# JK Lakshmipat University, Jaipur
# Institute of Engineering & Technology (IET)

**Minutes of fourth Board of Studies meeting held on 2nd April 2016 at JKLU Campus**

The 4th Board of Studies (BoS) meeting of the Institute of Engineering & Technology (IET), JK Lakshmipat University (JKLU) was held on April 2, 2016 at 11:00 AM in IM-004 Amphitheater. Director-IET Prof Dr-Ing Anupam Kumar Singh and Chairman of BoS extended a welcome note to all the external experts and faculty members of the Institute. Prof. Singh explained the need of syllabus revision, course learning objectives, enhancement of knowledge & skills of graduates, and overall programs outcome. Discussion of undergraduate (B.Tech) and post-graduate (M.Tech) programs structure was held in line with various criteria's put forward by several national accreditation agencies such as UGC, NAAC, NBA, NIRF, AICTE as well international accreditation agencies such as Accreditation Board for Engineering & Technology (ABET) of USA, Quality Assurance Agency for Higher Education (QAA) of UK.

Following BoS members were present in the meeting:

1. Prof. Dr. Ing. Anupam Kumar Singh, Director-IET & Chairman-BOS
2. Dr. S.C. Bhaduri, Professor, Mechanical Engineering JKLU
3. Dr. Pushpendra Singh, Associate Professor, Electrical Engineering JKLU
4. Dr Sonal Jain, Associate Professor, Computer Sc. Engineering JKLU
5. Dr. S.S. Sengar, Associate Professor, Electronics & Comm Engg JKLU
6. Dr Sandeep Kumar Tomar, Associate Professor, Chemistry JKLU
7. Dr Umesh Gupta, Associate Professor, Mathematics JKLU
8. Dr Vipin Kumar Jain, Associate Professor, Physics JKLU
9. Dr. Kavita Choudhary, Associate Professor, Computer Sc. Engineering JKLU
10. Dr. Hemant Kumar Gupta, Assistant Professor, Mechanical Engineering JKLU
11. Dr. Ravikumar Ganti, Assistant Professor, Civil Engineering JKLU
12. Dr Neha Sharma, Assistant Professor, Chemical Engg JKLU
13. Prof. Ram Kumar Agrawal, Assistant Professor, Mechanical Engineering JKLU
14. Prof. Jagdish Prasad Sharma, Assistant Professor, Electrical Engineering JKLU
15. Prof. Hanuman Prasad Agrawal, Assistant Professor, Electrical Engineering JKLU
16. Prof. Devendra Bhavasar, Assistant Professor, Computer Sc. Engineering JKLU
17. Dr Anurag Kumar Tiwari, Assistant Professor, Chemical Engg JKLU
18. Prof. Love Jain, Assistant Professor, Electronics & Comm Engg JKLU
19. Prof. Srinivas Rathod, Assistant Professor, Mechanical Engineering JKLU
20. Prof. Divanshu Jain, Assistant Professor, Electronics & Comm Engg JKLU
21. Dr Sahanawaz Khan, Assistant Professor, Chemistry JKLU
22. Dr Richa Sharma, Assistant Professor, Mathematics JKLU
23. Dr. Vinod K Jeenager, Assistant Professor, Mechanical Engineering JKLU
24. Dr. Paras Jain, Assistant Professor, Computer Sc. Engineering JKLU
25. Prof. Yogesh Rohilla, Assistant Professor, Electrical Engineering JKLU
26. Prof Vinod Kumar Vishwakarma, Assistant Professor, Civil Engineering JKLU

27. Prof. Amit Kumar, Assistant Professor, Civil Engineering JKLU

*External Experts*

28. Dr. V. K. Choubey, Professor, Electonics & Communication Engineering, BITS Pilani
29. Prof. Manoj Fauzdar, Professor, Electrical Engineering, MNIT Jaipur
30. Dr. Ashu Jain, Professor, Civil Engineering, IIT Kanpur
31. Dr. S.L. Soni, Professor, Mechanical Engineering, MNIT Jaipur
32. Dr. A.K. Vyas, Professor, Civil Engineering, MNIT Jaipur
33. Dr. Pramod K Singh, Associate Professor, Computer Sc. Engineering, IITM Gwalior
34. Dr. K.C. Jain, Professor & Head, Mathematics, University of Rajasthan Jaipur
35. Dr. Nupur Tandon, Associate Professor, Humanities, MNIT Jaipur
36. Dr. Sanjay Vashishtha, Managing Director, First Green Consulting Pvt. Ltd., Gurgaon
37. Mr. Satendra Singh, Director (India), Nokia Solutions & Network, Chennai
38. Mr Khalid Kamal Hussain, Principal-Education & Research, Infosys Limited Jaipur

The following members requested leave of absence:

39. Dr R Mukhopadhyay, Director R&D and CEO, HASETRI, Kankroli
40. Dr. Ravindra Gudi, Professor, Chemical Engineering, IIT Bombay Mumbai
41. Mr. Krishna Yadav, Devi Construction Pvt Limited Jaipur
42. Mr. Kunwer Sachdev, Managing Director, Su-Kam Power Systems Ltd., Gurgaon
43. Dr. B.K. Sharma, Retd. Professor–Physics, University of Rajasthan
44. Mr. Igor Palka, CEO, MMI Pvt Limited Mumbai
45. Dr. Y.C. Joshi, Assistant Professor, Chemistry University of Rajasthan Jaipur
46. Dr. Dambarudhar Seth, Associate Professor, Electronics & Comm Engg JKLU
47. Dr Jaya Gupta, Assistant Professor, Mathematics JKLU

The Chairman-BoS briefed all the members about the proceedings of the meeting:

1. The program structure and course syllabi for batch 2016-2020 for B.Tech programs of various programs of engineering [Chemical Engineering (CHE), Civil Engineering (CE), Computer Science & Engineering (CSE), Electrical Engineering (EE), Mechanical Engineering (ME) and Electronics & Communication Engineering (ECE)] at IET will be discussed. We have introduced four new programs in B.Tech Computer Science Engineering with specialization in Big Data Analytics, Cloud Computing, Information Security and Mobile Computing. These programs will be offered with part technical support from IBM; thus program structure and syllabus of all programs to be fixed.

2. The program structure and course syllabi for batch 2016-2018 for M.Tech programs of engineering [Computer Science Engineering (CSE) and Electronics & Communication Engineering (ECE)] as well two-newly introduced M.Tech programs in Electrical Engineering (specializations in Power Systems) and Mechanical Engineering (specialization in Thermal Engineering) will be discussed.

Thereafter, Dr Singh made a brief presentation on activities carried out at the Institute of Engineering & Technology as well several achievements of faculty and students. IET has successfully conducted National symposium on Geomatics for Digital India with Indian Space Research Organization (ISRO) during 16-18 December 2015, a training programs on Mathematical modelling with Michigan-Tech University USA in June 2015, and Environmental Analysis & Monitoring for Paper, Cement, Dairy and Tyre Industries in June 2015. IET-JKLU jointly with MNIT Jaipur hosted QCFI regional conference during 18-19 September 2015 at Jaipur. We have great success in establishing Institution of Engineers India (IEI) Chapter for benefits of students & faculty members. In addition, few skill development programs were organized for IL&FS, JCB, Deity-Government of India during 2015-16. IET has facilitated in establishing campus wide ERP-system TCS-iON since June 2015 with 25 mbps internet connectivity. The members highly appreciated efforts by the Institute, Faculty and staff members for their achievements.

Later, the head of departments of each program (CHE, CE, CSE, EE, ECE, ME) presented the program structure in light of expectations and changes. It was suggested to finish review of program, syllabus, teaching, and evaluation scheme before the Academic Council meeting proposed in third week of May 2016.

Final observations, recommendations and suggestions for various programs of Engineering are listed below:

**Programme: B. Tech in Chemical Engineering**

Expert members present in the meeting:

1. Dr. Neha Sharma, Assistant Professor, Department of Chemical Engineering, JKLU Jaipur
2. Dr. Anurag Tiwari, Assistant Professor, Department of Chemical Engineering, JKLU Jaipur
3. Dr R Mukhopadhyay, Director R&D CEO, HASETRI, Kankroli sought leave of absence.
4. Prof. Dr. Ravindra Gudi, Professor, Department of Chemical Engineering, IIT Bombay, Mumbai sought of leave of absence.

*Concern of external experts is taken by mail and telephonic conversation.*

The members approved the syllabus and content of the B. Tech program in chemical engineering. The following suggestions were made by members:
1. Course Chemical Engineering Thermodynamics (CHE403) has been shifted to semester III as Chemical Engineering Thermodynamics (CHE305) with teaching scheme and credit scheme (3 1 0 0)4.

2. Course Chemical Engineering Thermodynamics (CHE305), it was suggested that some topics like power cycles and refrigeration cycles should be included.
3. Course Heat transfer operations (CHE303) has been shifted to semester IV as CHE408 with teaching scheme and credit scheme (3 1 2 0) 5.
4. Course Unit Processes in organic synthesis (CHE304) with (3 0 0) is proposed to remove due to repetition of the syllabus.
5. Course Chemical Engineering Materials (CHE505) with (3 0 0) has been shifted to semester III from semester V as Chemical Engineering Materials (CHE306) with (3 0 0 0) and 3 credit scheme
6. Course Chemical Reaction Engineering-I (CHE404), teaching scheme was revised from (3 1 3) to (3 0 4 0) and 5 credit scheme
7. Course Mechanical operations (CHE405) with scheme (3 1 3) 5.5 has been shifted to semester V from semester IV as CHE504 with scheme (3 1 2 0) 5.
8. Course Mass transfer-II (CHE507), teaching scheme was revised from (3 1 3) to (3 1 2 0) and 5 credit scheme
9. Course Process Modelling and Simulation (CHE503) with (3 1 2) has been shifted in elective I (CHE512) with (3 0 0 0).
10. Elective I with (3 0 0) is shifted from semester VI to semester V.
11. Following subject have been removed from Elective-I with teaching scheme (3 0 0 )3:
    - Energy Engineering (CHE611)
    - Non-Conventional Energy Resources (CHE612)
    - Engineering Optimization (CHE613)
    - Process Plant Simulation (CHE614)
    - Biochemical Engineering (CHE615)
    - Energy Conservation & Management (CHE616)
12. Following subject have been added in Elective-I with teaching scheme (3 0 0 0)3:
    - Introduction to petroleum operation (CHE511)
    - Process Modelling and Simulation (CHE512)
    - Polymer Rheology (CHE513)
    - Industrial safety and hazards management (CHE514)
13. Minor project (CHE607) has been added in semester VI with (0 0 4 2) and 4 credit scheme.
14. Course Computational Fluid Dynamics (ME625) form semester VI has been removed.
15. Course Process Equipment Design (CHE603), teaching scheme was revised from (3 1 3) to (3 1 2 0) and 5 credit scheme
16. Course Transport Phenomenon (CHE604) has been shifted to semester VII as CHE704 with (3 1 0 0) and 4 credit scheme.
17. Course Petroleum Refinery and Petrochemicals (CHE606) has been added as compulsory course with (3 0 2 0) scheme and 4 credits.

18. Course Petroleum Refinery and Petrochemicals (CHE606) with (3 0 2 0) 4, new Lab of Petroleum is introduced.

19. Syllabus of course Chemical Process Technology (CHE602), Process Equipment Design (CHE603) and Petroleum Refining and Petrochemicals (CHE606) has been improved.

20. Following subject have been removed from Elective-II with teaching scheme (3 0 0 ) 3
    - Process Design Decisions (CHE621)
    - Advanced Process Control (CHE626)
    - Pulp & Paper Technology (CHE624)
    - Fertilizer technology (CHE625)
    - Mathematical methods in chemical engineering (CHE622)
    - Corrosion Engineering (CHE623)

21. Following subject have been added in Elective-II with teaching scheme (3 0 0 0) 3:
    - Natural gas engineering (CHE711)
    - Process Engineering and Plant Design (CHE712)
    - Rubber Product Manufacturing (CHE713)
    - Safety in Chemical Industries (CHE714)

22. Following subject have been removed from Elective-III with teaching scheme (3 0 0 ) 3
    - Advanced Heat transfer (CHE711)
    - Energy integration analysis (CHE712)
    - Computer Aided Design in Chemical Engineering (CHE714)
    - Nanofluid Engineering (CHE716)
    - Petroleum Refinery & Petrochemicals (CHE715)
    - Process Intensification (CHE713)

23. Following subject have been added in Elective-III list with teaching scheme (3 0 0 0)3:
    - Elements of reservoir engineering (CHE721)
    - Process Integration (CHE722)
    - Rubber Science & Technology (CHE723)
    - Process Safety Management in Industry (CHE724)

24. Following subject have been removed from Elective-IV list with teaching scheme (3 0 0 )3
    - Fluidization Engineering
    - Sugar technology (CHE723)
    - Pharmaceutical Engineering (CHE724)
    - Chemical vapor deposition (CHE725)
    - Scale-up and Pilot Plant Methods in Chemical Engineering (CHE726)
    - Advanced Separation Processes (CHE722)

25. Following subject have been added in Elective-IV list with teaching scheme  (3 0 0)3
    - Enhanced oil recovery techniques (CHE731)
    - Design of Piping Systems (CHE732)
    - Mould Design and Development (CHE733)
    - Regulation for Health, Safety and Environment (CHE734)
26. Open Elective has been added in semester VI with (3 1 2 0) and 5 credit scheme.
27. Following subject have been added in semester VI as open Elective:
    - Environmental Engineering-I (CE407)
    - Industrial Pollution Abatement (CHE621)
    - Production and Operations Management (MBA205)
    - Database Management Systems (CSE401)
28. Course Biochemical Engineering (CHE706) with (3 0 0)3 was suggested to be offered as compulsory course in semester VII.
29. Courses Fuel and Combustion Technology (CHE406), Process utility and Industrial safety (CHE702) and Industrial Pollution Abatement (CHE703) have been removed.
30. Major project (CHE705) has been added in semester VII with (0 0 4 4) and 6 credit scheme.
31. PS-II has been shifted from semester VII to semester VIII as PS801 with change in credits from 16 to 20.

**Programme: B. Tech in Civil Engineering**

Expert members present in the meeting:

1. Prof. Dr. Ing. Anupam Kumar Singh, Chairman BOS
2. Dr. Ravikumar Ganti, Assistant Professor, JKLU Jaipur.
3. Prof Vinod Kumar Vishwakarma, Lecturer, JKLU Jaipur.
4. Prof. Amit Kumar, Lecturer, JKLU Jaipur.
5. Dr. Ashu Jain, Professor, IIT-Kanpur.
6. Prof. Dr. A. K. Vyas, Professor, Department of Civil Engineering, MNIT Jaipur

The members approved the syllabus and content of the B. Tech program in civil engineering. The following suggestions were made by members:
1. Course Minor Project (MINOR 601) in semester VI and course Major Project (MAJOR 701) in semester VII have added with teaching scheme (0 0 4 2)4 for both.
2. Courses Survey-I (CE 308) and Survey-II (CE 408) has been clubbed into a Single course as Surveying (CE308) with teaching scheme (3 0 2 0)4 with relevant revisions having following units.

    Unit 1: History of Surveying (4 to 5 Lectures covering all the old methods - chain till theodolite)

Unit 2: Advanced surveying methods - Total station, GPS, DGPS
Unit 3: Quantity surveying: Measurement of Area and Volume,
Unit 4: Layout preparation.

In addition to the above changes in Surveying in order to have good field training, a one week, "Intensive Survey" having 2 credits has been introduced. This would be scheduled immediately after the End semester exams of III semester.

3. Course Urban and Regional Planning (CE 607) has been removed and replaced by Design of RCC Structure (CE 507) with teaching scheme (3 1 0 0)4.
4. Course SMART Urban and Regional Planning (CE 627) with teaching scheme (3 0 2 0)4 is suggested as elective in Elective III.
5. Course Design of RCC Structure (CE 607) has been replaced with course Design of Steel Structures (CE-607) with teaching scheme (3 1 0 0)4.
6. Course Building Planning and Drawing (CE 408) with teaching scheme (3 0 2 0)4 has been proposed as a core course in semester IV.
7. Course Estimation and costing syllabus (CE 609) had gone through a minor revision.
8. Courses Fluid Mechanics-I (CE 306) and Fluid Mechanics-II (CE 406) have been clubbed as a single course Fluid Mechanics (CE 306) with teaching scheme (3 1 2 0)5.

   Unit1: Fluid fundamentals (Properties)
   Unit2: Fluid Kinematics
   Unit3: Fluid Dynamics
   Unit4: Pipe Flow
   Unit5: Open Channel Flow
   Unit 6: Dimensional Analysis.

9. Courses Geotechnical Engineering-1 (CE 508) and Geotechnical Engineering-2 (CE 608) have been merged and renamed as Geotechnical Engineering (CE 508) with teaching scheme (3 1 2 0)5.
10. Syllabus of course Structural Analysis-I (CE 305) and Structural Analysis-II (CE 405) has been rearranged.
11. A total of 12 new electives have been proposed with teaching scheme (3 0 0 2)5.

## Programme: B. Tech in Computer Science & Engineering

Expert members present in the meeting:

1. Dr Sonal Jain, Associate Professor, JKLU Jaipur
2. Dr. Kavita Choudhary, Associate Professor, JKLU Jaipur.
3. Dr. Paras Jain, Assistant Professor, JKLU Jaipur.
4. Prof. Devendra Bhavasar, Assistant Professor, JKLU Jaipur
5. Dr. Pramod Kumar Singh, Associate Professor, Department of Computer Science & Engineering, IITM Gwalior

6. Mr Khalid Kamal Hussain, Principal-Education & Research, Infosys Limited Jaipur.

The members approved the syllabus and content of the B. Tech program in computer science & engineering. The following suggestions were made by members:

1. Course Data Structures (CSE301), teaching scheme (L-T-P) and Credits division has been changed from (3 0 4) 5 to (3 1 2 0) 5.
2. Course Digital Electronics (ECE306) with teaching scheme (3 1 2) has been shifted to Semester V as ECE510 with teaching scheme (3 1 2 0) and 5 credit scheme.
3. Course Electronic Device & Circuits (ECE301) with teaching scheme (3 1 2) has been replaced with Application Development (CSE304) with teaching scheme (3 1 2).
4. Course Foundations of Computer Graphics (CSE404) with teaching scheme (3 0 2) has been reintroduced as Elective with title Principles of Computer Graphics (CSE527) with teaching scheme (3 0 0 0).
5. Course Computer Architecture and Organization (CSE403), (L-T-P) and Credits division has been changed from (3 1 0) 4 to (3 1 2 0) 5.
6. Course Operating System (CSE501), (L-T-P) and Credits division has been changed from (3 1 2) 5 to (3 0 2 0) 4.
7. Course System Analysis & Design (CSE506) with teaching scheme (3 1 0) 4 has been removed from semester V and HS Elective with teaching scheme (2 0 0 0) 2 had been added as new subject.
8. Course Distributed Systems (CSE601) with teaching scheme (3 1 2) has been removed from semester VI.
9. Course Software Engineering (CSE604), teaching scheme (3 0 2) 4 is changed to (3 1 2 0) 5.
10. Elective – II with teaching scheme (3 0 0) 3 has been replaced with an Open elective having (L-T-P) and Credits as (3 1 2 0) 5.
11. Minor Project (CSE611) having (L-T-P) and Credits as (0 0 4) 2 has been reintroduced with code CSE610 having (L-T-P) and Credits as (0 0 4 2) 4.
12. Mobile Computing (CSE702) having (L-T-P) and Credits as (3 0 2) 4 has been reintroduced with title Principles of Mobile Computing (CSE722) as a part of Elective – IV and having (L-T-P) and Credits as (3 0 0 0) 3. An Elective – II subject has been chosen as replacement for Mobile Computing.
13. Artificial Intelligence (CSE703) having (L-T-P) and Credits as (3 0 2) 4 has been made a part of Elective – II with modified (L-T-P) and Credits as (3 0 0 0) 3. Major Project (CSE705) has been chosen as replacement for Artificial Intelligence.
14. Following subject from Elective – I with teaching scheme (3 0 0) 3 have been removed:
    - Information Technology & Project Management (CSE522)
    - Data Compression & Encryption (CSE523)
    - Graph Theory (CSE524)
15. Following subject in Elective – I with teaching scheme (3 0 0 0) 3 have been added:
    - Python Programming (CSE525)

- Distributed Computing (CSE526)
- Principles of Computer Graphics (CSE527)
- Cellular & Wireless Networks (CSE528)
- PL/SQL Programming (CSE529)

16. All the existing subjects in Elective – II with teaching scheme (3 0 0) 3 list have been removed and following new subjects with teaching scheme (3 0 0 0) 3 have been added in this list:
   - Information Theory & Coding (ECE730)
   - Wireless Sensor Networks (ECE735)
   - Information Retrieval (CSE740)
   - Artificial Intelligence (CSE703)
   - Real Time Systems (CSE741)
   - Object-Oriented Analysis & Design (CSE731)

17. All the existing subjects in Elective – III with teaching scheme (3 0 0) 3 list have been removed and following new subjects with teaching scheme (3 0 0 0) 3 have been added in this list:
   - Data Compression & Encryption (CSE742)
   - Cryptography & Network Security (CSE743)
   - Database Administration (CSE744)
   - Foundation of Soft Computing (CSE745)
   - Cloud Computing (CSE746)
   - Information Technology & Project Management (CSE747)

18. Following subject have been removed from Elective – IV with teaching scheme (3 0 0) 3 list:
   - Real Time Systems (CSE721)
   - Information Theory & Coding (ECE829/ECE730)
   - Object-Oriented Analysis & Design (CSE731)
   - Cyber Laws and Intellectual Property Rights (CSE730)

19. Following subject have been added in Elective –IV with teaching scheme (3 0 0 0) 3 list:
   - Digital Image Processing (CSE728)
   - Principles of Mobile Computing (CSE748)
   - Business Intelligence (CSE749)
   - Programming Paradigm (CSE750)
   - Machine Learning (CSE724)
   - Software Testing & Quality Assurance (CSE751)

20. Open Elective has been introduced in Semester VI as new group of electives containing the subjects namely, Industrial Electronics (EE603), Production & Operations Management (MBA205), Geographic Information System and Remote Sensing (CE408), Microprocessors & Interfacing (ECE606), Analog Electronics (ECE401) having (3 1 2 0) 5 credit scheme.

**Programme: B. Tech in Electrical Engineering**

Expert members present in the meeting:

1. Dr. Pushpandra Singh, Associate Professor and Head, JKLU, Jaipur.
2. Prof. Jagdish Prasad Sharma, Assistant Professor, JKLU Jaipur
3. Prof. H P Agarwal, Assistant Professor, JKLU Jaipur
4. Prof. Yogesh Rohilla, Assistant Professor, JKLU Jaipur
5. Prof. Manoj Fauzdar, Professor, Department of Electrical Engineering, MNIT, Jaipur
6. Mr. Kunwer Sachdev, Managing Director, Su-Kam Power Systems Ltd., Gurgaon sought leave of absence.

The members approved the syllabus and content of the B. Tech program in electrical engineering. The following suggestions were made by members:

1. Network Analysis & Synthesis (EE301) with teaching scheme (3 0 2) 4 is removed from semester III and Network Theory-I (EE301) with teaching scheme (3 0 2 0) 4 is proposed. Following experiment are added to list as:
   - Measurement of active power and reactive power using two and three wattmeter method.
   - Time response of first order system using various test signals (MATLAB).
   - Simulation of RLC circuits in series and parallel configuration for the study of resonance (MATLAB).
   - Time response of second order system using various test signals (MATLAB).

2. Course Digital Electronics (ECE303) with teaching scheme (3 1 2 0) 5 has been removed from semester III and introduced in semester V as new course code ECE 521.

3. Course Electrical machine-II (EE401) with teaching scheme (3 1 2 0) 5, one new unit has been added and experiment list is also updated.
   Unit:
   - **Special machines:** Switched reluctance motor, stepping motors, permanent magnet brushless DC motor, permanent magnet synchronous motor.
   Experiment:
   - To plot the V-curve for a synchronous motor at 100 % Load , 75 % Load, 5o % Load and at No-Load.

4. Course Transmission & Distribution of Electrical Power (EE402) with teaching scheme (3 1 0 0) 4 is shifted to semester V from semester IV with new course code as EE503 and in place this a new course Network Theory-II (EE402) is proposed.

5. Course Electrical Measurement & Instruments (EE404) is shifted in semester III new code is EE303 and in place of above subject Energy Sources (EE 403) with teaching scheme (3 1 0 0) 4 is proposed.

6. Course Conventional Energy sources (EE403) has been removed from semester IV.

7. Course Linear Control Systems (EE501) with teaching scheme (3 1 2 0) 5, contents states space and design and analysis are removed from the theory. Two experiments are added in experiment list.
   - To study and draw the characteristics of stepper motor.
   - To study the temperature measurement thermocouple RTD/Thermistor

8. Course Power system switchgear & protection (EE502) has been removed from semester V and introduced in semester VI with new course code and teaching scheme EE 602 (3 1 2 0) 5. One experiment is added as
   - To find out dielectric strength of transformer oil.

9. Course Microprocessor (EE502) with teaching scheme (3 0 2 0)4 has been introduced in place of Power system switchgear & protection.

10. Course Transmission & Distribution of electrical power (EE402) with teaching scheme (3 1 0) 4 is removed from semester IV and introduced in semester V with new course code EE503.

11. Course Digital Electronics (ECE303) with teaching scheme (3 1 2) 5 is removed from semester III and offered in semester V with new course code ECE 521. Course Electrical Signal & Systems (EE504) has been removed from semester V.

12. List of elective-I with teaching scheme (3 0 0 0) 3 has been updated as:
   - High Voltage Engineering (EE504)
   - Advanced Distribution System (EE505)
   - Industrial Automation and Control (EE506)
   - Electrical and Electronic Engineering Materials (EE507)

13. Course High voltage engineering (EE504) (3 1 0) is offered as elective subject as new course code EE 702, earlier this subject was compulsory in semester VII.

14. Course Power System Analysis with teaching scheme (3 1 2 0) 5, course code has been changed from EE602 form EE601. New experiment is also added which is given as:
   - Modelling of Synchronous Machine.
   - Modelling of Induction Machine.

15. Course Non-conventional Energy Sources (EE601) has been removed from semester VI.

16. Course Industrial Electronics (EE603) with teaching scheme (3 1 2)5, theory contents and experiment list are updated as:
   Theory: Unit V
   - **REGULATORS:** Single phase and three phase A.C. Regulators-different circuit configurations and their operation.
   - **CYCLO-CONVERTERS:** Principle of cyclo-converter operation, classification of cyclo-converters, single phase to single phase cyclo-converter circuit, Three-phase to single-phase and three-phase to three phase configurations.
   Experiment

   - Study and obtain waveform of voltage source inverter.

17. Course Advanced Control System (EE604) with teaching scheme (3 0 0) has been removed from VI semester and offered as elective in semester with new course code EE712.

18. Minor Project (EE 608) with teaching scheme (0 0 4 2) 4 has been newly introduced in semester VI.

19. Course Linear Integrated Circuits (ECE609) is offered as elective subject, earlier this subject was compulsory in semester V as course code ECE 501.

20. Following subjects have been removed from Elective – I with teaching scheme (3 0 0)3 list:
   - Restructured Power System (EE622)
   - Power System Transients (EE621)
   - Advanced Distribution System (EE624)
   - Engineering Optimization   (MA621)

21. Following subjects have been added in Elective – I with teaching scheme (3 0 0 0)3 list:
   - High Voltage Engineering (EE504)
   - Advanced Distribution System EE505
   - Industrial Automation and Control (EE506)
   - Electrical and Electronic Engineering Materials (EE507)

22. Course Electrical Drive & Control (EE701) with teaching scheme (3 1 2 0)5, theory contents are updated and Laboratory component is added.

   Theory: Unit V
   - **BRAKING OF DRIVES:-** Various methods of braking of a.c. and d.c drives, Automatic control arrangement, characteristics and application, acceleration and Retardation time ,Energy consideration.

Experiments

- Control speed of dc motor using 3-phase half controlled bridge converter.Plot armature voltage versus speed characteristic.
- Speed control of sin gle phase motor using triac.
- Control speed of dc motor using 3-phase full controlled bridge converter. Plot armature voltage versus speed characteristic.
- Control speed of a 3-phase induction motor in variable stator voltage mode using 3-phase AC voltage regulator.
- Control speed of a 3-phase Brush less DC motor.
- Control speed of universal motor using AC voltage regulator.
- Study of  3-phase dual converter.
- To study the speed control of dc motor using 3-phase dual converter.
- Study of three-phase cycloconverter and speed control of synchronous motor using cycloconverter.
- Control of 3-Phase Induction Motor in variable frequency V/f constant mode using 3-phase inverter.

23. Following subjects have been removed from Elective – II with teaching scheme (3 0 0)3 list:
    - Power Quality & Utilization of electric power (EE821)
    - High Power Semiconductor devices (EE823)
    - Flexible AC Transmission System (EE822)
    - Electrical Machine Design (EE724)

24. Following subjects have been added in Elective – II with teaching scheme (3 0 0 0)3 list:
    - Restructured Power System (EE702)
    - Power Electronics applications in renewable energy (EE703)
    - Artificial Intelligence (EE704)
    - Electrical Machine Design (EE705)

25. Course Testing and commissioning of Electrical Machines (EE703) has been removed from semester VII and introduced as elective as new course code EE 713 with teaching scheme (3 0 0 0)3.

26. Following subjects have been removed from Elective –III with teaching scheme (3 0 0)3 list:
    - Biomedical Engineering (ECE722)
    - Industrial Automation and Control (EE824)
    - Information theory and coding (ECE724)
    - IC Technology (ECE725)

27. Following subjects have been added in Elective – III with teaching scheme (3 0 0 0)3 list:
    - EHV AC/DC Transmission system (EE706)
    - Numerical Simulation of power electronic Systems (EE707)
    - Optimal and adaptive control system (EE708)
    - Power System Design (EE709)

28. Following subjects have been added in Elective – IV with teaching scheme (3 0 0 0)3 list:
    - Smart Grid Technology (EE710)
    - Power Quality& Utilization of Electrical power (EE711)
    - Advanced Control System (EE712)
    - Testing and commissioning of Electrical Machines (EE713)

29. Seminar (SEM 701) with teaching scheme (0 0 4 0)2 has been introduced in semester VII.

30. Major Project (EE714) with teaching scheme (0 0 4 2)4 has been newly introduced in semester VII.

## Programme: B. Tech in Electronics & Communication Engineering

Expert members present in the meeting:

The following members were present during the meeting:

1. Dr. Sandeep Singh Sengar, HoD, , JKLU Jaipur
2. Prof Love Jain, Assistant Professor, JKLU Jaipur
3. Prof Divanshu Jain, Assistant Professor, JKLU Jaipur Prof (Dr.)
4. V. K. Chaubey, Professor, Department of Electronics & Communication Engineering, BITS Pilani
5. Mr. Satendra Singh, Director & Manufacturing, Head India, Nokia Solutions & Network, Chennai

The members approved the syllabus and content of the B. Tech program in electronics & communication engineering. The following suggestions were made by members:

1. Course Electronic Devices & Circuits (ECE301), teaching scheme has been changed from (3 1 2) to (3 0 2 0) with 4 credits.
2. Course Measurement & Instrumentation (ECE302) with (3 0 2)4 has been replaced with Measurement & Instrumentation (EE303) with change of Syllabus with (3 0 2 0) and 4 credit scheme.
3. Course Digital Electronics (ECE306) (3 1 2)5 has been shifted to Semester V as ECE510 with (3 1 2 0) and 5 credit scheme.
4. Course Network Analysis & Synthesis (EE301) (3 1 2)5 has been renamed as Network Theory I (EE301) with (3 1 2 0) and 5 credit scheme.
5. Course Linear Control System (EE501) of V semester has been changed with Control System (ECE304) with (3 0 0 0) and 3 credit scheme and added in III semester.
6. Course Microprocessors & Interfacing (ECE406) with (3 0 2)4 is shifted from semester-IV to semester-VI as Microprocessors & Interfacing (ECE606) with (3 1 2 0) and 5 credit scheme.
7. Course Digital Signal Processing (ECE603) with (3 1 2)5 has been shifted to Semester V as Digital Signal Processing (ECE511) with (3 1 2 0) and 5 credit scheme.
8. Course Linear Integrated Circuit (ECE501) with (3 1 2)5 has been shifted to Semester VI as Linear Integrated Circuit (ECE609) with (3 1 2 0) and 5 credit scheme.
9. Course Analog Communication (ECE502) with (3 0 2)4 is merged with Digital Communication and kept in V semester as Digital Communication (ECE507) with (3 0 2 0) and 4 credit scheme.
10. Course Computer Networks (CSE503) with (3 0 2)4 has been removed from semester V.
11. Course Microwave Engineering I (ECE504) with (3 0 0)3 has been added with Microwave Engineering II and kept in V Semester as Microwave Engineering (ECE509) with (3 0 2 0) and 4 credit scheme.

12. Course Antenna & Wave Propagation (ECE506) with (3 0 2)4 has shifted from semester-V to Semester VII as Elective-III Antenna & Wave Propagation (ECE607) with (3 0 0 0) and 3 credit scheme.

13. The course Effective Public Speaking and Employability Skills (LA501) has been removed.

14. Elective I with (3 0 0) is shifted from Semester VI to Semester V.

15. HS Electives are also added in both Semester V and Semester VI.

16. Project (ECE631) has been added as Minor Project (ECE610) in Semester VI and as Major Project (ECE705) in Semester VII with (0 0 4 2) and 4 credit scheme.

17. Course "VLSI Design (ECE827)" has been shifted from Elective IV to Semester VI with practical as VLSI Deign (ECE608) with (3 0 2 0) and 4 credit scheme.

18. Open Elective has been added in Semester VI with (3 1 2 0) and 5 credit scheme.

19. Course Telecommunication Switching Circuit & Networks (ECE522) has been shifted from Elective I to Semester VII as Telecommunication Switching Circuit & Networks (ECE704) as compulsory course with (3 0 0 0) and 3 credit scheme.

20. Course Optical Fiber Communication (ECE801) has been shifted to Elective I as ECE522 with (3 0 0 0) and 3 credit scheme.

21. The list of Electives II, III, IV are reframed.

22. Following subjects have been removed from Elective –I with teaching scheme (3 0 0)3 list:
    - Telecommunication Switching Circuit & Networks (ECE628)
    - Power Electronics (ECE629)
    - Engineering Optimization Techniques (MA621)

23. Following subject in Elective – I with teaching scheme (3 0 0 0)3 have been added:
    - Optical Fiber Communication (ECE522)
    - Biomedical Engineering(ECE523)
    - Wireless Communication
    - Digital Image Processing (ECE525)

24. Following subjects have been removed from Elective –II with teaching scheme (3 0 0)3 list:
    - Biomedical Engineering (ECE722)
    - Embedded Systems (ECE821)
    - Wireless Sensor Networks (ECE823)
    - Mobile Computing(CSE802)

25. Following subject in Elective –II with teaching scheme (3 0 0 0)3 have been added:

- Information Theory and Coding (ECE730)
- IC Technology (ECE731)
- RADAR & Satellite Communication  (ECE732)
- Object Oriented Analysis and Design (CSE726)

26. Following subjects have been removed from Elective –III with teaching scheme (3 0 0)3 list:
   - Information Theory and Coding (ECE824)
   -  IC Technology (ECE825)
   -  RADAR & Satellite Communication (ECE826)

27. Following subject in Elective –III with teaching scheme  (3 0 0 0)3 have been added:

   - Antenna & Wave Propagation (ECE733)
   - Engineering Materials and  Processes(ECE734)
   -  Wireless Sensor Networks(ECE735)
   -  Modeling & Simulation Technologies (CSE722)

28. Following subjects have been removed from Elective –IV with teaching scheme (3 0 0)3 list:
   - VLSI Design (ECE827)
   - Network Management(CSE824)
   -  Machine Learning (CSE840)

29. Following subject in Elective –IV with teaching scheme  (3 0 0 0)3 have been added:
   - VHDL (ECE736)
   - Embedded Systems (ECE737)
   - Application Development (CSE304)
   -  Wireless Networks(CSE728)

30. PS2 has been shifted from Semester VII to Semester VII as PS801 with change in credits from 16 to 20.

**Programme: B. Tech in Mechanical Engineering**

Expert members present in the meeting:

1. Dr. S.C. Bhaduri, Professor, JKLU Jaipur.
2. Dr. Hemant Gupta, Assistant Professor and Head, JKLU Jaipur
3. Prof. Ram Kumar Agrawal, Assistant Professor, JKLU Jaipur
4. Prof. Srinivas Rathod, Assistant Professor, JKLU Jaipur
5. Dr. Vinod Kumar Jeenager, Assistant Professor, JKLU Jaipur.

The members approved the syllabus and content of the B. Tech program in mechanical engineering. The following suggestions were made by members:

1. Course Fluid Mechanics (ME307) and Hydraulic Machines (ME406) have been combined into one subject named Fluid Mechanics & machines (ME308) with (3 1 2 0) 5 credits.
2. Course Material Science & Engineering (ME304) with (2 0 0 0) 2 has been shifted to semester IV.
3. Course I C Engines & Gas turbines (ME409) with (3 0 2) 4 has been shifted to semester V from semester IV with I C Engines & Gas turbines (ME502) with (3 1 2 0) 5 credits.
4. Course Mechanical Measurements (ME411) with (3 0 2 0) 4 has been added in semester IV.
5. Courses Kinematics of machines (ME407) and Dynamics of machines (ME507) have been combined into one subject named Theory of machines (ME507) with (3 1 2 0) 5 in semester V.
6. Courses Production planning & Control (ME505) and Industrial Engineering & Operation research (ME506) have been grouped and offered in Elective-I in V semester shifted from semester VI.
7. Course Production technology-II (ME508) with (3 0 2) 4 has been shifted to semester VI with new course code ME607 with (3 0 2 0) 4.
8. Course Mechanical Vibrations & control (ME605) has been shifted to semester VII with new course code ME701 with (3 1 2 0) 5.
9. Course Renewable energy Technology (ME606) with (3 0 2) 4 has been shifted in elective –II of Semester VI.
10. Minor Project has been added in semester VI with (0 0 4 2) 4 credits.
11. Courses of Semester VIII have been shifted to Semester VII and Practice School-II (PS701) has been shifted to semester VIII (PS801) from semester VII.
12. PS801 (Practice school-II) credits has been changed to 20 from 16.
13. One new elective, Elective-V has been added in semester VII.
14. Power plant engg (ME803) with (3 0 0), CAD-CAM (ME802) with (3 0 0) & Total Quality Management (ME804) with (3 0 0) have been shifted in Electives III, IV & V of semester VII.
31. The list of Electives I, II, III, IV are reframed.
32. Following subject in Elective – I with teaching scheme (3 0 0 0) 3 have been added:
    - Automobile Engineering (ME524)
    - Industrial Engineering (ME526)
    - Production Planning & Control (ME525)
    - Product design & Development (ME 521)

33. Following subject in Elective –II with teaching scheme (3 0 0 0) 3 have been added:

- Renewable Energy Technology (ME629)
- Flexible manufacturing system(ME627)
- Non-Conventional Machining processes (ME622)
- Mechatronics (ME626)

34. Following subject in Elective –III with teaching scheme (3 0 0 0) 3 have been added:

- Power Plant Engineering (ME728)
- Reliability & Maintenance Engineering (ME723)
- CAD-CAM (ME738)
- Robotics Engineering (ME736)

35. Following subject in Elective –IV with teaching scheme (3 0 0 0) 3 have been added:

- Energy Management & Efficiency (ME730)
- Industrial Pollution & Control(ME725)
- Metal Forming & Analysis (ME732)
- Mechanical System & Design(ME726)

36. Following subject in Elective –V with teaching scheme (3 0 0 0) 3 have been added:

- Computational Fluid Dynamics (ME739)
- Industrial Tribilogy(ME734)
- Total Quality Management (ME724)
- Fundamental of Aerodynamics(ME721)
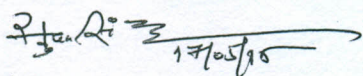
15. Major Project has been added in semester VII with (0 0 4 4), 6 credits.

**Programme: B.Tech.**

**Discipline: Common to all Branches**

1. (L T P) scheme is revised to (L T P S) with S signifying self-study hours of student and assigned 1 credit.
2. Engineering Mathematics–I (MA101) with (3 1 0) is replaced with Calculus and Linear Algebra (MA102) with (3 1 0 0).
3. Workshop Practice (ME141) having L-T-P (0 0 4) is replaced with Elements of Engineering (CM101) having L-T-P-S (2 0 4 0).
4. Engineering Mathematics-II (MA201) with (3 1 0) has been replaced with Differential Equations and Complex Analysis (MA202) with (3 1 0 0) and 4 credit scheme.

5. Engineering Mathematics – III (MA301) with (3 1 0) has been replaced with Computer Based Numerical & Statistical Techniques (MA302) with (3 0 2).

6. Course Self Development and Behavioral Skills (HS303) has been added with (0 0 2 1) and 2 credit scheme in semester III in place of Principles of Management for Engineers (HS 302) with (2 0 0) 2.

7. Numerical and Statistical Methods (MA402) has been replaced with Engineering Optimization (MA403) with (3 0 2 0) and 4 credit scheme.

8. Course Self Development and Report Writing (HS402) has been added with (0 0 2 1) and 2 credit scheme in place of Principles of Economics (HS 701) with (3 0 0).

9. An audit subject Effective Public Speaking and Employability Skills (LA501) has been replaced with a new credit subject Foreign Language (HS501) with (0 0 2 1) 2 credit scheme.

10. Open Elective has been added in Semester VI with (3 1 2 0) IE601/IE602/IE603... and 5 credit scheme.


Prof Dr-Ing Anupam K Singh

Chairman, BOS-IET

Based on the suggestions given by various stakeholders, program-wise following courses have been introduced. The details of these courses are given below.

## COURSES INTRODUCED

| Program Name | Batch | Code | Subject Name | Credits | Year | Semester | Core/ Elective |
|---|---|---|---|---|---|---|---|
| B Tech CE | 2013-17 | CE703 | Construction Equipment Methods | 3 | 4 | 7 | Core |
| B Tech CE | 2013-17 | CE701 | Construction Project Management | 4 | 4 | 7 | Core |
| B Tech CE | 2013-17 | CE702 | Geoinformatics | 4 | 4 | 7 | Core |
| B Tech CE | 2013-17 | CE735 | Ground Improvement Techniques | 3 | 4 | 7 | Elective |
| B Tech CE | 2013-17 | CE705 | Infrastructure Planning and Finance Management | 3 | 4 | 7 | Core |
| B Tech CE | 2015-19 | CE409 | Concrete Technology | 4 | 2 | 4 | Core |
| B Tech CE | 2015-19 | CE304 | Engineering Geology & Construction Materials | 4 | 2 | 3 | Core |
| B Tech CE | 2015-19 | CE408 | GIS and Remote Sensing | 4 | 2 | 4 | Core |
| B Tech CE | 2016-20 | MA102 | Calculus and Linear Algebra | 4 | 1 | 1 | Core |
| B Tech CE | 2016-20 | MA202 | Differential Equations and Complex Analysis | 4 | 1 | 2 | Core |
| B Tech CE | 2016-20 | CM101 | Elements of Engineering | 4 | 1 | 2 | Core |
| B Tech CHE | 2014-18 | CHE615 | Biochemical Engineering | 3 | 3 | 6 | Elective |
| B Tech CHE | 2014-18 | CHE501 | Chemical Reaction Engineering-II | 5.5 | 3 | 5 | Core |
| B Tech CHE | 2014-18 | ME625 | Computational Fluid Dynamics | 4 | 3 | 6 | Core |
| B Tech CHE | 2014-18 | CHE506 | Process Instrumentation | 3 | 3 | 5 | Core |
| B Tech CHE | 2014-18 | CHE503 | Process Modeling and Simulation | 5 | 3 | 5 | Core |
| B Tech CHE | 2015-19 | CHE407 | Mass Transfer Operations-I | 4 | 2 | 4 | Core |
| B Tech CSE | 2013-17 | CSE703 | Artificial Intelligence | 4 | 4 | 7 | Core |
| B Tech CSE | 2013-17 | CSE701 | Data Warehousing & Data Mining | 4 | 4 | 7 | Core |
| B Tech CSE | 2013-17 | CSE702 | Mobile Computing | 5 | 4 | 7 | Core |
| B Tech CSE | 2013-17 | CSE735 | Real Time Systems | 3 | 4 | 7 | Elective |
| B Tech CSE | 2016-20 | CSESP101 | Software Foundation and Programming-I | 4 | 1 | 1 | Core |
| B Tech CSE | 2016-20 | CSESP201 | Software Foundation and Programming-II | 4 | 1 | 2 | Core |
| B Tech EE | 2013-17 | ECE722 | Biomedical Engineering | 3 | 4 | 7 | Elective |
| B Tech EE | 2013-17 | EE701 | Electrical Drive & Control | 4 | 4 | 7 | Elective |
| B Tech EE | 2013-17 | EE702 | High Voltage Engineering | 4 | 4 | 7 | Elective |
| B Tech EE | 2013-17 | EE703 | Testing and Commissioning of Electrical Machines | 5 | 4 | 7 | Elective |

| B Tech EE | 2015-19 | EE404 | Electrical Measurement & Instrumentation | 5 | 2 | 4 | Core |
|---|---|---|---|---|---|---|---|
| B Tech MBA CE | 2012-17 | MBAOM402 | Contemporary Practices in Operations Management | 4 | 5 | 10 | Elective |
| B Tech MBA CE | 2012-17 | MBAOM301 | Project Management | 4 | 5 | 9 | Elective |
| B Tech MBA CE | 2012-17 | MBAOM302 | TQM & Six Sigma | 4 | 5 | 9 | Core |
| B Tech MBA CE | 2012-17 | MBAOM401 | World Class Manufacturing | 4 | 5 | 10 | Elective |
| B Tech ME | 2013-17 | ME725 | Industrial Pollution & Control | 3 | 4 | 7 | Elective |
| B Tech ME | 2013-17 | ME737 | Waste Heat Recovery & Management | 3 | 4 | 7 | Elective |
| B Tech ME | 2015-19 | ME407 | Kinematics of Machine Elements | 3 | 2 | 4 | Core |
| M Tech CSE | 2015-17 | MTCS326 | Artificial Intelligence Techniques | 3 | 2 | 3 | Elective |
| M Tech CSE | 2015-17 | MTCS427 | Data Warehousing & Mining | 3 | 2 | 3 | Elective |
| PhD IET | 2016-19 | PHCH02 | Organic Synthesis | 4 | 1 | 1 | Elective |

## COURSES DROPPED

| Program Name | Batch | Code | Subject Name | Credits | Year | Semester | Core/ Elective |
|---|---|---|---|---|---|---|---|
| B Tech CE | 2015-19 | CE522 | Ground Water Hydrology | 4 | 3 | 5 | Elective |
| B Tech CE | 2015-19 | CE607 | Design of Steel Structure | 4 | 3 | 6 | Core |
| B Tech CE | 2015-19 | CE622 | EIA and Environmental Auditing | 4 | 3 | 6 | Elective |
| B Tech CE | 2015-19 | CE625 | Design of Pre-stressed Concrete Structures | 3 | 3 | 6 | Elective |
| B Tech CE | 2016-20 | CE306 | Fluid Mechanics-I | 5 | 2 | 3 | Core |
| B Tech CE | 2016-20 | MA301 | Engineering Mathematics - III | 4 | 2 | 3 | Core |
| B Tech CE | 2016-20 | CE406 | Fluid Mechanics-II | 5 | 2 | 4 | Core |
| B Tech CE | 2016-20 | CE408 | GIS and Remote Sensing | 4 | 2 | 4 | Core |
| B Tech CE | 2016-20 | MA402 | Numerical & Statistical Analysis | 4 | 2 | 4 | Core |
| B Tech CE | 2017-21 | LA201 | Professional Communication Skills | 3 | 1 | 2 | Core |
| B Tech CHE | 2015-19 | CHE502 | Process Dynamics & Control | 5 | 3 | 5 | Core |
| B Tech CHE | 2015-19 | CHE504 | Separation Processes | 4 | 3 | 5 | Core |
| B Tech CHE | 2015-19 | CHE506 | Process Instrumentation | 3 | 3 | 5 | Core |
| B Tech CHE | 2015-19 | CHE615 | Biochemical Engineering | 3 | 3 | 6 | Elective |
| B Tech CHE | 2016-20 | CHE302 | Fluid Flow Operations | 5 | 2 | 3 | Core |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| B Tech CHE | 2016-20 | CHE304 | Unit Processes in Organic Synthesis | 3 | 2 | 3 | Core |
| B Tech CHE | 2016-20 | MA301 | Engineering Mathematics - III | 4 | 2 | 3 | Core |
| B Tech CHE | 2016-20 | CHE405 | Mechanical Operations | 5.5 | 2 | 4 | Core |
| B Tech CHE | 2016-20 | MA402 | Numerical & Statistical Analysis | 4 | 2 | 4 | Core |
| B Tech CHE | 2017-21 | LA201 | Professional Communication Skills | 3 | 1 | 2 | Core |
| B Tech CSE | 2014-18 | CSE735 | Real Time Systems | 3 | 4 | 7 | Elective |
| B Tech CSE | 2015-19 | CSE521 | Management Information System | 3 | 3 | 5 | Elective |
| B Tech CSE | 2015-19 | MA502 | Optimization Techniques | 4 | 3 | 5 | Core |
| B Tech CSE | 2015-19 | CSE602 | Design & Analysis of Algorithms | 4 | 3 | 6 | Core |
| B Tech CSE | 2015-19 | ECE622 | Microprocessor & Interfacing | 4 | 3 | 6 | Elective |
| B Tech CSE | 2016-20 | CSE303 | Principles of Programming Languages | 3 | 2 | 3 | Core |
| B Tech CSE | 2016-20 | MA301 | Engineering Mathematics - III | 4 | 2 | 3 | Core |
| B Tech CSE | 2016-20 | CSE405 | Design & Analysis of Algorithms | 5 | 2 | 4 | Core |
| B Tech CSE | 2016-20 | MA402 | Numerical & Statistical Analysis | 4 | 2 | 4 | Core |
| B Tech CSE | 2017-21 | CSESP101 | Software Foundation and Programming-I | 4 | 1 | 1 | Core |
| B Tech CSE | 2017-21 | CSESP201 | Software Foundation and Programming-II | 4 | 1 | 2 | Core |
| B Tech CSE | 2017-21 | LA201 | Professional Communication Skills | 3 | 1 | 2 | Core |
| B Tech ECE | 2014-18 | ECE726 | Verilog Hardware Description Language | 3 | 4 | 7 | Elective |
| B Tech ECE | 2014-18 | ECE728 | VlSI Design | 3 | 4 | 7 | Elective |
| B Tech ECE | 2015-19 | MA502 | Optimization Techniques | 4 | 3 | 5 | Core |
| B Tech ECE | 2015-19 | ECE604 | Electronic Circuit Design | 3 | 3 | 6 | Core |
| B Tech ECE | 2015-19 | ECE622 | Microprocessor & Interfacing | 3 | 3 | 6 | Core |
| B Tech ECE | 2016-20 | EE301 | Network Analysis and Synthesis | 5 | 2 | 3 | Core |
| B Tech ECE | 2016-20 | MA301 | Engineering Mathematics - III | 4 | 2 | 3 | Core |
| B Tech ECE | 2016-20 | ECE406 | Microprocessor & Interfacing | 4 | 2 | 4 | Core |
| B Tech ECE | 2016-20 | MA402 | Numerical & Statistical Analysis | 4 | 2 | 4 | Core |
| B Tech ECE | 2017-21 | LA201 | Professional Communication Skills | 3 | 1 | 2 | Core |
| B Tech EE | 2015-19 | EE522 | Advanced Distribution System | 3 | 3 | 5 | Elective |
| B Tech EE | 2015-19 | ECE622 | Microprocessor & Interfacing | 4 | 3 | 6 | Core |
| B Tech EE | 2016-20 | EE301 | Network Analysis and Synthesis | 5 | 2 | 3 | Core |
| B Tech EE | 2016-20 | MA301 | Engineering Mathematics - III | 4 | 2 | 3 | Core |
| B Tech EE | 2016-20 | EE402 | Transmission & Distribution of Electrical Power | 4 | 2 | 4 | Core |
| B Tech EE | 2016-20 | EE403 | Conventional Energy Sources | 3 | 2 | 4 | Core |

| B Tech EE | 2016-20 | EE404 | Electrical Measurement & Instrumentation | 5 | 2 | 4 | Core |
|-----------|---------|-------|------------------------------------------|---|---|---|------|
| B Tech EE | 2016-20 | MA402 | Numerical & Statistical Analysis | 4 | 2 | 4 | Core |
| B Tech EE | 2017-21 | LA201 | Professional Communication Skills | 3 | 1 | 2 | Core |
| B Tech ME | 2015-19 | ME508 | Machining, Machine Tools & Metrology | 4 | 3 | 5 | Core |
| B Tech ME | 2015-19 | ME606 | Solar Energy Technology | 4 | 3 | 6 | Core |
| B Tech ME | 2016-20 | MA301 | Engineering Mathematics - III | 4 | 2 | 3 | Core |
| B Tech ME | 2016-20 | ME305 | Advanced Machine Drawing | 2 | 2 | 3 | Core |
| B Tech ME | 2016-20 | MA402 | Numerical & Statistical Analysis | 4 | 2 | 4 | Core |
| B Tech ME | 2016-20 | ME406 | Hydraulic Machines | 4 | 2 | 4 | Core |
| B Tech ME | 2016-20 | ME407 | Kinematics of Machine Elements | 3 | 2 | 4 | Core |
| B Tech ME | 2016-20 | ME409 | IC Engines & Gas Turbines | 4 | 2 | 4 | Core |
| B Tech ME | 2017-21 | LA201 | Professional Communication Skills | 3 | 1 | 2 | Core |

Prof Dr-Ing Anupam K Singh

Chairman, BOS-IET