Minutes of Board of Studies Meeting: Name of Department

School of Technology (SoT),

Pandit Deendayal Energy University

Gandhinagar, Gujarat-382007

Date: 05-03-2021
Time: 12:00 p.m. onwards
Venue: Online (MS Teams)

A. Members of Board of Studies

Name of BoS Member	Name of Organization and Designation	Present / Absent	Remarks
Dr. Praghnesh Bhatt	Chairman-BoS& Head, EED, PDEU	Present	
Dr. Amit Sant	Associate Professor, EED, PDEU	Present	
Dr. VSKV Harish	Assistant Professor, EED, PDEU	Absent	On leave
Dr. Meera Karamta	Assistant Professor, EED, PDEU	Present	
Prof. Bhim Singh	Professor, Department of Electrical Engineering, IIT-Delhi	Present	
Dr. NaranPindoria	Associate Professor, Department of Electrical Engineering IIT-Gandhinagar	Present	
Mr. Vinod Patel	DGM, R&D, Amtech Electronics, Gandhinagar	Present	
Mr. B. B. Mehta	Director, Odisha Power Transmission Co. Ltd, Bhuvaneshwar	Present	
Prof. Vivek Pandya	Head-IQAC& Professor, EED, PDEU	Present	Special invitee
Dr. Bhinal Mehta	Assistant Professor and NBACoordinator, EED, PDEU	Present	Special invitee

B. Agenda of Meeting:

B. Tech Program: Electrical Engineering

1. To review and approve the syllabus of the courses for B. Tech 1st Year (1st and 2nd Semester) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2021)**.
2. To review and approve (a) curriculum structure with Teaching and Examination scheme and (b) syllabus for B. Tech 2nd Year (3rd and 4th Semester) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2020)**.
3. To review and approve (a) curriculum structure with Teaching and Examination scheme and (b) syllabus for B. Tech 3rd and 4th Year (5th to 8th Semester) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2019)**
4. To review and approve (a) course structure with Teaching and Examination scheme and (b) syllabus for B. Tech 4th Year (7th and 8th Semester) to be implemented w.e.f. academic year 2021-2022 **(2018 Batch)**
5. Discussion on effective implementation of Outcome Based Education (OBE) and review of vision & mission of department, POs, PEOs, PSOs.
6. To assess the quality of question papers of UG programs for June-2020 and December 2020 End Semester Examination.
7. Any other item

M. Tech Program: Electrical Engineering (Electrical Power Systems)

1. To review and approve (a) curriculum structure with Teaching and Examination scheme and (b) syllabus for M. Tech 1st and 2nd Year (1st to 4th Semesters) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2021).**
2. Discussions and Suggestions on starting new PG program in Electrical Engineering.
3. To assess the quality of question papers of PG programs for June 2020 and December 2020 End Semester Examination.
4. Any other item.

PhD Program: Electrical Engineering

1. To approve syllabus of new courses for PhD course work

C. Minutes of BoS Meeting:

B. Tech Program: Electrical Engineering

Agenda	Discussion	Resolution
Agenda 1	The syllabus of the courses for B. Tech 1st Year (1st and 2nd Semester) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2021)** was reviewed by BoS members.	The syllabus of the courses for B. Tech 1st Year (1st and 2nd Semester) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2021)** is approved by BoS members. **Refer Annexure 1.**
Agenda 2	(a) Curriculum structure with Teaching and Examination (T&E) scheme and (b) Syllabus for B. Tech 2nd Year (3rd and 4th Semester) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2020)** was reviewed by BoS members. The proposed T&E scheme and syllabus are found satisfactory.	The proposed T&E scheme and syllabus for B. Tech 2nd Year (3rd and 4th Semester) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2020)**is approved by BoS members. **Refer Annexure 2.**
Agenda 3	(a) Curriculum structure with Teaching and Examination scheme and (b) syllabus for B. Tech 3rd and 4th Year (5th to 8th Semester) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2019)** was reviewed.	*All proposed suggestions by BoS members are incorporated and revised curriculum structure with T&E schemeand syllabus for B. Tech 3rd and 4th Year (5th to 8th Semester) to be implemented w.e.f. ACY: 2021-2022* ***(Batch 2019)*** *is approved.* **Refer Annexure 3.**
	(b) The contents of the course "Power System Analysis" in 5th Semester needs to revise to incorporate the topic on Economic Dispatch and Frequency Control.	The course "Power System Analysis" is renamed to "Power System Operations and Control" after the revision of content.
	(c) The simulations in the course "Power System Simulation Laboratory" in 5th Semester needs revision as simulation for this laboratory course is based on new proposed course on "Power System Operations and Control"	The simulation based on Economic Dispatch and Frequency Control are incorporated.
	(d) Dr J G Jamnani suggested to increase contact hours of the course "High Voltage Engineering" from 2 to 3 based on the importance of course and his teaching experience for this course.	Credits for the course on "High Voltage Engineering" is changed from 2 to 3 as the theory hours for the course is increased from 2 to 3.

	(e) The course on "Artificial Intelligence in Electrical Systems" (Theory + Laboratory) was earlier proposed in 6th Semester. This course might be very helpful to students to undertake various projects. Before this course, the courses on programming language such as C, C++ and Python are already offered during 1st and 2nd year.	Looking to importance of this course, it is decided to offer "Artificial Intelligence in Electrical Systems" (Theory + Laboratory) in the 5th Semester.
	(f) From "Power System Operation and Control" course in 6th Semester, the content related to Economic Dispatch is shifted to 5th Semester Course. Hence, it is proposed to change name of this course to "Advanced Power System Analysis"	The content of the course is reviewed and new title "Advanced Power System Analysis" is approved.
	(g) For open elective course on "Electric Vehicles" in 6th Semester, it is discussed to replace the topic "Battery Chargers" of Unit 3 with some more specific content.	Based on the discussion, specific topics "Wireless chargers, off-board chargers and on-board chargers" are included. dc-dc chargers and solar based EV charging are also included.
	(h) Course on "Smart Grids and Electric Vehicles" was proposed in 7th Semester. Now it is discussed to split this course to two different courses i.e. "Smart Grid: Technologies and Applications" and "Electric Vehicles Technologies". The contents related to smart grid, microgrid, DER, communication technologies for smart grid, smart substations and demand side management are proposed for the course on "Smart Grid: Technologies and Applications" whereas contents related to charging infrastructure, power train, integration of EVs, application of AI for EV are proposed for the course on "Electric Vehicles Technologies".	As per the discussion, two new courses, i.e. "Smart Grid: Technologies and Applications" and "Electric Vehicles Technologies". are approved.
	(i) It is a welcome suggestion from BoS members to propose one course to cover prevailing policies and regulations in Indian electricity Sector. It is very much required for the students to know about the government regulations along with technical knowledge of the course.	Based on the suggestion, a new course on "Electricity Sector in India: Policies and Regulations" is prepared covering Indian electricity sector and its policies, regulations for grid connectivity of renewable energy sources. The content of the course is approved.
Agenda 4	(a) course structure with Teaching and Examination scheme and (b) syllabus for B. Tech 4th Year (7th and 8th Semester) to be implemented w.e.f. academic year 2021-2022 **(2018 Batch)**was reviewed and found satisfactory.	course structure with Teaching and Examination scheme and (b) syllabus for B. Tech 4th Year (7th and 8th Semester) to be implemented w.e.f. academic year 2021-2022 **(2018 Batch)** is approved. **Refer Annexure 4.**
Agenda 5	Dr Bhinal Mehta briefed about the progress of NBA activities and implementation of Outcome Based Education (OBE) in the department. The vision & mission of department, POs, PEOs, PSOs were reviewed and confirmed by the BoS.	

Agenda 6	Dr. Amit Sant explained to the B.o.S members how online End Semester Examination,December 2020 was conducted through software platform PEXA. He also explained mapping of COs to each question in the question paper and how the performance of students is assessed to successfully implement OBE. The question papers of UG programs for June-2020 and December 2020 End Semester Examination were reviewed and found satisfactory.	

M. Tech Program: Electrical Engineering (Electrical Power Systems)

Agenda	**Discussion**	**Resolution**
Agenda 1	(a) curriculum structure with Teaching and Examination scheme and (b) syllabus for M. Tech 1st and 2nd Year (1st to 4th Semesters) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2021)**was reviewed and found satisfactory.	(a) curriculum structure with Teaching and Examination scheme and (b) syllabus for M. Tech 1st and 2nd Year (1st to 4th Semesters) to be implemented w.e.f. ACY: 2021-2022 **(Batch 2021)**is approved. **Refer Annexure 5.**
	▪ Mr. B. B. Mehta suggested inclusion of the topic 'Solving stability issues using PMU' as part of the core course "Modern Power System operation and control" offered in Sem-I.	Topic on PMU and WAMS are already covered in course on "Smart Grid Technologies".
	▪ Dr. Pindoriya mentioned that % syllabus common in UG & PG program offered at PDPU should not be more than 5-10 %. This will encourage the existing UG students to also take admission to M.Tech. Program.	All suggestionsare duly considered.
	▪ Dr. Bhim Singh suggested that core courses in UG cannot be same as that of PG. Content should be modified and the title has to be specific and not overlapping with B.Tech course titles	
Agenda 2	It is suggested to start new PG program on "Power Electronics and Drives" for Electrical Engineering	
Agenda 3	Quality of question papers of PG programs for June 2020 and December 2020 End Semester Examination were assessed and found satisfactory.	

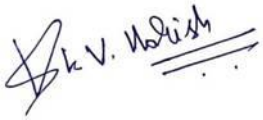
PhD Program: Electrical Engineering

Agenda	Discussion	Resolution
Agenda 1	The courses for PhD course work are reviewed and following suggestions are received: 1. Prof. Bhim Singh and Prof. Pindoriya suggested to modify the title of two courses. 2. BoS members suggested to give more freedom to faculty for coursework evaluation. Evaluation can be in terms of: literature review, seminars, term-papers, problem identification/solving, etc. They also mentioned research ambience could be inculcated in the coursework curriculum. 3. It is suggested to offer courses from PG program as a part of course work for PhD research scholars.	The title of following two courses are modified. 1. "Power Electronics" to Power Electronics Converters and Their Applications" 2. "Application of forecasting techniques in Power System Domain" to "Forecasting Techniques for Renewable Energy Sources" The courses for PhD course work is given in **Annexure 6.**

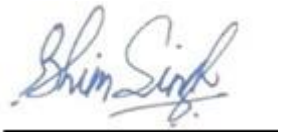
Dr Praghnesh Bhatt
Chairman – BoS

Dr Amit Sant
Member – BoS

Dr Meera Karamta
Member – BoS

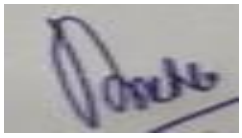


Dr VSKV Harish
Member – BoS



Prof Bhim Singh
IIT – Delhi
BoS Member

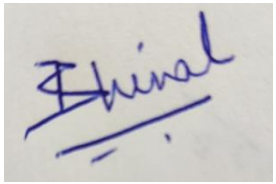
Prof NaranPindoriya
IIT – Gandhinagar
BoS Member



Shri B B Mehta
Director, Odisha Power Transmission Co. Ltd,
Bhuvaneshwar

Shri Vinod Patel
DGM, Amtech Electronics,
Gandhinagar

Prof. Vivek Pandya
Head – IQAC
PDEU



Dr Bhinal Mehta
NBA Coordinator
EED, SoT