

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA
SURATHKAL**

**MINUTES
OF
37th MEETING OF
BOARD OF STUDIES**

Date : 20-07-2022 (Wednesday)
Time : 3.00 PM
Venue : Board Room

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

Minutes of the Thirty Seventh combined Board of Studies (UG, PG & Research) Meeting held on Wednesday, 20th July, 2022 at Board Room.

MEMBERS PRESENT

1)	Dr. Vidya Shetty K.	...	Chairman
2)	Mr. K. Ravindranath	...	Member
3)	Dr. Vijay Sai	...	External Member
4)	Dr. Deepti P.P	...	External Member
5)	Dr. G.C. Mohan Kumar	...	Member
6)	Dr. Narendranath S.	...	Member
7)	Dr. Vijay Desai	...	Member
8)	Dr. S.M. Kulkarni	...	Member
9)	Dr. Ramesh Kini M.	...	Member
10)	Dr. K. Manjunath Sharma	...	Member
11)	Dr. Ashivni Chaturvedi	...	Member
12)	Dr. Shashidhar Koolagudi	...	Member
13)	Dr. Jaidhar C.D	...	Member
14)	Dr. Dattatreya Gaonkar	...	Member
15)	Dr. Jagadeesh Babu	...	Member
16)	Dr. S.M. Murugendrappa	...	Member
	(Represented HOD, Mechanical Engg.)		
17)	Dr. M.R. Ramesh	...	Member
18)	Dr. Arun M.	...	Member
19)	Dr. A.U. Ravishankar	...	Member
	(Represented HOD, Civil Engg.)		
20)	Dr. B.M. Doddamani	...	Member
21)	Dr. Ravi Shankar	...	Member
22)	Dr. Uday Kumar Dalimba	...	Member
23)	Dr. Uday Shankar	...	Member
24)	Dr. R. Madhusudhan	...	Member
25)	Dr. Rajesh Acharya	...	Member
26)	Dr. A.K. Tripathi	...	Member
	(Represented HOD, Mining Engg.)		
27)	Dr. Mallikarjun Angadi	...	Member
28)	Ms. Sandhya, AR (Academic)i/c	...	Secretary

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**Minutes of Thirty Seventh (37th) BOS meeting held on
20-07-2022 (Wednesday) at 3.00 pm at Board Room**

The Chairman (BOS) and Dean (Academic) chaired the meeting and welcomed all the members to the **Thirty Seventh BOS meeting**. The Chairman also welcomed the newly nominated external members to the meeting.

**ITEM No. 37-BOS-A : Confirmation of minutes of 36th meeting
of the BOS held on 8th November, 2022 at 3.00
pm in online mode**

The minutes of **Thirty sixth BOS** meeting was approved as there were no comments received from the members.

Item No.37 BOS-1: Amendment to Regulations Specific to B.Tech degree Pertaining to Minor Programme.		
Existing	Proposed Modification	
For Minor programmes A student in a particular discipline can take additional specified courses totalling 15 to 20 credits in Minor discipline. 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.	The BOS resolved to recommend the following amendment to Regulations for Minor programs 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.	For Senate Approval

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ITEM No. 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.

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**”.

The BOS resolved to recommend the following proposals

- 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’.

**For
Senate
Approval**

ITEM No.: 37-BOS-3: Approval of inclusion of Forms for various academic processes in the curriculum book for undergraduate programs.

The **BOS resolved to recommend** the proposal of inclusion of the following academic process forms in the curriculum book

- (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

The forms are attached as **Annexure - I, Page No. 1-7**

**For
Senate
approval**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
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ITEM No.: 37-BOS-4 : Proposal of Department of Chemical Engineering – Introduction of elective course for M.Tech program

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.

**For
Senate
approval**

**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

Item No. 37-BOS-5: Proposals of Dept. of Civil Engineering

(a) Introduction of Programme Specific Elective (PSE) for B.Tech. Civil Engineering

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.

**For
Senate
approval**

- 1. CV374 Transportation Systems Planning (3-0-0) 3
Pre-requisites: Highway and Traffic Engineering (CV254)**
- 2. CV375 Applied Rock Engineering (3-0-0)3
Pre-requisites: CV386 – Rock Mechanics**

The course content and other details are attached as
Annexure-III Page No.1-3

(b) Revisions of Existing PG programme Specific Elective (PSE) Courses

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.

**For
Senate
approval**

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1. M.Tech. Geotechnical Engineering

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

2. M.Tech. Structural Engineering

It is recommended to modify the content of the following course:

CV810 Advanced Bridge Engineering

The course content and other details are attached as **Annexure - III, Page No. 4**

(c) Introduction of PG Programme Specific Elective (PSE) course for M.Tech programmes

The **BOS resolved to recommend** the proposal of Department of Civil Engineering to introduce the following new PSE course for **M.Tech. Structural Engineering**

**For
Senate
approval**

CV820 Steel-Concrete Composite Design (3-0-0) 3

The course content and other details are attached as **Annexure - III, Page No. 5**

(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

**For
Senate
approval**

The details and course content are attached as **Annexure - III, Page No. 5-6**

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**ITEM No.: 37-BOS-6 Proposals of Department of Computer
Science and Engineering**

**(a) Opening of M.Tech (Research) for Project Staffs
(Internal Registrants) in January Session.**

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.

**For
Senate
approval**

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.

**For
Senate
approval**

The details are attached as **Annexure - IV, Page No. 1-3**

(b) Replacing CS415 by CS367 in the "Minor in Cyber-Physical Systems" under new UG Curriculum 2021.

The **BOS resolved to recommend** the Department of Computer Science and Engineering to replace CS415 by CS367 under the Minor in "Cyber-Physical Systems" under new UG Curriculum - 2021.

**For
Senate
approval**

Existing: CS415 – Computational Cyber-Physical Systems

Proposed: CS367–Foundations of Cyber-Physical Systems

The details are attached as an **Annexure - IV, Page No. 3**

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(c) Starting the new M.Tech programme – M.Tech in Computer Science & Engg. (Online)

Proposal	BOS Resolution
<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 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>

**For
Senate
approval**

**For
Senate
approval**

(d) Allowing M.Tech (Research) students to opt their courses from other department as well.

Proposal	BOS Resolution
<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.</p> <p>The BOS recommended to retain the existing regulations.</p>

**For
Senate
approval**

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(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
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.	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.

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.

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 **recommend** the proposed Programme structure, Degree requirements, suggested plan of study and course content along with the modalities for the conduct of the programme.

The details are attached as **Annexure - V, Page No. 1-12**

**For
Senate
approval**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
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(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

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.

**For
Senate
approval**

The modified course structure details as proposed by the Department are attached as **Annexure-V, Page No. 16.**

(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

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.**

**For
Senate
approval**

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

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).

**For
Senate
approval**

EE875 Fundamentals of Electric Vehicles (EVs) (4-0-0) 4

EE876 Digital Controllers and Applications in Power Electronics (4-0-0) 4

EE877 Applications of Machine Learning Techniques to Power Systems (3-0-2) 4

The course content and other details are attached as **Annexure- V, Page No. 13-15**

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(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.

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:

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

**For
Senate
approval**

The course structure after incorporation of recommended changes is attached as **Annexure - V, Page No. 17, 20-23**

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

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.

**For
Senate
approval**

Sl 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

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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

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.

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**.

**For
Senate
approval**

Sl 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**.

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(h) Modification in the title of Electives

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.

**For
Senate
approval**

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.

The **BOS resolved to recommend** the proposal of the DUGC of Department of Electrical and Electronics Engineering to include the following new elective course.

**For
Senate
approval**

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

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.

**For
Senate
approval**

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	Electiv	EE498	EE499

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						e		
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
<i>Basic Science Core (BSC)</i>	16
<i>Engineering Science Core (ESC)</i>	13
<i>Humanities and Social Science Core (HSC)</i>	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**

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

(a) Inclusion of Honors courses in the B.Tech programmes.

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 .

**For
Senate
approval**

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.

**For
Senate
approval**

A set of 24 Honors program courses and other details are attached as **Annexure - VI, Page No. 2**

(b) Introduction of new elective course

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.

**For
Senate
approval**

EC481 : Advanced Deep Learning and Applications (3-1-0) 4

The course content and other details are attached as an **Annexure - VI, Page No. 4**

(c) Restructuring credits mapping for M.Tech Major Project - I and Major Project - II

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.

**For
Senate
approval**

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For M.Tech (CEN)

EC759 Major Project – I 6

EC760 Major Project – II 6

For M.Tech (SPML)

EC789 Major Project – I 6

EC790 Major Project – II 6

For M.Tech (VLSI-Design)

EC729 Major Project – I 6

EC730 Major Project – II 6

Annexure VI, Page No. 3,4

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

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.

- 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**

The details and course content are attached as **Annexure-VII, Page No. 1-23**

**For
Senate
approval**

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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

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.

**For
Senate
approval**

The Programme structure and content details with Proposed modification are attached as **Annexure - VII, Page No. 1-23**

(c) Change of existing course credits of PSE from (3-0-0) to (3-0-2) 4

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.

**For
Senate
approval**

The revised course content and other details are attached as **Annexure - VII, Page No. 24-26**

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.

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),

**For
Senate
approval**

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a new programme starting from the academic year 2022-23 to implement NEP 2020 guidelines.

1. Inclusion of MA500 Capstone Project- 4 credits
2. Inclusion of CS100 Python programming (3-0-0)
CS101 Python Programming Lab (0-0-3)
in place of CS110 Computer Programming (3-1-0) 4
CS111 Computer Programming Lab (0-0-1)
3. Dropping of EE110 Elements of Electrical Engg. (2-0-0) 2
4. Replacement of MA490 Minor Project- 2 credits
with MA490 Practical Training- 1credit
5. Inclusion of ME100 Introduction to Design Thinking(2-0-0) 2
6. Inclusion of SA401 Liberal Arts courses/co-curricular/extra-curricular Activities- 10 credits

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**

(b) Inclusion of two new Ph.D level courses in the curriculum.

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.

1. MA947: Fundamentals of Fluid Mechanics (4-0-0) 4
2. MA946 Fractional Differential Equations and Applications (4- 0- 0)4

The course content and other details are attached as **ANNEXURE-VIII, Page No. 7-10**

**For
Senate
approval**

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL

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

(a) Inclusion of new electives for B.Tech Mechanical Engineering at 4th year level.

The **BOS resolved to recommend** the proposal of Mechanical Engineering Department for the inclusion of the following three electives for B.Tech Mechanical Engineering:

**For
Senate
approval**

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

The course content and other details are attached as **Annexure - IX Page No. 1-8, 10, 11**

(b) Inclusion of new elective for M.Tech Mechatronics Engg.

The **BOS resolved to recommend** the proposal of Mechanical Engineering Department for the inclusion of the following elective for M.Tech Mechatronics Engg:

**For
Senate
approval**

1. ME 873 Applied cyber physical systems (2-0-2)3

The course content and other details are attached as **Annexure - IX, Page No. 24**

(c) Revision in the course contents

The **BOS resolved to recommend** the proposal of department of Mechanical Engineering to revise the course content of the following course.

**For
Senate
approval**

- (i) **ME826 Mechanics of Viscoelastic materials.
M.Tech (Mechanical Design)**

- (ii) **ME831 Smart structures and materials.
M.Tech (Mechatronics Engineering)**

The course content details are attached as **Annexure - IX, Page No. 8, 14-16**

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(d) Modification in the course structure of M.Tech (Thermal Engg.), M.Tech (Manufacturing), M.Tech (Mechatronics) and M.Tech (Mechanical Design).

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".

**For
Senate
approval**

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**

(e) Inclusion of ME 831 Smart Structures and materials as elective for M.Tech (Mechanical Design)

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).

**For
Senate
approval**

The Program structure after inclusion of proposed elective is provided as **Annexure - IX. Page: 14,15,16**

(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.

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.

**For
Senate
approval**

The details of the proposal are provided in **Annexure-IX Page 21**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

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

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.

**For
Senate
approval**

WO871 Artificial Intelligence Applications in Hydro Geoinformatics Credits : (3-0-0) 3

The course content is provided as **Annexure - X, Page No. 1,2**

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

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.

**For
Senate
approval**

The Academic calendar for the same is presented as **Annexure - XI**

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

The BOS noted the recognition of the following faculty members as Ph.D guides after the 36th BOS meeting based on the recommendation of the respective DRPC.

**Reporting
to Senate**

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. Kalpana G. Bhat	Assistant Professor	Electronics and Communication Engg.	N.I.T.K., Surathkal

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
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ITEM No: 36-BOS-14: Inclusion of External Additional Guides

A) Department of Civil Engineering

The DRPC of Civil Engineering Department has proposed that Dr. S.K. Prasad, Professor and Head, Department of Civil Engineering, Vidyavardhaka College of Engineering, Mysuru be considered as an Additional Research Guide for the Ph.D student Mr. Chethan L.

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.

**Reporting
to Senate**

The details are enclosed as Annexure – XII Page 1-18

B) Department of Water Resources and Ocean Engineering

The DRPC of the Department of Water Resources and Ocean Engineering has proposed that Dr. M.S. Ganesh Prasad, Professor, Department of Civil Engineering, National Institute of Engineering, Mysuru be considered as an External additional Guide for the Ph.D student Ms. Roopa N.

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.

**Reporting
to Senate**

The details are enclosed as Annexure – XII Page 19-27

C) Department of Mechanical Engineering

The DRPC of Mechanical Engineering Department has proposed that 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.

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).

**Reporting
to Senate**

The details are enclosed as Annexure – XII Page 28-38

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

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

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).

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.

The BOS resolved to recommend the following modifications in clause 3.2 of Ph.D Regulations :

**For
Senate
approval**

Clause 3.2

The Minimum course credit Requirement is 12 (Courses carrying "S/N grades shall not be counted)

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)

Clause 3.2

The Minimum course credit Requirement is 12 (Courses carrying "S/N grades shall not be counted).

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).

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.

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL

ITEM NO. 37-BOS-17 : Changing the Course Code for “Introduction to Design Thinking” from ME100 to UC100

The course “**Introduction to Design Thinking**” with course code ME100 is being handled by all B. Tech offering departments to their branch students.

The BOS resolved to recommend the change of Course code for “Introduction to Design Thinking” from ME100 to UC100, indicating it is a Universal Course (UC) to all Department Students. This measure enables individual departments to approve the grades of their branch students. The BOS resolved to recommend the implementation of the same from Academic Year 2022-23 onwards.

**For
Senate
Approval**


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

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.

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.

**For
Senate
Approval**

The Chairman (BOS) proposed the vote of thanks to the members.


Secretary – BOS, NITK


Chairman-BOS, NITK

