



**Minutes of the 55th Meeting of the Senate of
National Institute of Technology, Tiruchirappalli held on
2nd July 2021 at 11.00 AM through VC Mode (MS Teams)**

The following members were present in the meeting:

1.	Dr. Mini Shaji Thomas, Director	Chairperson
2.	Dr. Ramakalyan Ayyagari, Dean (Academic)	Member
3.	Dr. G. K. Ananthasuresh	External Member
4.	Dr. M. Thamban Nair	External Member
5.	Dr. Haripriya Gundimeda	External Member
6.	Dr. A. Chandra Bose	Member
7.	Dr. A. K. Bakthavatsalam	Member
8.	Dr. AR. Veerappan	Member
9.	Dr. B. Ravisankar	Member
10.	Dr. B. Senthil Arasu	Member
11.	Dr. B. Vasuki	Member
12.	Dr. B. Venkataramani	Member
13.	Dr. C. Mala	Member
14.	Dr. D. Sastikumar	Member
15.	Dr. D. Sriram Kumar	Member
16.	Dr. G. Arthanareeswaran	Member
17.	Dr. G. Lakshminarayanan	Member
18.	Dr. G. Subbaiyan	Member
19.	Dr. G. Swaminathan	Member
20.	Dr. G. Uma	Member
21.	Dr. J. Sarat Chandra Babu	Member
22.	Dr. K. Baskar	Member
23.	Dr. K. Dhanalakshmi	Member
24.	Dr. K. M. Meera S. Begum	Member
25.	Dr. K. Murugesan	Member
26.	Dr. K. Muthukkumaran	Member
27.	Dr. K. Muthukumar	Member
28.	Dr. L. Cindrella	Member
29.	Dr. M. Ashok	Member
30.	Dr. M. Bhaskar	Member
31.	Dr. M. Duraiselvam	Member
32.	Dr. M. Jaya Bharata Reddy	Member
33.	Dr. M. Premalatha	Member
34.	Dr. M. Udayakumar	Member
35.	Dr. M. Umopathy	Member
36.	Dr. Mary Saira Bhanu	Member
37.	Dr. N. Baskaran	Member

38.	Dr. N. Gopalakrishnan	Member
39.	Dr. N. Kumaresan	Member
40.	Dr. N. Ramasubramanian	Member
41.	Dr. N. Sivakumaran	Member
42.	Dr. N. Thamaraiselvan	Member
43.	Dr. P. Asokan	Member
44.	Dr. P.J.A. Alphonse	Member
45.	Dr. P. Jayabalan	Member
46.	Dr. P. Kalaichelvi	Member
47.	Dr. P. Muthuchidambaranathan	Member
48.	Dr. P. Palanisamy	Member
49.	Dr. P. Saikrishnan	Member
50.	Dr. P. Sivashanmugam	Member
51.	Dr. R.B. Anand	Member
52.	Dr. R. Jeyapaul	Member
53.	Dr. R. Joseph Ponniah	Member
54.	Dr. R. Leela Velusamy	Member
55.	Dr. R. Murugesan	Member
56.	Dr. S. Anandan	Member
57.	Dr. S. Jayalekshmi	Member
58.	Dr. S. Kumanan	Member
59.	Dr. S. Kumaran	Member
60.	Dr. S. Moses Santhakumar	Member
61.	Dr. S. Muthukumaran	Member
62.	Dr. S.P. Kumaresh Babu	Member
63.	Dr. S.P. Sivapirakasam	Member
64.	Dr. S.R. Balasundaram	Member
65.	Dr. S. Raman Sankaranarayanan	Member
66.	Dr. S. Shanmugam	Member
67.	Dr. S. T. Ramesh	Member
68.	Dr. S. Velmathi	Member
69.	Dr. S. Venkatachalapathy	Member
70.	Dr. T.K. Radhakrishnan	Member
71.	Dr. T.N. Janakiraman	Member
72.	Dr. V.J. Sivakumar	Member
73.	Dr. V. Kumaran	Member
74.	Dr. V. Ravichandran	Member
75.	Dr. V. Sankaranarayanan	Member
76.	Dr. V. Vinod Balakrishnan	Member
77.	Dr. M. Arivazhagan	Secretary (i/c)
78.	Dr. G. Lakshmana Gomathi Nayagam	Special Invitee
79.	Dr. G. Muruganatham	Special Invitee
80.	Dr. K. Thirumaran	Special Invitee
81.	Dr. Rajeswari Sridhar	Special Invitee

82.	Dr. S. Mekala	Special Invitee
83.	Dr. T. Sivasankar	Special Invitee
84.	Dr. V. Mariappan	Special Invitee
85.	Dr. P. Srinivasa Rao Nayak	Special Invitee
86.	Dr. P. Senthil	Special Invitee
87.	Dr. R. Raghavan	Special Invitee

The following members expressed their inability to attend the meeting:

88.	Dr. K. Sundareswaran	Member
89.	Dr. K. Viswanathan Iyer	Member
90.	Dr. C. Nagamani	Member
91.	Dr. R. Karvembu	Member
92.	Dr. T. Srinivasa Rao	Member

The following member did not attend the meeting:

93.	Dr. J. Hemalatha	Member
94.	Dr. M. Punniyamoorthy	Member
95.	Dr. Michael Arock	Member
96.	Dr. P. Sathiya	Member
97.	Dr. R. Ponalagusamy	Member
98.	Dr. S. Arul Daniel	Member
99.	Dr. S. Nickolas	Member
100.	Dr. S. Sudha	Member
101.	Dr. T. Srinivas	Member
102.	Dr. V. Muthupandi	Member

The Chairperson, Senate welcomed the members to the 55th Meeting of Senate and having ensured a quorum, continued with the proceedings of the Senate. She shared some of the major achievements and developments since the last meeting of the Senate.

She thanked the outgoing external members of the Senate, Dr. K. Ramamurthy (IIT Madras), Dr. Gurumurthy Neelakandan (IIT Kanpur) and Dr. G.C. Anupama (Institute of Astrophysics, Bangalore) who have served for the past three years. She specially welcomed the newly appointed external members of the Senate, Dr. G.K. Ananthasuresh (IISc Bangalore), Dr. Haripriya Gundimeda (IIT Bombay) and Dr. M. Thamban Nair (IIT Madras).

The Chairperson appreciated the relentless contributions of Dr. S. Natarajan, Department of Metallurgical and Materials Engineering, who had retired from services on 30-06-2021. She also appreciated enormous contributions made by Dr. P. Jayabalan, Department of Civil Engineering and Dr. V. Muthupandi, Department of Metallurgical and Materials Engineering who will retire from services on 31-07-2021 and 31-08-2021, respectively.

The Chairperson briefed the developments with respect to MOOC activities as NIT

Tiruchirappalli being appointed as the National MOOC coordinator by MHRD for UG and PG engineering courses in May 2020. The Chairperson was glad to announce that an amount of rupees three crores was sanctioned recently and the studio for the preparation of MOOC courses is under process. Also, the Chairperson was hopeful to upload the MOOC courses in Swayam flat form in few months' time. She was happy to share that the 650 SF Super Computer would be installed and would be functional in three months' time.

She wants to place on record the Senate that the three Centres of Excellence, Advanced Manufacturing & Automation, Energy Harvesting & Storage, and Particulate Emission from Combustion & Industrial Processes, are ready for inauguration in the month of July 2021. These Centre's would cater the needs of the institute and industries, and Chairperson appreciated the effort of the faculties who have initiated the development of these Centre's.

The Chairperson was happy to announce that the MoU between ISRO and NIT Tiruchirappalli has been extended for another two years. She requested all the faculties to encourage all the UG, PG and Ph.D. students to utilize the facilities of the ISRO S-TIC CELL developed under this MoU and solve the real time issues in relation with ISRO scientists.

Based on the approval of the direct Ph.D. and integrated Ph.D. programme in the 54th Senate meeting, there were overwhelming response to the Ph.D. advertisement under this scheme and more than 1000 application have been received till date. As reported earlier 13 PMRF's was awarded out of the 16 allotted, and setup of network of the PMRF's awardees is in the process. Also, workshops and technical events is also to be organized for them. The review process of the post-doctoral fellows (PDF's) have been completed, and due to COVID-19 situation and other related issues the PDF's couldn't complete their task. Hence, the Chairperson informed to the Senate and the HoD's that the institute is planning to extend the tenure of PDF's till May 2022. The recruitment process of temporary faculty has been initiated to compensate the vacancies in various department. The Chairperson congratulated all the departments for actively conducting online faculty development programmes.

The Chairperson informed that RECAL, the Alumni Association of NIT Tiruchirappalli had created a scheme called RECAL CARES to support the COVID-19 affected students, staff, faculties, alumni and immediate neighbourhood of the Institute. RECAL had raised an amount of Rs. Two Crores in a time span of less than a month. Out of this, nearly half of the amount has been allotted to the needs of NIT Tiruchirappalli to tackle COVID-19 related issues. Four oxygen concentrators were already provided to our hospital and

building up of mobile oxygen generators by our institute is under process through this fund. The financial assistance to students who have lost their parents and orphanages nearby institute, and groceries to support staffs are other activities performed under this RECAL CARES scheme. In addition to these activities, RECAL have plan of conducting health upon competition among faculties and staffs, and research prototype grant both put together for Rs.40 Lakhs. The school going and college going children of the deceased staffs are also to be supported by this scheme.

Following the welcome address, the Registrar (i/c) opened the deliberations on the agenda items.

1. Confirmation of the Minutes of 54th Meeting of the Senate held on 21st May 2021

The Senate resolved to confirm the minutes of the 54th Meeting of the Senate.

RESOLUTION **RESOLVED THAT the Minutes of 54th Meeting of 55/SENATE/2021/1 Senate held on 21st May 2021 be confirmed.**

2. Action Taken Report on the decisions of the 54th Meeting of the Senate

The Action Taken Report of the previous meetings of the Senate were discussed.

54/SENATE/2021/2: The academic audit report for the two courses:

1. CEPC15 Concrete Technology/ II Year B.Tech. Civil Engineering, and
2. MEIR11 Basics of Mechanical Engineering/I Year B.Tech. ICE

The Dean (Academic) presented the audit report for the course MEIR11. Based on the question papers and answer sheets of the course, the expert had pointed that the standard of the question was “medium” with few minor grammatical errors which could be improved and was fully satisfied with the answer sheet evaluation.

The audit report for the courses CEPC15 could not be presented as the expert requested for additional materials for the completion of the report. The audit report for this course will be presented during the next meeting.

RESOLUTION **RESOLVED THAT the action taken by the O/o Dean 55/SENATE/2021/2 (Academic) be noted with the above-mentioned observation.**

APPROVAL ITEMS

3. Results of UG and PG courses (except II Semester B.Tech./B.Arch. and II Semester MCA) for the January session 2020-21

The Senate approved the results of UG and PG courses (except II Semester B.Tech./B.Arch. and II Semester MCA) for the January session 2020-21 as approved by the respective Performance Analysis Committees (PACs).

RESOLUTION 55/SENATE/2021/3 RESOLVED THAT the results of UG and PG courses (except II Semester B.Tech./B.Arch. and II Semester MCA) for the January session 2020-21 as approved by the respective PACs be approved.

FURTHER, RESOLVED THAT the two laboratories in the II Semester M.Tech. (Industrial Engineering & Management) and one laboratory in the II Semester M.Tech. (Manufacturing Technology) be moved to the next semester as requested by the HOD/Production.

4. Award of UG / PG / M.S. (by Research)/ Ph.D. degrees and Award of medals in the 17th Convocation, 2021

The 17th Convocation of NIT, Tiruchirappalli is scheduled to be held during September 2021. As on 1st July 2021, a total (tentative) of 848 UG, 727 PG, 9 M. S. (by Research) and 101 Ph.D. graduands shall receive the degree during the convocation. Out of these, 56 students shall receive B.Tech. (Honors) degree and 608 students shall receive B. Tech. degree with Minor. Due to the pandemic some UG students will be writing their final exams shortly and the list of medal winners will be available after the completion of these exams.

The Senate approved the award of degrees to the eligible graduands. The Senate authorized the Chairperson, Senate to approve the award of degrees and medals for the students who will complete the degree requirements up to 10 days prior to the forthcoming Convocation.

RESOLUTION 55/SENATE/2021/4 RESOLVED THAT the award of UG / PG / M. S. (by Research) and Ph.D. degrees in the 17th Convocation be approved. The Senate authorized the Chairperson, Senate to approve the award of degrees and medals for the students who will complete the degree requirements up to 10 days prior to the forthcoming Convocation.

5. Modified curriculum and syllabi for B.Tech. (ECE), M.Tech. (VLSI System) and M.Tech. (Communication Systems) programmes

The HOD/ECE presented the modified curriculum and syllabus as recommended by the Boards of Studies (BoS) for the UG and PG programmes as in Annexure - I. As per the new curricula for the UG programmes which come into force for the batches admitted from 2019-20, the credits of Honors courses has been modified along with addition/shifting of courses as elective and Honors course list. For the PG programmes, two new courses with code EC635 and EC628 were introduced in M. Tech. (VLSI System) and one new course with code EC654 was introduced in M. Tech. (Communication Systems).

The Senate accepted the recommendations of the Board of Studies (BoS) for B. Tech. (ECE), M. Tech. (VLSI System) and M. Tech. (Communication Systems).

RESOLUTION **RESOLVED THAT the modified curriculum and syllabus**
55/SENATE/2021/5 **as recommended by respective Boards of Studies for**
B.Tech. (ECE), M.Tech. (VLSI System) and M.Tech.
(Communication Systems) programmes be approved.

6. Requests from students

a. Extension of B.Tech. registration beyond the prescribed period of completion

The Dean (Academic) briefed the request from the B.Tech. student – S Harish Vignesh Kumar, Roll No. 107115033, B.Tech. (EEE) – requesting extension of his registration for one year beyond the prescribed period of completion. The student had cited health issues for his inability to complete the course. The Senate after reviewing the number of courses to be completed, accepted to extend his registration for another one year (until 30th June 2022).

RESOLUTION **RESOLVED THAT the B. Tech. registration extension**
55/SENATE/2021/6 **of S Harish Vignesh Kumar (Roll No. 107115033) for**
one year (until 30th June 2022) be approved.

RATIFICATION ITEMS

7. **Award of provisional degree to M.S. (by Research) and Ph.D. scholars who have successfully completed the requirements for the award of the degree**

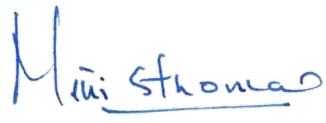
The Senate ratified the award of provisional degree to 11 Ph.D. scholars (Annexure - II).

RESOLUTION **RESOLVED THAT** the award of provisional degree to
55/SENATE/2021/7 **M.S. (by Research) and Ph.D. scholars be ratified.**

8. **Any other item with permission of the Chairperson, Senate**

The Meeting concluded with thanks to the Chair.


Secretary, Senate


Chairperson, Senate

Annexure – I



NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI – 620 015

Recommendations of the Board of Studies (BoS)

Department : ECE
Degree : B.Tech.
Name of the Programme : B.Tech. - ECE
Batch : 2019 onwards
Date of BoS : 15-05-2021 through online by circulation

Sl. No.	Existing Curriculum/Syllabus	Proposed changes in the Curriculum/Syllabus	Remarks, if any
1.	ECHO13 Wavelet Signal Processing (3 credit)	Syllabus is updated and made to 4 credits	
2.	ECHO22 Design of ASICs (3 credit)	Syllabus is updated and made to 4 credits	
3.	ECHO24 Optimizations of Digital Signal Processing Structures for VLSI (3 credit)	Syllabus is updated and made to 4 credits	
4.	ECHO30 Digital Signal Processing for Medical Imaging (3 credit)	Syllabus is updated and made to 4 credits	
5.	ECPE25 Advanced Digital Signal Processing is listed as Elective. (3 credit)	Updated, Removed from Elective list, moved to Honours list with code ECHO34 and made to 4 credits	
6.	ECHO21 Electronic Design Automation Tools is listed as honours course.	Moved to Elective list and given code ECPE41.	
7.	Not Existing	Electromagnetic interference and compatibility is included as elective with code ECPE42.	

Signature of the HoD with Seal

**PROFESSOR AND HEAD
DEPARTMENT OF ELECTRONICS
AND COMMUNICATION ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI - 620 015.**

Date: 18-05-2021



**NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI – 620 015**

Recommendations of the Board of Studies (BoS)

Department : ECE
Degree : M.Tech.
Name of the Programme : VLSI System
Batch : 2021 onwards
Date of BoS : 15-05-2021 through online by circulation

Sl. No.	Existing Curriculum/Syllabus	Proposed changes in the Curriculum/Syllabus	Remarks, if any
1.	Not Existing	EC628 Pattern recognition and computational intelligence is included as Elective.	
2.	Not Existing	EC 635 Electromagnetic interference and compatibility is included as Elective.	

Department : ECE
Degree : M.Tech.
Name of the Programme : Communication Systems
Batch : 2021 onwards
Date of BoS : 15-05-2021 through online by circulation

Sl. No.	Existing Curriculum/Syllabus	Proposed changes in the Curriculum/Syllabus	Remarks, if any
1.	Not Existing	EC654 Electronic Design Automation Tools is included as Elective	

Signature of the HoD with Seal

**PROFESSOR AND HEAD
DEPARTMENT OF ELECTRONICS
AND COMMUNICATION ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI - 620 015.**

Date: 18-05-2021

Annexure - II

Details of Ph.D. Scholars to be awarded Provisional Certificate

Sl.No.	Roll No & Name	Title of the Thesis	Name of the Guide	Co-Guide	Date of Admission	Date of Viva-voce	Indian Examiner	Foreign Examiner
1.	407117007 Satheesh Krishnan G	Development, Implementation and Analysis of Modified Swarm Intelligence Techniques towards Maximum Power Point Tracking in Photovoltaic Systems	Dr. K. Sundareswaran / EEE	--	17.07.2017	17.05.2021	Dr Arun Karuppaswamy B, Assistant Professor, IIT Madras	Dr Ahmed Zobaa, Reader in Electrical and power Engineering Brunel University, London, UK
2.	411913003 M. Kirubakaran	Development and Investigation on Renewable Nano Catalyst for Biodiesel Optimization from Waste Chicken Fat and its Performance Characteristics in a CI Engine	Dr. V. Arul Mozhi Selvan / Mech.	--	30.08.2013	19.05.2021	Dr. V. Prabu, Associate Professor, Indian Institute of Technology Guwahati	Dr. Hwai Chyuan Ong, Senior Lecturer, University of Technology Sydney, Australia
3.	411116004 A. Santhoshkumar	Energy-efficient fuel extraction from hazardous waste engine oil and its application in diesel engine using advanced injection strategy	Dr. R.Anand / Mech.	--	04.08.2016	19.05.2021	Dr. S K Tyagi, Associate Professor, IIT Delhi	Dr. Francisco Javier Rodriguez Varela, Professor, Carr. Saltillo-Monterrey km. 13, Ramos Arizpe, Coahuila
4.	405115008 N. Karthika	Multi-Variate Data Indexing For Retrieval, Clustering and Classification	Dr. B. Janet/CA	--	27.08.2015	01.06.2021	Dr. Subramanian N Senior Director (R D) at C-DAC Pune Maharashtra, India.	Dr.Xiaolei Wang Aalto University AALTO Finland Rauduntie 7 M 02130 Espoo, Finland
5.	416115001 M. Jagadeeswari	Approximation of Fuzzy Numbers and its generalizations towards Multi Criteria Decision Making Problems	Dr. V. Lakshmana Gomathi Nayagam / Maths	--	06.08.2015	04.06.2021	Dr Debjani Chakraborty, Professor, Indian Institute of Technology Kharagpur	Dr. Florentin Smarandache, Professor, Mathematics and Science Division, University of New Mexico, United States
6.	412116003 Amruthaluru Sai Kiran	Surface Modification of Interstitial Free Steels by Plasma Electrolytic Oxidation	Dr. N. Ramesh Babu / MME	Dr. L. Rama Krishna	04.08.2016	09.06.2021	Dr. Haridoss Prathap, Professor, IIT Madras	Dr. Krishnan Raja, Associate Professor, University of Idaho, USA

7.	414115003 Sivaprasad P V	A Comparative Study for Micro-Drilling In Hastelloy-X by using Laser And Laser Combined EDM And ECM	Dr. A. Noorul Haq / Production	Dr. K. Pannerselvam/ Production	06.08.2015	09.06.2021	Dr I. A. Palani, Associate Professor, Indian Institute of Technology-Indore	Dr. Weidong Li, Professor, Faculty of Engineering, Coventry University, CV1 5FB, UK
8.	407115007 Appikonda M Durga Kumar	Modelling And Control Of DC - DC Converter With Voltage Multiplier Cells For Photovoltaic System Application	Dr. Dhanalakshmi K / ICE	--	08.08.2015	15.06.2021	Dr. B Venkatesa Perumal, Professor, National Institute of Technology Karnataka, Surathkal	Dr. P. Sanjeevikumar, Assistant Professor, Department of Energy Technology, Aalborg University – Esbjerg Campus, Denmark.
9.	403115005 Sivaraman. S	Axial and Lateral Load Capacity Analysis of Piles Considering Consolidation Effect of Soft Clay [Dr. K. Muthukkumaran / Civil	--	06.08.2015	15.06.2021	Dr. Chandresh H. Solanki, Professor, SVNIT Surat	Dr. Alessandro Flora, Professor, University of Naples Federico II , Naples, Italy
10.	409116002 Geetha R	An Experimental Study on Effectuating Language Learning Strategies to Promote the Writing Skills of Polytechnic Students	Dr. S. Mekala / HSS	--	04.08.2016	17.06.2021	Dr. Binod Mishra, Professor, IIT Roorkee, Uttarakhand	Dr. Soe Marlar Lwin, Associate Professor, Singapore University of Social Sciences, singapore.
11.	405115006 K V Sriharsha	Depth sensing mechanism using optical imaging with inherent machine learning and deep learning techniques	Dr. P.J.A.Alphonse / CA	--	13.08.2015	18.06.2021	Dr Amritanshu Pandey, Associate professor, IIT BHU, Varanasi	Dr. Vasile Palade, Professor, Coventry University, UK