I.K. Gujral Punjab Technical University

Date: 10/07/2017

(Minutes of Meeting)

Board of Studies of Mechanical Engineering/Production Engineering/Industrial Engineering/Automobile Engineering

of the Board of Studies (Mechanical Engineering/Production Engineering/Industrial Engineering/Automobile Engineering) constituted vide Notification No. IKGPTU/Reg/NF/26 dated 01/03/17 was held on July 10th, 2017 at 11:00 in the conference hall, Department of Academics, G+3 Building, main campus, I.K. Gujral Punjab Technical University, Jalandhar, Jalandhar-Kapurthala highway, Punjab. The agenda of the meeting was:

- To discuss the skeleton and syllabus of M. Tech. Mechanical Engineering.
- To discuss and study suggestions regarding the new scheme of B. Tech proposed by Dean Academic Office. The syllabus is likely to be revised for 2018-19.
- To discuss any other matter with the permission of Chair.

Following members of the BOS were present and actively participated:

- Dr. Vikas Chawla, Chairman (Professor & Head M.E.D., IKGPTU Main Campus) 1.
- Dr. Buta Singh Sidhu, Special Invitee (Dean P&D, MRSPTU, Bathinda) 2.
- Dr. S.P. Singh, Member (Professor, M.E.D., IIT Delhi) 3.
- Dr. Harwinder Singh, Member (Professor, M.E.D., GNDEC, Ludhiana) 4.
- Dr. Om Pal Singh, Member (Professor, M.E.D., BCET, Gurdaspur) 5.
- Dr. Paramjit Singh Bilga, Member (Professor, M.E.D., GNDEC, Ludhiana) 6.
- Dr. Neelkanth Grover, Member (Assoc. Professor, M.E.D., IKGPTU Main Campus) 7.
- Dr. Dilbag Singh, Member (Assoc. Professor, M.E.D., BCET, Gurdaspur) 8.
- Dr. Deepak Kumar Goyal, Coordinator (A. P., M.E.D., IKGPTU Main Campus) 9.
- 10. Dr. Jujhar Singh, Member (A. P., M.E.D., IKGPTU Main Campus)
- Dr. Amoljit Singh Gill, Member (A. P., M.E.D., IKGPTU Main Campus)

Following members of BOS could not attend the meeting:

- Dr. Dinesh Kumar, Member (Professor, M.E.D., IIT Roorkee)
- Dr. Ajay Batish, Member (Professor, M.E.D., Thapar Univ., Patiala) 2.
- Dr. Sumit Jain, Member (Assoc. Professor, CTIMT, Jalandhar) 3.
- S. Navdeepak Sandhu, Member (Dy. Director, CR&A, IKGPTU) 4.

The Board has taken the following decisions:

- The skeleton of M.Tech. Mechanical Engineering was discussed and finalised. The same is attached herewith. Further, it has been recommended to adopt the same for the session 2017-2018.
- The task of designing the detailed syllabus of various courses of 1st semester of M.Tech. Mechanical Engineering have been assigned to following members:

Subject	BOS Members
Advanced Engineering Materials	Dr. Buta Singh Sidhu
3	Dr. Vikas Chawla
	Dr. Jujhar Singh
Finite Element Analysis	Dr. S.P.Singh
NO. 2010	Dr. Neel Kanth Grover
Advanced Design of Mechanical Systems	Dr. S.P.Singh
	Dr. Harwinder Singh
	Dr. Amoljit Singh Gill
Operations Management	Dr. Om Pal Singh
1	Dr. Dilbag Singh
	Dr. Deepak Kumar Goyal
Advanced Thermodynamics	Dr. Paramjit Singh Bilga
	Dr. Neel Kanth Grover

The members are requested to complete the given task within one week.

- 3. It has been suggested that if a student selects all the three elective subjects from the same group of electives and also completes his/her project and dissertation in the same field, he/she may be awarded a separate/ additional certificate indicating the more concentration in particular field e.g. Manufacturing, Industrial, Design or Thermal Engineering of his/her M.Tech. degree.
- Regarding the proposed new study scheme of B.Tech. for the session 2018-19, it has been recommended that the new study scheme should be as per the UGC guidelines related to the same for the session 2018-19.

Dr. Vikas Chawla

Dr. Buta Singh Sidhu

Dr. S.P. Singh

Dr. Harwinder Singh

Dr. Om Pal Singh

Or. Paramit Singh Bile

Dr.Dilbag Singh

Dr. Neelkanth Grover

Dr. Deepak Kumar Goyal

Dr.Jujhar Singh

Dr.Amoljit Singh Gill

Study Scheme of M.Tech. Mechanical Engineering (2017 Admission Batch Onwards)

SEMESTER 1st Subject Code Subject Name				ct /eek	Maximum Marks			Credits
XXXX	Subject Name Advanced Engineering Materials	L	T	P	Int.	Ext.	Total	
XXXX	Finite Element Analysis	4	0	0	50	100	150	-4
XXXX	Advanced Design of Market	3	1*	0	50	100	150	1
XXXX	Advanced Design of Mechanical Systems Operations Management	3	1*	0	50	100	150	4
XXXX	Advanced Thermodynamics	4	0	0	50	100	150	4
		4	0	0	50	100	150	4
Total Contac	et Hours/Week = 20	18	2	0	250	500	750	20

Subject Code	Contact Hours/Week			Maximum Marks			Credits		
XXXX	Subject Name Research Methodology	L	T	P	Int.	Ext.	Total		
XXXX	Tribology	3	1*	0	50	100	150	1	
XXXX	Modern Manufacturing Processes	4	0	0	50	100	150	4	
XXXX	Computational Fluid Dynamics	4	0	0	50	100	150	4	
XXXX	Elective -I	3	1*	0	50	100	150	4	
- 15-		_ 4	0	0	50	100	150	4	
Total Contac	ct Hours/Week = 20	18	2	0	250	500	750	20	

SEMESTER 3rd Subject Code Subject Name			Contact Hours/Week			Maximum Marks		
XXXX	Subject Name Elective-II	L	T	P	Int.	Ext.		
XXXX	Elective-III	4	0	0	50	100	150	4
XXXX	Project	4	0	0	50	100	150	4
XXXX	Seminar	-	-	12	50	50	100	6
	T. J.	-	-	4	100		100	2
Total Contact	t Hours/Week = 16	8	0	16	250	250	500	16

SEMESTER 4th	C Hou	onta		Evaluation Criteria	Credits		
Subject Name	I.	T	P				
Dissertation	0	0	28	Satisfant III			
Total Contact Hours/W	nol 10	9	20	Satisfactory/Unsatisfactory	14		

Total Credits for the Programme: 70

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(Days

List of Electives (Manufacturing & Industrial Engineering)

- 1. Advanced Welding Technology
- 2. Advanced Metal Forming Processes
- 3. Automation and Robotics
- Advanced Material Characterization Techniques
 Rapid Prototyping
 Advanced Metal Cutting
 Advanced Casting Processes

- 8. Maintenance and Reliability Engineering
- 9. Supply Chain Management
- 10. Quality Assurance
- 11. Computer Integrated Manufacturing
- 12. Product Design and Development

List of Elective (Design)

- 1. Computer Aided Engineering
- 2. Engineering Design Optimization
- Advanced Vibration Engineering
 Robot Manipulators: Kinematics, Dynamics and Control
 Mechatronics
- 6. Dynamics of Rotating Machines
- 7. Experiential Stress Analysis
- 8. Sustainable Design and Manufacturing
- 9. Vibration and Noise Control
- 10. Composite Materials
- 11. Instrumentation and Control Engineering
- 12. Modelling and Simulation of Dynamic Systems

List of Elective (Thermal)

- 1. Design of Internal Combustion Engines
- 2. Advanced Internal Combustion Engines
- 3. Design of Steam Turbine
- 4. Convective Heat Transfer

- 5. Advanced Fluid Mechanics
 6. Combustion Engineering
 7. Conductive & Radiative Heat Transfer
- Solar Energy Utilization
 Alternative Refrigeration and Air Conditioning Techniques
- 10. Design of HVAC systems
- 11. Design and Optimization of Thermal Systems
- 12. Advanced Heat and Mass Transfer