Minutes of

Online Board of Studies Meeting of Electronics and Telecommunication Engineering

held on 21.12.2021

Agenda of the BoS

(Approved by the Academic Development Cell for all BoS Meetings Scheduled during December2021)

Instructions for preparing BoS Proceedings

{All information is to be uploaded on the webpage under suitable heading (such as Board of Studies) and separate links to be provided for each category mentioned below}

1.

Summary of BoS minutes

Courses where revision was carried out*

(Course/subject name)	Course Code	Year/Date of introduction	Year/Date of revision	Percentage of content added or replaced	Agenda Item No.	Page No.	Link of relevant documents/minutes
Digital Circuits and Systems	200411	2015	2021	10% deleted 8% added	11	35	Annexure A
Analog Communication	200413	2015	2021	5% deleted 5% added	11	37	Annexure B

Courses focusing on employability/entrepreneurship/ skill development*

(Course/subject name)	Course Code	Activities/contents which have a bearing on increasing skill and employability	Agenda Item No.	Page No.	Link of relevant documents/minutes
Optical Communication	200611	Signal Degradation in Optical Fibres, Optical Communication and Networks	7	24	Annexure IV
Antenna and Wave Propagation	200612	Antenna Arrays, Aperture and special Antennas, Microstrip Patch Antenna	7	25	Annexure IV
Telecom Switching and Network	200613	Telephone Networks, Switching, Traffic Engineering, Data networks	7	26	Annexure IV
Intelligent Control	900104	Modeling of Control System, Hybrid Control, Fuzzy Controllers	9	27	Annexure V
Embedded System	900105	8051 microcontroller, Serial port, interrupt Programming, Interfacing real world devices with 8051 microcontroller, Interfacing real world devices with Arduino	9	28	Annexure V

New Courses added*

(Course/subject name)	Course Code	Activities/contents which have a bearing on increasing skill and employability	Agenda Item No.	Page No.	Link of relevant documents/minutes
Digital Filter Design		Finite Impulse Response Digital Filters, Infinite Impulse Response Digital Filters	4	17	Annexure II
EEG Signal Processing		Fundamentals of EEG Signal Processing, Event-Related Potentials, Seizure Signal Analysis	4	18	Annexure II
Optical Networks		Optical network components, Optical network architecture, Advance Optical Networks	4	19	Annexure II
Analog Integrated Circuits	200412	Power Amplifiers, Multivibrator Design using 555 IC, Operational Amplifier	11	36	Annexure VII

Feedback on curriculum received from stakeholders: Analysis& ATR*

Stakeholder	Student	Faculty	Alumni	Employer
No. of responses	ET I : 110	12	31	6

		ET II: 97 ET III: 46 ET IV: 98			
	Link of Analysis	ANNEXURE XIII			
	ATR Link				
	Link showing Excel sheet of Google Form details of stakeholders	shorturl.at/dmAQR	shorturl.at/bstER	shorturl.at/goBXY	shorturl.at/jqJU0

Minutes of the online Board of studies meeting on 21-12-2021

Following members have attended the online meeting;

1.	Dr. Laxmi Shrivastava	Chairperson, Associate Professor and Head
2.	Prof. Jyoti Singhai	RGPV nominee by Academic Council, Professor, MANIT, Bhopal
3.	Dr N S Ragava	External Member, Professor, ECE Deptt., DTU, Delhi
4.	Er. Pankaj Agarwal	Alumni, External member, Assistant Engineer, UP Power Corporation Limited
5.	Prof. P. K. Singhal	Professor
6.	Dr. V. V. Thakare	Associate Professor
7.	Dr. R. P. Narwaria	Assistant Professor
8.	Dr. Karuna Markam	Assistant Professor
9.	Prof. Madhav Singh	Assistant Professor
10.	Prof. D. K. Parsediya	Assistant Professor
11.	Dr. Sandeep Sharma	Assistant Professor
12.	Dr. Vikas Mahor	Assistant Professor
13.	Dr. Rahul Dubey	Assistant Professor
14.	Dr. Hemant Choubey	Assistant Professor
15.	Dr. Deepak Batham	Assistant Professor
16.	Dr. Varun Sharma	Assistant Professor
17.	Dr. Shubhi Kansal	Assistant Professor
18.	Dr. Sushmita Chaudhary	Assistant Professor
19.	Dr. Dinesh Rano	Assistant Professor

Following external members could not attend the meeting:

1. Dr Alok Jain, V.C. Nominee, RGPV, Professor, SATI, Vidisha
2. Er. Gaurav Tripathi, Representative from industry/ corporate sector/ allied area External member, Sr. Enterprise Architect, HCL Technologies SEZ, Noida

At the onset, the chairperson welcomed external members to the meeting of BoS and placed the agenda for the deliberation to the members. The following deliberations were made as per the items of circulated agenda:

- Minutes of the last BoS held on 08-06-2021 were confirmed.

BoS Agenda Items	
Item 1	To propose the **scheme structure of VIII Semester** with the provision of Two Departmental Electives and one Open Category (OC)Course**, to be offered in online mode** with credit transfer for the batch admitted in 2018-19. The scheme structure for VIII Semester with the provision of two departmental electives has been discussed and finalized. Same can be find out in Annexure-I(A), and Annexure I(B).
Item 2	To propose the list of courses which the students can opt from SWAYAM/NPTEL/ other MOOC Platforms/ Institution (MITS) MOOC, to be offered in ***online mode under Departmental Elective (DE) category,*** for credit transfer in the ***VIII Semester*** under the flexible curriculum (*Batch admitted in 2018-19)* Following are the lists of courses finalized which the students can opt from SWAYAM/NPTEL/ other MOOC Platforms/ Institution (MITS) MOOC, to be offered in ***online mode under Departmental Elective (DE) category,*** for credit transfer in the ***VIII Semester*** under the flexible

curriculum (*Batch admitted in 2018-19)*

S.No	Category Code	Course Code	Name of The course	Duration of the Course in weeks	Course Registration		Name of the Mentor Faculty
					Start Date	End Date	
Electronics/Electronics & Telecommunication Engineering							
1	DE-5	200854	Fundamental of power Electronics	12	12-11-2020	31-01-2021	Dr. R P Narwaria
2		200855	Biomedical Signal Processing	12	12-11-2020	31-01-2021	Dr. Hemant Chaubey
3		200853	Power Management Integrated Circuits	12	12-11-2020	31-01-2021	Dr. Vikas Mahor
4	DE-6	200861	Design and Analysis of VLSI Subsystems	12	12-11-2020	31-01-2021	Dr. Shubhi Kansal
5		200862	An Introduction to Information Theory	08	12-11-2020	31-01-2021	Prof. Pooja Sahoo
6		200863	Fundamentals of MIMO Wireless Communication	08	12-11-2020	31-01-2021	Dr. Karuna Markam

Item 3

To propose the list of courses which the students can opt from SWAYAM/NPTEL/MOOC Platform, to be offered in ***online mode from*** SWAYAM/NPTEL/MITS MOOCs/ other MOOC Platforms) ***under Open Category (OC)*** Courses, for credit transfer in the ***VIII Semester under*** the flexible curriculum (*Batch admitted in 2018-19)*

Following is the list of courses which the students can opt from SWAYAM/NPTEL/MOOC Platform, to be offered in ***online mode from*** SWAYAM/NPTEL/MITS MOOCs/ other MOOC Platforms) ***under Open Category (OC)*** Courses, for credit transfer in the ***VIII Semester under*** the flexible curriculum (*Batch admitted in 2018-19)*

S.No	Category Code	Course Code	Name of The course	Duration of the Course in weeks	Course Registration		Name of the Mentor Faculty
					Start Date	End Date	
Electronics/Electronics & Telecommunication Engineering							
1	OC-4	900601	Linear Dynamical System	12	12-11-2020	31-01-2021	Prof. D K Parsedia
2		900602	Sensors and Actuators	12	12-11-2020	31-01-2021	Dr Sushmita Chaudhari

Item 4

To propose the course and syllabi of MITS*MOOC* Course along with the Course Outcomes for credit transfer in the *VIII Semester* under the flexible curriculum *(Batch admitted in 2018-19)*

Course and syllabi of MITS MOOCS have been discussed and finalized with the consent of external and Internal member of BoS. Same can be find out in Annexure-II.

S.No	Subject Code	Subject Name
1	200861	Digital Filter Design
2	200862	EEG Signal Processing

3	200863	Optical Networks

Item 5

To propose the list of "Additional Courses" which can be opted for getting an

(i) Honours (for students of the host department)

(ii) Minor Specialization (for students of other departments)

*[These will be offered through SWAYAM/NPTEL/MOOC based Platforms for the **VI semester** (for the batch admitted in 2019-20) and for **VIII semester students** (for the batch admitted in 2018-19)]*

Following are the lists of "Additional Courses" which can be opted for getting an

(i) Honours (for students of the host department)

(ii) Minor Specialization (for students of other departments)

*[These will be offered through SWAYAM/NPTEL/MOOC based Platforms for the **VI semester** (for the batch admitted in 2019-20) and for **VIII semester students** (for the batch admitted in 2018-19)]*

Category	Semester	Name of The course	Duration of the Course in weeks	Course Registration		Name of the Mentor Faculty
				Start Date	End Date	
Electronics/Electronics & Telecommunication Engineering (VI Semester)						
Hons	VI	Electromagnetic Waves in Guided and Wireless Media	08	12 Nov 2021	21 Feb 2022	Dr. Vandana Vikas Thakare
	VI	CMOS Digital VLSI Design	12	12 Nov 2021	31 Jan 2022	Prof. Madhav Singh
	VI	Multirate DSP	12	12 Nov 2021	31 Jan 2022	Dr. Dinesh Rano
Minors	VI	Integrated Circuits, MOSFETs, Op-Amps and their Application	12	12 Nov 2021	31 Jan 2022	Prof. D K Parsedia
	VI	Principles of Digital Communications	12	12 Nov 2021	31 Jan 2022	Dr. Sushmita Chaudhari
Electronics/Electronics & Telecommunication Engineering (VIII Semester)						
Hons	VIII	Architectural Design of Digital Integrated Circuits	12	12 Nov 2021	31 Jan 2022	Dr. Shubhi Kansal
	VIII	Nonlinear System Analysis	08	12 Nov 2021	31 Jan 2022	Dr. Deepak Batham
	VIII	Computer Vision and Image Processing - Fundamentals and Applications	12	12 Nov 2021	31 Jan 2022	Dr. Rahul Dubey
Minors	VIII	An Introduction to Information Theory	08	12 Nov 2021	31 Jan 2022	Prof. Pooja Sahoo
	VIII	Signal Processing Techniques and its Applications	12	12 Nov 2021	31 Jan 2022	Dr. Rahul Dubey

Item 6

To review and finalize the syllabi for all ***Departmental Core (DC) Courses*** of ***VI Semester (for batches admitted in 2019-20)*** under the flexible curriculum along with their COs

Syllabi for all ***Departmental Core (DC) Courses*** of ***VI Semester (for batches admitted in 2019-***

20) under the flexible curriculum along with their COs have been discussed and finalized. Same can be find out in Annexure-III.

S.No	Subject Code	Subject Name
1	200601	Digital Signal Processing
2	200602	Data Communication

Item 7

To review and finalize the courses & syllabi to be offered ***(for batches admitted in 2019-20)*** under ***Departmental Elective (DE) Courses*** in the ***VI Semester***

Courses & syllabi to be offered ***(for batches admitted in 2019-20)*** under ***Departmental Elective (DE) Courses*** in the ***VI Semester*** has been discussed and finalized with the consent of external and Internal BOS members. Same can be find out in ANNEXURE-IV.

S.No	Subject Code	Subject Name
1	200611	Optical Communication
2	200612	Antenna & wave Propagation
3	200613	Telecom Switching and Networks

Item 8

To propose the list of courses from SWAYAM/NPTEL/MOOC Platforms to be offered ***(for batches admitted in 2019-20)*** in online mode under ***Departmental Elective (DE) Courses*** with credit transfer, in the ***VI Semester***

The list of courses from SWAYAM/NPTEL/MOOC Platforms to be offered ***(for batches admitted in 2019-20)*** in online mode under ***Departmental Elective (DE) Courses*** with credit transfer, in the ***VI Semester***has been finalized.

S.No	Category Code	Course Code	Name of The course	Duration of the Course in weeks	Course Registration		Name of the Mentor Faculty
					Start Date	End Date	
Electronics/Electronics & Telecommunication Engineering							
1	Departmental Elective (DE-2)	200651	Spread Spectrum Communications and Jamming	12	12 Nov 2021	31 Jan 2022	Dr. Sandeep Sharma
2		200652	Digital IC Design	12	12 Nov 2021	31 Jan 2022	Dr Varun Sharma
3		200653	Fuzzy Sets, Logic and Systems & Applications	12	12 Nov 2021	31 Jan 2022	Dr Deepak Batham

Item 9

To review and finalize the courses & syllabi to be offered ***(for batches admitted in 2019-20)*** under the ***Open Category (OC) Courses***(in traditional mode) for ***VI semester*** students of other departments along with their COs

The courses & syllabi to be offered ***(for batches admitted in 2019-20)*** under the ***Open Category (OC) Courses*** (in traditional mode) for ***VI semester*** students of other departments along with their COs has been discussed and finalized. Same can be find out in ANNEXURE-V.

S.No	Subject Code	Subject Name
1	900104	Intelligent Control
2	900105	Embedded Systems

Item 10

To review and finalize the Experiment list/ Lab manual for Laboratory Courses to be offered in VI semester ***(for batches admitted in 2019-20)***

The Experiment list/ Lab manual for Laboratory Courses to be offered in VI semester ***(for batches admitted in 2019-20)*** has been finalized. Same can be find out in ANNEXURE-VI.

S.No	Subject Code	Subject Name
1	200601	Digital Signal Processing
2	200606	Minor Project-I

Item 11

To review and finalize the scheme and syllabi of **B. Tech.** ***IV Semester (for batches admitted in 2020-21)*** under the flexible curriculum along with their COs

The scheme and syllabi of **B. Tech.** ***IV Semester (for batches admitted in 2020-21)*** under the

<table>
<tr><td></td><td>flexible curriculum along with their COs has been discussed and finalized. Same can be find out in ANNEXURE-VII.</td></tr>
<tr><td>Item 12</td><td>To review and finalize the Experiment list/ Lab manual for Laboratory Courses to be offered in IV(for batch admitted in 2020-21)

The Experiment list/ Lab manual for Laboratory Courses to be offered in IV (for batch admitted in 2020-21) has been finalized. Same can be find out in ANNEXURE-VIII.

<table>
<tr><th>S.No</th><th>Subject Code</th><th>Subject Name</th></tr>
<tr><td>1</td><td>200411</td><td>Digital Circuits and Systems</td></tr>
<tr><td>2</td><td>200412</td><td>Analog Integrated Circuits</td></tr>
<tr><td>3</td><td>200413</td><td>Analog Communications</td></tr>
<tr><td>4</td><td>200415</td><td>PCB Design Lab</td></tr>
</table></td></tr>
<tr><td>Item 13</td><td>To review and finalize the suggestive list of projects which can be assigned under the ‘Skill based mini-project’ category in various laboratory courses to be offered in Jan - June 2022 semester during IV Semester (for the batch admitted in 2020-21).

The list of projects which can be assigned under the ‘Skill based mini-project’ category in various laboratory courses to be offered in Jan - June 2022 semester during IV Semester (for the batch admitted in 2020-21) has been discussed and finalized. Same can be find out in ANNEXURE-IX.</td></tr>
<tr><td>Item 14</td><td>To ratify the Scheme & Syllabi, list of experiments and skill based mini projects of First semester of the newly started B. Tech. programmes in the emerging areas (AI & ML, AI & DS, CSD) (started from 2021-22 Session) {Applicable for the concerned departments}
NA</td></tr>
<tr><td>Item 15</td><td>To ratify the Scheme & Syllabi, list of experiments and skill based mini projects of First SemesterB. Tech. programmes [admitted batch 2021-22 Session] (if any)
NA</td></tr>
<tr><td>Item 16</td><td>To prepare and recommend the Scheme & Syllabi (along with the Course Outcomes) of II semester of the newly started B. Tech. programmes in the emerging areas (AI & ML, AI & DS, CSD) (started from 2021-22 Session) {Applicable for the concerned departments}
NA</td></tr>
<tr><td>Item 17</td><td>To prepare and recommend the list of experiments and skill based mini projects of II semester of the newly started B. Tech. programmes in the emerging areas (AI & ML, AI & DS, CSD) (started from 2021-22 Session) {Applicable for the concerned departments}
NA</td></tr>
<tr><td>Item 18</td><td>To review and finalize the Scheme & Syllabi (along with the Course Outcomes) of II semester B. Tech. programmes (batch admitted 2021-22 Session)

The Scheme & Syllabi (along with the Course Outcomes) of II semester B. Tech. programmes (batch admitted 2021-22 Session) has been discussed and finalized. Same can be find out in ANNEXURE-X(A), and ANNEXURE-X(B).</td></tr>
<tr><td>Item 19</td><td>To review and finalize the list of experiments and skill based mini projects of II semester B. Tech. programmes (batch admitted 2021-22 Session)
The list of experiments and skill based mini projects of II semester B. Tech. programmes (batch admitted 2021-22 Session) has been reviewed and finalized with the consent of BOS members. Same can be find out in ANNEXURE-XI.</td></tr>
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<table>
<tr><td>Item 20</td><td>To propose the course “Economics Entrepreneurship & Management” and its syllabi along with the Course Outcomes (COs) for the V Semester B.Tech. (Batch admitted 2020-21 onwards).
{to be proposed and recommended by Management Department}
NA</td></tr>
<tr><td>Item 21</td><td>To revise and recommend the course “Energy, Environment, Ecology & Society” and its syllabi along with the Course Outcomes (COs) for the III Semester B.Tech. (Batch admitted 2021-22 onwards).
{inclusion of contents related to “Sustainability” is to be done}
{to be proposed and recommended by theCivil Engineering Department}
NA</td></tr>
<tr><td>Item 22</td><td>To propose a new course: Universal Human Values & Professional Ethics (HVPE)& its syllabi along with the Course Outcomes (COs), as Mandatory Course (MC) for the batch admitted in 2020-21onwards
{A portion on ‘gender sensitization’also to be included in the syllabus of this course}
{to be proposed and recommended byHumanities Department}
NA</td></tr>
<tr><td>Item 23</td><td>To review the CO attainments, to identify gaps and to suggest corrective measures for the improvement in the CO attainment levels for (i) I year April–September 2021 Semester (ii) January-June 2021 Session for II to IV year students

CO attainment has been discussed and suggestion of experts has been taken into consideration. This can be find out in ANNEXURE-XII.

<table>
<tr><th>Total No of courses</th><th>Total number of COs</th><th>Number of COs NOT attained level 3</th><th>Percentage of COs not attained</th></tr>
<tr><td>12</td><td>62</td><td>4</td><td>7%</td></tr>
</table></td></tr>
<tr><td>Item 24</td><td>To review curricula feedback from various stakeholders, its analysis and impact

{Stakeholder feedback analysis must also contain an action taken report (ATR) and the details/data of the stakeholder who have responded through GOOGLE form (such as Name, organization, mail id, phone no if available) must also be shared along with the feedback for the alumni/employer.}

Curricula feedback from various stakeholders, its analysis and impact has been reviewed. Same can be find out in ANNEXURE-XIII.</td></tr>
<tr><td>Item 25</td><td>To review Course Outcomes (COs) feedback of various courses, its analysis and impact.

Course Outcomes (COs) feedback of various courses, its analysis and impact has been reviewed and same can be find out in ANNEXURE-XIV.</td></tr>
<tr><td>Item 26</td><td>Any other matter</td></tr>
</table>

During the meeting experts suggested the following points:

1. List of experiments for VI semester of all subjects has been revised as per the suggestions of external experts.
2. List of skill based mini projects for IV Semester of all subjects has been updated as per the suggestions of external experts.
3. Courses for DE-1and OC-1to be taught in traditional mode were finalized with the consent of external experts.
4. Courses for DE-5, DE-6 and OC-4 to be run through NPTEL were finalized with the consent of external experts.
5. Suggestions of experts in the CO attainment have been taken into consideration**.**
6. COs of Communication Network has been modified.

Dr. Dinesh Rano	Dr. Sushmita Chaudahry	Dr. Shubhi Kansal
Dr. Varun Sharma	Dr. Deepak Batham	Dr. Hemant Choubey
Dr. Rahul Dubey	Dr. Vikas Mahor	Dr. Sandeep Sharma
Prof. D K Parsedia	Prof. Pooja Sahoo	Prof. Madhav Singh
Dr Karuna Markam	Dr. R. P. Narwaria	Dr. Vandana Vikas Thakare
Dr. P. K. Singhal		
Er. Pankaj Agarwal (External member)	Dr. N. S. Ragava (External member)	Dr. Jyoti Singhai (External member)

Dr. Laxmi Shrivastava

Head of the Department