

# Scheme & Syllabus

W.E.F July 2018

## *Electrical Engineering*

### *Board of Studies*

*Contents:*

1. Minutes of BoS
2. Scheme for flexible curriculum (I to VIII sem)
3. Syllabus of II year with COs, Experiment list for all lab courses, lab COs etc
4. Schemes & syllabi with COs of VII and VIII sem grading system for (For students admitted in 2015 & 16 under CBCS scheme) with code BEEL 701.. etc
5. M.E. III and IV sem schemes with new six digit codes



*Electrical Engineering Department*

**Madhav Institute of Technology & Science**

(A Govt. Aided UGC Autonomous Institute Affiliated to R.G.P.V., Bhopal, MP)

Gwalior-474005

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR-5

(A Govt. Aided UGC Autonomous Institute Affiliated to RGPV, Bhopal)

## ELECTRICAL ENGINEERING DEPARTMENT

The Board of Studies (BoS) meeting of department of Electrical Engineering was held on 20.03.2018 in the office of HoD Electrical Engineering. Following external members were invited in addition to the faculty members of the department:

1. Dr. Rakesh Saxena, Director, SGSITS, Indore(VC, RGPV nominee)
2. Dr. Yaduvir Singh, Professor, Electrical Engineering  
HBTU, Kanpur. (Subject Expert)
3. Dr. Bidyadhar Subudhi, Professor, National Institute of Technology Rourkela, Rourkela-  
769008, Odisha, India (Subject Expert)
4. Er. Sandeep Gandhi, General Manager (QS), Tata Projects Limited, Q. S. Division,  
Ghaziabad-201010 (Industry Expert)
5. Er. Mukesh Bhatia,  
Sr. Manager, Crompton Greaves, Gwalior, (Alumnus)
6. OBE coordinators of BE II, III, IV & ME (ISD,MAC)

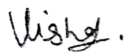
Dr. Rakesh Saxena, Dr. Yaduvir Singh, Dr. Bidyadhar Subudhi & Er. Mukesh Bhatia could not attend the meeting due to some reason.

The minutes of meeting are as follows:-

1. The Scheme and Syllabi of Flexible Curriculum for B.Tech. (Electrical) for the students admitted in July 2017 onwards were discussed in detail.
2. Considering the current-market demand, inclusion of following Subjects/ Topics was suggested:
  - Elective subject *Condition monitoring of Electrical Assets and Associated Equipment*, including Electrical Machines, Transformers, Motors, Generators, Switch Yards, Control Panels, Power Plants, MV & EHV Transmission Lines etc. in B.Tech. program.
  - The subject *Operation and Maintenance of Electrical Machines & installation* in B.Tech. Curriculum.
  - Latest development and technologies in *Electrical Engineering Material and Nano-technology*.
  - Awareness of *Integrated Management System (IMS)* related to Quality, Health, Safety & Environment (ISO 9001, ISO 14001, 18001) in curriculum of BE/ ME.
  - New technologies like *IOT, Virtual Reality, and Smart Grid* in BE/ ME curriculum.
  - Topics relevant to Emerging Sectors like *Renewable Energy (Solar PV & Wind), Metro Rail, Smart Grid/ Smart House, EHV Transmission Lines & Substations (AC & DC, 400kV and above)* in BE curriculum.
  - *Electrical Safety* (in medium & high voltage installations) in BE curriculum.
3. The Scheme and Syllabi of VII and VIII Semesters of B.E. (Electrical) in *New Grading Scheme* for the students admitted in July 2015 and in July 2016 were also discussed in detail. Following changes were suggested.
  - The subject, *Switchgear & Protection* to be shifted from VIII Semester to VII Semester in place of *Control System*, as the subject, *Control System* has already been taught in previous semester.
  - The subject, *High Voltage Engineering* to be shifted from VII Semester to VIII Semester.

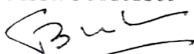
- The subject, *Soft Computing Techniques* to be shifted from Elective Subject to Compulsory Subject in VIII Semester, so that Lab may be included in it.
  - All the subject codes to be modified in accordance with their previous codes (i.e. EEL-701 to BEEL-701 and so on).
  - In addition to previously offered Electives, a new Elective, "Power System Economics" to be introduced in VII Semester.
4. The Scheme and Syllabi of III and IV Semester of M.E. (Industrial Systems & Drives) for the students admitted in July 2017 were also discussed in which all the subject codes were modified in accordance with their previous codes (i.e. MISL-931 to 580301 and so on).
5. As per OBE Students Coordinators (BE), following were suggested:
- Integration of Electrical Engineering with Computer Science like *Aurdino*
  - Time-to-time Career Counselling through Counsellor
  - *Python* language to be included in BE II Year
  - More *Short Clips/ Animations* related to the subjects to be shown in class
  - To provide better understanding, Junior students to be exposed to the *Minor and Major Projects* of their senior students
  - Mock tests for competitive exams to be conducted on working Saturdays
6. As per OBE Students Coordinator (ME), following were suggested:
- More exposure to the operation, maintenance and installation of Electrical Equipments like *Solar Energy Plants, Roof Top Installation* etc. through Industrial visits.
  - In place of *Power Quality & FACTS Controllers*, some other Elective to be offered to ME (Measurement & Control) students.
  - Workshops and Seminars to be conducted for the students
7. Time to time Webinar for Expert Lectures, Knowledge Sharing, Career Guidance etc. to be included

The meeting ended with vote of thanks.



(Prof. Vishal Chaudhary)

Asst. Professor



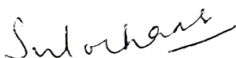
(Dr. V. Bhuria)

Asst. Professor



(Dr. H.M. Dubey)

Asst. Professor



(Dr. S. Wadhvani)

Professor

*Attended*

(Er. Sandeep Gandhi)

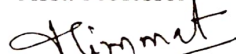
General Manager (QS).

Tata Projects Limited, Q. S. Division



(Prof. Praveen Bansal)

Asst. Professor




(Prof. H. Singh)

Asst. Professor



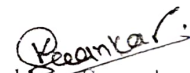
(Dr. Shishir Dixit)

Asst. Professor



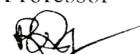
(Dr. A.K. Wadhvani)

Professor



(Prof. Kuldeep Swarnkar)

Asst. Professor



(Prof. R. Narvey)

Asst. Professor



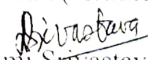
(Prof. R. Patra)

Asso. Professor



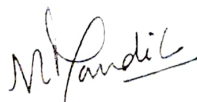
(Dr. Manjaree Pandit)

Prof. & Dean (Academic)



(Dr. Laxmi Srivastava)

Prof. & Head



(Dr. Manjaree Pandit)

Prof. & Dean (Academic)