

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



MINUTES
OF THE
38th Meeting of
BOARD OF STUDIES

Date : 13.03.2023 (Monday)
Time : 3:00 PM
Venue : Board Room
N.I.T.K., Surathkal

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

Minutes of the Thirty Eighth combined Board of Studies (UG, PG & Research) Meeting held on Monday, 13th March 2023 in the Board Room of NITK Surathkal.

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. Shrikantha Rao	...	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. Manu Basavaraju	...	Member
13)	Dr. Jaidhar C.D	...	Member
14)	Dr. Dattatreya Gaonkar	...	Member
15)	Dr. Jagadeesh Babu	...	Member
16)	Dr. Ravikiran Kadoli	...	Member
17)	Dr. B.R. Jayalekshmi	...	Member
	(Represented by Dr. M.C. Narasimhan)		
18)	Dr. B.M. Doddamani	...	Member
19)	Dr. Ravi Shankar	...	Member
20)	Dr. Uday Kumar Dalimba	...	Member
21)	Dr. Uday Shankar	...	Member
22)	Dr. R. Madhusudhan	...	Member
23)	Dr. Sheena	...	Member
24)	Dr. M.Aruna	...	Member
25)	Dr. Mallikarjun Angadi	...	Member
26)	Ms. Sandhya AR (Academic) i/c	...	Secretary

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

CONTENTS

Item No	Agenda Item Details	Page No.
38-BOS-A	Confirmation of minutes of 37 th meeting of the BOS held on 20 th July, 2022 at 3.00 pm	3
38-BOS-1	Proposals of Department of Computer Science and Engineering.	3-4
38-BOS-2	Proposals of Department of Electrical and Electronics Engineering.	4-8
38-BOS-3	Proposals of Department of Electronics and Communication Engineering.	8-16
38-BOS-4	Proposals of Department of Information Technology	17-18
38-BOS-5	Proposals of Department of Mathematics and Computational Sciences	18-20
38-BOS-6	Proposals of Department of Mechanical Engineering	20-21
38-BOS-7	Proposals of Department of Metallurgical and Materials Engineering	22
38-BOS-8	Proposals of Department of School of Humanities, Social Sciences and Management	22-30
38-BOS-9	Inclusion of External Additional Guides	30

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

**Minutes of Thirty Eighth (38th) BOS meeting held on
13-03-2023 (Monday) at 3.00 pm in the Board Room**

The Chairman (BOS) and Dean (Academic) chaired the meeting and welcomed all the members to the **Thirty eighth BOS meeting**.

**ITEM No. 38-BOS-A: Confirmation of minutes of 37th meeting
of the BOS held on 20th July, 2022 at 3.00 pm**

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

**ITEM No.: 38-BOS-1 Proposals of Department of Computer
Science and Engineering**

**1.1. Modification of Suggested Plan of study in
B.Tech Program.**

Proposal	BOS Resolution	For Senate approval
<p>The DFC of the Department of Computer Science and Engineering has proposed the following modifications in the suggested Plan of Study in the B.Tech curriculum, 2023 as listed below.</p> <p>1. CS112: Discrete Mathematical Structures course to be moved to II Semester</p> <p>2. MA208: Probability Theory and Application course to be moved to IV Semester</p> <p>3. SM300: Engineering Economics course to be moved to V semester</p> <p>4. CS253: Design and Analysis of Algorithms course to be moved to V Semester</p> <p>The proposed suggested plan of study and the details are attached as Annexure - I Page No. 2,4-7</p>	<p>The BOS resolved to recommend the proposal of the DFC of Department of Computer Science and Engineering for the following modifications in the suggested Plan of Study in the B.Tech curriculum 2023.</p>	

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

1.2 Handling of C programming and Python Programming courses by ECE, EEE and IT departments for their first year B.Tech students.

Proposal	BOS Resolution	Reporting to Senate
<p>The DFC of the Department of Computer Science and Engineering has placed the following requests.</p> <p>1. C Programming and C Programming Lab (CS110 and CS111) courses for the B.Tech ECE and B.Tech IT students should be handled by the respective parent department.</p> <p>2. Python Programming and Python Programming Lab (CS100 and CS101) courses for the B.Tech EEE should be handled by the respective parent department.</p> <p>The details are attached as an Annexure-I, Page No. 2,5,6</p>	<p>After the deliberations, BOS resolved that the Heads of ECE, EEE and IT Departments may discuss the matter in their respective DFC and the DFC resolution/recommendations may be presented in the next BOS meeting.</p>	

ITEM No: 38-BOS-2 Proposals of Department of Electrical and Electronics Engineering

2.1. Proposal to start a new M.Tech Programme on M.Tech in Power Electronics and Control (PE&C)

Proposal	BOS recommendation	For Senate Approval
<p>The DPGC of the Department of Electrical and Electronics Engineering has proposed to start a new M.Tech program in Power Electronics and Control (PE&C) in addition to the existing PG programmes. The new M.Tech programme is proposed by reducing the</p>	<p>BOS Resolution: BOS has resolved to recommend the proposal of the DPGC of Department of Electrical and Electronics Engineering to start a New M.Tech Programme in Power Electronics and Control (PE&C) with intake of 18 by splitting the intake of the</p>	

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

Intake seats of existing M.Tech in Power and Energy Systems as below without additional requirement of Financial support/infrastructure and faculty.

The DPGC has provided its recommendations on the Programme structure, suggested plan, credit requirements and course content for the conduct of the programme.

The details are attached as an Annexure - II, Page No. 3, 5-13

Sl. No	PG Programme	Proposed Intake (with Gate scholarships)	Proposed Self-financed seats	Proposed M-Tech (Research)
1	Existing: M-Tech in Power and Energy Systems (P&ES)	18	10	2
2	New: M-Tech in Power Electronics and Control (PE&C)	18	10	2

existing M.Tech programme on Power and Energy Systems and with 10 self- financed seats and two M.Tech (Research) seats.

It is resolved to recommend that the DPGC of the Department of Electrical and Electronics Engineering may provide appropriate justifications for the start of the new programme.

Further, it is recommended that the DPGC may deliberate on the curriculum for the new M.Tech programme by inviting experts from industry and academia (one each) and frame the curriculum based on the outcome of such a deliberation which may be submitted to Chairperson, BOS along with the justification.

The BoS resolved to authorize Chairperson, BOS to take appropriate decision on the acceptance of the curriculum for placing for Senate approval.

For further action by Chairperson, DPGC, EEE Department

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

2.2 Addition of one new elective course in M.Tech programme.

Proposal	BOS recommendation
<p>The DPGC of Department of Electrical and Electronics Engineering has proposed for the addition of the following new elective course in M.Tech programme (Power and Energy Systems)</p> <p>EE878 : Statistics for Machine Learning (3-0-2) 4</p> <p>The course content and other details are attached as Annexure-II, Page No. 3,4</p>	<p>The BOS resolved to recommend the proposal of DPGC of Department of Electrical and Electronics Engineering to add the new elective courses with the changed title as follows:</p> <p>EE878 Statistics for Data Analysis (3-0-2) 4</p>

For Senate approval

2.3 Change of course content and L-T-P structure of the elective courses EE430 and EE319

Proposal	BOS recommendation
<p>The DUGC of the Department of Electrical and Electronics Engineering has proposed to change the course content and L-T-P structure of the elective course EE430 and EE319 with details as below:</p> <p>EE430: Robot Dynamics and Control (3-0-2)4</p> <p>EE319: Neural Networks and Applications (3-0-2)4</p> <p>The details are attached as Annexure-II, Page No. 14, 15</p>	<p>The BOS resolved to recommend the proposal of DPGC of Department of Electrical and Electronics Engineering to change the course content and L-T-P structure of the elective course EE430 and EE319, but with the following titles as existing in 2022 curriculum.</p> <p>EE430 Introduction to Robot Dynamics and Control (3-0-2)4</p> <p>EE319 Neural Networks and Applications (3-0-2)4</p>

For Senate Approval

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

2.4. Change of Minimum credit requirement for B.Tech Honors degree in Electrical and Electronics Engineering from present 20 credits to 16 credits.

Proposal	BOS recommendation
The DUGC of the Department of Electrical and Electronics Engineering has proposed to change the minimum credit requirement for B.Tech Honors degree from present 20 credits to 16 credits.	The BOS resolved to recommend the proposal of the DUGC of the Department of Electrical and Electronics Engineering to change the minimum credit requirement for B.Tech Honors degree from present 20 credits to 16 credits.

For Senate approval

2.5. Addition of Four elective courses in the B.Tech Program.

Proposal	BOS recommendation
<p>The DUGC of the Department of Electrical and Electronics Engineering has proposed to add the following four elective courses in the UG Programme.</p> <p>EE403: Deep Neural Network (3-1-0) 4</p> <p>EE405: Deep Neural Network Laboratory (0-0-3) 2</p> <p>EE401: Time Series Analysis and Forecasting (4-0-0) 4</p> <p>EE407: Modelling of Electrical Machines (4-0-0) 4</p> <p>The course content and other details are attached as Annexure-II, Page No. 15-17, 21,22</p>	<p>The BOS resolved to recommend the proposal of the DUGC of the Department of Electrical and Electronics Engineering for the inclusion of the following two elective courses EE401 and EE407 with the course credit structure as below in the UG Programme</p> <p>EE401: Time Series Analysis and Forecasting (3-0-2) 4 EE407: Modelling of Electrical Machines (4-0-0) 4</p> <p>The BOS also resolved to not recommend the inclusion of the following two electives and suggested that it may be presented in the next BOS after discussion in the DFC regarding combining these two courses as one course with appropriate (L-T-P) C structure.</p>

For Senate approval

Reporting to Senate

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

	EE403: Deep Neural Networks (3-1-0) 4 EE405: Deep Neural Network Laboratory (0-0-3) 2				
ITEM No.: 38-BOS-3 Proposal of Department of Electronics and Communication Engineering					
3.1. Proposal to change the minimum credit required for final year B.Tech.					
<table><tr><th>Proposal</th><th>BOS recommendation</th></tr><tr><td>The DUGC of the Department of Electronics and Communication Engineering has proposed that the minimum credit requirement for final year students may be reduced to 6 from the existing 12 credits so as to allow them to focus on their major project.</td><td>The BOS resolved not to recommend the proposal of the DUGC of the department of Electronics and Communication Engineering on changing the minimum credit requirement for final year students from the existing 12 credits to 6 credits.</td></tr></table>	Proposal	BOS recommendation	The DUGC of the Department of Electronics and Communication Engineering has proposed that the minimum credit requirement for final year students may be reduced to 6 from the existing 12 credits so as to allow them to focus on their major project.	The BOS resolved not to recommend the proposal of the DUGC of the department of Electronics and Communication Engineering on changing the minimum credit requirement for final year students from the existing 12 credits to 6 credits.	Reporting to Senate
Proposal	BOS recommendation				
The DUGC of the Department of Electronics and Communication Engineering has proposed that the minimum credit requirement for final year students may be reduced to 6 from the existing 12 credits so as to allow them to focus on their major project.	The BOS resolved not to recommend the proposal of the DUGC of the department of Electronics and Communication Engineering on changing the minimum credit requirement for final year students from the existing 12 credits to 6 credits.				
3.2. Modification in the curriculum of M.Tech VLSI Design					
The DPGC of the Department of Electronics and Communication Engineering has proposed the following modifications in the curriculum of M.Tech VLSI Design.					
(a) Revision of the course contents of core course EC701 in M.Tech VLSI Design					

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

Proposal	BOS recommendation	
<p>The DPGC of Department of Electronics and Communication Engineering has proposed the Revision of the course contents of the following core course EC701: CMOS VLSI (4-0-0) 4, by moving Application oriented course contents of core course EC701 to an elective course EC806, where EC806 is renamed as Design and Modelling of Digital Systems.</p> <p>The revised course content for EC701 and other details are provided in Annexure - III Page No. 2, 4</p>	<p>BOS resolution: The BOS resolved that the DPGC of Department of Electronics and Communication Engineering may deliberate on these modifications by inviting the experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>	Reporting to Senate

(b) Revision of credits

Proposal	BOS recommendation	
<p>The DPGC of Department of Electronics and Communication Engineering has proposed to revise the L-T-P of the following course from (4-0-0)4 to (3-0-2) 4, while keeping total credits same and add some new references.</p> <p>EC704: VLSI Design Automation (3-0-2) 4</p> <p>EC792: High Performance Computing Architecture (3-0-2) 4</p> <p>EC802: Low Power VLSI Design (3-0-2) 4</p> <p>The details are attached as ANNEXURE-III, Page No.17</p>	<p>The BOS resolved to recommend the proposal of the DPGC of Department of Electronics and Communication Engineering to revise the L-T-P of the courses EC 704, EC 792 and EC 802 from (4-0-0)4 to (3-0-2) 4, while keeping total credits same and with the addition of some new references.</p>	For Senate Approval

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(c) Change of course from elective to core

Proposal	BOS recommendation
<p>Looking into importance of device modelling, the DPGC of the Department of Electronics and Communication Engineering has proposed to add the following course (EC706) as a core course in the first semester in place of EC791 Linear Algebra and Stochastic Process and to add EC791 in the elective courses list.</p> <p>EC706: Microelectronic Devices and Technology (4-0-4) 4</p> <p>The details are attached as ANNEXURE- III, Page No. 4,5</p>	<p>The BOS resolved that the DPGC of Department of Electronics and Communication Engineering may deliberate on these modifications by inviting the experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>

Reporting to Senate

(d) Revision of course syllabus and renaming of courses

The Proposal	BOS recommendation
<p>The DPGC of the Department of Electronics and Communication Engineering has proposed to rename the course EC806 Digital Design using FPGA as the following and revise the course syllabus.</p> <p>EC806: Design and Modelling of Digital Systems (2-0-3)4</p> <p>The details are attached as ANNEXURE- III, Page No. 6</p>	<p>The BOS resolved that the DPGC of Department of Electronics and Communication Engineering may deliberate on these modifications by inviting the experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>

Reporting to Senate

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(e) Suggested plan of study

The Proposal					BOS recommendation	Reporting to Senate
The DPGC of the Department of Electronics and Communication Engineering has proposed the modifications in the suggested plan study as presented below for M.Tech (VLSI Design).					The BOS resolved that the DPGC of Department of Electronics and Communication Engineering may deliberate on these modifications by inviting the experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.	
Revised Suggested Plan of Study						
Sl. No	Semester					
	I	II	III	IV		
1	EC701	EC703	EC729	EC730		
2	EC702	EC704				
3	EC705	EC792				
4	EC706	Elective 3				
5	Elective 1	EC727				
6	Elective 2	EC728				

3.3. Modification in M.Tech (Signal Processing and Machine Learning) curriculum.

The DPGC of the Department of Electronics and Communication Engineering has proposed the following modification in M.Tech (Signal Processing and Machine Learning) curriculum.

a) Change of Elective courses as core courses in M.Tech program (Signal Processing and Machine Learning)

The Proposal	BOS recommendation	Reporting to Senate
The DPGC of the Department of Electronics and Communication Engineering has proposed to add the following elective courses as	The BOS resolved that the DPGC of Department of Electronics and Communication Engineering may deliberate on these modifications by inviting the	

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

core courses in the M.Tech programme

EC765: Time Series Analysis and Data Science (4-0-0) 4 in place of **EC792** High Performance Computing Architectures and add **EC792** in the elective course list.

EC766: Deep Learning and Applications in place of **EC761**— Information Processing and Compression and **EC761** to be added to the list of elective courses.

The details are attached as **ANNEXURE- III, Page No. 5,7,8,17**

experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.

(b) Suggested Plan of Study for SPML

Proposal					BOS recommendation
The DPGC of the Department of Electronics and Communication Engineering has proposed for the modifications in the suggested plan study as presented below for M.Tech (Signal Processing and Machine Learning)					The BOS resolved that the DPGC of Department of Electronics and Communication Engineering may deliberate on these modifications by inviting the experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision
Suggested Plan of Study					
Sl. No.	Semester				
	I	II	III	IV	
1	EC791	EC765	EC789	EC790	
2	EC793	EC766			
3	EC762	EC763			
4	EC764	EC788			
5	EC787	Elective 2			
6	Elective 1	Elective 3			

**Reporting
to
Senate**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

3.4. Modification in M.Tech (Communication Engineering and Networks)

The DPGC of the Department of Electronics and Communication Engineering has proposed the following modifications in M.Tech **Communication Engineering and Networks** curriculum.

(a) Change of the Elective courses as core courses in M.Tech program (Communication Engineering and Networks)

Proposal	BOS recommendation
<p>The DPGC of the Department of Electronics and Communication Engineering has proposed to add the following elective courses as core courses in the M.Tech programme (Communication Engineering and Networks).</p> <p>(1)EC735: Signal Processing for Communication Systems (3-0-2) 4 in place of EC793-Signal Analysis and Processing and to add EC793 in the elective course list.</p> <p>(2) EC737: Nano-Photonics (4-0-0) 4 in place of EC733-Optical Networks and Switching and to add EC733 in the elective course list.</p> <p>The details are attached as ANNEXURE- III, Page No. 8,9</p>	<p>The BOS resolved that the DPGC of Department of Electronics and Communication Engineering may deliberate on these modifications by inviting the experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>

**Reporting
to
Senate**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(b) To replace the core course EC731 with EC738

Proposal	BOS recommendation
<p>The DPGC of the Department of Electronics and Communication Engineering has proposed to add</p> <p>EC738-Next generation Wireless Systems and Networks: (4-0-0) 4</p> <p>as a core course in place of</p> <p>EC731 Wireless Communication and Networks (4-0-0)4 and to add EC731 as an elective course</p> <p>The details are attached as ANNEXURE- III, Page No. 10</p>	<p>The BOS resolved that the DPGC of Department of Electronics and Communication Engineering may deliberate on these modifications by inviting the experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>

**Reporting
to
Senate**

c) Revision of the references

Proposal	BOS recommendation
<p>The DPGC of the Department of Electronics and Communication Engineering has proposed to revise the references of the following course</p> <p>EC732: RF Circuit Design (4-0-0) 4</p> <p>The details are attached as ANNEXURE-III, Page No.9</p>	<p>The BOS resolved to recommend the proposal of DPGC of the Department of Electronics and Communication Engineering for the revision of the references for EC732.</p>

**For Senate
Approval**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(d) Introduction of new elective courses

Proposal	BOS recommendation
<p>The DPGC of the Department of Electronics and Communication Engineering has proposed to introduce the following new Elective courses for the M.Tech program in Communication Engineering and Networks.</p> <p>EC854: RF Transceiver System Design for Wireless Communication (4-0-0) 4</p> <p>EC855: VLSI for Wireless Communication (4-0-0) 4</p> <p>EC856: Modern Error Control Codes for Wireless and Storage Systems (4-0-0) 4</p> <p>EC857: Wireless Optical Communication (4-0-0) 4</p> <p>EC858: Multi-User Communications and Networks(4-0-0) 4</p> <p>The course content and other details are attached as Annexure-III, Page No. 10-12, 15,16</p>	<p>The BOS resolved to recommend the proposal of the DPGC of the Department of Electronics and Communication Engineering to introduce the new Elective courses for the M.Tech program in Communication Engineering and Networks.</p> <p>The BOS has resolved that the DPGC of the Department of Electronics and Communication Engineering may provide the course content for these courses in brief for inclusion in the curriculum. The revised course content for these courses are provided in Annexure III Page No. 15, 16</p>

**For
Senate
Approval**

**For
Senate
Approval**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(e) Modification in the suggested plan of study

Proposal	BOS recommendation																																							
<p>The DPGC of Department of Electronics and Communication Engineering has proposed the following suggested plan of study for Communication Engineering and Networks</p>	<p>The BOS resolved that the DPGC of Department of Electronics and Communication Engineering may deliberate on these modifications by inviting the experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>																																							
<table><tr><th rowspan="2">Sl No</th><th colspan="4">Semester</th></tr><tr><th>I</th><th>II</th><th>III</th><th>IV</th></tr><tr><td>1</td><td>EC737</td><td>EC738</td><td>EC 759</td><td>EC760</td></tr><tr><td>2</td><td>EC732</td><td>EC734</td><td></td><td></td></tr><tr><td>3</td><td>EC791</td><td>EC758</td><td></td><td></td></tr><tr><td>4</td><td>EC735</td><td>EC736</td><td></td><td></td></tr><tr><td>5</td><td>EC757</td><td>Elective 2</td><td></td><td></td></tr><tr><td>6</td><td>Elective 1</td><td>Elective 3</td><td></td><td></td></tr></table>	Sl No	Semester				I	II	III	IV	1	EC737	EC738	EC 759	EC760	2	EC732	EC734			3	EC791	EC758			4	EC735	EC736			5	EC757	Elective 2			6	Elective 1	Elective 3			
Sl No		Semester																																						
	I	II	III	IV																																				
1	EC737	EC738	EC 759	EC760																																				
2	EC732	EC734																																						
3	EC791	EC758																																						
4	EC735	EC736																																						
5	EC757	Elective 2																																						
6	Elective 1	Elective 3																																						

Reporting to Senate

3.5. Inclusion of 900 level course

Proposal	BOS recommendation
<p>The DRGC of Department of Electronics and Communication Engineering has proposed to include the following 900 level course for Ph.D.</p> <p>EC915: Advanced VLSI Fabrication Processes 4</p> <p>The course content and other details are attached as Annexure-III, Page No. 13</p>	<p>The BOS resolved to recommend the proposal of the DRPC of the department of Electronics and Communication Engineering to include the 900 level course EC915 for Ph.D.</p>

For Senate approval

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

Item No.: 38-BOS-4: Proposals of the Department of Information Technology

(a) Minor changes in Programme Specific Elective course for B.Tech in Information Technology.

Proposal	BOS recommendation
<p>The DFC of the Department of Information Technology has proposed for the minor changes in the following Programme Specific Elective courses for B.Tech in Information Technology.</p> <p>1. IT407: Technologies for Internet of Things (3-0-2) 4 credits</p> <p>The details are attached as Annexure- IV, Page No. 2,3</p>	<p>The BOS resolved to recommend the proposal of the Department of Information Technology for the minor changes in Programme Specific Elective courses for B.Tech in Information Technology.</p>

**For
Senate
approval**

(b) Minor changes in Programme core and minor courses IT301/IT301M

Proposal	BOS recommendation
<p>The DFC of the Department of Information Technology has proposed minor changes in the following programme core and minor courses for B.Tech.</p> <p>1. IT301/IT301M: Parallel Computing (3-0-2) 4 credits.</p> <p>The modified course content details are attached as Annexure- IV, Page No. 2,4</p>	<p>The BOS resolved to recommend the proposal of DFC of the Department of Information Technology for the minor changes in course content details of the Programme core and minor courses for B.Tech.</p>

**For
Senate
approval**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(c) Minor changes in Programme Specific Elective courses for M.Tech in Information Technology

Proposal	BOS recommendation
<p>The DFC of the Department of Information Technology has proposed for the minor changes in the following course</p> <p>IT825: Designing Internet of Things (3-0-2) 4 credits</p> <p>The modified course content details attached as Annexure-IV, Page No. 2,3</p>	<p>The BOS resolved to recommend the proposal of the DFC of Department of Information Technology for the minor changes in the course contents details of the following course.</p> <p>IT825: Designing Internet of Things (3-0-2) 4 credits</p>

**For
Senate
approval**

ITEM No: 38-BOS-5: Proposals of Department of Mathematics and Computational Science

(a) Inclusion of new elective in the curriculum of M.Tech (CDS)

Proposal	BOS recommendations
<p>The DFC of Department of Mathematical and Computational Science (MACS) has proposed to include the following new elective in M.Tech (CDS)</p> <p>MA871:Data Structures and Algorithms (4-0-0) 4</p> <p>The course content and other details are attached as ANNEXURE-V, Page No. 3</p>	<p>The BOS resolved to recommend the proposal of the DFC of Department of Mathematical and Computational Science for the inclusion of the new elective MA 871 by adding laboratory exercises in the content with course credit structure as follows:</p> <p>MA871:Data Structures and Algorithms (3-0-2) 4</p>

**For
Senate
approval**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(b) Change of course title of Ph.D (900 level) course		For Senate approval
Proposal	BOS recommendations	
<p>The DFC of Department of Mathematical and Computational Science (MACS) has proposed to Change the title, (L-T-P) credits and course contents of the following course.</p> <p>MA939: Topics of Functional Equations (3-0-0) 3 to</p> <p>MA939 Theory of Functional Equations (4-0-0)4</p> <p>The Revised course content and other details are attached as ANNEXURE-V, Page No. 4</p>	<p>The BOS resolved to recommend the proposal of the DFC of Department of Mathematical and Computational Science (MACS) to change the title, (L-T-P) credits and course contents of the course MA 939.</p>	
(c) Change of course titles		For Senate approval
Proposal	BOS recommendations	
<p>The DFC of the Department of Mathematical and Computational Science (MACS) has proposed to Change the following course titles:</p> <p>i) MA 607: Database Management Systems to MA 607: Database Systems (MCA)</p> <p>ii) MA660: Advanced Database Management Systems to MA660: Advanced Database Systems (MCA)</p> <p>iii) MA709: Database Management to MA709: Database Systems (Other M.Tech)</p> <p>iv) MA922: Advanced Database Management Systems to MA 922 Advanced Database Systems (Ph.D level)</p> <p>The details are attached as ANNEXURE-V, Page No. 1, 5</p>	<p>The BOS resolved to recommend the proposal of the DFC of Department of Mathematical and Computational Science (MACS) to change of the course titles for MA607, MA660, MA709 and MA922.</p>	

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(d) Change of credits

Proposal	BOS recommendations	For Senate approval
<p>The DFC of the Department of Mathematical and Computational Science (MACS) has proposed to Change the credits of the following course</p> <p>MA924 : Analysis & Design of Algorithms (3-0-0) 3 to MA924 : Analysis & Design of Algorithms (4-0-0) 4 with revised course Content</p> <p>The details are attached as ANNEXURE-V, Page No. 1,5</p>	<p>The BOS resolved to recommend the proposal of the DFC of Department of Mathematical and Computational Science (MACS) to Change the credits of the course MA 924 from (3-0-0) 3 to (4-0-0) 4 with the revised content.</p>	

**ITEM No.: 38-BOS-6: Proposals of Department of
Mechanical Engineering**

(a) Inclusion of new electives in the final year B.Tech Mechanical Engineering.

Proposal	BOS recommendations	For Senate approval
<p>The DUGC of the Department of Mechanical Engineering has proposed to include the following electives for B.Tech Mechanical Engineering with changes in the title and L-T-P course ME444.</p> <p>1. ME442 Aerodynamics (3-0-0)3</p> <p>2. ME443 Mechanical Vibration and Acoustics (3-0-0)3</p> <p>3. ME444 Data Processing in Machine Learning (3-0-0)3</p> <p>The course contents and other details are attached as Annexure - VI Page No. 2, 5,17,18</p>	<p>The BOS resolved to recommend the proposal of the DUGC of Department of Mechanical Engineering to include the following electives for B.Tech Mechanical Engineering as proposed.</p> <p>ME442 Aerodynamics (3-0-0-)3</p> <p>ME443 Mechanical Vibration and Acoustics (3-0-0)3</p> <p>Further, BOS resolved to recommend the inclusion of ME444 with the change in title as Data driven Modeling using Machine learning and (L-T-P) C structure as (3-1-0)4</p>	

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(b) Inclusion of new elective for M.Tech (Thermal Engineering) programme.

Proposal	BOS recommendations	Reported to Senate
<p>The DPGC of the Department of Mechanical Engineering has proposed the inclusion of the following electives for the M.Tech programme.</p> <p>1. ME874 Conduction and Radiation (3-0-0)3</p> <p>2. ME875 Convective heat transfer (3-0-0)3</p> <p>The course content details are attached as Annexure - VI, Page No. 2.8-10</p>	<p>The BOS resolved not to recommend the proposal of the DPGC of Department of Mechanical Engineering for inclusion of the courses ME 874 and ME 875 as electives for M.Tech.</p> <p>The BOS suggested that the DPGC may provide the detailed course content to show the appropriateness of these courses as PG level electives and present the same in the next BOS for decision.</p>	

(c) Revision in the course content

Proposal	BOS recommendations	For Senate approval
<p>The DPGC of the Department of Mechanical Engineering has proposed to revise the course content of the following course.</p> <p>ME704: Metal Casting Processes (3-0-0)3</p> <p>ME704 is added with Laboratory component "Solidification simulation Laboratory". The theory content of the course is not modified and total credits remain same as 3 credits. With the addition of laboratory content, the credit distribution is changed to (2-0-2)3</p> <p>The course content details are attached as an Annexure - VI, Page No. 2,8, 11-12</p>	<p>The BOS resolved to recommend the proposal of the DPGC of Department of Mechanical Engineering for revision of the course content of the course -</p> <p>ME704: Metal Casting Processes (3-0-0)3 with addition of Laboratory component "Solidification simulation Laboratory" and the change of (L-T-P) C structure from (3-0-0)3 to (2-0-2)3</p>	

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

ITEM No.: 38-BOS-7: Proposals of Department of Metallurgical and Materials Engineering

Proposal	BOS recommendations	For Senate approval
<p>The DUGC of the Department of Metallurgical and Materials Engineering has proposed the request of III year UG students for the inclusion of SM300: Engineering Economics as a Humanities and Social Science Core (HSC) in the curriculum of the B.Tech VI Semester for the Metallurgical and Materials Engineering</p> <p>The details are provided as Annexure - VII, Page No. 1-9, 10,13</p>	<p>The BOS resolved to recommend the proposal of the DUGC of the Department of Metallurgical and Materials Engineering for the inclusion of SM300: Engineering Economics as a Humanities and Social Science Core (HSC) in the curriculum of the B.Tech Metallurgical and Materials Engineering in VI Semester with the consequential increase in the HSC credits from 6 to 9 and the Minimum total number of credits to be earned for the award of B.Tech degree from 165 to 168 credits.</p>	

ITEM No.: 38-BOS-8: Proposals of Department of School of Humanities, Social Sciences and Management

(a) Revision of the course content for SM302 of UG program

Proposal	BOS recommendation	For Senate approval
<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to revise the course content of the following Course for B.Tech programme.</p> <p>SM302 : Principles of Management (3-0-2)3</p> <p>The revised course content and details are provided in Annexure- VIII Page 6,22</p>	<p>The BOS resolved to recommend the proposal of the DFC of School of Humanities, Social Sciences and Management to revise the course content of the following Course for B.Tech programme.</p> <p>SM302 : Principles of Management (3-0-2)3</p>	

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(b) Integrate two courses on Entrepreneurship offered to all branches of the B.Tech program as a new course

Proposal	BOS recommendation
<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to integrate the following two courses (SM451 and SM459) on Entrepreneurship offered to all branches of the B.Tech program and offer a new course SM460.</p> <p><u>Existing</u></p> <p>SM451: Foundation course on Entrepreneurship</p> <p>SM459: Advanced Course on Entrepreneurship</p> <p><u>New course</u></p> <p>SM460: Contemporary Entrepreneurship (3-1-0)4</p> <p>The details are provided in Annexure- VIII Page 6, 22</p>	<p>The BOS resolved to recommend the proposal of DFC of the School of Humanities, Social Sciences and Management to integrate the two courses (SM451 and SM459) on Entrepreneurship offered to all branches of the B.Tech program and offer a new course SM460.</p>

For Senate approval

(c) Revise and revamp the course content of the courses in MBA program

Proposal	BOS recommendation
<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to revise the course content of the following courses.</p>	<p>The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by</p>

Reporting to Senate

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

SM713:Financial Accounting
SM714:Managerial Economics
SM721: Managerial Accounting Course
SM722:Marketing Management
SM724:Operational Management
SM725: Financial Management
SM731: Strategic Management
SM831:International Financial Management
SM823: Brand Management
SM859: Machine Learning for Business Management
SM824: Consumer Behaviour
SM864: International Business Management

inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.

(d) Renaming the Courses

Proposal	BOS recommendation
<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to rename the following courses.</p> <p>SM711:Research Methodology renamed as Business Research Methods (SM-728). This course shall be moved from the first semester to second semester MBA.</p> <p>SM716: Corporate Communication renamed as Managerial Communication with revision</p>	<p>The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>

**Reporting to
Senate**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

in course content by adding a few more topic to it.

SM738: Summer Internship project renamed as Internship and credits shall be reduced from 8 to 3

SM748: Term Paper to be renamed as **Major Project** and **credits shall be changed from 3 to 8**

SM825: Marketing Research renamed as **Research for Marketing Decisions** with revised and updated content and references.

SM832: Banking, Financial Services and Insurance renamed as **Banking and Financial Intermediation** with revised content and updated reference.

SM846: Supply Chain Management renamed as **Logistics and Supply Chain Management**

SM847: Forecasting models shall be renamed as **Demand Forecasting** and moved from Analytic Group to Operations Group (G4)

SM860: Data Analytics: Business Decision making renamed as **Multivariate Modeling** with revision of course content.

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(e) Renaming of Group 5: Analytics as Information Systems and Analytics

Proposal	BOS recommendations
The DFC of the School of Humanities, Social Sciences and Management has proposed to rename the Group 5 Analytics as Information Systems and Analytics.	The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.

**Reporting to
Senate**

(f) To remove all seminar courses from Mandatory Learning courses and introduce three new courses

Proposal	BOS recommendations
<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to remove all seminar courses (SM719, SM729 and SM739) from Mandatory Learning courses and introduce the following three new courses</p> <p>SM710: Basic course on SPSS/SAS, TABLEAU/POWERBI (Lab course) 1 credit</p> <p>SM720: Basics of R/PYTHON (Lab course) 1 credit</p> <p>SM730: Corporate Grooming 1 credit</p>	<p>The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>

**Reporting to
Senate**

(g) Removal of the Courses

Proposal	BOS recommendations
The DFC of the School of Humanities, Social Sciences and Management has proposed	The BOS resolved that the DPGC of School of Humanities, Social

**Reporting to
Senate**

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

<p>(i) to remove the Marketing courses viz. SM819, SM821, SM827, SM828 and SM830 from Group 2.</p> <p>(ii) to remove SM854 Product processing from Analytics – Group 5</p> <p>(iii) to remove SM862: Contemporary Issues in Management from Group G – General Electives.</p>	<p>Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>				
<p>(h) Rectify the (L-T-P) credits</p>					
<table><tr><th>Proposal</th><th>BOS recommendations</th></tr><tr><td><p>The DFC of the School of Humanities, Social Sciences and Management has proposed to rectify the discrepancy in the credits of the course SM718 Spreadsheet Modelling for Business and L-T-P changed from (2-0-2)2 to (2-0-2)3.</p></td><td><p>The BOS resolved to recommend the proposal of the DFC of School of Humanities, Social Sciences and Management to rectify the discrepancy in the credits of the course SM718 Spreadsheet Modelling for Business and L-T-P changed from (2-0-2)2 to (2-0-2)3.</p></td></tr></table>	Proposal	BOS recommendations	<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to rectify the discrepancy in the credits of the course SM718 Spreadsheet Modelling for Business and L-T-P changed from (2-0-2)2 to (2-0-2)3.</p>	<p>The BOS resolved to recommend the proposal of the DFC of School of Humanities, Social Sciences and Management to rectify the discrepancy in the credits of the course SM718 Spreadsheet Modelling for Business and L-T-P changed from (2-0-2)2 to (2-0-2)3.</p>	<p>For Senate Approval</p>
Proposal	BOS recommendations				
<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to rectify the discrepancy in the credits of the course SM718 Spreadsheet Modelling for Business and L-T-P changed from (2-0-2)2 to (2-0-2)3.</p>	<p>The BOS resolved to recommend the proposal of the DFC of School of Humanities, Social Sciences and Management to rectify the discrepancy in the credits of the course SM718 Spreadsheet Modelling for Business and L-T-P changed from (2-0-2)2 to (2-0-2)3.</p>				
<p>(i) Adding a new course</p>					
<table><tr><th>Proposal</th><th>BOS recommendations</th></tr><tr><td><p>The DFC of the School of Humanities, Social Sciences and Management has proposed to add the following new courses to Human Resource Management of Group-1.</p><p>SM817: Management consulting (3-0-0) 3</p><p>SM838: Project Finance – A new course has been added to the Finance Group with (3-0-0)3 credits.</p><p>SM839: Behavioural Finance and Value Investing (3-0-0)3 added to</p></td><td><p>The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p></td></tr></table>	Proposal	BOS recommendations	<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to add the following new courses to Human Resource Management of Group-1.</p> <p>SM817: Management consulting (3-0-0) 3</p> <p>SM838: Project Finance – A new course has been added to the Finance Group with (3-0-0)3 credits.</p> <p>SM839: Behavioural Finance and Value Investing (3-0-0)3 added to</p>	<p>The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>	<p>Reporting to Senate</p>
Proposal	BOS recommendations				
<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to add the following new courses to Human Resource Management of Group-1.</p> <p>SM817: Management consulting (3-0-0) 3</p> <p>SM838: Project Finance – A new course has been added to the Finance Group with (3-0-0)3 credits.</p> <p>SM839: Behavioural Finance and Value Investing (3-0-0)3 added to</p>	<p>The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>				

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

the Finance Elective group (Group 3).

SM840: Financial Modelling added to the Finance Elective with (3-0-0)3 Credits.

SM848: Digital Transformation (3-0-0) to Operations group.

SM849: TQM and Lean Management (3-0-0)3 added to the Operations Elective.

(j) Moving of the courses across the groups

Proposal	BOS recommendations	Reporting to Senate
<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to move</p> <p>SM857 HR Analytics and SM858 Marketing Analytics from the</p> <p>Analytics Group to Human Resource Management and Marketing Groups respectively.</p> <p>SM855: Forecasting Models be moved to the Operations Elective Group from Analytics group.</p>	<p>The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>	

(k) Splitting of a course to two new courses

Proposal	BOS recommendations	Reporting to Senate
<p>The DFC of the School of Humanities, Social Sciences and Management has proposed to split</p> <p>SM856: Introduction to Management Science and Big Data course to two new courses namely; SM872 – Decision Science (3-0-0)3 and SM873-Big Data analytics (3-0-0)3 with the new course content to both the two courses.</p>	<p>The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>	

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**

(l) Introducing new elective

Proposal	BOS recommendations
<p>The DFC of the School of Humanities, social Sciences and Management has proposed to introduce a new elective</p> <p>SM817: Management Consulting (3-0-0) 3</p>	<p>The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.</p>

**Reporting to
Senate**

(m) Proposal for modification in suggested plan of study for MBA

Proposal					BOS recommendations
The DFC of the School of Humanities, Social Sciences and Management has proposed for modification in suggested plan of study as below for MBA programme.					The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.
Suggested plan of study					
Sl. No.	Semester				
	I	II	III	IV	
1	SM710	SM720	SM730	SM741	
2	SM712	SM721	SM731	Elective	
3	SM713	SM722	SM733	Elective	
4	SM714	SM723	Elective 1	Elective	
5	MA715	SM724	Elective 2	Elective	
6	SM716	SM725	Elective 3	SM748	
7	SM718	SM726	Elective 4		
8	SM717	SM727	SM738		
9	----	SM728			

**Reporting to
Senate**

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL**


Proposal		BOS recommendations	Reporting to Senate
Credit Requirements		The BOS resolved that the DPGC of School of Humanities, Social Sciences and Management may deliberate on these modifications by inviting experts for the DPGC meeting and the DPGC recommendations based on the expert opinion may be placed in the next meeting of the BOS for decision.	
Category	Minimum Credits to be Earned		
Foundation Courses	≥ 23		
Functional Courses	≥ 29		
Elective Courses	≥ 24		
Mandatory Learning Courses (MLC)	3		
Major Project	8		


ITEM No: 38-BOS-9: Inclusion of External Additional Guides

A) Department of Mathematical and Computational Sciences

Proposal	BOS recommendations	Reporting to Senate
<p>DRPC of Department of Mathematical and Computational Sciences has proposed that Dr.Himadri Mukherjee, Asst Professor, BITS Pilani be considered as an Additional Research Guide for the Ph.D student Mr. Ajay P. Joseph.</p> <p>The details are enclosed as Annexure-IX Page 1-10.</p>	<p>The BOS resolved not to consider Dr.Himadri Mukherjee, Asst Professor, BITS Pilani as an Additional Research Guide for the Ph.D student Mr. Ajay P. Joseph.</p>	

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


Secretary – BOS, NITK


Chairman-BOS, NITK