IK GUJRAL PUNJAB TECHNICAL UNIVERSITY
(Department of Academics)

Ref. No. IKGPTU/ME/2642 Date: 29/01/2019

Dr. Vikas Chawla, Professor & In-charge, IKGPTU Hoshiarpur Campus, Hoshiarpur (Chairman, BOS)
Dr. R.P. Singh, Professor (Rtd.) (Special invitee)
Dr. Buta Singh Sidhu, Dean Planning, MRSPTU, Bathinda (Special invitee)
Dr. S.P. Singh, Professor, IIT, Delhi
Dr. A.S. Buttar, Assoc. Prof. & Head, Deptt. of ECE, IKGPTU, Kapurthala (Special invitee)
Dr. Vinay Gupta, Professor, Department of Mechanical Engg, Pbi. Univ., Patiala (Special invitee)
Dr. Harwinder Singh, Professor, Department of Mechanical Engg, GNDEC, Ludhiana
Dr. Om Pal Singh, Professor, Department of Mechanical Engg, BCET, Gurdaspur
Dr. Paramjit Singh Bilga, Professor, Department of Mechanical Engg, GNDEC, Ludhiana
Dr. Neelkanth Grover, Assoc. Prof. & Head, Department of Mechanical Engg, IKGPTU, Kapurthala
Dr. Dilbag Singh, Assoc. Prof., Department of Mechanical Engg, BCET, Gurdaspur
Dr. Sumit Jain, Assoc. Prof., Department of Mechanical Engg, CTIMT, Jalandhar
Dr. Amit Sarin, Assoc. Prof. & Head, Deptt. of Physical Sciences, IKGPTU, Kapurthala (Special invitee)
Dr. Ashish Arora, Assoc. Prof. & Head, Deptt. of Mathematical Sciences, IKGPTU, Kapurthala (Special invitee)
Dr. Jagmeet Bawa, Asstt. Prof., IRCUHVE, IKGPTU, Kapurthala (Special invitee)
Dr. Niraj Bala, Assoc. Prof. & Head, RIC, BBSBEC, Fatehgarh Sahib (Special invitee)
Dr. Deepak Kumar Goyal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
Dr. Jujhar Singh, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
Dr. Amoljit Singh Gill, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
Er. Navdeepak Sandhu, Dy. Director CR&A, IKGPTU, Kapurthala
Dr. Manoj Mittal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)
Dr. Vivek Aggarwal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)
Dr. Amit Bansal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)
Er. Sumit Bansal, BHEL, Goindwal Sahib (Special invitee from industry)
Er. Sewa Singh, A.P., ACEM, Kapurthala (Special invitee, PTU Alumni)

Subject: **Meeting of Board of Studies Mechanical Engineering/ Production Engineering/ Industrial / Automobile Engineering.**

Sir/ Madam

A meeting of the above said members of Board of Studies **Mechanical Engineering/ Production Engineering/ Industrial / Automobile Engineering** & special invitees is scheduled to be held on **February 7th, 2019 at 11:00** a.m. in the conference hall, Department of Academics, G+3 Building, I.K. Gujral Punjab Technical University Jalandhar, Jalandhar-Kapurthala highway, Punjab.

The agenda of the meeting is:

- To discuss and upgrade the scheme & syllabus of B.Tech. (Mechanical Engineering) from 3rd to 8th semester.
- To discuss any other matter with the permission of Chair.

The scheme & syllabus for UG programme of Mechanical Engineering of BCET, Gurdaspur, GNE Ludhiana and AICTE Model curriculum are attached herewith for your kind reference.

You are requested to participate and contribute through your suggestions. Kindly confirm your participation in the said meeting through e-mail dr.deepakgoyal@ptu.ac.in or through SMS at 9465884836.

TA/DA & Honorarium will be paid as per the University norms. Kindly bring the information of your bank account number and IFSC code of your bank as payment will be directly credited into your account. A word in reply will be appreciated.

Chairman, BOS, IKGPTU

Cc:
Dean Academics for information

I.K. Gujral Punjab Technical University

Date: 07/02/2019

(Minutes of Meeting)

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

A meeting 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 February 7th, 2019 at 11:00 a.m. in the conference hall, R.I.C. Department, G+3 Building, I.K. Gujral Punjab Technical University, Jalandhar, Jalandhar-Kapurthala highway, Punjab.

The agenda of the meeting was:

- To discuss and upgrade the scheme & syllabus of B.Tech. (Mechanical Engineering) from 3rd to 8th semester.
- To discuss any other matter with the permission of Chair.

Following members of BOS and special invitees were present and actively participated:

1. Dr. Vikas Chawla, Professor & In-charge, IKGPTU Hoshiarpur Campus, Hoshiarpur (Chairman, BOS)
2. Dr. R.P. Singh, Professor (Rtd.) (Special invitee)
3. Dr. Vinay Gupta, Professor, Department of Mechanical Engg, Pbi. Univ., Patiala (Special invitee)
4. Dr. Om Pal Singh, Professor, Department of Mechanical Engg, BCET, Gurdaspur
5. Dr. Neelkanth Grover, Assoc. Prof. & Head, Department of Mechanical Engg, IKGPTU, Kapurthala
6. Dr. Dilbag Singh, Assoc. Prof., Department of Mechanical Engg, BCET, Gurdaspur
7. Dr. Jagmeet Bawa, Asstt. Prof., IRCUHVE, IKGPTU, Kapurthala (Special invitee)
8. Dr. Deepak Kumar Goyal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
9. Dr. Jujhar Singh, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
10. Dr. Amoljit Singh Gill, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
11. Er. Navdeepak Sandhu, Dy. Director CR&A, IKGPTU, Kapurthala
12. Dr. Vivek Aggarwal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)
13. Dr. Amit Bansal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)

Following members of BOS could not attend the meeting:

1. Dr. Buta Singh Sidhu, Dean Planning, MRSPTU, Bathinda (Special invitee)
2. Dr. S.P. Singh, Professor, IIT, Delhi
3. Dr. Harwinder Singh, Professor, Department of Mechanical Engg, GNDEC, Ludhiana
4. Dr. Paramjit Singh Bilga, Professor, Department of Mechanical Engg, GNDEC, Ludhiana
5. Dr. Sumit Jain, Assoc. Prof., Department of Mechanical Engg, CTIMT, Jalandhar
6. Dr. Amit Sarin, Assoc. Prof. & Head, Deptt. of Physical Sciences, IKGPTU, Kapurthala (Special invitee)
7. Dr. Ashish Arora, Assoc. Prof. & Head, Deptt. of Mathematical Sciences, IKGPTU, Kapurthala (Special invitee)
8. Dr. Niraj Bala, Assoc. Prof. & Head, RIC, BBSBEC, Fatehgarh Sahib (Special invitee)
9. Dr. Manoj Mittal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)
10. Er. Sumit Bansal, BHEL, Goindwal Sahib (Special invitee from industry)
11. Er. Sewa Singh, A.P., ACEM, Kapurthala (Special invitee, PTU Alumni)

The Board has taken the following decisions:

1. The scheme for B.Tech. Mechanical Engineering (Batch 2018 onwards) from 3rd Semester to 8th Semester was discussed and finalised (attached herewith as Annexure-I)

2. The team of faculty members have been constituted to propose the detailed contents of the syllabus of various subject of 3rd and 4th semester (Mechanical Engineering) as per following details:

Sr. No.	Semester	Subject	Faculty Member(s)
1	3rd	Fluid Mechanics	Dr. Neelkanth Grover Dr. Vivek Aggarwal
2	3rd	Theory of Machines-I	Dr. Deepak Kumar Goyal Dr. Amit Bansal
3	3rd	Machine Drawing	Dr. Vikas Chawla
4	3rd	Basic Electronics Engineering	Chairman, BOS (ECE)
5	3rd	Strength of Materials-I	Dr. Vinay Gupta Dr. Amoljit Singh Gill
6	3rd	Applied Thermodynamics-I	Dr. R.P. Singh Dr. Jujhar Singh
7	3rd	Mech. Engg. Lab-I (SOM, TOM-I, Fluid Mechanics)	Dr. Neelkanth Grover, Dr. Jujhar Singh, Dr. Amoljit Singh
8	4th	Applied Thermodynamics-II	Dr. R.P. Singh Dr. Jujhar Singh
9	4th	Fluid Machines	Dr. Neelkanth Grover Dr. Vivek Aggarwal
10	4th	Strength of Materials-II	Dr. Vinay Gupta Dr. Amoljit Singh Gill
11	4th	Materials Engineering	Dr. Dilbag Singh Dr. Om Pal Singh
12	4th	Theory of Machines-II	Dr. Deepak Kumar Goyal Dr. Amit Bansal
13	4th	Environmental Science	Chairman, BOS (Chemical Sciences)
14	4th	Mechanical Engg. Lab-II (Applied Thermodynamics, Fluid Machines, Material Engineering)	Dr. Jujhar Singh Dr. Neelkanth Grover Dr. Dilbag Singh

3. Subject codes and open elective subjects will be decided in next BOS meeting.

Dr. Vikas Chawla

Dr. R. P. Singh

Dr. Vinay Gupta

Dr. Om Pal Singh

Dr. Neelkanth Grover

Dr.Dilbag Singh

Dr. Deepak Kumar Goyal

Dr. Jujhar Singh

Dr. Amoljit Singh Gill

Dr. Vivek Aggarwal

Dr. Amit Bansal

Er. Navdeepak Sandhu

Dr. Jagmeet Bawa

Two papers which were decided for the meeting (related to First year are not included.

ANNEXURE -I

Branch / course: Mechanical Engineering
Total credits (4 year course)

Semester III (Second year]
Branch/Course Mechanical Engineering

Sl. No.	Category	Code	Course Title	Hours per week			Total contact hours	Credits
				Lecture	Tutorial	Practical		
1	Professional Core courses		Fluid Mechanics	3	1	0	4	4
2	Professional Core courses		Theory of Machines -I	3	1	0	4	4
3	Professional Core courses		Machine Drawing	1	0	4	3	3
4	Engineering Science courses		Basic Electronics Engineering	3	0	0	3	3
5	Professional Core courses		Strength of Materials-I	3	1	0	4	4
6	Professional Core courses		Applied Thermodynamics-I	3	1	0	4	4
7.	Professional Core courses		Mech. Engg. Lab-I (SOM, TOM-I, Fluid Mechanics)	0	0	4	4	2
							Total credits	**24**

Semester IV (Second year]
Branch/Course Mechanical Engineering

Sl. No.	Category	Code	Course Title	Hours per week			Total contact hours	Credits
				Lecture	Tutorial	Practical		
1	Professional Core courses		Applied Thermodynamics -II	3	1	0	4	4
2	Professional Core courses		Fluid Machines	3	1	0	4	4
3	Professional Core courses		Strength of Materials-	3	1	0	4	4

			II					
4	Engineering Science courses		Materials Engineering	3	0	0	3	3
5	Professional Core courses		Theory of Machines-II	3	1	0	4	4
6	Mandatory courses		Environmental Science	-	-	-	-	0
7	Professional Core courses		Mechanical Engg. Lab-II (Applied Thermodynamics, Fluid Machines, Material Engineering)	0	0	4	4	2
							Total credits	**21**

Semester V (Third year]

Branch/Course Mechanical Engineering

Sl. No.	Category	Code	Course Title	Hours per week			Total contact hours	Credits
				Lecture	Tutorial	Practical		
1	Professional Core courses		Heat Transfer	3	1	0	4	4
2	Professional Core courses		Design of Machine Elements-I	3	1	0	4	4
3	Professional Core courses		Manufacturing Processes-I	3	0	0	3	3
4	Engineering Science Courses		Numerical Methods	3	0	2	5	4
5	Humanities and Social Sciences including Management courses		Humanities -I	3	0	0	3	3
6	Professional Core courses		Mechanical Engineering Laboratory-III (Heat Transfer, Manufacturing Processes)	0	0	4	4	2
7	Mandatory course		Essence of Indian Knowledge Tradition	0	0	0		0
							Total credits	**20.0**

Semester VI (Third year] Branch/Course
Mechanical Engineering

Sl. No.	Category		Course Title	Hours per week			Total contact hours	Credits
				Lecture	Tutorial	Practical		
1	Professional Core courses		Manufacturing Processes-II	3	0	0	3	3
2	Professional Core courses		Design of Machine Elements-II	3	1	0	4	4
3	Professional Core courses		Refrigeration and Air Conditioning	3	1	0	4	4
4	Professional Core courses		Mechanical Measurements & Metrology	3	0	0	3	3
5	Humanities and Social Sciences including Management		Open Elective-II (Humanities)	3	0	0	3	3
6	Professional Core courses		Mechanical Engineering Laboratory -IV (M.P.-II, M.M.M., R.A.C.)	0	0	4	4	2
7	Project/ internship		Project-I	0	0	4	(90 hrs Total)	2
							Total credits	**21.0**

Semester VII (Fourth year]
Branch/Course: Mechanical Engineering

Sl. No.	Category	Code	Course Title	Hours per week			Total contact hours	Credits
				Lecture	Tutorial	Practical		
1	Professional Core courses		Automation in Manufacturing	3	0	0	3	3
2	Professional Elective courses		Elective I	3	0	0	3	3

Sl. No.	Category	Code	Course Title	Hours per week			Total contact hours	Credits
3	Professional Core courses		Mechanical Vibrations	3	1	0	4	4
4	Professional Core courses		Operations Research	3	1	0	4	4
5	Professional Core courses		Mechanical Engineering Laboratory-V (Automation in Manufacturing, Mechanical Vibration)	0	0	4	4	2
6	Project		Project-II	0	0	8	8	4
							Total credits	**20.0**

Semester VIII (Fourth year]
Branch/Course Mechanical Engineering

Sl. No.	Category	Code	Course Title	Hours per week			Total contact hours	Credits
				Lecture	Tutorial	Practical		
1	Professional Elective Courses		Elective-II	3	0	0	3	3
2	Professional Elective Courses		Elective-III	3	0	0	3	3
3	Professional Core courses		Automobile Engg.	3	0	2	5	4
4	Open Elective courses		Open Elective-III	3	0	0	3	3
5	Humanities and Social Sciences including Management		Open Elective- III (Humanities)	3	0	0	3	3
6	Project		Project-III	0	0	10	10	5
							Total credits	**21**

TOTAL CREDITS – 165

List of PROFESSIONAL ELECTIVE COURSES

Sl. No	Code No.	Subject
	Group 1	Internal Combustion Engines
		Cryogenic Technology
		Non Conventional Energy Resources
		Energy Conservation and Management
		Solar Energy
		Power Plant Engineering
	Group II	Total Quality Management
		Modeling and Simulation
		Operations Management
		Non-Destructive Testing
		Maintenance and Reliability Engineering
		Material Management
	Group III	Product Design and Development
		Machine Tool Design
		Tool Design
		Finite Element Method
		Industrial Tribology
		Mechatronics