



CHILDREN'S EDUCATION SOCIETY (REGD.)

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THE OXFORD COLLEGE OF ENGINEERING

(Recognized by the Govt. of Karnataka, Affiliated to Visvesvaraya Technological University, Belagavi &

Approved by A.I.C.T.E. New Delhi

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DEPARTMENT OF BIOTECHNOLOGY ENGINEERING

Department Proceedings of The Meeting
Curriculum Delivery & Planning

Date: 07-09-2022

Time: 11:00AM

Members Present:

1	Dr.B.K.Manjunatha
2	Dr.Valarmathy K
3	Dr.Indulekha
4	Dr.Ajitha
5	Mr.Divakara
6	Ms.Salma Kausar
7	Ms.Aswathy U
8	Dr.Nathiya T
9	Mr.Shambu G

AGENDA: -

1. Review of previous minutes meeting
2. Department Academic Calendar
3. Department Time Table
4. Course File / Pedagogical Methods
5. Value Added Courses; Content beyond syllabus
6. Student Centric Methods

7. Implementation of OBE Matrix
8. Action Plan for Slow Learners and Advanced Learners
9. Feedback analysis and Action taken plan

The following agenda was discussed: -

1. Dr. B.K.Manjunath , HOD welcomed all the members present.
2. The last semester held for 2021-22 even was briefed by HOD. He informed as expected target in results was not satisfied and could have achieved good results , subject faculty to improve the same during the coming academic year 2022-23 ODD.
It was instructed to the faculty that student's performance and subject deliverance must be improved. Also instructed to the faculties to conduct remedial for the weaker students and the concern faculty were informed to take up appropriate measures by adopting innovative pedagogical methods to improve their quality of deliverance in teaching.

3. Academic Calendar:

The HOD briefed the dates for the commencement of ODD semester as per VTU guidelines

The HOD instructed the department coordinator to prepare the draft of the department calendar for the semester activities and advised to submit immediately all the details incorporating all the important academic, department activities & events.

4. Master Time Table:

HOD advised the Time Table Coordinator to prepare a subject proficiency matrix to allocate the subject for the ODD Semester 2022-

5. Course File / Pedagogical Methods:

HOD allotted the subjects to the faculty and asked them to prepare course file for the current semester subject as per the VTU guidelines before the commencement of the semester.

1. The course file / material should contain a copy of university syllabus, students list, attendance register, teacher diary along with lesson plans with pedagogical initiatives, notes and reference books, previous IA question papers and university question papers along with scheme of evaluation and question bank, assignments etc. Many pedagogical methods are adapted by the faculty like chalk and talk, smart board usages, PPTs, Videos, short term courses, seminars, Presentations, etc. are included in the course file.

HOD instructed each faculty that they need to follow VTU guidelines for conducting the Internal Assessments Tests (the CIE question paper, Scheme of Evaluation, Result Analysis.

6. HOD instructed to faculty importance of Cross Cutting Issues in syllabus by giving the awareness of Ethics, Gender, Environment, etc. This needs to be shared with students.

7. Value Added Courses, Content beyond syllabus.

The value-added course to be completed for the academic year 2022-23.

Sl.No.	Name of Add on/ Certificate programs offered	Duration of the Course
1.	Workshop on IPR	30 hrs

8. Feedback analysis and Action taken plan.

The feedback was taken on 'Curriculum' as per the template framed for the academic year 2022-23 odd from the following stakeholders after the 2nd IA.

- a) Students
- b) Faculty
- c) Course End Survey / Employer
- d) Course End Survey / Parents
- e) Alumni

The analysis was based on the student's feedback on faculty. The analysis for the feedback is based on the scaling of 1 and 5 and HOD prepared action taken report and submitted to the principal office for further action.

Faculty who secured greater than 90% are to be appreciated and those who scored less than or equal to 75% need to take immediate necessary action. Such faculty need to undergo and enhance training/FDP/Workshop/Seminars etc. to upgrade their skills.

9. Implementation of OBE Matrix

The COs, POs and PSOs of the programs were instructed and taken care in the department and for implementing appropriate pedagogic strategies. The Course outcomes was designed as per the affiliating university prescribed syllabus and by employing Bloom's Taxonomy verbs and levels. It was also informed that all the Courses should have around five course outcomes and these are correlated to the Program Outcomes (POs). The process of mapping of COs prescribed by VTU and POs prescribed by the NBA related for the course.

HOD advised and instructed the faculty that the mapping should be based on the scaling parameter which is as defined by NBA and are as follows: -

“1” – Slight (Low) correlation, “2” – Moderate (Medium) Correlation, “3” – Substantial (High) correlation and “-“ indicates there is no correlation. Similarly, COs with PSOs should be mapped to achieve the attainments.

10. Students Centric Methods

As per the content delivery committee members direction the student's centric methods were incorporated to improve the student's learning ability. HODs advised the faculty to adhere the following methods in the teaching process. Guest Lecture / Expert Talk / Technical Talk/Seminar/Webinar, Hands-on session, Interactive Session, Soft skill training/ Technical Training, Industrial visit/ field visit, Internship, Project, Mini Project & innovative practices.

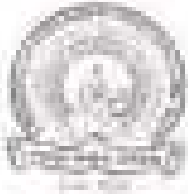
11. Action Plan for Slow learners and Advanced Learners

As per the content delivery committee members instructions HOD directed the subject faculty that they should conduct remedial classes and mentoring for the slow learners. And, also instruct the advanced learners to participate for the Conferences, Add-on courses, MOOC courses to enrich their subject knowledge in turn to get the university rank.

12. Resolutions

1. HOD instructed to follow the 2018, 2022, 2020 scheme CIE rubrics.
2. The approved syllabus is followed.
3. HOD instructed all faculty should have their course file ready and checked by HOD before the commencement of the classes.
4. Action plan should be submitted one week after this meeting.
5. It is decided that all should encourage the students towards more pedagogy initiatives to get better insights in the academics.
6. HOD advised to conduct more add on course/industrial visit/workshops to fill the gap and motivate the students regarding this.





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ACTION PLAN REPORT (2022-23-EVEN)

SL.NO.	MOM - No.	ACTION PLANNED	STATUS
1.	3	The Internship/Field Visit/Project	As planned for the semester all departments conducted the Internship/Field Visit/Projects
2.	4	Course File / Pedagogical Methods	As directed it was implemented by all departments
3.	9	Value Added Courses, Content beyond syllabus	As per the plan it was implemented
4.	10	Feedback analysis	Feedback was taken by all departments during the semester
5.	11	Implementation of OBE Matrix	OBE Matrix was followed by all departments
6.	12	Students Centric Methods	The student's centric methods were incorporated in all departments
7.	13	Action Plan for Slow learners and Advanced Learners	Remedial classes were conducted for slow learners & the advanced learners
8.	11	DAC	DAC meeting was conducted before the beginning of the semester in all departments


Principal

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All HODs
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ACTION TAKEN REPORT (2022-23 -ODD)

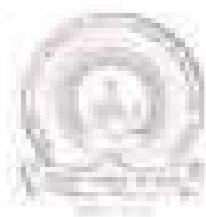
SL.NO.	MOM – No.	ACTION PLANNED	STATUS
1.	5	Course File / Pedagogical Methods:	As directed Pedagogical methods were implemented by all departments.
2.	8	Value Added Courses, Content beyond syllabus	As per the plan 9 programs were conducted during the odd semester
3.	9	Feedback analysis	Feedback was taken and analysis was done for the 1- 5 scaling.
4.	10	Implementation of OBE Matrix	OBE Matrix was implemented and all departments followed it.
5.	11	Students Centric Methods	The student's centric methods were incorporated in all departments.
6.	11	The Internship/Field Visit/Project	All departments had planned for the Internship/Field Visit/Projects and few of them are ongoing.
7.	12	Action Plan for Slow learners and Advanced Learners	Remedial classes were conducted for slow learners & the advanced learners to participate in various programmes.
8.	13	DAC	DAC meeting was conducted before the beginning of the semester in all departments and identified the thrust areas to bridge the gap.

Principal

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TOC/EST/27/2022-23

Date: 07Feb. 2023

CIRCULAR

Sub: Curriculum Planning and Delivery Committee Meeting

All HODs are hereby informed to attend a meeting scheduled for the upcoming academic year 2022-2023 (EVEN) to discuss about Curriculum activities for all the departments. The Meeting is scheduled on 09th Feb. 2023 at 11:00am in the Board room, The Oxford College of Engineering, Bengaluru.

The agenda for discussion is appended below. Kindly make it convenient to attend the meeting positively.

1. Academic Calendar
2. Master Time Table
3. Course File/Pedagogical Methods
4. Value Added Courses, Content beyond syllabus
5. Student Centric Methods
6. Mapping of Cos, Pos & PSCs
7. Feedback analysis and Action taken plan
8. Any other points with the permission of the Chair

Copies

The Chairman, The Oxford Educational Institutions
All HODs
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TOCE/EST 27/2022-23

Date: 06 Sept. 2022

CIRCULAR

Sub: Curriculum Planning and Delivery Committee Meeting

All HODs are hereby informed to attend a meeting scheduled for the upcoming academic year **2022 -2023 (ODD)** to discuss about Curriculum activities for all the departments. The Meeting is scheduled on 09th Sept.2023 at 11:00 am in the Board room, The Oxford College of Engineering, Bengaluru.

The agenda for discussion is appended below. Kindly make it convenient to attend the meeting positively:

1. Academic Calendar
2. Master Time Table
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5. Student Centric Methods
6. Mapping of Cos, Pos & PSOs
7. Feedback analysis and Action taken plan
8. Any other points with the permission of the Chair

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All HODs

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TOCE/EST/27/2022-23

PROCEEDINGS OF THE MEETING
Curriculum Delivery Committee

Date: 09-02-2023

Time: 11:00am

Members Present:

01	Dr N Kannan, Principal, Chairperson		
02	Dr. E Ch A Naidu, Member Secretary (QAC)		
03	Dr. Vijaya Kumar - Dean Academic	04	Dr. Freeta Charan - Dean Research
05	Dr. Mallikarjun - Dean Exams	06	Dr. Mangarath B K - HOD - IT
07	Dr. Malleshiah T S - HOD - CIVIL	08	Dr. M S Shankar - HOD - MCA
09	Dr. Manja Devi, HOD - DCE	09	Dr. P Gangavathi - HOD - S&H
11	Mr. Dhananjay R, Student Member, M.Tech-Structural Engineering	12	Mr. Prashant Kargan, Student Member B.E (Mechanical Engineering)
13	Megha Gowda, Student Member MCA	14	Ms. Navya, Student Member B.E (Computer Science and Engineering)
15	Ms. Meghraj G Student Member - MBA	16	Darvy Johnson P Student Member B.E (Electrical and Electronics Engineering)
17	Mr. Anantha Choudary Parent	18	Nagaraj NL Parent
19	Mr. Nanda Gopal - Industry Expert - MIT	20	Dr. Srinivas Tilakathota - Academic Expert-ECE
21	Mr. Gaurav Mishra - Akasa		

AGENDA :-

1. Review of previous minutes meeting
2. Academic Calendar
3. Master Time Table
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5. Value Added Course; Content beyond syllabus
6. Student Centric Methods
7. Implementation of OBE Matrix
8. Action Plan for Slow Learners and Advanced Learners
9. Feedback analysis and Action taken plan

The following agenda was discussed :-

1. Principal welcomed all the members present and the resolution planned in the last meeting has been approved for compliance.
2. The resolution planned in the last meeting has been approved for immediate compliance.
3. The last semester held for 2022-23 OOD was briefed by principal.

As per the VTU guideline the 1st semester of B.E. was commenced on 30-11-2022, and for 1st semester of PG - MBA, MCA, MTech was commenced on 13-02-2023.

He also reviewed the results of CIE and Semester End Examination for each branch. It was also noted that the expected target in results was not satisfied and could have achieved good results for which the committee members were advised all HODs and subject faculty to improve the same during the coming academic year 2022-23 Even.

It was also noted that student's performance and subject deliverance by the faculty must be improved. HODs were advised to conduct remedial for the weaker students and the concern faculty were informed to take up appropriate measures by adopting innovative pedagogical methods to improve their quality of deliverance in teaching.

The Principal directed all HODs to include in the curriculum for the EVEN semester - the Internship/Field Visit/Project.

4. Academic Calendar:

The principal briefed the following dates for the commencement of Even semester as per the VTU guideline:

Semester	VTU	YUCL
I V B. E	05-06-2023	05-06-2023
VI B. E	20-03-2023	20-03-2023
VIII B. E	13-02-2023	13-02-2023
II B. E	25-05-2023	25-05-2023
II MBA	26-06-2023	26-06-2023
IV MBA	17-04-2023	17-04-2023
II MCA	26-06-2023	26-06-2023
I V MCA	17-04-2023	17-04-2023
II M Tech	26-06-2023	26-06-2023
I V M Tech	17-04-2023	17-04-2023

The Principal instructed the HODs to prepare the department calendar for the semester activities and HODs were advised to submit incorporating all the important academic activities and events by finalizing the date.

5. **Master Time Table:** The committee advised HODs to prepare a subject proficiency matrix as per the 2018 scheme and 2021 scheme for higher semesters and 2022 schemes for the 1st year UG Programme, and prepare the department time table for the EVEN Semester 2022-23.

The committee advised MCA HOD to prepare a subject proficiency matrix and allocate the subject for the EVEN Semester 2022-23 with the 2022 scheme for the Master of Computer Applications and fourth semester with the 2018 scheme.

The committee advised MBA HOD to prepare a subject proficiency matrix and allocate the subject for the EVEN Semester 2022-23 with the 2022 scheme for the Master of Business Administration (MBA) PG Programme and 4th semester with the 2020 scheme.

The committee advised all HODs of M.Tech Course to prepare a subject proficiency matrix and allocate the subject for the ODD Semester 2022-23 with the 2021 scheme for the first year, and second year for 2021 scheme of the Master of Technology (M.Tech) PG Programme.

Based on the same, the Time Table needs to be prepared and HODs were asked to submit the final draft of the Department Time Table and Master Time Table of the department to the principal's office. Mentors were identified for 10-15 students each and it was assigned to all the department faculty and the Mentoring hour are included in all the department Time-table.

6. **Course File / Pedagogical Methods:** HODs were instructed to direct the subject faculty to prepare the course file for the current semester subject as per the VTU guidelines before the commencement of the semester. The course file should contain a copy of university syllabus, students list, attendance register, teacher diary along with lesson plans with pedagogical initiatives, notes and reference books, previous CIE question papers and university question papers along with scheme of evaluation and question bank, assignments etc. Many pedagogical methods are adopted by the faculty like chalk and talk, smart board usage, PPTs, Videos, short term courses, seminars, Presentations, etc. are included in the course file.

The committee members instructed HODs that they should do a thorough check on the portion coverage related to each subject before the commencement of each Continuous Internal Assessment.

The committee members advised HODs to instruct each faculty to adhere the VTU guidelines for conducting CIE Tests and also advised HODs to have through check on the CIE question paper pattern.

Also, the committee members discussed that as per the 2018 scheme, the rubrics for allotment of marks are 60 marks for Semester End Exam (SEE) and 40 marks for Continuous Internal Evaluation (CIE). In 40 marks of Internal Assessment, 30 marks are awarded as the average of 3 Internal assessments and 10 marks for the Assignments which are considered awarding for the final IA marks.

Also, an opportunity can be given to the students who need IA average in form of Improvement test.

And for the 2021 scheme, III - First year, the rubrics for allotment of marks is 50% marks for Semester End Exam (SEE) and 50% marks for Continuous Internal Evaluation (CIE).

As per the MCA for 2018 scheme, the rubrics for the allotment of marks are 80 marks for Semester End Exams and 20 marks for Internal tests. With 20 marks for the Internal test, 60% for the average of three internal test marks and 40% for the Assignment marks should be considered for awarding of the final Internal Test marks of the Master of Computer Applications. And for 2020 scheme,

the rubrics for the allotment of marks are 60% marks for Semester End Exams and 40% marks for Internal tests.

As per the 2020 scheme of MHA, the rubrics for the allotment of marks are 60% marks for End Semester Exams and 40% marks for Internal Tests. With 25 marks on the Internal test, average of best of 2 out of 3 IA, 15 marks for Assignments / Presentation / Seminars depending on the subjects.

As per the 2020 scheme of M.Tech, the rubrics for the allotment of marks are 60% marks for End Semester Exams and 40% marks for Internal Tests. With 20 marks on the Internal test, average of 3 IA, and 20 marks for Assignments / Presentation / Seminars depending on the subjects.

Faculty were advised to evaluate the blue books within the stipulated duration and after each internal assessment, the slow learners need to be identified for the conduct of bridge courses.

HODs were advised to instruct the subject faculty that they should incorporate pedagogical methods like group discussions, industrial visits, MCQs, role play, Quiz, peer to peer learning, brain storming sessions, model based learning, industrial visits, and PPTs for the better insight of the concepts for better understanding.

7. **B.E Honors:** As per VTU circular and guidance it was discussed during Hods meeting to give importance and awareness of B.E honours and motivate the students the same. Principal directed to conduct the meeting for the same in their respective department.
8. Principal also suggested the importance of Cross Cutting Issues in syllabus by giving the awareness of Ethics, Gender, Environment, etc. This needs to be shared with faculty and students.
9. **Value Added Courses, Content beyond syllabus:** The curriculum delivery committee discussed the curriculum and decided during the pandemic to plan for the academic year 2022-23 to enrich the student's knowledge in various thrust areas.

Sl. NO	Name of Add on /Certificate programs offered	Department	Duration of course
1	AWS cloud essential for researchers	CSE	10 hrs.
2	Data Analytics using Power BI	ISE	28 hrs.
3	Innovation & Design Thinking Opportunities in the Field of Electrical Design and Drafting	EEE	30 hrs.
4	Innovation and Design Thinking Ideas in Geotechnical Engineering	CV	30 hrs.
5	Design of Fluid Power Systems and its analysis	ME	30 hrs.
6	Hands on training Data Analytics using Excel	ECE	30 hrs.
7	Python Programming using Django	BT	10 hrs.

8	Workshop on Know your Intellectual Property Rights	IT	30 hrs.
9	Effective Business Communication for industrial perspectives	MBA	30 hrs.
10	AWS cloud practitioner certification	MCA	180 hrs.
11	Python Programming using Django	MT	30 hrs.

The Committee members reviewed the above-mentioned courses and approved for the same.

10. Feedback analysis and Action taken plan.

The feedback committee members are advised to take online feedback on 'Curriculum' as per the template framed for the academic year 2022-23 (Even) from the following stakeholders after the 2nd LA.

- Students
- Faculty
- Course End Survey
- Program Exit Survey
- Alumni
- Employers

HODs and Feedback committee members are advised to analyze the outcome based on the student's feedback on faculty and should submit the action plan and the same will be discussed in the next meeting. Like faculty who scored greater than 95% are to be appreciated and those who scored less than or equal to 75% need to take immediate necessary action. Such faculty need to undergo and enhance training/IDP/Workshop/Seminars etc. to upgrade their skills.

11. Implementation of OBE Matrix

The members took the decision regarding the COs, POs and PSO of the programs and for implementing appropriate pedagogic strategies. Also informed that the Course outcomes are designed as per the affiliating university prescribed syllabus and by employing Bloom's taxonomy verbs and levels. It was also informed that all the Courses have annual free course outcomes and these are correlated to the Program Outcomes (POs). The members also discussed the process of mapping of COs prescribed by VTU and POs prescribed by the NBA related for the course.

HODs were advised to instruct the faculty that the mapping should be based on the scaling parameter which is as defined by NBA and are as follows:-

"1" - Slight (Low) correlation, "2" - Moderate (Medium) Correlation, "3" - Substantial (High) correlation and "-" indicates there is no correlation. Similarly, COs with PSOs should be mapped to achieve the statements.

12. Student Centric Methods

The curriculum delivery committee members took the decision to incorporate the student's centric methods to improve the student's learning ability. HODs were advised to instruct the faculty to adhere the following methods in the teaching program. Guest Lecture / Expert Talk / Technical Talk/Seminar/Workshop, Hands-on session, Interactive Session, Soft skill training/ Technical

Training, Industrial visit/ field visit, Internship, Project, Mini Project & Innovative projects. As per the VTU circular students' needs to be motivated to take up B.E. Honors course with 8.5 CGPA.

13. Action Plan for Slow learners and Advanced Learners

The curriculum delivery committee members instructed HODs to direct the subject faculty that they should conduct remedial classes and mentoring for the slow learners. And, also instruct the advanced learners to participate for the Conferences, Add-on courses, MOOC courses to enrich their subject knowledge in turn to get the university rank.

14. DAC: Principal instructed all department Dept Advisory Committee, to conduct the meeting with stakeholders, and identifies the curriculum gap, reviews the stakeholder's remarks, and identifies the thrust areas to bridge the gap.

15. Resolutions

1. Principal instructed to follow the 2022, 2021, 2020 and 2018 scheme CIE rubrics.
2. The approved syllabus is followed.
3. Principal advised all faculty should have their course file ready and checked by respective HODs before the commencement of the classes.
4. Action plan should be submitted one week after this meeting.
5. It is decided that all should encourage the students towards more pedagogy initiatives to get better insights in the academics.
6. Principal advised to conduct the bridge course/add on course/Industrial visit/workshops to fill the gap.
7. Principal instructed to work together for NAAC to aim A++ Grade.

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TOCE/EST/27/2022-23

PROCEEDINGS OF THE MEETING **Curriculum Delivery Committee**

Date: 09-09-2022

Time: 11:00AM

Members Present:

01	Dr N Kannan, Principal, Chairperson.		
02	Dr. R Ch A Naidu, Member Secretary (IQAC)		
03	Dr. Vijaya Kumari – Dean Academics	04	Dr.Preeta Charan - Dean Research
05	Dr.Mallikarjun - Dean Exams	06	Dr. Manjunath B K - HOD - BT
07	Dr. Malleshaiah T S - HOD -CIVIL	08	Dr. M S Shashidhar - HOD - MCA
09	Dr. Manju Devi, HOD - ECE	10	Dr. P Gangavathi - HOD –S&H
11	Mr. Dharshan R, Student Member, M.Tech-Structural Engineering	12	Mr. Prashanth Ranjan, Student Member B.E (Mechanical Engineering)
13	Megan Gowda, Student Member MCA	14	Ms. Navya, Student Member B.E (Computer Science and Engineering)
15	Mr. Megharaj G Student Member - MBA	16	Danny Johnson P Student Member B.E (Electrical and Electronics Engineering)
17	Mr. Anadha Chowdary, Parent	18	Nagaraj NL Parent
19	Mr. Nanda Gopal - Industry Expert - MT	20	Dr. Srinivas Talabattula - Academic Expert-ECE
21	Mr. Gaurav Mishra - Alumni		

AGENDA: -

1. Review of previous minutes meeting
2. Academic Calendar
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9. Feedback analysis and Action taken plan

The following agenda was discussed: -

1. Principal welcomed all the members present and the resolution planned in the last meeting has been approved for compliance.
2. The last semester held for 2021-22 EVEN was briefed by Principal.

The 2nd semester of B.E. was commenced on 19-05-2021 and all 2nd semester PG courses - MCA, MBA & MTech was commenced on 10-05-2021 as per the VTU guidelines.

He also reviewed the results of CIE and Semester End Examination for each branch. It was also noted that the expected target in results was not satisfied and could have achieved good results for which the committee members were advised all HODs and subject faculty to improve the same during the coming academic year 2022-23 ODD.

It was also noted that student's performance and subject deliverance by the faculty must be improved.

3. **Academic Calendar:**

The principal briefed the following dates for the commencement of ODD semester as per VTU guidelines.

Sem	TOCE
VII BE	12-09-2022
V BE	17-10-2022
III BE	31-10-2022
I BE	30-11-2022
III MBA, MCA, MTech	28-11-2022
I MBA, MCA, MTech	13-02-2023

4. **Master Time Table:** The committee advised HODs to prepare a subject proficiency matrix as per the 2018 scheme and 2021 scheme for higher semesters and 2022 scheme for the 1st year UG Programme, and prepare the department time table for the ODD Semester 2022-23.

The committee advised MCA HOD to prepare a subject proficiency matrix and allocate the subject for the ODD Semester 2022-23 with the 2022 scheme for the Master of Computer Applications and 3rd semester with the 2018 schemes.

The committee advised MBA HOD to prepare a subject proficiency matrix and allocate the subject for the ODD Semester 2022-23 with the 2022 scheme for the Master of Business Administration (MBA) PG Programme and 3rd semester with the 2020 scheme.

The committee advised all HODs of M.Tech Course to prepare a subject proficiency matrix and allocate the subject for the ODD Semester 2022-23 with the 2022 scheme for the first year, and second year for 2021 scheme of the Master of Technology (M.Tech) PG Programme.

Based on the same, the Time Table needs to be prepared and HODs were asked to submit the final draft of the Department wise class Time Table and Master Time Table of the department to the principal's office. Mentors were identified for 10-15 students each and it was assigned to all the department faculty. And the Mentoring hour are included in all the department Time-table.

5. **Course File / Pedagogical Methods:** HODs were instructed to direct the subject faculty to prepare the course file for the current semester subject as per the VTU guidelines before the commencement of the semester. The course file should contain a copy of university syllabus, students list, attendance register, teacher diary, CO - PO mapping, Content beyond syllabus, along with lesson plans with pedagogical initiatives, notes and reference books, previous IA/CIE question papers and university question papers along with scheme of evaluation and question bank, assignments etc., Many pedagogical methods are adapted by the faculty like chalk and talk, smart board usages, PPTs, Videos, short term courses, seminars, Presentations, etc. are included in the course file.

The committee members instructed HODs that they should do a thorough check on the portion coverage related to each subject before the commencement of each Continuous Internal Evaluation (CIE). After conducting CIE and Evaluation there should be parents' teachers meeting schedule as per TOCE academic calendar of event.

The committee members advised HODs to instruct each faculty to adhere the VTU guidelines for conducting Continuous Internal Evaluation (CIE) and also advised HODs to have through check on the CIE question paper pattern. Scrutiny committee member go through the 2 set of question paper and select one set from the same. After the question paper securitized it is submitted to the Exam Dean.

Also, the committee members discussed that as per the 2018 scheme, 2021 scheme and 2022 scheme the rubrics for allotment of marks.

1. 2018 scheme 60 marks for Semester End Exam (SEE) and 40 marks for Continuous Internal Evaluation (CIE). In 40 marks of Internal Assessment, 30 marks are awarded as the average of 3 Internal assessments and 10 marks for the Assignments which are considered awarding for the final IA marks.
2. 2021 scheme 50 marks for Semester End Exam (SEE) and 30 marks for Continuous Internal Evaluation (CIE). In 30 marks of Internal Assessment, 30 marks are awarded as the average of 3 Internal assessments and 20 marks for the Assignments, quiz, GD, etc. which are considered awarding for the final IA marks.
3. 2022 scheme 50 marks for Semester End Exam (SEE) and 25 marks for Continuous Internal Evaluation (CIE). In 25 marks of Internal Assessment, 25 marks are awarded as the average of 2 Internal assessments and 25 marks for the Assignments, quiz, GD, etc. which are considered awarding for the final IA marks.

Also, an opportunity can be given to the students who need IA average in form of Improvement test.

For the 2021 scheme, BE- First year, the rubrics for allotment of marks is 50% marks for Semester End Exam (SEE) and 50% marks for Continuous Internal Evaluation, Assignments / Presentation / Seminars (CIE).

And for the 2022 scheme, BE- First year, the rubrics for allotment of marks is 50% marks for Semester End Exam (SEE) and 50% marks for Continuous Internal Evaluation, Assignments / Presentation / Seminars (CIE).

As per the MCA for 2018 scheme, the rubrics for the allotment of marks are 80 marks for Semester End Exams and 20 marks for Internal tests. With 20 marks for the Internal test, 60% for the average of three internal test marks and 40% for the Assignment marks should be considered for awarding of the final Internal Test marks of the Master of Computer Applications. And for 2020 scheme, the rubrics for the allotment of marks are 60% marks for Semester End Exams and 40% marks for Internal tests.

As per the 2020 scheme of MBA, the rubrics for the allotment of marks are 60% marks for End Semester Exams and 40% marks for Internal Tests. With 25 marks on the Internal test, average of best of 2 out of 3 IA, 15 marks for Assignments / Presentation / Seminars depending on the subjects.

As per the 2020 scheme of MTech, the rubrics for the allotment of marks are 60% marks for End Semester Exams and 40% marks for Internal Tests. With 20 marks on the Internal test, average of 3 IA, and 20 marks for Assignments / Presentation / Seminars depending on the subjects

Faculty were advised to evaluate the blue books within the stipulated duration and after each internal assessment, the slow learners need to be identified for the conduct of bridge courses.

HODs were advised to instruct the subject faculty that they should incorporate pedagogical methods like group discussion, Industrial visits, MCQs, role play, Quiz, peer to peer learning, brain storming, model based, Industrial visit, and PPTs for the better insight of the concepts for better understanding.

6. **B.E Honors:** As per VTU circular and guidance it was discussed during Hods meeting to give importance and awareness of B.E honors and motivate the students the same. Principal directed to conduct the meeting for the same in their respective department.
7. **Cross Cutting Issues:** Principal also suggested the importance of Cross Cutting Issues in syllabus by giving the awareness of Ethics, Gender, Environment, etc. This needs to be shared with faculty and students.
8. **Value Added Courses, Content beyond syllabus:** The curriculum delivery committee discussed the curriculum and decided during the academic year 2022-23 to enrich the student's knowledge in various thrust areas.

Sl.No.	Name of Add on/ Certificate programs offered	Department	Duration of the Course
1.	Skill development for higher studies	CSE	30 hrs

2.	Hands on training of PCB design	EEE	30 hrs
3.	IOT for real time applications	ISE	30 hrs
4.	Workshop on Entrepreneurship skill, attitude and behaviour development	CV	30 hrs
5.	Microprocessor programming for Motor applications	ME	30 hrs
6.	Intel India stem skill programme for women	ECE	30 hrs
7.	Foundations of Private equity & venture capital	MBA	30 hrs
8.	Front Accounting- Business Accounting system	MBA	30 hrs
9.	Boot Camp on Python Programming	MCA	30 hrs
10.	Mechanical Modelling using solid works	MT	30 hrs

The committee members reviewed the above-mentioned courses and approved for the same.

9. **Feedback analysis and Action taken plan:** The feedback committee members are advised to take the feedback on 'Curriculum' as per the template framed for 1- 5 scaling during the academic year 2022-23 (ODD) from the following stakeholders after the 2nd IA.

- a) Students
- b) Faculty
- c) Course End Survey
- d) Program Exit Survey
- e) Alumni
- f) Employers

HODs and Feedback committee members are advised to analyze the outcome based on the student's feedback on faculty and should submit the action plan and the same will be discussed in the next meeting. Like faculty who secured greater than 90% are to be appreciated and those who scored less than or equal to 75% need to take immediate necessary action. Such faculty need to undergo and enhance training/FDP/Workshop/Seminars etc. to upgrade their skills.

10. **Implementation of OBE Matrix:** The members took the decision regarding the COs, POs and PSOs of the programs and for implementing appropriate pedagogic strategies. Also informed that the Course outcomes should be designed as per the affiliating university prescribed syllabus and by employing Bloom's Taxonomy verbs and levels. It was also informed that all the Courses should have around five course outcomes and these are correlated to the Program Outcomes (POs). The members also discussed the process of mapping of COs prescribed by VTU and POs prescribed by the NBA related for the course.

HODs were advised to instruct the faculty that the mapping should be based on the scaling parameter which is as defined by NBA and are as follows: -

“1” – Slight (Low) correlation, “2” – Moderate (Medium) Correlation, “3” – Substantial (High) correlation and “-” indicates there is no correlation. Similarly, COs with PSOs should be mapped to achieve the attainments.

11. **Students Centric Methods:** The curriculum delivery committee members took the decision to incorporate the student’s centric methods to improve the student’s learning ability. HODs were advised to instruct the faculty should adhere the following methods in the teaching process. Guest Lecture / Expert Talk / Technical Talk/Seminar/Webinar, Hands-on session, Interactive Session, Soft skill training/ Technical Training, Industrial visit/ field visit, Internship, Project, Mini Project & innovative practices. As per the VTU circular students needs to be motivated to take up B.E Honors course with 8.5 CGPA

12. **Action Plan for Slow learners and Advanced Learners:** The curriculum delivery committee members instructed HODs to direct the subject faculty that they should conduct remedial classes and mentoring for the slow learners. And, also instruct the advanced learners to participate for the Conferences, Add-on courses, MOOC courses to enrich their subject knowledge in turn to get the university rank.

13. **DAC:** Principal instructed all department Dept Advisory Committee, to conduct the meeting with stakeholders, and identifies the curriculum gap, reviews the stakeholder’s remarks, and identifies the thrust areas to bridge the gap.

14. Resolutions

1. Principal instructed to follow the 2022, 2021, 2020 and 2018 scheme CIE rubrics.
2. The approved syllabus is followed.
3. Principal advised all faculty should have their course file ready and checked by respective HODs before the commencement of the classes.
4. Action plan should be submitted one week after this meeting.
5. It is decided that all should encourage the students towards more pedagogy initiatives to get better insights in the academics.
6. Principal advised to conduct more add on course/industrial visit/workshops to fill the gap and motivate the students regarding this.

PRINCIPAL

PRINCIPAL

The Oxford College of Engineering
Bommanahalli, Hosur Road
Bengaluru-560 068

Copy to:

The Chairman, The Oxford Educational Institutions

All HODs.

IQAC



CHILDREN'S EDUCATION SOCIETY (Regd.)

Administrative Office :

1st Phase, J.P. Nagar, Bengaluru - 560 078. ☎ : 080 - 61754501 - 502 Fax: 080 2654 8658

THE OXFORD COLLEGE OF ENGINEERING

[Recognized by the Govt. of Karnataka, Affiliated to Visvesvaraya Technological University, Belagavi & Approved by A.I.C.T.E., New Delhi, Accredited by NAAC & NBA New Delhi and Recognized by UGC under section 2(f)]

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E-mail: engprincipal@theoxford.edu Web: www.theoxford.edu

Ref No: TOCE/AACAD/57/2023-24/6302

Date: 06/11/2023

Declaration

The Oxford College of Engineering is affiliated to Visvesvaraya Technological University, the college has to follow the VTU curriculum mandatorily. However to ensure effective implementation of academic calendar The Oxford College of Engineering has constituted Curriculum Delivery Committee (CDC) which will conduct the meeting with key stake holders for effective planning and implementation of curriculum delivery in the campus, the Minutes of meeting of same is communicated to all the Head of the Departments for effective implementation.

PRINCIPAL

PRINCIPAL

The Oxford College of Engineering
Bommanahalli, Hosur Road
Bengaluru-560 068

विद्या सर्वत्र बोधते

Estd. 1974



CHILDREN'S EDUCATION SOCIETY (CESO)

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THE OXFORD COLLEGE OF ENGINEERING

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Approved by AICTE, New Delhi

Memorandum, 1st Phase Road, Bangalore - 560078

☎ 080-4774200, Fax: 080-20548438, e-mail: ocp@oxfordcollege.edu Web: www.oxfordcollege.edu

Date: 30-01-2023

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Circular

SUB: Department Meeting of Curriculum Delivery Committee

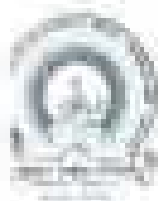
The Department Meeting of Curriculum Delivery and Planning has been scheduled for 31-01-2023 at the HOD Cabin, HODMAM. All faculty members are hereby informed to attend the above meeting without fail.

AGENDA:-

1. Department Academic Calendar
2. Department Time Table
3. Course File / Pedagogical Methods
4. Value Added Courses Content beyond syllabus
5. Action Plan for Slow Learners and Advanced Learners
6. Feedback analysis and Action taken plan


HOD/EEE

Professor & Head EEE,
The Oxford College of Engineering,
Bommasandra, 1st Phase Road,
Bangalore-560 078



CHILDREN'S EDUCATION SOCIETY (CES) J

Administrative Office

1st Phase of Nagar, Bangalore – 560 078

0800-61754001 - 302 Fax: 080-2534-9000

THE OXFORD COLLEGE OF ENGINEERING

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Approved by AICTE (U.E. No. 020)

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DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING

Department Proceedings of Curriculum Delivery committee Meeting

Date: 31-01-2023

Time: 10:00AM

Members Present:

1	Dr. Bharath V S
2	Dr. Desi Vigneshwaran B
3	Prof. Jayakumar N
4	Prof. Nisha C Rao
5	Prof. Rachal Ruby
6	Prof. Saralitha T L
7	Prof. Ratna S R

AGENDA:

1. Department Academic Calendar
2. Master Time Table
3. Course File / Pedagogical Methods
4. Value Added Courses Content beyond syllabus
5. Action Plan for Slow Learners and Advanced Learners
6. Feedback analysis and Action taken plan

The following agenda was discussed:-

1. Academic Calendar:

The HODs instructed the department coordinator to prepare the draft of the department calendar for the semester activities and advised to submit immediately all the details incorporating all the important academic, department activities & events.

2. Master Time Table:

HOD advised the Time Table Coordinator to allocate the subject for the EVEN Semester 2022-23.

HOD asked the Department Time Table Coordinator to submit the final draft. Messes were identified for 10-15 students each and it was assigned to all the department faculty. And the Missing hour are included in all the department Time-table.

3. Course File / Pedagogical Methods

HODs advised the subjects to the faculty and asked them to prepare course file for the current semester subject as per the VTU guidelines before the commencement of the semester.

The course file / material should contain a copy of university syllabus, students list, attendance register, teacher diary along with lesson plans with pedagogical initiatives, notes and reference books, previous IA question papers and university question papers along with scheme of evaluation and question bank, assignments etc. Many pedagogical methods are adapted by the faculty like chalk and talk, smart board usage, PPTs, Videos, short term courses, seminars, Presentations, etc. are included in the course file.

HOD instructed each faculty that they need to follow VTU guidelines for conducting the Internal Assessments Tests (the CIE question paper, Scheme of Evaluation, Result Analysis).

4. Value Added Courses, Content beyond syllabus.

The value-added course to be completed for the academic year 2022-23 should contain 10hrs and can plan after classes. It should be offline event and asked the concerned coordinators to identify suitable resource person for the same.

5. Feedback analysis and Action taken plan.

The feedback was taken on 'Curriculum' as per the template framed for the academic year 2022-23.

- a) Students
- b) Faculty
- c) Course End Survey / Employer
- d) Course End Survey / Parents
- e) Alumni

Based on the curriculum feedback the add on courses, guest lectures and other activities can be framed so that the gap can be filled.

6. Action Plan for Slow learners and Advanced Learners

As per the content delivery committee members instructions HOD directed the subject faculty that they should conduct remedial classes and mentoring for the slow learners. And, also instruct the advanced learners to participate for the Conferences, Add-on courses, MOOC courses to enrich their subject knowledge in turn to get the university rank.


HOD/EEE

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Bangalore-560 088



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THE OXFORD COLLEGE OF ENGINEERING

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TOCE/EBT/27/2022-23

Re-constitution of Curriculum Delivery Committee

Date: 02-09-2022

Time: 11:00 AM

TOCE being affiliated institution has very limited role in curriculum designing. However, to ensure seamless learning experiences to the students, TOCE has constituted curriculum delivery committee. The committee interacts with all the key stake holders to ensure effective curriculum learning process. The Curriculum Delivery Committee members for the academic year 2022-2023 as follows:

Members Details

01	Dr.N Karan, Principal, Chairperson		
02	Dr. R Ch A Kaida, Member Secretary (IQAC)		
03	Dr. Vijaya Kumar – Dean Academics	04	Dr.Prasanna Charan - Dean Research
05	Dr.Mallikarjun - Dean Exams	06	Dr. Marjorath B K - HOD - IT
07	Dr. Malleshiah T S - HOD -CIVIL	08	Dr. M S Shanmukha - HOD - MCA
09	Dr. Manju Devi, HOD - ECE	10	Dr. P.Gangavathi - HOD -BBA
11	Mr. Dharmas R, Student Member, M.Tech-Structural Engineering	12	Mr. Prashanth Kumar, Student Member B.E (Mechanical Engineering)
13	Megha Gowda, Student Member MCA	14	Ms. Navya, Student Member B.E (Computer Science and Engineering)
15	Mr. Megharaj G Student Member - MBA	16	Dhruv Arjunan P Student Member B.E (Electrical and Electronics Engineering)
17	Mr. Anusha Choudhary Faculty	18	Nagaraj H, Parent
19	Mr. Nanda Gopal - Industry Expert - MT	20	Dr. Sravya Talasila - Academic Expert-ECE
21	Mr. Gaurav Mishra - Alumni		

PRINCIPAL

PRINCIPAL

The Oxford College of Engineering
Bannerghatta, Inner Road
Bangalore-560 082

Copy to:
The Chairman, The Oxford Educational Institutions
All HODs
IQAC



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಶ್ವವಿದ್ಯಾಲಯ ಅಧಿನಿಯಮ ೧೯೯೪ ನೇ ಆರ್ಟಿಕಲ್ ೩೨(೧) ಅನ್ವಯ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

(State University of Government of Karnataka Established as per the VTU Act, 1994)

"JnanaSangama" Belagavi-590018, Karnataka, India

Phone : (0831) 2498100

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REGISTRAR

REF: VTU/BGM/ACA/2022-23/ 3000

DATE: 3 SEP 2022

NOTIFICATION

Subject: - Academic Calendar of ODD semesters B.E./B.Tech./B.Plan /B.Arch. programs of University regarding...

Reference: Hon'ble Vice-Chancellor's approval dated: 03 09.2022

The academic calendar concerned to **ODD semesters of B.E./B.Tech./B.Plan./B.Arch.** programs of University for academic year 2022-23 are hereby notified as mentioned in the attached sheet;

The Principals of Affiliated, Constituent and Autonomous Engineering Colleges are hereby informed to bring the academic calendar to the notice of all concerned.

Encl: As mentioned

Sd/-

REGISTRAR

To,

1. The Principals of all affiliated/ constituent /Autonomous Engineering Colleges under the ambit of VTU Belagavi.
2. The chairperson, Department of Mechanical Engineering /Civil Engineering /Computer Science and Engineering and Business Studies of the University.

Copy to,

1. To the Hon'ble Vice-Chancellor through the secretary to VC, VTU Belagavi for information
2. The Registrar (Evaluation), VTU Belagavi for information.
3. The Regional Directors (I/c) of all the regional offices of VTU for circulation.
4. The Director I/c ITI SMU, VTU Belagavi for information and to make arrangements to upload revised Academic Calendar on the VTU web portal.
5. The Director of Physical Education, VTU Belagavi for information
6. PS to Registrar VTU Belagavi
7. All the concerned Special Officer/s and Caseworker/s of the academic section, VTU, Belagavi

Ray 02/09/2022 E
Registrar

#

Academic Calendar for ODD Semester of UG programs for the year 2022-23

	I semester B.E./B.Tech.	I semester B.Arch/B.Plan	I semester B.Sc.	II semester B.E./ B.Tech.	III Semester B.Arch.	III semester B.Plan	III Semester B.Sc.	V Semester B.E./B.Tech.	V Semester B.Arch/ B.Plan	VII semester B.L./B.Tech.	VII semester B.Plan.	VII semester B.Arch	IX semester B.Arch
Commencement of ODD Semester	# 10.10.2022	# 10.10.2022	10.10.2022 (Tentative)	11.10.2022	31.10.2022	31.10.2022	10.10.2022	10.10.2022	12.09.2022	21.08.2022	21.08.2022	19.09.2022	01.09.2022
Internship				11.10.2022 To 30.10.2022						21.08.2022 To 17.09.2022	21.08.2022 To 24.09.2022		
Commencement of Classes				31.10.2022	31.10.2022	31.10.2022	10.10.2022	10.10.2022	12.09.2022	19.09.2022	26.09.2022	19.09.2022	01.09.2022
Last Working day of ODD Semester				11.02.2023	11.02.2023	11.02.2023	28.01.2023	27.01.2023	31.12.2022	31.12.2022	07.01.2023	31.12.2022	20.12.2022
Practical Examination				13.02.2023 To 21.02.2023	13.02.2023 To 21.02.2023	13.02.2023 To 21.02.2023	01.02.2023 To 09.02.2023	30.01.2023 To 09.02.2023	03.01.2023 To 13.01.2023	03.01.2023 To 13.01.2023	09.01.2023 To 14.01.2023	03.01.2023 To 13.01.2023	21.12.2022 To 31.12.2022
Theory Examinations				22.02.2023 To 22.03.2023	22.02.2023 To 22.03.2023	22.02.2023 To 22.03.2023	13.02.2023 To 03.03.2023	13.02.2023 To 18.03.2023	16.01.2023 To 15.02.2023	16.01.2023 To 15.02.2023	16.01.2023 To 15.02.2023	16.01.2023 To 15.02.2023	—
Internship			*	26.03.2023 To 16.04.2023	—	—		—	—	—	—	—	—
Internship Viva Voce/ Project Viva				—	—	—		—	—	—	—	—	—
Commencement of EVEN Semester				17.04.2023	17.04.2023	17.04.2023	20.03.2023	20.03.2023	20.03.2023	20.02.2023	20.02.2023	20.02.2023	06.01.2023

Please Note:

- The academic sessions for ODD semesters should commence from the dates mentioned above. # Commencement of Induction Program As per AICTE Academic Calendar 2022-23
- The commencement date of VI semester B.E./B.Tech/, is postponed from 12.09.2022 to 19.09.2022 to cover 04 weeks of Internship duration. The students of B.E./B.Tech. compulsorily have to complete the Internship in this duration only.
- The commencement date of VII semester B.Plan, is postponed from 12.09.2022 to 26.09.2022 to cover 06 weeks of Internship duration.
- Students joining to VII semester B.E./B.Tech/B.Plan should complete the Internship before the commencement of the classes.
- The Institute needs to function for six days a week with additional hours (Saturday is a full working day). #if required, the college can also plan to have extra classes on Sundays to complete academic activities within the duration mentioned.
- The faculty/staff shall be available to undertake any work assigned by the university.
- Notification regarding the Calendar of Events relating to the conduct of University Examinations will be issued by the Registrar (Evaluation) from time to time.
- Academic Calendar may be modified based on guidelines/directions issued in the future by MHRD/UGC/AICTE/State Government.
- Academic Calendar is also applicable for Autonomous Colleges. If any changes are to be effected by Autonomous Colleges in the academic terms and examination schedule, they could do so with the approval of the University.
- The college has to conduct offline classes to cover 80% of the syllabus of the courses, however, 20% of the syllabus can be covered in virtual mode (Online) mode. Attendance of the students for offline and online classes is mandatory and records should be maintained and submitted to the university whenever informed.
- If any clarification/question, please email to sbhutusa@gmail.com

* Internship for Lateral Entry Students

Ray 03/09/2022
REGISTRAR
30/11/22



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಶ್ವವಿದ್ಯಾಲಯದ ಸಂವಿಧಾನದ ಅಡಿಯಲ್ಲಿ ಸ್ಥಾಪಿಸಲ್ಪಟ್ಟ ವಿಶ್ವವಿದ್ಯಾಲಯ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

State University of Government of Karnataka, Established by public LTD. Act, 1978, Bangalore, Karnataka, India.

Prof. B. E. Rangaswamy, VC

Phone: (0811) 2488108

REGISTRAR

Fax: (0811) 2405467

REF: VTU/REG/REG/2022/ 650

DATE: **18 MAY 2023**

NOTIFICATION

Subject: Tentative Academic Calendar of II Semester B.E./B.Tech./B.Arch and B.Plan and IV semester B.E./B.Tech., programs of University regarding...

Reference: Hon'ble Vice-Chancellor's approval dated 18.05.2023

Tentative Academic Calendar of II Semester B.E./B.Tech., B.Arch and B.Plan and IV semester B.E./B.Tech., programs of the University for the academic year 2022-23 are hereby notified as mentioned below:

[Tentative] Academic Calendar for semesters of II semester B.E./B.Tech./B.Arch./B.Plan and IV semester B.E./B.Tech., Programs (May 2023)			
	II semester B.E./B.Tech.	II semester B.Arch, B.Plan	IV semester B.E./ B.Tech
Commencement of even semester	17.05.2023	17.05.2023	17.05.2023
Internship	—	—	17.05.2023 To 03.06.2023
Commencement of the Classes	17.05.2023	17.05.2023	05.06.2023
Last Working day of the Semester	31.08.2023	31.08.2023	16.09.2023
Practical Examination/ Viva Examination	01.09.2023 To 10.09.2023	01.09.2023 To 09.09.2023	19.09.2023 To 30.09.2023
Theory Examination	11.09.2023 To 07.10.2023	11.09.2023 To 27.09.2023	03.10.2023 To 20.10.2023
Commencement of next Semester	09.10.2023	09.10.2023	25.10.2023

Please Note:

- The academic sessions for IVth semester should commence on the date mentioned above.

- If necessary, the college may hold extra classes on Saturdays and Sundays to complete academic activities within the specified timeframe.
- The faculty/staff shall be available to undertake any work assigned by the university.
- University Examination Calendars will be published by the Registrar (Evaluation) from time to time.
- The Academic Calendar may be modified as MHRD/UGC/AICTE/state governments issue guidelines/directions in the future.
- Academic calendars are also applicable to autonomous colleges. If any changes are to be made by Autonomous colleges in the academic terms and examination schedule, they could do so with the approval of the university.
- If any clarification/correction/suggestions, please email abhal@vsnl.net
- ** Induction Programs shall be conducted for 10 days for 2nd semester students. Activities related to induction program's shall be conducted on every Saturday (if required on Sunday) totaling to 10 days. Upon completion of the induction program, colleges must email a brief report to abhal@vsnl.net

1. The principals of engineering colleges under the aegis of the University, are hereby informed to bring the academic calendar to the notice of all concerned.
2. The Chairpersons of the PG department of the University where UG programs are offered are hereby informed to bring the academic calendar to the notice of the all concerned.
3. The Directors of Schools of Architecture and Planning under the aegis of the university are hereby informed to bring the academic calendar to the notice of all concerned.

(Sd/-)
REGISTRAR

To,

1. The principals of all engineering colleges, Directors, Schools of Architecture and Planning, under the aegis of VTU Belagavi, The Chairpersons of the PG Department of the university

Copy to,

1. To the Hon'ble Vice-Chancellor through the secretary to VC, VTU Belagavi for information.
2. The Registrar (Evaluation), VTU Belagavi for information.
3. The Regional Directors (U/s) of all the regional offices of VTU for circulation.
4. The Director I/c, ITI SMU, VTU Belagavi for information and to make arrangements to upload Academic Calendar on the VTU web portal.
5. The Director of Physical Education, VTU Belagavi for information.
6. The Director of Central Placement Office, VTU Belagavi for information.
7. All the concerned Special Officer/s and Commissioner/s of the academic sector, VTU Belagavi.

Res _____ CE
REGISTRAR
3/



ವಿಸ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

Visvesvaraya Technological University

Dr. A. S. Deshpande, Registrar

Phone: (0832) 2681100

Registrar

Fax: (0832) 2622467

Ref: VTL/DIR/REG/AR/2022-23/14-57

Date: 15 JUN 2022

NOTIFICATION

- Subject:** Academic Calendar of 2nd semester of M.Arch./M.Tech./MBA/ MCA/ M.Des/ MDA(MV) programs of University regarding:
- Reference:**
- Academic Calendar (2022-23) of VITVE dated 24.03.2022
 - Final Engineering Approval dated 14.06.2022
 - Final UoV Council's approval dated 14.06.2022

The academic calendar concerned to 2nd semester of the M.Arch./M.Tech./MBA/ MCA/ M.Des/ MDA(MV) programs of University are hereby notified as:

	II sem M.Des	II sem MDA(MV)	II semester MBA	II semester M.Tech.	II semester M.Arch	II semester MCA
Commencement of 2 nd Semester	27.06.2022	28.06.2022	27.06.2022	27.06.2022	27.06.2022	27.06.2022
Last Working day of 2 nd Semester	24.06.2022	22.06.2022	24.06.2022	24.06.2022	24.06.2022	24.06.2022
Practical Examination	28.06.2022 To 30.06.2022	28.06.2022 To 29.06.2022	---	28.06.2022 To 30.06.2022	---	28.06.2022 To 30.06.2022
Theory Examination	01.07.2022 To 02.07.2022	01.07.2022 To 02.07.2022	01.07.2022 To 02.07.2022	01.07.2022 To 02.07.2022	01.07.2022 To 02.07.2022	01.07.2022 To 02.07.2022
Holiday	27.06.2022 To 28.06.2022	---	28.06.2022 To 29.06.2022	27.06.2022 To 28.06.2022	27.06.2022 To 28.06.2022	---
Commencement of next OCA Semester	28.06.2022	28.06.2022	28.06.2022	28.06.2022	28.06.2022	28.06.2022

Please Note:

- The academic sessions for the 2nd semester should commence from the dates mentioned above.
- The Institute needs to function for six days a week with additional hours (Saturday is a full working day). If required college can also plan to have extra classes on Sunday to complete the requisite hours of teaching and learning of courses as per the scheme.
- Students of MCA students may utilize the duration that available between matriculation and 2nd semester commencement date for completion of Industry Certificate program/activity to improve their skill.
- The faculty/staff shall be available to undertake any work assigned by the university.

- Notifications regarding the Calendar of Events relating to the conduct of University Examinations will be issued by the Registrar (Evaluation) from time to time.
- Academic Calendar may be modified based on guidelines/directives issued in the future by MHRD/UGC/AICTE/State Government.
- Academic Calendar is also applicable for Autonomous Colleges. In case any changes are to be effected by Autonomous Colleges in the academic terms and examination schedule, they should do so with the approval of the University.
- The college has to conduct offline classes to cover 80% of the syllabus of the courses; however, 20% of the syllabus can be covered in virtual (Online) mode. Attendance of the students for offline and online classes is mandatory and records should be maintained and submitted to the university whenever required.

The Principals of Affiliated, Constituent and Autonomous Engineering Colleges are hereby informed to bring the academic calendar to the notice of all concerned.

M,
REGISTRAR

To,

1. The Principals of all affiliated/constituent/Autonomous Engineering Colleges under the control of VTU Belagavi.
2. The Chairperson, Department of Mechanical Engineering, Civil Engineering, Computer Science and Engineering and Business Studies of the University.

Copy to

1. To the Deputy Vice-Chancellor through the secretary to VC, VTU Belagavi for information.
2. The Registrar (Evaluation), VTU Belagavi for information.
3. The Regional Directors (R/O) of all the regional offices of VTU for circulation.
4. The Director I/c, IT/MSU, VTU Belagavi for information and to make arrangements to upload Academic Calendar on the VTU web portal.
5. The Director of Physical Education, VTU Belagavi for information.
6. PS to Registrar VTU Belagavi.
7. All the concerned Special Officer/s and Librarian/s of the academic sectors, VTU Belagavi.


REGISTRAR



ವಿಶ್ವವಿದ್ಯಾರಣ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಶ್ವವಿದ್ಯಾಲಯ, ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಅಧೀನದಲ್ಲಿ, ಕರ್ನಾಟಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಕರ್ನಾಟಕ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

(State University of Government of Karnataka Established as per the VTU Act, 1984)

"ಜ್ಞಾನ-ಸಂಪನ್ಮೂಲ" ಬೆಂಗಳೂರು-560076, ಕರ್ನಾಟಕ, ಇಂಡಿಯಾ

Prof. Dr. B. E. Rangaswamy, as a
REGISTRAR(I/C)

Phone: (0831) 2498100
Fax : (0831) 2498467

REF: VTUBGN/ACA/2022-23/ 47806

DATE: = 9 NOV 2022

NOTIFICATION

Subject: Academic Calendar of 3rd semesters of
M.Tech./MBA/MCA/M.Plan/M.Arch. programs of University regarding.
Reference: Hon'ble Vice-Chancellor's approval dated: 07.11.2022

The academic calendar concerned to 3rd semesters
of M.Tech./MBA/MCA/M.Arch./M.Plan. programs of University for academic year-2022-
23 are hereby notified as mentioned in the attached sheet.

The Principals of Affiliated, Constituent and Autonomous Engineering Colleges are
hereby informed to bring the academic calendar to the notice of all concerned.
Each As mentioned

Sd/-
REGISTRAR

To,

1. The Principals of all affiliated/constituent/Autonomous Engineering Colleges under the
aegis of VTU Belagavi.
2. The chairperson, Department of Mechanical Engineering/Civil Engineering/Computer
Systems and Engineering and Business Studies of the University.

Copy to

1. To the Hon'ble Vice-Chancellor through the secretary to PC, VTU Belagavi for information
2. The Registrar (Education), VTU Belagavi for information
3. The Regional Directors (A/C) of all the regional offices of VTU for circulation.
4. The Director (A. I.E.E.M), VTU Belagavi for information and to make all arrangements in regard
Academic Calendar on the VTU web portal.
5. The Director of Physical Education, VTU Belagavi for information
6. P.O to Registrar VTU Belagavi
7. All the concerned Special Officers and Clerks/Staff of the academic section, VTU Belagavi

Sd/-
REGISTRAR
11/11/22

Academic Calendar for OOD Semesters of PG Programmes for Year 2022-23(Tentative)

	Semester MBA	Semester M.Tech	Semester M.Arch	Semester M.Plan	Semester MCA	Semester MBA/IT/ITM	II Semester MCA	II Semester M.Tech	II Semester MBA	II Semester M.Arch	II Semester M.Plan					
Commencement of 2022 Semester Not Working Day of OOD Semester	Commencement Dates will be announced after the notification of opening schedule of PGVT-2022-23						01-08-2022	01-11-2022	01-11-2022	01-11-2022	01-11-2022	01-11-2022				
Final / Viva Examination							18-02-2023	18-02-2023	18-02-2023	18-02-2023	18-02-2023	18-02-2023	18-02-2023	18-02-2023	18-02-2023	18-02-2023
Final Examination							25-02-2023	25-02-2023	25-02-2023	25-02-2023	25-02-2023	25-02-2023	25-02-2023	25-02-2023	25-02-2023	25-02-2023
Results							27-02-2023	27-02-2023	27-02-2023	27-02-2023	27-02-2023	27-02-2023	27-02-2023	27-02-2023	27-02-2023	27-02-2023
Project Work, Professional Training, Internship Start							18-04-2023	18-04-2023	18-04-2023	18-04-2023	18-04-2023	18-04-2023	18-04-2023	18-04-2023	18-04-2023	18-04-2023
Internship Final Exam/Project and Submission of the Report to University Commencement of 2023 Semester							11-06-2023	11-06-2023	11-06-2023	11-06-2023	11-06-2023	11-06-2023	11-06-2023	11-06-2023	11-06-2023	11-06-2023

Notes:

1. The academic calendar for OOD semesters is available on the University website.
2. The Institute needs to function for one day a week with administrative staff (Saturday is a full working day). With respect to the Institute, the Institute should have a full-time staff for handling.
3. Faculty should render their additional service (M/L) to assist the students.
4. The Institute need not be available to accept any work assigned by the university.
5. Students regarding the transfer of branch relating to admission of University Examinations will be issued by the Registrar (University) from time to time.
6. Students (Institute) may be notified about any guidelines, instructions issued from time to time by UGC/Ministry of Education Government.
7. Address provided is also applicable for Autonomous Colleges. If any any change occur in address by Autonomous College in the academic year and subsequent schedule they need to notify the university in advance.
8. The college has to conduct office hours to cover 80% of the syllabus of the courses covered. 20% of the syllabus can be covered in extra-curricular (Online) mode dependent upon the nature of the courses. The syllabus and schedule should be submitted and submitted to the university in advance.


REGISTRAR




ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

(ವಿಶ್ವವಿದ್ಯಾಲಯ ನಾಣ್ಯ ಕಾನೂನು ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಅಧಿಕಾರದಲ್ಲಿ ಸ್ಥಾಪಿಸಲಾದ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ)

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

(State University of Government of Karnataka Established as per the VTU Act, 1994)

"Jnanasagar" Belagavi-590018, Karnataka, India



Prof. Dr. R. E. Rangaswamy, Ph.D.
REGISTRAR

Phone: (0831) 2498100
Fax : (0831) 2405467

REF: VTU/BGM/ACA/2022-23/ 504

DATE: 7 APR 2023

NOTIFICATION

- Subject:** Tentative Academic Calendar of IV semesters
MBA/M.Arch/M.Plan/M.Tech./B.Plan/B.Arch programs and III
sem of MBA(IEV) programs of University regarding...
- Reference:** Dean Faculty of Engineering VTU Belagavi approval dated
06.04.2023
Hon'ble Vice-Chancellor's approval dated: 07.04.2023

The tentative academic calendar concerned to IV semesters of B.Arch./B.Plan/ MCA/MBA/M.Tech./M.Arch./M.Plan and III semester of MBA(IEV) programs of University for academic year 2022-23 are hereby notified as mentioned in the attached file

Please Note:

- The academic sessions for the entire program mentioned should commence on the date mentioned
- The Institute needs to function for six days a week with Saturday being half working day. If required, the college can also plan to have extra classes on Saturday afternoons and Sundays full day to complete academic activities within the duration mentioned.
- The faculty/staff shall be available to undertake any work assigned by the university
- Notification regarding the Calendar of Events relating to the conduct of University Examinations will be issued by the Registrar (Evaluation) from time to time.
- Academic Calendar may be modified based on guidelines/directions issued in the future by MHRD/UGC/AICTE/State Government.
- Academic Calendar is also applicable for Autonomous Colleges. If any changes are to be effected by Autonomous Colleges in the academic terms and examination schedule, they could do so with the approval of the University.
- If any clarification/correction, please email to - sbhalbhavi@vtu.ac.in

The Principals of all Engineering Colleges and Directors of Schools of Architecture, under the ambit of University are hereby informed to bring the academic calendar to the notice of all concerned.

Encl: As mentioned above

Sd/-
REGISTRAR

To,

1. The Principals all Engineering Colleges and Directors, Schools of Architecture under the ambit of VTU Belagavi.

Copy to,

1. To the Hon'ble Vice-Chancellor through the secretary to VC, VTU Belagavi for information
2. PS to the Registrar (Evaluation), VTU Belagavi for information.
3. The Director I/c. ITI SMG, VTU Belagavi for information and to make arrangements to upload Academic Calendar on the VTU web portal.
4. Special Officer QPDS Examination section VTU Belagavi
5. Caseworker P. Manjunath Examination section VTU Belagavi
6. The Regional Directors (I/c) of all the regional offices of VTU for circulation
7. The Director of Physical Education, VTU Belagavi for information
8. All the concerned Special Officer/s and Caseworker/s of the academic section, VTU, Belagavi

Ras 07/04/23 RE
REGISTRAR

(Tentative) Academic Calendar of UG-PG programs for the academic year 2022-23

	IV Semester B.Arch.	IV semester B. Plan	III semester MBA(IEV)	IV semester MCA	IV semester M.Tech.	IV Semester MBA	IV Semester M. Arch.	IV Semester M.Plan.
Commencement of Semester	17.04.2023	17.04.2023	17.04.2023	17.04.2023	17.04.2023	17.04.2023	17.04.2023	17.04.2023
Internship /Project Survey	—	—	17.04.2023 To 27.05.2023	—	—	17.04.2023 To 27.05.2023	—	—
Commencement of Classes	17.04.2023	17.04.2023	29.05.2023	17.04.2023	17.04.2023	29.05.2023	17.04.2023	17.04.2023
Last Working day of Semester	31.07.2023	31.07.2023	09.09.2023	31.07.2023	31.07.2023	09.09.2023	31.07.2023	31.07.2023
Practical Examination	01.08.2023 To 05.08.2023	01.08.2023 To 05.08.2023	11.09.2023 To 15.09.2023	01.08.2023 To 05.08.2023	—	—	—	—
Theory Examinations	07.08.2023 To 30.08.2023	07.08.2023 To 30.08.2023	19.09.2023 To 06.10.2023	07.08.2023 To 30.08.2023	02.08.2023 To 22.08.2023 (Old scheme)	11.09.2023 To 07.10.2023	—	—
Report Submission	—	—	—	15.07.2023 To 31.07.2023	01.08.2023 To 15.08.2023	28.08.2023 To 10.09.2023	01.08.2023 To 10.08.2023	01.08.2023 To 10.08.2023
Commencement of next Semester	04.09.2023	04.09.2023	09.10.2023	—	—	—	—	—



ವಿಶ್ವವಿದ್ಯಾರಣ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಶ್ವವಿದ್ಯಾಲಯದ ವಿವರಗಳನ್ನು ಕುರಿತು ಅಧಿಕೃತ ಮಾಹಿತಿಗಾಗಿ ದಯವಿಟ್ಟು ನೋಡಿ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

(State University of Government of Karnataka Constituted as per the YTU Act, 1984)

"ಜ್ಞಾನೋತ್ಸವ" ಬೆಂಗಳೂರು-560015, ಕರ್ನಾಟಕ, ಇಂಡಿಯಾ

Prof. Dr. B. E. Rangaswamy, *in. ch.*

REGISTRAR

Phone : (0831) 2490100

Fax : (0831) 2485467

REF: YTU/ADM/ACA/2022-23/ 7119

DATE: 2 MAR 2022

NOTIFICATION

- Subject:** Tentative Academic Calendar of II and IV sem BSc (Dist), VI sem B.E./B.Tech, B.Plan, B.Arch- programs of University regarding...
- Reference:** Hon'ble Vice-Chancellor's approval dated: 01.03.2022

The tentative academic calendar concerned to II and IV sem BSc (Dist), VI sem B.E./B.Tech, B.Plan, B.Arch, programs of University for academic year 2022-23 are hereby notified as mentioned in Annexure-I:

The Principals/ Directors of all Engineering Colleges/Schools of Architecture, under the aegis of University are hereby informed to bring the academic calendar to the notice of all concerned.

Sd/

REGISTRAR

To

1. The Principals all Engineering Colleges under the aegis of University
2. The Director of all school of Architecture under the aegis of University
3. The chargeperson/Program coordinator of MBA(BE) program YTU Belagavi

Copy to

1. To the Hon'ble Vice-Chancellor through the secretary to VC, YTU Belagavi for information
2. The Registrar (Executive), YTU Belagavi for information
3. The special officer QPDS section YTU Belagavi
4. The Regional Directors (R/D) of all the regional offices of YTU for circulation
5. The Director I/T, ITSMA, YTU Belagavi for information and to make arrangements to upload Academic Calendar on the YTU web portal
6. The Director of Physical Education, YTU Belagavi for information
7. The Director, Central Placement Cell, YTU Belagavi
8. All the concerned Special Officer (s) and General Officer (s) of the academic section, YTU Belagavi



REGISTRAR



Annexure-I

Tentative Academic Calendar for academic year 2022-23

	II sem B.Sc. (Hon)	IV sem B.Sc. (Hon)	VI sem B.E./B.Tech	V sem B.Pharm	#VI sem B.Arch.
Commencement of semester Classes	04.09.2022 ✓	30.09.2022 ✓	20.09.2022 ✓	20.09.2022 ✓	20.09.2022 ✓
Last Working day of the Semester	30.06.2023 ✓	30.07.2023 ✓	30.07.2023 ✓	30.07.2023 ✓	30.07.2023 ✓
Practical Examination/Viva Examination	05.07.2023	11.07.2023	11.07.2023	11.07.2023	11.07.2023
	To 07.07.2023 ✓	To 15.07.2023 ✓	To 21.07.2023 ✓	To 21.07.2023 ✓	To 21.07.2023 ✓
Theory Examinations	30.07.2023	17.07.2023	24.07.2023	24.07.2023	24.07.2023
	To 25.07.2023 ✓	To 31.07.2023 ✓	To 13.08.2023 ✓	To 12.08.2023 ✓	To 12.08.2023 ✓
Internship	—	—	04 weeks 03.08.2023	06 weeks 16.08.2023	—
Commencement of next Semester	01.09.2023 ✓	01.09.2023 ✓	11.09.2023 ✓	19.09.2023 ✓	16.09.2023 ✓

* Academic calendar strictly notified via registrar@pau.ac.in 21/08/22, dated 11.08.2022

Please Note:

- The academic sessions should commence on the date mentioned above.
- If required, the college can also plan to have extra classes on Saturday(1st and 3rd) and Sundays full day to complete academic activities within the duration mentioned.
- The faculty/staff shall be available to undertake any work assigned by the university.
- Notification regarding the Calendar of Events relating to the conduct of University Examinations will be issued by the Registrar (Evaluation) from time to time.
- Academic Calendar may be modified based on guidelines/directions issued in the future by MHRD/UGC/AICTE/State Government.
- Academic Calendar is also applicable for Autonomous Colleges. If any changes are to be effected by Autonomous Colleges in the academic terms and examination schedule, they could do so with the approval of the University.
- If any clarification/correction, please email to - skhain@pau.ac.in

REGISTRAR





ವಿಶ್ವವಿದ್ಯಾರಣ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ಶಿಕ್ಷಣ ಮತ್ತು ತಂತ್ರಜ್ಞಾನಗಳ ಸಂಶೋಧನೆ ಮತ್ತು ಅಭಿವೃದ್ಧಿಗಾಗಿ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

State University of Government of Karnataka Established as per the VTU Act, 1984

"Jnanachanganu" Belagavi-590108, Karnataka, India

Prof. Dr. B. E. Rangaswamy, Ph.D.
REGISTRAR

Phone: (0831) 2498100
Fax : (0831) 2405467

REF:VTU/BOB/ACA/2022-23/ 6566

DATE: 3 FEB 2023

NOTIFICATION

- Subject:** Tentative Academic Calendar of VIII semesters of B.E./B.Tech.,
B.Arch. & B. Plan programs of University regarding—
Reference: Hon'ble Vice-Chancellor's approval dated: 01.02.2023

The tentative academic calendar concerned to VIII semesters of B.E./B.Tech.,
B. Arch, and B. Plan programs of University for academic year 2022-23 are hereby
notified as mentioned below:

[Tentative] Academic Calendar for semesters of all VIII Semesters DG Programs [Feb 2023]			
	B.E./B.Tech	B.Arch	B. Plan
Commencement of 8 th semester Classes	11.02.2023	13.02.2023	13.02.2023
Last Working day of 8 th Semester	13.05.2023	15.05.2023	13.05.2023
Practical Examination/Viva Examination	05.06.2023 To 13.06.2023	16.05.2023 To 26.05.2023	---
	16.05.2023 To 01.06.2023	29.05.2023 To 10.06.2023	18.05.2023 To 01.06.2023
Commencement of next Semester	---	---	---

Please Note:

- The academic session for VIII semester should commence on the date mentioned above.
- The Institute needs to function for six days a week with Saturday being half working day. If required, the college can also plan to have extra classes on Saturday afternoons and holidays full day to complete academic activities within the duration mentioned. This will facilitate the final year students for appearing competitive examinations for their career and also helps in making education abroad.

- The faculty/staff shall be available to undertake any work assigned by the university.
- Notifications regarding the Calendar of Events relating to the conduct of University Examinations will be issued by the Registrar (Evaluation) from time to time.
- Academic Calendar may be modified based on guidelines/directions issued in the future by MHRD/UGC/AICTE/state Government.
- Academic Calendar is also applicable for Autonomous Colleges. If any changes are to be effected by Autonomous Colleges in the academic terms and examination schedule, they could do so with the approval of the University.
- If any clarification/correction, please email to - shibetam@vtu.ac.in

The Principals/ Directors of Schools of Architecture, under the aegis of University are hereby informed to bring the academic calendar to the notice of all concerned.

sd/-

REGISTRAR

To,

1. The Principals / Directors, Schools of Architecture under the aegis of VTU Belagavi.

Copy to,

1. To the Non-Job Vice-Chancellor through the secretary to VC, VTU Belagavi for information
2. The Registrar (Evaluation), VTU Belagavi for information.
3. The Regional Directors (I/A) of all the regional offices of VTU for circulation.
4. The Director (A, IT) SMO, VTU Belagavi for information and to make arrangements to upload Academic Calendar on the VTU web portal.
5. The Director of Physical Education, VTU Belagavi for information.
6. All the concerned Special Officer/s and Clerks/other/s of the academic section, VTU, Belagavi.


REGISTRAR




ವಿಶ್ವವರಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಶ್ವವಿದ್ಯಾಲಯದ ಅಧೀನದಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಅಧಿಕಾರವು ಇರುವ ವಿಶ್ವವಿದ್ಯಾಲಯ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

(State University of Government of Karnataka Established as per the VTU Act, 1988)

"Banaswara" Bellary-580116, Karnataka, India

Prof. Dr. B. K. Rangaswamy, P.E.
REGISTRAR

Phone: (0831) 2490100

Fax : (0831) 2493467

REF:VTU/HQM/ACA/2022-23/ 6537

DATE:
- 2 FEB 2023

NOTIFICATION

- Subject:** Tentative Academic Calendar of 1st semester of all Post Graduate programs of University regarding .
- Reference:** Dean Faculty of Engineering, VTU Bellary approval dated: 01.02.2023
Hon'ble Vice-Chancellor's approval dated: 02.02.2023

The tentative academic calendar concerned to 1st semester of all PG programs of University for academic year 2022-23 are hereby notified as mentioned below:

(Tentative) Academic Calendar for 1 st semester of all PG Programs (Feb 2023)					
	MBA	M.Tech.,	M.Arch	M.Plan	MCA
Commencement of 1 st semester Classes	13.02.2023	13.02.2023	13.02.2023	13.02.2023	13.02.2023
Last Working day of 1 st Semester	31.05.2023	31.05.2023	31.05.2023	31.05.2023	31.05.2023
Practical Examination/Viva Examination	---	01.06.2023 To 06.06.2023	01.06.2023 To 06.06.2023	01.06.2023 To 06.06.2023	01.06.2023 To 06.06.2023
Theory Examinations	07.06.2023 To 21.06.2023	07.06.2023 To 21.06.2023	07.06.2023 To 21.06.2023	07.06.2023 To 21.06.2023	07.06.2023 To 21.06.2023
Commencement of next Semester	26.06.2023	26.06.2023	26.06.2023	26.06.2023	26.06.2023

Please Note:

- The academic sessions for 1st semester of all PG program should commence on the date mentioned above.
- The Institute needs to function for six days a week with Saturday being half working day. If required, the college can also plan to have extra classes on

Saturday afternoon and holidays full day to complete academic activities within the duration mentioned.

- The faculty/staff shall be available to undertake any work assigned by the university.
- Notification regarding the Calendar of Events relating to the conduct of University Examinations will be issued by the Registrar (Evaluation) from time to time.
- Academic Calendar may be modified based on guidelines/directions issued in the future by MHRD/UGC/AICTE/State Government.
- Academic Calendar is also applicable for Autonomous Colleges. If any changes are to be effected by Autonomous Colleges in the academic term and examination schedule, they could do so with the approval of the University.
- If any clarification/correction, please email to - shbctms@yahoo.com

The Principals/ Directors of Schools of Architecture, under the aegis of University are hereby informed to bring the academic calendar to the notice of all concerned.

Sd/-

REGISTRAR

To,

1. The Principals / Directors, Schools of Architecture under the aegis of VTU Belagavi.

Copy to

1. To the Hon'ble Vice-Chancellor through the secretary to VC, VTU Belagavi for information.
2. PS to the Registrar (Evaluation), VTU Belagavi for information.
3. Special Officer QPDS Examination section VTU Belagavi
4. Caseworker P. Manjunath Examination section VTU Belagavi
5. The Regional Directors (1/1) of all the regional offices of VTU for circulation.
6. The Director I/s. ITI/SMU, VTU Belagavi for information and to make arrangements to upload Academic Calendar on the VTU web portal.
7. The Director of Physical Education, VTU Belagavi for information
8. All the concerned Special Officer/s and Caseworker /s of the academic section, VTU Belagavi


REGISTRAR
4



THE OXFORD COLLEGE OF ENGINEERING
DEPARTMENT OF BIOTECHNOLOGY

Organized by the Govt. of Karnataka, Affiliated to Mysore University, Mysore
Approved by AICTE, New Delhi, Accredited by NBA, New Delhi, and recognized by UGC under Section 2(F)

Saraswathi, Bengal Road, Bangalore - 560008.

☎ 080 22424242, ☎ 080 - 22424242, ✉ oxfordcollegeofengineering@gmail.com, www.oxfordce.org

TOCE/IT/DAC/2022-23/02

25/01/2023

DAC MEETING CIRCULAR

This is to bring to the notice that Department Advisory Committee (DAC) meeting has been scheduled for the 1st of February, 2023. The meeting will take place from 11:00 AM to 12:00 PM at Biotechnology Department ICIE: Cabin.

Agenda of the Meeting:

1. Review of Previous DAC meeting
2. Department Plan of action for Academic year 2022-23 Even semester
3. To discuss Pedagogical Initiatives and Student Centric methods
4. Review of course file/Timetable
5. Implementation of OBE matrix
6. Action Plan for slow and fast learners
7. Feed back analysis and Action Plan
8. Finalizing the domain and Subareas for Internship and Project.
9. Promoting Research Publications among Faculties and Students.
10. Organizing Value added courses and workshops
11. Any other with the Permission of Chair

MANJUNATH N

Professor & Head

Department of Biotechnology
The Oxford College of Engineering
Bangalore-560 008.

Chairperson

PRINCIPAL

The Oxford College of Engineering
Saraswathi, Bengal Road
Bangalore - 560 008



THE OXFORD COLLEGE OF ENGINEERING
DEPARTMENT OF BIOTECHNOLOGY

Recognized by the Govt. of Karnataka, Affiliated to JSS University, Mysore, Bangalore.
Approved by AICTE, New Delhi, Accredited by ISO 9001, ISO 14001 and ISO 27001 under section 80G
Bannur Road, Bengaluru - 560075
Ph: 080-26744444, Fax: 080-26744445, Email: info@oxfordce.edu, www.oxfordce.edu

1/12/2023

MINUTES OF MEETING OF DEPARTMENT ADVISORY COMMITTEE (DAC)

DAC meeting was conducted on 1/12/2023 at HOD's chamber from 11:00 Am to 12:00 Pm to discuss the following points and the Committee was in full agreement

1. Department Plan for the Academic Year 2023-24 From Semester

- Reviewed and approved the proposed plan for the upcoming academic semester with respect to academic calendar and Timetable
- Discussed key academic activities, including Course File preparation, Pedagogical Initiatives such as using Digital board, Inclusion of AI based tools, Flip flop classes, NPTEL, MOOCs, Videos in Teaching learning Process, class schedules, assessments etc.

2. Explored methods to enhance teaching's student-centric nature such as field visits, industrial visits, outreach programmes, Mini Projects and Fostering active participation and engagement in the learning process.

3. Discussed strategies for both slow and advanced learners, aiming to offer appropriate support and challenges based on individual needs such as condensation of remedial classes, Practice sessions for analytical skill improvement for slow learners and having extra study material such as Research articles, Journal and Industry VIDEOS for current trends in the subject domain for advanced learners.

4. Analyzed feedback data from students and faculty to prepare areas of improvement, commendations, and actionable steps to enhance the overall educational experience.

5. Reviewed the status of Outcome-Based Education (OBE) matrix implementation such CO-PO-PSO statements, ensuring alignment with accreditation standards and continuous improvement.

6. Finalizing the domain and Industries for Internship and Project

- Explored potential industry partnerships and domains for student internships and projects.

- Discussed criteria for selecting industries to create alignment with academic goals.
- Dr. Copinath along with The Committee members suggested the below companies for internship and Projects -Aryana Biomedicals Pvt.Ltd, R.V.College of Engineering, Starline Pharma Pvt.Ltd, Serai Biotech Research Laboratory, Central Silk Technological Research Institute, National Institute of Mental Health and Neuro Sciences (NIMHANS)

7. Promoting Research Publications among Faculty and Students

- Dr.V.Sundaraman emphasized the importance of research publications for both faculty and students.
- Discussed strategies to encourage and support faculty in publishing their research.
- Explored opportunities for student involvement in research and publication activities.

8. Organizing Value added courses and workshops to aim at enriching the curriculum by addressing identified gaps and providing content that goes beyond foundational knowledge.

- Acknowledged the significance of conducting value-added courses and workshops and the topic is been identified for value added course was Python Programming using Django.
- Discussed potential topics for courses and workshops based on identified knowledge gaps and to promote Patenting and to give awareness about IPR more prevalence had been given for conducting workshops and awareness programme related to IPR.

Member Secretary presented department performance in the previous semester (2022-23 Odd Semester) with respect to the DAC meeting conducted on 8th September 2022

1. Student performance in semester end examination along with result analysis.

2. Department activity.

3. Faculty performance

4. Curricular gap identified and addressed in the academic year


5. Research activity

The Committee was in full quorum. After Reviewing, the committee approved the Department Academic Plan, Calendar, timetable and plan of action for academic year 2022-23 Even

Semester.

Sl. No.	Name	Designation	Position in the Committee
1	Dr.N.Katanna	Principal, The Oxford College of Engineering, Bengaluru	Chairperson
2	Dr. H K. Mangamathu	Professor & Head Department of Biotechnology, The Oxford College of Engg., Bengaluru	Member Secretary
3	Dr. V Sankaranan	Principal Scientist, CSIR-CIMAP, Bengaluru (Industry Expert)	Member
4	Dr.Gopinath SM	Professor & Chairman, Dept of PG studies and research in Biotechnology, Davangere University (Academic Expert)	Member
5	Mr.Gaurav Mishra	Managing Associate & Patent Attorney, Berson IP solutions, Bengaluru(Ahmed)	Member
6	Dr. Manja Devi	Professor & Head, IQAC-Member, Department of Electronics and Communication Engineering, The Oxford College of Engineering, Bengaluru	Member
7	Dr.K.Valarmathy	Associate Professor, Department of Biotechnology, The Oxford College of Engineering, Bengaluru	Member
8	Mrs.Sajada R.	Software Engineer,Kroha and Rodha,Bengaluru (Parent)	Invited
9	Rakshith B.M(1CX2007018)	5 th Semester Student	Invited


Member Secretary


Chairperson
PRINCIPAL
 The Oxford College of Engineering
 Bengaluru

Copy to:

- 1.Principal's Office
- 2.Chairman's Desk

E-Copy to:

- 1.Dr. V.Sankaranan
- 2.Dr.Gopinath S.M
- 3.Mr.Gaurav Mishra
- 4. Dr.Manja Devi
- 5.Dr.K.Valarmathy
- 6 Mrs.Sajada R.



THE OXFORD COLLEGE OF ENGINEERING
DEPARTMENT OF BIOTECHNOLOGY

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Approved by A.C.T.E., New Delhi, Accredited by UAC & UBI, New Delhi and Recognized by ISO under section 9001
Bommanahalli, Hosur Road, Bangalore - 560088.
08 882 622624/08 882 622625 / 08 882 622626 and 08 882 622627, 08 882 622628

RESOLUTIONS TAKEN DURING DAC MEETING

Following are the list of Action Plan proposed by the DAC committee during the DAC Committee meeting conducted on 1/5/23 to implement in the Academic year 2022-23 Even Semester

1. Implementing Pedagogical Innovations in teaching and learning Process--Digital brand, Inclusion of AI based tools , Flip flop classes, NPTEL,MOOCs videos
2. Implementation of Student Centric methods- field visits, Industrial visits, outreach programmes, Mini Projects
3. Remedial Classes for Slow learners and training for fast learners
4. Feedback analysis
5. Implementation of OISE: CO-PO-PSO assessments
6. Domain for Internship and Projects
7. Organizing Value added Course on Python Programming and Workshop on Intellectual Property Rights

Member Secretary
Dr. B.K. MANJUNATHA
Professor & Head
Department of Biotechnology
Oxford College of Engineering
Bommanahalli-560 088.

Chairperson
PRINCIPAL
The Oxford College of Engineering
Bommanahalli, Hosur Road
Bommanahalli-560 088



**THE OXFORD COLLEGE OF ENGINEERING
DEPARTMENT OF BIOTECHNOLOGY**

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Bommarahalli, Hosur Road, Bengaluru - 560088.
E-mail: admission@oxce.edu, Fax: 9845-3878000, 9845387800, 9845387800, 9845387800

ACTION PLAN FOR ACADEMIC YEAR 2022-23 EVEN SEMESTER

S.NO	MOM NO	Resolutions /Action Planned	Status
1	1	Implementing Pedagogical initiatives in teaching and learning Process	As instructed faculties implemented the discussed pedagogical methods in learning teaching process
2	2	Implementation of Student Centric methods	Implemented student centric methods such as Industrial visits and mini projects
3	3	Remedial Classes for Slow learners and training for fast learners	Remedial classes were conducted and training were given. Improvement from remedial to Normal is measured
4	4	Feedback analysis	Feedback back was collected from all stakeholders and analyzed on the scale of 1-5 and submitted to IQAC committee
5	5	Implementation of OBE	The OBE matrix was implemented and followed as per NBA guidelines
6	6	Outreach for Internship and Projects	Outreach and Industries and Projects were identified and implemented to students
7	7	Organizing Value added Courses and Workshops	Value added Courses on Python Programming and Workshop on IPR had been organized


Member Secretary
Mr. B.K MANJUNATHA
 Professor & Head
 Department of Biotechnology
 The Oxford College of Engineering
 Bengaluru-560 088.


Chairperson
PRINCIPAL
 The Oxford College of Engineering
 Bommarahalli, Hosur Road
 Bengaluru-560 029



Children's Education Society (C) Ltd.
THE OXFORD COLLEGE OF ENGINEERING
Hosur Road, Bannerghatta, Bengaluru-560 088
Website: www.oxford.edu.in

Affiliated to VTU, New Delhi, Accredited by AICTE, ISO 9001:2015 & Affiliated to VTU, Bangalore

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
TOCE/CSE/DAC/2022-23/01

Circular

Date: 02-09-2022

It is to inform that DAC/Member meeting is arranged at CSE, HOJ/Room on 05-09-2022 at 11:00AM. All the members are requested to attend the meeting and make it a grand success.

Agenda

1. Academic Calendar
2. Master timetable
3. Course File/Pedagogical Methods
4. Value added courses
5. Student Centre Methods
6. Implementation of RMC
7. Action Plan for First, Second and Advanced Courses
8. Feedbacks on courses/Autonomous program
9. Any other item with permission of chair.

Composition

Sl.No	Name	Designation	Position in the Committee
1	Dr. V. Kumar	Principal	Chairperson
2	Dr. R. D. A. Naidu	Head of the Department	Member Secretary
3	Dr. Maya Devi	RMC Coordinator	Member
4	Mr. Anand K. S. - Non-Teacher	Industry Expert / Employer	Member
5	Dr. Sagar (HOD-IT)	Academic Expert	Member
6	Mrs. Sujatha	Alumni	Member
7	Honourable Parents	Parents	Guest
8	Dr. Saravara Kumar	Senior Professor	Member
9	CHENNAIPASCHA/ HOD/CSE/2022	Student	Guest


Member Secretary


Chairperson

PRINCIPAL
The Oxford College of Engineering,
Bannerghatta, Hosur Road
Bengaluru-560 088

MINUTES

Minutes of BAC members meeting held on DATE: 05.09.2020 @ 10PM @ CSI. BAC meeting is as follows:

1. Academic Calendar:

- The BAC has to get the data for the academic calendar of BAC and suggest VTU guidelines.
- The respective coordinators administratively send KOs to the department as and when they were informed by the respective academic activities & date.

2. Master Time Table:

The BACs created a subject expertise matrix in accordance with the 2018, 2021 and 2022 schemes, and informed the faculty to follow the 2018 scheme for the first, first year, 2021 scheme for the second year and 2022 scheme for the first year of the program. The BAC also shared the subject expertise matrix to the BAC members.

It is noted on the course, the Time Table is prepared based on the nature and kind of studies in the training of the

Department Time Table and Master Time Table of the department is shared to the principal's office through HOD.

3. Course File/Pedagogical Methods:

Updating in the ICT tools was implemented and new pedagogical methods were introduced in the teaching & learning process was also discussed. To enhance student's quality of learning, the course file should contain delivery content and pedagogical methods.

course file should contain the following:

• syllabus

The course file / material should contain a copy of university syllabus, students list, attendance register, teacher diary along with lesson plans with pedagogical initiatives, notes and reference books, previous department papers and university question papers along with scheme evaluation and assignment work, assignments etc. The BACs also informed each faculty that they must adhere to VTU norms when conducting internal assessment while preparing CI question papers and scheme.

4. Value Added Courses: Content they include

Value added courses and content beyond the syllabus to be followed in the departments to fill the gaps and improve the skill set of students.

5. Student Centre Methods

All undergraduate students are compulsorily made to undergo an institutional and industrial internship as per their study schemes.

Regular industry visits and field visits are planned for students.

Students also learn through their involvement in the field projects, workshops, Trainings, simulations, prototyping, visiting exhibitions etc.

MEMBERS PRESENT:

Sl No	NAME	Designation	Position in the Committee
1	Dr. N. Karan	Principal	Chairman
2	Dr. N. C. A. Naidu	Head of the Department	Member Secretary
3	Dr. George Gudi	UGAC Coordinator	Member
4	Ms. Srilatha A.S. Saravakula	Industry Expert / Engineer	Member
5	Dr. Suresh N. C. H. H. H.	Academic Expert	Member
6	Ms. Sujatha	Alumni	Member
7	Dr. Subramanya Prasad	Faculty	Member
8	Dr. Subramanya Kumar	Senior Professor	Member
9	CHETAN KUMAR SANKAR (2021-2023)	Student	Member

Noted
Member Secretary

Copies to:
1. Principal's Office
2. Chairman's desk

- Copy to:
- Dr. Manjunath
 - Dr. Suresh A. S. Saravakula
 - Dr. Suresh N. C. H. H. H.
 - Sujatha
 - Dr. Subramanya Prasad
 - Dr. J. Saravakula Prasad
 - Dr. Subramanya Prasad

[Signature]
Chairperson
MEMBERIAL
The Odisha College of Engineering
Baramposh, Bhubaneswar
(Telephone: 0674 253)

Action Taken for 2023-2024

Sl No	MOM no	Action Plan	Notes
1	3	Implementing pedagogical initiatives in teaching and learning process	As mentioned the faculty implemented the pedagogical methods in scoring teaching process.
2	3	Faculty identifying and individual skills were present	All the planned individual skills and workshops are completed.
3	4	Implementation of OPE	The OPE plans are implemented and followed.
4	7	Remedial classes for slow learners and technical training for advanced learners	Remedial classes were conducted and technical training program was given.
5	8	Feedback Analysis	Feedback was collected from all stakeholders and analysed on the basis of 7-

Principal
 Member Secretary

Champrasad

Champrasad
 PRINCIPAL
 The Oxford College of Engineering
 Hemmisenahalli, Mysore Road
 Bangalore-560 088



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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
TOPIC/CSE/ DAC/2022-23-02

Circular

Date: 1-03-2022

It is informed that DAC members meeting is arranged at 09:00 AM on 03-03-2022 at 09:00 AM. All the members are requested to attend the meeting and vote in a good manner.

Agenda

1. Academic Calendar
2. Merit certificate
3. Current In Progress Methods
4. Add Scientist Overall Discussion
5. Value added courses
6. Implementation of OBE
7. Action Plan and Annual approved syllabus all courses
8. Feedback/Quality issues/Recommendation
9. Any other item with permission of chair

Resolution is:

S/NO	NAME	Designation	Position in the Committee
1	Dr. M. Ganesh	Principal	Chairperson
2	Dr. B. P. A. Naidu	Head of the Department	Member Secretary
3	Dr. Madhu Desh	BOAC Coordinator	Member
4	Ms. Anurupa A. B. Reddy	Industry Expert/ Employee	Member
5	Dr. K. S. H. H. H. H.	Academic Expert	Member
6	Ms. R. R. R.	Alumni	Member
7	Representative Parents	Parents	Member
8	Dr. R. R. R. R.	Faculty (Academic)	Member
9	Dr. R. R. R. R. R.	Students	Member

(Signature)
 Member Secretary

(Signature)
 Chairperson

REGIONAL
 The College of Engineering
 Barambachi, Pune-411 004
 Maharashtra, India

MINUTES

Minutes of UAC meeting meeting held on (04/11/2023-03/2023) at 2:00PM at CSE 11000 room on 04/11/2023.

1. Attendance/absider:

- Present: [List of names]
- Absent: [List of names]

2. Minutes from Faculty:

The minutes stated a subject speaker series is scheduled with the 2023-2024 and 2024-2025 academic and personal skills faculty in fall for 2023-2024 academic year. The series will focus on the student job skills 2022-2023 series for the "Career" effort program. The series will be held on [Date/Time].

The minutes also stated that the [Department] will be responsible for the [Project Name]. The [Department] will be responsible for the [Project Name]. The [Department] will be responsible for the [Project Name].

3. 2023-2024 Career/Benefit Discussion:

Faculty in the department was asked about the percentage with respect to their subject level and support to maintain such from 2023.

4. Career/Benefit/Project/Work:

Faculty in the department was asked about the percentage with respect to their subject level and support to maintain such from 2023. The series will focus on the student job skills 2022-2023 series for the "Career" effort program. The series will be held on [Date/Time].

The series will focus on the student job skills 2022-2023 series for the "Career" effort program. The series will be held on [Date/Time]. The series will focus on the student job skills 2022-2023 series for the "Career" effort program. The series will be held on [Date/Time].

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5. Action/Subject/Committee/Work/Task:

Faculty in the department was asked about the percentage with respect to their subject level and support to maintain such from 2023. The series will focus on the student job skills 2022-2023 series for the "Career" effort program. The series will be held on [Date/Time].

6. Faculty/Student/Work/Task/Project:

Faculty in the department was asked about the percentage with respect to their subject level and support to maintain such from 2023. The series will focus on the student job skills 2022-2023 series for the "Career" effort program. The series will be held on [Date/Time].

- [List of names]
- [List of names]
- [List of names]

11. Parents
12. Alumni

Faculty members are encouraged to provide constructive feedback to students and staff members. Faculty members are encouraged to provide constructive feedback to students and staff members.

5. Implementation of the Plan

1.1.1.1

The faculty members are encouraged to provide constructive feedback to students and staff members. The faculty members are encouraged to provide constructive feedback to students and staff members. The faculty members are encouraged to provide constructive feedback to students and staff members. The faculty members are encouraged to provide constructive feedback to students and staff members.

The faculty members are encouraged to provide constructive feedback to students and staff members. The faculty members are encouraged to provide constructive feedback to students and staff members. The faculty members are encouraged to provide constructive feedback to students and staff members.

6. Action/Improvement/Innovation/Initiative

The faculty members are encouraged to provide constructive feedback to students and staff members. The faculty members are encouraged to provide constructive feedback to students and staff members. The faculty members are encouraged to provide constructive feedback to students and staff members.

Observation

1. Plans should be greater than 90%
2. Some pedagogical initiatives are to be implemented
3. Value added courses are planned
4. Initiatives are made mandatory
5. Implementation of OER
6. Remedial classes
7. Feedback initiative

MEMBERS PRESENT:

Sl. No.	Name	Designation	Remarks
1	Dr. M. Ramesh	Principal	Present
2	Dr. B. C. R. N. Naidu	Head of the Department	Present
3	Dr. M. R. R. R. R.	QOM Coordinator	Present
4	Ms. J. J. J. J. J.	Faculty In-charge / Registrar	Present
5	Dr. R. R. R. R. R.	Assistant Professor	Present
6	Mr. R. R. R. R.	Officer	Present
7	Mr. R. R. R. R.	Officer	Present
8	Dr. R. R. R. R. R.	Officer	Present
9	Mr. R. R. R. R. R.	Officer	Present
10	Mr. R. R. R. R. R.	Officer	Present
11	Mr. R. R. R. R. R.	Officer	Present
12	Mr. R. R. R. R. R.	Officer	Present
13	Mr. R. R. R. R. R.	Officer	Present
14	Mr. R. R. R. R. R.	Officer	Present
15	Mr. R. R. R. R. R.	Officer	Present
16	Mr. R. R. R. R. R.	Officer	Present
17	Mr. R. R. R. R. R.	Officer	Present
18	Mr. R. R. R. R. R.	Officer	Present
19	Mr. R. R. R. R. R.	Officer	Present
20	Mr. R. R. R. R. R.	Officer	Present

Chemical
Reaction

1. $2H_2 + O_2 \rightarrow 2H_2O$

2. $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$



Action Taken for 2022-2023(EVEN)

Sl. No.	Action Planned	Status
3	Pass percentage should be greater than 90%	Results achieved and faculty and transported to school every year percentage.
4	New pedagogical initiatives are to be implemented.	Pedagogical initiatives were implemented in teaching learning process.
5	Value added courses are planned.	As per the plan, value added courses were conducted.
6	Internships are made mandatory.	Students have successfully completed their internships.
7	Implementation of CBE.	CBE starts was implemented and followed.
8	Mentorial classes	Mentorial classes were conducted for class teachers.
9	Feedback Analysis	Feedback of curriculum was taken for all the stakeholders and updated.

D. Jayaram
Member Secretary


Chairperson
P.B.H.C.P.M.A.
The Central College of Engineering
Bommarathalli, Huzur Road
Bengaluru-560 068

THE OXFORD COLLEGE OF ENGINEERING
 HENRI ROAD, BOMMANAHALLI, BENGALURU - 56
 Department of Science & Technology

Lesson Plan

Date: 22/03/23

Subject code: BCHE0301
 Subject Title: Applied Chemistry for CBE Branch
 Course / Branch: BE - Artificial Intelligence & Machine Learning Section C8
 Semester: II
 Academic Year: 2022-2023
 Faculty Name: Dr. Shree Hanu

COURSE OBJECTIVE:

- To enable students to acquire knowledge on principles of chemistry for engineering applications
- To develop an intuitive understanding of chemistry by emphasizing the related branches of engineering
- To provide students with a solid foundation in analytical reasoning required to solve societal problems

COURSE OUTCOME:

- Identify the terms and processes involved in scientific and engineering applications
- Explain the structures of chemistry to describe the methods of engineering processes
- Solve for the problems in chemistry that are pertinent in engineering applications
- Apply the basic concepts of chemistry to explain the chemical properties and processes
- Analyze properties and processes associated with chemical substances in multidisciplinary
- situations

Unit	Topic No.	Date	Topic	Text Referred & Page No.	Pedagogy
1	1	24/3/2023	MODULE 1: Sensors and Energy Systems Sensors Introduction to Sensors	T1.R1	Smart Board/PPT
	2	25/3/2023	MODULE 1: Introduction, working, principle and applications of Conductometric sensors	T1.R1	Smart Board/PPT
	3	26/3/2023	Introduction, working, principle and applications of Electrochemical sensors	T1.R1	Smart Board/PPT
	4	26/3/2023	Introduction, working, principle and applications of Optical sensors	T1.R1	Smart Board/PPT
	5	26/3/2023	Introduction, working, principle and	T1.R1	Smart

				Board/PT
		applications of Electrochromic sensors		
	5/6/2021	Sensors for the measurement of dissolved oxygen (DO)	TLR1	Smart Board/PT
	6/6/2021	Electrochemical sensors for the pharmaceuticals	TLR1	Smart Board/PT
	4/6/2021	Electrochemical gas sensors for SO ₂ and NO _x	TLR1	Smart Board/PT
	6/6/2021	Disposable sensors for the detection of neurotransmitters and pesticides.	TLR1	Smart Board/PT
	6/6/2021	Energy systems: Introduction to batteries, construction, working and applications of Lithium ion and Sodium ion batteries.	TLR1	Smart Board/PT
	12/6/2021	Quantum Dot Sensitized Solar Cells(QDSSC): a-Principles, Properties and Applications.		
	13/6/2021	Revision- MOLECULES: Sensors and Energy Systems.	TLR1	Smart Board/PT
II	15/6/2021	Module-2: Materials for Memory and Display Systems: Memory Devices: Introduction, Basic concepts of electronic memory	TLR1	Smart Board/PT
	16/6/2021	Classification of electronic memory	TLR1	Smart Board/PT
	17/6/2021	History of organic/polymer electronic memory devices	TLR1	Smart Board/PT
	18/6/2021	Classification of electronic memory devices	TLR1	Smart Board/PT
	20/6/2021	Types of organic memory devices (organic molecules, polymeric materials, organic inorganic hybrid materials)	TLR1	Smart Board/PT
	21/6/2021	Display Systems: Photoconductive and electroconductive materials.	TLR1	Smart Board/PT
	22/6/2021	Nonmaterials and organic materials used in optoelectronic devices.	TLR1	Smart Board/PT
	23/6/2021	Liquid crystals (LC's) - Introduction, classification, LC-properties and application in Liquid Crystal Displays (LCD's)	TLR1	Smart Board/PT
	24/7/2021	Properties and application of Liquid Crystal Displays (LCD's)	TLR1	Smart Board/PT
	25/7/2021	Properties and application of Quantum Light Emitting Diodes (QLED's): Light emitting	TLR1	Smart Board/PT

			electrochemical cells		
	23	6/7/2023	Revision- Module-2 Materials for Memory and Display Systems	TT,RT	Smart Board/PPT
III	24	7/7/2023	Module-3 Corrosion and Electrode System Corrosion Chemistry: electrochemical theory of corrosion	TT,RT	Smart Board/PPT
	25	14/7/2023	Types of corrosion-Differential metal, Differential aeration corrosion	TT,RT	Smart Board/PPT
	26	15/7/2023	Corrosion control -Galvanization, Anodization and sacrificial anode method	TT,RT	Smart Board/PPT
	27	17/7/2023	Corrosion Penetration Rate (CPR) (Definition and formula) - Introduction and numerical problems	TT,RT	Smart Board/PPT
	28	18/7/2023	Electrode System: Introduction, types of electrodes	TT,RT	Smart Board/PPT
	29	26/7/2023	Ion selective electrode - definition, construction, working and applications of glass electrode	TT,RT	Smart Board/PPT
	30	21/7/2023	Determination of pH using Glass electrode	TT,RT	Smart Board/PPT
	31	24/7/2023	Reference electrode- Introduction, calomel electrode- construction, Working and applications of calomel electrode	TT,RT	Smart Board/PPT
	32	25/7/2023	Concentration cell-Definition, construction and Numerical problems.	TT,RT	Smart Board/PPT
	33	25/7/2023	Analytical Techniques: Introduction, principle and instrumentation of Conductometry: Its application in the estimation of weak acid.	TT,RT	Smart Board/PPT
	34	28/7/2023	Potentiometry: its application in the Estimation of iron.	TT,RT	Smart Board/PPT
	35	1/8/2023	Revision: Corrosion and Electrode System	TT,RT	Smart Board/PPT
	IV	36	7/8/2023	Module-4 Polymer and Green Fuels Polymers-Introduction	TT,RT
37		8/8/2023	Molecular weight-Number average, weight average and numerical problems	TT,RT	Smart Board/PPT
38		9/8/2023	Preparation, properties, and commercial applications of Kevlar.	TT,RT	Smart Board/PPT
39		10/8/2023	Conducting polymers- Synthesis of Polyaniline	TT,RT	Smart Board/PPT
40		11/8/2023	Conducting mechanism of	TT,RT	Smart

		Polymers from and environmental applications	TLR1	Smart Board/PPT
41	12/8/2023	Green Facts: Introduction, construction and working of solar photovoltaic cell	TLR1	Smart Board/PPT
42	14/8/2023	PV cell: advantages and disadvantages	TLR1	Smart Board/PPT
43	17/8/2023	Green Hydrogen: Introduction to properties of hydrogen pertaining to fuel, introduction to electrolysis of water	TLR1	Smart Board/PPT
44	18/8/2023	Generation of energy (green hydrogen) by electrolysis of water and its advantages	TLR1	Smart Board/PPT
45	21/8/2023	Revision- Polymers and Green Facts	TLR1	Smart Board/PPT
46	22/8/2023	Module 1: E-waste Management, E-Waste: Introduction, sources of e-waste	TLR1	Smart Board/PPT
47	24/8/2023	E-waste-Composition, Characteristics, and Need of e-waste management	TLR1	Smart Board/PPT
48	25/8/2023	Toxic materials used in manufacturing electronic and electrical products, health hazards due to exposure to e-waste	TLR1	Smart Board/PPT
49	26/8/2023	Recycling and Recovery: Different approaches of recycling -separation, thermal treatment	TLR1	Smart Board/PPT
50	28/8/2023	Hydrometallurgical extraction, pyro metallurgical methods	TLR1	Smart Board/PPT
51	29/8/2023	Direct recycling of E-waste	TLR1	Smart Board/PPT
52	31/8/2023	Role of stakeholders in the environmental management of e-waste: Who are called stakeholders - a local and global perspective	TLR1	Smart Board/PPT
53	1/9/2023	Role of stakeholders - producers, consumers, recyclers, and statutory bodies	TLR1	Smart Board/PPT
54	8/9/2023	Revision- E-waste Management	TLR1	Smart Board/PPT
55	10/9/2023	Revision & discussion of important Questions Module 1 to 5	TLR1	Smart Board/PPT
56	25/9/2023	Revision & discussion of important Questions Module 1	TLR1	Smart Board/PPT
57	24/9/2023	Revision & discussion of important Questions Module 2	TLR1	Smart Board/PPT

Assignment Topics			Reference
Sl No	Topic		
1	Assignment Module 1, 2, 4		11.01
2	Assignment Module 3, 5		11.01

1st INTERNAL - 1872003 - 1872003

2nd INTERNAL - 1872003 - 1872003

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	Engineering Chemistry, Edited by Dr. Mahesh B and Dr. Ranganathan B	1 st Edition	Saxena Publisher	2022
Reference Books	R1	Engineering Chemistry by P.C. Jain & Monica Jain	10 th Edition	Deepan Patil Publication	2015


Faculty


1000

Professor and Head
Department of Science & Humanities
The Oshin College of Engineering
Bangalore 560024

THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical & Electronics Engineering

Lesson Plan

Date: 5/6/2023

Subject code : 21EE42
Subject Title : Digital System Design
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : IV
Academic Year : 2022-23 (Even)
Faculty Name : Mrs Nisha C Rani

COURSE OBJECTIVE:

- (1) Illustrate simplification of Algebraic equations using Karnaugh Maps and Quine-McClusky Techniques.
- (2) Design combinational logic circuits.
- (3) Design Decoders, Encoders, Digital Multiplexer, Adders, Subtractors and Binary Comparators
- (4) Describe Latches and Flip-flops, Registers and Counters. (5) Analyze Mealy and Moore Models.
- (6) Develop state diagrams, Synchronous Sequential Circuits and to understand the basics of various memories. Develop state diagrams, Synchronous Sequential Circuits and to understand the basics of various Memories

COURSE OUTCOME:

Course outcomes (Course Skill Set): At the end of the course the student will be able to:

- (1) Develop simplified switching equation using Karnaugh Maps and QuineMcClusky techniques.
- (2) Design of Combinational circuits. Design Multiplexer, Encoder, Decoder, Adder, Subtractors and Comparator as digital combinational control circuits.
- (3) Design flip flops, counters, shift registers as sequential control circuits.
- (4) Develop Mealy/Moore Models and state diagrams for the given clocked sequential circuits.
- (5) Explain the functioning of Read only and Read/Write Memories, Programmable ROM, EPROM and Flash memory.
- (6) Realize Boolean expressions, adders and subtractors using gates. and Design and test Ring counter/Johnson counter, Sequence generator and 3 bit counters.

PREREQUISITE(s):

Basics of gates, Boolean algebra

Unit	Topic No.	Date	Topic	Period	Text Referred & Page No	Pedagogy
I	1	5/6/23	Principles of Combinational Logic: Introduction	2	T1,R2	PPT & Smart board
	2	6/6/23	Definition of combinational logic, canonical forms,	2	T1,R2	Chalk & Board
	3	7/6/23	Karnaugh maps-3,4,5 variables	5	T1,R2	Chalk & Board
	4	8/6/23	Numericals, Incompletely specified functions (Don't care terms),	1	T1,R2	Chalk & Board
	5	12/6/23	Simplifying Max term equations	2	T1,R2	Chalk & Board
	6	13/6/23	Quine-McCluskey minimization technique	2	T1,R2	Chalk & Board
	7	14/6/23	Quine-McCluskey using don't care terms, Reduced prime implicants Tables.	5	T1,R2	Chalk & Board
II	8	15/6/23	Analysis and Design of Combinational logic:	1	T1,R2	Chalk & Board
	9	17/6/23	General approach to combinational logic design,	2	T1,R2	Chalk & Board
	10	19/6/23	Adders and subtractors,	2	T1,R2	Chalk & Board
	11	20/6/23	Cascading full adders, Look ahead carry,	2	T1,R2	Chalk & Board
	12	21/6/23	Binary comparators.	5	T1,R2	Chalk & Board
	13	22/6/23	Encoders	1	T1,R2	Chalk & Board
	14	26/6/23	digital multiplexers	2	T1,R2	Chalk & Board
	15	27/6/23	Using multiplexers as Boolean function generators	2	T1,R2	Chalk & Board
	16	28/6/23	Numericals	5	T1,R2	Chalk & Board
	17	1/7/23	Numericals	2	T1,R2	Chalk & Board
	18	3/7/23	Decoders, BCD decoders,	2	T1,R2	Chalk & Board
	19	4/7/23	Decoders, BCD decoders,	2	T1,R2	Chalk & Board
	20	5/7/23	Numericals	5	T1,R2	Chalk & Board
III	21	6/7/23	Flip-Flops: Basic Bistable elements,	1	T2,R2	PPT & Smart board
	22	15/7/23	Latches, Timing considerations	1	T2,R2	PPT & Smart board
	23	17/7/23	The master-slave flip-flops (pulsetriggered flip-flops)	2	T2,R2	PPT & Smart board
	24	18/7/23	SR flip-flops, JK flip-flops	2	T2,R2	PPT & Smart board
	25	19/7/23	Edge triggered flip- flops	5	T2,R2	PPT & Smart board
	26	20/7/23	Characteristic equations.	1	T2,R2	PPT & Smart board
IV	27	24/7/23	Flip-Flops Applications: Introduction	2	T2,R2	PPT & Smart board
	28	25/7/23	Registers	2	T2,R2	PPT & Smart board
	29	26/7/23	Counters based on shift registers	5	T2,R2	PPT & Smart board
	30	27/7/23	binary ripple counters	1	T2,R2	PPT & Smart

						board
	31	31/7/23	synchronous binary counters,	2	T2,R2	PPT & Smart board
	32	1/8/23	Design of a synchronous counter,	2	T2,R2	PPT & Smart board
	33	2/8/23	Design of a synchronous mod-n counter using clocked T, JK, D and SR flip-flops.	5	T2,R2	Chalk & Board
	34	3/8/23	Design of a synchronous mod-n counter using clocked T, JK,FF	1	T2,R2	Chalk & Board
	35	7/8/23	Design of counters exampls	2	T2,R2	Chalk & Board
	36	8/8/23	Design of counters exampls	2	T2,R2	Chalk & Board
	37	9/8/23	Design of counters exampls	5	T2,R2	Chalk & Board
	38	10/8/23	Design of counters exampls	1	T2,R2	Chalk & Board
	39	12/8/23	Sequential Circuit Design:	2	T2,R2	Chalk & Board
V	40	14/8/23	Mealy and Moore models	2	T2,R2	Chalk & Board
	41	21/8/23	State machine notation		T2,R2	Chalk & Board
	42	22/8/23	Synchronous Sequential circuit analysis		T2,R2	Chalk & Board
	43	23/8/23	counter design.		T2,R2	Chalk & Board
	44	24/8/23	Memories: Read only and Read/Write Memories		T2,R2	PPT & Smart board
	45	26/8/23	Programmable ROM		T2,R2	PPT & Smart board
	46	28/8/23	EPROM, Flash memory.		T2,R2	PPT & Smart board
	47	29/8/23	Revision		T2,R2	PPT & Smart board
	48	30/8/23	Revision		T2,R2	PPT & Smart board
	49	31/8/23	Module 1 Revision		T2,R2	PPT & Smart board
	50	4/9/23	Module 2 Revision		T2,R2	PPT & Smart board
	51	5/9/23	Module 3 Revision		T2,R2	PPT & Smart board
	52	6/9/23	Module 4 Revision		T2,R2	PPT & Smart board
	53	7/9/23	Module 5 Revision		T2,R2	PPT & Smart board
	54	9/9/23	Previous Question Paper Discussion		T2,R2	PPT & Smart board
	55	15/9/23	Previous Question Paper Discussion		T2,R2	PPT & Smart board

Assignment Topics:

Sl.No	Topic	References
1	Assignment Module 1	T1
2	Assignment Module 2	T1
3	Assignment Module 4,5	T2

1ST INTERNAL - 10/7/2023 - 12/7/2023

2ND INTERNAL - 16/8/2023 - 18/8/2023

3RD INTERNAL - 11/9/2023 - 13/9/2023

Book Type	Code	Publication Information
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			Edition	Publisher	Year
Text Books	T1	Digital Logic Applications and Design, John M Yarbrough,	ISBN 981-240-062-	Thomson Learning	2001
	T2	Digital Principles and Design Donald D. Givone	ISBN 978-0-07-052906-9.	McGraw Hill	2002
Reference Books	R1	Digital Circuits and Design D. P. Kothari and J. S Dhillon,	ISBN:9789332543539 2	Pearson 2016	2016
	R2	Digital Design Morris Mano	3rd	Prentice Hall of India	-
	R3	Fundamentals of logic design Charles H Roth, Jr.,	5th	Cengage Learning.	-




Faculty

THE OXFORD COLLEGE OF ENGINEERING
HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electrical & Electronics Engineering
Lesson Plan - 2022 – 2023 (EVEN)

Date: 01 /05/2023

Subject code : 21EE43
Subject Title : Microcontroller
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : IV
Academic Year : June 2023 – Sep 2023
Faculty Name : Dr.B.Devi Vighneshwari

COURSE OBJECTIVE:

- To explain the internal or organization and working of computers, microcontrollers and embedded processors also to compare and contrast the various members of the 8051 family.
- To explain in detail the execution of 8051 assembly language instructions and data types and also to explain loop, conditional and unconditional jump and call, handling and manipulation of I / O instructions.
- To explain develop 8051C programs for time delay, I/O operations, I/O bit manipulation, logic, arithmetic operations and data conversions.
- To explain develop 8051C serial port programming.
- To explain in detail the interfacing of various devices with 8051 C processor.
- To explain about various interrupt routines

COURSE OUTCOME:

CO1	Outline the 8051 architecture, registers, internal memory organization, addressing modes
CO2	Discuss 8051 addressing modes, instruction set of 8051, accessing data and I/O port programming.
CO3	Develop 8051C programs for time delay, I/O operations, I/O bit manipulation, logic and arithmetic operations, data conversion and timer/counter programming.
CO4	Summarize the basics of serial communication and interrupts, also develop 8051 programs for serial data communication and interrupt programming
CO5	Program 8051to work with external devices for ADC, DAC, Stepper motor control, DC motor control.

PREREQUISITE(s):

Basics of different microprocessor families
Logic functions and basics of logic circuits

Unit	Topic No.	Date	Topic	Text Referred	Pedagogy
II	1.	05/06/23	Module 2: Assembly Programming and Instruction of 8051 Introduction	TI, R1	Chalk & Talk / PPT/ Programming
	2.	07/06/23	Arithmetic Instructions - With Programs	TI, R1	Chalk & Talk / PPT/ Programming

	3.	08/06/23	Logical Instructions - With Programs	TI, R1	Chalk & Talk / PPT/ Programming
	4.	08/06/23	Arithmetic Instructions - With Programs	TI, R1	Chalk & Talk / PPT/ Programming
	5.	12/06/23	Logical Instructions - With Programs	TI, R1	Chalk & Talk / PPT/ Programming
	6.	14/06/23	Jump Instructions - With Programs	TI, R1	Chalk & Talk / PPT/ Programming
	7.	15/06/23	Loop Instructions with Programs	TI, R1	Chalk & Talk / PPT/ Programming
	8.	15/06/23	Call Instructions with Programs	TI, R1	Chalk & Talk / PPT/ Programming
	9.	17/06/23	I/ O Programming	TI, R1	Chalk & Talk / PPT/ Programming
	10.	19/06/23	Running of the Programs	TI, R1	Chalk & Talk / PPT/ Programming
I	11.	21/06/23	Module1: 8051 Microcontroller Basics - Introduction, Various Processors	TI, R1	Chalk & Talk / PPT/ Programming
	12.	22/06/23	Block Diagram and Internal Memory Organizations	TI, R1	Chalk & Talk / PPT/ Programming
	13.	26/06/23	Stack and Addressing Modes	TI, R1	Chalk & Talk / PPT/ Programming
	14.	28/06/23	Register Banks, PSW, Flag bits	TI, R1	Chalk & Talk / PPT/ Programming
	15.	30/06/23	Stack Operations	TI, R1	Chalk & Talk / PPT/ Programming
	16.	01/07/23	I/O Port usage	TI, R1	Chalk & Talk / PPT/ Programming
	17.	01/07/23	Memory decoding - Introduction	TI, R1	Chalk & Talk / PPT/ Programming
	18.	03/07/23	Memory decoding - Examples	TI, R1	Chalk & Talk / PPT/ Programming
	19.	05/07/23	Problems in Memory Decoding	TI, R1	Chalk & Talk

					/ PPT/ Programming
	20.	06/07/23	Problems in Memory Decoding	TI, R1	Chalk & Talk / PPT/ Programming
III	21.	06/07/23	Module 3: 8051 Programming in C Data Types - Introduction, Time delays - with calculations	TI, R1	Chalk & Talk / PPT/ Programming
	22.	15/07/23	I/O Programming, Logic Operations in C	TI, R1	Chalk & Talk / PPT/ Programming
	23.	17/07/23	Data conversion Programs, Data serialization	TI, R1	Chalk & Talk / PPT/ Programming
	24.	19/07/23	Accessing Code ROM space	TI, R1	Chalk & Talk / PPT/ Programming
	25.	20/07/23	8051 Timer Programming: Introduction	TI, R1	Chalk & Talk / PPT/ Programming
	26.	20/07/23	Counter - Different Modes	TI, R1	Chalk & Talk / PPT/ Programming
	27.	24/07/23	Counter - Different Modes	TI, R1	Chalk & Talk / PPT/ Programming
	28.	26/07/23	Programming of Counters	TI, R1	Chalk & Talk / PPT/ Programming
	29.	27/07/23	Programming of Counters	TI, R1	Chalk & Talk / PPT/ Programming
	30.	27/07/23	Design Calculations	TI, R1	Chalk & Talk / PPT/ Programming
	IV	31.	31/07/23	Module 4: Serial Port and Interrupt Introduction	TI, R1
32.		02/08/23	Basics of serial communication	TI, R1	Chalk & Talk / PPT/ Programming
33.		03/08/23	Connections of Serial Port	TI, R1	Chalk & Talk / PPT/ Programming
34.		03/08/23	Serial Port programming in assembly	TI, R1	Chalk & Talk / PPT/ Programming
35.		07/08/23	Serial Port Programming in C	TI, R1	Chalk & Talk / PPT/

					Programming
	36.	09/08/23	8051 Interrupts - Introduction	TI, R1	Chalk & Talk / PPT/ Programming
	37.	10/08/23	Timer Interrupts	TI, R1	Chalk & Talk / PPT/ Programming
	38.	10/08/23	External Hardware Interrupts	TI, R1	Chalk & Talk / PPT/ Programming
V	39.	12/08/23	Module 5: Interfacing - Introduction	TI, R1	Chalk & Talk / PPT/ Hardware
	40.	14/08/23	Motor Control - DC, Stepper motor	TI, R1	Chalk & Talk / PPT/ Hardware
	41.	21/08/23	DAC Programming	TI, R1	Chalk & Talk / PPT/ Hardware
	42.	23/08/23	ADC Programming	TI, R1	Chalk & Talk / PPT/ Hardware
	43.	24/08/23	Key board interfacing	TI, R1	Chalk & Talk / PPT/ Hardware
	44.	24/08/23	LCD interfacing	TI, R1	Chalk & Talk / PPT/ Hardware
	45.	26/08/23	8255 Interfacing	TI, R1	Chalk & Talk / PPT/ Hardware
	46.	28/08/23	Sensor interfacing	TI, R1	Chalk & Talk / PPT/ Hardware
I, II, III, IV, V	47.	30/08/23	Revision of Module 1	TI, R1	Chalk & Talk
	48.	31/08/23	Revision of Module 2	TI, R1	Chalk & Talk
	49.	04/09/23	Revision of Module 3	TI, R1	Chalk & Talk
	50.	06/09/23	Revision of Module 4	TI, R1	Chalk & Talk
	51.	07/09/23	Revision of Module 5	TI, R1	Chalk & Talk
	52.	07/09/23	VTU Question Paper - 1	TI, R1	Chalk & Talk
	53.	09/09/23	VTU Question Paper - 2	TI, R1	Chalk & Talk

Assignment Topics:

Sl.No	Topic	References
1	Open Book Test / Class Test / Assignment (Module 1 & 2)	R2 & T1
2	Open Book Test / Class Test / Assignment (Module 3 & 4)	T1 & R2
3	Open Book Test / Class Test / Assignment (Module 5)	T1 & R2

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	The 8051 Microcontroller and embedded systems using Assemble and C, Muhammad Ali Mazadi	2nd Edition	Pearson	2008
	T2	The 8051 Microcontroller, Kenneth Ayala	3rd Edition	Cengage Learning	2005
Reference Books	R1	The 8051 Microcontroller and Embedded Systems, Manish K Patel	1st Edition	McGraw Hill	2014
	R2	Microcontrollers: Architecture, Programming, Interfacing and System Design, Rajkamal	1st Edition	Pearson	2012



(Dr.B.Devi Vighneshwari)
Faculty



(Dr.Bharath V S)
HOD / EEE

THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical and Electronics Engineering

Lesson Plan

Date:02/06/23

Subject code : 21EE44
 Subject Title : Electric Motors
 Course / Branch : BE/EEE
 Semester : IV
 Academic Year : 2022-2023-Even Sem
 Faculty Name : Mrs Resna S R

Course Objectives:

- (1) To study the constructional features of Motors and select a suitable drive for specific application.
- (2) To study the constructional features of Three Phase and Single phase induction Motors.
- (3) To study different test to be conducted for the assessment of the performance characteristics of motors.
- (4) To study the speed control of motor by a different methods.
- (5) Explain the construction and operation of Synchronous motor and special motors.

PREREQUISITE(s): Basic Electrical Engineering, Circuit theory

Module	Topic No.	Date	Topic	Text Referred & Page	Pedagogy
I	1	5/6/23	Introduction, Classification of dc motors	T1 :285-407	PPT,Chalk&Board
	2	6/6/23	Back emf, significance of back emf		PPT,Chalk&Board
	3	7/6/23	Torque equation, Problems		PPT,Chalk&Board
	4	8/6/23	Characteristics of shunt, Series & Compound motors		PPT,Chalk&Board
	5	12/6/23	Speed control of shunt, Series and Compound motors		PPT,Chalk&Board
	6	13/6/23	Application of motors		PPT,Chalk&Board
	7	14/6/23	DC motor starters – 3 point		PPT,Chalk&Board
	8	15/6/23	4 point starter		PPT,Chalk&Board
	9	17/6/23	Losses and efficiency- Losses in DC motors, Power flow diagram, problems		PPT,Chalk&Board
	10	19/6/23	Efficiency, Condition for maximum efficiency		PPT,Chalk&Board
	11	20/6/23	Problems		PPT,Chalk&Board
	12	21/6/23	Problems		PPT,Chalk&Board
	13	22/6/23	Problems		PPT,Chalk&Board
	14	26/6/23	Testing of DC Motors- Direct & indirect methods of testing of DC motors-Brake test	T1:412-423	PPT,Chalk&Board
	15	27/6/23	Swinburne's test, Retardation test		PPT,Chalk&Board
	16	28/6/23	Hopkinson's test, Field's test		PPT,Chalk&Board
	17	1/7/23	Merits and demerits of tests, Problems		PPT,Chalk&Board
	18	3/7/23	Three phase Induction Motor -Review of concept and generation of rotating magnetic field		PPT,Chalk&Board

II	19	4/7/23	Principle of operation, construction	T1:593-613	PPT,Chalk&Board
	20	5/7/23	classification and types		PPT,Chalk&Board
	21	6/7/23	squirrel-cage, slip-ring,Slip		PPT,Chalk&Board
	22	13/7/23	Torque equation		PPT,Chalk&Board
	23	15/7/23	Torque-slip characteristic covering motoring, Generating and braking regions		PPT,Chalk&Board
	24	17/7/23	Maximum torque, Significance of slip		PPT,Chalk&Board
	25	18/7/23	Problems		PPT,Chalk&Board
	26	19/7/23	Problems		PPT,Chalk&Board
	27	20/7/23	Phasor diagram of induction motor on no load and on load		PPT,Chalk&Board
	28	24/7/23	Equivalent circuit		PPT,Chalk&Board
III	29	25/7/23	Performance Of Induction Motor -Losses and efficiency	T1:614-688	PPT,Chalk&Board
	30	26/7/23	No-load and blocked rotor tests		PPT,Chalk&Board
	31	27/7/23	Performance of the motor from the circle diagram and equivalent circuit		PPT,Chalk&Board
	32	31/7/23	Cogging and crawling		PPT,Chalk&Board
	33	1/8/23	High torque rotors-double cage and deep rotor bars		PPT,Chalk&Board
	34	2/8/23	Equivalent circuit and performance evaluation of double cage induction motor		PPT,Chalk&Board
	35	3/8/23	Induction motor working as induction generator		PPT,Chalk&Board
	36	4/8/23	Problems		PPT,Chalk&Board
	37	7/8/23	Problems		PPT,Chalk&Board
	38	8/8/23	Problems		PPT,Chalk&Board
	39	9/8/23	Problems		PPT,Chalk&Board
	40	10/8/23	Problems		PPT,Chalk&Board
IV	41	14/8/23	Need for starter, Direct on line starting	T1:638-734	PPT,Chalk&Board
	42	21/8/23	Star-Delta and autotransformer starting		PPT,Chalk&Board
	43	22/8/23	Rotor resistance starting, Speed control by voltage, frequency and rotor resistance methods		PPT,Chalk&Board
	44	23/8/23	Single phase Induction motor-Double revolving field theory and principle of operation		PPT,Chalk&Board
	45	24/8/23	Construction and operation of split-phase, Capacitor startCapacitor run induction Motor		PPT,Chalk&Board
	46	26/8/23	shaded pole motor Comparison of single phase motors and applicationsmotors, Problems		PPT,Chalk&Board
	47	28/8/23	Problems		PPT,Chalk&Board
	48	29/8/23	Problems		PPT,Chalk&Board
	49	30/8/23	Principle of operation, Phasor diagrams	T1:444-454	PPT,Chalk&Board

V	50	31/8/23	Torque and torque angle, Blondel diagram	:543-555	PPT, Chalk & Board
	51	4/9/23	Effect of change in load, Effect of change in excitation		PPT, Chalk & Board
	52	5/9/23	V and inverted V Curves, Synchronous condenser		PPT, Chalk & Board
	53	6/9/23	Hunting and damping		PPT, Chalk & Board
	54	7/9/23	Methods of starting synchronous motors		PPT, Chalk & Board
	55	9/9/23	Construction and operation of Universal motor	T1:740-746	PPT, Chalk & Board
	56	14/9/23	AC servomotor, Linear induction motor, Stepper motor		PPT, Chalk & Board

Outcomes of the Course:

At the end of the course the student will be able to:

1. Explain the construction, operation and classification of DC Motor and AC motor
2. Describe the performance characteristics and applications of Electric motors.
3. Demonstrate and explain the methods of testing of DC machines and determine losses and efficiency.
4. Explain the methods of Controlling the speed of DC motor and induction motor.
5. Explain the starting methods, equivalent circuit and phasor diagrams, torque angle, effect of change in excitation and change in load, hunting and damping of synchronous motors
6. Explain the construction, operation of special purpose motors.

Assignment Topics:

Sl.No	Topic	References
1	Module 1&2	T1
2	Module 2&3	T1

Text Books:

T1: Electric Machines D. P. Kothari, I. J. Nagrath McGraw Hill 4th edition, 2011

T2: Theory of Alternating Current Machines Alexander Langsdorf McGraw Hill 2nd Edition, 2001


T3: Electric Machines Ashfaq Hussain Dhanpat Rai & Co 2nd Edition, 2013

Reference Books:

R1: Electrical Machines, Drives and Power systems Theodore Wildi Pearson 6th Edition, 2014

R2: Electrical Machines M.V. Deshpande PHI Learning 2013


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THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical and Electronics Engineering

Lesson Plan

Date:04/06/2023

Subject code : 21EEL46
Subject Title : **ELECTRICAL MACHINES LABORATORY – II**
Course / Branch : B.E/EEE
Semester : IV
Academic Year : 2022-2023(Even Sem)
Faculty Name : Mrs.Resna S R

Course objectives :

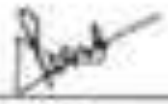
- (1)To perform tests on DC machines to determine their characteristics.
- (2)To control the speed of DC motor.
- (3)To conduct test for pre-determination of the performance characteristics of DC machines
- (4)To conduct load test on single phase and three phase induction motor.
- (5)To conduct test on induction motor to determine the performance characteristics.
- (6)To conduct test on synchronous motor to draw the performance curves..

	TOPIC NO.	DATE	TOPIC
CYCLE I	1	5/6/23& 9/6/23	Load test on dc shunt motor to draw speed – torque and horse power- efficiency characteristics.
	2	12/6/23& 16/6/23	Speed control of dc shunt motor by armature and field control
	3	19/6/23 & 23/6/23	Load test on three phase induction motor
	4	26/6/23& 30/6/23	Load test on single phase induction motor to draw output versus torque, current, power and efficiency characteristics
	5	3/7/23& 7/7/23	Conduct suitable tests to draw the equivalent circuit of single phase induction motor and determine performance parameters
	6	17/7/23& 14/7/23	No load and Blocked rotor test on three phase induction motor to draw (i) equivalent circuit and (ii) circle diagram. Determination of performance parameters at different load conditions from (i) and (ii).
CYCLE II	7	21/7/23& 24/7/23	Regenerative test (Hopkinson test) on dc shunt machines
	8	28/7/23& 31/7/23	Retardation test on dc shunt motor.
	9	4/8/23& 7/8/23	Swinburne's Test on dc motor.
	10	11/8/23& 14/8/23	Conduct an experiment to draw V and Λ curves of synchronous motor at no load and load conditions
	11	21/8/23& 25/8/23	Field Test on dc series machines
	12	28/8/23& 1/9/23	Load test on induction generator.
	13	4/9/23	Repetition Class
	14	8/9/23	Repetition Class

Course outcomes:

At the end of the course the student will be able to:

- (1) Test DC machines to determine their characteristics and also to control the speed of DC motor.
- (2) Pre-determine the performance characteristics of DC machines by conducting suitable tests.
- (3) Perform load test on single phase and three phase induction motor to assess its performance.
- (4) Conduct test on induction motor to pre-determine the performance characteristics. (5) Conduct test on synchronous motor to draw the performance curves.



Faculty



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THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical and Electronics Engineering

Lesson Plan

Date: 20/03/2023

Subject code/Title : 18EE61/ Control Systems
Course / Branch : BE/EEE
Semester : VI
Academic Year : 2022-23 (EVEN)
Faculty Name : Mrs. Mounika Sharon

COURSE OBJECTIVES:

To define a control system

To explain the necessity of feedback and types of feedback control systems.

To introduce the concept of transfer function and its application to the modeling of linear systems.

To discuss the stability of linear time invariant systems and Routh - Hurwitz criterion.

To obtain transfer function of systems through block diagram manipulation and reduction.

To use Mason's gain formula for finding transfer function of a system.

To demonstrate mathematical modeling of control systems, components and to develop design criteria for manipulating the time response in terms of time domain response specification.

To discuss transient and steady state time response of a simple control system.

To investigate the trajectories of the roots of the characteristic equation when a system parameter is varied.

To conduct the control system analysis in the frequency domain.

To determine the controller or compensator configuration and parameter values relative to how it is connected to the controlled process given the design specifications

PREREQUISITE(s) : Network and Circuits, Basic Engineering Mathematics

Topic No.	Date	Topic	Books Referred & Pages	Pedagogy
1	20/03/23	Introduction, Classification of control systems.	T1:80-81 R2:1-5	Chalk and Talk
2	21/03/23	Modelling of mechanical system elements	T1:80-84 R2:6-20	Chalk and Talk
3	23/03/23	electrical systems ,Analogous systems	R2:21-25	Chalk and Talk
4	23/03/23	Transfer function, Single input single output systems, Procedure for deriving transfer functions	R2:25-30	Chalk and Talk
5	25/03/23	problems	R2:30-34	Chalk and Talk
6	25/03/23	problems	R2:34-39	Chalk and Talk
7	27/03/23	problems	T1:84-86	Chalk and Talk
8	28/03/23	problems	T1:86-90	Chalk and Talk
9	29/03/23	servomotors	T1:90-108	Chalk and

				R2:6-20	Talk
	10	30/03/23	Gear trains	R2:12-14	Chalk and Talk
	11	30/03/23	synchros	R2:19-20	Chalk and Talk
	12	04/04/23	Problems	R2:19-20	Chalk and Talk
	13	05/04/23	Revision, VTU QP discussion	R2:87-90	Chalk and Talk
	14	06/04/23	Module 1 – Class test	R2:91-94	-
	15	06/04/23	Class Test qp discussion	R2:95-98	Chalk and Talk
II	16	10/04/23	Block diagram of a closed loop system	T1:301-302	Chalk and Talk
	17	11/04/23	Procedure for drawing block diagram and block diagram reduction to find transfer function.	T1:302-304	Chalk and Talk
	18	12/04/23	Construction of signal flow graphs	T1:304-312	Chalk and Talk
	19	13/04/23	basic properties of signal flow graph, signal flow graph algebra, construction of signal flow graph for control systems	R2:164-166	Chalk and Talk
	20	13/04/23	problems	T1:313-318	Chalk and Talk
	21	17/04/23	problems	R2:166-169	Chalk and Talk
	22	18/04/23	problems	T1:313-318	Chalk and Talk
	23	19/04/23	problems	R2:169-172	Chalk and Talk
	24	20/04/23	problems	T1:313-318	Chalk and Talk
	25	20/04/23	Problems	T1:313-318	Chalk and Talk
	26	27/04/23	Problems	R2:166-169	Chalk and Talk
	27	27/04/23	Problems	R2:169-172	Chalk and Talk
	28	02/05/23	Revision, VTU QP discussion	T1:318-322	Chalk and Talk
	29	03/05/23	Module 1 – Class test	R2:199-205	Chalk and Talk
		30	04/05/23	Class Test qp discussion	R2:205-210
III	31	04/05/23	Standard test signals, relative stability analysis	T1:342-343	Chalk and Talk, PPT
	32	06/05/23	time response of first order systems	T1:343-349	Chalk and Talk, PPT
	33	08/05/23	time response of second order systems	T1:349-351	Chalk and Talk, PPT
	34	09/05/23	steady state errors and error constants	T1:351-353	Chalk and Talk, PPT
	35	10/05/23	Types of control systems	T1:353-354	Chalk and

					Talk, PPT
	36	11/05/23	problems	T1:354-358	Chalk and Talk, PPT
	37	11/05/23	problems	T1:359-366	Chalk and Talk, PPT
	38	15/05/23	BIBO stability, Necessary conditions for stability	R2:61-64	Chalk and Talk, PPT
	39	16/05/23	problems	R2:64-70	Chalk and Talk, PPT
	40	17/05/23	Routh stability criterion, difficulties in formulation of Routh table	R2:70-85	Chalk and Talk, PPT
	41	18/05/23	problems	R2:82-86	Chalk and Talk, PPT
	42	18/05/23	application of Routh stability criterion to linear feedback systems, problems	R2:169-172	Chalk and Talk, PPT
	43	20/05/23	problems	R2:97-98	Chalk and Talk, PPT
	44	22/05/23	Relative stability analysis	R2:98-99	-
IV	45	23/05/23	Introduction, root locus concepts	T1:369-370	Chalk and Talk
	46	24/05/23	construction of root loci, rules for the construction of root locus	T1:370-371	Chalk and Talk
	47	25/05/23	problems	T1:371-373	Chalk and Talk
	48	25/05/23	problems	R2:213-215	Chalk and Talk
	49	29/05/23	problems	R2:213-215	Chalk and Talk
	50	30/05/23	Co-relation between time and frequency response – 2nd order systems only	T1:374-376	Chalk and Talk
	51	31/05/23	problems	R2:215-217	Chalk and Talk
	52	04/06/23	problems	T1:376-384	Chalk and Talk
	53	05/06/23	General procedure for constructing bode plots, computation of gain margin and phase margin	R2:217-221	Chalk and Talk
	54	06/06/23	problems	T1:385-387	Chalk and Talk
	55	07/06/23	Revision, VTU QP discussion	R2:223-239	Chalk and Talk
	56	07/06/23	Module 4 – Class test	R2:242-243	-
V	57	12/06/23	Principle of argument	T1:403-409	PPT
	58	13/06/23	Nyquist stability criterion,	T1:410-413	PPT
	59	14/06/23	assessment of relative stability using Nyquist criterion	R2:246-249	PPT
	60	15/06/23	Introduction, Design with the PD Controller, Design with the PI Controller	T1:410-413	PPT
	61	15/06/23	Design with the PID Controller, Design with Phase-Lead Controller	R2:249-252	PPT
	62	17/06/23	Design with Phase - Lag Controller ,Design	T1:423-426	PPT

		with Lead-Lag Controller		
63	19/06/23	Principle of argument	R2:252-254	PPT
64	20/06/23	Nyquist stability criterion,	T1:427-430	PPT
65	21/06/23	Problems	R2:254-262	PPT
66	22/06/23	Problems	T1:448-454	PPT
67	26/06/23	Module 5– Class test	R2:277-278	-
68	27/06/23	Question Paper Discussion - Module 1	VTU QP	Chalk and Talk
69	28/06/23	Question Paper Discussion - Module 2	VTU QP	Chalk and Talk
70	01/07/23	Question Paper Discussion - Module 3	VTU QP	Chalk and Talk
71	06/07/23	Question Paper Discussion - Module 4	VTU QP	Chalk and Talk
72	10/07/23	Question Paper Discussion - Module 5	VTU QP	Chalk and Talk

COURSE OUTCOMES:

- Discuss the effects of feedback and types of feedback control systems ,Demonstrate the knowledge of mathematical modeling of control systems and components &Evaluate the transfer function of a linear time invariant system.
- Apply block diagram manipulation and signal flow graph methods to obtain transfer function of systems.
- Evaluate the stability of linear time invariant systems
- Determine transient and steady state time response of a simple control system.
- Investigate the performance of a given system in time and frequency domains using bode plots and Nyquist plots
- Determine the controller or compensator configuration and parameter values relative to how it is connected to the controlled process

Assignment Topics

Sl. No.	Assignment Topics	Submission due on
1	Assinment-1	21/04/2023
2	Assignment-2	26/05/2023
3	Assignment-3	30/06/2023

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	Control systems, Anand Kumar	2ND	PHI	2014
Reference Books	R1	Automatic Control Systems, Farid Golnaraghi, Benjamin C. Kuo	9th	Wiley	2010
	R2	Control Systems Engineering Norman S. NisE	4th	Wiley	2004
	R3	Control Systems, Principles and Design M.Gopal	4th Edition	McGaw Hill	2012

THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical and Electronics Engineering

Lesson Plan

Date: 20/03/2023

Subject code/Title : 18EE62/ Power System Analysis-1
Course / Branch : BE/EEE
Semester : VI
Academic Year : 2022-23 (EVEN)
Faculty Name : Mrs. Sumitha T L

COURSE OBJECTIVES:

- To explain analysis of three phase symmetrical faults on synchronous machine and simple power systems and to discuss selection of circuit breaker.
- To explain symmetrical components, their advantages and the calculation of symmetrical components of voltages and currents in un-balanced three phase circuits.
- To explain the concept of sequence impedance and sequence networks of an unloaded synchronous generator, transformers and transmission lines.
- To explain the analysis of synchronous machine and simple power systems for different unsymmetrical faults using symmetrical components.
- To discuss the dynamics of synchronous machine and derive the power angle equation for a synchronous machine
- Discuss stability and types of stability for a power system and the equal area criterion for the evaluation of stability of a simple system.

PREREQUISITE(s): Knowledge about Machines, Switch gear components

	Topic No.	Date	Topic	Books Referred & Pages	Pedagogy
I	1	20/03/23	Representation of Power System Components: Introduction	T1:80-81 R2:1-5	Chalk and Talk
	2	21/03/23	Single phase representation of balanced three phase networks, One line diagram	T1:80-84 R2:6-20	Chalk and Talk
	3	23/03/23	Impedance or reactance Diagram	R2:21-25	Chalk and Talk
	4	23/03/23	Problems on pu calculations	R2:25-30	Chalk and Talk
	5	25/03/23	Per unit system – problems	R2:30-34	Chalk and Talk
	6	25/03/23	Problems on per unit system	R2:34-39	Chalk and Talk
	7	27/03/23	Problems on pu calculations	T1:84-86	Chalk and Talk
	8	28/03/23	Problems on pu calculations	T1:86-90	Chalk and Talk
	9	29/03/23	Steady state model of synchronous machine, Power transformer, Transmission Lines, load	T1:90-108 R2:6-20	Chalk and Talk
	10	30/03/23	Three winding transformer	R2:12-14	Chalk and Talk

	11	30/03/23	Problems on 3 winding transformers	R2:19-20	Chalk and Talk
	12	04/04/23	Problems on transformers	R2:19-20	Chalk and Talk
	13	05/04/23	Revision, VTU QP discussion	R2:87-90	Chalk and Talk
	14	06/04/23	Module 1 – Class test	R2:91-94	-
	15	06/04/23	Class Test qp discussion	R2:95-98	Chalk and Talk
II	16	10/04/23	Symmetrical Fault Analysis: Introduction-Fault, Types	T1:301-302	Chalk and Talk
	17	11/04/23	Transient due to short circuit in transmission lines	T1:302-304	Chalk and Talk
	18	12/04/23	Transient due to Short Circuit in alternators on no load	T1:304-312	Chalk and Talk
	19	13/04/23	Fault analysis procedure – KVL and Thevenin's method	R2:164-166	Chalk and Talk
	20	13/04/23	Problems on symmetrical fault analysis – KVL method	T1:313-318	Chalk and Talk
	21	17/04/23	Problems on symmetrical fault analysis – KVL method	R2:166-169	Chalk and Talk
	22	18/04/23	Problems on symmetrical fault analysis – KVL method	T1:313-318	Chalk and Talk
	23	19/04/23	Problems on symmetrical fault analysis – KVL method	R2:169-172	Chalk and Talk
	24	20/04/23	Problems on symmetrical fault analysis – Thevenin's method	T1:313-318	Chalk and Talk
	25	20/04/23	Problems on symmetrical fault analysis – Thevenin's method	T1:313-318	Chalk and Talk
	26	27/04/23	Problems on symmetrical fault analysis – Thevenin's method	R2:166-169	Chalk and Talk
	27	27/04/23	Problems on symmetrical fault analysis – Thevenin's method	R2:169-172	Chalk and Talk
	28	02/05/23	Selection of Circuit Breakers	T1:318-322	Chalk and Talk
	29	03/05/23	Revision, VTU QP discussion	R2:199-205	Chalk and Talk
	30	04/05/23	Module 2 – Class test	R2:205-210	-
III	31	04/05/23	Symmetrical Components: Introduction	T1:342-343	Chalk and Talk, PPT
	32	06/05/23	Symmetrical component transformation	T1:343-349	Chalk and Talk, PPT
	33	08/05/23	Phase shift in Star delta	T1:349-351	Chalk and Talk, PPT
	34	09/05/23	Sequence Impedance of transmission lines	T1:351-353	Chalk and Talk, PPT
	35	10/05/23	Sequence networks of Power system	T1:353-354	Chalk and Talk, PPT
	36	11/05/23	Sequence networks of machines	T1:354-358	Chalk and Talk, PPT
	37	11/05/23	Sequence networks of Transformers	T1:359-366	Chalk and

					Talk, PPT
	38	15/05/23	Problems on sequence networks	R2:61-64	Chalk and Talk, PPT
	39	16/05/23	Problems on sequence networks	R2:64-70	Chalk and Talk, PPT
	40	17/05/23	Problems on sequence networks	R2:70-85	Chalk and Talk, PPT
	41	18/05/23	Problems on sequence networks	R2:82-86	Chalk and Talk, PPT
	42	18/05/23	Assignment & tutorial problem discussion	R2:169-172	Chalk and Talk, PPT
	43	20/05/23	Revision, VTU QP discussion	R2:97-98	Chalk and Talk, PPT
	44	22/05/23	Module 3– Class test	R2:98-99	-
IV	45	23/05/23	Unsymmetrical Fault Analysis: Introduction	T1:369-370	Chalk and Talk
	46	24/05/23	Symmetrical component analysis of unsymmetrical faults	T1:370-371	Chalk and Talk
	47	25/05/23	Single line to ground fault	T1:371-373	Chalk and Talk
	48	25/05/23	Problems on single line to ground fault	R2:213-215	Chalk and Talk
	49	29/05/23	Problems on single line to ground fault	R2:213-215	Chalk and Talk
	50	30/05/23	Line to line fault	T1:374-376	Chalk and Talk
	51	31/05/23	Problems on line to line fault	R2:215-217	Chalk and Talk
	52	04/06/23	Double Line to ground fault	T1:376-384	Chalk and Talk
	53	05/06/23	Problems on double line to ground fault	R2:217-221	Chalk and Talk
	54	06/06/23	Open conductor faults	T1:385-387	Chalk and Talk
	55	07/06/23	Revision, VTU QP discussion	R2:223-239	Chalk and Talk
	56	07/06/23	Module 4 – Class test	R2:242-243	-
V	57	12/06/23	Power System Stability: Introduction, Dynamics of synchronous Machine	T1:403-409	PPT
	58	13/06/23	Power angle equation– Salient pole machine	T1:410-413	PPT
	59	14/06/23	Power angle problems	R2:246-249	PPT
	60	15/06/23	Power Angle equation - Non salient pole machine	T1:410-413	PPT
	61	15/06/23	Problems on power angle equation	R2:249-252	PPT
	62	17/06/23	Steady state stability	T1:423-426	PPT
	63	19/06/23	Problems on steady state stability	R2:252-254	PPT
	64	20/06/23	Transient stability	T1:427-430	PPT
	65	21/06/23	Problems of Stability Analysis	R2:254-262	PPT
	66	22/06/23	Swing curve and swing equation	T1:448-454	PPT
	67	26/06/23	Module 5– Class test	R2:277-278	-

68	27/06/23	Question Paper Discussion - Module 1	VTU QP	Chalk and Talk
69	28/06/23	Question Paper Discussion - Module 2	VTU QP	Chalk and Talk
70	01/07/23	Question Paper Discussion - Module 3	VTU QP	Chalk and Talk
71	06/07/23	Question Paper Discussion - Module 4	VTU QP	Chalk and Talk
72	10/07/23	Question Paper Discussion - Module 5	VTU QP	Chalk and Talk

COURSE OUTCOMES:

At the end of the course the student will be able to:

- 1 – Show understanding of per unit system, its advantages and computation.
- 2 - Perform short circuit analysis on a synchronous machine and simple power system to select a circuit breaker for the system.
- 3 – Evaluate symmetrical components of voltages and currents in un-balanced three phase circuits.
- 4 - Explain the concept of sequence impedance and sequence networks of power system components and power system.
- 5 - Analyse three phase synchronous machine and simple power systems for different unsymmetrical faults using symmetrical components.
- 6 - Discuss the dynamics of synchronous machine, stability and types of stability.

Assignment Topics

Sl. No.	Assignment Topics	Submission due on
1	Problems on Per unit calculations and PU reactance diagram	21/04/2023
2	Problems on Symmetrical fault analysis; Sequence networks	26/05/2023
3	Stability definitions, Equal Area Criterion	30/06/2023

Text Books:

- T1: Modern Power System Analysis, D P Kothari, McGraw Hill, 4th Edition, 2011
T2: Power system Analysis, Hadi sadat, MC Graw Hill, 1st Edition, 2002

Reference Books:

- R1: Power System Analysis by V.Neelakantan, Shiva Book centre, 1st edition, 2016
R2: Power System analysis by Nagoorkani, 1st edition, RBA Publication, 2013

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS

Lesson Plan

Date: 18-3-23

Subject code : 18EE63
Subject Title : DIGITAL SIGNAL PROCESSING
Course / Branch : B.E/ EEE
Semester : VI
Academic Year : 2022-23
Faculty Name : M.RAICHEL RUBY
Objective of Course : To study about the basis of signal processing and enable to work a relatively wide range of problems in Discrete systems.

Course Objectives:

- To evaluate DFT of various signals using properties of DFT.
- To explain different linear filtering techniques.
- To explain the evaluation of DFT and inverse DFT using fast and efficient algorithms
- To discuss impulse invariant transformation, bilinear transformation techniques and their properties.
- To design infinite impulse response Butterworth digital filters using impulse invariant and bilinear transformation techniques.
- To design infinite impulse response Chebyshev digital filters using impulse invariant and bilinear transformation techniques.
- To discuss direct, cascade, parallel and ladder methods of realizing a digital IIR filter.
- To discuss window functions used for the design of FIR filters.
- To discuss windowing technique of designing FIR filter.
- To discuss frequency sampling technique of designing FIR filter.
- To discuss direct, cascade and linear phase form of realizing a digital FIR filter.

Unit	Topic No.	Date	Planned Topic	Books Referred & Pages	Pedagogy
I	1.	20.3.23	Introduction to DSP ,Block Diagram of DSP, Advantages, Limitations & Applications	T1-1,2	Chalk & Talk
	2.	21.3.23	Introduction to DFT & IDFT	T1-3-7	Chalk & Talk
	3.	23.3.23	Computing DFT by expansion & problems	T1-8	Chalk & Talk
	4.	24.3.23	Problems	T1-10	Chalk & Talk
	5.	25.3.23	Computing DFT by matrix relation & problems	T1-12	Chalk & Talk
	6.	27.3.23	Problems	T1-15	Chalk & Talk
	7.	28.3.23	Computing IDFT by matrix relation &	T1-16	Chalk & Talk

		problems			
	8.	03.4.23	Problems	T1-20 Chalk & Talk	
	9.	04.4.23	Properties of DFT:linearity, shifting property & Problems	T1-30 Chalk & Talk	
	10.	05.4.23	Properties-symmerty & Problems	T1-31 Chalk & Talk	
	11.	06.4.23	Circular convolution -proof	T1-35 Chalk & Talk	
	12.	07.4.23	Problems	T1-36 Chalk & Talk	
	13.	10.4.23	Circular arrays-problems	T1-38 Chalk & Talk	
II	14.	14.4.23	Stockhams method,Matrix method and problems	T1-39 Chalk & Talk	
	15.	17.4.23	Comparison of linear convolution with circular convolution and problems	T1-41 Chalk & Talk	
	16.	18.4.23	Introduction to Signal segmentation using overlap add method	T1-43 Chalk & Talk	
	17.	02.5.23	Problems using overlap add method	T1-44 Chalk & Talk	
	18.	02.5.23	Signal segmentation using overlap save method and problems	T1-45 Chalk & Talk	
	19.	04.5.23	Introduction to FFT algorithms and properties	T1-48 Chalk & Talk	
	20.	04.5.23	DITFFT algorithms-first and second stage decimation	T1-50 Chalk & Talk	
	21.	06.5.23	Problems on DIT FFT algorithms	T1-52 Chalk & Talk	
	22.	09.5.23	Problems on DIT FFT algorithms	T1-55 Chalk & Talk	
		11/5/23 - 13/5/23	I –INTERNAL TEST	- -	
		23.	16.5.23	Problems on DIF FFT algorithms	T1-56 Chalk & Talk
		24.	17.5.23	Problems on DIFFFT algorithms	T1-57 Chalk & Talk
II	25.	18.5.23	Introduction to Inverse FFT & problems on IDIF FFT algorithms	T1-83 Chalk & Talk	
	26.	18.5.23	Problems on IDIT FFT algorithms	T1-84 Chalk & Talk	
	27.	20.5.23	Design of IIR filters- introduction	T1-90 Chalk & Talk	
	28.	23.5.23	Introduction to butterworth and chebyshev filter	T1-92 Chalk & Talk	
	29.	24.5.23	Design of butterworth filter (analog)	T1-93 Chalk & Talk	
	30.	25.5.23	Design of chebyshev filter(analog)	T1-95 Chalk & Talk	
	31.	25.5.23	Frequency transformation in analog	T1-97 Chalk & Talk	

			domain		
	32.	27.5.23	Frequency transformation in digital domain using impulse invariant transformation and problems	T1-99	Chalk & Talk
	33.	30.5.23	Frequency transformation in digital domain using Bilinear transformation and problems	T1-100	Chalk & Talk
111	34.	31.5.23	Design of IIR butterworth filter using impulse invariant transformation & problems	T1-104	Chalk & Talk
	35.	01.6.23	Design of IIR butterworth filter using Bilinear transformation & problems	T1-106	Chalk & Talk
	36.	03.6.23	Design of chebyshev filter type-I(analog) and problems	T1-108	Chalk & Talk
	37.	06.6.23	Design of IIR chebyshev filter using impulse invariant transformation & problems	T1-109	Chalk & Talk
	38.	07.6.23	problems	T1-110	Chalk & Talk
		08.6.23-10.6.23	II –INTERNAL TEST	-	-
	39.	13.6.23	problems	T1-115	Chalk & Talk
VI	40.	14.6.23	Design of IIR chebyshev filter using Bilinear transformation & problems	T1-117	Chalk & Talk
	41.	15.6.23	problems	T1-120	PPT
	42.	15.6.23	Realization of IIR system-direct form	T1-125	Chalk & Talk
	43.	17.6.23	Realization of IIR system- cascaded form	T1-126	Chalk & Talk
	44.	18.6.23	Realization of IIR system- parallel form	T1-127	Chalk & Talk
	45.	20.6.23	Realization of IIR system- ladder structure	T1-127	Chalk & Talk
	46.	21.6.23	Design of FIR digital filters-introduction	T1-132	PPT
	47.	22.6.23	Properties of FIR digital filters	T1-135	PPT
	48.	24.6.23	Windowing rectangular, modified rectangular	T1-136	Chalk & Talk
	49.	27.6.23	problems	T1-137	Chalk & Talk
	50.	28.6.23	Blackman ,hamming	T1-139	Chalk & Talk
	51.	29.6.23	problems	T1-140	Chalk & Talk
	52.	29.6.23	Realization of FIR system –direct form	T1-141	Chalk & Talk
	53.	30.6.23	problems	T1-142	Chalk &

					Talk
V	54.	24.6.23	problems	T1-143	Chalk & Talk
	55.	01.7.23	Realization of FIR system –cascade form	T1-146	Chalk & Talk
	56.	02.7.23	problems	T1-147	Chalk & Talk
	57.	04.7.23	problems	T1-149	Chalk & Talk
	58.	05.7.23	Realization of FIR system –linear phase form	T1-150	PPT
	59.	06.7.23	problems	T1-152	Chalk & Talk
	60.	06.7.23	problems	T1-155	Chalk & Talk
	61.	08.7.23	problems	T1-156	Chalk & Talk
		11.7.23-13.7.23	III –INTERNAL TEST	-	-
	62.	14.7.23	Revision		Chalk & Talk
	63.	15.7.23	Revision		Chalk & Talk

Course Outcome:

After the completion of the course, the students should be able

- Compute the DFT of various signals using its properties and linear filtering of two sequences
- Apply fast and efficient algorithms for computing DFT and inverse DFT of a given sequence
- Design IIR Butterworth digital filters using impulse invariant /bilinear transformation technique
- Design IIR Chebyshev digital filters using impulse invariant /bilinear transformation technique
- Realize digital IIR filter by direct ,cascade, parallel and ladder methods of realization
- Design of FIR filters by use of window function and Realization digital FIR filter by direct, cascade and linear phase form.

Assignment Topics:

Sl. No.	Assignment Topics	References
1.	DFT and IDFT problems	R1
2.	Analog Filters-B.W,Chebyshev filters	T1
3.	Fir Filters	T1

Text Books:

T1: Digital Signal Processing principle, Algorithm & application proakis,- pearson education/PHI

T2: Digital Signal Processing-Sanjeet K.Mitra-TMH

Reference Books:

R1 : Discrete time signal processing-GANESH RAO -pearson education

R2: Digital Signal Processing –Dr J.S .Chitode

R3: Digital Signal Processing- P.Ramesh Babu



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THE OXFORD COLLEGE OF ENGINEERING
HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electrical & Electronics Engineering
Lesson Plan

Date: 20/32023

Subject code : 18EE644
Subject Title : Embedded Systems (Professional Elective)
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : VI
Academic Year : 2022-23(even)
Faculty Name : Mrs Nisha C Rani

COURSE OBJECTIVE:

- To understand the concepts of Embedded system design such as ROM variants, RAM, SOC
- To learn the technological aspects of Embedded system such as signal conditioning, Sample & Hold.
- To understand the design trade-offs
- To study about the software aspects of Embedded system To explain about various interrupt routines

COURSE OUTCOME:

- C3644.1- To understand the concepts of Embedded system design concepts, components , ROM variants, RAM, SOC
- C3644.2 To Understand about the various modules of microcontroller core architecture
- C3644.3-To apply Technological aspects to various interfacing with devices such as ADC,DAC
- C3644.4- To Elaborate various design trade-offs.
- C3644.5-To apply software aspects and programming concepts to the design of Embedded System.
- C3644.6 To explain how to interface subsystem with external system.

PREREQUISITE(s):

Basics of Microcontroller architecture, computer architecture, basics of C Programming

Unit	Topic No.	Date	Topic	Period	Text Referred & Page No	Pedagogy
I	1	20/3/23	Module 1 Embedded System: Introduction	4	T3 1-37	Chalk & Board
	2	21/3/23	Concept of Embedded System Design	3	T31.1.1-1.1.4	Chalk & Board
	3	22/3/23	Components	1	T31.1.1-1.1.4	Chalk & Board
	4	24/3/23	classification, skills required.	2	T31.1.1-1.1.4	Chalk & Board
	5	25/3/22	Embedded Micro controller cores: Architecture of 6808	4	T1,R2 T1: 1..3,R3	Chalk & Board
	6	27/3/23	Architectural features of 6808	3	T1 1.3.1- 1.3,R3	Chalk & Board

	7	28/3/23	Embedded Micro controller cores: Architecture of 6811	1	T11.4 1.4.1-1.4	Chalk & Board
	8	29/3/23	Architectural features of 6811	2	T11.4 1.4.1-1.4,R3	Chalk & Board
	9	31/3/23	Modes of operation of 6811 MCU	4	T11.4 1.4.1-1.4,R3	Chalk & Board
	10	4/4/23	Embedded Memories	4	T3 :37- 39	Chalk & Board
	11	5/4/23	RAM ,ROM Variants	3	T3 :37- 39	Chalk & Board
	12	8/4/23	Revision	1	T1T3,R3	Chalk & Board
	13	10/4/23	Vtu question paper discussion	2	-	Chalk & Board
	14	11/4/23	Class Test	4	T1,T3,R3	Chalk & Board
	15	13/4/23	Vtu question paper discussion	3	-	Chalk & Board
II	16	17/4/23	Module 2 Technological Aspects of Embedded System: General design issues of Embedded System	1	1.5.1,1.6.1	Chalk & Board
	17	18/4/23	Applications of embedded system	2	R2 3.1.1	PPT
	18	19/4/23	Examples of Embedded system	3	R2 3.1.1	PPT
	19	21/4/23	SoC systems SOC for bar code scanner.	4	R2 3.1.1	Chalk & Board
	20	28/4/23	Interfacing between analog and digital blocks,	3	T1 167-210	Chalk & Board
	21	2/5/23	Signal conditioning, digital signal processing,	1	T1 167-210	Chalk & Board
	22	3/5/23	DAC interfacing,	2	T1 167-210	Chalk & Board
	23	5/5/23	ADC Interfacing	4	T1 167-210	Chalk & Board
	24	6/5/23	Sample & hold	3	T1 167-210	Chalk & Board
	25	8/5/23	multiplexer interface	1	T1 167-210	Chalk & Board
	26	9/5/23	Internal ADC interfacing	2	T1 167-210	Chalk & Board
	27	10/5/23	Internal ADC interfacing	4	T1 167-210	Chalk & Board
	28	12/5/23	Internal ADC interfacing	3	T1 167-210	Chalk & Board
	29	15/5/23	Assignment 1 Discussion	1	T1	Chalk & Board
	30	16/5/23	Revision	2	T1	Chalk & Board
		31	17/5/23	Vtu question paper discussion	4	-
	32	19/5/23	Revision	3	T1	Chalk & Board
III	33	20/5/23	Module 3 Design Trade Offs Due to Process Incompatibility, Thermal Considerations	1	T3:542-548 (5:12.7) R1 Ch-1	Chalk & Board
	34	22/5/23	Data Acquisition System technology,	2	T3:542-548 (5:12.7) R1 Ch-1	Chalk & Board

	35	23/5/23	Data Acquisition System technology and	4	T3:542-548 (5:12.7) R1 Ch-1	Chalk & Board	
	36	24/5/23	Signal conditioning using DSP	3	T3:542-548 (5:12.7) R1 Ch-1	Chalk & Board	
	37	26/5/23	Issues in embedded system design	1	T3:542-548 (5:12.7) R1 Ch-1, Internet	Chalk & Board	
	38	29/5/23	Design challenge, design	2	R1 Ch-1	Chalk & Board	
	39	30/5/23	trade-offs. Thermal considerations	4	T3:542-548 Internet	Chalk & Board	
	40	31/5/23	Revision	3	R1	Chalk & Board	
	41	4/6/23	Assignment 2 Discussion	1	-	Chalk & Board	
IV	42	5/6/23	Module 4 Software aspects of Embedded Systems:	2	T3 167-210	Chalk & Board	
	43	6/6/23	Real time programming Languages,	4	T3 Ch5	Chalk & Board	
	44	7/6/23	operating systems. Programming concepts	3	T3 Ch5	Chalk & Board	
	45	8/6/23	embedded programming in C	1	T3 Ch5	Chalk & Board	
	46	12/6/23	Round Robin Architecture,	2	R3 Chapter 5 & 6	PPT	
	47	13/6/23	Round Robin with interrupts,	4	R3 Chapter 5 & 6	PPT	
	48	14/6/23	Function queue-scheduling architecture	3	R3 Chapter 5 & 6	PPT	
	49	16/6/23	Vtu question paper discussion	1	-	Chalk & Board	
	50	19/6/23	Revision	2	T3 Ch5	Chalk & Board	
V	51	20/6/23	Module 5 Subsystem interfacing:	4	T2	Chalk & Board	
	52	21/6/23	With external systems user interfacing	3	T2	Chalk & Board	
	53	23/6/23	Serial I/O devices	1	T1 7.1 7.2 T1 Ch.9 494-514 Ch 10 530-555	Chalk & Board	
	54	26/6/23	Parallel port interfaces:	2	T1 7.1 7.2 T1 Ch.9 494-514 Ch 10 530-555	Chalk & Board	
	55	27/4/23	Parallel port interfaces: Input switches interfacing	4		Chalk & Board	
	56	27/6/23	Key boards interfacing	3		Chalk & Board	
		57	28/6/23	Memory interfacing	1	T1 7.1 7.2	Chalk & Board
		58	30/6/23	Memory interfacing Examples	2		Chalk & Board

59	1/7/23	Memory interfacing Examples	4	T1 Ch.9 494-514 Ch 10 530-555	Chalk & Board
60	6/7/23	Assignment 3 Discussion	3	T1	Chalk & Board
61	7/7/23	VTU Question Paper Discussion	1	-	Chalk & Board
62	10/7/23	VTU Question Paper Discussion	2	-	Chalk & Board

Assignment Topics:

Sl.No	Topic	References
1	Module 1	T3
2	Module 3	T1
3	Module 5	T1

1ST INTERNAL - 24/4/2023 - 25/4/2023
2ND INTERNAL - 1/6/2023 - 3/6/2023
3RD INTERNAL - 3/7/2023– 5/7/2023

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	Embedded Microcomputer systems: Real time interfacing	2nd Edition	Valvano J.W Cengage Learning	2008
	T2	The Art of Designing Embedded systems Jack Ganssle Newnes 2 nd Edition	Newnes 2 nd Edition	The Art of Designing Embedded systems Jack Ganssle	2008
	T3	Embedded System, Architecture, Programming and Design	TMH, 2 nd Edition	Raj Kamal	2008
Reference Books	R1	A Unified Hardware/Software Introduction Frank Vahid,	Wiley student edition	Tony Givargis	2002
	R2	Embeded Software Premier	Wessly 2000	Simon David Addison	2000
	R3	Motorola and Intel Manuals		Datasheet	

Faculty

HEAD OF DEPT.

THE OXFORD COLLEGE OF ENGINEERING
HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electrical and Electronics Engineering

Lesson Plan

Date: 10/02/23

Subject code : **18EEL66**
 Subject Title : **Control Systems LAB**
 Course / Branch : **B.E/EEE**
 Semester : **VI**
 Academic Year : **2022-2023(EVEN Sem)**
 Faculty Name : **Mrs.Mounika Sharon**
Objective of Course :

To determine the time and frequency domain responses of a given second order system using software package or discrete components.

To design and analyze Lead, Lag and Lead – Lead compensators for given specifications.

To draw the performance characteristics of ac and dc servomotors and synchro-transmitter receiver pair.

To simulate the DC position and feedback control system to study the effect of P, PI, PD and PID controller and Lead compensator on the step response of the system.

To write a script files to plot root locus, bode plot, Nyquist plots to study the stability of the system using a software package

• **PREREQUISITE** : **Knowledge in MATLAB**

Experiment No.	Date	Topic	PEDAGOGY
1	15/2/23 16/2/23	Experiment to draw the speed torque characteristics of (i) AC servo motor (ii) DC servo motor	Chalk and Talk / Hardware
2	22/2/23 23/2/23	Experiment to draw synchro pair characteristics	Chalk and Talk / Hardware
3	01/3/23 02/3/23	Experiment to determine frequency response of a second order system	Chalk and Talk / Simulation
4	08/3/23 09/3/23	(a) To design a passive RC lead compensating network for the given specifications, viz, the maximum phase lead and the frequency at which it occurs and to obtain the frequency response. (b) To determine experimentally the transfer function of the lead compensating network	Chalk and Talk / Simulation
5	22/3/23 30/3/23	(a) To design a passive RC lag compensating network for the given specifications, viz, the maximum phase lag and the frequency at which it occurs and to obtain the frequency response. (b) To determine experimentally the transfer function of the lag compensating network	Chalk and Talk / Simulation
6	05/4/23 20/4/23	Experiment to draw the frequency response characteristics of the lag – lead compensator network and determination of its transfer function	Chalk and Talk / Simulation
7	19/4/23 27/4/23	(a) To simulate a typical second order system and determine step response and evaluate time response specifications. (b) To evaluate the effect of additional poles and zeros on time response of second order system. (c) To evaluate the effect of pole location on stability (d) To evaluate the effect of loop gain of a negative feedback system on stability.	Chalk and Talk / Simulation
8	26/4/23 27/4/23	To simulate a second order system and study the effect of (a) P, (b) PI, (c) PD and (d) PID controller on the step response	Chalk and Talk / Hardware
9	03/5/23 05/5/23	(a) To simulate a D.C. Position control system and obtain its step response. (b) To verify the effect of input waveform, loop gain and system type on steady state errors. (c) To perform trade-off study for lead compensator. (d) To design PI controller and study its effect on steady state error.	Chalk and Talk / Hardware
10	03/5/23 05/5/23	(a) To examine the relationship between open-loop frequency response and stability, open-loop frequency and closed loop transient response (b) To study the effect of open loop gain on transient response of closed loop system using root locus.	Chalk and Talk / Simulation
11	11/5/23 12/5/23	((a) To study the effect of open loop poles and zeros on root locus contour (b) To estimate the effect of open loop gain on the transient response of closed loop system using root locus. (c) Comparative study of Bode, Nyquist and root locus with respect to stability	Chalk and Talk / Simulation

Course outcomes: At the end of the course the student will be able to:

1. Use software package or discrete components in assessing the time and frequency domain responses of a given second order system.
2. Design and analyze Lead, Lag and Lead – Lag compensators for given specifications.
3. Determine the performance characteristics of ac and dc servomotors and synchro transmitter receiver pair used in control systems.
4. Simulate the DC position and feedback control system to study the effect of P, PI, PD and PID controller and Lead compensator on the step response of the system.
5. Write a script files to plot root locus, bode plot, Nyquist plots to study the stability of the system using a software package.
6. Work with a small team to carry out experiments and prepare reports that present lab work



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Department of Electrical and Electronics Engineering

Lesson Plan

Date: 10/02/23

Subject code : **18EEL67**
Subject Title : **DIGITAL SIGNAL PROCESSING LAB**
Course / Branch : **B.E/EEE**
Semester : **VI**
Academic Year : **2022-2023(EVEN Sem)**
Faculty Name : **Mrs. M.Raichel Ruby**
Objective of Course :

- To explain the use of MATLAB software in evaluating the DFT and IDFT of given sequence
- To verify the convolution property of the DFT
- To design and implementation of IIR and FIR filters for given frequency specifications.
- To realize IIR and FIR filters.
- To help the students in developing software skills.

• **PREREQUISITE : Knowledge in MATLAB**

Experiment No.	Date	Topic	Pedagogy
1	15/2/23 16/2/23	Introduction-Sine, Cosine, Exponential signal generation for continuous and discrete.	Chalk and Talk
2	22/2/23 23/2/23	Computation of N – point DFT and to plot the magnitude and phase spectrum.	Chalk and Talk
3	01/3/23 02/3/23	Evaluation of impulse response of a system.	Chalk and Talk
4	08/3/23 09/3/23	To perform linear convolution of given sequences	Chalk and Talk
5	22/3/23 30/3/23	To perform circular convolution of given sequences using (a) the convolution summation formula (b) the matrix method and (c) Linear convolution from circular convolution with zero padding.	Chalk and Talk
6	05/4/23 20/4/23	Verification of Sampling Theorem both in time and frequency domains	Chalk and Talk
7	19/4/23 27/4/23	Linear and circular convolution by DFT and IDFT method.	Chalk and Talk
8	26/4/23 27/4/23	Solution of a given difference equation.	Chalk and Talk
9	03/5/23 05/5/23	Calculation of DFT and IDFT by FFT	Chalk and Talk
10	03/5/23 05/5/23	Design and implementation of IIR filters to meet given specification (Low pass, high pass, band pass and band reject filters).	Chalk and Talk
11	11/5/23 12/5/23	Design and implementation of FIR filters to meet given specification (Low pass, high pass, band pass and band reject filters) using different window functions.	Chalk and Talk

Course Outcome:

At the end of the course the student will be able to:

- Give physical interpretation of sampling theorem in time and frequency domains.
- Evaluate the impulse response of a system.
- Perform convolution of given sequences to evaluate the response of a system.
- Compute DFT and IDFT of a given sequence using the basic definition and/or fast methods.
- Provide a solution for a given difference equation.
- Design and implement IIR and FIR filters
- Conduct experiments using software and prepare reports that present lab work

Reference Books:

1. Digital Signal Processing – Principles, Algorithms, and Applications Jhon G. Proakis Dimitris G. Manolakis Pearson 4 th Edition, 2007.
2. Digital Signal Processing A.NagoorKani McGraw Hill 2 nd Edition, 2012
3. Digital Signal Processing Shaila D. Apte Wiley 2 nd Edition, 2009
4. Digital Signal Processing Ashok Amberdar Cengage 1 stEdition, 2007
5. Digital Signal Processing Tarun Kumar Rawat Oxford 1 st Edition, 20

Students Feedback about the course from Last Year:

1. Digital Signal Processing subject theory should be studied



(M.Raichel Ruby)
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THE OXFORD COLLEGE OF ENGINEERING
HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electrical & Electronics Engineering
Lesson Plan - 2022 – 2023 (EVEN)

Date:09 /02/2023

Subject code : 18EE81
Subject Title : Power System Operation & Control
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : VIII
Academic Year : Feb 2023 – May 2023
Faculty Name : Dr.B.Devi Vighneshwari

COURSE OBJECTIVE:

- To describe various levels of controls in power systems and the vulnerability.
- To explain components, architecture & configuration of SCADA
- To explain the generator control loops, functions of ALFC, speed governors and mathematical models
- To explain automatic generation control, voltage and reactive power control in an interconnected power system

To explain reliability and contingency analysis, state estimation & related issues. **COURSE OUTCOME:**

At the end of the course the student will be able to:

C411.1 -Develop & Analyze Mathematical Modeling of Single Area Load frequency Control

C411.2 - Develop & Analyze Mathematical Modeling of Automatic Generation Control, SCADA Configurations

C411.3 -Develop & Analyze Mathematical Modeling of Interconnected Automatic Generation Control, SCADA Details

C411.4 -Discuss on the Control of Voltage, Reactive power & Voltage Collapse

C411.5 -Discuss the various levels of Controls in power systems

C411.6 -Explain power system security, contingency and state estimation of power systems

PREREQUISITE(s):

Knowledge on Power System, Power Generation & Economic Dispatch.

Unit	Topic No.	Date	Topic	Text Referred & Page No	Pedagogy
II	1	17/02/23	<u>Automatic Generation Control (AGC):</u> Introduction, Explanation of ALFC & AVR Loops	T1-290 - 327	PPT & Chalk & Board
	2	17/02/23	Load Frequency Control - Explanation	T1-290 - 327	PPT & Chalk & Board
	3	17/02/23	Speed Governing System - Modelling	T1-290 - 327	PPT & Chalk & Board
	4	17/02/23	Turbine , Generator & Load Model	T1-290 - 327	PPT & Chalk & Board
	5	24/02/23	Completed Block Diagram Representation of Isolated Single Area ALFC Loop	T1-290 - 327	PPT & Chalk & Board

	6	24/02/23	Steady State Analysis of Single Area ALFC Loop	T1-290 - 327	PPT & Chalk & Board
	7	25/02/23	Dynamic State Analysis of Single Area ALFC Loop	T1-290 - 327	PPT & Chalk & Board
	8	25/02/23	Proportional & Integral Controller with Single Area ALFC	T1-290 - 327	PPT & Chalk & Board
	9	03/03/23	Problems in Single Area ALFC Designs	T1-290 - 327	PPT & Chalk & Board
	10	03/03/23	Problems in Single Area ALFC Designs	T1-290 - 327	PPT & Chalk & Board
I	11	03/03/23	Introduction: Operating States of Power System & Objectives of Control	T1- 510 - 512	PPT & Chalk & Board
	12	10/03/23	Key Concepts of Reliable Operation, Preventative & Emergency Controls , Energy Management Centres	T1- 510 - 512	PPT & Chalk & Board
	13	10/03/23	Supervisory Control and Data Acquisition:(SCADA) Introduction, Components, Applications of Power System	R1- 21 - 40	PPT & Chalk & Board
	14	11/03/23	SCADA - Basic Functions & advantages	R1- 21 - 40	PPT & Chalk & Board
	15	11/03/23	Building Blocks of SCADA System	R1- 21 - 40	PPT & Chalk & Board
	16	17/03/23	Components of RTU, Communication Sub Systems	R1- 21 - 40	PPT & Chalk & Board
	17	17/03/23	IED Functional Block Diagram & Its Applications	R1- 21 - 40	PPT & Chalk & Board
	18	17/03/23	Classification of SCADA Systems: Types of SCADA - With Block Diagram & Explanation	R1- 62 - 74	PPT & Chalk & Board
	19	24/03/23	Revision of Module 1 & VTU Question Paper Discussion	R1- 62 - 74	PPT & Chalk & Board
	20	24/03/23	Revision of Module 2& VTU Question Paper Discussion	R1- 62 - 74	PPT & Chalk & Board
IV	21	25/03/23	Control of Voltage and Reactive Power : Introduction, Generation & Absorption of Reactive Power	T1- 591 - 601	PPT & Chalk & Board
	22	25/03/23	Relationship Between Voltage , Power and Reactive Power at a node	T1- 591 - 601	PPT & Chalk & Board
	23	31/03/23	Methods of Voltage Control	T1- 591 - 601	PPT & Chalk & Board

	24	31/03/23	Methods of Voltage Control	T1- 591 - 601	PPT & Chalk & Board
	25	31/03/23	Methods of Voltage Control	T1- 591 - 601	PPT & Chalk & Board
	26	08/04/23	Problems in Voltage Control	T1- 591 - 601	PPT & Chalk & Board
	27	08/04/23	Problems in Voltage Control	T1- 591 - 601	PPT & Chalk & Board
	28	08/04/23	Voltage Collapse	T1- 591 - 601	PPT & Chalk & Board
	29	21/04/23	Class Test on Module 4	-	PPT & Chalk & Board
	30	21/04/23	Revision of Module 4& VTU Question Paper Discussion	-	PPT & Chalk & Board
II	31	21/04/23	<u>Automatic Generation Control (AGC) & Interconnected Power System :</u> Introduction & Area Control Concept	T1-290 - 327	PPT & Chalk & Board
	32	28/04/23	Two area frequency control by State Variable method	T1-290 - 327	PPT & Chalk & Board
	33	28/04/23	Two area frequency control by State Variable method	T1-290 - 327	PPT & Chalk & Board
	34	28/04/23	Load Frequency Control With Generation rate Constraints	T1-290 - 327	PPT & Chalk & Board
	35	05/05/23	Speed Governor dead band and its effect on AGC	T1-290 - 327	PPT & Chalk & Board
	36	05/05/23	Digital LF Controllers	T1-290 - 327	PPT & Chalk & Board
	37	05/05/23	Decentralized Control	T1-290 - 327	PPT & Chalk & Board
	38	06/05/23	Problems under Two area Frequency control	T1-290 - 327	PPT & Chalk & Board
V	39	06/05/23	<u>Power System Security:</u> Introduction & Factors Affecting Security	T1-510 - 524	PPT & Chalk & Board
	40	06/05/23	Power System Security	T1-510 - 524	PPT & Chalk & Board
	41	12/05/23	Contingency Analysis - Introduction & Flowchart	T1-510 - 524	PPT & Chalk & Board
	42	12/05/23	Linear Sensitivity Factors	T1-510 - 524	PPT & Chalk & Board
	43	12/05/23	Ac Power Flow Methods	T1-510 - 524	PPT & Chalk &

					Board
	44	13/05/23	Contingency Selection and Ranking	T1-510 - 524	PPT & Chalk & Board
	45	13/05/23	<u>State Estimation of Power Systems :</u> Introduction	T1-531 - 540	PPT & Chalk & Board
	46	13/05/23	Linear Least Square Estimation	T1-531 - 540	PPT & Chalk & Board

Assignment Topics:

Sl.No	Topic	References
1	Open Book Test / Class Test / Assignment (Module 1 & 2)	R2 & T1
2	Open Book Test / Class Test / Assignment (Module 3 & 4)	T1 & R2
3	Open Book Test / Class Test / Assignment	T1 & R2

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	Modern Power System Analysis by D.P.Kothari	4th Edition	Tata Mcgraw hill	2011
	T2	Power Generation, Operation & Control by Allen J Wood etal	2 nd Edition	Wiley	2003
Reference Books	R1	Power System SCADA & smart Grid by Mini S Thom & John D Mc Donald	2 nd Edition	CRC Press	2015
	R2	Power System analysis stability and control by Kundur	8 th Reprint	MC Graw Hill	2009



(Dr.B.Devi Vighneshwari)
Faculty



(Dr.Bharath V S)
HOD / EEE



THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

DEPARTMENT OF ELECTRICAL AND ELECTRONICS

Lesson Plan

Date: 24-05-23

Subject code : BESCK104B/BESCK204B
Subject Title : Introduction to Electrical Engineering
Course / Branch : B.E/ AIML, SECTION –C6
Semester : II
Academic Year : 2022-2023
Faculty Name : Mrs. Resna S R

Objective of Course

- To explain the laws used in the analysis of DC and AC circuits.
- To explain the behavior of circuit elements in single-phase circuits.
- To explain the construction and operation of transformers, DC generators and motors and induction motors.
- To introduce concepts of circuit protecting devices and earthing.
- To explain electric power generation, transmission and distribution, electricity billing, equipment and personal safety measures.

Module	Topic No.	Date	Planned Topic	Books Referred & Pages	Pedagogy
I	1.	25/5/2023	Introduction to syllabus	T1-16	PPT
	2.	26/5/2023	Module1 Introduction: Conventional and non-conventional energy resources; General structure of electrical power systems using single line diagram approach.	T1-20	PPT
	3.	29/5/2023	Power Generation: Hydel, Nuclear power generation (Block Diagram approach).	T1-21	PPT
	4.	30/5/2023	Solar & wind power generation (Block Diagram approach).	T1-25	PPT
	5.	1/6/2023	D.C.Circuits: Electric circuit, active and passive elements, dependent source and independent source	T1-30	Chalk &Board
	6.	2/6/2023	Ohm's Law and limitations	T1-32	Chalk &Board
	7.	3/6/2023	Analysis of Series, Parallel, & Series-Parallel circuits excited by independent voltage source	T1-35	Chalk &Board
	8.	5/6/2023	problems	T1-36	Chalk &Board
	9.	6/6/2023	problems	T1-40	Chalk &Board
	10.	8/6/2023	Kirchhoff's voltage and current Law(KCL&KVL), power, energy	T1-42	Chalk &Board

II	11.	9/6/2023	problems	T1-43	Chalk &Board
	12.	12/6/2023	Problems	T1-44	Chalk &Board
	13.	13/6/2023	Problems	T1-50	Chalk &Board
	14.	15/6/2023	Module2 A.C. Fundamentals: Equation of AC Voltage and current ,Definition of time period, frequency, amplitude, phase, phase difference.	T1-55	Chalk &Board
	16.	16/6/2023	Average value, RMS value, form factor, peak factor	T1-78	Chalk &Board
	17.	19/6/2023	Analysis of Resistive and inductive circuit with Phasor diagram	T1-84	Chalk &Board
	18.	20/6/2023	Problems on resistive and inductive load	T1-84	Chalk &Board
	19.	22/6/2023	Problems on resistive and inductive load	T1-85	Chalk &Board
	20.	23/6/2023	Analysis of Capacitive circuit with Phasor diagram+problems	T1-86	Chalk &Board
	21	30/6/2023	Analysis of RL circuits with Phasor diagrams	T1-87	Chalk &Board
	III	22.	1/7/2023	Analysis of RC circuits with Phasor diagrams	T1-89
23.		3/7/2023	Analysis of RLC circuits with Phasor diagrams	T1-92	Chalk &Board
24.		4/7/2023	Real power, Reactive power, Apparent Power and Power factor	T1-96	Chalk &Board
25.		6/7/2023	Problems on series circuits	T1-98	Chalk &Board
26.		7/7/2023	Problems on series circuits	T1-100	Chalk &Board
27		10/7/2023	Three Phase circuits: Generation of 3 phase power, Advantages and limitations of 3-phase power.	T1-102	Chalk &Board
28.		11/7/2023	Voltage and current relations in star and delta connections.	T1-106	Chalk &Board
29.		13/7/2023	Module 3: DC Machines: DC Generator: Principle of operation, constructional details	T1-110	Chalk &Board
30		14/7/2023	Induced emf expression, Types of generat	T1-118	Chalk &Board
31.		15/7/2023	The relation between induced emf and terminal voltage and problems	T1-120	Chalk &Board
32.		17/7/2023	Problems	T1-130	Chalk &Board

IV	33.	18/7/2023	Problems	T1-132	Chalk &Board
	34.	20/7/2023	Problems	T1-135	Chalk &Board
	35.	21/7/2023	DC Motor: Principle of operation	T1-137	Chalk &Board
	36.	24/7/2023	Back emf and and its significance, torque equations	T1-138	Chalk &Board
	37.	25/7/2023	Types of motors, characteristics (shunt and series only), and applications.	T1-139	Chalk &Board
	38.	27/7/2023	Speed control(shunt and series only),	T1-140	Chalk &Board
	39.	28/7/2023	Problems	T1-141	Chalk &Board
	40.	31/7/2023	Problems	T1-145	Chalk &Board
	41.	1/8/2023	Problems	T1-147	Chalk &Board
	42.	7/8/2023	Module 4: Single Phase Transformers: Necessity of transformer, Principle of operation.	T1-148	Chalk &Board
	43.	8/8/2023	Types and construction of transformers.	T1-149	Chalk &Board
	44.	10/8/2023	EMF equation, losses.	T1-150	Chalk &Board
	45.	11/8/2023	Problems on emf equation	T1-152	Chalk &Board
	46.	12/8/2023	Variation of losses with respect to load, efficiency.	T1-154	Chalk &Board
	47.	14/8/2023	Condition for maximum efficiency.	T1-155	Chalk &Board
	48.	17/8/2023	problems	T1-157	Chalk &Board
	49.	18/8/2023	problems	T1-158	Chalk &Board
	50.	21/8/2023	problems	T1-159	Chalk &Board
	51.	22/8/2023	Three Phase Induction Motors: Principle of operation and concept of rotating magnetic field.	T1-160	Chalk &Board
	52.	24/8/2023	Construction and types of three-phase induction motor.	T1-162	Chalk &Board
	53.	25/8/2023	Working principle of three-phase induction motor.	T1-163	Chalk &Board
	54.	26/8/2023	Types – squirrel cage and wound rotor	T1-165	Chalk &Board

	55.	28/8/2023	Slip and its significance.	T1-166	Chalk &Board
	56.	29/8/2023	problems	T1-167	Chalk &Board
V	57.	31/8/2023	Module 5: Domestic Wiring: Requirements, Types of wiring: casing, capping. Two way and three way control of load.	T1- 170	PPT
	58.	1/9/2023	Electricity bill: Power rating of household appliances including air conditioners, PCs, laptops, printers,etc.	T1-172	PPT
	59.	7/9/2023	Definition of “unit” used for consumption of electrical energy, two-part electricity tariff, Calculation of electricity bill for domestic consumers.	T1-175	PPT
	60	8/9/2023	Equipment Safety measures: Working principle of Fuse and Miniature circuit breaker (MCB), merits and demerits	T1-176	PPT
	61	9/9/2023	Personal safety measures: Earthing and its types, Electric Shock, Safety precautions to avoid Shock	T1-178	PPT

COURSE OUTCOMES:

CO1: Understand the concepts of various energy sources and Electric circuits.

CO2 : Apply the basic Electrical laws to solve circuits.

CO3 : Discuss the construction and operation of various Electrical Machines.

CO4 : Identify suitable Electrical machine for practical implementation.

CO5: Explain the concepts of electric power transmission and distribution, electricity billing, circuit protective devices and personal safety measures.

Assignment Topics:

Sl. No.	Assignment Topics	References
1.	Assignment Test - I	R1
2.	Assignment Test - II	T1

Text Books:

T1: Basic Electrical Engineering, D C Kulshreshtha, TMH, Revised first edition.

T2: A Text book of Electrical Technology by B.L. Theraja, S Chand and Company, reprint edition 2014.

Reference Books:

R1:Basic Electrical Engineering, D. P. Kothari and I. J. Nagrath, Tata McGraw Hill 4th edition, 2019

R2:Principles of Electrical Engineering & Electronics by V. K. Mehta, Rohit Mehta, S. Chand and Company Publications, 2nd edition, 2015.

R3: Fundamentals of Electrical Engineering by Rajendra Prasad, PHI, 3rd edition, 2014.


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THE OXFORD COLLEGE OF ENGINEERING
HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electrical & Electronics Engineering
Lesson Plan

Date: 30/10/22

Subject code : 21EE32
Subject Title : Analog Electronics & Opamps
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : III
Academic Year : 2022 – 2023 (ODD)
Faculty Name : Jayakumar N

COURSE OBJECTIVE:

To provide the knowledge for the analysis of transistor biasing and thermal stability circuits. To develop skills to design the electronic circuits like amplifiers, power amplifiers and oscillators. To understand the importance of FET and MOSFET and FET/MOSFET amplifiers

COURSE OUTCOME:

At the end of the course the student will be able to:

1. Utilize the characteristics of transistor for different applications.
2. Design and analyze biasing circuits for transistor.
3. Design, analyze and test transistor circuitry as amplifiers and oscillators

Unit	Topic No.	Date	Topic	Text Referred & Page No	Pedagogy
I	1	31-10-22	Diode clipping	T1, R1	Chalk &Board & PPT
	2	2-11-22	The operating point, load line analysis	T1, R1	Chalk &Board & PPT
	3	2-11-22	DC analysis and design of fixed bias circuit	T1, R1	Chalk &Board & PPT
	4	3-11-22	emitter stabilized bias circuit, collector to base bias circuit	T1, R1	Chalk &Board & PPT
	5	7-11-22	voltage divider bias circuit,	T1, R1	Chalk &Board & PPT
	6	9-11-22	Modified DC bias with voltage feedback	T1, R1	Chalk &Board & PPT
	7	9-11-22	. Bias stabilization and stability factors for fixed bias circuit	T1, R1	Chalk &Board & PPT
	8	10-11-22	collector to base bias circuit and voltage divider bias circuit	T1, R1	Chalk &Board & PPT
	9	14-11-22	bias compensation, Transistor switching	T1, R1	Chalk &Board & PPT

			circuits.		
	10	16-11-22	Hybrid model	T1, R1	Chalk &Board & PPT
	11	16-11-22	h-parameters for CE, CC and CB modes	T1, R1	Chalk &Board & PPT
	12	17-11-22	mid-band analysis of single stage amplifier, simplified hybrid model	T1, R1	Chalk &Board & PPT
II	13	18-11-22	, analysis for CE, CB and CC(emitter voltage follower circuit) modes,	T1, R1	Chalk &Board & PPT
	14	21-11-22	Millers Theorem and its dual, analysis for collector to base bias circuit and CE with un bypassed emitter resistance.	T1, R1	Chalk &Board & PPT
	15	23-11-22	Transistor frequency response: General frequency considerations, effect of various capacitors on frequency response	T1, R1	Chalk &Board & PPT
	16	23-11-22	CE short circuit current gain using hybrid pi model, multistage frequency effects	T1, R1	Chalk &Board & PPT
	17	24-11-22	Cascade connection , analysis for CE-CC mode, CE-CE mode	T1, R1	Chalk &Board & PPT
	18	28-11-22	CASCADE stage-unbypassed and bypassed emitter resistance modes	T1, R1	Chalk &Board & PPT
	19	5-12-22	Darlington connection using h-parameter model	T1, R1	Chalk &Board & PPT
	20	7-12-22	Feedback Amplifiers: Classification of feedback amplifiers	T1, R1	Chalk &Board & PPT
	21	7-12-22	, concept of feedback, general characteristics of negative feedback amplifiers,	T1, R1	Chalk &Board & PPT
	22	8-12-22	Input and output resistance with feedback of various feedback amplifiers,	T1, R1	Chalk &Board & PPT
	23	12-12-22	analysis of different practical feedback amplifier circuits.	T1, R1	Chalk &Board & PPT

	24	14-12-22	Classification of power amplifiers, Analysis of class A, Class B	T1, R1	Chalk &Board & PPT
	25	14-12-22	class C and Class AB amplifiers	T1, R1	Chalk &Board & PPT
	26	15-12-22	,Distortion in power amplifiers, second harmonic distortion	T1, R1	Chalk &Board & PPT
	27	19-12-22	harmonic distortion in Class B amplifiers, cross over distortion and elimination of cross over distortion	T1, R1	Chalk &Board & PPT
	28	21-12-22	Oscillators: Concept of positive feedback,	T1, R1	Chalk &Board & PPT
	29	21-12-22	frequency of oscillation for RC phase oscillator, Wien Bridge oscillator	T1, R1	Chalk &Board & PPT
	30	22-12-22	Tuned oscillator circuits, Hartley oscillator,	T1, R1	Chalk &Board & PPT
	31	26-12-22	Colpitt's oscillator , crystal oscillator and its types.	T1, R1	Chalk &Board & PPT
III	32	28-12-22	FETs: Construction, working and characteristics of JFET and MOSFET	T1, R1	Chalk &Board & PPT
	33	28-12-22	Biasing of JFET and MOSFET. Fixed bias configuration	T1, R1	Chalk &Board & PPT
	34	29-12-22	self bias configuration, voltage divider biasing	T1, R1	Chalk &Board & PPT
	35	31-12-22	Analysis and design of JFET (only common source configuration with fixed bias)	T1, R1	Chalk &Board & PPT
	36	31-12-22	MOSFET	T1, R1	Chalk &Board & PPT
	37	2-01-23	Diode clipping	T1, R1	Chalk &Board & PPT
	38	05-01-23	The operating point, load line analysis	T1, R1	Chalk &Board & PPT
	39	09-01-23	DC analysis and design of fixed bias circuit	T1, R1	Chalk &Board & PPT
	40	11-01-23	emitter stabilized bias circuit, collector to base bias circuit	T1, R1	Chalk &Board & PPT

	41	11-01-23	voltage divider bias circuit,	T1, R1	Chalk &Board & PPT
IV	42	12-01-23	Modified DC bias with voltage feedback	T1, R1	Chalk &Board & PPT
	43	14-01-23	. Bias stabilization and stability factors for fixed bias circuit	T1, R1	Chalk &Board & PPT
	44	16-01-23	collector to base bias circuit and voltage divider bias circuit	T1, R1	Chalk &Board & PPT
	45	18-01-23	bias compensation, Transistor switching circuits.	T1, R1	Chalk &Board & PPT
	46	18-01-23	Hybrid model	T1, R1	Chalk &Board & PPT
	47	19-01-23	h-parameters for CE, CC and CB modes	T1, R1	Chalk &Board & PPT
	48	23-01-23	mid-band analysis of single stage amplifier, simplified hybrid model	T1, R1	Chalk &Board & PPT
	49	25-01-23	, analysis for CE, CB and CC(emitter voltage follower circuit) modes,	T1, R1	Chalk &Board & PPT
	50	25-01-23	Millers Theorem and its dual, analysis for collector to base bias circuit and CE with un bypassed emitter resistance.	T1, R1	Chalk &Board & PPT
	V	51	30-01-23	Transistor frequency response: General frequency considerations, effect of various capacitors on frequency response	T1, R1
52		06-02-23	CE short circuit current gain using hybrid pi model, multistage frequency effects	T1, R1	Chalk &Board & PPT
53		08-02-23	Cascade connection , analysis for CE-CC mode, CE-CE mode	T1, R1	Chalk &Board & PPT
54		08-02-23	CASCADE stage-unbiased and bypassed emitter resistance modes	T1, R1	Chalk &Board & PPT
55		09-02-23	Darlington connection using h-parameter model	T1, R1	Chalk &Board & PPT
56		31-10-22	Feedback Amplifiers: Classification of feedback	T1, R1	Chalk &Board & PPT

			amplifiers		
	57	2-11-22	, concept of feedback, general characteristics of negative feedback amplifiers,	T1, R1	Chalk & Board & PPT

Assignment Topics:

Sl.No	Topic	References
1	Assignment Module 1, 2	T1
2	Assignment Module 4	T1
3	Assignment Module 5	T1

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	Electronic Devices and Circuit Theory, Robert L Boylestad Louis Nashelsky	11 th Edition	Pearson,	2015
	T2	Electronic Devices and Circuits, Millman and Halkias	4 th Edition	McGraw Hill	2015
Reference Books	R1	Microelectronics Circuits Analysis and Design, Muhammad Rashid	2 nd Edition	Cengage Learning,	2014



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THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical and Electronics Engineering

Lesson Plan

Date: 31/10/2022

Subject code/Title : 21EE33/ Electric circuit Analysis
Course / Branch : BE/EEE
Semester : III
Academic Year : 2022-23 (ODD)
Faculty Name : Mrs. Sumitha T L

COURSE OBJECTIVES:

- To familiarize the basic laws, source transformations, theorems and the methods of analyzing electrical circuits.
- To explain the use of network theorems and the concept of resonance.
- To familiarize the analysis of three-phase circuits, two port networks and networks with non-sinusoidal inputs.
- To explain the importance of initial conditions, their evaluation and transient analysis of R-L and R-C circuits.
- To impart basic knowledge on network analysis using Laplace transforms.

PREREQUISITE(s): Ohms Law, Kirchhoff's Current and Voltage law, Potential divider rule and Current divider rule

Sl. No.	Topic No.	Date	Topics	Books Referred	Pedagogy
I	1	31/10/22	Module 1- Basic Concepts: Active and passive elements, Concept of ideal and practical source	T1	Chalk and Talk
	2	04/11/22	Source Transformation	T1	Chalk and Talk
	3	07/11/22	Source Transformation	T1	Chalk and Talk
	4	08/11/22	Source shifting	T1	Chalk and Talk
	5	08/11/22	Star-delta Transformation	T1	Chalk and Talk
	6	14/11/22	Network reduction method - Mesh Analysis	T1	Chalk and Talk
	7	15/11/22	Network reduction method - Mesh Analysis	T1	Chalk and Talk
	8	15/11/22	Network reduction method - Nodal Analysis	T1	Chalk and Talk
	9	21/11/22	Network reduction method - Nodal Analysis	T1	Chalk and Talk
	10	22/11/22	Super Mesh Analysis	T1	Chalk and Talk
	11	22/11/22	Super Node Analysis	T1	Chalk and Talk
	12	25/11/22	Duality	T1	Chalk and Talk
II	13	28/11/22	Module 2 – Network Theorems: Superposition theorem statement, Problem 1	T1, T2	Chalk and Talk
	14	29/11/22	Superposition theorem – Problems 2,3	T1, T2	Chalk and Talk
	15	29/11/22	Superposition theorem – Problems 4,5	T1, T2	Chalk and Talk
	16	02/12/22	Thevenin's theorem statement, Problem 1	T1, T2	Chalk and Talk
	17	05/12/22	Thevenin's theorem – Problems 2,3	T1, T2	Chalk and Talk
	18	06/12/22	Thevenin's theorem – Problems 4,5	T1, T2	Chalk and Talk
	19	06/12/22	Norton's theorem statement, Problem 1	T1, T2	Chalk and Talk
	20	09/12/22	Norton's theorem – Problems 2,3	T1, T2	Chalk and Talk
	21	10/12/22	Norton's theorem – Problems 4,5	T1, T2	Chalk and Talk

	22	12/12/22	Maximum Power transfer theorem statement, Problem 1	T1, T2	Chalk and Talk
	23	13/12/22	Maximum Power transfer theorem – Problems 2,3	T1, T2	Chalk and Talk
	24	13/12/22	Maximum Power transfer theorem – Problems 4,5	T1, T2	Chalk and Talk
III	25	16/12/22	Module 3 - Resonant Circuits & Transient Analysis: Analysis of simple series RLC circuits under resonance	T2	Chalk and Talk
	26	19/12/22	Problems on Resonant frequency, Bandwidth and Quality factor in series resonant circuit	T2	Chalk and Talk
	27	20/12/22	Problems on Resonant frequency, Bandwidth and Quality factor in series resonant circuit	T2	Chalk and Talk
	28	20/12/22	Analysis of simple Parallel RLC circuits under resonance	T2	Chalk and Talk
	29	23/12/22	Problems on Resonant frequency, Bandwidth and Quality factor in parallel resonant circuit	T2	Chalk and Talk
	30	26/12/22	Problems on Resonant frequency, Bandwidth and Quality factor in parallel resonant circuit	T2	Chalk and Talk
	31	27/12/22	Transient analysis of RL circuits under DC excitation	T2	Chalk and Talk
	32	27/12/22	Transient analysis of RL circuits under DC excitation	T2	Chalk and Talk
	33	30/12/22	Transient analysis of RC circuits under DC excitation	T2	Chalk and Talk
	34	02/01/23	Transient analysis of RC circuits under DC excitation	T2	Chalk and Talk
IV	35	03/01/23	Module 4 – Laplace Transformation: LT of Impulse function	T1	Chalk and Talk
	36	03/01/23	LT of Impulse function	T1	Chalk and Talk
	37	06/01/23	LT of Step function	T1	Chalk and Talk
	38	09/01/23	LT of Step function	T1	Chalk and Talk
	39	10/01/23	LT of Ramp function	T1	Chalk and Talk
	40	10/01/23	LT of Ramp function	T1	Chalk and Talk
	41	13/01/23	Initial and Final value theorems	T1	Chalk and Talk
	42	13/01/23	Numericals based on Initial and Final value theorem	T1	Chalk and Talk
	43	16/01/23	Solution of electric circuits using LT	T1	Chalk and Talk
	44	16/01/23	Solution of electric circuits using LT	T1	Chalk and Talk
V	45	17/01/23	Module 5-Unbalanced Three Phase Systems & Two Port networks: Analysis of 3-ph system	T2	Chalk and Talk
	46	17/01/23	Calculation of real and reactive power	T2	Chalk and Talk
	47	18/01/23	Open Circuit Impedance (Z) parameters	T2	Chalk and Talk
	48	18/01/23	Numericals based on Z parameters	T2	Chalk and Talk
	49	20/01/23	Short Circuit Admittance (Y) parameters	T2	Chalk and Talk
	50	20/01/23	Numericals based on Y parameters	T2	Chalk and Talk
	51	23/01/23	Transmission (T or ABCD) parameters	T2	Chalk and Talk
	52	23/01/23	Numericals based on T parameters	T2	Chalk and Talk
	53	23/01/23	Relation between Z and Y parameters	T2	PPT
	54	23/01/23	Relation between Z and T; Y and T parameters	T2	PPT

THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical and Electronics Engineering

Lesson Plan

Date:30/10/22

Subject code :21EE34
Subject Title :Transformers and Generators
Course / Branch :BE/EEE
Semester : III
Academic Year :2022-2023-Odd Sem
Faculty Name :Mrs Resna S R

Course Objectives:

- To understand the concepts of transformers and their analysis.
- To suggest a suitable three phase transformer connection for a particular operation
- To understand the concepts of generator and to evaluate their performance.
- To explain the requirement for the parallel operation of transformers and synchronous generators. •

PREREQUISITE(s): Basic Principles of Transformers and Generators

Module	Topic No.	Date	Topic	Text Referred & Page	Pedagogy
1	1	31-10-22	Introduction, Working Principle, Types of transformers	T1:48-89	Chalk & Board
	2	2-11-22	Operation of practical transformer under no-load and on-load with phasor diagrams.		Chalk & Board
	3	2-11-22	Open circuit and Short circuit tests		Chalk & Board
	4	3-11-22	Problems		Chalk & Board
	5	7-11-22	Problems		Chalk & Board
	6	9-11-22	Calculation of equivalent circuit parameters and predetermination of efficiency-commercial		Chalk & Board
	7	9-11-22	Problems		Chalk & Board
	8	10-11-22	All-day efficiency		Chalk & Board
	9	14-11-22	Voltage regulation and its significance.		Chalk & Board
	10	16-11-22	Problems		Chalk & Board
	11	16-11-22	Three-phase Transformers: Introduction	Chalk & Board	
	12	17-11-22	Constructional features of three-phase transformers.	Chalk & Board	

	13	18-11-22	Choice between single unit three-phase transformer and a bank of three single-phase transformers	T1:101-115	Chalk &Board
	14	21-11-22	Transformer connection for three phase operation– star/star, delta/delta		Chalk &Board
	15	23-11-22	star/delta, zigzag/star and V/V, comparative features		Chalk &Board
	16	23-11-22	Phase conversion-Scott connection for three-phase to two-phase conversion		Chalk &Board
	17	24-11-22	Problems		Chalk &Board
	18	28-11-22	Labeling of three-phase transformer terminals, vector groups.		Chalk &Board
2	19	5-12-22	Polarity test, Sumpner's test	T1:116-131	Chalk &Board
	20	7-12-22	Separation of hysteresis and eddy current losses		Chalk &Board
	21	7-12-22	Necessity of Parallel operation, conditions for parallel operation– Single phase and three phase		Chalk &Board
	22	8-12-22	Load sharing in case of similar and dissimilar transformers		Chalk &Board
	23	12-12-22	Introduction to autotransformer-copper economy, equivalent circuit	T2:69-79	Chalk &Board
	24	14-12-22	No load and on load tap changing transformers.		Chalk &Board
3	25	14-12-22	Three-winding transformers	T2:69-79	Chalk &Board
	26	15-12-22	Cooling of transformers		Chalk &Board
	27	19-12-22	Direct current Generator: Armature reaction	T1:285-357	Chalk &Board
	28	21-12-22	Commutation and associated problems		Chalk &Board
	29	21-12-22	Synchronous Generators: Armature windings, Winding Factors	T2:221-236	Chalk &Board
	30	22-12-22	E.M.F equation		Chalk &Board
	31	26-12-22	Harmonics–causes, reduction and elimination		Chalk &Board
	32	28-12-22	Armature reaction		Chalk &Board
	33	28-12-22	Synchronous reactance, Equivalent circuit		Chalk &Board
4	34	29-12-22	Synchronous Generators Analysis: Alternator on load	T2:415-450	Chalk &Board
	35	31-12-22	Excitation control for constant terminal voltage		Chalk &Board
	36	31-12-22	Voltage regulation		Chalk &Board

	37	2-01-23	Open circuit and short circuit characteristic		Chalk &Board
	38	05-01-23	Assessment of reactance-short circuit ratio		Chalk &Board
	39	09-01-23	synchronous reactance		Chalk &Board
	40	11-01-23	Voltage regulation by EMF methods.		Chalk &Board
	41	11-01-23	Voltage regulation by MMF methods.		Chalk &Board
	42	12-01-23	Voltage regulation by ZPF methods.		Chalk &Board
	43	14-01-23	Problems		Chalk &Board
	44	16-01-23	Problems		Chalk &Board
5	45	18-01-23	Effects of saliency, two-reaction theory	T2:451-499	Chalk &Board
	46	18-01-23	Parallel operation of generators and load sharing		Chalk &Board
	47	19-01-23	Methods of Synchronization		Chalk &Board
	48	23-01-23	Synchronizing power		Chalk &Board
	49	25-01-23	Determination of X_d & X_q – slip test		Chalk &Board
	50	25-01-23	Performance of Synchronous Generators: Power angle characteristic (salient and non salient pole)		Chalk &Board
	51	30-01-23	Power angle diagram		Chalk &Board
	52	06-02-23	Reluctance power		Chalk &Board
	53	08-02-23	Capability curve for large turbo generators.		Chalk &Board
	54	08-02-23	Hunting and damper windings		Chalk &Board
	55	09-02-23	Revision		Chalk &Board

Outcomes of the Course:

At the end of the course the student will be able to :

- Understand the construction and operation of 1-phase, 3-Phase transformers, and Autotransformer.
- Analyze the performance of transformers by polarity test, Sumpner's Test, phase conversion, 3-phase connection, and parallel operation.
- Understand the construction and working of AC and DC Generators
- Analyze the performance of the AC Generators on infinite bus and parallel operation.

- Determine the regulation of AC Generator by Slip test, EMF, MMF, and ZPF Methods
- Performance of synchronous generators, power angle characteristics

Assignment Topics:

Sl.No	Topic	References
1	Module 1&2	T1
2	Module 2&3	T1
3	Module 4&5	T1

Text Books:

T1: Electric Machines, D. P. Kothari, et al, 4 th Edition, 2011.

T2: Principals of Electrical Machines, V.K Mehta, Rohit Mehta, S Chand, 2nd edition, 2009.

Reference Books:


R1:Electric Machines, Mulukuntla S.Sarma, at el, Cengage, 1st Edition, 2009.

R2:Electrical Machines, Drives and Power systems, Theodore Wildi, Pearson, 6th Edition, 2014.

R3:Electric Machines, Ashfaq Hussain, Dhanpat Rai & Co, 2nd Edition, 2013.



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THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical and Electronics Engineering

Lesson Plan

Date:30/10/2022

Subject code : 21EEL35
Subject Title : **ELECTRICAL MACHINES LABORATORY – I**
Course / Branch : B.E/EEE
Semester : **III**
Academic Year : 2022-2023(Odd Sem)
Faculty Name : Mrs.Resna S R

Course objectives :

- Conducting of different tests on transformers and synchronous machines and evaluation of their performance.
- Verify the parallel operation of two single phase transformers.
- Study the connection of single phase transformers for three phase operation and phase conversion.
- Study of synchronous generator connected to infinite bus.
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	TOPIC NO.	DATE	TOPIC
CYCLE I	1	08-11-22	Open Circuit and Short circuit tests on single phase step up or step down transformer and predetermination of (i) Efficiency and regulation (ii) Calculation of parameters of equivalent circuit
	2	15-11-22	Sumpner's test on similar transformers and determination of combined and individual transformer efficiency
	3	22-11-22	Parallel operation of two dissimilar single-phase transformers of different kVA and determination of load
	4	29-11-22	Polarity test and connection of 3 single-phase transformers in star – delta and determination of efficiency and regulation under balanced resistive load.
	5	06-12-22	Comparison of performance of 3 single-phase transformers in delta – delta and V – V (open delta) connection under load.
	6	13-12-22	Scott connection with balanced and unbalanced loads
	7	17-12-22	Internal-I
CYCLE II	8	13-12-22	Separation of hysteresis and eddy current losses in single phase transformer
	9	27-12-22	Voltage regulation of an alternator by EMF and MMF methods.
	10	10-01-23	Voltage regulation of an alternator by ZPF method.
	11	17-01-23	Power angle curve of synchronous generator or Direct load test on three phase synchronous generator to determine efficiency and regulation
	12	24-01-23	Slip test – Measurement of direct and quadrature axis reactance and predetermination of regulation of salient pole synchronous machines
	13	31-01-23	Performance of synchronous generator connected to infinite bus, under constant power and variable excitation & vice - versa.

	14	07-02-23	Internal II
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Course outcomes:

At the end of the course the student will be able to:

- Evaluate the performance of transformers from the test data obtained.
- Connect and operate two single phase transformers of different KVA rating in parallel.
- Connect single phase transformers for three phase operation and phase conversion.
- Compute the voltage regulation of synchronous generator using the test data obtained in the laboratory.
- Evaluate the performance of synchronous generators from the test data and assess the performance of synchronous generator connected to infinite bus



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THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical & Electronics Engineering

Lesson Plan

Date: 15/11/2023

Subject code : BSCK307
Subject Title : Social Connect and Responsibility
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : III
Academic Year : 2023-24 (Odd)
Faculty Name : Mrs Nisha C Rani

COURSE OBJECTIVE:

The course will enable the students to:

1. Provide a formal platform for students to communicate and connect to the surrounding.
2. create a responsible connection with the society.
3. Understand the community in general in which they work.
4. Identify the needs and problems of the community and involve them in problem – solving.
5. Develop among themselves a sense of social & civic responsibility & utilize their knowledge in finding practical solutions to individual and community problems.
6. Develop competence required for group-living and sharing of responsibilities & gain skills in mobilizing community participation to acquire leadership qualities and democratic attitudes.

COURSE OUTCOME:

Course outcomes (Course Skill Set):

At the end of the course, the student will be able to:

CO1: Communicate and connect to the surrounding.

CO2: Create a responsible connection with the society.

CO3: Involve in the community in general in which they work.

CO4: Notice the needs and problems of the community and involve them in problem – solving.

CO5: Develop among themselves a sense of social & civic responsibility & utilize their knowledge

in finding practical solutions to individual and community problems.

CO6: Develop competence required for group-living and sharing of responsibilities & gain skills

in mobilizing community participation to acquire leadership qualities and democratic attitudes

PREREQUISITE(s):

Basics awareness of social responsibilities

Unit	Topic No.	Date	Topic	Period	Pedagogy
I	1	17/11/23	Introduction to Social Connect and Responsibility	4	PPT & Smart Board
	2	24/11/23	Lecture session and planning to start Plantation	4	PPT & Smart Board
	3	1/12/23	Sharing the experience by students about plantation activity	4	PPT & Smart Board
	4	8/12/23	Planning and Discussion on Heritage walk, crafts	4	PPT & Smart Board
	5	15/12/23	Video based presentation by students based on Heritage walk	4	PPT & Smart Board
	6	22/12/23	Planning and Discussion on Waste Management and Organic farming	4	PPT & Smart Board
	7	5/1/24	Sharing the experience by students about Waste Management and Organic farming activity (ppt)	4	PPT & Smart Board
II	8	12/1/24	Planning and Discussion on Water Conservation	4	PPT & Smart Board
	9	19/1/24	Sharing the experience by students about creating awareness to people about water conservation	4	PPT & Smart Board
	10	2/2/24	Planning and Discussion on food culture	4	PPT & Smart Board
	11	9/2/24	Food walk	4	PPT & Smart Board
	12	16/2/24	Jamming Session on Various social connect activities	4	PPT & Smart Board



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THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electronics and Communication Engineering

Lesson Plan

Date: 14/10/2022

Subject code/Title : 18EE51/Management & Entrepreneurship
Course / Branch : BE/EEE
Semester : V
Academic Year : 2022-23 (ODD)
Faculty Name : Dr. Bharath V S

COURSE OBJECTIVE:

- To introduce the field of management, task of the manager, importance of planning and types of planning, staff recruitment and selection process.
- To discuss the ways in which work is allocation, structure of organizations, modes of communication and importance of managerial control in business. To explain need of coordination between the manager and staff, the social responsibility of business and leadership.
- To explain various types of entrepreneurs and their functions, the myths of entrepreneurship and the factors required for capacity building for entrepreneurs
- To discuss the importance of Small Scale Industries and the related terms and problems involved.
- To discuss methods for generating new business ideas and business opportunities in India and the importance of business plan.
- To introduce the concepts of project management and discuss capitol building process. To explain project feasibility study and project appraisal and discuss project financing

PREREQUISITE(s) :

Basics of management and planning.

Social Responsibilities of Business & Entrepreneurship.

Module	Topic No.	Date	Topic	Books Referred & Pages	Pedagogy
I	1	17/10/22	Module1: Management- Definition, Importance – Nature and Characteristics of Management	T1:1-9, 31-33	Chalk and talk
	2	18/10/22	Management Functions	T1:1-2, 24-26	Chalk and talk
	3	19/10/22	Roles of Manager, Levels of Management	T1: 20-23	Chalk and talk
	4	20/10/22	Management & Administration, Management as a Science, Art & Profession	T1:16-19	Chalk and talk
	5	25/10/22	Nature, Importance and Purpose Of Planning, Types of Plans	T1:33-35	Chalk and talk

	6	27/10/22	Steps in Planning, Limitations of Planning	T1:36-44	Chalk and talk
	7	31/10/22	Decision Making – Meaning, Types of Decisions	T1:45-65	Chalk and talk
	8	02/11/22	Steps in Decision Making.	T1:68-69	Chalk and talk
	9	03/11/22	Managerial Skills, Question Paper discussion	T1:69-72	Chalk and talk
	10	07/11/22	Question Paper discussion	T1:73-76	Chalk and talk
	11	08/11/22	VTU QP Discussion	T1:77-82	Chalk and talk
	12	09/11/22	Revision	T1:83-86	Chalk and talk
II	13	10/11/22	Module 2: Organizing and Staffing - Meaning, Nature and Characteristics of Organization	T1: 122-123	Chalk and talk
	14	14/11/22	Process of Organization, Principles of Organization	T1:137-141	Chalk and talk
	15	15/11/22	Departmentalization, Centralization Versus Decentralization of Authority and Responsibility	T1:141-142	Chalk and talk
	16	16/11/22	Committees – meaning, Types of Committees, Span of Control (Definition only)	T1:142-145	Chalk and talk
	17	17/11/22	Nature and Importance of Staffing, Process of Selection and Recruitment.	T1:122-127	Chalk and talk
	18	21/11/22	Directing and Controlling: Meaning and Nature of Directing-Leadership Styles,	T1:128-134	Chalk and talk
	19	22/11/22	Motivation Theories Communication – Meaning and Importance	T1:135-136	Chalk and talk
	20	23/11/22	Coordination- Meaning and Importance, Techniques of Coordination.	T1:147-151	Chalk and talk
	21	24/11/22	Controlling – Meaning, Steps in Controlling	R1: 83-92	Chalk and talk
	22	25/11/22	Question Paper discussion	R1: 92-98	Chalk and talk
	23	28/11/22	VTU QP Discussion	R1: 98-102	Chalk and talk
	24	29/11/22	Revision	R1: 103-106	Chalk and talk
III	25	30/11/22	Module 3: Social Responsibilities of Business: Meaning of Social	T1: 304-305	Chalk and talk

			Responsibility, Social Responsibilities of Business towards Different Groups,		
	26	01/12/22	Social Audit, Business Ethics and Corporate Governance.	T1:305-307	Chalk and talk
	27	05/12/22	Entrepreneurship: Definition of Entrepreneur, Importance of Entrepreneurship,	T1:307-309	Chalk and talk
	28	06/12/22	concepts of Entrepreneurship, Characteristics of successful Entrepreneur,	T1:309-313	Chalk and talk
	29	07/12/22	Classification of Entrepreneurs, Intrapreneur – An Emerging Class,	T1:314-330	Chalk and talk
	30	08/12/22	Comparison between Entrepreneur and Intrapreneur,	T1:314-330	Chalk and talk
	31	12/12/22	Myths of Entrepreneurship,	T1:135-136	Chalk and talk
	32	13/12/22	Entrepreneurial Development models,	T1:337-339	Chalk and talk
	33	14/12/22	Entrepreneurial development cycle,	R1:137-148	Chalk and talk
	34	15/12/22	Problems faced by Entrepreneurs and capacity building for Entrepreneurship	R1:149-157	Chalk and talk
	35	19/12/22	VTU QP Discussion	R1:157-165	Chalk and talk
IV	36	20/12/22	Module 4: Modern Small Business Enterprises: Role of Small Scale Industries, Concepts and definitions of SSI Enterprises,	T1: 431-432	Chalk and talk
	37	21/12/22	Government policy and development of the Small Scale sector in India,	T1:431-432	Chalk and talk
	38	22/12/22	Growth and Performance of Small Scale Industries in India,	T1:432-435	Chalk and talk
	39	26/12/22	Sickness in SSI sector, Problems for Small Scale Industries,	T1:436-438	Chalk and talk
	40	27/12/22	Impact of Globalization on SSI,	T1:438-443	Chalk and talk
	41	28/12/22	Impact of WTO/GATT on SSIs,	T1:445-453	Chalk and talk
	42	29/12/22	Ancillary Industry and Tiny Industry (Definition only).	T1:453-455	Chalk and talk
	43	02/01/23	Institutional Support for Business	T1:456-458	Chalk and talk

			Enterprises: Introduction		
	44	03/01/23	Policies & Schemes of Central–Level Institutions,	T1:487-492	Chalk and talk
	45	04/01/23	State-Level Institutions	T1:500-505	Chalk and talk
	46	05/01/23	Policies & Schemes of Central–Level Institutions,	T1:506-508	Chalk and talk
	47	09/01/23	State-Level Institutions	T1: 509-512	Chalk and talk
	48	10/01/23	VTU QP Discussion	T1:514-517	Chalk and talk
	49	11/01/23	Revision	T1:518-526	Chalk and talk
V	50	12/01/23	Module 5: Project Management: Meaning of Project	T1: 166-170	Chalk and talk, PPT
	51	16/01/23	Project Objectives & Characteristics,	T1:171-180	Chalk and talk, PPT
	52	17/01/23	Project Identification- Meaning & Importance; Project Life Cycle,	T1:181-182	Chalk and talk, PPT
	53	18/01/23	Project Scheduling, Capital Budgeting,	T1:182-204	Chalk and talk, PPT
	54	19/01/23	Generating an Investment Project Proposal,	T1:205-216	Chalk and talk, PPT
	55	23/01/23	Project Report-Need and Significance of Report, Contents, Formulation,	T1:226-235	PPT
	56	24/01/23	Project Analysis-Market, Technical, Financial, Economic, Ecological, Project Evaluation and Selection,	T1:237-247	PPT
	57	25/01/23	Project Financing, Project Implementation Phase, Human & Administrative aspects of Project Management,	T1:248-259	PPT
	58	30/01/23	Prerequisites for Successful Project Implementation.	T1:280-284	PPT
	59	31/01/23	New Control Techniques- PERT and CPM, Steps involved in developing the network,	T1:285-287	PPT
	60	01/02/23	Uses and Limitations of PERT and CPM	T1:289-294	Chalk and talk
	61	02/02/23	VTU QP Discussion	-	-

COURSE OUTCOMES:

- 1) Explain the field of management, task of the manager, planning and the need of proper staff, recruitment and selection process.
- 2) Discuss work allocation, the structure of organization, the modes of communication and importance of managerial control in business.
- 3) To explain need of coordination between the manager and staff in exercising the authority and delegating duties.
- 4) To explain the social responsibility of business and leadership. Explain the concepts of entrepreneurship and the role and importance of the entrepreneur in economic development.
- 5) Show an understanding of the role and importance of Small Scale Industries, business plan and its presentation.
- 6) Discuss the concepts of project management, capitol building process, project feasibility study, project appraisal and project financing.

Assignment Topics

Activity	Unit	Planned date	Execution date	Remarks (Mention the bridging of curriculum gap for the course)
Assignment Test - I	Module 1 & 2	15/12/22	15/12/22	Indepth knowledge about Management & Planning
Assignment Test - II	Module 3 & 4.5	10/01/23	10/01/23	Helps in understanding the social responsibilities of business.
Assignment Test - III	Module 4.5 & 5	27/01/23	27/01/23	Helps in understanding the Policies & Schemes of Central–Level Institutions, State-Level Institutions.

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	Principles of Management, P.C.Tripathi, P.N.Reddy	6thEdition	McGraw Hill	2017
	T2	Entrepreneurship Development And Small Business Enterprises, Poornima M.Charanthimath	2nd Edition	Pearson	2014
Reference Books	R1	Dynamics of Entrepreneurial Development and Management, Vasant Desai	1st Edition	Himalaya Publishing House	2007
	R2	Essentials of Management: An International, Innovation and Leadership perspective, Harold Koontz, Heinz Wehrich	10th Edition	McGraw Hill	2016



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HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electrical & Electronics Engineering
Lesson Plan

Date: 17/10/2022

Subject code : 18EE52
Subject Title : Microcontrollers
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : V
Academic Year : 2022-23(Odd)
Faculty Name : Mrs Nisha C Rani

COURSE OBJECTIVE:

- To explain the internal organization and working of Computers, microcontrollers and embedded processors.
- Compare and contrast the various members of the 8051 family.
- To explain the registers of the 8051 microcontroller, manipulation of data using registers and MOV instructions.
- To explain in detail the execution of 8051 Assembly language instructions and data types
- To explain loop, conditional and unconditional jump and call, handling and manipulation of I/O instructions.
- To explain different addressing modes of 8051, arithmetic, logic instructions, and programs.
- To explain develop 8051C programs for time delay, I/O operations, I/O bit manipulation, logic,.

COURSE OUTCOME:

At the end of the course the student will be able to:

- Outline the 8051 architecture, registers, internal memory organization, addressing modes.
- Discuss 8051 addressing modes, instruction set of 8051, accessing data and I/O port programming.
- Develop 8051C programs for time delay, I/O operations, I/O bit manipulation, logic and arithmetic operations, data conversion and timer/counter programming.
- Summarize the basics of serial communication and interrupts, also develop 8051 programs for serial data communication and interrupt programming.
- Program 8051 to work with external devices for ADC, DAC, Stepper motor control, DC motor control, Elevator control.

PREREQUISITE(s):

Basics of Microcontroller architecture, computer architecture, basics of C Programming

Unit	Topic No.	Date	Topic	Period	Text Referred & Page No	Pedagogy
I	1	17/10/22	Module1: 8051 Microcontroller Basics - Introduction, Various	2	T1,R1	Chalk & Board

			Processors			
	2	18/10/22	Block Diagram and Internal Memory Organizations	3	T1,R1	Chalk & Board
	3	19/10/22	Stack and Addressing Modes	1	T1,R1	Chalk & Board
	4	20/10/22	Register Banks, PSW, Flag bits	2	T1,R1	Chalk & Board
	5	21/10/22	Stack Operations	5	T1,R1	Chalk & Board
	6	25/10/22	I/O Port usage	2	T1,R1	Chalk & Board
	7	27/10/22	Memory decoding - Introduction	2	T1,R1	Chalk & Board
	8	28/10/22	Memory decoding - Examples	5	T1,R1	Chalk & Board
	9	31/10/22	Problems in Memory Decoding	2	T1,R1	Chalk & Board
	10	2/11/22	Problems in Memory Decoding	1	T1,R1	Chalk & Board
	11	3/11/22	Revision	2	T1,R1	Chalk & Board
	12	4/11/22	Revision	5	T1,R1	Chalk & Board
II	13	5/11/22	Module 2: Assembly Programming and Instruction of 8051 Introduction	3	T1,R1	Chalk & Board
	14	7/11/22	Arithmetic Instructions - With Programs	2	T1,R1	PPT
	15	8/11/22	Logical Instructions - With Programs	3	T1,R1	PPT
	16	9/11/22	Arithmetic Instructions - With Programs	1	T1,R1	Chalk & Board
	17	10/11/22	Logical Instructions - With Programs	2	T1,R1	Chalk & Board
	18	14/11/22	Jump Instructions - With Programs	2	T1,R1	Chalk & Board
	19	15/11/22	Loop Instructions with Programs	3	T1,R1	Chalk & Board
	20	16/11/22	Call Instructions with Programs	1	T1,R1	Chalk & Board
	21	21/11/22	I/ O Programming	2	T1,R1	Chalk & Board
	22	22/11/22	Running of the Programs	3	T1,R1	Chalk & Board
	23	23/11/22	Program in Data Transfer	1	T1,R1	Chalk & Board
	24	24/11/22	Programs in Data Transfer	2	T1,R1	Chalk & Board
	25	25/11/22	Programs in Arithmetic Instructions	5	T1,R1	Chalk & Board
	26	28/11/22	Programs in Arithmetic Instructions	2	T1,R1	Chalk & Board
	27	29/11/22	Programs in Logical Instructions	3	T1,R1	Chalk & Board
		28	30/11/22	Programming	1	T1,R1
	29	1/12/22	Programming	2	T1,R1	Chalk & Board
III	30	2/12/22	Module 3: 8051 Programming in C Data Types - Introduction, Time delays - with calculations	5	T1,R1	Chalk & Board
	31	3/12/23	I/O Programming, Logic Operations in C	1	T1,R1	Chalk & Board
	32	5/12/22	Data conversion Programs, Data serialization	2	T1,R1	Chalk & Board

	33	6/12/22	Accessing Code ROM space	3	T1,R1	Chalk & Board
	34	7/12/22	8051 Timer Programming: Introduction	1	T1,R1	Chalk & Board
	35	8/12/22	Counter - Different Modes	2	T1,R1	Chalk & Board
	36	9/12/22	Counter - Different Modes	5	T1,R1	Chalk & Board
	37	12/12/22	Programming of Counters	2	T1,R1	Chalk & Board
	38	13/12/22	Programming of Counters	3	T1,R1	Chalk & Board
IV	39	14/12/22	Module 4: Serial Port and Interrupt Introduction	1	T1,R1	Chalk & Board
	40	15/12/22	Basics of serial communication	2	T1,R1	Chalk & Board
	41	16/12/22	Connections of Serial Port	5	T1,R1	Chalk & Board
	42	17/12/22	Serial Port programming in assembly	2	T1,R1	Chalk & Board
	43	19/12/22	Serial Port Programming in C	2	T1,R1	PPT
	44	20/12/22	8051 Interrupts – Introduction	3	T1,R1	PPT
	45	21/12/22	Timer Interrupts,Serial Communication Interrupts	1	T1,R1	PPT
	46	22/12/22	External Hardware Interrupts	2	T1,R1	Chalk & Board
	47	23/12/22	Interrupt priority,	3	T1,R1	Chalk & Board
V	48	27/12/22	Programs in Interrupts	1	T1,R1	Chalk & Board
	49	28/12/22	With external systems user interfacing	2	T1,R1	Chalk & Board
	50	30/12/22	Serial I/O devices	2	T1,R1	Chalk & Board
	51	31/12/22	Module 5: Interfacing – Introduction	3	T1,R1	Chalk & Board
	52	1/1/23	Motor Control - DC, Stepper motor	1		Chalk & Board
	53	2/1/23	DAC Programming,	2		Chalk & Board
	54	3/1/23	ADC Programming,	5	T1,R1	Chalk & Board
	55	4/1/23	8255 Interfacing	2		Chalk & Board
	56	5/1/23	Key board interfacing	3	T1,R1	Chalk & Board
	57	6/1/23	LCD interfacing	1	T1,R1	Chalk & Board
	58	9/1/23	Key board interfacing	2	T1,R1	Chalk & Board
	59	10/1/23	LCD interfacing	5	T1,R1	Chalk & Board
	60	11/1/23	Revision	2	T1,R1	Chalk & Board
	61	16/1/23	Revision	3	T1,R1	Chalk & Board
	62	18/1/23	Revision	1	T1,R1	Chalk & Board
	63	19/1/23	Revision	2	T1,R1	Chalk & Board
	64	30/1/23	Revision	5	T1,R1	Chalk & Board
	65	1/2/23	Revision	2	T1,R1	Chalk & Board
	66	2/2/23	Revision	3	T1,R1	Chalk & Board
	67	3/2/23	Revision	1	T1,R1	Chalk & Board

Assignment Topics:

Sl.No	Topic	References
1	Module 1	T3
2	Module 3	T1
3	Module 5	T1

1ST INTERNAL - 17/11/2022- 19/11/2022

2ND INTERNAL - 26/11/2022 - 28/12/2022

3RD INTERNAL - 23/1/2023– 25/1/2023

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	The 8051 Microcontroller and embedded systems using Assemble and C, Muhammad Ali Mazadi	2nd Edition	Pearson	2008
	T2	The 8051 Microcontroller, Kenneth Ayala	3rd Edition	Cengage Learning	2005
Reference Books	R1	The 8051 Microcontroller and Embedded Systems, Manish K Patel	1st Edition	Mc Graw Hill	2014
	R2	Microcontrollers: Architecture, Programming, Interfacing and System Design, Rajkamal	1st Edition	Pearson	2012



Faculty



HOD/EE

THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electronics and Communication Engineering

Lesson Plan

Date: 14/10/2022

Subject code/Title : 18EE53/Power Electronics
Course / Branch : BE/EEE
Semester : V
Academic Year : 2022-23 (ODD)
Faculty Name : Mrs. Sumitha T L

COURSE OBJECTIVE:

1. To give an overview of applications power electronics, different types of power semiconductor devices, their switching characteristics, power diode characteristics, types, their operation and the effects of power diodes on RL circuits.
2. To explain the techniques for design and analysis of single phase diode rectifier circuits.
3. To explain different power transistors, their steady state and switching characteristics and limitations.
4. To explain different types of Thyristors, their gate characteristics and gate control requirements.
5. To explain the design, analysis techniques, performance parameters and characteristics of controlled rectifiers and Voltage controllers.
6. To explain the design, analysis techniques, performance parameters and characteristics of DC- DC and DC -AC converters

PREREQUISITE(s):

1. Knowledge about electronics, semiconductor devices and their basic operation
2. Knowledge about basic control techniques and controllers

Module	Topic No.	Date	Topic	Books Referred & Pages	Pedagogy
I	1	17/10/22	Power Diodes and Diode Rectifiers - Introduction	T1:1-9, 31-33	Chalk and talk
	2	18/10/22	Applications of power electronics, Peripheral effects	T1:1-2, 24-26	Chalk and talk
	3	19/10/22	Types of Power electronic circuits	T1: 20-23	Chalk and talk
	4	20/10/22	Characteristics and specifications of Switches	T1:16-19	Chalk and talk
	5	25/10/22	Power Diodes - Introduction, Characteristics	T1:33-35	Chalk and talk
	6	27/10/22	Types of diodes, Freewheeling diode	T1:36-44	Chalk and talk
	7	31/10/22	Freewheeling diode with RL Load	T1:45-65	Chalk and talk
	8	02/11/22	Diode Rectifiers - Introduction	T1:68-69	Chalk and talk
	9	03/11/22	Diode circuits with DC source connected to R load	T1:69-72	Chalk and talk
	10	07/11/22	Diode circuits with DC source connected to RL load	T1:73-76	Chalk and talk
	11	08/11/22	Single phase full wave rectifier with R Load	T1:77-82	Chalk and talk
	12	09/11/22	Single phase full wave rectifier with RL Load	T1:83-86	Chalk and talk

II	13	10/11/22	Power Transistors - Introduction	T1: 122-123	Chalk and talk	
	14	14/11/22	Power MOSFET structure, operation, symbol	T1:137-141	Chalk and talk	
	15	15/11/22	MOSFET - Steady state characteristics	T1:141-142	Chalk and talk	
	16	16/11/22	MOSFET - Switching characteristics	T1:142-145	Chalk and talk	
	17	17/11/22	Bipolar Junction Transistors – Steady State Characteristics	T1:122-127	Chalk and talk	
	18	21/11/22	Bipolar Junction Transistors – Switching Characteristics	T1:128-134	Chalk and talk	
	19	22/11/22	Switching Limits	T1:135-136	Chalk and talk	
	20	23/11/22	IGBT - structure, operation, v-i characteristics	T1:147-151	Chalk and talk	
	21	24/11/22	MOSFET Gate Drive, BJT Base Drive	R1: 83-92	Chalk and talk	
	22	25/11/22	Isolation of Gate and Base Drive – pulse Transformers, Optocouplers	R1: 92-98	Chalk and talk	
	23	28/11/22	Problems on BJT	R1: 98-102	Chalk and talk	
	24	29/11/22	Problems on BJT	R1: 103-106	Chalk and talk	
	III	25	30/11/22	Thyristor - Introduction	T1: 304-305	Chalk and talk
		26	01/12/22	PN structure, Equivalent circuit, Operation	T1:305-307	Chalk and talk
27		05/12/22	Two-Transistor Model of Thyristor	T1:307-309	Chalk and talk	
28		06/12/22	Thyristor Turn- ON and Turn- OFF Characteristics	T1:309-313	Chalk and talk	
29		07/12/22	A brief study on Thyristor Types	T1:314-330	Chalk and talk	
30		08/12/22	Thyristor Types	T1:314-330	Chalk and talk	
31		12/12/22	Series and Parallel operation of Thyristors	T1:135-136	Chalk and talk	
32		13/12/22	di/dt Protection, dv/dt Protection	T1:337-339	Chalk and talk	
33		14/12/22	DIAC - Structure, Equivalent circuit, Characteristics	R1:137-148	Chalk and talk	
34		15/12/22	Block diagram for generation of triggering pulses, types of firing circuits	R1:149-157	Chalk and talk	
35		19/12/22	UJT Firing circuit	R1:157-165	Chalk and talk	
IV	36	20/12/22	Controlled Rectifiers and AC voltage Controllers - Introduction	T1: 431-432	Chalk and talk	
	37	21/12/22	Single phase half wave circuit with R Load	T1:431-432	Chalk and talk	
	38	22/12/22	Single phase half wave circuit with RL Load	T1:432-435	Chalk and talk	
	39	26/12/22	Single phase half wave circuit with RL Load and Freewheeling Diode	T1:436-438	Chalk and talk	
	40	27/12/22	Single phase half wave circuit with RLE Load	T1:438-443	Chalk and talk	
	41	28/12/22	Single-Phase Full Converters with RLE Load	T1:445-453	Chalk and talk	
	42	29/12/22	Single-Phase Dual Converter	T1:453-455	Chalk and talk	
	43	02/01/23	Principle of operation of Three- Phase dual Converters	T1:456-458	Chalk and talk	
	44	03/01/23	Problems on controlled rectifiers	T1:487-492	Chalk and talk	
	45	04/01/23	AC Voltage Controllers -Introduction, Principle of phase control & Integral	T1:500-505	Chalk and talk	

			cycle control		
	46	05/01/23	Single-Phase Full-Wave Controllers with Resistive Load	T1:506-508	Chalk and talk
	47	09/01/23	Single- Phase Full-Wave Controllers with Inductive Load	T1: 509-512	Chalk and talk
	48	10/01/23	Three-Phase Full-Wave Controllers	T1:514-517	Chalk and talk
	49	11/01/23	Problems on AC voltage controllers	T1:518-526	Chalk and talk
V	50	12/01/23	DC-DC Converters and DC-AC Converters - Introduction	T1: 166-170	Chalk and talk, PPT
	51	16/01/23	Principle of step up and step down chopper with RL load	T1:171-180	Chalk and talk, PPT
	52	17/01/23	Performance parameters	T1:181-182	Chalk and talk, PPT
	53	18/01/23	DC-DC converter classification	T1:182-204	Chalk and talk, PPT
	54	19/01/23	Problems on DC-DC converters	T1:205-216	Chalk and talk, PPT
	55	23/01/23	DC-AC Converters: Introduction, Principle of operation single phase bridge inverters	T1:226-235	PPT
	56	24/01/23	Three phase bridge inverters	T1:237-247	PPT
	57	25/01/23	Voltage control of single phase inverters	T1:248-259	PPT
	58	30/01/23	Harmonic reductions	T1:280-284	PPT
	59	31/01/23	Current source Inverters	T1:285-287	PPT
	60	01/02/23	Problems on single phase bridge inverters	T1:289-294	Chalk and talk
	61	02/02/23	VTU QP Discussion	-	-

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. To give an overview of applications power electronics, different types of power semiconductor devices, their switching characteristics, power diode characteristics, types, their operation and the effects of power diodes on RL circuits.
2. To explain the techniques for design and analysis of single-phase diode rectifier circuits.
3. To explain different power transistors, their steady state and switching characteristics and limitations.
4. To explain different types of Thyristors, their gate characteristics and gate control requirements.
5. To explain the design, analysis techniques, performance parameters and characteristics of controlled rectifiers and DC- DC converters.
6. To explain the design, analysis techniques, performance parameters and characteristics of DC -AC converters and Voltage controllers.

Assignment Topics

Sl. No.	Assignment Topics	Submission due on
1	Applications of Power Electronics, Switching characteristics of BJT, MOSFET	15/12/22
2	UJT Triggering circuit, Problems based on UJT triggering circuit	10/01/23
3	Problems on Chopper circuits	27/01/23

Text Books:

T1: Power Electronics: Circuits Devices and Applications - Mohammad H Rashid Pearson, 4th Edition, 2014

Reference Books:

R1: Power Electronics - P.S. Bimbhra Khanna Publishers 5th Edition, 2012

R2: Power Electronics: Converters, Applications and Design Ned Mohan et al Wiley 3rd Edition, 2014

R3: Power Electronics Daniel W Hart McGraw Hill 1 st Edition, 2011

R4: Elements of Power Electronics Philip T Krein Oxford Indian Edition, 2004





THE OXFORD COLLEGE OF ENGINEERING
HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
DEPARTMENT OF ELECTRICAL AND ELECTRONICS

Lesson Plan

Date: 13-10-22

Subject code : 18EE54
Subject Title : SIGNALS AND SYSTEMS
Course / Branch : B.E/ EEE
Semester : V
Academic Year : 2022-23
Faculty Name : M.RAICHEL RUBY
Objective of Course : To study about the basis of signals and system analysis procedures and enable to work a relatively wide range of problems in linear systems

Course Objectives:

- To study about the basis of signals and system analysis procedures and enable to work a relatively wide range of problems in linear systems.
- To study Fourier representation of continuous and discrete time non-periodic signals and the properties of Fourier transform.
- To study the use of Z-Transform in the complex exponential representation of discrete time signals and the analysis of systems.

Unit	Topic No.	Date	Planned Topic	Books Referred & Pages	Pedagogy
I	1.	17.10.22	Definitions of signals & system	1-T1	Chalk & Talk
	2.	18.10.22	Classification of signals	4 -T1	Chalk & Talk
	3.	20.10.22	Problems	5-T1	Chalk & Talk
	4.	21.10.22	problems	7-T1	Chalk & Talk
	5.	21.10.22	Basic operation on signals	32-T1	Chalk & Talk
	6.	22.10.22	problems	35-T1	Chalk & Talk
	7.	25.10.22	Problems	36-T1	Chalk & Talk
	8.	27.10.22	Problems	48-T1	Chalk & Talk
	9.	28.10.22	Interconnection of operations	57-T1	Chalk & Talk
	10.	28.10.22	problems	66-T1	Chalk & Talk
	11.	31.10.22	Problems	66-T1	Chalk & Talk
	12.	03.11.22	Properties of system	68-T1	Chalk & Talk
	13.	04.11.22	problems	70-T1	Chalk & Talk
II	14.	04.11.22	Impulse response representation	82-T1	Chalk & Talk
	15.	05.11.22	problems	84-T1	Chalk & Talk
	16.	07.11.22	Problems	85-T1	Chalk & Talk
	17.	08.11.22	Properties of impulse response rep	118-T1	Chalk & Talk
	18.	10.11.22	problems	120-T1	Chalk & Talk
	19.	14.11.22	problems	125-T1	Chalk & Talk
	20.	15.11.22	Difference & differential eqn	135-T1	Chalk & Talk

		17/11/22-19/11/22	I- INTERNAL TEST	-	-	
	22.	21.11.22	Problems	150-T1	Chalk & Talk	
	23.	22.11.22	Block diagram representation	154-R1	Chalk & Talk	
III	24.	24.11.22	Continuous time Fourier Transform (CTFT)	180- ,R1	Chalk & Talk	
	25.	25.11.22	Properties of CTFT	181-R1	Chalk & Talk	
	26.	25.11.22	Problems	187- R1	Chalk & Talk	
	27.	26.11.22	Problems	189- R1	Chalk & Talk	
	28.	28.11.22	Problems	192- ,R1	Chalk & Talk	
	29.	29.11.22	Applications of Continuous time Fourier Transform(CTFT)	165- R1	Chalk & Talk	
	30.	1.12.22	Problems of CTFT	167- R1	Chalk & Talk	
	31.	2.12.22	Frequency and Solutions of differential equations	172-R1	Chalk & Talk	
	32.	2.12.22	Problems	179-R1	Chalk & Talk	
IV	33.	3.12.22	Introduction to DTFT	218- T2	Chalk & Talk	
	34.	5.12.22	Properties of DTFT	219- T2	Chalk & Talk	
	35.	6.12.22	Problems	228- T2	Chalk & Talk	
	36.	8.12.22	Problems	233- T2	Chalk & Talk	
	37.	9.12.22	Problems	235-	Chalk & Talk	
	38.	9.12.22	Problems	244- T2	Chalk & Talk	
	39.	12.12.22	Discrete time Fourier transform(DTFT)	193- T2	Chalk & Talk	
	40.	13.12.22	Problems	200-T2	Chalk & Talk	
	41.	15.12.22	Problems	194- T2	Chalk & Talk	
	42.	16.12.22	Properties of DTFT	205- T2	Chalk & Talk	
	43.	16.12.22	Problems	207- T2	Chalk & Talk	
	44.	17.12.22	Problems	217- T2	Chalk & Talk	
	45.	19.12.22	Frequency response of LTI system	245- T1	Chalk & Talk	
	46.	20.12.22	Problems	246- T1	Chalk & Talk	
	47.	22.12.22	Problems	253- T1	Chalk & Talk	
	48.	23.12.22	Problems	254- T1	Chalk & Talk	
			26/12/22-28/12/22	II –INTERNAL TEST	-	-
		49.	29.12.22	Solution of differential equation using system function	255- T1	Chalk & Talk
		50.	30.12.22	Problems	257- T1	Chalk & Talk
	51.	30.12.22	Problems	265- T1	Chalk & Talk	
	52.	31.12.22	Problems	266- T1	Chalk & Talk	
	53.	2.01.23	Problems	267- T1	Chalk & Talk	
V	54.	3.01.23	Introduction to z-transform	268- T1	Chalk & Talk	
	55.	5.01.23	Problems	270- T1	Chalk & Talk	
	56.	6.01.23	Problems	284- T1	Chalk & Talk	
	57.	6.01.23	Properties of z-transform	291- T1	Chalk & Talk	
	58.	10.01.23	Problems	293- T1	Chalk & Talk	
	59.	12.01.23	Problems	294- T1	Chalk & Talk	
	60.	13.01.23	Problems- tutorial class	295- T1	Chalk & Talk	
	61.	16.01.23	Inversion of z-transforms	305- T1	Chalk & Talk	
	62.	17.01.23	Problems	309- T1	Chalk & Talk	

	63.	19.01.23	Transform analysis of LTI system	310- T1	Chalk & Talk
	64.	20.01.23	Transfer function, stability, causality	311- T1	Chalk & Talk
		23/01/23-25/01/23	III - INTERNAL TEST	-	-
	65.	27.01.23	Problems	312- T1	Chalk & Talk
	66.	30.01.23	Unilateral z-transform	313- T1	Chalk & Talk
	67.	31.01.23	Problems	314- T1	Chalk & Talk
	68.	02.02.23	Application to solve difference equation	316- T1	Chalk & Talk

COURSE OUTCOME:

C354.1 - Basics of signals and system, Classification of signals and system

C354.2 - Basic operations on signals and properties of system

C354.3 - Use convolution in both continuous and discrete domain for the analysis of systems given the impulse response of a system. Provide block diagram representation of LTI system.

C354.4 - Use Z-transform and properties of Z-transform for the analysis of discrete time systems.

C354.5 - Apply continuous time Fourier transform representation to study signals and linear time invariant systems

C354.6- Apply Discrete time Fourier transform representation to study signals and linear time invariant systems

Assignment Topics:

Sl. No.	Assignment Topics	References
1.	Transform analysis of LTI system	R1
2.	Transfer function of z-transform	T1

Text Books:

T1: Simon Haykin & Barry Veen. "signals and system" John Wiley & sons.

T2: Alan v Oppenheim, Alen S Hamind Nawab "signals & system" pearson education Asia

Reference Books:

R1 :signals and system UdayaKumar.S

R2 :Michel J Roberts. "signals & system analysis of signal through linear systems" TataMcgraw Hill



— (M. Raichel Ruby)
Faculty



(Dr. Bharath V S)
HOD / EEE

THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical and Electronics Engineering

Lesson Plan

Date:15/10/22

Subject code : 18EE55
Subject Title : Electrical Machine Design
Course / Branch : BE/EEE
Semester : V
Academic Year : 2022-2023-Odd Sem
Faculty Name : Mrs Resna S R

Course Objectives:

- 1.To discuss design factors, limitations in design and modern trends in design and manufacturing of electrical machines.
- 2.To discuss the properties of electrical, magnetic and insulating materials used in the design of electrical machines.
3. To derive the output equation of DC machine, single phase, three phase transformers, induction motor and synchronous machines.
4. To discuss the selection of specific loadings, for various machines.
5. To discuss separation of main dimensions for different electrical machines
6. To discuss design of field windings for DC machines and synchronous machines.
7. To evaluate the performance parameters of transformer, induction motor.
8. To design of cooling tubes for the transformer for a given temperature rise.
9. To explain design of rotor of squirrel cage rotor and slip ring rotor..

PREREQUISITE(s): Basic Principles of Machines

Module	Topic No.	Date	Topic	Text Referred &Page	Pedagogy
I	1	17/10/22	Design of Machines, Design Factors, Limitations in design	T1:1.1-1.4	PPT
	2	17/10/22	Modern Trends in design, manufacturing Techniques.	T1:1.4-1.5	PPT
	3	18/10/22	Electrical Engineering Materials: Desirabilities of Conducting Materials	T1:2.1	PPT
	4	20/10/22	Comparison of Aluminium and Copper wires.	T1:2.2	PPT
	5	21/10/22	Ferromagnetic Materials	T1:2.10	PPT
	6	25/10/22	Soft Magnetic materials-Solid Core Materials,	T1:2.11	PPT
	7	27/10/22	Electrical Sheet and Strip, Cold Rolled Grain Oriented Steel. Insulating Materials	T1:2.11-2.15	PPT
	8	28/10/22	Desirable Properties	T1:2.17	PPT
	9	31/10/22	Temperature Rise and Insulating Materials	T1:2.17-2.19	PPT
	10	3/11/22	Classification of Insulating materials based on Thermal Consideration	T1:2.19-2.20	PPT
	11	4/11/22	Output Equation	T1:9.13	PPT, Youtube Videos

II	12	5/11/22	Choice of Specific Loadings	T1:9.14-9.15	PPT, Youtube Videos
	13	7/11/22	Choice of Number of Poles	T1:9.18	PPT, Youtube Videos
	14	7/11/22	Main Dimensions of armature	T1:9.25-9.27	PPT, Youtube Videos
	15	8/11/22	Design of Armature Slot Dimensions	T1:9.43-9.44	PPT, Youtube Videos
	16	10/11/22	Commutator and Brushes	T1:9.88	PPT, Youtube Videos
	17	14/11/22	Estimation of Ampere Turns for the Magnetic Circuit	T1:9.61	PPT, Youtube Videos
	18	14/11/22	Dimensions of Yoke	T1:9.61	PPT, Youtube Videos
	19	15/11/22	Main Pole and Air Gap	T1:9.58	PPT, Youtube Videos
	20	21/11/22	Design of Shunt and Series Field Windings	T1:9.63-9.65	PPT, Youtube Videos
	21	21/11/22	Problems	T1:9.65-9.71	PPT
	22	22/11/22	Problems	T1:9.85	PPT
	23	24/11/22	Problems	T1:9.86	PPT
	24	25/11/22	Problems	T1:9.87	PPT
	25	28/11/22	Problems	T1:9.88	PPT
III	26	28/11/22	Output Equations of Single Phase and Three Phase Transformers	T1:5.49-5.50	PPT, Youtube Videos
	27	29/11/22	Output Equations Three Phase Transformers	T1:5.50	PPT, Youtube Videos
	28	1/12/22	Choice of Specific Loadings		PPT, Youtube Videos
	29	2/12/22	Expression for Volts/Turn	T1:5.50	PPT, Youtube Videos
	30	3/12/22	Determination of Main Dimensions of the Core	T1:5.58	PPT, Youtube Videos
	31	3/12/22	Estimation of Number of Turns and Conductor Cross Sectional area of Primary and Secondary Windings	T1:5.59	PPT, Youtube Videos
	32	5/12/22	Estimation of Conductor Cross Sectional area of Primary and Secondary Windings	T1:5.60	PPT, Youtube Videos
	33	5/12/22	No Load Current.	T1:5.98	PPT, Youtube Videos
	34	6/12/22	Expression for the Leakage Reactance of core type transformer with concentric coils, and calculation of Voltage Regulation.	T1:5.85	PPT, Youtube Videos
	35	8/12/22	Design of Tank and Cooling (Round and Rectangular) Tubes	T1:5.105	PPT, Youtube Videos
	36	9/12/22	Problems	T1:5.77	PPT

	37	12/12/22	Problems	T1:5.78	PPT
	38	12/12/22	Problems	T1:5.79	PPT
	39	13/12/22	Problems	T1:5.80-5.81	PPT
	40	15/12/22	Problems	T1:5.81-5.84	PPT
	41	16/12/22	Problems	T1:5.112	PPT
	42	17/12/22	Problems	T1:5.120	PPT
	43	19/12/22	Problems	T1:5.124	PPT
IV	44	19/12/22	Introduction -Three phase Induction motors	T1:10.1-10.2	PPT, Youtube Videos
	45	20/12/22	Output Equation	T1:10.7	PPT, Youtube Videos
	46	22/12/22	Choice of Specific Loadings	T1:10.9-10.8	PPT, Youtube Videos
	47	23/12/22	Main Dimensions of Stator	T1:10.9	PPT, Youtube Videos
	48	29/12/22	Design of stator slots and Winding,	T1:10.10	PPT, Youtube Videos
	49	30/12/22	Choice of Length Air Gap	T110.19	PPT, Youtube Videos
	50	02/01/23	Estimation of Number of Slots for Squirrel Cage Rotor	T:10.11	PPT, Youtube Videos
	51	02/01/23	Design of Rotor Bars and End Ring.	T1:10.28-10.29	PPT, Youtube Videos
	52	03/01/23	Design of Slip Ring rotor	T1:10.34-10.35	PPT, Youtube Videos
	53	05/01/23	Estimation of No Load Current and Leakage Reactance	T1:10.41,10.51	PPT, Youtube Videos
	54	06/01/23	Problems	T1:10.13	PPT
	55	09/01/23	Problems	T1:10.14	PPT
	56	09/01/23	Problems	T1:10.15	PPT
	57	10/01/23	Problems	T1:10.16	PPT
58	12/01/23	Problems	T1:10.17	PPT	
V	59	13/01/23	Output Equation	T1:11.14	PPT, Youtube Videos
	60	14/01/23	Choice of Specific Loadings	T1:11.15	PPT, Youtube Videos
	61	16/01/23	Short Circuit Ratio	T1:11.18	PPT, Youtube Videos
	62	16/01/23	Main Dimensions of Stator	T1:11.15	PPT, Youtube Videos
	63	17/01/23	Design of stator slots and Winding	T1:11.21	PPT, Youtube Videos
	64	19/01/23	Design of Salient and non- salient Pole Rotors.	T1:11.38	PPT, Youtube Videos
	65	20/01/23	Design of non- salient Pole Rotors	T1:11.56	PPT, Youtube Videos

66	27/01/23	Magnetic Circuit and Field Winding	T1:11.44,11.47	PPT, Youtube Videos
67	30/01/23	Problems	T1:11.16	PPT
68	30/01/23	Problems	T1:11.17	PPT
69	01/02/23	Revision		
70	03/02/23	Revision		

Outcomes of the Course:

- Identify and list, limitations, modern trends in design, manufacturing of electrical machines and properties of materials used in the electrical machines. •
- Derive the output equation of DC machine, discuss selection of specific loadings and magnetic circuits of DC machines,
- Design the field windings of DC machine, and design stator and rotor circuits of a DC machine.
- Derive the output equations of transformer, discuss selection of specific loadings, estimate the number of cooling tubes, no load current and leakage reactance of core type transformer.
- Develop the output equation of induction motor, discuss selection of specific loadings and magnetic circuits of induction motor, design stator and rotor circuits of a induction motor.
- Formulate the output equation of alternator, design the field windings of Synchronous machine, discuss short circuit ratio and its effects on performance of synchronous machines, design salient pole and non-salient pole alternators for given & define short circuit ratio and discuss its effect on machine performance..

Assignment Topics:

Sl.No	Topic	References
1	Module 1&2	T1
2	Module 2&3	T1
3	Module 4&5	T1

Text Books:


T1: A course in Electrical Machine, A.K.Sawhney DhanpatRai 6 th Edition, 2013.

Reference Books:

R1: Performance and Design of Alternating Current Machines M.G. Say CBS Publisher 3 rd Edition, 2002.

R2: Design Data Handbook A. Sanmugasundaram Et al New Age International 1 st Edition, 2011.


Faculty


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THE OXFORD COLLEGE OF ENGINEERING
HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
DEPARTMENT OF ELECTRICAL AND ELECTRONICS

Lesson Plan

Date: 13-10-22

Subject code : 18EE56
Subject Title : HIGH VOLTAGE ENGINEERING
Course / Branch : B.E/ EEE
Semester : V
Academic Year : 2022-23
Faculty Name : Dr B.Devi Vighneshwari

Course Objectives:

- To explain the Fundamentals of Conduction and Breakdown in gases, Breakdown in Liquid dielectrics and Breakdown in Solid dielectrics.
- To explain the generation of high voltages and currents.
- To explain the measurement of high Voltages and currents.
- To explain the over voltage phenomenon and Insulation coordination in Electric power systems.
- To explain the high voltage testing of Electrical apparatus.

Unit	Topic No.	Date	Planned Topic	Books Referred	Pedagogy
I	1.	17.10.22	Gases as Insulating Media	T1, R1	Chalk & Talk
	2.	18.10.22	Ionization process	T1, R1	Chalk & Talk
	3.	20.10.22	Townsend's current growth equation	T1, R1	Chalk & Talk
	4.	21.10.22	Streamer theory of breakdown in gases	T1, R1	Chalk & Talk
	5.	21.10.22	Liquids as Insulators	T1, R1	Chalk & Talk
	6.	22.10.22	Break down in solid dielectrics	T1, R1	Chalk & Talk
	7.	25.10.22	Thermal Breakdown	T1, R1	Chalk & Talk
	8.	27.10.22	Intrinsic breakdown	T1, R1	Chalk & Talk
	9.	28.10.22	Electro mechanical breakdown	T1, R1	Chalk & Talk
	10.	28.10.22	Thermal Breakdown	T1, R1	Chalk & Talk
	11.	31.10.22	Numericals	T1, R1	Chalk & Talk
	12.	03.11.22	Numericals	T1, R1	Chalk & Talk
	13.	04.11.22	Numericals	T1, R1	Chalk & Talk
II	14.	04.11.22	Current doubler circuit and Multiplier circuit	T1, R1	Chalk & Talk
	15.	05.11.22	Generation of high alternating voltages	T1, R1	Chalk & Talk
	16.	07.11.22	Cascade transformers and Resonant transformers	T1, R1	Chalk & Talk
	17.	08.11.22	Generation of Impulse voltages	T1, R1	Chalk & Talk
	18.	10.11.22	Generation of Impulse current	T1, R1	Chalk & Talk
	19.	14.11.22	Marx circuit	T1, R1	Chalk & Talk
	20.	15.11.22	Tripping and control of Impulse	T1, R1	Chalk & Talk

			generators			
		17/11/22-19/11/22	Internal I	T1, R1	-	
	22.	21.11.22	Tripping and control of Impulse generators	T1, R1	Chalk & Talk	
	23.	22.11.22	Impulse generator with three electrode gap	T1, R1	Chalk & Talk	
III	24.	24.11.22	Measurement of high direct current voltages	T1, R1	Chalk & Talk	
	25.	25.11.22	High ohmic resistance, potential dividers	T1, R1	Chalk & Talk	
	26.	25.11.22	Generating voltmeters	T1, R1	Chalk & Talk	
	27.	26.11.22	Measurement of high alternating voltages	T1, R1	Chalk & Talk	
	28.	28.11.22	Electrostatic voltmeters, shubb frotscue	T1, R1	Chalk & Talk	
	29.	29.11.22	Measurement of high currents - AC and DC	T1, R1	Chalk & Talk	
	30.	1.12.22	Numericals	T1, R1	Chalk & Talk	
	31.	2.12.22	Numericals	T1, R1	Chalk & Talk	
	32.	2.12.22	Numericals	T1, R1	Chalk & Talk	
	IV	33.	3.12.22	Natural causes for over voltages	T1, R1	Chalk & Talk
34.		5.12.22	Lighning phenomenon	T1, R1	Chalk & Talk	
35.		6.12.22	Over voltages due to switching surges	T1, R1	Chalk & Talk	
36.		8.12.22	System faults	T1, R1	Chalk & Talk	
37.		9.12.22	Other abnormal conditions	T1, R1	Chalk & Talk	
38.		9.12.22	Principles of Insulations coordinations on High voltage	T1, R1	Chalk & Talk	
39.		12.12.22	Extra High Voltage power system	T1, R1	Chalk & Talk	
40.		13.12.22	Numericals	T1, R1	Chalk & Talk	
41.		15.12.22	Numericals	T1, R1	Chalk & Talk	
42.		16.12.22	Numericals	T1, R1	Chalk & Talk	
43.		16.12.22	Numericals	T1, R1	Chalk & Talk	
44.		17.12.22	Natural causes for over voltages	T1, R1	Chalk & Talk	
45.		19.12.22	Lighning phenomenon	T1, R1	Chalk & Talk	
46.		20.12.22	Over voltages due to switching surges	T1, R1	Chalk & Talk	
47.		22.12.22	System faults	T1, R1	Chalk & Talk	
48.		23.12.22	Other abnormal conditions	T1, R1	Chalk & Talk	
			26/12/22-28/12/22	Internal II	T1, R1	-
		49.	29.12.22	Revision	T1, R1	Chalk & Talk
		50.	30.12.22	Numericals	T1, R1	Chalk & Talk
		51.	30.12.22	Numericals	T1, R1	Chalk & Talk
	52.	31.12.22	Numericals	T1, R1	Chalk & Talk	
	53.	2.01.23	Class Test	T1, R1	Chalk & Talk	
V	54.	3.01.23	Testing of Insulators	T1, R1	Chalk & Talk	
	55.	5.01.23	Testing of Insulators	T1, R1	Chalk & Talk	
	56.	6.01.23	Testing of Insulators	T1, R1	Chalk & Talk	
	57.	6.01.23	Testing of bushings	T1, R1	Chalk & Talk	
	58.	10.01.23	Testing of bushings	T1, R1	Chalk & Talk	
	59.	12.01.23	Testing of bushings	T1, R1	Chalk & Talk	
	60.	13.01.23	Testing of Isolators	T1, R1	Chalk & Talk	
	61.	16.01.23	Testing of circuit breakers	T1, R1	Chalk & Talk	
	62.	17.01.23	Testing of Surge arresters	T1, R1	Chalk & Talk	
	63.	19.01.23	Radio Interference measurements	T1, R1	Chalk & Talk	
	64.	20.01.23	Testing of HVDC Valves and equipments	T1, R1	Chalk & Talk	

		23/01/23- 25/01/23	Internal III	T1, R1	-
	65.	27.01.23	Numericals	T1, R1	Chalk & Talk
	66.	30.01.23	Numericals	T1, R1	Chalk & Talk
	67.	31.01.23	Numericals	T1, R1	Chalk & Talk
	68.	02.02.23	Numericals	T1, R1	Chalk & Talk

COURSE OUTCOME:

- At the end of the course the student will be able to:
- Explain the Conduction and Breakdown phenomenon in gases, liquid dielectrics.
- Explain the Conduction and Breakdown phenomenon in gases, solid dielectrics.
- To discuss the generation of high Voltages and currents.
- To discuss the measurement techniques for high voltages and currents.
- To discuss over voltage phenomenon and Insulation coordination in Electric power system.
- To discuss testing of materials and Electric apparatus and high voltage testing of Electric apparatus.

Assignment Topics:

Sl. No.	Assignment Topics	References
1.	Module 1, 2	T1, R1
2.	Module 2, 3	T1, R1
3	Module 4 & 5	T1, R1

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	High Voltage Engg - MS Naidu & Kamaraju	5 th Edition	Mc Graw Hill	2011
	T2	High Voltage Engg - CL Wadhwa	3 rd Edition	Mc Graw Hill	2002
Reference Books	R1	High Voltage Engg - Kuffel	1st	Shiva Book Centre	2016
	R2	High Voltage Engg - Ray S	1st	RBA Publication	2013



(Dr.B.Devi Vighneshwari)
Faculty



(Dr.Bharath V S)
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THE OXFORD COLLEGE OF ENGINEERING
HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electrical & Electronics Engineering
Lesson Plan

Date: 11/9/2023

Subject code : 18EE71
Subject Title : Power System Analysis 2
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : VII
Academic Year : OCT 2023
Faculty Name : Dr.B.Devi Vighneshwari

COURSE OBJECTIVE:

- To explain formulation of network models and bus admittance matrix for solving load flow problems.
- To discuss optimal operation of generators on a bus bar and optimum generation scheduling.
- To explain symmetrical fault analysis and algorithm for short circuit studies.
- To explain formulation of bus impedance matrix for the use in short circuit studies on power systems.
- To explain numerical solution of swing equation for multi-machine stability

COURSE OUTCOME:

- Formulate network matrices and models for solving load flow problems.
- Perform steady state power flow analysis of power systems using numerical iterative techniques.
- Solve issues of economic load dispatch and unit commitment problems.
- Analyze short circuit faults in power system networks using bus impedance matrix.
- Apply Point by Point method and Runge Kutta Method to solve Swing Equation.

Unit	Topic No.	Date	Topic	Period	Text Referred & Page No	Pedagogy
I	1	11/9/23	Network Topology: Introduction and basic definitions of Elementary graph theory	1	T1,R1	Chalk &Board & PPT
	2	12/9/23	Tree, cut-set, loop analysis.	3	T1,R1	Chalk &Board & PPT
	3	14/9/23	Formation of Incidence Matrices. Primitive network- Impedance form and admittance form	4	T1,R1	Chalk &Board & PPT
	4	15/9/23	Problems on Graph Theory	2	T1,R1	Chalk &Board & PPT
	5	19/9/23	Problems on Graph Theory	1	T1,R1	Chalk &Board & PPT
	6	21/9/23	Tutorials on Graph	3	T1,R1	Chalk &Board

			Theory			& PPT
	7	22/9/23	Ybus by Inspection Method.	4	T1,R1	Chalk &Board & PPT
	8	23/9/23	Problems on Inspection Methods	2	T1,R1	Chalk &Board & PPT/simulation
	9	29/9/23	Problems on Inspection Methods	1	T1,R1	Chalk &Board & PPT/simulation
	10	03/10/23	Tutorials on Inspection Methods	1	T1,R1	Chalk &Board & PPT/simulation
	11	05/10/23	Formation of Y Bus by Singular Transformation	3	T1,R1	Chalk &Board & PPT/simulation
	12	06/10/23	Problems on singular Transformation Methods	2	T1,R1	Chalk &Board & PPT/simulation
II	13	09/10/23	Problems on singular Transformation Methods	1	T1,R1	Chalk &Board & PPT/simulation
	14	10/10/23	Tutorials on Singular Transformation Methods	3	T1,R1	Chalk &Board & PPT
	15	12/10/23	Revision & Class Test	4	T1,R1	Chalk &Board & PPT
	16	13/10/23	Load Flow introduction	2	T1,R1	Chalk &Board & PPT
	17	16/10/23	Load flow – Gauss seidal method – Derivation	1	T1,R1	Chalk &Board & PPT/simulation
	18	17/10/23	Load flow Problem – with only PQ bus	3	T1,R1	Chalk &Board & PPT/simulation
	19	19/10/23	Load flow Problem – with only PQ bus - Numericals	4	T1,R1	Chalk &Board & PPT/simulation
	20	20/10/23	Load flow Problem – with only PQ bus - Numericals	2	T1,R1	Chalk &Board & PPT/simulation
	21	26/10/23	Class Test / Tutorials	3	T1,R1	Chalk &Board & PPT
	22	27/10/23	Load flow problem – with PQ & PV bus	4	T1,R1	Chalk &Board & PPT/simulation
	23	30/10/23	Load flow problem – with PQ & PV bus - Numericals	2	T1,R1	Chalk &Board & PPT/simulation
	24	31/10/23	Load flow problem – with PQ & PV bus -	1	T1,R1	Chalk &Board &

			Numericals			PPT/simulation
	25	02/11/23	Class Test / Tutorials	3	T1,R1	Chalk &Board & PPT
	26	03/11/23	Load flow problem – with limits	4	T1,R1	Chalk &Board & PPT/simulation
	27	06/11/23	Load flow problem – with limits- Numericals	2	T1,R1	Chalk &Board & PPT/simulation
	28	07/11/23	Load flow problem – with limits- Numericals	3	T1,R1	Chalk &Board & PPT/simulation
	29	09/11/23	Revision & Class Test	4	T1,R1	Chalk &Board & PPT
	30	10/11/23	Load flow studies: Newton Raphson Method – Derivation	2	T1,R1	Chalk &Board & PPT/simulation
	31	13/11/23	Newton Raphson Method – Algorithm	4	T1,R1	Chalk &Board & PPT/simulation
III	32	16/11/23	Newton Raphson Method – Flowchart	3	T1,R1	Chalk &Board & PPT/simulation
	33	17/11/23	Newton Raphson Method – Problems	4	T1,R1	Chalk &Board & PPT/simulation
	34	23/11/23	Newton Raphson Method – Problems	2	T1,R1	Chalk &Board & PPT/simulation
	35	24/11/23	Class test	4	T1,R1	Chalk &Board & PPT
	36	25/11/23	Fast Decoupled Method – Derivation	2	T1,R1	Chalk &Board & PPT/simulation
	37	27/11/23	Fast Decoupled method – Algorithm	2	T1,R1	Chalk &Board & PPT/simulation
	38	28/11/23	Fast Decoupled method – Flowchart	1	T1,R1	Chalk &Board & PPT/simulation
	39	01/12/23	Fast Decoupled Method – Problems	3	T1,R1	Chalk &Board & PPT/simulation
	40	04/12/23	Fast Decoupled Method – Problems	2	T1,R1	Chalk &Board & PPT/simulation
	41	05/12/23	Fast Decoupled Method – Problems	1	T1,R1	Chalk &Board & PPT/simulation

IV	42	07/12/23	Comparison of Load flow methods	3	T1,R1	Chalk &Board & PPT
	43	08/12/23	Optimal System Operation: Introduction	4	T1,R1	Chalk &Board & PPT
	44	11/12/23	Economic Operation-neglecting the losses	2	T1,R1	Chalk &Board & PPT/simulation
	45	12/12/23	Problems on economic operation by neglecting losses	1	T1,R1	Chalk &Board & PPT/simulation
	46	13/12/23	Problems on economic operation by neglecting losses	1	T1,R1	Chalk &Board & PPT/simulation
	47	13/12/23	Derivation of Transmission Losses	3	T1,R1	Chalk &Board & PPT/simulation
	48	15/12/23	Problems on Transmission losses	4	T1,R1	Chalk &Board & PPT/simulation
	49	18/12/23	Problems on Transmission losses	2	T1,R1	Chalk &Board & PPT/simulation
	50	19/12/23	Economic Operation Including the losses	1	T1,R1	Chalk &Board & PPT/simulation
V	51	21/12/23	Problems on economic operation including the losses	3	T2	Chalk &Board & PPT/simulation
	52	22/12/23	Problems on economic operation including the losses	4	T2	Chalk &Board & PPT/simulation
	53	26/12/23	Optimal unit commitment	2	T2	Chalk &Board & PPT
	54	30/12/23	Problems	3	T2	Chalk &Board & PPT
	55	01/01/24	Symmetrical Fault Analysis: Introduction	1	T2	Chalk &Board & PPT
	56	02/01/24	Zbus formation	1	T2	Chalk &Board & PPT/simulation
	57	04/01/24	Zbus formation derivation	3	T2	Chalk &Board & PPT/simulation
	58	05/01/24	Problems on Z bus formation	4	T2	Chalk &Board & PPT/simulation
	59	06/01/24	Problems on Z bus formation	2	T2	Chalk &Board & PPT/simulation

Assignment Topics:

Sl.No	Topic	References
1	Assignment Module 1, 2	T1
2	Assignment Module 4	T1
3	Assignment Module 5	T2

1ST INTERNAL - 16/10/2023 - 18/10/2023

2ND INTERNAL - 20/11/2023 - 22/11/2023

3RD INTERNAL - 27/12/2023 - 29/12/2023

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	Modern Power System Analysis by D.P.Kothari	4th Edition	Tata Mcgraw hill	2011
	T2	Computer Methods in Power System Analysis by Glen W Stagg	1 st Edition	Scientific International Pvt Ltd	2019
Reference Books	R1	Computer Techniques in Power System Analysis by M A Pai	2 nd Edition	MC Graw Hill	2012
	R2	Power system Analysis by Hadi sadat	2 nd Edition	Tata Mcgraw hill	2002



(Dr.B.Devi Vighneshwari)
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C

THE OXFORD COLLEGE OF ENGINEERING
HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electrical & Electronics Engineering
Lesson Plan

Date: 11/9/2023

Subject code : 18EE72
Subject Title : Power System Protection
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : VII
Academic Year : OCT 2023
Faculty Name : Jayakumar N

COURSE OBJECTIVE:

- To discuss performance of protective relays, components of protection scheme and relay terminology.
- To explain relay construction and operating principles.
- To explain Over current protection using electromagnetic and static relays and Over current protective schemes.
- To discuss types of electromagnetic and static distance relays, effect of arc resistance, power swings, line length and source impedance on performance of distance relays.
- To discuss pilot protection; wire pilot relaying and carrier pilot relaying.
- To discuss construction, operating principles and performance of various differential relays for differential protection.
- To discuss protection of generators, motors, Transformer and Bus Zone Protection.
- To explain the principle of circuit interruption and different types of circuit breakers.
- To describe the construction and operating principle of different types of fuses and to give the definitions of different terminologies related to a fuse.
- To discuss protection Against Over voltages and Gas Insulated Substation (GIS).

COURSE OUTCOME:

At the end of the course the student will be able to:

- Discuss the performance of protective relays, components of protection scheme and relay terminology over current protection.
- Explain the working of distance relays and the effects of arc resistance, power swings, line length and source impedance on the performance of distance relays.
- Discuss pilot protection, construction, operating principles and performance of differential relays
- Discuss protection of generators, motors, transformer and Bus Zone Protection. Explain the construction and operation of different types of circuit breakers.
- Outline features of fuse, causes of over voltages and its protection, also modern trends in Power System Protection.

Unit	Topic No.	Date	Topic	Period	Text Referred & Page No	Pedagogy
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I	1	11/9/23	Introduction to Power System Protection	1	T1, R1	Chalk &Board & PPT
	2	12/9/23	Zones of Protection	3	T1 – 1-70	Chalk &Board & PPT
	3	14/9/23	Essential Qualities , Performance of Relaying and Classification	4	T1 – 1-70	Chalk &Board & PPT
	4	15/9/23	Automatic Reclosing	2	T1 – 1-70	Chalk &Board & PPT
	5	19/9/23	CT & PT for Protection	1	T1 – 1-70	Chalk &Board & PPT
	6	21/9/23	Class Test	3	T1 – 1-70	Chalk &Board & PPT
	7	22/9/23	Relay Construction & Operating Principle:	4	T1 – 1-70	Chalk &Board & PPT
	8	23/9/23	Electromechanical & Static Relays	2	T1 – 1-70	Chalk &Board & PPT
	9	29/9/23	Over Current Protection:	1	T1 – 1-70	Chalk &Board & PPT
	10	03/10/23	Current Setting and Time setting	1	T1 – 1-70	Chalk &Board & PPT
	11	05/10/23	Revision of Module -1 Question Paper Discussion	3	T1 – 1-70	Chalk &Board & PPT
	12	06/10/23	Class Test	2	T1, R1	Chalk &Board & PPT
II	13	09/10/23	Over Current Protection: Reverse Power or Directional Relay	1	T1 : 84 – 172	Chalk &Board & PPT
	14	10/10/23	Protection of Parallel feeder, Ring mains	3	T1 : 84 – 172	Chalk &Board & PPT
	15	12/10/23	Earth fault and Phase fault Protective Schemes	4	T1 : 84 – 172	Chalk &Board & PPT
	16	13/10/23	Static and Numerical over current Relay	2	T1 : 84 – 172	Chalk &Board & PPT
	17	16/10/23	Directional Earth fault Relay	1	T1 : 84 – 172	Chalk &Board & PPT
	18	17/10/23	Class Test	3	T1 : 84 – 172	Chalk &Board & PPT
	19	19/10/23	Distance Protection: Introduction	4	T1 : 84 – 172	Chalk &Board & PPT
	20	20/10/23	Impedance, Reactance, Mho Relay	2	T1 : 84 – 172	Chalk &Board & PPT
	21	26/10/23	Angle impedance relay	3	T1 : 84 – 172	Chalk &Board & PPT
	22	27/10/23	Effect of Arc resistance, Effect of Power Surges, Effect of Line length	4	T1 : 84 – 172	Chalk &Board & PPT
	23	30/10/23	Source impedance on	2	T1 : 84 –	Chalk &Board

			performance of distance relays		172	& PPT
	24	31/10/23	Revision of Module -2	1	T1 : 84 – 172	Chalk &Board & PPT
	25	02/11/23	Revision of Module -2	3	T1 : 84 – 172	Chalk &Board & PPT
	26	03/11/23	Question Paper Discussion	4	T1 : 84 – 172	Chalk &Board & PPT
	27	06/11/23	Class Test	2	T1 : 84 – 172	Chalk &Board & PPT
	28	07/11/23	Circuit Breakers: Introduction	3	T1 : 173 – 192	Chalk &Board & PPT
	29	09/11/23	Fault Clearing time, Arc Voltage and Arc Interruption	4	T1 : 173 – 192	Chalk &Board & PPT
	30	10/11/23	Restriking and Recovery Voltage	2	T1 : 173 – 192	Chalk &Board & PPT
	31	13/11/23	Current Chopping, Capacitive current	4	T1 : 173 – 192	Chalk &Board & PPT
III	32	16/11/23	Classification of Circuit Breakers (CB)	3	T1 : 173 – 192	Chalk &Board & PPT
	33	17/11/23	Air Break , Oil CB	4	T1 : 173 – 192	Chalk &Board & PPT
	34	23/11/23	Air Blast CB	2	T1 : 173 – 192	Chalk &Board & PPT
	35	24/11/23	SF6 CB	4	T1 : 173 – 192	Chalk &Board & PPT
	36	25/11/23	Vacuum CB	2	T1 : 173 – 192	Chalk &Board & PPT
	37	27/11/23	High Voltage Direct current CB	2	T1 : 173 – 192	Chalk &Board & PPT
	38	28/11/23	Testing of CB	1	T1 : 173 – 192	Chalk &Board & PPT
	39	01/12/23	Revision of Module – 4	3	T1 : 173 – 192	Chalk &Board & PPT
	40	04/12/23	VTU Question Paper Discussion	2	T1 : 173 – 192	Chalk &Board & PPT
	41	05/12/23	Class Test	1	T1 : 173 – 192	Chalk &Board & PPT
IV	42	07/12/23	Fuses: Introduction, Definitions, Fuse characteristics	3	T1 : 245 – 294	Chalk &Board & PPT
	43	08/12/23	Types of Fuses	4	T1 : 245 – 294	Chalk &Board & PPT
	44	11/12/23	Applications of Fuses	2	T1 : 245 – 294	Chalk &Board & PPT
	45	12/12/23	Protection against Overvoltage: Causes,	1	T1 : 245 – 294	Chalk &Board & PPT

			Lightning phenomenon			
	46	13/12/23	Wave shape and Over voltage due to lightning	1	T1 : 245 – 294	Chalk &Board & PPT
	47	13/12/23	Klydonograph and magnetic link	3	T1 : 245 – 294	Chalk &Board & PPT
	48	15/12/23	Class Test	4	T1 : 245 – 294	Chalk &Board & PPT
	49	18/12/23	Protection of Transmission Lines, stations and substations against Lightning	2	T1 : 245 – 294	Chalk &Board & PPT
	50	19/12/23	Protection against travelling waves	1	T1 : 245 – 294	Chalk &Board & PPT
V	51	21/12/23	Insulation Coordination, Basic Impulse Insulation Level	3	T1 : 245 – 294	Chalk &Board & PPT
	52	22/12/23	Modern Trends in Power System Protection: Introduction	4	T1 : 245 – 294	Chalk &Board & PPT
	53	26/12/23	Gas insulated switch gear substations	2	T1 : 245 – 294	Chalk &Board & PPT
	54	30/12/23	Class Test	3	T1 : 245 – 294	Chalk &Board & PPT
	55	01/01/24	Revision of Quesiton Paper	1	T1 : 245 – 294	Chalk &Board & PPT
	56	02/01/24	Pilot Relaying Scheme: Introduction	1	T1 : 193 – 244	Chalk &Board & PPT
	57	04/01/24	Wire Pilot, Carrier Current Protection	3	T1 : 193 – 244	Chalk &Board & PPT
	58	05/01/24	Differential Protection: Introduction	4	T1 : 193 – 244	Chalk &Board & PPT
	59	06/01/24	Simple, Percentage – Relays	2	T1 : 193 – 244	Chalk &Board & PPT

Assignment Topics:

Sl.No	Topic	References
1	Assignment Module 1, 2	T1
2	Assignment Module 4	T1
3	Assignment Module 5	T1

1ST INTERNAL - 16/10/2023 - 18/10/2023

2ND INTERNAL - 20/11/2023 - 22/11/2023

3RD INTERNAL - 27/12/2023 – 29/12/2023

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	Power System Protection and Switchgear Badri Ram, D.N. Vishwakarma	4th Edition	McGraw Hill 2nd Edition	2011

	T2	Power System Protection and Switchgear BhuvaneshOza eta	1 st Edition	McGraw Hill	2010
Reference Books	R1	Power Systems - V.K.METHA Power Systems - J.B. Gupta	2 nd Edition	Tata Mcgraw hill	2012



**(Jayakumar N) -
Faculty**



**(Dr. Bharath V S)
HOD / EEE**

THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electronics and Communication Engineering

Lesson Plan

Date: 05/09/2022

Subject code/Title : 18EE734/Advanced Control Systems
Course / Branch : BE/EEE
Semester : VII
Academic Year : 2022-23 (ODD)
Faculty Name : Mrs. Sumitha T L

COURSE OBJECTIVE:

- To introduce state variable approach for linear time invariant systems in both the continuous and discrete time systems and develop state models for linear continuous – time and discrete – time systems.
- To explain application of vector and matrix algebra to find the solution of state equations for linear continuous – time and discrete – time systems.
- To define controllability and observability of a system and testing techniques for controllability and observability of a given system.
- To explain design techniques of pole assignment and state observer using state feedback.
- To explain about inherent and intentional nonlinearities that can occur in control system and developing the describing function for the nonlinearities.
- To explain stability analysis of nonlinear systems using describing function analysis, Lyapunov function and design of Lyapunov function for stable systems.

PREREQUISITE(s):

1. Knowledge about transfer function of a system, knowledge about matrix computation.
2. Knowledge about linear, non-linear systems, continuous, discrete systems and stability.

Module	Topic No.	Date	Topic	Books Referred & Pages	Pedagogy
I	1	12/09/22	State Variable Analysis and Design: Introduction	T1:448-449	Chalk and Talk
	2	14/09/22	Concept of State, State Variables and State Model	T1:449-455	Chalk and Talk
	3	14/09/22	State Models for Linear Continuous–Time Systems	T1:456-459	Chalk and Talk
	4	15/09/22	State Variables for Linear Continuous–Time Systems	T1:459-460	Chalk and Talk
	5	16/09/22	State Model for Linear Discrete– Time Systems	T1:511-523	Chalk and Talk
	6	19/09/22	State Variables for Linear Discrete– –Time Systems	T1:511-523	Chalk and Talk
	7	21/09/22	Problems on Linear Continuous–Time Systems	T1:464-466	Chalk and Talk
	8	21/09/22	Problems on Linear Continuous–Time Systems	T1:467-469	Chalk and Talk
	9	22/09/22	Problems on Linear Discrete –Time Systems	T1:511-523	Chalk and Talk
	10	23/09/22	Problems on linear Discrete –Time Systems	T1:511-523	Chalk and Talk
	11	26/09/22	State Transition matrix, Problems	T1:449-455	Chalk and Talk
	12	28/09/22	Canonical variables	T2:328-347	Chalk and Talk

II	13	28/09/22	State Variable Analysis and Design (continued): Diagonalization	T2:347-360	Chalk and Talk
	14	29/09/22	State Equations	T2:360-372	Chalk and Talk
	15	30/09/22	Solution of State Equations	T2:372-383	Chalk and Talk
	16	03/10/22	Concepts of Controllability	T2:384-388	Chalk and Talk
	17	06/10/22	Problems on Controllability – Gilberts Approach	T2:388-398	Chalk and Talk
	18	07/10/22	Problems on Controllability – Kalman’s approach	T2:388-398	Chalk and Talk
	19	10/10/22	Concepts of Observability	T2: 454-461	Chalk and Talk
	20	12/10/22	Problems on Observability	T2: 454-461	Chalk and Talk
III	21	12/10/22	Pole Placement Design and State Observers: Introduction	T2:480-482	Chalk and Talk
	22	13/10/22	Stability Improvements by State Feedback	T2:482-486	Chalk and Talk
	23	14/10/22	Necessary and Sufficient Conditions for Arbitrary Pole Placement	T2:486-490	Chalk and Talk
	24	17/10/22	Problems on Pole placement	T1:504-507	Chalk and Talk
	25	19/10/22	State Regulator Design	T1:556-565	Chalk and Talk
	26	19/10/22	Problems on State Regulator Design	T2:490-494	Chalk and Talk
	27	20/10/22	Design of State Observer	T1:566-571	Chalk and Talk
	28	21/10/22	Problems on design of State Observer	T2:494-505	Chalk and Talk
29	27/10/22	Compensator Design by the Separation Principle	T2:505-511	Chalk and Talk	
IV	30	28/10/22	Non-linear systems Analysis: Introduction	R1:Ch4:2-4	Chalk and Talk
	31	31/10/22	Common Nonlinear System Behaviours	R1:Ch4:4-5	Chalk and Talk
	32	02/11/22	Common Nonlinearities in Control Systems	R1:Ch4:5-9	Chalk and Talk
	33	02/11/22	Describing Functions of Common Nonlinearities	R1:Ch4:15-32	Chalk and Talk
	34	03/11/22	Describing Functions of Common Nonlinearities	R1:Ch4:15-32	Chalk and Talk
	35	04/11/22	Describing Functions of Common Nonlinearities	R1:Ch4:15-32	Chalk and Talk
	36	07/11/22	Stability Analysis by Describing Function Method	R1:Ch4:15-32	Chalk and Talk
	37	09/11/22	Stability Analysis by Describing Function Method	R1:Ch4:15-32	Chalk and Talk
	38	09/11/22	Concept of Phase Plane Analysis	R1:Ch5:23-25	PPT
	39	10/11/22	Construction of Phase Portraits	R1:Ch5:25-30	PPT
	40	14/11/22	Construction of Phase Portraits	R1:Ch5:25-30	PPT
	41	16/11/22	System Analysis on the Phase Plane	R1:Ch5:4-22	PPT
	42	16/11/22	Class test	R1:Ch5:39-40	-
	43	17/11/22	Tutorial class	R1:Ch5:39-40	Chalk and Talk

V	44	18/11/22	Non-linear systems Analysis (continued): Simple Variable Structure Systems	T2: 567-568	Chalk and Talk, PPT
	45	21/11/22	Lyapunov Stability Definitions	T2: 571-573	Chalk and Talk, PPT
	46	23/11/22	Lyapunov Stability Theorems	T2: 573-580	Chalk and Talk, PPT
	47	23/11/22	Lyapunov Functions for Nonlinear Systems	T2: 581-586	Chalk and Talk, PPT
	48	24/11/22	Lyapunov Functions for Nonlinear Systems	R1:Ch6:13-18	Chalk and Talk, PPT
	49	25/11/22	Problems on stability-Lyapunov method	R1:Ch6:18-25	Chalk and Talk, PPT
	50	28/11/22	Problems on stability -Lyapunov method	R1:Ch6:18-25	Chalk and Talk, PPT
	51	30/11/22	Problems on stability- Direct method	R1:Ch6:25-30	Chalk and Talk, PPT
	52	30/11/22	Problems on stability -Direct method	R1:Ch6:30-37	Chalk and Talk, PPT
	53	01/12/22	Class test	R1:Ch6:41	-
	54	02/12/22	VTU Question paper discussion	T1, R1	Chalk and Talk
	55	05/12/22	VTU Question paper discussion	T1, R1	Chalk and Talk
	56	07/12/22	VTU QP discussion	T1, R1	Chalk and Talk
	57	08/12/22	Revision Module 1	T1, R1	Chalk and Talk
	58	12/12/22	Revision Module 2	T1, R1	Chalk and Talk
	59	14/12/22	Revision Module 3	T1, R1	Chalk and Talk
	60	16/12/22	Revision Module 4	T1, R1	Chalk and Talk
	61	19/12/22	Revision Module 5	T1, R1	Chalk and Talk

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Discuss state variable approach for linear time invariant systems in both the continuous and discrete time systems and to develop of state models for linear continuous–time and discrete–time systems
2. Apply vector and matrix algebra to find the solution of state equations for linear continuous–time and discrete–time systems
3. Define controllability and observability of a system and test for controllability and observability of a given system
4. Design pole assignment and state observer using state feedback
5. Develop the describing function for the nonlinearity present to assess the stability of the system.
6. Develop Lyapunov function for the stability analysis of nonlinear systems.

Assignment Topics

Sl. No.	Assignment Topics	Submission due on
1	Problems on State model and state variable representation	15/11/22
2	Problems on state model, solution to state equation, observability	17/12/22
3	Problems on State Feedback controller and stability	26/12/22

Text Books:

T1: Control Systems Engineering, I.J. Nagrath and, M.Gopal, NewAge, 5th Edition,2007

T2: Digital Control and State Variable Methods: Conventional and Intelligent Control systems, M.Gopal, McGrawHill, 3rd Edition,2008

T3: Modern Control Theory, R. V. Parvathikar, Prism Books Pvt. Ltd. 1st Edition,2014

Reference Books:

R1: Advanced Control systems, U A Bakshi, Dr. M V Bakshi



THE OXFORD COLLEGE OF ENGINEERING
HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68
Department of Electrical & Electronics Engineering
Lesson Plan

Date: 19/09/2022

Subject code : 18EE742
Subject Title : Utilization of Electric Power
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : VII
Academic Year : SEP 2021 – DEC 2022
Faculty Name : Mrs Nisha C Rani

COURSE OBJECTIVE:

- To discuss electric heating, air-conditioning and electric welding.
- To explain laws of electrolysis, extraction and refining of metals and electro deposition.
- To explain the terminology of illumination, laws of illumination, construction and working of electric lamps.
- To explain design of interior and exterior lighting systems- illumination levels for various purposes light fittings- factory lighting- flood lighting-street lighting.
- To discuss systems of electric traction, speed time curves and mechanics of train movement.
- To discuss motors used for electric traction and their control.
- To discuss braking of electric motors, traction systems and power supply and other traction systems.

Give awareness of technology of electric and hybrid electric vehicles.

COURSE OUTCOME:

C4742.1- Able to discuss electric heating, air-conditioning and electric welding.

C4742.2- To explain laws of electrolysis, extraction and refining of metals and electro deposition, terminology of illumination, laws of illumination, construction and working of electric lamps.

C4742.3- Able to Design interior and exterior lighting systems- illumination levels for factory lighting- flood lighting-street lighting.

C4742.4- To discuss systems of electric traction, speed time curves and mechanics of train movement.

C4742.5- Able to Explain the motors used for electric traction and their control and discuss braking of electric motors, traction systems and power supply and other traction systems.

C4742.6- Able to explain the working of electric and hybrid electric vehicles.

PREREQUISITE(s):

Basics of electrical subjects, illumination ,motors, electrolysis

Unit	Topic No.	Date	Topic	Period	Text Refer red & Page No	Pedagogy
I	1	19/09/22	Module 1 HEATING AND WELDING: Introduction	1	T1,R1	Chalk & Board
	2	20/09/22	Electric Heating, Resistance ovens, Radiant Heating	2	T1,R1	Chalk & Board
	3	21/09/22	Induction Heating, High frequency Eddy Current Heating	2	T1,R1	Chalk & Board
	4	22/09/22	Dielectric Heating, Air – Conditioning	1	T1,R1	Chalk & Board
	5	23/09/22	The Arc Furnace, Heating of Buildings	1	T1,R1	Chalk & Board
	6	26/09/22	Electric Welding, Modern Welding Techniques	2	T1,R1	Chalk & Board
	7	27/09/22	Electrolytic electro – metallurgical process, Ionization	2	T1,R1	Chalk & Board
	8	28/09/22	Faraday’s Laws of Electrolysis,	2	T1,R1	Chalk & Board
	9	30/09/22	Faraday’s Laws of Electrolysis, Definitions	1	T1,R1	Chalk & Board
	10	3/10/22	Extraction & Refining of Metals, Electro Deposition	1	T1,R1	Chalk & Board
	11	6/10/22	Problems	2	T1,R1	Chalk & Board
	12	7/10/22	Assignment 1 discussion	2	T1,R1	Chalk & Board
	13	8/10/22	Vtu question paper discussion	1	T1,R1	Chalk & Board
	14	10/11/12	Problems	1	T1,R1	Chalk & Board
	15	11/10/22	Vtu question paper discussion	2	T1,R1	Chalk & Board
II	16	13/10/22	Module 2 ILLUMINATION :Introduction	2	T1,R1	Chalk & Board
	17	14/10/22	Introduction, Radiant Energy,	1	T1,R1	Chalk & Board
	18	17/10/22	Definitions, Laws of Illumination,	1	T1,R1	Chalk & Board
	19	18/10/22	Photometry	2	T1,R1	Chalk & Board
	20	19/10/22	Measurement of Mean Spherical Candle Power by Integrating Sphere	2	T1,R1	Chalk & Board
	21	20/10/22	Illumination Photometer,	1	T1,R1	Chalk & Board
	22	21/10/22	Energy Radiation and luminous Efficiency	1	T1,R1	Chalk & Board
	23	22/10/22	electric Lamps, Cold Cathode Lamp	2	T1,R1	PPT
	24	25/10/22	Lighting Fittings	2	T1,R1	PPT
	25	31/10/22	Illumination for Different Purposes, requirements of Good Lighting	1	T1,R1	Chalk & Board
	26	2/11/22	Assignment 2 Discussion	1	T1,R1	Chalk & Board
	27	3/11/22	Basic Problems on Illumination	2	T1,R1	Chalk & Board
	28	4/11/22	Problems on Illumination	2	T1,R1	Chalk & Board
	29	5/11/22	Vtu question paper discussion	1	T1,R1	Chalk & Board
	30	7/11/22	Problems	1	T1,R1	Chalk & Board
	31	8/11/22	Vtu question paper discussion	2	T1,R1	Chalk & Board

III	32	9/11/22	Module 3 ELECTRIC TRACTION SPEED - TIME CURVES AND MECHANICS OF TRAIN MOVEMENT, ELECTRIC MOTORS	2	T1,R1	Chalk & Board
	33	10/11/22	Introduction, Systems of Traction	1	T1,R1	Chalk & Board
	34	14/11/22	Systems of electric Traction, Speed - Time Curves for Train	1	T1,R1	PPT
	35	15/11/22	Movement ,Mechanics of Train Movement	2	T1,R1	Chalk & Board
	36	16/11/22	Train Resistance, Adhesive Weight, Coefficient of Adhesion	2	T1,R1	Chalk & Board
	37	17/11/22	Introduction, Series and Shunt Motors for Traction Services	1	T1,R1	Chalk & Board
	38	18/11/22	Two Similar Motors (Series Type) are used to drive a Motor Car	1	T1,R1	Chalk & Board
	39	19/11/22	Tractive Effort and Horse Power, AC Series Motor, Three Phase Induction Motor.	2	T1,R1	Chalk & Board
	40	21/11/22	Introduction, control of DC motors	2	T1,R1	Chalk & Board
	41	22/11/22	Tapped Field Control or Control by Field Weakening	1	T1,R1	Chalk & Board
	42	23/11/22	Multiple unit control, Control of Single, three Phase Motors	1	T1,R1	Chalk & Board
	IV	43	24/11/22	Braking, Electric traction systems and power supply: Introduction	2	T1,R1
44		25/11/22	Regenerative Braking with Three Phase Induction Motors	2	T1,R1	Chalk & Board
45		28/11/22	Braking with Single Phase Series Motors, Mechanical braking	1	T1,R1	Chalk & Board
46		29/11/22	Magnetic Track Brake, Electro – Mechanical Drum Brakes	1	T1,R1	Chalk & Board
47		30/11/22	System of Electric Traction	2	T1,R1	PPT
48		1/12/22	AC Electrification, Transmission Lines to Sub - Stations, Sub – Stations. Sub – Stations, Feeding and Distribution System of AC Traction ,Feeding and Distribution System for Dc Tramways	2	T1,R1	PPT,Video
49		2/12/22	Electrolysis by Currents through Earth, Negative Booster, System of Current Collection, Trolley Wires	1	T1,R1	Chalk & Board
50		3/12/22	System of Electric Traction	1	T1,R1	PPT
51		5/12/22	Trams, trolley buses and diesel – electric traction Tramways, The Trolley – Bus, Diesel Electric Traction	2	T1,R1	Chalk & Board
52		6/12/22	Problems	2	T1,R1	Chalk & Board
V	53	12/12/22	Module 5 Electric vehicles: Introduction	1	T2	Chalk & Board
	54	13/12/22	Configurations of Electric Vehicles	1	T2	Chalk & Board
	55	14/12/22	Performance of Electric Vehicles,	2	T2	Chalk & Board
	56	15/12/22	Tractive Effort in Normal Driving Energy	2	T2	Chalk & Board
	57	16/12/22	Energy consumption.	1	T2	Chalk & Board

	58	17/12/22	Hybrid electric vehicles: Introduction	1	T2	Chalk & Board
	59	19/12/22	Concept of Hybrid Electric Drive Trains	2	T2	Chalk & Board
	60	20/12/22	Architectures of Hybrid Electric Drive Trains	2	T2	Chalk & Board
	61	21/12/22	Vtu question paper discussion	1	T2	Chalk & Board
	62	22/12/22	Revision of Module 1,2	1	T2	Chalk & Board
	63	23/12/22	Revision of Module 3,4	2	T2	Chalk & Board
	64	31/12/22	Revision of Module 5	2	T2	Chalk & Board

Assignment Topics:

Sl.No	Topic	References
1	Assignment Module 1	T1
2	Assignment Module 3	T1
3	Assignment Module 5	T2

1ST INTERNAL - 27/10/2022 - 29/10/2022

2ND INTERNAL - 7/12/2022 - 9/12/2022

3RD INTERNAL - 27/1/2022 - 29/1/2022

Book Type	Code	Title & Author	Publication Information		
			Edition	Publisher	Year
Text Books	T1	A Textbook on Power System Engineering by A. Chakrabarti et al	2nd Edition	Danapat Rai & co	2010
	T2	Modern Electric, Hybrid Electric, and Fuel Cell Vehicles: Fundamentals Theory, and Design (Chapters 04 and 05 for module 5) by Mehrdad Ehsani et al .	1 st Edition	CRC Press	2005
Reference Books	R1	Utilization, Generation and Conservation of Electrical Energy by Sunil S Rao .	1 st Edition	Khanna publishers	2011
	R2	Utilization of Electric Power and Electric Traction by G.C. Garg	9th Edition	Khanna publishers	2014

Alaka C. Panigrahi

Faculty

Dr. J. P. Singh

HOD/EEE

THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical and Electronics Engineering

Lesson Plan

Date:13/09/22

Subject code : 18EE753
Subject Title : Disasters Management
Course / Branch : BE/EEE
Semester : VII-A
Academic Year : 2022-2023-Odd Sem
Faculty Name : Mrs Resna S R

Course Objectives:

- To explain disaster management, its planning, occurrence of cyclones and their hazard potential
- To explain the role of IMD, cyclone prediction and cyclone warning system in India
- To explain the role of different institutions, defence and other services in natural disaster management.
- To explain the role of Central Water Commission in river water sharing, Draught, its assessment and
- draught management plan
- To explain reasons for the occurrence of earth quake, Tsunamis and thunderstorms.

PREREQUISITE(s):

Module	Top ic No.	Date	Topic	Text Book &Ref	Pedagogy
I	1	20-09-22	Disaster Management Plan (DMP): - General.	T:5-13	PPT
	2	21-09-22	Cyclones and their Hazard Potential: Classification of Low-Pressure Systems	T:15-18	PPT
	3	22-09-22	Statistics of Cyclonic Storms Over Indian Seas	T:27	PPT
	4	23-09-22	Movement of Cyclones in Indian Seas	T:30	PPT
	5	27-09-22	Storm Surges	T:32	PPT
II	6	28-09-22	India Meteorological Department and Cyclone Warnings in India:	T:39-46	PPT
	7	29-09-22	Hazard Potential of Cyclonic Storms	T:46	PPT
	8	30-09-22	Cyclone Prediction and Dissemination of Warning	T:49	PPT
	9	06-10-22	Dissemination of Cyclone Warnings	T:50	PPT
	10	07-10-22	Cyclone Warning through INSAT	T:51	PPT
	11	08-10-22	Port Warnings with Day and Night hoisting Sib'Tlals	T:52	PPT
	12	11-10-22	Cyclones Disaster Management – Plan	T:59	PPT
	13	12-10-22	Hazard Potentials Associated with Cyclones	T:62	PPT
	14	13-10-22	Vulnerability Reduction, Early Warning	T:70	PPT
	15	14-10-22	Action Plan for Cyclone Disaster Management.	T:73	PPT
	16	20-10-22	Role of Different Institutions in Natural Disaster Management	T:83	PPT

III	17	21-10-22	Role of Zilla Parishad	T:85	PPT
	18	22-10-22	Role of PRA Groups	T:88	PPT
	19	25-10-22	Role of NGOs	T:91	PPT
	20	27-10-22	Self Help Groups in Disaster Management	T:91	PPT
	21	28-10-22	Role of Red Cross in Disaster Management.	T:92	PPT
	22	02-11-22	The Role of Defence and other Services in Disaster Management	T:95	PPT
	23	03-11-22	Role of Air Force in Disaster Management	T:98	PPT
	24	04-11-22	Role of Medical and Health Department in Cyclone disaster management	T:100	PPT
	25	05-11-22	National Disaster Response Force(NDRF)	T:102	PPT
	26	08-11-22	Role of Remote Sensing in Disaster Management	T:103	PPT
	27	09-11-22	Role of Broadcast, Educational Media in disaster management.	T:108	PPT
IV	28	10-11-22	Floods: Water Wealth of India	T:113-115	PPT
	29	15-11-22	Definition of Flood	T:116	PPT
	30	16-11-22	Role of Central Water Commission	T:119	PPT
	31	17-11-22	Monsoons	T:120	PPT
	32	18-11-22	Flood Warning Signals and Precautionary Actions	T:128	PPT
	33	19-11-22	Water Purification Technologies in Flood Affected Areas	T:130	PPT
	34	22-11-22	Drought: Meteorological Drought	T:133	PPT
	35	29-11-22	Breaks in the Monsoon	T:137	PPT
	36	30-11-22	Drought Management Plan	T:139	PPT
	37	1-12-22	Drought Years for Different Met Subdivision of India	T:149	PPT
	38	2-12-22	Drought Assessment, Drought Parameters	T:145-146	PPT
	39	06-12-22	Role of Banking, Insurance	T:149	PPT
	40	07-12-22	Microfinance in drought mitigation, Drought Monitoring	T:150	PPT
41	08-12-22	Drought Research Unit (IMD), Rainwater harvesting.	T:150-152	PPT	
V	42	09-12-22	Earth quakes: Interior Structure of the Earth, Plate Techtonics, Seismicity of India	T:161-177	PPT
	43	13-12-22	Earthquake Forecast and disaster management	T:184	PPT
	44	14-12-22	Tsunamis, Landslides and Avalanches, Volcanoes	T:187-193	PPT
	45	15-12-22	Hazards associated with Convective Clouds: Climatology of World Thunderstorms	T:197	PPT
	46	16-12-22	Lightning, Some Effects of Electric Shock, Favours and Frownings of Thunderstorms	T:200-205	PPT
	47	20-12-22	Hailstorms, Tornadoes, Watersprouts	T:213	PPT
	48	21-12-22	Dust-Devils, Nowcasting	T:221	PPT
	49	22-12-22	Summer Thunderstorms over India	T:222	PPT
	50	23-12-22	Cold Waves and Heat Waves - Cold Waves in India, Heat Waves in India	T:227	PPT

Outcomes of the Course:

- Discuss disaster management plan, cyclones and their hazard potential
- Understand the role of IMD and cyclone prediction and cyclone warning system in India
- Understand the role of different institutions defence and other services in natural disaster management.
- Understand the role of Central Water Commission in river water sharing, Draught, its assessment and draught management plan
- Understand occurrence of earth quake, Tsunamis and thunderstorms.

Assignment Topics:

Sl.No	Topic	References
1	Module 1&2	T
2	Module 2&3	T
3	Module 4&5	T

Text Books:

T1: Earth and Atmospheric Disasters Management Natural and Man-made , Navale Pandharinath, C. K. Rajan, BS Publications 2009



Faculty



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THE OXFORD COLLEGE OF ENGINEERING

HOSUR ROAD, BOMMANAHALLI, BANGALORE - 68

Department of Electrical and Electronics Engineering

Lesson Plan

Date:13/09/22

Subject code :18EE753

Subject Title :Disasters Management

Course / Branch :BE/EEE

Semester : VII-B

Academic Year :2022-2023-OddSem

Faculty Name :Mrs M.Raichel Ruby

Course Objectives:

- To explain disaster management, its planning, occurrence of cyclones and their hazard potential
- To explain the role of IMD, cyclone prediction and cyclone warning system in India
- To explain the role of different institutions, defence and other services in natural disaster management.
- To explain the role of Central Water Commission in river water sharing, Draught, its assessment and draught management plan.
- To explain reasons for the occurrence of earth quake, Tsunamis and thunderstorms.

PREREQUISITE(s):

Module	Topic No.	Date	Topic	Text Book &Ref	Pedagogy
I	1	19-09-22	Disaster Management Plan (DMP): - General.	T:5	PPT / Chalk & Talk
	2	20-09-22	Cyclones and their Hazard Potential: Classification of Low-Pressure Systems	T:15-18	PPT / Chalk & Talk
	3	22-09-22	Statistics of Cyclonic Storms Over Indian Seas	T:27	PPT / Chalk & Talk
	4	23-09-22	Movement of Cyclones in Indian Seas	T:30	PPT / Chalk & Talk
	5	24-09-22	Storm Surges	T:32	PPT / Chalk & Talk
II	6	26-09-22	India Meteorological Department and Cyclone Warnings in India:	T:39	PPT / Chalk & Talk
	7	27-09-22	Hazard Potential of Cyclonic Storms	T:46	PPT / Chalk & Talk
	8	29-09-22	Cyclone Prediction and Dissemination of Warning	T:49	PPT / Chalk & Talk
	9	30-09-22	Dissemination of Cyclone Warnings	T:50	PPT / Chalk & Talk
	10	03-10-22	Cyclone Warning through INSAT	T:51	PPT / Chalk & Talk
	11	06-10-22	Port Warnings with Day and Night hoisting Signals	T:52	PPT / Chalk & Talk

	12	07-10-22	Cyclones Disaster Management – Plan	T:59	PPT / Chalk & Talk
	13	08-10-22	Hazard Potentials Associated with Cyclones	T:62	PPT / Chalk & Talk
	14	10-10-22	Vulnerability Reduction, Early Warning	T:70	PPT / Chalk & Talk
III	15	11-10-22	Action Plan for Cyclone Disaster Management.	T:73	PPT / Chalk & Talk
	16	13-10-22	Role of Different Institutions in Natural Disaster Management	T:83	PPT / Chalk & Talk
	17	14-10-22	Role of ZillaParishad	T:85	PPT / Chalk & Talk
	18	20-10-22	Role of PRA Groups	T:88	PPT / Chalk & Talk
	19	21-10-22	Role of NGOs	T:91	PPT / Chalk & Talk
	20	22-10-22	Self Help Groups in Disaster Management	T:91	PPT / Chalk & Talk
	21	25-10-22	Role of Red Cross in Disaster Management.	T:92	PPT / Chalk & Talk
	22	27-10-22	The Role of Defence and other Services in Disaster Management	T:95	PPT / Chalk & Talk
	23	28-10-22	Role of Air Force in Disaster Management	T:98	PPT / Chalk & Talk
	24	31-10-22	Role of Medical and Health Department in Cyclone disaster management	T:100	PPT / Chalk & Talk
	25	03-11-22	National Disaster Response Force(NDRF)	T:102	PPT / Chalk & Talk
	26	04-11-22	Role of Remote Sensing in Disaster Management	T:103	PPT / Chalk & Talk
	27	05-11-22	Role of Broadcast, Educational Media in disaster management.	T:108	PPT / Chalk & Talk
IV	28	7-11-22	Floods: Water Wealth of India	T:113-115	PPT / Chalk & Talk
	29	08-11-22	Definition of Flood	T:116	PPT / Chalk & Talk
	30	10-11-22	Role of Central Water Commission	T:119	PPT / Chalk & Talk
	31	14-11-22	Monsoons	T:120	PPT / Chalk & Talk
	32	15-11-22	Flood Warning Signals and Precautionary Actions	T:128	PPT / Chalk & Talk
	33	17-11-22	Water Purification Technologies in Flood Affected Areas	T:130	PPT / Chalk & Talk
	34	18-11-22	Drought: Meteorological Drought	T:133	PPT / Chalk & Talk
	35	19-11-22	Breaks in the Monsoon	T:137	PPT / Chalk & Talk
	36	21-11-22	Drought Management Plan	T:139	PPT / Chalk & Talk
	37	22-11-22	Drought Years for Different Met Subdivision of India	T:149	PPT / Chalk & Talk

	38	28-11-22	Drought Assessment, Drought Parameters	T:145-146	PPT / Chalk & Talk
	39	29-11-22	Role of Banking, Insurance	T:149	PPT / Chalk & Talk
	40	01-12-22	Microfinance in drought mitigation, Drought Monitoring	T:150	PPT / Chalk & Talk
	41	02-12-22	Drought Research Unit (IMD), Rainwater harvesting.	T:150-152	PPT / Chalk & Talk
V	42	03-12-22	Earth quakes: Interior Structure of the Earth, Plate Techtonics, Seismicity of India	T:161-177	PPT / Chalk & Talk
	43	05-12-22	Earthquake Forecast and disaster management	T:184	PPT / Chalk & Talk
	44	06-12-22	Tsunamis, Landslides and Avalanches, Volcanoes	T:187-193	PPT / Chalk & Talk
	45	08-12-22	Hazards associated with Convective Clouds: Climatology of World Thunderstorms	T:197	PPT / Chalk & Talk
	46	09-12-22	Lightning, Some Effects of Electric Shock	T:200-203	PPT / Chalk & Talk
	47	12-12-22	Favours and Frownings of Thunderstorms	T:204-205	PPT / Chalk & Talk
	48	13-12-22	Hailstorms, Tornadoes, Watersprouts	T:213	PPT / Chalk & Talk
	49	16-12-22	Dust-Devils, Nowcasting	T:221	PPT / Chalk & Talk
	50	19-12-22	Summer Thunderstorms over India	T:222	PPT / Chalk & Talk
	51	22-12-22	Cold Waves and Heat Waves - Cold Waves in India	T:227	PPT / Chalk & Talk
	52	23-12-22	Heat Waves in India	T:213	PPT / Chalk & Talk

Outcomes of the Course:

- Discuss disaster management plan, cyclones and their hazard potential
- Understand the role of IMD and cyclone prediction and cyclone warning system in India
- Understand the role of different institutions defence and other services in natural disaster management.
- Understand the role of Central Water Commission in river water sharing, Draught, its assessment and draught management plan
- Understand occurrence of earth quake, Tsunamis and thunderstorms.

Assignment Topics:

Sl.No	Topic	References
1	Module 1&2	T
2	Module 2&3	T
3	Module 4&5	T

Text Books:

T1:Earth and Atmospheric Disasters Management Natural and Man-made
,NavalePandharinath, C. K. Rajan,BS Publications 2009



(M.Raichel Ruby)
Faculty



(Dr.Bharath V S)
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Department of Electrical & Electronics Engineering
Lesson Plan

Date: 11/9/2023

Subject code : 18EEL76
Subject Title : Power System Simulation Laboratory
Course / Branch : BE (Electrical & Electronics Engineering)
Semester : VII
Academic Year : Oct 2023 – Jan 2024
Faculty Name : Dr. Devi Vighneshwari

COURSE OBJECTIVE:

- To assess the performance of medium and long transmission lines.
- To obtain the power angle characteristics of salient and non- salient pole alternator.
- To study transient stability of radial power systems under three phase fault conditions.
- To develop admittance and impedance matrices of interconnected power systems.
- To explain the use of suitable standard software package.
- To solve power flow problem for simple power systems.
- To perform fault studies for simple radial power systems.
- To study optimal generation scheduling problems for thermal power plants.

COURSE OUTCOME:

- Develop a program in suitable package to assess the performance of Transmission lines, Obtain Power Angle Characteristics, Admittance & Impedance Matrix & Bus Currents and Line Flows
- Use suitable package to solve power flow problem for simple power systems, Jacobian, Fault Currents & Optimal Generation
- Develop a program in suitable package to assess the transient stability under three phase fault at different locations in a of radial power systems.

PREREQUISITE(s):

Basic Knowledge about Electrical and Electronics Subjects and Computer science subjects

Unit	Topic No.	Date	Topic	Period	Text Referred & Page No	Pedagogy
NA	1	12/09/2023	Introduction Class about MATLAB Basics	5,6,7	NA	PPT
	2	19/09/2023	Formation for symmetric π /T configuration for Verification of Determination of Efficiency and Regulation	5,6,7	NA	Simulation in Matlab
	3	26/09/2023	Determination of Power Angle Diagrams, Reluctance Power, Excitation, EMF and Regulation for Salient and Non-Salient Pole Synchronous	5,6,7	NA	Simulation in Matlab

		Machines			
4	03/10/2023	Y Bus Formation for Power Systems with and without Mutual Coupling, by Singular transformation	5,6,7	NA	Simulation in Matlab
5	10/10/2023	Y Bus Formation by Inspection	5,6,7	NA	Simulation in Matlab
6	17/10/2023	Y Bus Formation for Power Systems with and with Mutual Coupling, by Singular transformation	5,6,7	NA	Simulation in Matlab
7	31/10/2023	Determination of Bus Currents, Bus Power and Line Flow for a Specified System Voltage	5,6,7	NA	Simulation in Matlab
8	07/11/2023	Economic Operation of Load Flow Studies	5,6,7	NA	Simulation in Mipower
9	28/11/2023	Internal 1	5,6,7	NA	NA
10	05/12/2023	Load Flow Analysis using Gauss Siedel Method, NR Method and Fast Decoupled Method for Both PQ and PV Buses	5,6,7	NA	Simulation in Mipower
11	12/12/2023	Load Flow Analysis using Gauss Siedel Method, NR Method and Fast Decoupled Method for Both PQ and PV Buses	5,6,7	NA	Simulation in Mipower
12	19/12/2023	Fault Analysis using MIPOWER	5,6,7	NA	Simulation in Mipower
13	26/12/2023	Internal Exam	5,6,7	NA	Simulation in Mipower
14	02/01/2024	Revision	5,6,7	NA	Simulation in Mipower



(Dr.B.Devi Vighneshwari)
Faculty



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Department of Electrical and Electronics Engineering

Lesson Plan

Date:08/09/22

Subject code : **18EEL77**
Subject Title : **RELAY AND HIGH VOLTAGE LAB**
Course / Branch : B.E/EEE
Semester : **VII**
Academic Year : 2022-2023(ODD Sem)
Faculty Name : Mrs. M.Raichel Ruby
Objective of Course :

- To conduct experiments to verify the characteristics of over current, over voltage, under voltage relays both electromagnetic and static type.
- To verify the operation of negative sequence relay.
- To conduct experiments to verify the characteristics of microprocessor based over current, over voltage, under voltage relays and distance relay.
- To conduct experiments on generator, motor and feeder protection.
- To conduct experiments to study the spark over characteristics for both uniform and non-uniform configurations using High AC and DC voltages.
- To measure high AC and DC voltages
- To experimentally measure the breakdown strength of transformer oil.
- To experimentally measure the capacitance of different electrode configuration models using Electrolytic Tank
- To generate standard lightning impulse voltage and determine efficiency, energy of impulse generator and 50% probability flashover voltage for air insulation.

• **PREREQUISITE** : Knowledge in Relays

Experiment No.	Date	Topic	pedagogy
1	13/9/22 15/9/22	Over Current Relay: (a)Inverse Definite Minimum Time(IDMT)Non-Directional Characteristics (b) Directional Features (c) IDMT Directional.	Chalk and Talk
2	20/9/22 22/9/22	IDMT Characteristics of Over Voltage or Under Voltage Relay (Solid State or Electromechanical type).	Chalk and Talk
3	27/9/22 29/9/22	Operating Characteristics of Microprocessor Based (Numeric) Over –Current Relay.	Chalk and Talk
4	11/10/22 13/10/22	Operating Characteristics of Microprocessor Based (Numeric) Over/Under Voltage	Chalk and Talk
5	25/10/22 20/10/22	Motor Protection against Faults.	Chalk and Talk
6	08/11/22 03/11/22	Spark Over Characteristics of Air subjected to High Voltage AC with Spark Voltage Corrected to Standard Temperature and Pressure for Uniform [as per IS1876: 2005]and Non-uniform [as per IS2071(Part 1) : 1993] Configurations: Sphere – Sphere, Point –Plane	Chalk and Talk
	15/11/22 10/11/22	I INTERNALS	Chalk and Talk
7	22/11/22 17/11/22	Measurement of Breakdown Strength of Transformer Oil as per IS 1876 :2005	Chalk and Talk
8	29/11/22 01/12/22	Field Mapping using Electrolytic Tank for any one of the following Models: Cable/Capacitor/	Chalk and Talk
9	06/12/22 08/12/22	Measurement of HVAC and HVDC using Standard Spheres as per IS 1876 :2005	Chalk and Talk

10	13/12/22 15/12/22	Spark over characteristics of air subjected to High voltage DC.	Chalk and Talk
11	20/12/22 22/12/22	Transmission Line/ Sphere Gap. (a) Generation of standard lightning impulse voltage and to determine efficiency and energy of impulse generator. (b) To determine 50% probability flashover voltage for air insulation subjected to impulse voltage.	Chalk and Talk
	03/01/23 05/01/23	II INTERNALS	

Course Outcome:

At the end of the course the student will be able to:

- Verify the characteristics of over current, over voltage, under voltage and negative sequence relay both electromagnetic and static type.
- Verify the characteristics of microprocessor based over current, over voltage, under voltage relays and distance relay.
- Show knowledge of protecting generator, motor and feeders.
- Analyze the spark over characteristics for both uniform and non-uniform configurations using High A and DC voltages.
- Measure high AC and DC voltages and breakdown strength of transformer oil.
- Draw electric field and measure the capacitance of different electrode configuration models.
- Show knowledge of generating standard lightning impulse voltage to determine efficiency, energy of impulse generator and 50% probability flashover voltage for air insulation

Reference Books:

1. **High Voltage** Engineering by C.L. Wadhwa.
2. **High Voltage** Engineering Fundamentals by John Kuffel, Peter Kuffel



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**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
CALENDAR OF EVENTS FOR EVEN SEMESTER 2022-23
FOR UG BE - 8TH SEMESTER**

COMMENCEMENT FROM 13-02-2023 TO 13-05-2023

Sl. No	Month	Days						No. of working days	Activities
1	Feb	13 (FWD) (Dept meeting)	14	15	16	17	18 (H)	5	<ul style="list-style-type: none"> • 13TH – First Working Day • 13th – Dept meeting • 18th–shivarathri
2	Feb	20	21	22	23	24	25	6	-
3	Feb/Mar	27	28 (Guest Lecture)	1	2	3	4 (H)	5	<ul style="list-style-type: none"> • 28th – Guest lecture
4	Mar	6	7	8	9	10 (CCM)	11	6	10 th – class committee meeting
5	Mar	13	14	15 (CIE1)	16 (CIE1)	17 (CIE1)	18 (H)	5	15 th ,16 th ,17 th – CIE - I
6	Mar	20 (Dept meeting)	21	22 (Result analysis meeting)	23 (H)	24	25 (PTM)	4	<ul style="list-style-type: none"> • 22nd -result analysis meeting • 23rd – UGADI • 25th - PTM
7	Mar/Apr	27	28	29	30	31 (IIC Activity)	1 (H)	5	31 st – IIC activity
8	Apr	3 (H)	4 (IIC Activity)	5	6	7 (H)	8 (Project demo)	4	<ul style="list-style-type: none"> • 3RD-Mahaveer Jayanthi • 7TH -Good Friday • 4th – IIC activity • 8th – Project demo day
9	Apr	10	11 (CIE2)	12 (CIE2)	13 (CIE2)	14 (H)	15 (H)	5	<ul style="list-style-type: none"> • 11th,12th,13th –CIE-2 • 14th – Dr. B R Ambedkar Jayanthi

10	Apr	17	18	19 (Result analysis meeting)	20	21	22 (H)	5	•19 th -Result analysis meeting •22 nd -Kutub-E-Ramzan
11	Apr	24 (Dept meeting)	25	26	27	28	29 (H)	5	24 th -Dept meeting
12	May	1 (H)	2	3	4	5 (CCM)	6	5	• 1 st - May Day 5 th – class committee meeting
13	May	8 (CIE3)	9 (CIE3)	10 (CIE3)	11	12	13 (LWD)	5	• 8 TH – 9 TH – 8 TH SEM 3 rd CIE •13 th – last working day

Activities planned for the even semester 2022 -23

Department Meeting
Class committee meeting
Expert talk/Guest lecture – IIC Activities
Project Demo day
CIE Result Analysis Meeting
PTM
Industrial visit


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**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
CALENDAR OF EVENTS FOR EVEN SEMESTER 2022-23
FOR UG BE - 6TH SEMESTER**

COMMENCEMENT FROM 20-03-2023 TO 10-07-2023

Sl. No	Month	Days						No. of working days	Activities
1	Mar	20 (FWD) (Dept meeting)	21	22	23 (H)	24	25	4	<ul style="list-style-type: none"> • 20th – FWD, Dept meeting • 23RD – UGADI
2	Mar/Apr	27	28	29	30	31 (Hands on training)	1 (H)	5	31st – Hands on Training
3	Apr	3 (H)	4 (IIC Activity)	5	6	7 (H)	8 (Project demo)	4	3 RD -Mahaveer Jayanthi 7 TH -Good Friday 4 th – IIC activity 8 th – Project demo day
4	Apr	10	11	12	13	14 (H)	15 (H)	5	14th –Ambedkar Jayanthi
5	Apr	17	18	19 (CCM)	20	21	22 (H)	5	19 th – class committee meeting 22 nd – Kutub-E-Ramzan
6	Apr	24 (CIE-1)	25 (CIE-1)	26 (CIE-1)	27	28	29 (H)	5	• 24 th , 25 th & 26 th –CIE-1
7	May	1 (H)	2 (Result analysis meeting)	3	4	5	6	5	1 st - May Day 2 nd – Result analysis meeting
8	May	8	9	10	11	12	13 (H)	5	
9	May	15	16	17	18	19	20 (Industrial visit)	6	• 20 th – Industrial visit

10	May	22	23	24	25 (CCM)	26	27 (H)	5	25 th – Class committee meeting
11	May/Jun	29	30	31	1 (CIE-2)	2 (CIE-2)	3 (CIE-2)	6	1 ST , 2 ND & 3 RD – CIE - 2
12	Jun	5 (Dept meeting)	6	7	8 (Result analysis meeting)	9	10 (H)	5	8 th – Result analysis meeting
13	Jun	12	13 (Guest Lecture)	14	15	16	17	6	13 th – guest lecture
14	Jun	19	20	21	22	23 (IIC activity – Demo)	24 (H)	5	23 rd – IIC activity – Demo day
15	Jun	26	27	28	29 (H)	30	1 (Poster presentation)	5	29 th – Bakrid 1 st – Poster presentation
16	Jun/Jul	3 (CIE-3)	4 (CIE-3)	5 (CIE-3)	6	7	8 (H)	5	3 rd , 4 th & 5 th – CIE - 3
17	Jul	10 (LWD)						1	10 th – Last Working Day

Activities planned for the even semester 2022 -23

Department Meeting

Class committee meeting

Expert talk/Guest lecture – IIC Activities

Demo day/Poster presentation

CIE Result Analysis Meeting

PTM

Industrial visit


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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING CALENDAR OF EVENTS FOR EVEN SEMESTER 2022-23 FOR UG BE - 4TH SEMESTER

COMMENCEMENT FROM 05-06-2023 TO 16-09-2023

Sl. No	Month	Days						No. of working days	Activities
1	Jun	5 (FWD) (Dept meeting)	6	7	8	9	10 (H)	5	5th – First Working Day, Dept meeting
2	Jun	12	13	14	15	16	17	6	-
3	Jun	19	20	21	22	23 (IIC activity-Demo)	24 (H)	5	23rd – IIC activity – Demo day
4	Jun	26	27	28	29 (H)	30	1	5	29th - Bakrid
5	Jun/Jul	3	4	5 (CCM)	6	7	8 (H)	5	5th – Class committee meeting
6	Jul	10	11 (CIE 1)	12 (CIE 1)	13 (CIE 1)	14	15 (Industrial visit)	6	11th, 12th, 13th - CIE-1 15th – Industrial visit
7	Jul	17	18 (Result analysis meeting)	19	20	21	22 (H)	5	18th – Result analysis meeting
8	Jul	24	25	26	27 (Guest lecture)	28 (Guest lecture)	29 (H)	5	27th, 28th – Guest Lecture 29th - Last Day of Moharram
9	Jul/Aug	31	1	2 (Expert Talk)	3	4	5 (H)	5	2nd – Expert Talk
10	Aug	7	8	9	10 (CCM)	11	12	6	10th–Class committee meeting

11	Aug	14	15(H)	16 (CIE 2)	17 (CIE2)	18 (CIE 2)	19	5	15 th – Independence day 16 th , 17 th & 18 th CIE2 for 4 th sem
12	Aug	21	22	23 (Result analysis meeting)	24 (Outreach activity)	25 (Expert talk)	26 (PTM)	6	23 rd –Result analysismeeting 24 th – outreach activity 25 th – Expert talk 26 th – PTM
13	Aug	28 (Industrial visit)	29	30	31	1	2 (H)	5	28 th – Industrial visit
14	Aug/Sep	4	5	6 (Outreach activity)	7	8	9	6	6 th – outreach activity
15	Sep	11 (CIE3)	12 (CIE3)	13 (CIE3)	14	15	16 (LWD) (H)		11 th , 12 th & 13 th - CIE -3 16 th – Last working day

Activities planned for the even semester 2022 -23

Department Meeting
 Class committee meeting
 Expert talk/Guest lecture – IIC Activities
 CIE Result Analysis Meeting
 Outreach Activities
 PTM
 Industrial visit


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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING CALENDAR OF EVENTS FOR ODD SEMESTER 2022-23 FOR UG BE - 7TH SEMESTER

COMMENCEMENT FROM 12-09-2022 TO 31-12-2022

Sl. No	Month	Days						No. of working days	Activities
1	Sep	12 (FWD) (Dept meeting)	13	14	15	16	17 (H)	5	<ul style="list-style-type: none">12TH – First Working Day12th – Dept meeting
2	Sep	19	20	21	22	23	24	6	-
3	Sep/Oct	26	27	28	29	30	1 (H)	5	-
4	Oct	3	4 (H)	5 (H)	6	7	8	4	4 th – Ayudhapooja 5 th - Vijayadashmi
5	Oct	10	11	12	13 (CCM)	14	15	5	13 th – class committee meeting
6	Oct	17 (CIE -1)	18 (CIE – 1)	19 (CIE-1)	20	21 (Seminar)	22 (PTM)	6	17 th ,18 th ,19 th -CIE - 1 22 nd - PTM 21 st – Seminar-IIC activity
7	Oct	24 (H)	25	26 (H)	27 (Result analysis meeting)	28	29 (H)	3	24 th – Naraka chaturdashi 26 th – Ballipadyami/ Deepavali
8	Oct/Nov	31	1 (H)	2	3	4	5	5	1 st – Kannada Rajyotsava
9	Nov	7	8	9	10	11 (H)	12 (H)	4	11 th - Kanakadasa jayanthi

10	Nov	14	15	16 (Expert talk)	17	18	19	6	16th – Expert talk
11	Nov	21	22	23 (CIE – 2)	24 (CIE - 2)	25 (CIE – 2)	26 (H)	5	23rd, 24th, 25th – CIE - 2
12	Nov/Dec	28	29	30 (Result analysis meeting)	1	2	3 (PTM)	6	30th – Result analysis meeting 3rd - PTM
13	Dec	5	6	7	8	9	10 (H)	5	
14	Dec	12	13	14	15 (CCM)	16	17	6	15th – class committee meeting
15	Dec	19	20	21 (Guest lecture)	22	23	24 (H)	5	21st – Guest lecture
16	Dec	26 (CIE – 3)	27 (CIE – 3)	28 (CIE – 3)	29	30	31 (PTM) (LWD)	6	26th, 27th, 28th – CIE -3 31st – PTM, Last working day

Activities planned for the Odd semester 2022 -23

Department Meeting
 Class committee meeting
 Expert talk/Guest lecture – IIC Activities
 Project Demo day
 CIE Result Analysis Meeting
 PTM
 Industrial visit


Professor & HOD, ECE
 The Oxford College of Engineering
 Bannaganahalli, Mysore Road
 Bengaluru, Karnataka



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING CALENDAR OF EVENTS FOR ODD SEMESTER 2022-23 FOR UG BE - 5TH SEMESTER

COMMENCEMENT FROM 17-10-2022 TO 04-02-2023

Sl. No	Month	Days						No. of working days	Activities
1	Oct	17 (FWD)	18	19	20	21 (Seminar)	22	6	17 th – First working day 21 st – Seminar- IIC activity
2	Oct	24 (H)	25	26 (H)	27	28	29 (H)	3	24 th – Naraka chaturdashi 26 th – Ballipadyami/ Deepavali
3	Oct/Nov	31	1 (H)	2	3	4	5	5	1 st – Kannada Rajyotsava
4	Nov	7	8	9	10	11 (H)	12 (H)	4	11 th - Kanakadasa jayanthi
5	Nov	14	15	16 (Expert talk)	17 (CIE – 1)	18 (CIE – 1)	19 (CIE – 1)	6	16 th – Expert talk 17 th , 18 th , 19 th – CIE -1
6	Nov	21	22	23 (Seminar- IIC activity)	24	25 (PTM)	26 (H)	5	23 rd -Seminar - IIC activity 25 th - PTM
7	Nov/Dec	28	29	30	1	2	3	6	
8	Dec	5	6	7	8 (CCM)	9	10 (H)	5	8 th – class committee meeting
9	Dec	12	13	14	15 (Industrial visit)	16	17	6	15 th – Industrial visit

10	Dec	19	20	21 (Guest lecture)	22	23	24 (H)	5	21st – Guest lecture
11	Dec	26 (CIE – 2)	27 (CIE – 2)	28 (CIE – 2)	29	30	31 (PTM)	6	26th, 27th, 28th – CIE -2 31st – PTM
12	Jan -23	2	3	4	5 (Result analysis meeting)	6	7 (H)	5	5th – Result analysis meeting
13	Jan -23	9	10	11	12	13	14 (H)	5	14th – Mahara sankranthi
14	Jan -23	16	17	18 (Dept meeting)	19	20	21 (H)	5	18th – Dept meeting
15	Jan -23	23 (CIE – 3)	24 (CIE – 3)	25 (CIE – 3)	26 (H)	27	28 (PTM)	6	23rd, 24th, 25th – CIE-3 26th – Republic day 28th - PTM
16	Feb - 23	30	31	1	2	3 (LWD)		4	3rd – Last working day

Activities planned for the Odd semester 2022 -23

Department Meeting
 Class committee meeting
 Expert talk/Guest lecture – IIC Activities
 Demo day/Poster presentation
 CIE Result Analysis Meeting
 PTM
 Industrial visit


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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING CALENDAR OF EVENTS FOR ODD SEMESTER 2022-23 FOR UG BE – 3rd SEMESTER

COMMENCEMENT FROM 31-10-2023 TO 11-02-2023

Sl. No	Month	Days						No. of working days	Activities
1	Oct/Nov	31	1 (H)	2	3	4	5	5	1st – Kannada Rajyotsava
2	Nov	7	8	9	10	11 (H)	12 (H)	4	11th- Kanakadasa jayanthi
3	Nov	14	15	16 (Expert talk)	17	18	19	6	16th – Expert talk
4	Nov	21	22	23 (Seminar-IIC activity)	24	25	26 (H)	5	23rd -Seminar - IIC activity 25th - PTM
5	Nov/Dec	28	29	30 (CIE – 1)	1 (CIE – 1)	2 (CIE – 1)	3 (PTM)	6	30th, 1st, 2nd – CIE -1
6	Dec	5	6	7	8	9	10 (H)	5	-
7	Dec	12	13	14	15 (Industrial visit)	16	17	6	15th – Industrial visit
8	Dec	19	20	21 (Guest lecture)	22	23	24 (H)	5	21st – Guest lecture
9	Dec	26	27	28	29	30 (CCM)	31	6	30th – Class committee meeting
10	Jan -23	2	3	4 (CIE-2)	5 (CIE-2)	6 (CIE-2)	7 (H)	5	4th, 5th, 6th – CIE -2

11	Jan -23	9	10	11	12	13 (PTM)	14 (H)	5	13th - PTM 14th – Mahara sankranthi
12	Jan -23	16 (Result analysis meeting)	17	18	19	20	21 (H)	5	16th – Result analysis meeting
13	Jan -23	23	24	25	26 (H)	27	28	6	26th – Republic day
14	Jan/Feb - 23	30	31	1 (CIE – 3)	2 (CIE – 3)	3 (CIE – 3)	4 (H)	4	1st, 2nd, 3rd - CIE-3
15	Feb - 23	6	7	8	9	10	11 (PTM) (LWD)		11th – Last working day

Activities planned for the Odd semester 2022 -23

Department Meeting
 Class committee meeting
 Expert talk/Guest lecture – IIC Activities
 CIE Result Analysis Meeting
 Outreach Activities
 PTM
 Industrial visit


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 Bangalore - 560022



THE INDIAN COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING
Srinagar, Ysr 500 092

C. sem. Results, names and subject

ROLL NO	SUBJECT	MARKS	PERCENT
18ME10	MECHANICAL DESIGN MANAGEMENT AND STATISTICAL ANALYSIS	57/100	57
18ME11	DESIGN OF MACHINE ELEMENTS	58/100	58
18ME12	VEHICLE TECHNOLOGY	57/100	57
18ME13	HYDRAULIC AND PNEUMATICS	57/100	57
18ME14	INTERNAL AND EXTERNAL FLOW	57/100	57
18ME15	INTERNAL FLOW	57/100	57
18ME16	INTERNAL AND EXTERNAL FLOW	57/100	57
18ME17	INTERNAL FLOW	57/100	57
18ME18	INTERNAL AND EXTERNAL FLOW	57/100	57
18ME19	INTERNAL FLOW	57/100	57

C. sem. Results, names and subject

ROLL NO	SUBJECT	MARKS	PERCENT
18ME20	INTERNAL FLOW	57/100	57
18ME21	INTERNAL FLOW	57/100	57
18ME22	INTERNAL FLOW	57/100	57
18ME23	INTERNAL FLOW	57/100	57
18ME24	PYTHON AND DATA SCIENCE	57/100	57
18ME25	INTERNAL FLOW	57/100	57
18ME26	INTERNAL FLOW	57/100	57
18ME27	INTERNAL FLOW	57/100	57

F. V. Srinivasulu
Principal

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DEAN ACADEMICS

Principal

A. Srinivasulu
The Indian College of Engineering
Srinagar, Ysr 500 092



**THE GOVT COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING
Mysuru, Tum (576 102)**

Sl. No.	Date	MEMBER	MRP	BOOK NO.	CLASS	TITLE	AUTHOR	PAGES	PRICE	BIBLIOGRAPHIC DATA		CROSS REFERENCE		
										CALL NO.	ISSUE NO.	1000	1000	1000
1	10/05	1 st	10001	001	MECH	Strength of Materials	Timoshenko	1000	1000	1000	1000	1000	1000	1000
		2 nd	10002	002	MECH	Strength of Materials	Timoshenko	1000	1000					
2	10/05	1 st	10003	003	MECH	Strength of Materials	Timoshenko	1000	1000	1000	1000	1000	1000	1000
		2 nd	10004	004	MECH	Strength of Materials	Timoshenko	1000	1000					
3	10/05	1 st	10005	005	MECH	Strength of Materials	Timoshenko	1000	1000	1000	1000	1000	1000	1000
		2 nd	10006	006	MECH	Strength of Materials	Timoshenko	1000	1000					
4	10/05	1 st	10007	007	MECH	Strength of Materials	Timoshenko	1000	1000	1000	1000	1000	1000	1000
		2 nd	10008	008	MECH	Strength of Materials	Timoshenko	1000	1000					
5	10/05	1 st	10009	009	MECH	Strength of Materials	Timoshenko	1000	1000	1000	1000	1000	1000	1000
		2 nd	10010	010	MECH	Strength of Materials	Timoshenko	1000	1000					
6	10/05	1 st	10011	011	MECH	Strength of Materials	Timoshenko	1000	1000	1000	1000	1000	1000	1000
		2 nd	10012	012	MECH	Strength of Materials	Timoshenko	1000	1000					
7	10/05	1 st	10013	013	MECH	Strength of Materials	Timoshenko	1000	1000	1000	1000	1000	1000	1000
		2 nd	10014	014	MECH	Strength of Materials	Timoshenko	1000	1000					
8	10/05	1 st	10015	015	MECH	Strength of Materials	Timoshenko	1000	1000	1000	1000	1000	1000	1000
		2 nd	10016	016	MECH	Strength of Materials	Timoshenko	1000	1000					

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DEPARTMENT OF EDUCATION, KARNATAKA
Bangalore, Pin: 560 002

೧೯. ಇತರೆ ವಿಷಯಗಳು ಮತ್ತು ವಿವರಣೆ:

ಆಯ್ಕೆ ವಿವರ		ಪದವಿ ೧	ಪದವಿ ೨	ಇತರ ವಿವರ
೧೯೧	೨೦೧೯-೨೦	ಪದವಿ ೧ (ಪದವಿ ೧) - ಇಂಜಿನಿಯರಿಂಗ್	ಪದವಿ ೧	೫೦
೧೯೨	೨೦೧೯-೨೦	ಪದವಿ ೧ (ಪದವಿ ೧) - ಇಂಜಿನಿಯರಿಂಗ್	ಪದವಿ ೧	೫೦
೧೯೩	೨೦೧೯-೨೦	ಪದವಿ ೧ (ಪದವಿ ೧) - ಇಂಜಿನಿಯರಿಂಗ್	ಪದವಿ ೧	೫೦
೧೯೪	೨೦೧೯-೨೦	ಪದವಿ ೧ (ಪದವಿ ೧) - ಇಂಜಿನಿಯರಿಂಗ್	ಪದವಿ ೧	೫೦
೧೯೫	೨೦೧೯-೨೦	ಪದವಿ ೧ (ಪದವಿ ೧) - ಇಂಜಿನಿಯರಿಂಗ್	ಪದವಿ ೧	೫೦
೧೯೬	೨೦೧೯-೨೦	ಪದವಿ ೧ (ಪದವಿ ೧) - ಇಂಜಿನಿಯರಿಂಗ್	ಪದವಿ ೧	೫೦
೧೯೭	೨೦೧೯-೨೦	ಪದವಿ ೧ (ಪದವಿ ೧) - ಇಂಜಿನಿಯರಿಂಗ್	ಪದವಿ ೧	೫೦
೧೯೮	೨೦೧೯-೨೦	ಪದವಿ ೧ (ಪದವಿ ೧) - ಇಂಜಿನಿಯರಿಂಗ್	ಪದವಿ ೧	೫೦
೧೯೯	೨೦೧೯-೨೦	ಪದವಿ ೧ (ಪದವಿ ೧) - ಇಂಜಿನಿಯರಿಂಗ್	ಪದವಿ ೧	೫೦
೨೦೦	೨೦೧೯-೨೦	ಪದವಿ ೧ (ಪದವಿ ೧) - ಇಂಜಿನಿಯರಿಂಗ್	ಪದವಿ ೧	೫೦

೨೦. ಇತರೆ ವಿಷಯಗಳು ಮತ್ತು ವಿವರಣೆ:

ಆಯ್ಕೆ ವಿವರ	ಪದವಿ ವಿವರ	ಪದವಿ ವಿವರ
೨೦೧	ಪದವಿ ೧ (ಪದವಿ ೧)	ಪದವಿ ೧ (ಪದವಿ ೧)
೨೦೨	ಪದವಿ ೧ (ಪದವಿ ೧)	ಪದವಿ ೧ (ಪದವಿ ೧)
೨೦೩	ಪದವಿ ೧ (ಪದವಿ ೧)	ಪದವಿ ೧ (ಪದವಿ ೧)
೨೦೪	ಪದವಿ ೧ (ಪದವಿ ೧)	ಪದವಿ ೧ (ಪದವಿ ೧)
೨೦೫	ಪದವಿ ೧ (ಪದವಿ ೧)	ಪದವಿ ೧ (ಪದವಿ ೧)
೨೦೬	ಪದವಿ ೧ (ಪದವಿ ೧)	ಪದವಿ ೧ (ಪದವಿ ೧)
೨೦೭	ಪದವಿ ೧ (ಪದವಿ ೧)	ಪದವಿ ೧ (ಪದವಿ ೧)
೨೦೮	ಪದವಿ ೧ (ಪದವಿ ೧)	ಪದವಿ ೧ (ಪದವಿ ೧)
೨೦೯	ಪದವಿ ೧ (ಪದವಿ ೧)	ಪದವಿ ೧ (ಪದವಿ ೧)
೨೧೦	ಪದವಿ ೧ (ಪದವಿ ೧)	ಪದವಿ ೧ (ಪದವಿ ೧)



THE OXFORD COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING
Academic Year 2022-2023

C. Faculty names and subjects

Sl. No.	SUBJECT	FACULTY
1. ME1101 (M/T/S)	Automotive Engines & Power Plants (M/T/S)	Mr. Anand R. SUDH
2. ME1102 (M/T/S)	Management Information Systems (MIS) (M/T/S)	Ms. Sangeetha S. SUDH
3. ME1103 (M/T/S)	Process Plant II (M/T/S)	Dr. Anand C. SUDH (M/T/S) & Mr. Anand R. SUDH
4. ME1104 (M/T/S)	Technical Seminar (M/T/S)	Ms. Sangeetha S. SUDH & Ms. Anand R. SUDH
5. ME1105 (M/T/S)	Workshop (M/T/S)	Dr. Anand C. SUDH (M/T/S) & Mr. Anand R. SUDH


Prof. & HOD

Department of Mechanical Engineering
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Dean Academic


Principal

The Oxford College of Engineering
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Bangalore - 560084



THE OXFORD COLLEGE OF ENGINEERING
 DEPARTMENT OF MBA
 ACADEMIC YEAR MASTER TIMETABLE 2023-2024 (REVISED)

Sl No	Day	Sec	W.L.F	ROOM NO	CLASS TEACHER	6:00-7:00	7:00-8:00	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	12:00-2:00	2:00-3:00	3:00-4:00	4:00-4:30
1	MON	1 st A.Sec	26/09/23	601	Dr. ME	FM (Dr. ME)	OR (Dr. GC)	EM&IPR (Dr. ME)	EM&IPR (Dr. ME)	H B I A B	L U B C H	HRM (Dr. AS)	HRM (Dr. AS)	Library	
2		1 st B.Sec	26/09/23	602	Prof. LB	HRM (Dr. AS)	ME (Prof. LB)	OR (Dr. GC)	OR (Dr. GC)			FM (Dr. AS)	FM (Dr. AS)	Library	
3		1 st A.Sec	26/09/23	601	Prof. AS	EM&IPR (Dr. ME)	Project work	HRM (Dr. ME)	HRM (Dr. ME)			FD (Dr. ME)	LA&CM (Prof. LB)	Project work	
4		1 st B.Sec	26/09/23	602	Prof. AS	Project work	OR (Dr. KTR)	EM&IPR (Dr. ME)	Project work			Project work	Project work	PG&IE (Dr. AS)	
5		1 st C.Sec	26/09/23	603	Prof. AS	EM&IPR (Dr. ME)	OR (Dr. ME)	Project work	Project work			FD (Dr. ME)	Project work	Project work	
6	TUE	1 st A.Sec	26/09/23	601	Dr. ME	OR (Dr. ME)	ME (Prof. LB)	OR (Dr. GC)	HRM (Dr. AS)	H B I A B	L U B C H	ME (Dr. KTR)	EM (Dr. KTR)	Monday	
7		1 st B.Sec	26/09/23	602	Prof. LB	OR (Dr. GC)	OR (Dr. KTR)	OR (Dr. KTR)	ME (Prof. LB)			EM&IPR (Dr. ME)	EM&IPR (Dr. ME)	Monday	
8		1 st A.Sec	26/09/23	601	Prof. AS	EM&IPR (Dr. ME)	Project work	HRM (Dr. ME)	HRM (Dr. ME)			FD (Dr. ME)	LA&CM (Prof. LB)	Project work	
9		1 st B.Sec	26/09/23	602	Prof. AS	Project work	HRM (Dr. ME)	Project work	Project work			Project work	Project work	PG&IE (Dr. AS)	
10		1 st C.Sec	26/09/23	603	Prof. AS	Project work	Project work	Project work	Project work			FD (Dr. ME)	Project work	Project work	
11	WED	1 st A.Sec	26/09/23	601	Dr. ME	OR (Dr. GC)	EM&IPR (Dr. ME)	OR (Prof. LB)	FM (Dr. ME)	H B I A B	L U B C H	ME (Dr. ME)	HRM (Dr. AS)	Class Study	
12		1 st B.Sec	26/09/23	602	Prof. LB	HRM (Dr. AS)	HRM (Dr. AS)	OR (Dr. GC)	EM&IPR (Dr. ME)			ME (Dr. KTR)	EM (Dr. KTR)	Class Study	
13		1 st A.Sec	26/09/23	601	Prof. AS	OR (Prof. LB)	HRM (Dr. ME)	Project work	EM&IPR (Dr. ME)			FD (Dr. ME)	Project work	LA&CM (Prof. LB)	
14		1 st B.Sec	26/09/23	602	Prof. AS	Project work	Project work	OR (Dr. KTR)	Project work			Project work	Project work	Project work	
15		1 st C.Sec	26/09/23	603	Prof. AS	OR (Prof. LB)	Project work	Project work	Project work			FD (Dr. ME)	Project work	Project work	
16	THU	1 st A.Sec	26/09/23	601	Dr. ME	ME (Prof. LB)	EM&IPR (Dr. ME)	OR (Dr. GC)	ME (Prof. LB)	H B I A B	L U B C H	EM (Dr. KTR)	EM (Dr. KTR)	Monday Borrowed Class	
17		1 st B.Sec	26/09/23	602	Prof. LB	HRM (Dr. AS)	OR (Dr. GC)	FM (Dr. ME)	FM (Dr. ME)			EM&IPR (Dr. ME)	EM&IPR (Dr. ME)	Monday Borrowed Class	
18		1 st C.Sec	26/09/23	603	Prof. AS	FD	HRM	EM&IPR	Project work			EM&IPR	Project work	Project work	

19		A Sec	2000/01	MS	Prof. AJ	(Dr. H)	(Dr. AJ)		(Dr. MK)	work		(Prof. LB)	(Dr. H)	
20		B Sec	2000/01	MS	Prof. AJ	Project work			Project work	OL (Dr. ATR)		Project work		PGRIE (Dr. AJ)
21		C Sec	2000/01	MS	Prof. AJ	FD	Project work		RMH			(Prof. LB)	Project work	
22		D Sec	2000/01	MS	Dr. Am.	HRM	OR		FM	FM		SM	RMH/PR (Dr. MK)	Library
23		E Sec	2000/01	MS	Prof. LB	(Dr. AJ)	(Dr. GC)		(Dr. MK)	(Dr. H)		(Dr. ATR)	(Dr. MK)	
24		F Sec	2000/01	MS	Prof. LB	OL	SM		HRM	OR		OL	FM	Library
25		G Sec	2000/01	MS	Prof. AJ	(Prof. LB)	(Dr. ATR)		(Dr. AJ)	(Dr. GC)		(Prof. LB)	(Dr. H)	
26		H Sec	2000/01	MS	Prof. AJ	HRM/HR (Dr. H)			Project work	RMH		Project work		
27		I Sec	2000/01	MS	Prof. AJ	Project work			OL (Dr. ATR)	Project work		Project work		
28		J Sec	2000/01	MS	Prof. AJ	Project work			OL (Dr. ATR)	RMH		Project work		
29		K Sec	2000/01	MS	Prof. AJ	Project work			OL (Dr. ATR)	RMH		Project work		
30	NAT					Alternate Saturday, full day with day after alternate						Alternate Saturday, full day with day after alternate		

2nd Sem A Section Subjects and Faculty Name:


COURSE CODE	COURSE NAME	FACULTY NAME
22MB421	Human Resource Management (HRM)	Dr. A. John (Dr. AJ)
22MB422	Financial Management (FM)	Dr. Harish V (Dr. H)
22MB423	Research Methodology & IPR (RMH/PR)	Dr. M. Kaliraman (Dr. MK)
22MB424	Operations Research (OR)	Dr. Suresh C / Dr. GC
22MB425	Strategic Management (SM)	Dr. K. Thangarajoo Nandy (Dr. ATR)
22MB426	Managerial Economics (ME)	Prof. Lakshmi Suresh (LB)

3rd Sem II Section Subjects and Faculty Names:

COURSE CODE	COURSE NAME	FACULTY NAME
22MB021	Human Resource Management (HRM)	Dr. A. Saha (Dr. AS)
22MB022	Financial Management (FM)	Dr. Hadas N (Dr. HN)
22MB023	Research Methodology & ITB, ORG (PM)	Dr. M. Kulkarni (Dr. MK)
22MB024	Operations Research (OR)	Dr. Gayatri C. (Dr. GC)
22MB025	Strategic Management (SM)	Dr. K. Thiruka Ram Reddy (Dr. TR)
22MB026	Managerial Economics (ME)	Prof. Lakshmi Suresha (LS)

4th Sem Subjects and Faculty Name:

COURSE CODE	SUBJECT	FACULTY
2008A0001	Risk Management and Insurance (RMI)	Dr. M. Kulkarni (Dr. MK)
2008A0002	Financial Derivatives (FD)	Dr. Hadas N (Dr. HN)
2008A0003	Labour Finance (LF)	Prof. Lakshmi Suresha (LS)
2008A0004	CRM Marketing Management (CRM)	Dr. K. Thiruka Ram Reddy (Dr. TR)
2008A0005	Logistics & Supply Chain Management (LSCM)	Prof. Lakshmi Suresha (LS) & Dr. Hadas (Dr. HN)
2008A0006	Digital Marketing Management (DM)	Dr. A. Saha (Dr. AS)
2008A0007	Organizational Leadership (OL)	Dr. K. Thiruka Ram Reddy (Dr. TR)
2008A0008	Personal Growth & Management Effectiveness (PGME)	Dr. A. Saha (Dr. AS)
2008A0009	International Human Resource Management (IHRM)	Dr. M. Kulkarni (Dr. MK)


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DEAN


PRINCIPAL
PRINCIPAL
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 Bommanahalli, Hosur Road
 Bangalore-560 088



THE OXFORD COLLEGE OF ENGINEERING
DEPARTMENT OF MBA
ACADEMIC YEAR MASTER TIMETABLE 2022-2023 (2022)

Sl No	Day	Sec	W/L/T	ROOM NO	CLASS TEACHER	08:00-09:00	09:00-10:00	10:00 - 11:00	11:00 - 11:30	11:30 - 12:00	12:00 - 1:30	1:30-2:30	2:30-3:30	3:30 - 4:30								
1	MON	1 st A Sec	13/2/23	601	Dr. MB	(ACM) (Prof. LB)	(DM) (Prof. LB)	(PMACM) (Dr. MB)	(MM) (Dr. KTR)			(BC) (Prof. AS)	(DS) (Dr. SB)	Library								
2		1 st B Sec	13/2/23	602	Prof. LB	(DM) (Dr. KTR)	(DS) (Dr. SB)	(SM) (Prof. LB)	(BC) (Prof. LB)			(ACM) (Prof. LB)	(PMACM) (Dr. MB)	Library								
3		1 st A Sec	20/1/23	601	Prof. AS	(MBA) (Prof. LB)	Internship (Prof. LB)	(MBA) (Prof. PC)					(DM) (Dr. MB)	(MM) (Prof. LB)	Library (Prof. AS)							
4		1 st B Sec	20/1/23	602	Prof. AS											(MBA) (Prof. LB)	(DM) (Dr. KTR)					
5		1 st C Sec	20/1/23	603	Prof. AS																	
6	TUE	1 st A Sec	13/2/23	601	Dr. MB	(PMACM) (Dr. MB)	(DM) (Prof. LB)									(ACM) (Prof. LB)	(BC) (Prof. AS)			(MM) (Dr. KTR)	(DS) (Dr. SB)	Missing
7		1 st B Sec	13/2/23	602	Prof. LB	(MM) (Dr. KTR)	(DS) (Dr. SB)									(SM) (Prof. LB)	(PMACM) (Dr. MB)			(BC) (Prof. AS)	(ACM) (Prof. LB)	Missing
8		1 st A Sec	20/1/23	601	Prof. AS	(MBA) (Prof. AS)	Internship (Prof. LB)	(MBA) (Prof. PC)					(DM) (Dr. MB)	(MM) (Prof. LB)	Library (Prof. AS)							
9		1 st B Sec	20/1/23	602	Prof. AS											(MBA) (Prof. AS)	(DM) (Dr. KTR)					
10	1 st C Sec	20/1/23	603	Prof. AS																		
11	WED	1 st A Sec	13/2/23	601	Dr. MB	(BC) (Prof. AS)	(DS) (Dr. SB)									(SM) (Prof. LB)	(MM) (Dr. KTR)			(PMACM) (Dr. MB)	(ACM) (Prof. LB)	Library
12		1 st B Sec	13/2/23	602	Prof. LB	(PMACM) (Dr. MB)	(ACM) (Prof. LB)	(BC) (Prof. AS)	(DS) (Dr. SB)			(SM) (Dr. KTR)	Case Presentation									
13		1 st A Sec	20/1/23	601	Prof. AS	(MM) (Dr. MB)	Internship (AS)	(MBA) (Prof. PC)					(DM) (Dr. MB)	(MM) (Prof. LB)	Library (Prof. AS)							
14		1 st B Sec	20/1/23	602	Prof. AS											(MM) (Dr. MB)	(DM) (Dr. KTR)					
15		1 st C Sec	20/1/23	603	Prof. AS																	
16		1 st A Sec	13/2/23	601	Dr. MB	(BC) (Prof. AS)	(DS) (Dr. SB)									(MM) (Prof. LB)	(ACM) (Prof. LB)			(DM) (Dr. KTR)	(PMACM) (Dr. MB)	Missing
17		1 st B Sec	13/2/23	602	Prof. LB	(MM) (Dr. KTR)	(PMACM) (Dr. MB)									(BC) (Prof. AS)	(DS) (Dr. SB)			(SM) (Prof. LB)	(ACM) (Prof. LB)	Library

18	THU	1 st A Sec	28/11/22	803	Prof. AS	22NBA11 (PM&OB) Dr.MK	22NBA12 (ED) Dr.SR	P&L A&L	ICT (Prof. LB)		L-11 N-C #	ICT (Prof. LB)	Marketing (Prof. AS)	ICT (Prof. LB)
19		1 st B Sec	28/11/22	803	Prof. AS				Internship (Prof. AS)			ICT (Dr. MK)	Marketing (Dr. MK)	ICT (Dr. MK)
20		1 st C Sec	28/11/22	803	Prof. AS				ICT (Prof. LB)			ICT (Prof. LB)	Marketing (Dr. MK)	ICT (Prof. LB)
21	FR	1 st A Sec	12/12/25	803	Dr. MK	ICT (Dr. SR)	ICT (Dr. SR)	P&L A&L	PM&OB (Dr. MK)	ICT (Prof. LB)	L-11 N-C #	ICT (Prof. AS)	Case Presentation	
22		1 st B Sec	13/12/22	803	Prof. LB	ICT (Prof. AS)	ICT (Dr. SR)		PM&OB (Dr. MK)	ICT (Prof. LB)		Marketing (Dr. MK)		
23		1 st C Sec	28/11/22	803	Prof. AS	ICT (Prof. LB)	ICT (Prof. LB)		ICT (Dr. MK)	ICT (Prof. LB)		Marketing (Dr. MK)		
24		1 st A Sec	28/11/22	803	Prof. AS	ICT (Dr. MK)	ICT (Dr. MK)		ICT (Prof. AS)	ICT (Prof. LB)		Marketing (Dr. MK)		
25		1 st B Sec	28/11/22	803	Prof. AS	ICT (Dr. MK)	ICT (Dr. MK)		ICT (Prof. AS)	ICT (Prof. LB)		Marketing (Dr. MK)		
26		1 st C Sec	28/11/22	803	Prof. AS	ICT (Dr. MK)	ICT (Dr. MK)		ICT (Prof. AS)	ICT (Prof. LB)		Marketing (Dr. MK)		
28	SAT				Alternate Saturday full day with day wise timetable						Alternate Saturday full day with day wise timetable			

1st Sem A Section Subjects and Faculty Name:

CODE	SUBJECT	FACULTY
22NBA11	Principles of Management and Organizational Behaviour (PM&OB)	Dr. M Kaliravan (Dr. MK)
22NBA12	Entrepreneurship Development (ED)	Dr. Srikant R (Dr. SR)
22NBA13	Accounts for Managers (ACM)	Prof. Lakshmi Suresha (Prof. LB)
22NBA14	Statistics for Managers (SM)	Prof. Lavanya B S (Prof. LBS)
22NBA15	Marketing Management (MM)	Dr. A. Tharaka Rani Reddy (Dr. KTR)
22NBA16	Business Communication (BC)	Prof. A. Sathya (Prof. AS)

1st Sem B Section Subjects and Faculty Name:

CODE	SUBJECT	FACULTY
22MBA11	Principles of Management and Organizational Behaviour (PMBOB)	Dr. M Kathiravan (Dr. MK)
22MBA12	Entrepreneurship Development (ED)	Dr. Srikanth B (Dr. SR)
22MBA13	Accounts for Managers (ACM)	Prof. Lakshmi Suresha (Prof. LS)
22MBA14	Statistics for Managers (SM)	Prof. Lavanya B S (Prof. LBS)
22MBA15	Marketing Management (MM)	Dr. K. Thirukumar Reddy (Dr. KTR)
22MBA16	Business Communication (BC)	Prof. A. Sabana (Prof. AS)

2nd Sem Subjects and Faculty Name:

CODE	SUBJECT	FACULTY
20MBA301	Emerging Exponential Technologies (EET)	Prof. A. Sabana (Prof. AS)
20MBA302	Technology & Operational Strategies (TOS)	Dr. M Kathiravan (Dr. MK)
20MBA3M303	Service Marketing (SM)	Prof. A. Sabana (Prof. AS)
20MBA3M304	Marketing Research & Analytics (MRA)	Prof. P Chandrika Reddy (Prof. PCR)
20MBAFM303	Investment Management (IM)	Prof. Lakshmi Suresha (Prof. LS)
20MBAFM304	Direct Taxation (DT)	Prof. Lakshmi Suresha (Prof. LS)
20MBAHR303	Recruitment & Selection (RAS)	Dr. K. Thirukumar Reddy (Dr. KTR)
20MBAHR304	HR Analytics (HRA)	Dr. M Kathiravan (Dr. MK)
20MBAIN307	Internship study (IS)	All Faculty members


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 HOD, Dept. of Business Administration,
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 Bangalore 560 088


DEAN


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THE OXFORD COLLEGE OF ENGINEERING

1000, Road, Bannur, Salem, Tamil Nadu

The Oxford College of Engineering, is an ISO 9001:2015 Certified

Institution which was declared as an A Grade by the All India Council of Technical Education (AICTE)

CALENDAR OF EVENTS FOR B.A. B.Sc. IN COMPUTER APPLICATIONS (2022-2023)

Master of Computer Applications

Sl.No	Month	Day						No. of Working Days	Remarks
		Mon	Tue	Wed	Thu	Fri	Sat		
1	APRIL	17(Fri)	18	19	20	21	22(Sat)	5	First Working Day - Semester
2	APRIL	24	25	26	27	28	29(Sat)	5	
3	MAY	06	7	8	9	10	11	5	
4	MAY	13	14	15	16	17	18	5	
5	MAY	20	21	22	23	24	25(Sat)	5	END-TERM
6	MAY	27	28	29	30	31	1(June)	5	
7	JUNE	03	04	05	06	07	08	5	
8	JUNE	10	11	12	13	14	15	5	
9	JUNE	17	18	19	20	21	22	5	END-TERM
10	JUNE	24	25	26	27	28	29	5	
11	JULY	01	02	03	04	05	06	5	Mid-Exam
12	JULY	08	09	10	11	12	13	5	
13	JULY	15	16	17	18	19	20	5	END-TERM
14	JULY	22	23	24	25	26	27	5	Last day of Semester
15	JULY	29	30	31				1	Non-working day

VTE Practical Exam: 01-06-2023 TO 02-06-2023

VTE Theory Exam: 07-06-2023 TO 08-06-2023

[Signature]
 Head,
 Department of MCA

The Oxford College of Engineering,
 1000, Road, BANNUR -

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 Head,
 Department of B.A. B.Sc.

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Hosur Road, Bengaluru-56, Karnataka - 560028
 080-28024000, Fax: 080-28024001, 080-28024002


For more information visit: www.oxfordcollege.ac.in, www.oxfordcollege.ac.in/ocae

CALENDAR OF EVENTS FOR EVEN SEMESTER FOR 1st Year MCA (2022-2023)

Sl.No	Week	Day						No of Working Days	Activities	
		Mon	Tue	Wed	Thu	Fri	Sat			
1	2022-11-7	20/11/22	21	22	23/11/22	24	1	5	1st & 2nd Year Working Day 1st Monday 11, 1st class	
2	NOV	3	4	5	6	7	8/11	3		
3	NOV	9	10	11	12	13	14	4	1st & 2nd Year 11	
4	NOV	15	16	17	18	19	20/11	5	1st & 2nd Year 11	
5	NOV	21	22	23/11/22	24/11/22	25/11/22	26/11	1	1st & 2nd Year of MCA 24,25,26 Continuous Internal Examination	
6	2022-11-27	28	1	2	3	4/11/22	5/11	1	1st & 2nd Year Teacher Meeting	
7	NOV	7	8	9	10	11	12	6	1st & 2nd Year 11	
8	NOV	13	14/11	15	16	17	18/11	4	1st & 2nd Year 11	
9	NOV	20	21	22	23	24	25	7	1st & 2nd Year 11	
10	2022-11-27	28/11/22	29/11/22	30/11/22	1	2	3/11	1	2nd & 3rd Continuous Internal Examination-2	
11	NOV	4	5	6	7	8	9/11/22	6	1st & 2nd Year 11 1st & 2nd Year Teacher Meeting	
12	NOV	11	12	13	14	15	16/11	7	1st & 2nd Year 11	
13	NOV	18/11	19	20	21	22	23	4	1st & 2nd Year of MCA 23,24,25,26 11	
14	NOV	28/11/22	29/11/22	30/11/22	1/12	2/12/22	3/12/22	3	1st & 2nd Year 24,25,26 Continuous Internal Examination 1st & 2nd Year Teacher Meeting 1st & 2nd Year 11	
YTD Working Days		05-10-2022 TO 03-01-2023								
YTD Working Days		05-10-2022 TO 26-10-2022								


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Vellore Institute of Technology
VIT VELLORE COLLEGE OF ENGINEERING
 VIT Vellore Campus, Vellore - 560027
 (An Autonomous Institute of the VIT Group)
 The Management of the Institute is pleased to announce the
CALNDAR OF EVENTS FOR THE YEAR 2011-2012
Year of Country Appreciation

SLNo	Month	Week						Total Ranking	Remarks
		1st	2nd	3rd	4th	5th	6th		
1	FEB	14(FRI)	14	15	16	17	18(FRI)	0	Exam Writing For: Maths (Semester)
2	FEB	20	21	22	23	24	25	0	Exam Writing For: (Bio Maths For Doctor)
3	FEBRUARY MCH	27	28	1	2	3	4(FRI)	0	Exam Writing For: Maths (Paper 01)
4	MARCH	6	7	8	9	10	11	0	
5	MARCH	13	14	15(FRI)	16(FRI)	17(FRI)	18(FRI)	0	VITU TEST: English (Semester 01)
6	MARCH	20	21	22(FRI)	23	24	25	0	Exam For: 01
7	MARCH APRIL	27	28	29	30	1	2(FRI)	0	Exam Writing For: Maths (Paper 02)
8	APRIL	9(FRI)	10	11	12	13(FRI)	14	0	Exam For: 01-02-03-04
9	APRIL	16	17	18	19	20(FRI)	21(FRI)	0	Exam For: 01-02-03-04
10	APRIL	23	24	25(FRI)	26(FRI)	27(FRI)	28(FRI)	0	VITU TEST: 01-02-03-04
11	APRIL	30	1	2	3	4	5(FRI)	0	Exam Writing For: Maths (Paper 02)
12	MAY	13(FRI)	14	15	16	17	18	0	Exam For: 01
13	MAY	20	21	22	23	24	25(FRI)	0	Exam Writing For: 01
14	MAY	27	28	29	30	1	2	0	
15	MAY	31	1	2	3	4	5(FRI)	0	VITU TEST
16	MAY	30	30	31(FRI)				0	LED-Exam Writing For

VITU Practical Exam	01-04-2012 TO 04-04-2012
VITU Theory Exam	07-04-2012 TO 12-04-2012



THE OXFORD COLLEGE OF ENGINEERING
 BANGALORE

Statement of Company Applications

Sl. No.	Month	No. of Applications		No. of Candidates		No. of Seats	No. of Vacancies	No. of Candidates	Remarks
		Male	Female	Male	Female				
1	Jan	1	1	1	1	1	1	1	
2	Jan	10	11	11	10	10	10	10	10
3	Jan	10	20	21	21	10000	1000	1000	1000
4	Jan	20	27	24	26	10000	1000	1000	1000
5	Jan	20000	1	1	1	1	1	1	1
6	Jan	1	10	11	11	1	1	1	1
7	Jan	10	17	19	19	10000	1000	1000	1000
8	Jan	20	20	20	20	20	20	20	20
9	Jan	10	11	11	11	1000	1000	1000	1000
10	Feb	1	7	8	8	1	1	1	1
11	Feb	10	11	11	11	1000	1000	1000	1000
12	Feb	20	21	21	21	10000	1000	1000	1000
13	Feb	20	21	1	1	1	1	1	1
14	Mar	1	1	1	1	1000	1000	1000	1000
15	Mar	11	11	11	11	10000	1000	1000	1000

For Further Enquiries: 080-2607 311 26-03-2017
 For Study Exam: 080-2607 311 08-04-2017

[Signature]
 Director
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