Minutes of Board of Studies Meeting: Mechanical Engineering Department

School of Technology (SoT),

Pandit Deendayal Energy University

Gandhinagar, Gujarat-382007

Date: 22.02.2021
Time: 04.00 pm to 06.00 pm
Venue: Ms Team

A. Members of Board of Studies

Name of BoS Member	Name of Organization and Designation	Present / Absent	Remarks
Mr. Anand Mishra	SVAP, Ford India, Ahmedabad Plant Quality & Launch Head	Present	
Mr. Anand Savalia	Kavyam Energy Pvt. Ltd, Rajkot Director	Present	
Prof. H.K.Raval	SVNIT-Surat Professor	Present	
Prof.D.S. Sharma	MS University, Baroda Professor & Head of the Department,	Present	
Prof. Sunil Khanna	PDPU, Director SoT	Present	
Prof. Vishvesh Badheka	PDPU, Professor & Head of the Department	Present	
Dr. Krunal Mehta	PDPU, Assistant Professor	Present	
Dr. Simran Singh	PDPU, Assistant Professor	Present	
Dr. Ravi Kant	PDPU, Assistant Professor	Present	
Dr. Jatin Patel	PDPU, Assistant Professor	Present	
Dr. Rajesh Patel	PDPU, Dean FoET	Present	

B. Agenda of Meeting:

- PhD Courses
- B. Tech Automobile Programme - Suggestions received from Foreign Reviewers
- Any other

C. Minutes of BoS Meeting:

Agenda-I: B. Tech Automobile Programme
Discussion and Resolution:
The inputs from Mr. Raghu Echempati, Kettering University were discussed with the BoS Members.

Suggestions from the members over the inputs are as under:

- It is better to document the prerequisites needed for each course.
- Computer programming - II is listed in Semester - I rather than Sem - II. Programming - I is listed in Sem - II. These are common courses for first year students. Suggested to rename the courses
    - It needs to be conveyed to the first year team.
- The names in the syllabus and that in the document to be checked and corrected.
- As a part of the electives for this program, consider giving 1 to 4 academic credits depending on the sustained involvement in Motor Sports activities (SAE Formula Car/Mini-Baja, etc). Right now, it is considered as a hobby with no incentives (except to participate in motor sports events). But assigning academic credits gives more accountability and interest for diverse student participation (from EE/ME/Other Eng departments).
    - It was informed that it is a policy matter and not all student take it up. Hence, it may be difficult to keep it as a credit subject.
- It was suggested to give hands-on experience in the lab (thermo/fluids/heat transfer) or in a workshop to operate machines (lathe, drilling, joining, etc) in earlier semester.
- It was suggested that Automotive controls, Artificial Intelligence, Computer Vision are getting to be very important and part of typical Automobile Engineering Programs.
- A few suggestions were related to subjects which are not specifically for Mechanical. Hence, the concerned faculty will be consulted for the same.
- A few typo errors to be corrected.
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The suggestions were noted as per Annexure I.

Agenda-I: PhD Courses
Discussion and Resolution:
19 courses were discussed in detail with the members of BoS. The course specific suggestions were noted as per Annexure-II.

General Discussion and Recommendation by BoS Members:

The external BoS members appreciated the relevant design of the courses which would help the candidates to get the best out of it. The courses are very suitable and useful to the students.

It was suggested to offer PhD courses as Elective to M. Tech Students.
The courses will be modified as per the suggestions and circulated.

Name of BoS Member - I	Name of BoS Member - II	Name of BoS Member - III	Name of BoS Member - IV
Sign	Sign	Sign	Sign

Note: Take signature of all the members present in BoS

Annexure: Summary of Course Content Revision (new/modified courses/syllabus)

Programme Name: B. Tech Automobile Engineering **w.e.f. A.Y: 2021-22**

Semester	Course Name and Course Code	Subject Type (Core/ Elective/ Open Elective)	Revision Type (Addition/ Deletion of Content or New Course)	Content Added	Content Deleted	% Course Content Revised	Justification
I & II	Mathematics I and Mathematics II	BSC (Basic Science Course)	MATLAB can be part of the tutorial				For Math - I and Math - II, training can be given for using one (or more) math tools like MATLAB. Math tool (matlab/maple) can be used to solve ODEs and PDEs. (The same to be conveyed to First Year BoS)
II	Chemistry	BSC (Basic Science Course)	Nomenclature to be kept as "Chemistry/Engineering Chemistry"				Suggestion accepted.
III	Mathematics - III: Automobile Engineering	BSC (Basic Science Course)	Remove Automobile Engineering.				Suggestion accepted.
III	Strength of Materials	PCC (Professional Core Course)	Reduce in Unit-4 and add in Unit-2				'Strength of Materials' is a course common with B.Tech Mechanical. The suggestions conveyed will therefore be passed through BoS Mechanical, and the syllabi will be updated accordingly.
IV	Theory of Machines	PCC (Professional Core Course)	Steering Mechanisms can be included.	Various Steering Mechanism		~7%	Including various mechanisms will make the course more

				s. Conditions for correct steering. Other Miscellaneous Mechanisms			relatable to Automobile Engineering.
VI	Vehicle Dynamics Lab	PCC (Professional Core Course)	Veh Dyn course, can you get license and use either Adams CAR or CarSim software. We conducted a hands on lab using ADAMS CAR.				Any of the Software for Kinematic analysis can be incorporated in the study.
VI	Finite Element Analysis	PCC (Professional Core Course)	Add Daryl L Logan's book				Daryl L Logan's book, is easy to follow by the students.

Programme Name: PhD **w.e.f. A.Y: 2021-22**

Semester	Course Name and Course Code	Subject Type (Core/ Elective/ Open Elective)	Revision Type (Addition/ Deletion of Content or New Course)	Content Added	Content Deleted	% Course Content Revised	Justification
	Surface Engineering and Coating Technology	Core	Addition	Friction stirring in surface coating, solid state cladding	-	1%	Suggested by external BoS member
	Material Management Techniques	Core	Addition	Scheduling and Product flow analysis, SQC and process capability	-	2%	Suggested by external BoS member
	Fundamentals of wind energy	Core	Addition	Speed control of large wind turbine	-	5%	Suggested by external BoS member
	Materials Design and Selection	Core	-	-	-	-	-
	Phase Change Material Based Thermal Energy Storage	Core	-	-	-	-	-
	Friction Stir Welding and Processing	Core	-	-	-	-	-
	Fundamentals of Welding	Core	-	-	-	-	-
	Advances in water desalination	Core	-	-	-	-	-
	Advanced Engineering Optimization	Core	-	-	-	-	-

	Recent Applications of Cavitation Technology in Industry	Core	-	-	-	-	-
	Applied Machine Learning in Mechanical Engineering	Core	-	-	-	-	-
	Computational Methods for Fluid Dynamics	Core	-	-	-	-	-
	Concept and applications of Finite Element Analysis	Core	-	-	-	-	-
	Exergy Analysis	Core	New	-	-	-	-
	Design and Analysis of Experimental Techniques	Core	-	-	-	-	-
	Material Modelling and Design	Core	-	-	-	-	-
	Solar Thermal Technologies	Core	-	-	-	-	-
	Design and Processing for Additive Manufacturing	Core	-	-	-	-	-
	Modelling and Simulation of Manufacturing Processes	Core	-	-	-	-	-