



SARANATHAN COLLEGE OF ENGINEERING
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Minutes of Course committee meeting

SUB: Course committee meeting for the subject **Process Control** of the even semester of academic year **2021-22** – minutes.

The course committee meeting for the subject **Process Control** for the even semester of the academic year **2021-22** was held on, **17.08.2021** between **11.00 AM – 11.30 AM** at HODs cabin of our Department.

Members present:

Name	Designation/ Role	Sign
Dr.S.M.Girirajkumar	Professor & HOD/ Chairperson	
Dr.M.Shanmugavalli	Professor / Senior faculty	
Dr. P. Aravind	Assistant Professor/ Course Instructor	

The following points were discussed:

1. The mission and vision of the institute and department were discussed.
2. The PEOs, PSOs and POs of the department were reviewed.
3. With reference the R2017 - Curriculum, this subject has only 3 credits and has no tutorial.
4. This subject will be allotted 4 hours per week.
5. Since this is a core subject videos and power point presentations need to be shown to students.
6. The nptel lectures available in the sara portal need to be utilized.
7. The execution and implementation strategies of the subject for the upcoming even of the academic year 2021-22 were discussed.
8. Since in the previous year assessment the outcomes were not reached the course outcomes, co- po mapping and content beyond syllabus to be conducted were discussed and finalized to be the same.
9. The teaching methodology for the subjects and units were discussed.
10. Bright and average students to be identified and they should be properly motivated and guided to score good marks. Counseling reports to be maintained properly.
11. Course material to be circulated to all the students and the same has to be ensured at the beginning of the semester.
12. Course logbook and course files will be reviewed periodically by HOD.
13. The portions for IA test I is 1.5 units, IA test II is 1.5 units and IA test III is 1.5 units were finalized.
14. IA test answer scripts to be duly corrected and given to the students.
15. The content beyond syllabus, the course outcomes and the mapping between Course outcomes, Program outcomes and the Program specific outcomes before and after content beyond syllabus were finalized as follows.

Identification of curricular gap & Content Beyond Syllabus(CBS)

Course Outcomes

C303	SUBJECTCODE: EI8553	SUBJECT TITLE PROCESS CONTROL
C303.1	Derive the Mathematical model of first order level, flow, pressure, temperature process.	
C303.2	Outline various final control elements and modelling of pneumatic actuators.	
C303.3	Illustrate the effect of various control actions.	
C303.4	Classify the evaluation criteria and tuning techniques of controllers.	
C303.5	Elaborate the model based control schemes.	
C303.6	Explain the concept of multi loop control techniques.	

Mapping of COs with PSOs and POs - before CBS.

C303- EI8553: PROCESS CONTROL																
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	
C303.1	3	3	2	2	1	-	-	-	-	-	3	3	3	3	2	
C303.2	3	3	2	2	1	-	-	-	-	-	3	3	3	3	2	
C303.3	3	3	2	2	1	-	-	-	-	-	3	3	3	3	2	
C303.4	3	3	2	2	1	-	-	-	-	-	3	3	3	3	2	
C303.5	3	3	2	2	1	-	-	-	-	-	3	3	3	3	2	
C303.6	3	3	2	2	1	-	-	-	-	-	3	3	3	3	2	
C303	3	3	2	2	1	-	-	-	-	-	3	3	3	3	2	

Identification of content beyond syllabus

Details of Content Beyond Syllabus(CBS) added	POs strengthened/ vacant filled	CO/Unit
Role of MATLAB in System identification and controller implementation	PO10 vacant filled	C303.1 to 6

Mapping of COs with PSOs and POs- after CBS.

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C303.1	3	3	2	2	1	-	-	-	-	3	3	3	3	3	2
C303.2	3	3	2	2	1	-	-	-	-	2	3	3	3	3	2
C303.3	3	3	2	2	1	-	-	-	-	3	3	3	3	3	2
C303.4	3	3	2	2	1	-	-	-	-	3	3	3	3	3	2
C303.5	3	3	2	2	1	-	-	-	-	3	3	3	3	3	2
C303.6	3	3	2	2	1	-	-	-	-	3	3	3	3	3	2
C303	3	3	2	2	1	-	-	-	-	3	3	3	3	3	2


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SARANATHAN COLLEGE OF ENGINEERING
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Minutes of Course committee meeting

SUB: Course committee meeting for the subject **Digital Logic Circuits** of the odd semester of academic year **2020-21** – minutes.

The course committee meeting for the subject **Digital Logic Circuits** for the odd semester of the academic year **2020-21** was held on, **16.08.2021** between **10.00 AM – 10.30 AM** at HODs cabin of our Department.

Members present:

Name	Designation/ Role	Sign
Dr. S. M. Girirajkumar	Professor & HOD/ Chairperson	
Dr. M. Shanmugavalli	Professor / Senior faculty	

The following points were discussed:

1. The mission and vision of the institute and department were discussed.
2. The PEOs, PSOs and POs of the department were reviewed.
3. With reference the R2017 - Curriculum, this subject has only 3 credits and has tutorial.
4. This subject will be allotted 3 hours per week.
5. Since this is a core subject videos and power point presentations need to be shown to students.
6. The nptel lectures available in the sara portal need to be utilized.
7. The execution and implementation strategies of the subject for the upcoming odd of the academic year 2020-21 were discussed.
8. Since in the previous year assessment the outcomes were not reached the course outcomes, co- po mapping and content beyond syllabus to be conducted were discussed and finalized to be the same.
9. The teaching methodology for the subjects and units were discussed.
10. Bright and average students to be identified and they should be properly motivated and guided to score good marks. Counseling reports to be maintained properly.
11. Course material to be circulated to all the students and the same has to be ensured at the beginning of the semester.
12. Course logbook and course files will be reviewed periodically by HOD.
13. The portions for IA test I is 1.5 units, IA test II is 1.5 units and IA test III is 1.5 units were finalized.
14. IA test answer scripts to be duly corrected and given to the students.
15. The content beyond syllabus, the course outcomes and the mapping between Course outcomes, Program outcomes and the Program specific outcomes before and after content beyond syllabus were finalized as follows.

Identification of curricular gap & Content Beyond Syllabus(CBS)

Course Outcomes

C202	EE8351 DIGITAL LOGIC CIRCUITS
C202.1	Describe the various types of number systems, binary codes and examine the digital logic families
C202.2	Use K map for simplification and implementation of combinational logic circuit.
C202.3	Explain the synchronous sequential logic circuits and produce a state transition diagram from a description of sequential logic function.
C202.4	Demonstrate the synchronous sequential circuits and describe the operation of programmable logic devices
C202.5	Describe the VHDL programming language for logic circuits
C202.6	Produce VHDL coding for combinational logic and sequential circuits

Mapping of COs with PSOs and POs - before CBS.

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C202.1	3	3	2	3	2	1	-	-	-	-	-	-	2	1	1
C202.2	3	3	2	3	2	-	1	-	-	-	-	-	2	1	1
C202.3	3	3	2	3	2	-	-	-	-	-	1	-	2	1	1
C202.4	3	3	2	3	2	-	-	-	-	1	-	-	2	1	1
C202.5	3	3	2	3	2	-	-	-	1	-	-	-	2	1	1
C202.6	3	3	2	3	2	-	-	1	-	-	-	1	2	1	1
C202.1	3	3	2	3	2	1	1	1	1	1	1	1	2	1	1

Identification of content beyond syllabus

Details of Content Beyond Syllabus(CBS) added	POs strengthened/ vacant filled	CO/Unit
Design using simulation tool	PO10 vacant filled	C202.5

Mapping of COs with PSOs and POs- after CBS.

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C202.1	3	3	2	3	2	1	-	-	-	-	-	-	2	1	1
C202.2	3	3	2	3	2	-	1	-	-	-	-	-	2	1	1
C202.3	3	3	2	3	2	-	-	-	-	-	1	-	2	1	1
C202.4	3	3	2	3	2	-	-	-	-	1	-	-	2	1	1
C202.5	3	3	2	3	2	-	-	-	1	1	-	-	2	1	1
C202.6	3	3	2	3	2	-	-	1	-	-	-	1	2	1	1
C202.1	3	3	2	3	2	1	1	1	1	1	1	1	2	1	1


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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Minutes of Course committee meeting

SUB: Course committee meeting for the subject **Industrial Data Networks** of the odd semester of academic year **2021-22**
– minutes.

The course committee meeting for the subject **Industrial Data Networks** for the odd semester of the academic year **2021-22** was held on, **16.08.2021** between **10.00 AM – 10.30 AM** at HODs cabin of our Department.

Members present:

Name	Designation/ Role	Sign
Dr. S. M. Girirajkumar	Professor & HOD/ Chairperson	
Dr. M. Shanmugavalli	Professor / Senior faculty	

The following points were discussed:

1. The mission and vision of the institute and department were discussed.
2. The PEOs, PSOs and POs of the department were reviewed.
3. With reference the R2017 - Curriculum, this subject has only 3 credits and has tutorial.
4. This subject will be allotted 4 hours per week.
5. Since this is a core subject videos and power point presentations need to be shown to students.
6. The nptel lectures available in the sara portal need to be utilized.
7. The execution and implementation strategies of the subject for the upcoming odd of the academic year 2021-22 were discussed.
8. Since in the previous year assessment the outcomes were not reached the course outcomes, co- po mapping and content beyond syllabus to be conducted were discussed and finalized to be the same.
9. The teaching methodology for the subjects and units were discussed.
10. Bright and average students to be identified and they should be properly motivated and guided to score good marks. Counseling reports to be maintained properly.
11. Course material to be circulated to all the students and the same has to be ensured at the beginning of the semester.
12. Course logbook and course files will be reviewed periodically by HOD.
13. The portions for IA test I is 1.5 units, IA test II is 1.5 units and IA test III is 1.5 units were finalized.
14. IA test answer scripts to be duly corrected and given to the students.
15. The content beyond syllabus, the course outcomes and the mapping between Course outcomes, Program outcomes and the Program specific outcomes before and after content beyond syllabus were finalized as follows.

Identification of curricular gap & Content Beyond Syllabus(CBS)

Course Outcomes

C403	EI8751 INDUSTRIAL DATA NETWORKS
C403.1	Infer knowledge on the basic concepts of data networks.
C403.2	Define the basics concepts of internetworking and serial communications.
C403.3	Describe the uses of HART and Field buses in process industries.
C403.4	Recognize the importance of MODBUS, PROFIBUS and other communication protocol.
C403.5	Identify the importance and applications of foundation fieldbus
C403.6	Exhibit the concept of industrial Ethernet and wireless communication techniques.

Mapping of COs with PSOs and POs - before CBS.

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C403.1	3	2	2	2	2	-	-	-	-	-	3	3	2	1	1
C403.2	3	2	2	2	2	-	-	-	-	-	3	3	2	1	1
C403.3	3	2	2	2	2	1	-	-	-	-	3	3	2	1	1
C403.4	3	2	2	2	2	1	1	1	-	-	3	3	2	1	1
C403.5	3	2	2	2	3	1	1	-	-	-	3	3	2	1	1
C403.6	3	2	2	2	2	-	-	-	1	1	3	3	2	1	1
C403	3	2	2	2	2	1	1	1	1	1	3	3	2	1	1

Identification of content beyond syllabus

Details of Content Beyond Syllabus(CBS) added	POs strengthened/ vacant filled	CO/Unit
Design using simulation tool	PO10 vacant filled	C403.5

Mapping of COs with PSOs and POs- after CBS.

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C403.1	3	2	2	2	2	-	-	-	-	-	3	3	2	1	1
C403.2	3	2	2	2	2	-	-	-	-	-	3	3	2	1	1
C403.3	3	2	2	2	2	1	-	-	-	-	3	3	2	1	1
C403.4	3	2	2	2	2	1	1	1	-	-	3	3	2	1	1
C403.5	3	2	2	2	3	1	1	-	-	1	3	3	2	1	1
C403.6	3	2	2	2	2	-	-	-	1	1	3	3	2	1	1
C403	3	2	2	2	2	1	1	1	1	1	3	3	2	1	1


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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Minutes of Course committee meeting

SUB: Course committee meeting for the subject **Fibre Optics and Laser Instruments** of the even semester of academic year **2021-22** – minutes.

The course committee meeting for the subject **Fibre Optics and Laser Instruments** for the even semester of the academic year **2021-22** was held on, **17.08.2021** between **11.00 AM – 11.30 AM** at HODs cabin of our Department.

Members present:

Name	Designation/ Role	Sign
Dr.S.M.Girirajkumar	Professor & HOD/ Chairperson	
Dr.M.Shanmugavalli	Professor / Senior faculty	
Dr. P. Aravind	Assistant Professor/ Course Instructor	

The following points were discussed:

1. The mission and vision of the institute and department were discussed.
2. The PEOs, PSOs and POs of the department were reviewed.
3. With reference the R2017 - Curriculum, this subject has only 3 credits and has no tutorial.
4. This subject will be allotted 3 hours per week.
5. Since this is a core subject videos and power point presentations need to be shown to students.
6. The nptel lectures available in the sara portal need to be utilized.
7. The execution and implementation strategies of the subject for the upcoming even of the academic year 2021-22 were discussed.
8. Since in the previous year assessment the outcomes were not reached the course outcomes, co- po mapping and content beyond syllabus to be conducted were discussed and finalized to be the same.
9. The teaching methodology for the subjects and units were discussed.
10. Bright and average students to be identified and they should be properly motivated and guided to score good marks. Counseling reports to be maintained properly.
11. Course material to be circulated to all the students and the same has to be ensured at the beginning of the semester.
12. Course logbook and course files will be reviewed periodically by HOD.
13. The portions for IA test I is 1.5 units, IA test II is 1.5 units and IA test III is 1.5 units were finalized.
14. IA test answer scripts to be duly corrected and given to the students.
15. The content beyond syllabus, the course outcomes and the mapping between Course outcomes, Program outcomes and the Program specific outcomes before and after content beyond syllabus were finalized as follows.

Identification of curricular gap & Content Beyond Syllabus(CBS)

Course Outcomes

C404-E31	SUBJECTCODE: EI8075	SUBJECT TITLE Fibre Optics and Laser Instruments
C404-E31.1	Understand the principle, transmission, dispersion and attenuation characteristics of optical fibers	
C404-E31.2	Acquire knowledge on the concepts of waves and optical devices and their applications in fibre optics	
C404-E31.3	Apply the gained knowledge on optical fibers for its use as communication medium.	
C404-E31.4	Gained knowledge optical fibre as a sensor which have important applications in production, manufacturing industrial and biomedical applications.	
C404-E31.5	Understand laser theory and laser generation system.	
C404-E31.6	Students will gain ability to apply laser theory for the selection of lasers for a specific Industrial and medical application.	

Map

ping of COs with PSOs and POs - before CBS.

C404-E31- EI8553: PROCESS CONTROL																
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	
C404-E31.1	3	3	3	3	3	-	-	-	-	-	-	-	3	2	1	
C404-E31.2	3	3	3	3	3	-	-	-	-	-	-	-	3	2	1	
C404-E31.3	3	3	3	3	3	-	-	-	-	-	-	-	3	2	1	
C404-E31.4	3	3	3	3	3	-	-	-	-	-	-	-	3	2	1	
C404-E31.5	3	3	3	3	3	-	-	-	-	-	-	-	3	2	1	
C404-E31.6	3	3	3	3	3	-	-	-	-	-	-	-	3	2	1	
C404-E31	3	3	3	3	3	-	-	-	-	-	-	-	3	2	1	

Identification of content beyond syllabus

Details of Content Beyond Syllabus(CBS) added	POs strengthened/ vacant filled	CO/Unit
Real time application of are discussed	PO10 vacant filled	C404-E31.1 to 6

Mapping of COs with PSOs and POs- after CBS.

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C404-E31.1	3	3	3	3	3	-	-	-	-	2	-	-	3	2	1
C404-E31.2	3	3	3	3	3	-	-	-	-	2	-	-	3	2	1
C404-E31.3	3	3	3	3	3	-	-	-	-	2	-	-	3	2	1
C404-E31.4	3	3	3	3	3	-	-	-	-	2	-	-	3	2	1
C404-E31.5	3	3	3	3	3	-	-	-	-	2	-	-	3	2	1
C404-E31.6	3	3	3	3	3	-	-	-	-	2	-	-	3	2	1
C404-E31	3	3	3	3	3	-	-	-	-	2	-	-	3	2	1



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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Minutes of Course committee meeting

SUB: Course committee meeting for the subject **Thermal Power Plant Instrumentation** of the even semester of academic year **2019-20** – minutes.

The course committee meeting for the subject **Thermal Power Plant Instrumentation** for the Even semester of the academic year **2019-20** was held on, **11.12.2019** between **13.00 PM – 13.30 PM** at HODs cabin of our Department.

Members present:

Name	Designation/ Role	Sign
Dr.S.M.Girirajkumar	Professor & HOD/ Chairperson	
Dr.M.Shanmugavalli	Professor / Senior faculty	
Mr.P.Aravind	Assistant Professor/ Course Instructor	

The following points were discussed:

1. The mission and vision of the institute and department were discussed.
2. The PEOs, PSOs and POs of the department were reviewed.
3. With reference the R2017 - Curriculum, this subject has only 3 credits and has no tutorial.
4. This subject will be allotted 5 hours per week.
5. Since this is a core subject videos and power point presentations need to be shown to students.
6. The nptel lectures available in the sara portal need to be utilized.
7. The execution and implementation strategies of the subject for the upcoming even of the academic year 2019-20 were discussed.
8. Since in the previous year assessment the outcomes were not reached the course outcomes, co- po mapping and content beyond syllabus to be conducted were discussed and finalized to be the same.
9. The teaching methodology for the subjects and units were discussed.
10. Bright and average students to be identified and they should be properly motivated and guided to score good marks. Counseling reports to be maintained properly.
11. Course material to be circulated to all the students and the same has to be ensured at the beginning of the semester.
12. Course logbook and course files will be reviewed periodically by HOD.
13. The portions for IA test I is 1.5 units, IA test II is 1.5 units and IA test III is 1.5 units were finalized.
14. IA test answer scripts to be duly corrected and given to the students.
15. The content beyond syllabus, the course outcomes and the mapping between Course outcomes, Program outcomes and the Program specific outcomes before and after content beyond syllabus were finalized as follows.

Identification of curricular gap & Content Beyond Syllabus(CBS)

Course Outcomes

C312	C312 EI8092 Thermal Power Plant Instrumentation
C312.1	Describe an overview on power generation through various methods.
C312.2	Identify various measurements and controls used in power plant.
C312.3	Understand basic furnace control techniques
C312.4	Know basic boiler control techniques.
C312.5	Discriminate advanced boiler control techniques.
C312.6	Summarize the turbine control techniques.

Mapping of COs with PSOs and POs - before CBS.

C312 EI8092 Thermal Power Plant Instrumentation															
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
C312.1	3	2	2	1	1	2	2	-	-	-	1	1	2	2	2
C312.2	3	2	2	1	1	2	2	-	-	-	-	1	2	2	2
C312.3	3	2	2	1	1	2	2	-	-	1	-	1	2	2	2
C312.4	3	2	2	1	1	2	2	-	1	-	-	1	2	2	2
C312.5	3	2	2	1	1	2	2	1	-	-	-	1	2	2	2
C312.6	3	2	2	1	1	2	2	1	1	1	1	1	2	2	2

Identification of content beyond syllabus

Details of Content Beyond Syllabus(CBS) added	POs strengthened/ vacant filled	CO/Unit
Role of Labview & MATLAB in industries	PO 5 vacant filled	C312

Mapping of COs with PSOs and POs- after CBS.

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C312.1	3	2	2	1	2	2	2	-	-	-	1	1	2	2	2
C312.2	3	2	2	1	2	2	2	-	-	-	-	1	2	2	2
C312.3	3	2	2	1	2	2	2	-	-	1	-	1	2	2	2
C312.4	3	2	2	1	2	2	2	-	1	-	-	1	2	2	2
C312.5	3	2	2	1	2	2	2	1	-	-	-	1	2	2	2
C312.6	3	2	2	1	2	2	2	1	1	1	1	1	2	2	2

(Signature)
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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Minutes of Course committee meeting

SUB: Course committee meeting for the subject **Advanced Control System** of the even semester of academic year **2019-20** – minutes.

The course committee meeting for the subject **Advanced Control System** for the even semester of the academic year **2019-20** was held on, **09.12.2019** between **01.00 PM – 01.30 PM** at HODs cabin of our Department.

Members present:

Name	Designation/ Role	Sign
Dr.S.M.Girirajkumar	Professor & HOD/ Chairperson	
Dr.M.Shanmugavalli	Professor / Senior faculty	
Mr. R. Seetharaman	Assistant Professor/ Course Instructor	

The following points were discussed:

1. The mission and vision of the institute and department were discussed.
2. The PEOs, PSOs and POs of the department were reviewed.
3. With reference the R2017 - Curriculum, this subject has only 3 credits and has 1 tutorial hour.
4. This subject will be allotted 4 hours per week.
5. Since this is a core subject videos and power point presentations need to be shown to students.
6. The nptel lectures available in the sara portal need to be utilized.
7. The execution and implementation strategies of the subject for the upcoming even of the academic year 2019-20 were discussed.
8. Since in the previous year assessment the outcomes were not reached the course outcomes, co- po mapping and content beyond syllabus to be conducted were discussed and finalized to be the same.
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Identification of curricular gap & Content Beyond Syllabus(CBS)

Course Outcomes

C309	IC8651 ADVANCED CONTROL SYSTEM
C309.1	Construct the model of linear and non-linear systems using state variable analysis
C309.2	Design and compute the state feedback control and state observer
C309.3	Examine sample data analysis
C309.4	Analyze the stability of the systems using different techniques.
C309.5	Construct phase trajectories for non-linear systems using the phase plane analysis and describing function analysis.
C309.6	Discuss the design of optimal controller.

Mapping of COs with PSOs and POs - before CBS.

C309 IC8651: ADVANCED CONTROL SYSTEM

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
C309.1	3	3	3	3	3	2	2	-	1	1	3	3	3	2	2
C309.2	3	3	3	3	3	2	2	-	1	-	3	3	3	2	2
C309.3	3	3	3	3	3	2	2	-	1	-	3	3	3	2	2
C309.4	3	3	3	3	3	2	2	-	1	-	3	3	3	2	2
C309.5	3	3	3	3	3	2	2	-	-	1	3	3	3	2	2
C309.6	3	3	3	3	3	2	2	1	1	-	3	3	3	2	2
C309	3	3	3	3	3	2	2	1	1	1	3	3	3	2	2

Identification of content beyond syllabus

Details of Content Beyond Syllabus(CBS) added	POs strengthened/ vacant filled	CO/Unit
Difference between MPC and LQR	PO6 strengthened	C309.5

Mapping of COs with PSOs and POs- after CBS.

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C309.1	3	3	3	3	3	2	2	-	1	1	3	3	3	2	2
C309.2	3	3	3	3	3	2	2	-	1	-	3	3	3	2	2
C309.3	3	3	3	3	3	2	2	-	1	-	3	3	3	2	2
C309.4	3	3	3	3	3	2	2	-	1	-	3	3	3	2	2
C309.5	3	3	3	3	3	3	2	-	-	1	3	3	3	2	2
C309.6	3	3	3	3	3	2	2	1	1	-	3	3	3	2	2
C309	3	3	3	3	3	2	2	1	1	1	3	3	3	2	2


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