

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)
Department of Mechanical Engineering

Summary of Board of studies (ME) meeting held on 07/07/2017

Detail of program/ courses where syllabus revision was carried out

Course/ Subject Name	Code	Year/date of introduction	Year/date of revision	Percentage of content added or replaced	Item no.	Page. No.
Engineering Graphics	100014	1957	07/07/2017	10%	4	4-5



Dr. M. K. Gaur

HMED

MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE, GWALIOR-474005
DEPARTMENT OF MECHANICAL ENGINEERING

Ref. No.: Mech/BOS/

Date: 07 July, 2017

Subject: Minutes of BOS (Mech. Engg. Deptt) meeting.

Reference: Notice AUT/17/327, dated 25/04/2017

As per the referred notice, meeting of members of Board of Studies (Mechanical Engineering) held on 07 July, 2017 at 11:00 AM in the office of Head, MED, MITS, Gwalior. Following external members were present:

- (i) Er. C G Porwal (External Member)
- (ii) Er. Anil Gupta (External Member)
- (iii) Prof. Sandeep Jain Associate Professor, SATI, Vidisha (External Member)

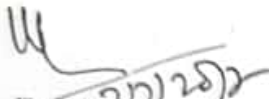
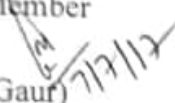
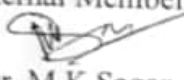
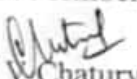
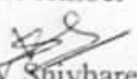
- (1) The scheme and syllabus for the V & VI sem., Mechanical Engineering is approved. The copy of scheme & syllabi is attached herewith.
- (2) **For academic year 2017, the II year and IV year schemes will remain the same as academic year July 2016, except for slight change in practical block (30: 20 distributions).**
- (3) There is minor change in name of a subject of scheme of IVth sem; The name of Simulation lab will be Simulation lab-I. The copy of the scheme is attached herewith.
- (4) The syllabus of the Basic Mechanical Engineering (100204), Engineering Graphics (100105) and Manufacturing Practices (100106) are discussed and approved for the students admitted in July 2017 in university credit system. The syllabi are attached herewith.
- (5) The code of subjects in the scheme of first year M.E. Production Engineering course has been changed and now new codes and scheme is finalized for the students admitting in July 2017. The copy of scheme and syllabus are attached herewith.


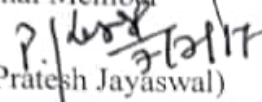
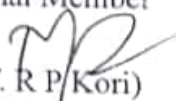
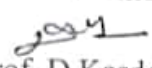




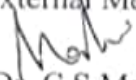

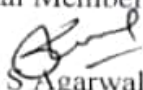
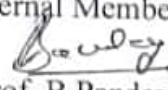
As per the recommendations of industrial experts, it is also proposed to change the old equipments (conventional) with latest automatic equipments like CNC, Rapid Prototyping, FMS, Unconventional machining systems and Robotics, CMM etc.

It is also recommended by industrial experts to use industrial practices via visit of students regularly.

The experts from industries have also given consents to sign the MOUs with APN technologies Okhla and NIMDC, New Delhi with institute for enhancing the industrial exposure to the students.


Er. C G Porwal
External Member

(Dr. M K Gaur)
Associate Prof. & Head
Internal Member

(Dr. M K Sagar)
Associate Prof.
Internal Member

(Prof. V Chaturvedi)
Assistant Prof.
Internal Member

(Prof. V Shivhare)
Assistant Prof.
Internal Member


Er. Anil Gupta
External Member

(Dr. Pratesh Jayaswal)
Associate Prof.
Internal Member

(Prof. R P Kori)
Assistant Prof.
Internal Member

(Prof. D Kasdekar)
Assistant Prof.
Internal Member

(Dr. Amit Aherwar)
Assistant Prof.
Internal Member


Prof. Sandeep Jain
External Member

(Dr. C S Malvi)
Associate Prof.
Internal Member

(Dr. A K Sharma)
Assistant Prof.
Internal Member

(Prof. S Agarwal)
Assistant Prof.
Internal Member

(Prof. B Pandey)
Assistant Prof.
Internal Member

Dr. Mangaree Pandit
Dean Academic





20/2

Syllabus Revision on 07/07/2017
For batch admitted in Academic Session 2017

100105: Engineering Graphics

Category	Title	Code	Credit-6			Theory Slot
			L	T	P	
Engineering Science -ESC	Engineering Graphics	100105/CEL/MEL/CSL/ EEL/ELL/ITL/CHL/ BTL105/1X25/BEEL/BELL/ BETL/BCHL/BAUL105/ BCEL/BMEL/BCSL/ BITL/BBTL204	4	1	2	Max.Marks-70 Min.Marks-22 Duration-3hrs.

Course Objective:

1. To inculcate the imagination and mental visualization capabilities for interpreting the geometrical details of common engineering objects.
2. To impart knowledge about principles/methods related to projections of one,two and three dimensional objects.

Syllabus:

Unit - 1

Introduction and scale: Basics of instruments, Lettering and dimensioning, Plane geometrical constructions. Plain and diagonal scale - Representative fraction, Unit conversion and Exercises based on linear, area, volume and speed. Scale of chord.

Engineering curves: Cycloidal curves - cycloid, epicycloid and hypocycloid curve, tangent and normal. Spiral curves - Archimedean and logarithmic spiral curves. Tangent & normal on the curves. Involute curve.

Unit - 2

Projection of points: Introduction, types of projections, quadrant system, positions of points and Exercise.

Projection of straight line: Introduction, Orientation of a straight line, Traces of a line and Exercise.

Unit - 3

Projection of planes: Introduction, Types of planes, Traces of planes, Position of planes and Exercise.

Projection of solids: Introduction, Types of solids, Positions of solids and Exercise.

Unit - 4

Section of solids: introduction, Types of section planes and Anti-section and Exercise.

Development of surfaces of right solids: Introduction, Methods of development & anti-development and Exercise.

Intersection of cylinders: Introduction, methods of developments, intersection of cylinder by another cylinder and exercise.

Unit - 5

Isometric projections: Introduction, isometric scale, isometric axis, isometric view and isometric projections from orthographic views, orthographic views from pictorial view and exercise.

Computer Aided Drafting using Auto CAD: Introduction, software's basic commands, transformation and editing commands. (Added)

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Course Outcomes: After successful completion of this course students will be able to:

- CO1. Visualize the geometric details of engineering objects.
- CO2. Translate the geometric information of engineering objects into engineering drawings.
- CO3. Draw orthographic projections and sections.
- CO4. Develop knowledge to read, understand and explain drawing.
- CO5. Improve their skills so that they can apply these skills in developing new products.
- CO6. Prepare simple layout of factory, machine and buildings.

Text books:

- Engineering Drawing by N. D. Bhatt, Charotar Publication Pvt. Ltd.
- Engineering Drawing by P.S. Gill, S. K. kataria& sons, Delhi
- Engineering Drawing by BasantAgrawal& C. M. Agrawal, Tata McGraw Hill Education Pvt. Ltd.
- Engineering Graphics by K. Venugopal, New Age International Publication, India

NPTEL Link for Engineering Graphics:

<http://nptel.ac.in/courses/112103019/>

Laboratory Work

List of Experiments:

- To prepare sheet of Plain scale, diagonal scale and Scale of chord.
- To prepare sheet of Cycloidal curves.
- To prepare sheet of Projection of points and lines.
- To prepare sheet of Projection of Planes.
- To prepare sheet of Projection of Solids.
- To prepare sheet of Section of Solids.
- To prepare sheet of Development of Surfaces.
- To prepare sheet of Isometric and Intersection of Solids.



Handwritten signatures and initials in blue ink, including the name 'P.L.' and other illegible marks.