

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL
P.O. SRINIVASNAGAR, MANGALURU-575025



MINUTES
OF THE
60th Meeting of the SENATE

Date : 29.07.2022 (Friday)

Time : 04:00PM onwards

Venue : Senate Hall
'C' Block - LHC
N.I.T.K., Surathkal
MANGALURU
PIN - 575 025



राष्ट्रीय प्रौद्योगिकी संस्थान कर्नाटक, सुरत्कल

(राष्ट्रीय महत्त्व का संस्थान, भारत सरकार के एनआईटीएसईआर अधिनियम के तहत स्थापित)

मंगलूरु - 575 025, कर्नाटक राज्य, भारत

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

(An Institute of National Importance, Established under NITSER Act, Govt. of India)

Mangaluru - 575 025, KARNATAKA, INDIA.

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Proceedings of the 60th Meeting of the Senate of National Institute of Technology Karnataka, Surathkal held on July 29, 2022 (Friday) at 4.00 PM in the Senate Hall of 'C' Block, LHC, NITK, Surathkal

MEMBERS PRESENT:

Dr. Udaykumar R. Yaragatti	.....	Chairman
Prof. K.V. Jayakumar	.....	External Member
Prof. N. C. Shivaprakash	.....	External Member (Attended online through Google Meet)
Dr. (Ms.) Vidya Shetty K.	.....	Member
Dr. G.C. Mohan Kumar	.....	Member
Dr. S.M. Kulkarni	.....	Member
Dr. Vijay H. Desai	.....	Member
Dr. Narendranath S.	.....	Member
Dr. B M Dodamani	.....	Member
Dr. Dwarakish G S	.....	Member
Dr. P E Jagadeesh Babu (HoD)	.....	Member
Dr. M.B. Saidutta	.....	Member
Dr. Raj Mohan B	.....	Member
Dr. Uday Kumar Dalimba (HoD)	.....	Member
Dr. A. Chitharanjan Hegde	.....	Member
Dr. A. Nityananda Shetty	.....	Member
Dr. Arun Mohan Isloor	.....	Member
Dr. (Mrs.) B R Jayalekshmi	.....	Member
Dr. M. C. Narasimhan	.....	Member
Dr. A.U. Ravi Shankar	.....	Member
Dr. K. Swaminathan	.....	Member
Dr. Varchese George	.....	Member
Dr. Shashidhar G Koolagudi (HoD)	.....	Member
Dr. Annappa	.....	Member

Dr. Ashvini Chaturvedi	.....	Member
Dr. U. Shripathi Acharya	.....	Member
Dr. (Mrs.) Sumam David S.	.....	Member
Dr. M.S. Bhat	.....	Member
Dr. Dattatraya Narayan Gaonkar (HOD)	.....	Member
Dr. K Panduranga Vittal	.....	Member
Dr. Shubhanga K N	.....	Member
Dr. Jaidhar C D (HoD)	.....	Member
Dr. Ananthanarayana V.S.	.....	Member
Dr. G. Ram Mohana Reddy	.....	Member
Dr. R Madhusudhan (HoD)	.....	Member
Dr. A. Kandasamy	.....	Member
Dr. Suresh M Hegde	.....	Member
Dr. B. R. Shankar	.....	Member
Dr. Ravikiran Kadoli (HOD)	.....	Member
Dr. Gangadharan K.V.	.....	Member
Dr. H. Suresh Hebbar	.....	Member
Dr. S. M. Murigendrappa	.....	Member
Dr. Ravishankar K.S. (HOD)	.....	Member
Dr. K. Narayan Prabhu	.....	Member
Dr. Jagannath Nayak	.....	Member
Dr. Anandhan Srinivasan	.....	Member
Dr. Ch. S. N. Murthy	.....	Member
Dr. Harsha Vardhan	.....	Member
Dr. N. K. Udayashankar	.....	Member
Dr. (Mrs.) H. D. Shashikala	.....	Member
Dr. M. N. Satyanarayan	.....	Member
Dr. Rajesh Acharya H (HoD)	.....	Member
Dr. K. B. Kiran	.....	Member
Dr. Shashikantha Koudur	.....	Member
Dr. Mallikarjuna Angadi, Librarian	.....	Member
Shri K. Ravindranath, Registrar	.....	Secretary

MEMBERS ABSENT:

Prof. (Ms.) Anjula Gurtoo	.....	External Member
Dr. K.S. Babu Narayan	.....	Member
Dr. Lakshman Nandagiri	.....	Member
Dr. Kiran G. Shirlal	.....	Member
Dr. Amai Mahesha	.....	Member
Dr. (Mrs.) Amba Shetty	.....	Member
Dr. B. Ramachandra Bhat	.....	Member
Dr. D. Krishna Bhat	.....	Member
Dr. Katta Venkataramana	.....	Member
Dr. S. Shrihari	.....	Member
Dr. Sitaram Nayak	.....	Member
Dr. Subhash C.Yaragal	.....	Member
Dr. K. Chandrasekaran	.....	Member
Dr. P. Santhi Thilak	.....	Member
Dr. T. Laxminidhi	.....	Member
Dr. Muralidhar Kulkarni	.....	Member
Dr. John D'Souza	.....	Member
Dr. Neelavar Shekar Vittal Shet	.....	Member
Dr. Gururaj S. Puneekar	.....	Member

PREAMBLE:

At the outset of the meeting, Chairman welcomed all the members to the 60th Meeting of the Senate.

After a brief discussion, with the permission of the Chair, the Secretary Senate, began the deliberations on the Agenda Items.

Item No. 60.1.1: Confirmation of the 59th meeting of the Senate held on Monday, February 28, 2022 at N.I.T.K., Surathkal – Reg.

Resolution: The Senate resolved to confirm the minutes of the 59th Meeting of the Senate.



Item No. 60.2: To consider the report on action taken on the minutes of 59th meeting of the Senate held on Monday, February 28, 2022 at N.I.T.K., Surathkal – Reg.

Resolution: The action taken on the minutes of the 59th Senate meeting were noted.

Item No. 60.3: To consider the items placed before the present (60th) meeting of the Senate held on Friday, July 29, 2022 at 04:00 PM - Reg.

Item No. 60.3.1: To consider the Agenda items discussed in the 37th Meeting of the Board of Studies (BoS) held on July 20, 2022 – Reg.

37-BOS-1: Amendment to Regulations specific to B.Tech Degree pertaining to Minor program.

Existing	Proposed Modifications	Resolution of the Senate
<p>For Minor programmes</p> <p>A student in a particular discipline can take additional specified courses totalling 15 to 20 credits in Minor discipline.</p> <p>If he/she gets a GPA of 7.0 in these courses, then it will find a mention in their grade cards and degree certificate</p>	<p>The BOS resolved to recommend the following amendment to Regulations for Minor programs</p> <p>A student in a particular discipline can earn additional credits totalling 15 to 20 by registering courses specified for any minor discipline. If the student earns the specified total number of credits required for the minor discipline, then it will find a mention in the student's grade cards and degree certificate.</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

37-BOS-2: Changing the nomenclature from 'Minor' to 'Focus Area' for the set of additional courses totaling to 15 to 20 credits offered within the parent discipline.

Resolution of the BoS	Resolution of the Senate
<p>The Academic Regulations – 2021 incorporated a provision of "Minor" wherein the students can register for a set of additional courses totaling 15 to 20 credits offered within the parent discipline which was termed as "Minor in Niche Areas in their parent discipline".</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

<p>The BOS resolved to recommend the following proposals</p> <ul style="list-style-type: none"> ● To change this nomenclature from 'Minor' to 'Focus Area' in line with the globally accepted nomenclature and submitted for approval for implementation from Academic Year 2021-22 onwards. ● If the student completes 15-20 credits of the specified Focus area courses, it will find a mention in the final year grade card, but not in the Degree Certificate. ● All the other regulations applicable for 'Minor' will remain applicable for the 'Focus Area'. 	
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37-BOS-3: Approval of inclusion of Forms for various academic processes in the curriculum book for undergraduate programs.

Resolution of the BoS	Resolution of the Senate
<p>BOS resolved to recommend the proposal of inclusion of the following academic process forms in the curriculum book</p> <ul style="list-style-type: none"> (a) MOOC Course Registration Form (b) Backlog Course Registration Form (c) Course Withdrawal Form (d) Discontinuation of Minor Form (e) Discontinuation of Honors Form (f) In-Lieu Elective Registration Form (g) Summer Session Course Registration Form <p>The forms are attached as Annexure - I, Page No. 1-7</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

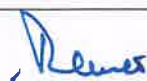
37-BOS-4: Proposal of Department of Chemical Engineering – Introduction of elective course for M.Tech program

Resolution of the BoS	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of Department of Chemical Engineering for the inclusion of the following new elective course for M.Tech programme in Chemical Engineering.</p> <p>CH816 : Introduction to Quantum Technology Credits : (3-0-0) 3 The course content and other details are attached as Annexure - II, Page No. 1-3</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

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37-BOS-5: Proposals of Dept. of Civil Engineering

(a) Introduction of Programme Specific Elective (PSE) for B.Tech. Civil Engineering	
Resolution of the BoS	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of Department of Civil Engineering for the introduction of the following Programme Specific Electives (PSE) for the B.Tech program.</p> <ol style="list-style-type: none"> CV374 Transportation Systems Planning (3-0-0) 3 Pre-requisites: Highway and Traffic Engineering (CV254) CV375 Applied Rock Engineering (3-0-0)3 Pre-requisites: CV386 – Rock Mechanics <p>The course content and other details are attached as Annexure-III Page No.1-3</p>	<p>The Senate resolved to approve the BoS recommendation.</p>
(b) Revisions of Existing PG programme Specific Elective (PSE) Courses	
Resolution of the BoS	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of the Department of Civil Engineering for the revision of two existing PG Programme Specific Elective (PSE) courses.</p> <ol style="list-style-type: none"> M.Tech. Geotechnical Engineering <p>The following change in the title from the existing title “Rock Mechanics” along with some modifications in the content is recommended. CV821 - Rock Mechanics and Rock Engineering (3-0-0) 3 M.Tech. Structural Engineering <p>It is recommended to modify the content of the following course: CV810 Advanced Bridge Engineering</p> <p>The course content and other details are attached as Annexure - III, Page No. 4</p> </p>	<p>The Senate resolved to approve the BoS recommendation.</p>
(c) Introduction of PG Programme Specific Elective (PSE) course for M.Tech programmes	
Resolution of the BoS	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of Department of Civil Engineering to introduce the following new PSE course for</p> <p>M.Tech. Structural Engineering</p> <p>CV820 Steel-Concrete Composite Design (3-0-0) 3</p> <p>The course content and other details are attached as Annexure - III, Page No. 5</p>	<p>The Senate resolved to approve the BoS recommendation.</p> <p>Further, the Senate resolved that the Department may include New e-books for CV820.</p>



(d) Suggestion for inclusion of MLC in Research Methodology and Academic Writing for all PG Courses.	
The BOS resolved to not recommend the proposal of Department of Civil Engineering for the inclusion of a MLC for all PG courses in Research Methodology and Academic Writing with Mode of offer through MOOCs with 2 or 3 credits	The Senate noted the BoS resolution.
The details and course content are attached as Annexure-III, Page No.5-6	

37-BOS-6: Proposals of Dept. of Computer Science and Engineering

(a) Opening of M.Tech (Research) for Project Staffs (Internal Registrants) in January Session.	
Resolution of the BoS	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of the Department of Computer Science and Engineering for opening of M.Tech (Research) admissions for Project Staffs (Internal Registrants) in January Session, having a maximum of two years' duration of their ongoing sponsored projects remaining.</p> <p>The BOS also recommended to open M.Tech (Research) admissions for all the categories of student status including filling up of the vacant seats under "full time student on GATE scholarship" in the Institute in January Session.</p> <p>The details are attached as Annexure - IV, Page No. 1-3</p>	<p>The Senate resolved to approve the BoS recommendation.</p>
(b) Replacing CS415 by CS367 in the "Minor in Cyber-Physical Systems" under new UG Curriculum 2021.	
<p>The BOS resolved to recommend the proposal of Department of Computer Science and Engineering to replace CS415 by CS367 under the Minor in "Cyber-Physical Systems" under new UG Curriculum - 2021.</p> <p>Existing: CS415 – Computational Cyber-Physical Systems</p> <p>Proposed: CS367–Foundations of Cyber-Physical Systems</p> <p>The details are attached as an Annexure - IV, Page No. 3</p>	<p>The Senate resolved to approve the BoS recommendation.</p> <p>Further, in accordance with the Senate resolution for Item No. 37-BOS-2., the change of Nomenclature of Minor in "Cyber-Physical Systems" to Focus area in "Cyber Physical Systems" was noted.</p>

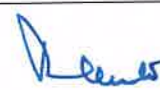
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(c) Starting the new M.Tech programme – M.Tech in Computer Science and Engg. (Online)		
Proposal	BOS Resolution	Resolution of the Senate
<p>The DFC of the Department of Computer Science and Engineering has proposed to start a new M.Tech programme in Computer Science and Engineering through online mode in addition to the existing PG programmes, primarily targeting the working professionals from Industry, Research Centers and Academic Institutes. It is proposed to be equivalent in all academic aspects and academic rigour to the regular M.Tech course.</p> <p>The salient features and other details are attached as Annexure - IV Page No, 3-6</p>	<p>There is an existing framework approved by BOG for the conduct of Industry supported customized PG programmes.</p> <p>However, there is no framework for conducting online PG programmes open to any interested eligible candidates.</p> <p>It is recommended that the proposal may be taken up after such a framework and guidelines is formulated and approved.</p>	<p>The Senate noted the BOS resolution.</p> <p>Further, the Senate resolved that the Committee constituted to frame common guidelines for the conduction of customized PG prorgammes in the Institute with Industry support may be entrusted to make the framework and guidelines for conduction of online PG programs open to working professionals or any interested eligible candidates and authorized the Chairman, Senate to approve the same.</p>
(d) Allowing M.Tech (Research) students to opt their courses from other department as well.		
Proposal	BOS Resolution	Resolution of the Senate
<p>Presently M.Tech (Res) students are permitted to opt the subjects' only from the parent discipline. The DFC of the Department of Computer Science and Engineering has proposed to allow M.Tech (Research) students to take their courses from the other department as it may be necessary for their research/ project work.</p>	<p>The BOS resolved not to recommend the proposal of allowing the M.Tech (Research) students to take their courses from the other department or discipline. The BOS recommended to retain the existing regulations.</p>	<p>Senate noted the BOS resolution</p>
(e) Change in the Nomenclature of the programme in which B.Tech Computer Science and Engineering students earn additional 20 credits in niche area courses offered by Computer Science and Engineering Department.		
Proposal	BOS Resolution	Resolution of the Senate
<p>The Department of Computer Science and Engineering has proposed to change the Nomenclature of the programme in which B.Tech Computer Science and Engineering students earn additional 20 credits in niche area courses offered by their Department from "Minor" to "Focus area". The details are attached as Annexure -IV, Page No.6-7.</p>	<p>As the matter was already discussed under ITEM No. 37-BOS-2, the BOS resolved that the recommendations of BOS under ITEM No. 37-BOS-2 will remain applicable.</p>	<p>Senate noted the BOS resolution</p>

ITEM No: 37-BOS-7

Proposals of Department of Electrical and Electronics Engineering

(a) Starting of Industry (ROBERT BOSCH) sponsored New M.Tech program in Power Electronics and Control for Electric Vehicle	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of Department of Electrical and Electronics Engineering to start ROBERT BOSCH Industry sponsored new M.Tech program in Power Electronics and Control for Electric Vehicle under the BOG approved "Framework for conduction of Customized PG programs in NITK Surathkal with Industry Support" and recommended the proposed Programme structure, Degree requirements, suggested plan of study and course content along with the modalities for the conduct of the programme.</p> <p>The details are attached as Annexure - V, Page No. 1-12</p>	<p>The Senate resolved to approve the BoS recommendation.</p>
(b) Change of the credits for all the PG Elective (Ele) Theory Courses for the M. Tech in (Power and Energy Systems) to (4-0-0) 4	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved not to recommend the proposal of the DPGC of Department of Electrical and Electronics Engineering to change the credits for all the PG Elective Theory Courses except in the case of EE871 and the elective laboratory courses for the M.Tech in Power and Energy Systems to (4-0-0) 4.</p> <p>The modified course structure details as proposed by the Department are attached as Annexure-V, Page No. 16.</p>	<p>The Senate noted the BoS resolution</p>
(c) Modification in the L-T-P structure of the elective course EE 871 from (3-1-2) 5 to (4-0-3) 6 credits	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved not to recommend the proposal of DPGC of the Department of Electrical and Electronics Engineering in the L-T-P structure of the elective course EE871 from (3-1-2) 5 to (4-0-3) 6.</p>	<p>The Senate noted the BOS resolution and resolved to approve the BoS recommendation.</p>



The **BOS further resolved to recommend** the change in the L-T-P structure of the elective course EE871 from (3-1-2) 5 to (3-0-2) 4 Credits.
The modified course structure details as proposed by the Department are attached as **Annexure-V, Page No. 16.**

(d) Addition of three elective courses into the PG Curriculum

BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of the DPGC of the Department of Electrical and Electronics Engineering to add the following three elective courses in the PG curriculum (M.Tech in Power and Energy Systems).</p> <p>EE875 Fundamentals of Electric Vehicles (EVs) (4-0-0) 4</p> <p>EE876 Digital Controllers and Applications in Power Electronics (4-0-0) 4</p> <p>EE877 Applications of Machine Learning Techniques to Power Systems (3-0-2) 4</p> <p>The course content and other details are attached as Annexure- V, Page No. 13-15</p>	<p>The Senate resolved to approve the BoS recommendations.</p>

(e) The modification in the LTP Structure for Program core courses of B.Tech in Electrical and Electronics Engineering considering the lab components and title changes after reviewing the course contents.

BOS Resolution	Resolution of the Senate																								
<p>The BOS resolved to recommend the proposal of the DUGC of Department of Electrical and Electronics Engineering to modify the LTP Structure considering lab components and title changes after reviewing the course contents for the following core courses as below:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sl No</th> <th>Course code</th> <th>Subject</th> <th>Modified Title</th> <th>Previous credit</th> <th>Modified credit</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">EE308</td> <td>Power Electronics</td> <td style="text-align: center;">-</td> <td style="text-align: center;">(3-1-0)4</td> <td style="text-align: center;">(3-1-3)6</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">EE326</td> <td>Linear Control Theory</td> <td style="text-align: center;">Linear Control Systems</td> <td style="text-align: center;">(3-1-0)4</td> <td style="text-align: center;">(3-1-3)6</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">EE350</td> <td>Power System Analysis</td> <td style="text-align: center;">-</td> <td style="text-align: center;">(3-1-0)4</td> <td style="text-align: center;">(3-1-3)6</td> </tr> </tbody> </table> <p>The course structure after incorporation of recommended changes is attached as Annexure - V, Page No. 17, 20-23</p>	Sl No	Course code	Subject	Modified Title	Previous credit	Modified credit	1	EE308	Power Electronics	-	(3-1-0)4	(3-1-3)6	2	EE326	Linear Control Theory	Linear Control Systems	(3-1-0)4	(3-1-3)6	2	EE350	Power System Analysis	-	(3-1-0)4	(3-1-3)6	<p>The Senate resolved to approve the BoS recommendation.</p>
Sl No	Course code	Subject	Modified Title	Previous credit	Modified credit																				
1	EE308	Power Electronics	-	(3-1-0)4	(3-1-3)6																				
2	EE326	Linear Control Theory	Linear Control Systems	(3-1-0)4	(3-1-3)6																				
2	EE350	Power System Analysis	-	(3-1-0)4	(3-1-3)6																				



(f) Removal of Elective courses from the curriculum of B.Tech in Electrical and Electronics Engineering due to out of scope/ not relevant /not offered

BOS Resolution				Resolution of the Senate
The BOS resolved to recommend the proposal of the DUGC of Department of Electrical and Electronics Engineering to remove the following elective courses from the curriculum due to out of scope/not relevant/not offered.				The Senate resolved to approve the BoS recommendation.
SI No	Course code	Subject	Credits	
1	EE253	Commutator Machines	(3-1-0)4	
2	EE255	Introduction to Algorithms and Data Structures	(3-1-0)4	
3	EE281	Commutator Machines Laboratory	(0-0-3)2	
4	EE298	Elements of Analog and Digital Communication	(3-1-0)4	
5	EE331	Distribution Systems Laboratory	(0-0-3)2	
6	EE334	Power Electronics Laboratory	(0-0-3)2	
7	EE342	Electronic Measurement Laboratory	(0-0-3)2	
8	EE361	Power System Communications	(3-1-0)4	
9	EE377	Modeling and Simulation Techniques for Dynamic Systems	(3-1-0)4	
10	EE378	Shell Scripting with Bash	(3-1-0)4	
11	EE379	Incremental Motion Control	(3-1-0)4	
12	EE382	Virtual Instrumentation Laboratory	(0-0-3)2	
13	EE384	Energy Auditing Laboratory	(0-0-3)2	
14	EE393	Dynamic System Simulation Laboratory	(0-0-3)2	
15	EE414	Non-Conventional Energy Systems	(3-1-0)4	
16	EE445	Power System Simulation Laboratory-I	(0-0-3)2	
17	EE478	An Introduction to the Intel IA-32 Architecture	(3-1-0) 4	
The Programme structure after incorporation of the recommended deletion is attached as Annexure - V, Page No. 17-23				

(g) Changes in the title and L-T-P structure of Elective courses

BOS Resolution						Resolution of the Senate
The BOS resolved not to recommend the following proposal of the Department of Electrical and Electronics Engineering to change the LTP structure for the electives.						The Senate noted the BOS resolution and resolved to approve the BoS recommendation
However, the BOS resolved to recommend the change in the title of the course EE 469 from Renewable Energy Systems to New and Renewable Energy Systems .						
SI No	Course code	Course Title	Modified Title	Previous credit	Modified credit	
1	EE320	Electrical Safety, Operations, Regulations	-	(3-0-0)3	(3-1-0)4	

2	EE432	Introduction to Machine Learning	-	(3-1-2) 5	(3-1-3) 6	
3	EE467	Industrial Electrical Systems	-	(3-0-0)3	(3-1-0)4	
4	EE469	Renewable Energy Systems	New and Renewable Energy Systems	(3-0-0)3	(3-1-0)4	

The modified Programme structure as proposed by the Department is attached as **Annexure-V, Page No.18-23**

(h) Modification in the title of Electives

BOS Resolution					Resolution of the Senate
The BOS resolved to recommend the proposal of the DUGC of Department of Electrical and Electronics Engineering to modify the titles of the following electives.					The Senate resolved to approve the BoS recommendation
Sl No	Course code	Credits	Previous Titles	Modified Titles	
1	EE303	(3-1-0) 4	Distribution Systems Planning and Control	Distribution Systems Control and Automation	
2	EE360	(3-1-0) 4	Microprocessors	Microprocessors and Microcontrollers	
3	EE385	(0-0-3) 2	Microprocessors Laboratory	Microprocessors and Microcontrollers Laboratory	
4	EE471	(0-0-3) 2	Power System Simulation Laboratory-II	Power System Simulation Laboratory	
The Programme structure after incorporation of suggested changes is attached as Annexure - V, Page No. 18-23					

(i) Inclusion of New elective course.

BOS Resolution				Resolution of the Senate
The BOS resolved to recommend the proposal of the DUGC of Department of Electrical and Electronics Engineering to include the following new elective course.				The Senate resolved to approve the BoS recommendation
Sl No	Course code	Subject	Credit	
1	EE301	Data Structures and Algorithms	(3-1-0) 4	
The course content and details are attached as Annexure - V, Page No.18-23				

(j) Modified Suggested Plan of Study

BOS Resolution

Resolution of the Senate

The BOS resolved to recommend the proposal of the DUGC of Department of Electrical and Electronics Engineering on the following modifications in the Suggested Plan of study and degree requirements

The Senate resolved to approve the BoS recommendation

Semester →	I	II	III	IV	V	VI	VII	VIII
1	MA110	MA111	EE213	EE276	SM300	SM302	Elective	Elective
2	CY110	PH110	EE207	EE258	EE326	EE308	Elective	Elective
3	CY111	PH111	EE226	EE265	EE350	Elective	EE498	EE499
4	WO110	ME110	EE256	EE224	Elective	Elective	EE449	EE448
5	CS100	ME111	--	--	Elective	Elective	SA401*	--
6	CS101	EE143	--	--	--	--	--	--
7	EE101	SM110	--	--	--	--	--	--
8	CV110	SM111	--	--	--	--	--	--
9	ME100	--	--	--	--	--	--	--
10	@	@	@	@	@	@	@	--

@Components of SA401 shall be pursued by the students with due approval and report the same to Faculty Advisor each semester. this shall be formally registered in 7th semester. Details related to this course can be found in curriculum book at REGULATIONS specific to "B.Tech. Degree Programme" clause 3.2

Degree Requirements:	
Category of Courses	Minimum Credits to be Earned
Foundation Courses (FC)	38
Basic Science Core (BSC)	16
Engineering Science Core (ESC)	13
Humanities and Social Science Core (HSC)	9
Programme Core (PC)	70
Electives (Elective courses*/Mini Projects**/MOOC/GIAN/NPTEL Courses***)	36
Project (MP): Major Project	6
Mandatory Learning Courses (MLC)****	16
Total	166

* Include the Program Specific Electives, PG Courses of the department and any courses of other departments with due approval DUGC.

**At most 4 credits can be earned from Mini Projects by registering to any two Design & Development elective courses (EE347/EE348/EE397/EE398) preferably in 5th and 6th semester.

***At most 8 credits can be earned from MOOC/GIAN/NPTEL Course (Courses offered by the academic institutes).

****At most 7 credits can be earned from MOOC/GIAN/NPTEL Course OR any other approved course under SA401 Liberal arts courses.

The details are attached as **Annexure – V , Page No. 18-23**

ITEM No.: 37-BOS-8 Proposal of Department of Electronics and Communication Engineering

(a) Inclusion of Honors courses in the B.Tech programmes	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of the DUGC of Department of Electronics and Communication Engineering for the inclusion of a set of 24 Honors courses in the B.Tech Programme Curriculum for Electronics and Communication Engineering .</p> <p>The BOS also resolved to recommend the proposal of the DUGC of Department of Electronics and Communication Engineering that for the Honors program, eligible B.Tech students are supposed to opt four courses (leading to 16 credits) during 5th to 8th semester of B.Tech program. A set of 24 Honors program courses and other details are attached as Annexure - VI, Page No. 2</p>	<p>The Senate resolved to approve the BoS recommendations.</p>
(b) Introduction of new elective course	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of DUGC of Department of Electronics and Communication Engineering to introduce the following new Elective course from the academic year 2022-23 onwards for the B.Tech Program.</p> <p>EC481 : Advanced Deep Learning and Applications (3-1-0) 4</p> <p>The course content and other details are attached as an Annexure - VI, Page No. 4</p>	<p>The Senate resolved to approve the BoS recommendation.</p>
(b) Introduction of new elective course	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of DUGC of Department of Electronics and Communication Engineering to introduce the following new Elective course from the academic year 2022-23 onwards for the B.Tech Program.</p> <p>EC481 : Advanced Deep Learning and Applications (3-1-0) 4</p> <p>The course content and other details are attached as an Annexure - VI, Page No. 4</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

(c) Restructuring credits mapping for M.Tech Major Project – I and Major Project - II	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of the DPGC of Department of Electronics and Communication Engineering to assign six credits for the Major Project-I as well as for the Major Project-II for all the three M.Tech streams, i.e. Communication Engineering and Networks (CEN), Signal Processing and Machine Learning (SPML) and Very Large Scale Integrated (VLSI) Design as given below.</p> <p>For M.Tech (CEN) EC759 Major Project – I 6 EC760 Major Project – II 6</p> <p>For M.Tech (SPML) EC789 Major Project – I 6 EC790 Major Project – II 6</p> <p>For M.Tech (VLSI-Design) EC729 Major Project – I 6 EC730 Major Project – II 6</p> <p>The details are attached as Annexure VI, Page No. 3,4</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

Item No.: 37-BOS-9: Proposals of the Department of Information Technology

(a) Introduction of new Programme Specific elective courses for B.Tech in Information Technology	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of Department of Information Technology to introduce the following new Program Specific Electives for B.Tech in Information Technology.</p> <ol style="list-style-type: none"> 1. IT372 : Mobile Networks of (3-0-2) 4 credits 2. IT482 : Social Network Analysis of (3-0-2) 4 credits. 3. IT483: Narrowband Internet of Things (3-0-2) 4 credits <p>The details and course content are attached as Annexure- VII, Page No. 1-23</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

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(b) Conversion of all three credit courses (3-0-0) 3 of B.Tech, Artificial Intelligence (AI) into four credit courses	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to not recommend the proposal of Department of Information Technology to convert all the elective courses of B.Tech (AI) with three credits (3-0-0) 3 (IT 472, IT 474, IT 475, IT 439 and IT 442) into four credit courses (3-0-2) 4 and the removal of the clause "At least 7 electives with (3-0-2)4 credits courses should be selected" from the B.Tech (AI) curriculum.</p> <p>The Programme structure and content details with Proposed modification are attached as Annexure - VII, Page No. 1-23</p>	<p>The Senate noted the BOS resolution</p>
(c) Change of existing course credits of PSE from (3-0-0) to (3-0-2) 4	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of Department of Information Technology to change the existing course credits from (3-0-0)3 to (3-0-2)4 for the Programme Specific Elective "IT408: Mobile Computing" in B.Tech Information Technology and inclusion of new topics in the existing syllabus.</p> <p>The revised course content and other details are attached as Annexure - VII, Page No. 24-26</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

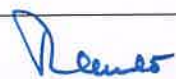
ITEM No: 37-BOS-10: Proposals of Department of Mathematics and Computational Science

(a) Minor changes in the approved curriculum of B.Tech Program in Computational and Data Science (CDS) to accommodate NEP 2020 implementation guidelines of the Institute.	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of the Department of Mathematical and Computational Science (MACS) for the following changes in the curriculum of B.Tech program in Computational and Data Science (CDS), a new programme starting from the academic year 2022-23 to implement NEP 2020 guidelines.</p> <p>1. Inclusion of MA500 Capstone Project- 4 credits</p> <p>2. Inclusion of CS100 Python programming (3-0-0)3 CS101 Python Programming Lab (0-0-3)2 in place of CS110 Computer Programming (3-1-0)4 CS111 Computer Programming Lab (0-0-1)1</p>	<p>The Senate resolved to approve the BoS recommendations.</p>

<p>3. Dropping of EE110 Elements of Electrical Engg. (2-0-0) 2</p> <p>4. Replacement of MA490 Minor Project- 2 credits with MA490 Practical Training- 1credit</p> <p>5. Inclusion of ME100 Introduction to Design Thinking(2-0-0) 2</p> <p>6. Inclusion of SA401 Liberal Arts courses/co-curricular/extra-curricular Activities- 10 credits</p> <p>The Programme structure, Degree requirements and suggested plan of study after incorporation of the recommended changes are attached as ANNEXURE-VIII, Page No. 1-6</p>	
<p>(b) Inclusion of two new Ph.D level courses in the curriculum.</p>	
<p>BOS Resolution</p>	<p>Resolution of the Senate</p>
<p>The BOS resolved to recommend the proposal of the Department of Mathematical and Computational Science (MACS) to include two new Ph.D. level courses in the curriculum from the academic year 2022-23.</p> <p>1.MA947: Fundamentals of Fluid Mechanics (4-0-0) 4</p> <p>2.MA946: Fractional Differential Equations and Applications (4- 0- 0)4</p> <p>The course content and other details are attached as ANNEXURE-VIII, Page No. 7-10</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

ITEM No.:37-BOS-11: Proposals of Department of Mechanical Engineering

<p>(a) Inclusion of new electives for B.Tech Mechanical Engineering at 4th year level.</p>	
<p>BOS Resolution</p>	<p>Resolution of the Senate</p>
<p>The BOS resolved to recommend the proposal of Mechanical Engineering Department for the inclusion of the following three electives for B.Tech Mechanical Engineering:</p> <p>1. ME 438 Injury Biomechanics (3-0-0-)3 2. ME439 Introduction to Flight (3-0-0)3 3.ME441 Pollution Control and Environmental Management (3-0-0)3</p> <p>The course content and other details are attached as Annexure - IX Page No. 1-8, 10, 11</p>	<p>The Senate resolved to approve the BoS recommendation.</p>



(b) Inclusion of new elective for M.Tech Mechatronics Engg.	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of Mechanical Engineering Department for the inclusion of the following elective for M.Tech Mechatronics Engg:</p> <p>1. ME 873 Applied cyber physical systems (2-0-2)3</p> <p>The course content and other details are attached as Annexure - IX, Page No. 24</p>	<p>The Senate resolved to approve the BoS recommendation.</p>
(c) Revision in the course contents	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of department of Mechanical Engineering to revise the course content of the following course.</p> <p>(i) ME826 Mechanics of Viscoelastic materials. M.Tech (Mechanical Design)</p> <p>(ii) ME831 Smart structures and materials. M.Tech (Mechatronics Engineering)</p> <p>The course content details are attached as Annexure - IX, Page No. 8, 14-16</p>	<p>The Senate resolved to approve the BoS recommendation.</p>
(d) Modification in the course structure of M.Tech (Thermal Engg.), M.Tech (Manufacturing), M.Tech (Mechatronics) and M.Tech (Mechanical Design).	
BOS Resolution	Resolution of the Senate
<p>The BOS resolved to recommend the proposal of Department of Mechanical Engg. to refer all the electives as only "Electives" without listing separately as "Program electives" and "Electives common to all PG Programmes".</p> <p>The list of courses under Electives for all the M.Tech streams of Mechanical Engineering Department are provided in Annexure – IX Page 8 17-20</p>	<p>The Senate resolved to approve the BoS recommendation.</p>
(e) Inclusion of ME 831 Smart Structures and materials as elective for M.Tech (Mechanical Design)	
BOS Resolution	Resolution of the Senate
	<p>The Senate resolved to approve the BoS recommendation.</p>

<p>The BOS resolved to recommend the proposal of Department of Mechanical Engg. to include ME 831 Smart Structures and materials as elective for M.Tech (Mechanical Design).</p> <p>The Program structure after inclusion of proposed elective is provided as Annexure - IX. Page: 14,15,16</p>	
<p>(f) Proposal to fix the dates for M.Tech Project evaluation for 3 to 4 days and to highlight the same in the even semester Academic calendar.</p>	
<p>BOS Resolution</p>	<p>Resolution of the Senate</p>
<p>The BOS resolved not to recommend the proposal of Department of Mechanical Engg. to fix the M.Tech Project evaluation for 3 to 4 days and to highlight the same in the even semester Academic calendar.</p> <p>The details of the proposal are provided in Annexure-IX Page 21</p>	<p>The Senate noted the BoS resolution.</p>

ITEM No.: 37-BOS-12: Proposals of Department of Water Resources and Ocean Engineering Introduction of new elective course for M.Tech program.

<p>BOS Resolution</p>	<p>Resolution of the Senate</p>
<p>The BOS resolved to recommend the proposal of the Department of Water Resource and Ocean Engineering to include the following new elective course for M.Tech programme in Geoinformatics. WO871 Artificial Intelligence Applications in Hydro Geoinformatics Credits : (3-0-0) 3</p> <p>The course content is provided as Annexure - X, Page No. 1,2</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

ITEM No. 37-BOS-13 To consider and approve the Academic calendar for I Year M.Tech./ M.Sc/ MBA/MCA/ Ph.D Program (Odd Semester) for the academic year 2022-23

<p>Resolution of the BoS</p>	<p>Resolution of the Senate</p>
<p>The BOS resolved to recommend the Academic calendar for I Year PG and Ph.D Programmes (Odd Semester) for the academic year 2022-23 which commences from 18th August 2022 as approved by Chairman, Senate. The Academic calendar for the same is presented as Annexure – XI</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

Revised

ITEM No: 37-BOS-14: Recognition as Research Guide (Internal) for Ph.D.

Resolution of the BoS				Resolution of the Senate
The BOS noted the recognition of the following faculty members as Ph.D guides after the 36 th BOS meeting based on the recommendation of the respective DRPC.				The Senate noted the BoS resolution.
Name of the Faculty	Designation	Department	Ph.D from	
Dr. Saumya A. Hegde	Assistant Professor	Computer Science and Engg.	N.I.T.K., Surathkal	
Dr.Kalpna G. Bhat	Assistant Professor	Electronics and Communication Engg.	N.I.T.K., Surathkal	

ITEM No: 36-BOS-15: Inclusion of External Additional Guides

(a) Department of Civil Engineering	
BOS Resolution	Resolution of the Senate
The BOS resolved to consider Dr. S.K. Prasad, Professor and Head, Department of Civil Engineering, Vidyavardhaka College of Engineering, Mysuru as an Additional Research Guide for Mr. Chethan L. in the Department of Civil Engineering. The details are enclosed as Annexure – XII Page 1-18	The Senate noted the BoS resolution.
(b) Department of Water Resources and Ocean Engineering	
BOS Resolution	Resolution of the Senate
The BOS resolved not to consider Dr. M.S. Ganesh Prasad, Professor, Department of Civil Engineering, The National Institute of Engineering, Mysuru as an Additional Research Guide for Ms. Roop N. in the Department of Water Resources and Ocean Engineering. The details are enclosed as Annexure – XII Page 19-27	The Senate noted the BoS resolution.
(c) Department of Mechanical Engineering	
BOS Resolution	Resolution of the Senate
The BOS resolved to consider Dr. Vijeesh V., Associate Professor, Department of Mechanical Engineering, NMAMIT, Nitte be considered as an External additional Guide for the Ph.D student Mr. Rajath N. Rao (External Registrant working at NMAMIT). The details are enclosed as Annexure – XII Page 28-38	The Senate noted the BoS resolution.

ITEM NO. 37-BOS-16: Certified MOOC courses for Research Scholars as a part of Course work requirement.

BOS Resolution		Resolution of the Senate
<p>As per the Ph.D Regulations, all the Research scholars are required to complete 12 credits of course work. Out of 12 credits required, only one self-study course (900 level) with maximum of 4 credits is permitted with the recommendations by DRPC of the respective departments and approved by Dean (A).</p> <p>In view of providing wider scope for the students to undergo specialized courses relevant to their area of Research, the BOS resolved to recommend that the full time research scholars may be allowed to do pre-approved certified MOOCs courses upto a maximum of 4 credits with recommendations by the DRPC of the respective Departments.</p> <p>The BOS resolved to recommend the following modifications in clause 3.2 of Ph.D Regulations:</p>		<p>The Senate resolved to approve the BoS recommendation.</p>
<p>Clause 3.2 The Minimum course credit Requirement is 12 (Courses carrying "S/N grades shall not be counted)</p> <p>Out of 12 credits, only one self -study course (900 level) with a maximum of 4 credits is permitted with the recommendation by the DRPC of the respective departments and approved by Dean (A)</p>	<p>Clause 3.2 The Minimum course credit Requirement is 12 (Courses carrying "S/N grades shall not be counted).</p> <p>Out of 12 credits, only one self-study course (900 level) with a maximum of 4 credits is permitted with the recommendation by the DRPC of the respective departments and approved by Dean(A).</p> <p>The student may also be allowed to do pre-approved certified MOOCs towards maximum of 4 credits. Examination to be conducted by the Department for such certified courses to award grades.</p>	

ITEM NO. 37-BOS-18: Changing the Course Code for Liberal Arts Courses/cocurricular/extracurricular activities from SA 401 to UC 401

BOS Resolution	Resolution of the Senate
<p>The Liberal Arts Courses/cocurricular / extracurricular activities (SA401) are mandatory for all branch students. The senate has resolved that Category A and B activities will be under Dean (SW) and Category C will be under the School of Humanities, Social Sciences and Management. In order to enable approval of consolidated 10 credits by individual departments for their branch students, the BOS recommended to change the Course Code from SA401 to UC401 for implementation from Academic Year 2021-22 onwards.</p> <p>Further, the BOS recommended that the final year grade card may mention the list of all the activities carried out by the student under different categories of this course.</p>	<p>The Senate resolved to approve the BoS recommendation.</p>

Item No. 60.3.2: To consider and approve the Academic calendars for 3rd Sem. B.Tech, 6th & 8th Semester B.Tech, 2nd and higher years of PG and Ph.D sessions – Authorization to Chairman, Senate – Reg.

Agenda Item	Resolution of the Senate
<p>It is planned to start the forthcoming academic sessions for 3rd semester B.Tech from 3rd October 2022 and that for 6th and 8th semester B.Tech, 2nd and higher years of PG and Ph.D. from 2nd January 2022. Further, the date of commencement of classes for 1st semester B.Tech (2022 admission) may only be fixed based on the JoSAA/CSAB counselling schedule which is yet to be announced.</p> <p>As the list of holidays for the year 2023 is yet to be released, it is recommended that the Chairman, Senate may be authorized to approve the Academic calendars for the above sessions at a later date.</p>	<p>The Senate resolved to authorize the Chairman, Senate to approve the Academic calendars for these academic sessions at a later date.</p>

Item No. 60.3.3: To consider the Seat Matrix for the B.Tech program in Computational and Data Science (CDS) – Reg.

Agenda Item	Resolution of the Senate																																
<p>The BOG of the Institute has approved to start B.Tech. Programme in Computational and Data Science (CDS) with intake of 30 from the AY 2022-23. The seat matrix of B.Tech in Computational and Data Science for regular and DASA category for the Academic Year 2022-23 is placed before the Senate for approval.</p> <p>Seat Matrix for Academic Year 2022-23 for B.Tech (CDS)</p> <table border="1"> <thead> <tr> <th>Program</th> <th>OPEN</th> <th>OPEN-PwD</th> <th>SC</th> <th>SC-PwD</th> <th>ST</th> <th>ST-PwD</th> <th>OBC-NCL</th> <th>OBC-NCL-PwD</th> <th>GEN-EWS</th> <th>GEN-EWS-PwD</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>B.Tech (CDS)</td> <td>11</td> <td>1</td> <td>5</td> <td>0</td> <td>2</td> <td>0</td> <td>8</td> <td>0</td> <td>3</td> <td>0</td> <td>30</td> </tr> </tbody> </table> <p>Seat Matrix for Academic Year 2022-23 for B.Tech (CDS) under DASA</p> <table border="1"> <thead> <tr> <th>Program</th> <th>DASA -CIWG</th> <th>General</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>B.Tech (CDS)</td> <td>2</td> <td>3</td> <td>5</td> </tr> </tbody> </table>	Program	OPEN	OPEN-PwD	SC	SC-PwD	ST	ST-PwD	OBC-NCL	OBC-NCL-PwD	GEN-EWS	GEN-EWS-PwD	Total	B.Tech (CDS)	11	1	5	0	2	0	8	0	3	0	30	Program	DASA -CIWG	General	Total	B.Tech (CDS)	2	3	5	<p>The Senate resolved to approve the Seat Matrix for the B.Tech program in Computational and Data Science (CDS)</p>
Program	OPEN	OPEN-PwD	SC	SC-PwD	ST	ST-PwD	OBC-NCL	OBC-NCL-PwD	GEN-EWS	GEN-EWS-PwD	Total																						
B.Tech (CDS)	11	1	5	0	2	0	8	0	3	0	30																						
Program	DASA -CIWG	General	Total																														
B.Tech (CDS)	2	3	5																														

Reemes

Item No. 60.3.4: To consider the registration of NITK on the ABC portal as per the directions of MoE - Reg.

Agenda Item	Resolution of the Senate
<p>Ministry of Education, Gol has established the Academic Bank of Credits (ABC) and the online platform has been developed by the National e-Governance division of Ministry of Electronics and Information Technology under the Digi Locker framework, which would digitally store the Academic credits earned from various recognized HEIs so that the degrees from HEI can be awarded taking into account the credits earned. ABC will ensure the opening, closure, and validation of the Academic Bank of Accounts, verification, accumulation, and transfer or redemption for students.</p> <p>All the HEIs have to register themselves on the ABC via National Academic Depository portal. Ministry of Education, Gol vide F.No.33-4/2022-TS.III has instructed all the NITs and IEST, Shibpur to register on ABC.</p> <p>It is recommended that NITK Surathkal gets registered on ABC.</p> <p>The letter from NITs Division of MoE is provided as Senate Annexure – II.</p>	<p>The Senate resolved to approve the proposal of the registration of NITK on the ABC portal as per the directions of MoE.</p>

Item No. 60.3.5: Any other matters

i. Summer Internship Programme – Reg.

The Senate member briefed that the Summer internship Programme to students from other Institutes was very successfully conducted every year earlier. The members mentioned that this programme had resulted in publications of the work carried out by the interns and it can improve the perception of the Institute. The Senate members recommended to restart the Summer internship Programme and authorized the Director to take a decision on restarting the programme.

ii. NIRF Ranking Status – Reg.

The Chairman, Senate informed the members about the achievement of the Institute in Securing 10th rank in Engineering Category and 27th rank in overall category in the NIRF-2022 ranking, appreciated the contributions, hard work and efforts of NITK faculty, staff, students, administration and all the stake holders for achieving the rank and the same was placed on record. The Senate noted the efforts and services of Professor I/c AARS towards achieving the ranking position with a special note of appreciation and placed it on record.

Meeting ended with vote of thanks to the Chair.

(K. Ravindranath)
Registrar and
Secretary – Senate, NITK

(Udaykumar R. Yaragatti)
Director In-Charge and
Chairman – Senate, NITK