

SPEED POST

Incharge BOS

14/8/15

Ref. No. ME/BOS(PTU)/382/1309
Dated 14/8/15

To

Dean (Academics),
Punjab Technical University,
Jalandhar - Kapurthala highway,
Punjab.



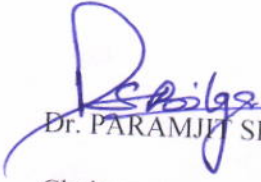
Subject: Minutes of Meeting of the BOS (Mechanical Engineering/ Production Engineering/Industrial Engineering/ Automobile Engineering/ Automotive Technology/ Automation & Robotics Engineering/ Tool Engineering) held on 03.08.2015 (Monday)

Dear Sir,

Find enclosed herewith Minutes of Meeting of the BOS (Mechanical Engineering/ Production Engineering/Industrial Engineering/ Automobile Engineering/ Automotive Technology/ Automation & Robotics Engineering/ Tool Engineering) held on 03.08.2015 (Monday) at 10.00 am in the Conference Hall, Department of Academics, Punjab Technical University, Jalandhar - Kapurthala highway, Punjab. This is for your kind consideration and record.

Thanking you.

Sincerely Yours,


Dr. PARAMJIT SINGH BHATIA 14/8/15

Chairman
BOS
Professor (Mech. Engg.)
Guru Nanak Dev Engineering College,
Ludhiana

Encl.: As above (02 pages)

MINUTES OF MEETING

A meeting of the Board of Studies (Mechanical Engineering/ Production Engineering/Industrial Engineering/ Automobile Engineering/ Automotive Technology/ Automation & Robotics Engineering/ Tool Engineering) constituted vide Notification No. PTU/Reg/BOS/Notification/305 dated 25.06.2014 was held on **Monday, 03.08.2015** at 10.00 am in the Conference Hall, 2nd Floor, Department of Academics, Punjab Technical University, Jalandhar - Kapurthala highway, Punjab. Following were the agenda points:-

1. To initiate the review/update process of the study scheme/syllabus of UG/PG programs which are not reviewed/updated since 2004.
2. To approve the syllabus/ contents of pending subjects of B.Tech. (Automobile Engg.).
3. To discuss any other issue with the permission of the Chairman BOS.

Following members of the BOS were present and actively participated:-

- | | |
|----------------------------------|---------------------------|
| 1. Dr. Paramjit Singh | Chairman |
| 2. Prof. R.P. Singh Suker-Chakia | Member (Professor) |
| 3. Dr. Dilbag Singh | Member (Assoc. Professor) |
| 4. Dr. Balwinder Singh | Member (Asstt. Professor) |
| 5. Dr. Pardeep Jindal | Member (Asstt. Professor) |
| 6. Dr. Avtar Singh Buttar | Member (Coordinator) |

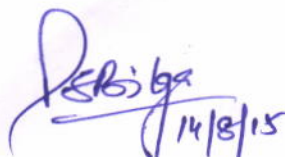
Following members of the BOS couldn't attend the meeting:-

- | | |
|------------------------|---------------------------|
| 1. Dr. Sehijpal Singh | Member (Professor) |
| 2. Dr. H. S. Bains | Member (Professor) |
| 3. Dr. Hazoor Singh | Member (Assoc. Professor) |
| 4. Dr. R. S. Bhatti | Member (Assoc. Professor) |
| 5. Dr. Harpreet Singh | Member (Asstt. Professor) |
| 6. Er. Ashok Gupta | Member (Outside Expert) |
| 7. CII/PHD/TIE Nominee | Member (Outside Expert) |
| 8. TPO PTU Nominee | Member (Outside Expert) |

The minutes of the meeting are as under:-

1. It was unanimously decided to distribute the work related to review/update process of the study schemes/syllabi of PG programs among small group of members of BOS preferably according to the specializations and the programs running at their institutes. These groups will have to conduct workshops/meetings separately under the chairman of BOS. The following members alongwith chairman are responsible to complete the work allocated to them :-
 - a) Dr. R.P. Singh Suker-Chakia ; Dr. Dilbag Singh M. Tech. (Thermal Engg.)
 - b) Dr. Sehijpal Singh; Dr. Balwinder Singh M. Tech. (Prod. Engg.); M. Tech. (Ind. Engg.)
 - c) Dr. Hazoor Singh; Dr. Pardeep Jindal; M. Tech. (Mech. Engg.);
Dr. H. S. Bains M.Tech. (Machine Design); M.Tech. (CAD/CAM)
M. Tech. (Automation and Robotics)
2. The syllabi/contents of the following pending subjects of B.Tech. (Automobile Engg.) have been finalized and approved (Copy of syllabi/contents attached) :-

Departmental Elective-I
BTAE/DE 610 Servo Mechanism and Automatic Controls
BTAE/DE 611 Design of Energy Systems
BTAE/DE 612 Special Purpose Vehicles


14/8/15

BTAE/DE 614 Finite Element Analysis

Departmental Elective-II

BTAE/DE 710 Reliability Engineering

BTAE/DE 711 Off - Road vehicles

BTAE/DE 712 Hybrid Vehicles

BTAE/DE 713 Automation and Mechatronics

BTAE/DE 714 Transport Management & Automotive Industry

Open Elective

BTAE/OE-1 Human Resource Management

BTAE/OE-2 Operation Research

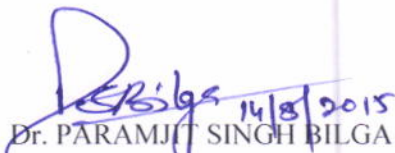
BTAE/OE-3 Industrial Engineering

BTAE/OE-4 Total Quality Management

BTAE/OE-5 Material Management

3. Under last agenda item i.e. the any other issue, the final draft for Choice Based Credit System (CBCS) applicable to Campuses, Autonomous & Affiliated Colleges/Institutions of IKGPTU prepared by Department of academics was discussed in order to put the views of our BOS in the meeting of Chairpersons of all BOSs which was held on 06.08.2015. Some clarifications regarding the following points in this CBCS was decided to be sought in the said meeting:
- Allocation of 01 credit to 01hour of seminar, project and dissertation.
 - Why project and dissertation kept separate? Although the meaning of dissertation is a detailed report related to some project.
 - Minimum and maximum number of credits required by the student for registration in each semester are not specified. Similarly minimum number of credits required by the student to earn degree/diploma/certification are also not mentioned.
 - Implications of I grade in subject.

Further, under this agenda item, the financial difficulties to pay honorarium/TA/DA to members especially experts and also to conduct BOS meeting at any other appropriate venue if need arises was brought forward. It was decided unanimously that this financial problem should be resolved at the earliest by the university to work more effectively and arrange high quality experts.


Dr. PARAMJIT SINGH BILGA
Chairman (BOS)

Encl.: Copy of syllabi/contents of B. Tech. (Automobile Engg.) Deptt. Elective and Open Elective
Subjects : 14 pages

BTAE/DE 610 Servo Mechanism and Automatic Control Systems

L T P
3 0 0

Internal Marks: 40
External Marks: 60

UNIT I INTRODUCTION: Basic elements of control system; Open and closed loop control system; Manually and automatically controlled closed loop system; Basic elements of a servo mechanism; Example of automatic control systems; Use of equivalent systems for system analysis; Linear systems, non-linear systems control systems: Examples from mechanical systems, electrical systems and automobile systems. Types of control systems, Performance analysis; Regulators and servo mechanism; Analog and digital control system. 9

UNIT II CONTROL SYSTEM: Introduction; Transfer function; Addition of poles and zeros; Root locus techniques; Polar plots; Rectangular plots. 4

UNIT III CONTROL ELEMENTS: Block diagram, reduction of block diagram, problems on block diagram; Representation of system and process; Liquid, gas, mechanical and thermal system; Hydraulic servo motor; Control valve; Comparison elements, Stability and Hurwitz - Routh criteria. 9

UNIT IV APPLICATION OF CONTROL SYSTEM: Machine tool control; Boiler control; Engine governing-mechanical, hydraulic, electric, pneumatic; Carburetor; Diesel fuel control; Gyroscopes; Active and vibration control. 8

UNIT V SEQUENTIAL CONTROL: Introduction; input and output devices, diagrams; Fluid devices; Ladder devices; Hydraulic and pneumatic actuation system. 6

RECOMMENDED BOOKS:

1. Nagrath and Gopal, "Control Systems Engineering", New Age Internationals
2. B.C. Kuo, "Automatic Control systems", Wiley India Ltd
3. Ghosh, "Control Systems: Theory and Applications", Pearson
4. W. Bolton, "Mechatronics" Pearson Education India

