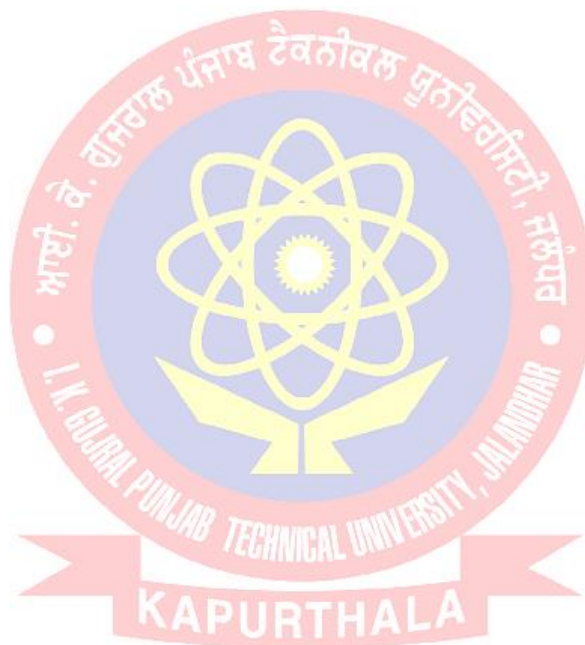


1.1.3 & 1.2.1

**Supporting Documents- Mechanical  
Engineering**

**MOMs Highlighting Employability  
Courses\_1.1.3**



**I K Gujral Punjab Technical University  
(Minutes of Meeting)**

A meeting of members of the Board of Studies **Mechanical Engineering/Production Engineering/Industrial/Automobile Engineering** was held through online (Google meet) as on **July 30<sup>th</sup> 2021** at 11:00 AM.

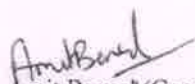
**Following members of BOS have attended the meeting:**


1. Dr. Neelkanth Grover (Chairman), Professor and Head, IKGPTU Campus Kapurthala
2. Dr. Om Pal Singh, Professor, S. Beant Singh State University, Gurdaspur
3. Dr. Vikas Chawla, Professor, IKGPTU Campus Kapurthala
4. Dr. Paramjit Singh Bilga, Professor, GNDEC, Ludhiana
5. Dr. Manpreet Kaur, Associate Professor, BBSBEC, Fatehgarh Sahib
6. Dr. Balkar Singh, Professor, IKGPTU Campus Kapurthala
7. Dr. Jagdev Singh, Professor, S. Beant Singh State University, Gurdaspur
8. Dr. Davinder Priyadarshi, DAVIET, Jalandhar
9. Dr. Amit Handa, Assistant professor, IKGPTU Campus, Kapurthala
10. Dr. Vivek Aggarwal, Assistant Professor, IKGPTU Campus, Kapurthala
11. Dr. Harmesh Kansal, Professor, UIET, Chandigarh.
12. Chairman/ Nominee BoS EE, Special Invitee, IKGPTU Campus Kapurthala

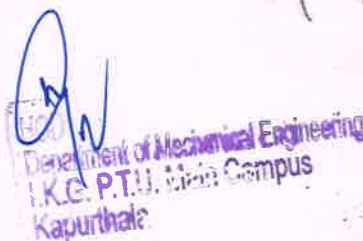
**The BOS has made the following recommendations:**

1. The BOS members approved the starting the M. Tech. course from the year 2021 onwards at IK Gujral Punjab Technical University Main Campus, Kapurthala. The name of M. Tech. course has been decided as M. Tech in Mechanical (Manufacturing Engineering and Automation). The scheme of the first semester for M. Tech. course, as approved by BOS members, is attached here with as Annexure-A.
2. The committee also approved the eligibility criteria for B.Sc. (Hons.) Aircraft Maintenance Engineering Course (03 years) for IET Bhattal Engineering College as per their request.
3. A committee of three members namely, Dr. Vivek Aggarwal, Dr. Jujhar Singh, and Dr. Amit Bansal has been formed to decide the courses for a minor degree in Electricals Vehicles to be offered to the students pursuing B. Tech. Major Degree in Electrical Engineering/ Electrical and Electronics Engineering/ Electronics and Electrical Engineering.
4. The committee approved the conduct of a theory paper for Engineering Graphics and Design for B.Tech.- First year students. The syllabus as approved by BOS members is attached herewith as Annexure-B.

The meeting ended with vote of thanks to the Chairman.

  
Dr. Amit Bansal (Coordinator)  
30/7/2021

  
Dr. Neelkanth Grover (Chairman)

  
Department of Mechanical Engineering  
I.K.G. P.T.U. Main Campus  
Kapurthala

**I.K. Gujral Punjab Technical University**

Date: 15/06/2017

(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 June 15<sup>th</sup>, 2017 at 11:00 in the conference hall, Department of Academics, G-13 Building, main campus. IK Gujral Punjab Technical University Jalandhar, Jalandhar-Kapurthala highway, Punjab.

The agenda of the meeting was to discuss the scheme & syllabus of B.Tech Mechanical Engg., M.Tech Mechanical Engg., & Production Engg., being run in main campus & affiliated colleges and to discuss any other matter with the permission of Chair.

Following members of the BOS were present and actively participated:

- |                             |                                |
|-----------------------------|--------------------------------|
| 1. Dr. Vikas Chawla         | Chairman (Professor)           |
| 2. Dr. Harwinder Singh      | Member (Professor)             |
| 3. Dr. Om Pal Singh         | Member (Professor)             |
| 4. Dr. Paramjit Singh Bilga | Member (Professor)             |
| 5. Dr. Neelkanth Grover     | Member (Assoc. Professor)      |
| 6. Dr. Dilbag Singh         | Member (Assoc. Professor)      |
| 7. Dr. Sumit Jain           | Member (Assoc. Professor)      |
| 8. Dr. Deepak Kumar Goyal   | Coordinator (Asstt. Professor) |
| 9. Dr. Jujhar Singh         | Member (Asstt. Professor)      |
| 10. Dr. Amoljit Singh Gill  | Member (Asstt. Professor)      |

Following members of BOS could not attend the meeting:

- |                         |                         |
|-------------------------|-------------------------|
| 1. Dr. S.P. Singh       | Member (Outside Expert) |
| 2. Dr. Dinesh Kumar     | Member (Outside Expert) |
| 3. Dr. Ajay Batish,     | Member (Outside Expert) |
| 4. S. Navdeepak Sandhu. | Member (T&P)            |

The Board has taken the following decisions:

1. It has been observed that BOG vide its 39<sup>th</sup> meeting under Agenda item no. 39.3 approved Manufacturing and Material Engineering; Thermal Engineering and Industrial Automation and Robotics as specializations for M.Tech. Programs to be started under

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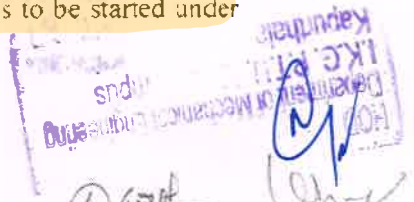
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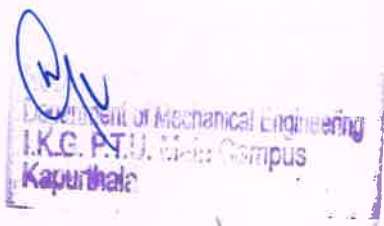
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Department of Mechanical Engg., IKGPTU Main campus and not M.Tech. Mechanical Engineering (Manufacturing Engineering) as notified by the university. It has also been noted that this matter has never been brought to or discussed in any earlier BOS meeting/s.

2. It has been noticed that the specialization Manufacturing and Material Engineering approved by BOG doesn't come under nomenclatures approved by the AICTE in their guidelines.
3. Thus, it has been unanimously decided that M.Tech. Mechanical (Manufacturing and Material Engineering) as approved by BOG or M.Tech. Mechanical (Manufacturing Engineering) as notified by IKGPTU should not be considered as specialization to be started at IKGPTU Main Campus, Kapurthala. Although M.Tech. Mechanical (Manufacturing Engineering) is in tune with the nomenclature of AICTE, but as already M.Tech. Mechanical (Production Engineering) is being offered by the university affiliated colleges and both these specializations are almost similar, thus choice of M.Tech. Mechanical (Manufacturing Engineering) has been phased out.
4. Further, it has been unanimously suggested by all the members of BOS that from the point of view of more employability of students, it will have worth to start M.Tech. Mechanical Engineering at IKGPTU Main Campus on the pattern of IIT Ropar or some other IITs. Also, M.Tech. (Mechanical Engineering) is as per the nomenclature of AICTE. Approval for the same has to be taken from the BOG and Academic Council.
5. Department of Mechanical Engineering, IKGPTU Main Campus shall propose a study scheme and detailed syllabus/ contents of various subjects for M.Tech. (Mechanical Engineering) based on the contents of similar subjects taught in various IIT's. The proposed study scheme and detailed syllabus/ contents of various subjects will be discussed and finalised in the next meetings of BOS.
6. It has been strongly recommended that the study scheme and syllabus of UG and PG programs to be offered at IKGPTU Main Campus and its affiliated colleges/ institutions (except autonomous colleges/institutions as per UGC) should be same if the nomenclature of the program is same. Further, BOS recommended that in case IKGPTU decides to have separate syllabus, then nomenclature of the course/program should be different.



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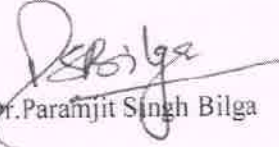
**Most important recommendation based on current observation:**

Henceforth, whenever any new program is to be started by university or its affiliated colleges/institutions, it should be brought forward to BOS of the university well in advance so that appropriate recommendations can be given by BOS before any kind of approvals to new program/s. Treat this as most important to avoid any kind of problems at later stages.

  
Dr. Vikas Chawla

  
Dr. Harwinder Singh

  
Dr. Om Pal Singh

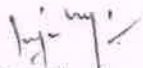
  
Dr. Paramjit Singh Bilga

  
Dr. Neelkanth Grover

  
Dr. Dilbag Singh

  
Dr. Sumit Jain

  
Dr. Deepak Kumar Goyal

  
Dr. Jujhar Singh

  
Dr. Amoljit Singh Gill

  
Dr. K.G.P.  
Kapurthala

Kapurthala  
K.G.P.  
Dr. K.G.P.  
Kapurthala



**I.K. Gujral Punjab Technical University**  
**(Minutes of Meeting)**

Date: 10/07/2017

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 July 10<sup>th</sup>, 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:**

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

**Following members of BOS could not attend the meeting:**

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

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Department of Mechanical Engineering  
I.K.G.P.T.U. Main Campus  
Kapurthala

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The Board has taken the following decisions:

1. 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.
2. The task of designing the detailed syllabus of various courses of 1<sup>st</sup> semester of M.Tech. Mechanical Engineering have been assigned to following members:

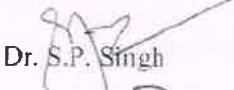
Subject	BOS Members
Advanced Engineering Materials	Dr. Buta Singh Sidhu Dr. Vikas Chawla Dr. Jujhar Singh
Finite Element Analysis	Dr. S.P.Singh Dr. Neel Kanth Grover
Advanced Design of Mechanical Systems	Dr. S.P.Singh Dr. Harwinder Singh Dr. Amoljit Singh Gill
Operations Management	Dr. Om Pal Singh Dr. 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.
4. 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

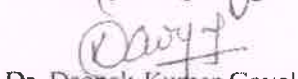
  
Dr. Harwinder Singh

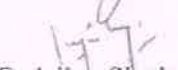
  
Dr. Om Pal Singh

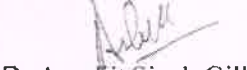
  
Dr. Paramjit Singh Bilga


  
Dr. Dilbag Singh

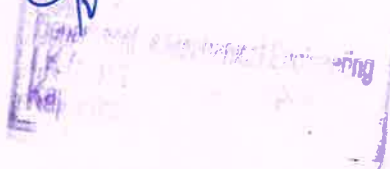
  
Dr. Neelkanth Grover

  
Dr. Deepak Kumar Goyal

  
Dr. Jujhar Singh

  
Dr. Amoljit Singh Gill

  
Dr. Paramjit Singh Bilga



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

SEMESTER 1 <sup>st</sup>		Contact Hours/Week			Maximum Marks			Credits
Subject Code	Subject Name	L	T	P	Int.	Ext.	Total	
XXXX	Advanced Engineering Materials	4	0	0	50	100	150	4
XXXX	Finite Element Analysis	3	1	0	50	100	150	4
XXXX	Advanced Design of Mechanical Systems	3	1	0	50	100	150	4
XXXX	Operations Management	4	0	0	50	100	150	4
XXXX	Advanced Thermodynamics	4	0	0	50	100	150	4
<b>Total</b>		<b>18</b>	<b>2</b>	<b>0</b>	<b>250</b>	<b>500</b>	<b>750</b>	<b>20</b>

**Total Contact Hours/Week = 20**  
\* Tutorials involve problems solving sessions including practice on relevant software

SEMESTER 2 <sup>nd</sup>		Contact Hours/Week			Maximum Marks			Credits
Subject Code	Subject Name	L	T	P	Int.	Ext.	Total	
XXXX	Research Methodology	3	1	0	50	100	150	4
XXXX	Tribology	4	0	0	50	100	150	4
XXXX	Modern Manufacturing Processes	4	0	0	50	100	150	4
XXXX	Computational Fluid Dynamics	3	1	0	50	100	150	4
XXXX	Elective -I	4	0	0	50	100	150	4
<b>Total</b>		<b>18</b>	<b>2</b>	<b>0</b>	<b>250</b>	<b>500</b>	<b>750</b>	<b>20</b>

**Total Contact Hours/Week = 20**  
\* Tutorials involve problems solving sessions including practice on relevant software

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

**Total Contact Hours/Week = 16**

SEMESTER 4 <sup>th</sup>		Contact Hours/Week			Evaluation Criteria	Credits
Subject Name	L	T	P			
Dissertation	0	0	28	Satisfactory/Unsatisfactory	14	

**Total Contact Hours/Week = 28**

**Total Credits for the Programme: 70**

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Department of Mechanical Engineering  
I.K.G. P.T.U. Jalandhar Campus  
Kapurthala



**List of Electives (Manufacturing & Industrial Engineering)**

- 1. Advanced Welding Technology
- 2. Advanced Metal Forming Processes
- 3. Automation and Robotics
- 4. Advanced Material Characterization Techniques
- 5. Rapid Prototyping
- 6. Advanced Metal Cutting
- 7. 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
- 3. Advanced Vibration Engineering
- 4. Robot Manipulators: Kinematics, Dynamics and Control
- 5. 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
- 8. Solar Energy Utilization
- 9. Alternative Refrigeration and Air Conditioning Techniques
- 10. Design of HVAC systems
- 11. Design and Optimization of Thermal Systems
- 12. Advanced Heat and Mass Transfer

Handwritten signatures and stamps at the bottom of the page. A purple stamp from the Department of Mechanical Engineering, K.G. P.T.U., is visible. There are several handwritten initials and names, including 'Devi', 'S', and 'K'. A date stamp '15/11/20' is also present.

# I.K. Gujral Punjab Technical University

Date: 15/12/2017

## (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 December 15<sup>th</sup>, 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 and finalise the syllabus of M.Tech Mechanical Engineering 2nd semester onwards.
- To discuss the syllabus of B.Tech 1st year subjects related to Mechanical Engineering for the coming session.
- 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 & Head, Department of Mechanical Engg., IKGPTU, Kapurthala
2. Dr. Om Pal Singh, Professor, Department of Mechanical Engg, BCET, Gurdaspur
3. Dr. Neelkanth Grover, Assoc. Prof. Department of Mechanical Engg. IKGPTU, Kapurthala
4. Dr. Deepak Kumar Goyal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
5. Dr. Jujhar Singh, Asstt. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala
6. Dr. Amoljit Singh Gill, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
7. Er. Navdeepak Sandhu, Dy. Director CR&A, IKGPTU, Kapurthala
8. Dr. Manoj Mittal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)
9. Dr. Vivek Aggarwal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)
10. Er. Sewa Singh, A.P., ACEM, Kapurthala (Special invitee, PTU Alumni)
11. Dr. Amit Bansal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)

### Following members of BOS and special invitees 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. Dinesh Kumar, Professor, IIT, Roorkee
4. Dr. Ajay Batish, Professor, Thapar University
5. Dr. Harwinder Singh, Professor, Department of Mechanical Engg, GNDEC, Ludhiana\*
6. Dr. Paramjit Singh Bilga, Professor, Department of Mechanical Engg, GNDEC, Ludhiana
7. Dr. Dilbag Singh, Asso. Prof. Department of Mechanical Engg, BCET, Gurdaspur\*
8. Dr. Sumit Jain, Assoc. Prof., Department of Mechanical Engg, CTIMT, Jalandhar
9. Er. Sumit Bansal, BHEL, Goindwal Sahib (Special invitee from industry)\*

\*The comments sent by BOS members has been incorporated in the syllabus.

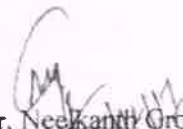
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The Board has taken the following decisions:

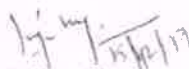
1. The scheme of M.Tech. Mechanical Engineering was discussed and list of elective subjects has been revised. Revised and finalised list of elective subjects is attached herewith. (Annexure-I)
2. The syllabus of M.Tech. Mechanical Engineering 2nd semester onwards was discussed and finalised (Details are attached as Annexure II).
3. It was suggested that the scheme of 1<sup>st</sup> year as per AICTE Model Curriculum issued in November 2017 for the first year undergraduate Degree Courses in Engineering & Technology (B.Tech.) to be adopted by the university w.e.f. session 2018-2019 for the admission batch 2018-19 onwards.
4. The syllabus of Mechanical Engineering subjects offered in B.Tech. 1<sup>st</sup> year was discussed and the task of designing the detailed syllabus of Engineering Graphics & Design is assigned to the team of Dr. Vikas Chawla, Dr. Amoljit Singh and Er. Sewa Singh, A.P., ACEM, Kapurthala (Special invitee, PTU Alumni). The team will submit the same by 15<sup>th</sup> January, 2018.


  
Dr. Vikas Chawla

  
Dr. Om Pal Singh

  
Dr. Neekanth Grover

  
Dr. Deepak Kumar Goyal

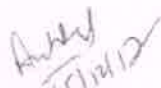
  
Dr. Jujhar Singh

  
Dr. Amoljit Singh Gill

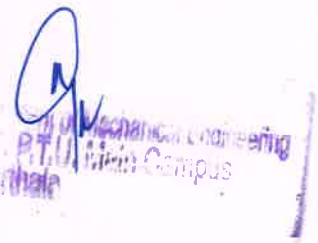
  
Er. Navdeepak Sandhu

  
Dr. Manoj Mittal

  
Dr. Vivek Aggarwal

  
Dr. Amit Bansal

  
Er. Sewa Singh

  
Dr. Neekanth Grover  
PTU Mechanical Engineering  
Kapurthala Campus





**I.K. Gujral Punjab Technical University**

Date: 06/04/2018

**(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 April 6<sup>th</sup>, 2018 at 11:00 a.m. 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 and finalise the scheme of M.Tech Mechanical Engineering for the coming session.
- To discuss and finalise the syllabus of B.Tech 1st year subjects related to Mechanical Engineering for the coming session.
- 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 & Head, Department of Mechanical Engg., IKGPTU, Kapurthala
2. Dr. Om Pal Singh, Professor, Department of Mechanical Engg, BCET, Gurdaspur
3. Dr. Harwinder Singh, Professor, Department of Mechanical Engg, GNDEC, Ludhiana
4. Dr. Dilbag Singh, Assoc. Prof. Department of Mechanical Engg, BCET, Gurdaspur
5. Dr. Neelkanth Grover, Assoc. Prof. Department of Mechanical Engg, IKGPTU, Kapurthala
6. Dr. Deepak Kumar Goyal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
7. Dr. Jujhar Singh, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
8. Er. Navdeepak Sandhu, Dy. Director CR&A, IKGPTU, Kapurthala
9. Dr. Manoj Mittal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)
10. Dr. Vivek Aggarwal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)
11. Er. Sewa Singh, A.P., ACEM, Kapurthala (Special invitee, PTU Alumni)
12. Dr. Amit Bansal, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala (Special invitee)

**Following members of BOS and special invitees 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. Dinesh Kumar, Professor, IIT, Roorkee
4. Dr. Ajay Batish, Professor, Thapar University
5. Dr. Paramjit Singh Bilga, Professor, Department of Mechanical Engg, GNDEC, Ludhiana
6. Dr. Sumit Jain, Assoc. Prof., Department of Mechanical Engg, CTIMT, Jalandhar
7. Dr. Amoljit Singh Gill, Asstt. Prof., Department of Mechanical Engg, IKGPTU, Kapurthala
8. Er. Sumit Bansal, BHEL, Goindwal Sahib (Special invitee from industry)

Handwritten signatures and stamps at the bottom of the page. A large signature is visible on the right side, dated 06/4/18. There are several other smaller signatures and a stamp from IKGPTU, Kapurthala.

The Board has taken the following decisions:

1. It was discussed and finalised that the study scheme and syllabus of M. Tech Thermal Engineering are to be adopted same as AICTE Model Curriculum for 'M. Tech. Mechanical Engineering Specialization: Thermal Engineering' for the batch 2018-19 onwards. The copy attached as Annexure-A.
2. It was discussed and finalised that the syllabus of B. Tech 1<sup>st</sup> year (common to all branches) subjects related to BOS Mechanical Engineering (1. Engineering Graphics & Design, 2. Workshop/Manufacturing Practices) are to be adopted same as AICTE Model Curriculum for the batch 2018-19 onwards. The copy attached as Annexure-B.
3. The study scheme and syllabus of B. Tech. Mechanical Engineering for the batch 2018-19 onwards (3<sup>rd</sup> to 8<sup>th</sup> Semester) will be discussed and finalised in the next BOS meeting.
4. The subject codes for the all the subjects/courses will be decided by Academics Department, IKGPTU as per their pattern.
5. The study scheme and syllabus for the following B. Tech. and M. Tech. programmes will be revised after issuance of Model Curriculum by AICTE for the same or as decided by competent authority:
  - B. Tech. Automation & Robotics (Study scheme & syllabus of 3<sup>rd</sup> to 8<sup>th</sup> Sem.)
  - B. Tech. Automobile Engineering (Study scheme & syllabus of 3<sup>rd</sup> to 8<sup>th</sup> Sem.)
  - B. Tech. Industrial Engineering (Study scheme & syllabus of 3<sup>rd</sup> to 8<sup>th</sup> Sem.)
  - B. Tech. Production Engineering (Study scheme & syllabus of 3<sup>rd</sup> to 8<sup>th</sup> Sem.)
  - B. Tech. Tool Engineering (Study scheme & syllabus of 3<sup>rd</sup> to 8<sup>th</sup> Sem.)
  - M. Tech. Industrial Engineering (Study scheme & syllabus of 1<sup>st</sup> to 4<sup>th</sup> Sem.)
  - M. Tech. Mechanical Engineering (Study scheme & syllabus of 1<sup>st</sup> to 4<sup>th</sup> Sem.)
  - M. Tech. Production Engineering (Study scheme & syllabus of 1<sup>st</sup> to 4<sup>th</sup> Sem.)
  - M. Tech. CAD / CAM (Study scheme & syllabus of 1<sup>st</sup> to 4<sup>th</sup> Sem.)

The meeting ended with the vote of thanks to the chair.

  
Dr. Vikas Chawla  
6/4/18

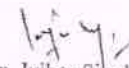
  
Dr. Om Pal Singh

  
Dr. Harwinder Singh

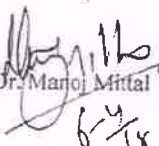
  
Dr. Dilbag Singh

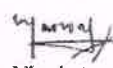
  
Dr. Neelbanti Grover

  
Dr. Deepak Kumar Goyal

  
Dr. Jujhar Singh


  
Er. Navdeepak Sandhu

  
Dr. Manoj Mittal  
6/4/18

  
Dr. Vivek Aggarwal

  
Er. Sewa Singh

  
Dr. Amit Bansal

  
Department of Mechanical Engineering  
I.K.G. P.T.U. Jalandhar Campus  
Kapurthala

**I.K. Gujral Punjab Technical University**      Date: 06/07/2018  
**(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 July 6<sup>th</sup>, 2018 at 11:00 a.m. 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 and finalise the syllabus of B. Voc. (Automobile Servicing, Automotive Manufacturing Technology and Refrigeration & Air Conditioning) Courses offered by AICTE for the admission year 2018-19.

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

1. Dr. Vikas Chawla, Professor & Head, Department of Mechanical Engg., IKGPTU, Kapurthala
2. Dr. Buta Singh Sidhu, Dean Planning, MRSPTU, Bathinda (Special invitee)
3. Dr. Om Pal Singh, Professor, Department of Mechanical Engg. BCET, Gurdaspur
4. Dr. Paramjit Singh Bilga, Professor, Department of Mechanical Engg. GNDEC, Ludhiana
5. Dr. Neelkhanth Grover, Asso. Prof. Department of Mechanical Engg. IKGPTU, Kapurthala
6. Dr. Dilbag Singh, Asso. Prof. Department of Mechanical Engg. BCET, Gurdaspur
7. Dr. Deepak Kumar Goyal, Asstt. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala
8. Dr. Jujhar Singh, Asstt. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala
9. Dr. Amojit Singh Gill, Asstt. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala
10. Dr. Manoj Mittal, Asstt. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala (Special invitee)
11. Dr. Vivek Aggarwal, Asstt. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala (Special invitee)
12. Dr. Amit Bansal, Asstt. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala (Special invitee)
13. Er. Sewa Singh, A.P., ACEM, Kapurthala (Special invitee, PTU Alumni)
14. Dr. R.K. Narula, Asstt. Prof., Department of Mathematics, IKGPTU, Kapurthala (Special invitee on the spot)
15. Dr. Gaurav Bhargava, Assoc. Prof. Department of Chemistry, IKGPTU, Kapurthala (Special invitee on the spot)
16. Dr. Amit Sarin, Assoc. Prof., Department of Physics, IKGPTU, Kapurthala (Special invitee on the spot)
17. Dr. Amit Gupta, Asstt. Prof., Department of ECE, IKGPTU, Kapurthala (Special invitee on the spot)

**Following members of BOS could not attend the meeting:**

1. Dr. S.P. Singh, Professor, IIT, Delhi
2. Dr. Dinesh Kumar, Professor, IIT, Roorkee
3. Dr. Ajay Batish, Professor, Thapar University
4. Dr. Harwinder Singh, Professor, Department of Mechanical Engg. GNDEC, Ludhiana
5. Dr. Sumit Jain, Asso. Prof., Department of Mechanical Engg. CTIMI, Jalandhar
6. Er. Navdeepak Sandhu, Dy. Director CR&A, IKGPTU, Kapurthala

Handwritten signatures and dates at the bottom of the page:

- Signature: *S.P. Singh*, Date: 06/07/18
- Signature: *D.K. Singh*, Date: 06/07/2018
- Signature: *Amit Gupta*, Date: 06/07/18
- Signature: *Om Pal Singh*, Date: 06/07/18
- Signature: *Buta Singh Sidhu*, Date: 06/07/18
- Signature: *Neelkhanth Grover*, Date: 06/07/18
- Signature: *Dilbag Singh*, Date: 06/07/18
- Signature: *Deepak Kumar Goyal*, Date: 06/07/18
- Signature: *Jujhar Singh*, Date: 06/07/18
- Signature: *Amojit Singh Gill*, Date: 06/07/18
- Signature: *Manoj Mittal*, Date: 06/07/18
- Signature: *Vivek Aggarwal*, Date: 06/07/18
- Signature: *Amit Bansal*, Date: 06/07/18
- Signature: *Sewa Singh*, Date: 06/07/18
- Signature: *R.K. Narula*, Date: 06/07/18
- Signature: *Gaurav Bhargava*, Date: 06/07/18
- Signature: *Amit Sarin*, Date: 06/07/18
- Signature: *Amit Gupta*, Date: 06/07/18



The Board has taken the following decisions:

1. Members of the BOS discussed and finalised the curriculum for Level 3 semester I & Level 3 semester II only. The curriculum for Level 4, Level 5, Level 6 and Level 7 will be discussed in subsequent BOS meetings.
2. In the model curriculum for B.Voc./D.Voc. in Automotive Manufacturing Technology, following points have been suggested:
  - (a) During Level 3, semester I in On-Job-Training (OJT)/ Qualification Packs, Auto Body Technician level 3 (ASC/Q 1410) course should be must.
  - (b) During Level 3, semester II in On-Job-Training (OJT)/ Qualification Packs, Automotive Service Technician level 3 (ASC/Q 1401) & Casting Technician Level 3 (ASC/ Q 3202) courses should be included and anyone from these two can be opted by the students.
  - (c) The detailed curriculum for 1<sup>st</sup> year is accepted as proposed by AICTE with minor modifications in their content (attached herewith).
3. In the model curriculum for B.Voc./D.Voc. in Automobile Servicing, following points have been suggested:
  - (a) During Level 3, semester I in On-Job-Training (OJT)/ Qualification Packs, Automotive Service Technician level 3 (ASC/Q 1401) course should be must.
  - (b) During Level 3, semester II in On-Job-Training (OJT)/ Qualification Packs, Auto Body Technician level 3 (ASC/Q 1410) & Casting Technician Level 3 (ASC/ Q 3202) courses should be included and anyone from these two can be opted by the students.
  - (c) The detailed curriculum for 1<sup>st</sup> year is accepted as proposed by AICTE with minor modifications in their content (attached herewith).
4. In the model curriculum for B.Voc./D.Voc. in Refrigeration and Air Conditioning, following points have been suggested:
  - (a) During Level 3, semester I in On-Job-Training (OJT)/ Qualification Packs, Field Technician-Refrigeration (ELE/Q 3103) course should be must.
  - (b) During Level 3, semester II in On-Job-Training (OJT)/ Qualification Packs, Operator -Conventional Training (CSC/Q 0110) and Fitter- Fabrication (CSC/Q 0303) courses should be included and anyone from these two can be opted by the students.

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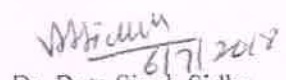
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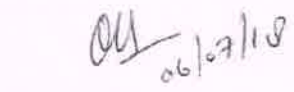
Department of Mechanical Engineering  
Hons. PT. II  
K. Srinivasan

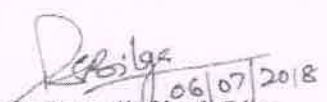


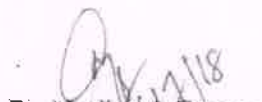
(c) The detailed curriculum for 1<sup>st</sup> year is accepted as proposed by AICTE with minor modifications in their content (attached herewith).

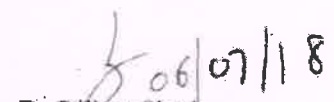
  
Dr. Vikas Chawla 06/07/18

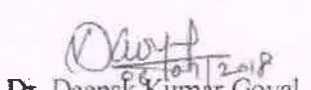
  
Dr. Buta Singh Sidhu 06/07/2018

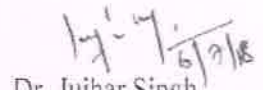
  
Dr. Om Pal Singh 06/07/18

  
Dr. Paramjit Singh Bilga 06/07/2018

  
Dr. Neelkanth Grover 06/07/18

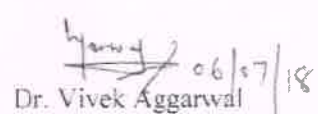
  
Dr. Dilbag Singh 06/07/18

  
Dr. Deepak Kumar Goyal 06/07/2018

  
Dr. Jujhar Singh 06/07/18

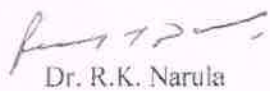
  
Dr. Amoljit Singh Gill 06/07/18

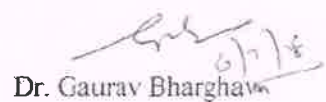
  
Dr. Manoj Mittal 06/07/18

  
Dr. Vivek Aggarwal 06/07/18


  
Dr. Amit Bansal 06/07/18


  
Er. Sewa Singh 06/07/18

  
Dr. R.K. Narula 06/07/18

  
Dr. Gaurav Bhargava 06/07/18

  
Dr. Amit Sarin 06/07/18

  
Dr. Amit Gupta 06/07/18

  
I.K.G. P.T.U.  
Kapurthala



**I.K.G. PUNJAB TECHNICAL UNIVERSITY**  
(Department of Academics)

Ref. No. JKGPTU/ME/2642

Date: 29/01/2019

- Dr. Vikas Chawla, Professor & Teaching, Mechanical Engineering, Bathinda (Chairman, BOS)  
 Dr. R.P. Singh, Professor (Retired), Bathinda  
 Dr. Bana Singh Sidhu, Dean Planning, MBSPTU, Bathinda (Special invitee)  
 Dr. S.P. Singh, Professor, IIT, Delhi  
 Dr. A.S. Bhatia, Assoc. Prof. & Head Dept. of ECE, IKGPTU, Kapurthala (Special invitee)  
 Dr. Anand Gupta, Professor, Department of Mechanical Engg. P.T. Univ., Patna (Special invitee)  
 Dr. Harwinder Singh, Professor, Department of Mechanical Engg. GNDEC, Ludhiana  
 Dr. Om Prakash Singh, Professor, Department of Mechanical Engg. BUEE, Gurdaspur  
 Dr. Pardeep Singh Bhatia, Professor, Department of Mechanical Engg. GNDEC, Ludhiana  
 Dr. Srikant Kumar, Assoc. Prof. & Head, Department of Mechanical Engg. IKGPTU, Kapurthala  
 Dr. Dhiraj Singh, Assoc. Prof., Department of Mechanical Engg. RCTE, Gurdaspur  
 Dr. Sunil Kumar, Assoc. Prof., Department of Mechanical Engg. C.U.E.T., Jalandhar  
 Dr. Anil Kumar, Assoc. Prof. & Head, Dept. of Physical Sciences, IKGPTU, Kapurthala (Special invitee)  
 Dr. Sushil Kumar, Assoc. Prof. & Head, Dept. of Mechanical Engineering, IKGPTU, Kapurthala (Special invitee)  
 Dr. Jagmeet Bawa, Asst. Prof. (Retired), IKGPTU, Kapurthala  
 Dr. Nagraj Bhatia, Assoc. Prof. & Head, RJC, BHSTTU, Bangalohi, Ludhiana  
 Dr. Deepak Kumar Goyal, Asst. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala  
 Dr. Jyoti Singh, Asst. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala  
 Dr. Amolji Singh Gill, Asst. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala  
 Dr. Navdeepak Sandhu, Dr. Director C.R.E.V. IKGPTU, Kapurthala  
 Dr. Manoj Mittal, Asst. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala (Special invitee)  
 Dr. Anil Aggarwal, Asst. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala (Special invitee)  
 Dr. Anand Goyal, Asst. Prof., Department of Mechanical Engg. IKGPTU, Kapurthala (Special invitee)  
 Dr. Sunil Bhatia, BHEL, cumulated salary, Bathinda  
 Dr. Sewa Singh, A.P., MCEM, Kapurthala

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

Sr. 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 28, 2019** at 11:00 am in the last class hall, Department of Academics, I.K.G. Punjab Technical University, near Gurdaspur-Kapurthala highway, Punjab.

The agenda of the meeting is:

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

The scheme & syllabus for B.E. programme of Mechanical Engineering at RCTE, Gurdaspur, GNDEC 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 meeting through e-mail to [me@jkgtu.ac.in](mailto:me@jkgtu.ac.in) or by the phone number 9815881836.

TA DA & Honorarium will be paid as per the University rules. Kindly leave 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.

Cc:  
Dean Academics

Chairman, BOS, IKGPTU

Department of Academics, G-3 Building, 2<sup>nd</sup> Floor, I.K.G. Punjab Technical University, near Gurdaspur-Kapurthala Highway, Near School City, Kapurthala - 144613, Punjab, India.

  
 Department of Mechanical Engineering  
 I.K.G. P.T.U. Kapurthala Campus  
 Kapurthala




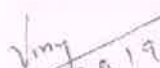
2. The team of faculty members have been constituted to propose the detailed contents of the syllabus of various subject of 3<sup>rd</sup> and 4<sup>th</sup> semester (Mechanical Engineering) as per following details:

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

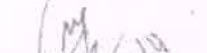
3. Subject codes and open elective subjects will be decided in next BOS meeting.

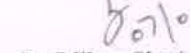
  
Dr. Vikas Chawla


  
Feb 7, 2019  
Dr. R. P. Singh

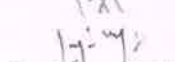
  
9.1.19  
Dr. Vinay Gupta

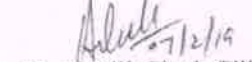
  
24/02/19  
Dr. Om Pal Singh

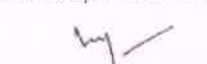
  
Dr. Neelkanth Grover

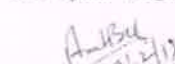
  
5/07/02/19  
Dr. Dilbag Singh

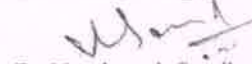
  
07/02/19  
Dr. Deepak Kumar Goyal

  
Dr. Jujhar Singh

  
07/2/19  
Dr. Amoljit Singh Gill


  
Dr. Vivek Aggarwal

  
Dr. Amit Bansal

  
07/02/19  
Er. Navdeepak Sandhu

  
Dr. Jagmeet Bawa

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

  
Kapurthala





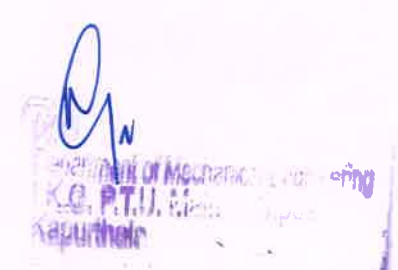
		II						
4	Engineering Science courses	Materials Engineering	3	0	0	3	3	
5	Professional Core courses	Theory of Machines-II	3	1	0	4	4	
6	Mandatory courses	Environmental Science	-	-	-	-	0	
7	Professional Core courses	Mechanical Engg. Lab-II (Applied Thermodynamics, Fluid Machines, Material Engineering)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

*Handwritten signatures and dates:*  
 27/11/18  
 22/19  
 07.2.19  
 07/2/19  
 07/2/19

**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
							<b>Total credits</b>	<b>20.0</b>

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**Semester VI (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		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
							<b>Total credits</b>	<b>21.0</b>

**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

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 Department of Mechanical Engineering  
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 Kapurthala  
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Sl. No.	Category	Code	Course Title	Hours per week			Total contact hours	Credits
				Lecture	Tutorial	Practical		
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
							<b>Total credits</b>	<b>20.0</b>

**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
							<b>Total credits</b>	<b>21</b>

**TOTAL CREDITS – 165**

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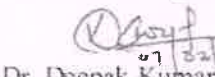
2. The team of faculty members have been constituted to propose the detailed contents of the syllabus of various subject of 3<sup>rd</sup> and 4<sup>th</sup> semester (Mechanical Engineering) as per following details:

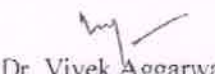
Sr. No.	Semester	Subject	Faculty Member(s)
1	3 <sup>rd</sup>	Fluid Mechanics	Dr. Neelkanth Grover Dr. Vivek Aggarwal
2	3 <sup>rd</sup>	Theory of Machines-I	Dr. Deepak Kumar Goyal Dr. Amit Bansal
3	3 <sup>rd</sup>	Machine Drawing	Dr. Vikas Chawla
4	3 <sup>rd</sup>	Basic Electronics Engineering	Chairman,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

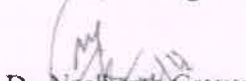
  
Dr. Om Pal Singh

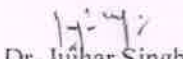
  
Dr. Deepak Kumar Goyal

  
Dr. Vivek Aggarwal


  
Dr. Jagmeet Bawa

  
Dr. R. P. Singh

  
Dr. Neelkanth Grover

  
Dr. Jujhar Singh

  
Dr. Amit Bansal

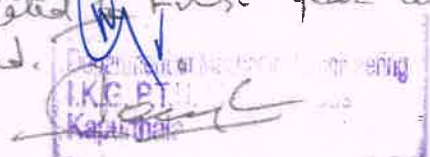
  
Dr. Vinay Gupta

  
Dr. Dilbag Singh

  
Dr. Amoljit Singh Gill

  
Er. Navdeepak Sandhu

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

  
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Kapurthala









Elective subjects (even semester) for Minor degree in B.Tech. Mech. Engineering:

Sl. No.	Category	Semester	Course Title	Hours per week			Total contact hours	Credits
				Lecture	Tutorial	Practical		
1	Professional Core courses	Even	Automobile Engg.	3	1	0	4	4
2	Professional Core courses	Even	Theory of Machines -II	3	1	0	4	4
3	Professional Core courses	Even	Strength of Materials-II	3	1	0	4	4
4	Professional Core courses	Even	Applied Thermodynamics-II	3	1	0	4	4
5	Professional Core courses	Even	Refrigeration and Air Conditioning	3	1	0	4	4

*Handwritten signatures and dates:*  
 11/3/19  
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\* Applied thermodynamics

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 Kapurthala



**List of MOOC Courses for  
B.Tech. Mechanical Engineering Batch 2018 onwards**

Course Id	Course Name	Duration
noc19-me40	Industrial Safety Engineering	12 Weeks
noc19-me41	Engineering Mechanics	12 weeks
noc19-me42	Engineering Fracture Mechanics	12 weeks
noc19-me43	Solid Mechanics	12 weeks
noc19-me44	Fundamentals of manufacturing processes	12 Weeks
noc19-me45	Manufacturing Systems Technology Part I & II	12 weeks
noc19-me47	Mathematical Modelling Of Manufacturing Processes	12 Weeks
noc19-me50	Work System Design	12 Weeks
noc19-me53	Advanced Concepts in Fluid Mechanics	12 Weeks
noc19-me56	Concepts of Thermodynamics	12 Weeks
noc19-me57	Applied Thermodynamics For Engineers	12 Weeks
noc19-me59	Fundamentals of Conduction and Radiation	12 Weeks
noc19-me60	Energy Conservation and Waste Heat Recovery	12 Weeks
noc19-me61	Fundamentals of Gas Dynamics	12 Weeks
noc19-me62	Heat Exchangers: Fundamentals and Design Analysis	12 Weeks
noc19-me64	Turbulent Combustion: Theory and Modelling	12 weeks
noc19-me65	Dynamic Behaviour Of Materials	12 Weeks
noc19-me66	Plastic Working Of Metallic Materials	12 Weeks
noc19-me69	Fundamentals of Surface Engineering: Mechanisms, Processes and Characterizations	12 Weeks
noc19-me71	Fundamentals Of Artificial Intelligence	12 Weeks
noc19-me70	Engineering Metrology	12 weeks
noc19-me72	Noise Management and Control	12 weeks
noc19-me76	Aircraft Propulsion	12 weeks
noc19-me77	Convective Heat Transfer	12 weeks

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I.K. Gujral Punjab Technical University  
(Minutes of Meeting)

Dated: 28/06/2019

A meeting of the Board of Studies (Mechanical Engineering) for IKG PTU and its constitute campuses was held on 28th June 2019 at 14:30 in the conference hall, Department of Academics, G+3 Building, main campus, IK Gujral Punjab Technical University Jalandhar, Jalandhar-Kapurthala highway, Punjab. Following persons attended the meeting:

1. Dr. Neel Kanth Grover, Associate Professor, IKGPTU, Kapurthala
2. Dr. Vikas Chawla, Professor, IKGPTU, Hoshiarpur
3. Dr. Harmesh Kansal, Professor, UIET, Chandigarh
4. Dr. J S Saini, Associate Professor, TIET, Patiala
5. Dr. Arun Kumar Asati, Associate Professor, SBSSTC, Ferozepur
6. Dr. Sumit Chugh, Director, CAX services Pvt Ltd, Chandigarh
7. Dr. Manoj Mittal, Asst. Professor, IKGPTU, Kapurthala
8. Mr Rajan, Student, Department of ME, IKGPTU Main Campus
9. Mr Sharan, Student, Department of ME, IKGPTU Main Campus

Following recommendations are made:

1. The current contents of syllabus being offered to Students of Mechanical engineering are as per Annexure-A. It is deliberated in the meeting that its contents need to be revised as per contents mentioned in Annexure-B.
2. The detailed syllabus for B. Tech. 1<sup>st</sup> year (Batch 2019 onwards) course of Engineering Graphics and Design (BTME-101-18) has been discussed. The credit of the course is recommended to be increased from 3 to 4 and contact hour increased from 4 to 6 hrs. Further, the theory paper can be included in the first year from 1<sup>st</sup> to 5<sup>th</sup> units with revised syllabus. There will be a theory examination of 60 Marks. The internal marks will be 40. The syllabus of internal practical exam will be having a unit 6 apart from unit 1 to 5 as mentioned above. The revised subject code will be BTME-101-19. The revised scheme is mentioned below:

Course code	BTME101-18				
Category	Engineering Science Courses				
Course title	Engineering Graphics & Design (Theory & Lab.)				
Scheme and Credits	L	T	P	Credits	Semester-
	1	0	6	4	I
Pre-requisites (if any)	Nil				
	Common to all branches				

3. It is recommended to increase the contact hours of MP / workshop from 1-0-4 to 1-0-6. The additional 02 hours will be meant for Atal Tinkering Lab.
4. The basic Thermodynamics course is introduced in the third semester. Further the practical hours have been recommended to increase from 4 to 6 hrs in the third semester and the different code is given to different lab such as SOM Lab (BTME-306-18), TOM lab (BTME-307-18) and Fluid Mechanics lab (BTME-308-18), in the third semester.

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Manoj Mittal  
C.A.G.N.O.S. MITTAL

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Rajan Singh

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Rajan Singh

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5. The Applied thermodynamics course is introduced in semester-IV. Further the practical hours have been revised to increase from 4 to 6 hrs in the fourth semester and the different code is given to different lab such as Thermal Lab (BTME-406-18), Fluid Machines lab (BTME-407-18), and Material Engineering Lab (BTME-408-18). The revised list of practical is given in scheme of syllabus.
6. It is recommended to adopt the curriculum of IKGPTU affiliated colleges for IKGPTU main campus as well as IKGPTU constituent campuses.
7. It is recommended to adopt the MOOCS from the next session i.e. Jan 2020. It is further suggested that Faculty of main campus as well as constituent campuses be trained for the same through FDP, workshops amongst others.
8. The list of subjects for minor degree has been recommended as per Annexure-C.

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 28/6/19

*[Signature]*  
 Sharan Singh

Rayan Singh  
*[Signature]*  
 (Mgans MITTAL)

*[Signature]*  
 Kapurthala



# I K Gujral Punjab Technical University

Jalandhar Road Kapurthala, Punjab India

Dated: 20<sup>th</sup> May 2020

## Minutes of Meeting

A meeting of the Board of Studies Mechanical Engineering/ Production Engineering/ Industrial / Automobile Engineering was held through online (Google meet) as on May 20<sup>th</sup> 2019 at 3:00 PM.

### Following members of BOS and special invitees have attended the meeting:

- 1 Dr. Ajay Kumar Sharma, Hon'ble Vice-Chancellor, IKGPTU Kapurthala.
- 2 Dr. Balkar Singh, Director Academics, IKGPTU Kapurthala.
- 3 Dr. Om Pal Singh (Chairman), BCET Gurdaspur
- 4 Dr. Neel Kanth Grover, HOD ME, IKGPTU main campus
- 5 Dr. Vikas Chawla, Professor, IKGPTU Campus Hoshiarpur.
- 6 Dr. Paramjit Singh Bilga, GNDEC, Ludhiana
- 7 Dr. Rachin Goyal, CGC, Landran
- 8 Dr. Vijay Kumar Jadon, Chitkara University, Rajpura
- 9 Dr. Suresh Kumar Verma, DCRUST Murthal (Sonipat) Haryana.
- 10 Dr. Amit Bansal, (Coordinator), IKGPTU Main Campus.
- 11 Dr. Jujhar Singh, IKGPTU Main Campus
- 12 Mr. Sarbjit Singh, GM-Manufacturing, Honda Motorcycle and Scooter India Pvt. Ltd. IMT Manesar.
- 13 Dr. Lakhvir Singh, Professor, BBSBEC, Fatehgarh Sahib
- 14 Dr. Devinder Priyadarshi, DAVIET, Jalandhar
- 15 Dr. Manoj Mittal, IKGPTU Main Campus
- 16 Dr. Vivek Aggarwal, IKGPTU Main Campus
- 17 Mr. Kapil, student, Department of ME, IKGPTU Main campus

### Following members of BOS could not attend the meeting:

- 1 Dr. R.P.S. Sukerchakia, Principal (Rt) GNDEC, Ludhiana.
- 2 Dr. Subhash Chander, NIT Jalandhar

### The board has made the following recommendations:

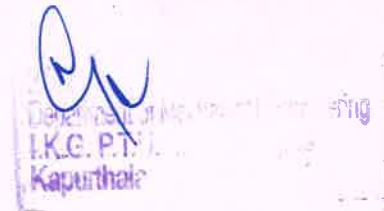
- 1) The scheme and syllabus of the 5<sup>th</sup> to 8<sup>th</sup> Semester of Mechanical Engineering for 2018 batch onwards has been thoroughly discussed. The board suggested that the scheme and syllabus (5<sup>th</sup> to 8<sup>th</sup> Semester) should be as per the AICTE curriculum with a change of maximum 20%.
- 2) The board suggested that there is need of modifying the syllabus (Max up to 20%) as per the needs of industry so that the students could be prepared industry ready. And also suitable for competitive examinations.

The meeting ended with the vote of thanks to the Hon'ble VC

  
Dr. Amit Bansal, Coordinator

  
Dr. Om Pal Singh, Chairman

✓  
Dean Academics





# I K Gujral Punjab Technical University

Jalandhar Road Kapurthala, Punjab India

Dated: 21<sup>st</sup> May 2020

## Minutes of Meeting

A meeting of the Board of Studies **Mechanical Engineering/ Production Engineering/ Industrial / Automobile Engineering** was held through online (Google meet) on May 21<sup>st</sup> 2019 at 10:00 AM.

The following members of BOS and special invitees have attended the meeting:

- 1 Dr. Om Pal Singh (Chairman), BCET Gurdaspur
- 2 Dr. Vikas Chawla, Professor, IKGPTU Campus Hoshiarpur
- 3 Dr. Lakhvir Singh, Professor, BBSBEC, Fatehgarh Sahib
- 4 Dr. Neel Kanth Grover, HOD ME, IKGPTU main campus
- 5 Dr. Davinder Priyadarshi, DAVIET, Jalandhar
- 6 Dr. Amit Bansal (Coordinator), IKGPTU, Kapurthala

The board has made the following recommendations:

- 1) The scheme and syllabus of the 5<sup>th</sup> Semester has been thoroughly discussed. The scheme has been finalized for the 5<sup>th</sup> semester. The modified scheme for 5<sup>th</sup> semester is attached below.
- 2) The syllabus for the Manufacturing Processes is to be prepared by Dr. Om Pal Singh, Prof ME, BCET Gurdaspur and Dr. Lakhvir Singh, Prof BBSBEC Fatehgarh Sahib.
- 3) The syllabus of Design of Machine Elements is to be prepared by Dr. Davinder Priyadarshi, Asstt Prof DAVIET, Jalandhar along with subject expert.
- 4) There will be 3-hour practical lab for Numerical Methods in the revised scheme of 5<sup>th</sup> semester.
- 5) The syllabus of Humanities-I (Economics) is to be prepared by Dr Neelkanth Grover, Asso. Prof. IKGPTU Campus.
- 6) The members have suggested that there should not be any change in the 3<sup>rd</sup> semester syllabus for the 2019 Mechanical Engineering batch.
- 7) The members suggested that the scheme of 2020 batch is to be thoroughly restructured from the first semester onwards in the next BoS meeting

The meeting ended with vote of thanks to the chair.

*Amit Bansal*  
21/05/2020  
Dr. Amit Bansal, Coordinator

*Om Pal Singh*  
21/05/2020  
Dr. Om Pal Singh, Chairman


*Dean Academics*

*Om Pal Singh*  
IKGPTU  
Kapurthala

### 5<sup>th</sup> Semester Study Scheme

Course Type	Course Code	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
Professional Core courses	BTME501-18	Heat Transfer	4	1	0	40	60	100	5
Professional Core courses	BTME502-18	Design of Machine Elements	4	1	0	40	60	100	5
Professional Core courses	BTME503-18	Manufacturing Processes	4	0	0	40	60	100	4
Mandatory courses		Management and Engineering Economics	3	0	0	40	60	100	3
Professional Core courses	BTME505-18	Heat Transfer (Lab)	0	0	2	30	20	50	1
Professional Core courses	BTME506-18	Manufacturing Processes (Lab)	0	0	2	30	20	50	1
Engineering Science courses	BTME504-18	Numerical Methods (Lab)	0	0	3	30	20	50	1.5
Mandatory courses	BTMC102-18	Essence of Indian knowledge Tradition	3	0	0	100	00	100	Non-Credit
		4-weeks Industrial Training *	0	0	6	60	40	100	Non-Credit
Total			18	2	13	410	340	750	20.5

\* The grade of Satisfactory/ Un-satisfactory of Industrial/Institutional Training imparted at the end of 4<sup>th</sup> Semester will be included here.

  
 DEPARTMENT OF MECHANICAL ENGINEERING  
 I.K.G. P.T.  
 Kapurthala



### I K Gujral Punjab Technical University

(Minutes of Meeting)

A meeting of the Board of Studies Mechanical Engineering/ Production Engineering/ Industrial/ Automobile Engineering was held through online (Google meet) as on November 16<sup>th</sup> 2020 at 03:00 PM.

Following members of BOS and special invitees have attended the meeting:

1. Dr. Om Pal Singh (Chairman), BCET Gurdaspur
2. Dr. Jagdev Singh (Professor), BCET Gurdaspur
3. Dr. Paramjit Singh Bilga (Professor), GNDEC, Ludhiana.
4. Dr. Vikas Chawla, Professor, IKGPTU Campus Hoshiarpur
5. Dr. Lakhvir Singh, Professor, BBSBEC, Fatehgarh Sahib
6. Dr. Sarabjit Kaushal, HOD ME, GGI Ludhiana (Special Invitee)
7. Dr. Devinder Priyadarshi, DAVIET, Jalandhar
8. Dr. Rachin Goyal, CGC, Landran.
9. Dr. Amit Bansal, Assistant Professor (Coordinator), Department of Mechanical Engineering, Main Campus, I. K. Gujral Punjab Technical University, Kapurthala.

**The board has made the following recommendations:**

- 1) The scheme and syllabus of the 6<sup>th</sup> Semester has been thoroughly discussed. The scheme has been finalized for the 6<sup>th</sup> semester. The scheme for 6<sup>th</sup> semester is given in Appendix- A.
- 2) The syllabus for the RAC (Course and Lab) will be prepared by Dr. Jagdev Singh and Dr. Paramjit Singh.
- 3) The syllabus for the MMM (Course and Lab) will be prepared by Dr. Lakhvir Singh and Dr. Devinder Singh.
- 4) The syllabus for the Automobile Engineering (Course and Lab) will be prepared by Dr. Lakhvir Singh and Dr. Sarabjit Kaushal.
- 5) The syllabus of Humanities- II will be prepared by Dr. Neelkanth Grover Sir.
- 6) In Elective subjects, the syllabus of composite materials, & IC engine will be prepared by Dr. Devender Sir.
- 7) In Elective subjects, the syllabus of Mechatronics & PDD will be prepared by Dr. Lakhvir Sir.
- 8) In Elective subjects, the syllabus of CAD will be prepared by Jadon Sir.
- 9) In Elective subjects, the syllabus of Non-Conventional Energy Resources will be prepared by Dr. Neelkanth Grover Sir.
- 10) In Elective subjects, the syllabus of Operation Research will be prepared by Dr. Ompal Singh Sir.
- 11) In Elective subjects, the syllabus of Microprocessor in Automation will be prepared by BOS of ECE.
- 12) In Elective subjects, the syllabus of Maintenance and Reliability will be prepared by Dr. Amit Bansal.
- 13) For Automobile and Automation & Robotics Engineering, there is a study scheme proposed by expert from the GGI, Ludhiana within a week. The scheme and syllabus will be finalized in next BOS meeting.

The meeting ends with vote of thanks to chairman.

*Amit Bansal*  
Dr. Amit Bansal (Coordinator)

*OS*  
Dr. Ompal Singh (Chairman)


## Annexure-A

Study scheme of 6<sup>th</sup> Semester:

Course Type	Course Code	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
Professional Core courses	BTME601-18	Refrigeration and Air conditioning	3	1	0	40	60	100	4
Professional Core courses	BTME602-18	Mechanical Measurements & Metrology	3	0	0	40	60	100	3
Professional Core courses	BTME603-18	Automobile Engineering	3	0	0	40	60	100	3
Mandatory courses	HSMC101-18	Humanities-II	3	1	0	40	60	100	4
Professional Elective		Elective-I	3	0	0	40	60	100	3
Professional Core courses	BTME604-18	RAC (Lab)	0	0	2	30	20	50	1
Professional Core courses	BTME605-18	MMM (Lab)	0	0	2	30	20	50	1
	BTME606-18	Auto. Engg. (Lab)	0	0	2	30	20	50	1
	BTME607-18	Project/Internship	0	0	4				2
Total			15	2	10	290	360	650	22

### List of Elective:

- 1) Internal Combustion Engines.
- 2) Mechatronics Systems.
- 3) Microprocessor in Automation
- 4) Composite Materials
- 5) Computer Aided Design.
- 6) Product Design and Development
- 7) Non-Conventional Energy Resources.
- 8) Operation Research
- 9) Maintenance and Reliability

  
 Director, Dept. of Mechanical Engineering  
 I.K.G. P.T.  
 Kapurthala



**I K Gujral Punjab Technical University  
(Minutes of Meeting)**

A meeting of the Board of Studies Mechanical Engineering/ Production Engineering/  
Industrial / Automobile Engineering was held through online (Google meet) as on January  
4<sup>th</sup> 2021 at 10:00 AM.

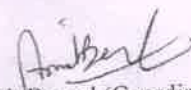
Following members of BoS and special invitees have attended the meeting:

1. Dr. Om Pal Singh (Chairman), BCET Gurdaspur
2. Dr. Vikas Chawla, Professor, IKGPTU Campus Hoshiarpur
3. Dr. Lakhvir Singh, Professor, BBSBEC, Fatehgarh Sahib
4. Dr. Neel Kanth Grover, HOD ME, IKGPTU main campus (Special Invitee)
5. Dr. Devinder Priyadarshi, DAVIET, Jalandhar.
6. Dr. Jagdev Singh, BCET, Gurdaspur.
7. Dr. Rachin Goyal, CGC, Landran
8. Dr. Suresh Kumar Verma, DCRUST Murthal (Sonipat) Haryana
9. Dr. Vijay Kumar Jadon, Chitkara University, Rajpura
10. Dr. Sarbjeet Kaushal, Special invitee, GGI, Ludhiana.
11. Dr. Amit Bansal, Assistant Professor, Department of Mechanical Engineering in  
Campus, I. K. Gujral Punjab Technical University, Kapurthala.

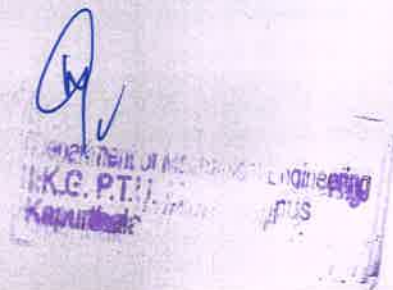
**The board has made the following recommendations:**

- 1) In this meeting, the study scheme and syllabus of the 6<sup>th</sup> Semester (AE and A& R) have been thoroughly discussed. The scheme and syllabus have been finalized for the 6<sup>th</sup> semester Automobile Engineering and Automation & Robotics Engineering.
- 2) The scheme and syllabus for 6<sup>th</sup> semester as approved by BoS members for Automobile Engineering and Automation & Robotics Engineering is attached as Annexure – A and Annexure B respectively.

The meeting ends with vote of thanks to chairman.

  
Dr. Amit Bansal (Coordinator)

  
Dr. Ompal Singh (Chairman)



# I K Gujral Punjab Technical University

(Minutes of Meeting)

A meeting of members of the Board of Studies Mechanical Engineering/ Production Engineering/ Industrial/ Automobile Engineering was held through online (Google meet) as on May 24<sup>th</sup> 2021 at 12:00 PM.

Following members of BOS and special invitees have attended the meeting:

1. Dr. Om Pal Singh (Chairman), BCET Gurdaspur
2. Dr. Jagdev Singh (Professor), BCET Gurdaspur
3. Dr. Paramjit Singh Bilga (Professor), GNDEC, Ludhiana.
4. Dr. Vikas Chawla, Professor, IKGPTU Campus Hoshiarpur
5. Dr. Lakhvir Singh, Professor, BBSBEC, Fatehgarh Sahib
6. Dr. Vijay Kumar Jadon, Professor, Chitkara University.
7. Dr. R. P. Singh Suker-Chakia, Director, PCTE, Ludhiana.
8. Dr. Sarabjit Kaushal, HOD ME, GGI Ludhiana (Special Invitee)
9. Dr. Rochin Goyal, CGC, Landran.
10. Dr. Amit Bansal, Assistant Professor (Coordinator), Department of Mechanical Engineering, Main Campus, I. K. Gujral Punjab Technical University, Kapurthala.

The BOS has made the following recommendations:

- 1) The scheme and syllabus of 7<sup>th</sup> Semester B. Tech. (Mechanical Engineering) has been thoroughly discussed and finalized.
- 2) The syllabus for Mechanical Vibrations has been prepared by Dr. Neel Kanth Grover and Dr. Vikas Chawla.
- 3) The syllabus for the Automation in Manufacturing has been prepared by Dr. Lakhvir Singh and Dr. Devinder Singh.
- 4) The syllabus for the Fundamentals of Management for Engineers in Humanities -III has been prepared by Dr. Vivek Aggarwal and Dr. Amit Bansal.
- 5) The open elective courses have been taken from the other department's open elective list.
- 6) The List of departmental Electives have been recommended as the open electives for all other branches.
- 7) All the detailed syllabus and scheme of 7<sup>th</sup> semester of B. Tech. (Mechanical Engineering) are presented in Annexure-A
- 8) For B. Tech. (Automobile Engg.) and B. Tech. (Automation & Robotics Engineering), the detailed scheme and syllabus have been finalized for 7<sup>th</sup> semester as proposed by the expert from the GGI, Ludhiana and are attached as Annexure-B & C respectively.
- 9) The 8<sup>th</sup> semester will be industrial training for all branches i.e. B. Tech. (Mechanical Engineering), B. Tech. (Automobile Engineering), and B. Tech. (Automation & Robotics Engineering).

Dr. Amit Bansal  
22/06/2021  
Coordinator

Dr. Om Pal Singh, Chairman  
22/06/2021

Department of Mechanical Engineering  
I.K.G. P.T.U. Kapurthala  
Kapurthala