DEPARTMENT MEETING HALL

Meeting was commenced by Chairman, Board of Studies with the brief introduction of Industry expert, Academic experts and internal members. At the outset, he briefed the agenda of meeting as to revise and revamp B.Tech. Chemical Engineering curriculum without violating norms of the Anna University and the institute level guidelines implemented in CIT which is mentioned as follows:

1. Total Credits for B.Tech. Chemical Regular should be in the range of 160-165.
2. Total Credits for B.Tech. Chemical Lateral Entry should be in the range of 120-125.
3. Each semester should be in the form of either in pattern1 (5 Theory + 2 Laboratory + 2 Mandatory Courses) or in pattern2 (6 Theory + 2 Laboratory + 2 Mandatory Courses)
4. There should be maximum of eight electives out of which two electives are under open elective category and the remaining six electives are under professional electives category.

In continuation to the Welcome address, B.Tech. Chemical Engineering Curriculum was presented by BoS coordinators. While presenting the curriculum, suggestions or recommendations given by the expert members are listed as follows:

1. Dr.A.Arunagiri-Subject Expert recommended to change 'Physics for Chemical Engineers' as 'Engineering Physics' and 'Electrical Drives and Control' as 'Electrical Machines and Drives'.
2. Moreover, Dr.A.Arunagiri suggested to combine the following subjects to reduce the total credits.
 - Chemical Engineering Thermodynamics-I (Fourth Semester) & Chemical Engineering Thermodynamics-II (Fifth Semester) shall be combined as Chemical Engineering Thermodynamics.

- Process Instrumentation & Instrumental methods of analysis shall be combined as 'Instrumental Analysis'.
 - Fundamentals of Computing-I and Fundamentals Computing -II may be combined as 'Programming for Engineers'.
3. There was a suggestion to set the syllabus of Chemical Process calculations by incorporating following modifications.
- Unit-3 Humidity and Saturation shall be combined with Unit-2.
 - Unit -4 and Unit-5 can be set as Energy balance for reactive systems and Energy Balance for non-reactive systems.
4. Dr.A.Arunagiri & Dr.V.Sivakumar – Subject Expert have recommended to prepone 'Mechanical Operations' to third semester and 'Chemical Process Industries' to fourth semester respectively.
5. Mr.C.Sampath Kumar- Industry Expert suggested to combine 'Biology for Engineers' and 'Biochemical Engineering' as a unique course.
6. All the members have unanimously accepted to modify the title of subject as 'Probability and Statistics' rather as 'Statistics and Special Functions'.
7. Dr.K.Ganesamoorthy – Internal Expert have suggested as to allot four credits for 'Probability and Statistics' instead of 3 credits.
8. Dr.A.Arunagiri and Dr.V.Sivakumar have suggested to assign 4 credits for Mass Transfer-II and 3 Credits for Mass Transfer-I respectively.
9. Similarly, there was a suggestion to assign 4 credits for Chemical Reaction Engineering-II and 3 credits for Chemical Reaction Engineering-I.
10. Dr.M.Anil Mozhi -University Nominee have instructed to include following subjects

in the B.Tech. Chemical Engineer.

- Drugs and Pharmaceutical Technology
- Food Technology
- Petroleum Refining and Petro Chemical Technology
- Petrochemical Technology
- Process Intensification
- Artificial Intelligence and Machine Learning
- Flow sheeting Laboratory.
- Seminar, Plagiarism in ethics and technical writing
- Design and Analysis of experiments

Overall Comments & Vote of Thanks

- Dr.M.Arulmozhi commented that overall curriculum and syllabi looks good and subjects are oriented with current technology development.
- Dr.V. Sivakumar have commented that overall structure of the curriculum is very good and excellent.
- Dr.A.Arunagiri have commented that entire chemical syllabus is very good.
- Mr.CS.Sampath Kumar commented that over all syllabus is good.

Finally, chairman have thanked all the members for their presence and valuable suggestions. Meeting was overed with good Dine and tea.



Dr.M.Thirumafimurugan

Chairman

Board of Studies

Department of Chemical Engineering

COIMBATORE INSTITUTE OF TECHNOLOGY
(Government Aided Autonomous Institution Affiliated to Anna University)

B.Tech. CHEMICAL ENGINEERING

Curriculum from the Academic Year-2023

SUBJECTS OF STUDY
SEMESTER-I

Code	Name of the Subject	L	T	P	C	CAT
Theory						
T1	Technical English	2	2	0	4	HSC
T2	Differential and Integral Calculus	3	1	0	4	BSC
T3	Engineering Physics	3	0	0	3	BSC
T4	Physical Chemistry	3	0	0	3	BSC
T5	Mechanics of Solids	3	0	0	3	ESC
T6	Fundamentals of Computing-I	3	0	0	3	ESC
Practical						
P1	Engineering Graphics	0	0	2	1	ESC
P2	Computer laboratory	0	0	2	1	ESC
Mandatory Courses						
MC1	Induction Programme	15 Hours				MC
MC2	Soft skills /Environmental science	0/2	0/0	3/0		MC
TOTAL					22	

SEMESTER-II

Code	Name of the Subject	L	T	P	C	CAT
Theory						
T1	Matrices, Fourier Series and Transforms	3	1	0	4	BSC
T2	Organic Chemistry	3	0	0	3	BSC
T3	Material Science	3	0	0	3	BSC
T4	Heat Power Engineering	3	0	0	3	ESC
T5	Electrical Machines and Drives	3	0	0	3	ESC
T6	Fundamentals of Computing-II	3	0	0	3	ESC
Practical						
P1	Language laboratory	0	0	4	2	HSC
P2	Basic Science Laboratory	0	0	2	1	ESC
Mandatory Courses						
MC1	Soft Skills	0	0	3	--	MC
MC2	Co-Curricular Activities	0	0	2	--	MC
TOTAL					22	

SEMESTER-III

Code	Name of the Subject	L	T	P	C	CAT
Theory						
T1	Differential Equations and Boundary Value Problems	3	1	0	4	BSC
T2	Biology for Chemical Engineers	3	0	0	3	BSC
T3	Fluid Mechanics for Chemical Engineers	3	0	0	3	PCC
T4	Process Instrumentation	3	0	0	3	PCC
T5	Chemical Process Industries-I	3	0	0	3	PCC
T6	Chemical Process Calculations	3	1	0	4	PCC
Practical						
P1	Physical and Organic Chemistry Laboratory	0	0	2	1	ESC
P2	Electrical Drives Laboratory	0	0	2	1	ESC
Mandatory Courses						
MC1	Soft Skills	0	0	3	--	MC
MC2	Human Values and Professional Ethics	2	0	0	--	MC
TOTAL						22

SEMESTER-IV

Code	Name of the Subject	L	T	P	C	CAT
Theory						
T1	Probability and Statistics	3	0	0	3	BSC
T2	Mechanical Operations	3	0	0	3	PCC
T3	Heat Transfer	2	1	0	3	PCC
T4	Mass Transfer-I	3	1	0	4	PCC
T5	Chemical Engineering Thermodynamics	3	1	0	4	PCC
T6	Instrumental Methods of Analysis	3	0	0	3	PCC
Practical						
P1	Fluid Mechanics Laboratory	0	0	2	1	PCC
P2	Technical and Instrumental Analysis Laboratory	0	0	2	1	PCC
Mandatory Courses						
MC1	Soft Skills	0	0	3	--	MC
MC2	Seminar and Technical Writing	0	0	3	--	MC
TOTAL						22

SEMESTER-V

Code	Name of the Subject	L	T	P	C	CAT
Theory						
T1	Numerical Methods in Chemical Engineering	2	1	0	3	PCC
T2	Mass Transfer-II	2	1	0	3	PCC
T3	Chemical Reaction Engineering-I	3	1	0	4	PCC
T4	Biochemical Engineering	3	0	0	3	PEC
T5	Elective-I	3	0	0	3	PEC
T6	Elective-II	3	0	0	3	PEC
Practical						
INTERNSHIP						
P1	Heat Transfer Laboratory	0	0	2	1	PEC
P2	Mechanical Operations Laboratory	0	0	2	1	PEC
Mandatory Courses						
MC1	Soft Skills	0	0	3	--	MC
MC2	Professional Development Course	0	0	3	--	MC
TOTAL					22	

SEMESTER-VI

Code	Name of the Subject	L	T	P	C	CAT
Theory						
T1	Process Dynamics and Control	2	1	0	3	PCC
T2	Chemical Reaction Engineering-II	2	1	0	3	PCC
T3	Chemical Process Safety	3	0	0	3	PCC
T4	Neural Networks and Data Science	3	0	0	3	PCC
T5	Elective-III	3	0	0	3	PCC
T6	Elective-IV	3	0	0	3	PCC
Practical						
P1	Mass Transfer Laboratory	0	0	2	1	PCC
P2	Reaction Engineering Laboratory	0	0	2	1	PCC
	MINI PROJECT	0	0	4	2	EEC
Mandatory Courses						
MC1	Soft Skills/Professional Development Course	0	0	3	--	MC
TOTAL					22	

SEMESTER-VII

Code	Name of the Subject	L	T	P	C	CAT
Theory						
T1	Transport Phenomena	2	1	0	3	PCC
T2	Process Economics and Management	2	1	0	3	PCC
T3	Process Modeling and Simulation	3	0	0	3	PCC
T4	Process Plant Utilities	3	0	0	3	PCC
T5	Elective-V	3	0	0	3	PEC
T6	Elective-VI	3	0	0	3	PEC
Practical						
P1	Process Equipment Design and Drawing	0	0	2	1	PCC
P2	Process Control and Simulation Laboratory	0	0	2	1	PCC
TOTAL CREDITS					20	

SEMESTER-VIII

Code	Name of the Subject	L	T	P	C	CAT
Theory						
T1	Elective-VII	3	0	0	3	PEC
T2	Elective-VIII	3	0	0	3	PEC
Practical						
	Project Work and Viva-Voce	0	0	12	6	EEC
TOTAL CREDITS					12	

TOTAL CREDITS - REGULAR : 164

TOTAL CREDITS - LATERAL : 120

List of Verticals offered by Department for the award of B.Tech.

Honours:

- i). Petroleum Process Technology - Vertical -I
- ii). Energy Engineering - Vertical-II
- iii). Industrial Biotechnology - Vertical-III
- iv). Environmental Safety Engineering - Vertical-IV
- v). Computational Chemical Engineering - Vertical-V
- vi). Chemical Plant Design - Vertical-VI

VERTICAL-I PETROLEUM PROCESS TECHNOLOGY		
S.No	Name of Course	Credits
1.	Petroleum Chemistry	3
2.	Primary Refining Technology	3
3.	Secondary Refining Technology	3
4.	Refinery advancements and regulations	3
5.	Petroleum Equipment Design	3
6.	Petrochemical Technology	3
7.	Process Engineering	3
TOTAL CREDITS (Any Six subjects in above list)		18

VERTICAL-II ENERGY ENGINEERING		
S.No	Name of Course	Credits
1.	Bio Energy	3
2.	Renewable Energy	3
3.	Pinch Technology	3
4.	Hydrogen and Fuel Cell Technology	3
5.	Power Plant Engg	3
6.	Non-renewable sources	3
7.	Sustainability Engineering	3
8.	Energy Management in Chemical Industries	3
TOTAL CREDITS (Any Six subjects in above list)		18

VERTICAL-III INDUSTRIAL BIOTECHNOLOGY		
S.No	Name of Course	Credits
1.	Bio Chemistry	3
2.	Bioprocess Technology	3
3.	Fermentation & Bioprocessing	3
4.	Bio Separation & Downstream processing	3
5.	Enzyme Immobilisation	3
6.	Bio Reactor Design	3
TOTAL CREDITS		18

VERTICAL-IV ENVIRONMENTAL AND SAFETY ENGINEERING		
S.No	Name of Course	Credits
1.	Air Pollution Engineering	3
2.	Waste Water Treatment	3
3.	Solid waste Management	3
4.	Environmental Impact Assessment	3
5.	Process Safety	3
6.	Risk and Hazop Analysis	3
TOTAL CREDITS		18

VERTICAL-V COMPUTATIONAL CHEMICAL ENGINEERING		
S.No	Name of Course	Credits
1.	Computational Techniques	3
2.	Optimization of Chemical Processes	3
3.	Pinch Analysis and Heat Exchange network	3
4.	Chemical Process Flow sheeting'	3
5.	Computational Fluid Dynamics	3
6.	Design and Analysis of experiments	3
TOTAL CREDITS		18

VERTICAL-VI CHEMICAL PLANT DESIGN		
S.No	Name of Course	Credits
1.	Chemical Plant Design	3
2.	Plant Layout	3
3.	Design Safety	3
4.	Material Selection	3
5.	Statutory Requirements & Customer Care	3
6.	Piping and Instrumentation	3
TOTAL CREDITS		18

List of Verticals offered to another Department for the award of B.Tech. Minor

- i). Business Data Analytics
- ii). Environmental and Sustainability
- iii). Public Administration
- iv). Entrepreneurship

VERTICAL-I BUSINESS DATA ANALYTICS		
S.No	Name of Course	Credits
1.	Statistics for Management	3
2.	Data mining for business intelligence	3
3.	Human resource Analytics	3
4.	Marketing and Social media analytics	3
5.	Operation and Supply chain analytics	3
6.	Financial Analytics	3
TOTAL CREDITS		18

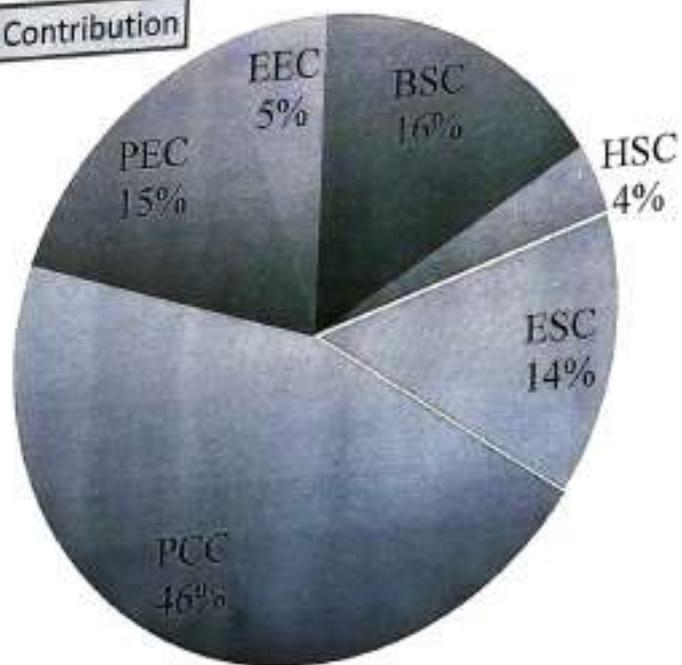
VERTICAL-II Environmental and Sustainability		
S.No	Name of Course	Credits
1.	Sustainable Infrastructure Development	3
2.	Sustainable Agriculture and Environmental Management	3
3.	Sustainable Biomaterials	3
4.	Materials for Energy Sustainability	3
5.	Green Technology	3
6.	Environmental Quality Monitoring	3
7.	Integrated Energy Planning	3
TOTAL CREDITS (Any Six)		18

VERTICAL-III Public Administration		
S.No	Name of Course	Credits
1.	Principles of public admin	3
2.	Constitution of India	3
3.	Public Personnel Admin	3
4.	Administrative theories	3
5.	Indian Administrative system	3
6.	Public Policy Administration	3
TOTAL CREDITS (Any Six)		18

VERTICAL-IV Entrepreneurship		
S.No	Name of Course	Credits
1.	Foundations of Entrepreneurship	3
2.	Team building Management for business	3
3.	Creativity and Innovation in entrepreneurship	3
4.	Principles of marketing management	3
5.	HR Management	3
6.	Psychology for Engineers	3
TOTAL CREDITS (Any Six)		18

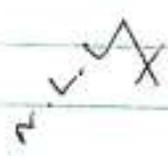
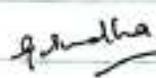
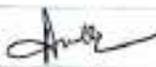
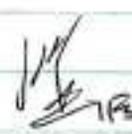
CATEGORY/ SEMESTER	BSC	HSC	ESC	PCC	PEC	OEC	EEC	TOTAL CREDITS
I	10	4	8	--	--	--	--	22
II	10	2	10	--	--	--	--	22
III	4	--	5	13	--	--	--	22
IV	3	--	--	19	--	--	--	22
V	--	--	--	15	6	--	1	22
VI	--	--	--	14	6	--	2	22
VII	--	--	--	14	6	--	--	20
VIII	--	--	--	--	6	--	6	12
TOTAL CREDITS	27	6	23	75	24	--	9	164
Contribution	16.5%	3.7%	14%	45.7%	14.6%	--	5.5%	

Percentage Contribution



The Board of Studies meeting for BTech. IT was held on 1st February 2020 at

MEMBERS PRESENT

1. Dr. N. K. Kasthikyan Chairman 
2. Dr. Dhananjay Kumar University Nominee 
3. Dr. G. Sudha Sadasivam Member 
4. Dr. Annappa Member 
5. Dr. K. Vivekanandan Member Pre-occupied
6. Mr. Chozhan Member .
7. Ms. P. R. Rangaswami Member 
8. Dr. Arun Sundararaman Member
9. Dr. Rangaraja Gopal Member 
10. Dr. R. Prabhakar Special Invitee Pre-occupied.
11. Dr. G. Kousalya Special Invitee

- | | | | |
|-----|------------------------|--------|------------|
| 12. | Dr. M. Rajalakshmi | Member | uj |
| 13. | Dr. M. Sangatha | Member | U. NG |
| 14. | Dr. N. Aritha Devi | Member | N. Ari |
| 15. | Mrs. K. Malavizhi | Member | K. M. |
| 16. | Mrs. S. Poonima | Member | P. S. |
| 17. | Mr. C. Murale | Member | C. M. |
| 18. | Mrs. R. Sandhya | Member | R. Sandhya |
| 19. | Dr. E. Arul | Member | E. Arul |
| 20. | Mrs. N. Geetha | Member | N. Geetha |
| 21. | Mr. N. Selvamuthukumar | Member | N. S. |

The following suggestions were made by the Board of Studies members:

- Dr. N. K. Raathikyan, Head of the Department of Information Technology, Chairman, BOS (Board of Studies) welcomed the Anna University Nominees, Experts from Industry & Academia and the Internal BOS members for the meeting.

Chairman, BOS informed the members that the draft version of the proposed R2019 curriculum has been framed taking into consideration the AICTE recommended Model Curriculum.

To start with, discussions were held with respect to the proposed Subject of Study and syllabus for the III to VIII semesters.

Mr. P. R. Rangarajam from Bushido Infotech suggested that students should learn all the basics pertaining to the Information Technology field.

Dr. Rangaraja Gopal, the industry expert suggested that "Software Project Management" and "Software Testing and Quality Assurance" can be combined as one course.

Dr. Sudha Sadhasivam, from PSG College of Technology, suggested that Number Systems topic in "Cryptography and Network Security" syllabus can be expanded as one unit.

Dr. Sudha Sadhasivam also suggested that slot allotted for Professional Elective / Open Elective can be fixed explicitly as either Professional Elective or Open Elective.

Dr. Dhananjay Kumar suggested that "Convolutional Neural Networks" topic can be included in "Machine Learning" syllabus.

Dr. Dhananjay Kumar suggested that all laboratory courses shall be allotted uniformly with 1.5 credits.

Dr. Sudha Sadhasivam suggested that the topics "Neural Network" and "Reinforcement Learning" can be included in "Machine Learning" syllabus.

Dr. Dhananjay Kumar suggested that the course "Statistical Techniques" can be renamed to "Data Analytics".

Dr. Dhananjay Kumar suggested that "Multimedia Systems" can be included as core course for IT.

Mr. P. R. Rangaswami suggested to include "Graphics" topic in the course "Multimedia Systems".

Dr. Sudha Sadhasivam suggested to revamp the syllabus of "Block Chain Technology".

Dr. Ranganaja Gopal and Mr. P. R. Rangaswami suggested to group the elective into specific domains such as Algorithms, Networking, Database etc.

Dr. Dhananjay Kumar suggested that the courses currently in demand such as "Agile Methodologies" can be included in electives.

Dr. Dhananjay Kumar suggested to add electives such as "Wireless Networks" and "Computer Vision".

Dr. Sudha Subhasivam suggested to increase the number of credits for "Software Engineering" course from 2 to 3.

Dr. Anrappa from NIT, Surathkal suggested that "Cloud" may be combined with Edge Computing and Serverless Computing concepts and offered as an elective.

N.L.V.

The Board of Studies meeting for B.Tech(IT)
was held on 21-07-2023 at IT215.

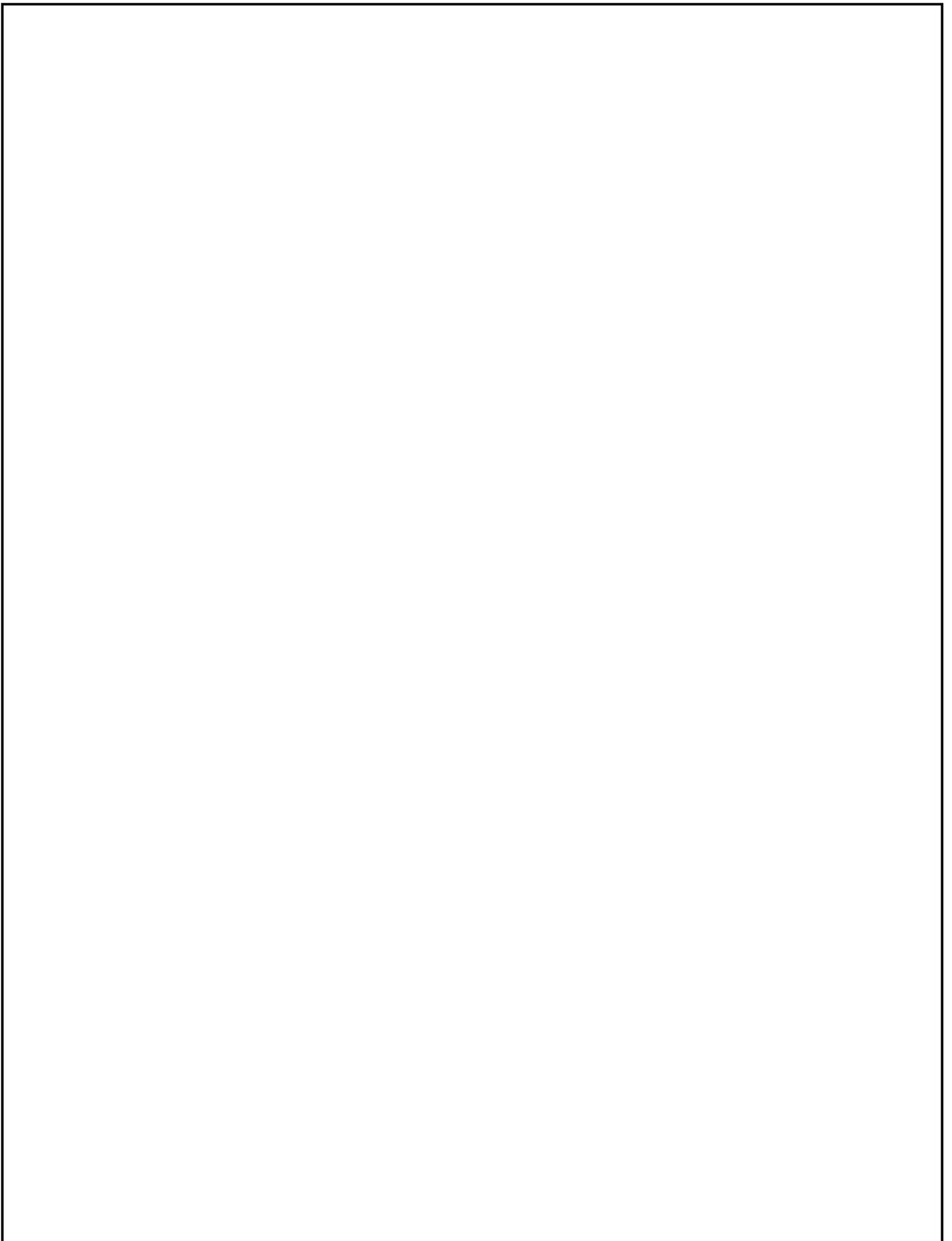
MEMBERS PRESENT

1. DR. N. K. KARTHIKEYAN CHAIRMAN *N.K.K.*
2. DR. M. RAJALAKSHMI MEMBER *M.R.*
3. DR. M. SANGEETHA MEMBER *N.H.C.*
4. DR. N. ANITHADEVI MEMBER *N.A.*
5. DR. K. MALARVIZHI MEMBER *K.M.*
6. DR. N. GEETHA MEMBER *Geetha N.*
7. DR. E. PRUL MEMBER *E. Prul*
8. MRS. POORNIMA MEMBER *P.*
9. MR. C. MURALE MEMBER *C.M.*
10. MRS. S. RAJASREE MEMBER *S.R.*
11. MRS. G. THILAGAVATHI MEMBER *G.T.G.T.P.*
12. MRS. S. DEVI MEMBER *S. Devi*
13. DR. E. P. SUBRAMANIAM MEMBER *E.P.S.*
14. DR. A. B. VENNELA MEMBER *A.B.V.*

52

EXTERNAL MEMBERS

1. Dr. N. ARUL ANAND UNIVERSITY NOMINEE *of the*
2. Dr. B. SURENDRAN MEMBER *of the*
3. Dr. G. R. KARPAGAM MEMBER *of the*
4. Mr. RANGARAJA GOPAL MEMBER ← PREOCCUPIED
5. Mr. SHIVA SHANKAR.D MEMBER *Dellin shiva*



The following suggestions were made by Board of Studies members during the meeting:

Dr. N. K. Karthikeyan, Head of the Department of Information Technology, Chairman, Board of Studies welcomed the Anna University nominees, experts from Industry and Academia, also introduced the internal BOS members of the meeting.

Dr. Arul Anand, from PSG Tech, Coimbatore has suggested to rename the course "Applied Chemistry" as "Chemistry for Information Science".

Dr. E. P. Subramanian has suggested to keep the course name as "Applied Chemistry" instead of Applied Chemistry-I, since it is common for three branches.

Dr. Arul Anand suggested renaming the course as "Electronic Devices" instead of "Introduction to Electronic Devices".

Dr. Nagarani, HoD of Mathematics, CIT has suggested

to rename the course "Linear Algebra, Complex Variables & Transform Techniques" as "Linear Algebra, Complex Variables & Transform".

Dr. Arul Anand has suggested to rename the course "Computer Network Concepts and Applications" to Computer Networks.

Dr. G.P. Karpagam from PSA Tech, Coimbatore has suggested to rename the course "Data Structures and ~~Part II~~" to "Data Structures and Algorithms I & II" respectively. Dr. Anil Anand also has reiterated the same.

Dr. Surendran, from NIT Puducherry asked for the clarification regarding the mandatory course "Soft Skill" flow of syllabus in all the semesters and clarified the same.

Dr. G.P. Karpagam has suggested renaming of the course "Machine Learning Techniques" as "Machine Learning".

Dr. Anil Anand has suggested to change the course name as "Artificial Intelligence" instead of "Foundations of Artificial Intelligence" as the name implies as if it covers the basics of course only.

Dr. N.K. Karthikeyan has emphasized the need for the course "Economics and Management for IT" for the students of Information Technology.

Mr. Shiva Shankar D, Project Leader, D.E. Shaw India Software Private Limited, has approved for the introduction of the courses like "Full Stack Development", "Dev Ops Labrading".

Dr. Surendran has suggested to remove the tutorial hour given for the course "Big Data".

Analyses' as the corresponding lab course respectively is available.

Dr. Surendran has also suggested to keep only the course "Main Project" in VIII semester as it helps the students for internships in the final semester.

Dr. Surendran raised a clarification regarding the name "Communication Lab" in the second semester. Dr. Arthy, Assistant Professor, Dept of Humanities, CIT has suggested to rename the course "Communication Lab" as "English Communication Lab".

Dr. Surendran has also suggested for the provision of fast track courses and Learning NPTEL courses instead of elective courses.

Dr. G. P. Karpagam has suggested to rename the vertical "Cloud Application Development" as "Cloud Computing".

Dr. G. P. Karpagam has suggested to introduce the theory course on "Devops" and "Open Source Systems" concept as the respective laboratory are available in the curriculum.

Dr. Nagaveni has insisted to rename the course

"Graph Theory" as "Applications of Graph Theory"

Dr. Sundarajan has suggested to include the course "Quantum Computing" in the vertical "Computational Science"

Dr. G.R. Karpagam has suggested to add "GPU Computing" as an elective in Computational Science.

Dr. G.R. Karpagam has also suggested to introduce the course "Meta verse" in the vertical "Immersive Technology"

Mr. Shiva Shankar suggested to provide two credits to Hackathon.

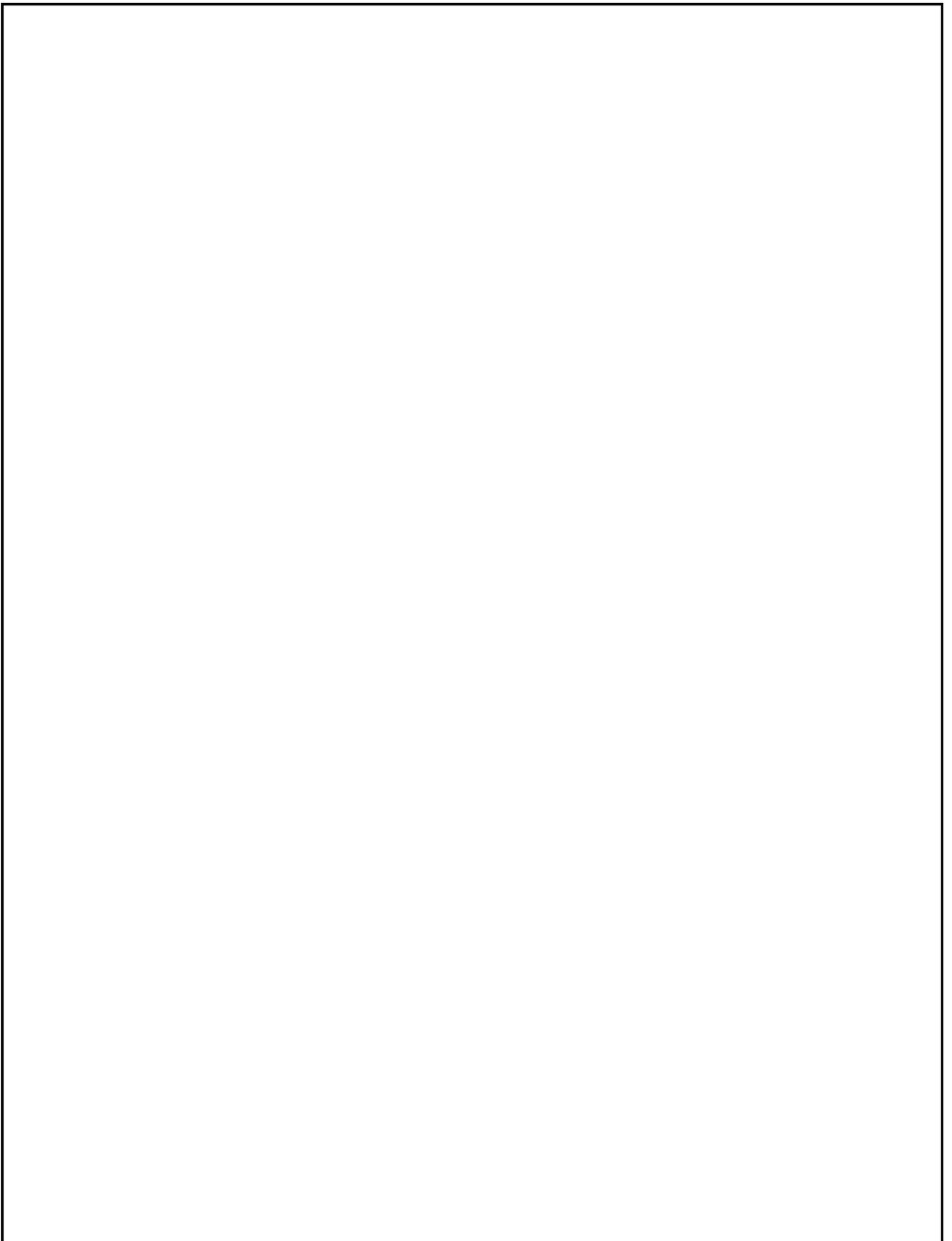
Mr. Shiva Shankar and Dr. Sundarajan must do on doing internship during end of VI semester instead of doing it at end of IV semester.

Dr. Sundarajan suggested to add 2 or 3 more courses to each vertical.

Dr. G.R. Karpagam suggested to add the course "Wireless Networks" in the networking vertical.

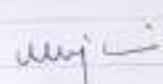
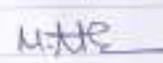
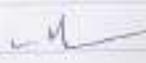
n.k.k.

HEAD OF THE DEPARTMENT
[DR. N. K. KARTHIKEYAN]



The Board of Studies meeting for B.Tech(IT) was held on 24/07/2023 at IT215:

MEMBERS PRESENT:

1. Dr. N. K. KARTHIKEYAN CHAIRMAN
2. Dr. Arul Arand UNIVERSITY NOMINEE 
3. Dr. G. R. KARPAGAM MEMBER 
4. Dr. B. SURENDIRAN MEMBER [Online]
5. Dr. RANGARAJA GOPAL MEMBER 
6. Dr. M. RAJALAKSHMI MEMBER 
7. Dr. M. SANGEETHA MEMBER 
8. Dr. N. ANITHA DEVI MEMBER 
9. Dr. K. MALARVIZHI MEMBER 
10. Dr. N. GEETHA MEMBER 
11. Dr. E. ARUL MEMBER 
12. Mrs. POORNIMA MEMBER 
13. Mr. C. MURALE MEMBER 
14. Dr. S. RAJASREE MEMBER 

15. MRS. G. THILAGAVATHI MEMBER G. T. J. J.
16. MRS. S. DEVI MEMBER S. D.
17. DR. D. SHEELA MEMBER D. S. S.
18. DR. V. ARTHY MEMBER V. S. S.
19. DR. P. THARAPACKIAN MEMBER P. T. S.
20. DR. M. MUKHARJEE MEMBER M. M. S.

online attendance for Dr. Sunandhan from
NIT, PUDUCHERRY

Zoom Meeting

Semester VI

Sl. No.	Attendance	Present	Absent	Excused	Total
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	0	0	0	0	0
16	0	0	0	0	0
17	0	0	0	0	0
18	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
21	0	0	0	0	0
22	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
27	0	0	0	0	0
28	0	0	0	0	0
29	0	0	0	0	0
30	0	0	0	0	0
31	0	0	0	0	0
32	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
44	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
47	0	0	0	0	0
48	0	0	0	0	0
49	0	0	0	0	0
50	0	0	0	0	0
51	0	0	0	0	0
52	0	0	0	0	0
53	0	0	0	0	0
54	0	0	0	0	0
55	0	0	0	0	0
56	0	0	0	0	0
57	0	0	0	0	0
58	0	0	0	0	0
59	0	0	0	0	0
60	0	0	0	0	0
61	0	0	0	0	0
62	0	0	0	0	0
63	0	0	0	0	0
64	0	0	0	0	0
65	0	0	0	0	0
66	0	0	0	0	0
67	0	0	0	0	0
68	0	0	0	0	0
69	0	0	0	0	0
70	0	0	0	0	0
71	0	0	0	0	0
72	0	0	0	0	0
73	0	0	0	0	0
74	0	0	0	0	0
75	0	0	0	0	0
76	0	0	0	0	0
77	0	0	0	0	0
78	0	0	0	0	0
79	0	0	0	0	0
80	0	0	0	0	0
81	0	0	0	0	0
82	0	0	0	0	0
83	0	0	0	0	0
84	0	0	0	0	0
85	0	0	0	0	0
86	0	0	0	0	0
87	0	0	0	0	0
88	0	0	0	0	0
89	0	0	0	0	0
90	0	0	0	0	0
91	0	0	0	0	0
92	0	0	0	0	0
93	0	0	0	0	0
94	0	0	0	0	0
95	0	0	0	0	0
96	0	0	0	0	0
97	0	0	0	0	0
98	0	0	0	0	0
99	0	0	0	0	0
100	0	0	0	0	0

20:00 | ONWAITED...

The following suggestions were made by the Board of Studies members:

- * Dr. N. H. Karthikeyan, Head of the Department of Information Technology, Chairman BOS (Board of Studies) welcomed the Anna University nominee, experts from Industry and Academia, also introduced the internal BOS members of the meeting.
- * Dr. N. K. Karthikeyan presented vision, Mission, PEAS, Pos, PSOs and subjects of study to the BOS members.
- * Dr. G. R. Kanpagam, from Y301 IECT, Coimbatore has suggested to include "Tamil Heritage" as compulsory for lateral entry students too.
- * Dr. G. R. Kanpagam has suggested to include the topic "Microservices" in the course "Internet Technology".
- * Dr. G. R. Kanpagam has suggested to include "Generative models" in the course "Natural language processing".
- * Dr. G. R. Kanpagam has suggested to include Course "Machine Learning" in replacement for "Devops lab" as Devops strategy can be incorporated in the lab course "Full Stack development".
- * Dr. G. R. Kanpagam suggested the inclusion of theory course "Open Source Systems (OSS)".

in the V Semester as the lab for the same is included.

* Dr. N.K. Kasthikyan has replied that students will be advised to take the elective course also in the V Semester.

* Dr. Anul Anand has suggested selecting two Verticals out of four Verticals for B.F. (Honors) Specialization.

* Dr. Anul Anand has also approved that the Syllabus for theory courses can be four units.

* Dr. Surenokman suggested changing the name of the course "Agile Techniques" to "Agile Methodologies".

* Dr. Surenokman suggested having seven subjects for major and minor Verticals.

* Dr. Surenokman has suggested to include the "Software Reliability" topic in the course "Software Process Management".

* Dr. G.R. Kathpagan and Mr. Ranga Raja Gopal insisted on including "GPU Computing" as part of parallel computing.

* Dr. Surenokman, Dr. Anul Anand and Dr. G.R. Kathpagan insisted on including the course "Data Structures" in the minor vertical "Data Science".

* Dr. Azul Anand suggested adding a few subjects such as "Applied Data Science with Python" and "Data visualization" with a practical component for Data Science minor.

n.l.v
H.D/IT