

Rules and Regulations for B.Tech (Dyestuff Technology) Seminar and Projects

	Course Code: DYP1006	Course Title: Seminar	Credits = 2		
	Semester: VII	Total Contact Hours: 60	L	T	P
List of Prerequisite Courses					
All courses					
List of Courses where this course will be Prerequisite					
Profession career					
Description of relevance of this course in the B. Tech. (Dyestuff Technology) Programme					
The course is intended to develop student's ability to read, understand any given topic related to dyestuff technology, collect literature, , analyze the information from Scientific principles, write a scientific report on that topic based on the provided guidelines and present the scientific merits and demerits of the matter. Students shall prepare critical reviews of selected topics in Chemical Technology and allied subjects and submit in the form of standard typed reports. Students shall also make oral presentations of the reviews. This will enable the students to function in a professional environment later on in their career.					
Sr. No.	Course Contents (Topics and Subtopics)				Required Hours
1	<p>Students will be required to prepare a critical review of selected topics in Dyestuff/Speciality Chemical Technology and allied subjects and submit in the form of a standard typed report. Typically, the report should contain and will be evaluated based on the following points:</p> <p>(i) Introduction: 2 pages maximum,</p> <p>(ii) Exhaustive review of literature (including figures): 10 – 12 pages (minimum): 50% weightage</p> <p>(iii) Critical analysis of the literature and comments on the analysis (including figures): 10 – 12 pages: 50% weightage. The critical analysis of literature should include the following points:</p> <p>Are the papers technically correct? are assumptions reasonable; is the reasoning logical? If you think it is not, specify what you think is incorrect and suggest the correct approach. Are the methods used in the literature appropriate? Are there any internal contradictions, experimental inaccuracies or computational errors and are there any loopholes in the observations? If so, please explain. Critical analysis of papers should also contain quantitative comparison of observations, results, and conclusion amongst the various papers.</p> <p>Each student will also be required to make an oral presentation of the review. Weightage would be 40% for the presentation and 60% for the report. Additional details and requirements are given to the students every year by the coordinator of this activity.</p> <p>The reference and bibliography section should be in accordance with either ACS format, and the DOI numbers of all the papers referred to in making the report should be given. The chemical structures in the report should preferably be drawn using ChemDraw or similar other structure drawing software.</p>				
Total					60
List of Text Books/Reference Books					
Course Outcomes (students will be able to.....)					
CO1	Develop a protocol for literature survey about a certain topic (K4)				
CO2	Evaluate the literatures and interpret the scientific content (K5)				
CO3	Apply the concept of dyestuff technology on a selected topic (K3)				
CO4	Develop skills for presenting a scientific topic in dyestuff technology or Speciality chemicals technology (K6)				

CO5	Develop skills for writing a scientific document (K6)														
Mapping of Course Outcomes (COs) with Programme Outcomes (POs)															
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
		K3	K4	K6	K5	K6	K3	K3+S	K3	K3+A	K2+A	K3	K6+A+P	K3	K4
CO1	K4	3	3	1	3	2	3	3	3	3	3	3	2	3	3
CO2	K5	3	2	3	3	3	0	3	3	3	3	2	3	3	3
CO3	K3	3	3	2	2	2	3	3	2	3	3	3	1	3	3
CO4	K6	3	1	3	3	0	3	3	3	1	3	0	3	3	3
CO5	K6	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Course	K6	3	3	3	3	3	3	3	3	3	3	3	3	3	3

3, Strong Contribution; 2, Moderate Contribution; 1, Low Contribution; 0, No Contribution
 K, knowledge level from cognitive domain; A, Affective domain; S, Psychomotor domain

Rubrics for grading

A: Report (60% weightage)	Assessment criteria	Max marks allotted
	Appropriateness of the introduction	3
	Literature search	10
	Critical analysis (Data based reasoning and interpretation)	2
	Report writing	5
	Grammar and spelling	5
	Formatting (Text alignment, proper referencing, use of ChemDraw or other software)	5
Total		30
B: Presentation (40% weightage)	Delivery of the content	3
	Content organization	5
	Understanding the topic and subject knowledge	10
	Quality of the slides	2
Total		20
Total (A + B)		50

	Course Code: DYP1007	Course Title: Project - I	Credits = 2		
			L	T	P
	Semester: VII	Total Contact Hours: 60	0	0	4
List of Prerequisite Courses					
All Courses					
List of Courses where this course will be Prerequisite					
Profession career					
Description of relevance of this course in the B. Tech. (Dyestuff Technology) Programme					

<p>This course enables students to integrate all the subjects that they have learnt and design plants / processes from Chemical Technology and Engineering Principles. The course will help to:</p> <ol style="list-style-type: none"> 1. Develop a skill to solve a research problem related to dyestuff technology 2. Develop skills for presenting a research work effectively. The course presents an opportunity to the students for fine-tuning their scientific communication skills, oral as well as written. 		
Sr. No.	Course Contents (Topics and Subtopics)	Required Hours
1	<p>Every student will be required to solve a problem on synthesis of any dye, pigment, dyestuff intermediate or speciality molecule which will set by the departmental faculties. The literature search will have to be submitted in the form of a standard typed report. Every student will be orally examined. The report will contain the following parts:</p> <ol style="list-style-type: none"> 1. Introduction 2. Objective and aim of the project 3. Importance of the given target and its uses 4. Literature search and route scouting (showing the possible synthetic routes to access the target molecule) 5. Project proposal (Route selection with appropriate justification) 6. References (with proper ACS formatting and DOI) 7. Deliverables 8. Timeline (in the form of Gantt chart) <p>The student will be assessed based on the progress made during the semester. There would be two submissions: (i) report, (ii) PowerPoint presentation. The submissions will be presented to a panel of faculty members / examiners. There will be a weightage of 60% for the submissions and 40% for the presentation. Additional details may be given to the students from time to time by the project coordinator. The reference and bibliography section should be in accordance with either ACS format, and the DOI numbers of all the papers referred to in making the report should be given. The chemical structures in the report should preferably be drawn using ChemDraw or similar other structure drawing software.</p>	
Total		60
List of Text Books/Reference Books		
Course Outcomes (students will be able to.....)		
CO1	<i>Develop</i> critical thinking to identify the research gap for the project (K5)	
CO2	<i>Formulate</i> a scientific question and approach to solve it (K6)	
CO3	<i>Plan</i> the experimental methodology for the project (K5)	
CO4	<i>Develop</i> skills to communicate the research plan effectively (K6)	
CO5	<i>Develop</i> skills for writing a scientific document on the research work (K6)	

Mapping of Course Outcomes (COs) with Programme Outcomes (POs)															
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
		K3	K4	K6	K5	K6	K3	K3+S	K3	K3+A	K2+A	K3	K6+A+S	K3	K4
CO1	K5	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO2	K6	3	3	3	3	3	3	3	3	3	3	2	3	3	1
CO3	K5	3	2	3	3	3	3	3	1	3	3	3	3	3	3
CO4	K6	3	3	3	3	3	2	3	3	3	0	3	3	2	3
CO5	K6	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Course	K6	3	3	3	3	3	3	3	3	3	3	3	3	3	3

3, Strong Contribution; 2, Moderate Contribution; 1, Low Contribution; 0, No Contribution
 K, Knowledge level from cognitive domain; A, Affective domain; P, Psychomotor domain

Rubrics for grading

A: Report (60% weightage)	Assessment criteria	Max marks allotted
	Appropriateness of the introduction	2
	Literature search	15
	Critical analysis (Data based reasoning and interpretation)	3
	Report writing	15
	Grammar and spelling	5
	Formatting (Text alignment, proper referencing, use of ChemDraw or other software)	10
Total		50
B: Presentation (40% weightage)	Delivery of the content	10
	Content organization	10
	Understanding the topic and subject knowledge	20
	Quality of the slides	10
Total		50
Total (A + B)		100

	Course Code: DYP1008	Course Title: Project – II	Credits = 2		
	Semester: VIII		Total Contact Hours: 60	L	T
			0	0	4
List of Prerequisite Courses					
All Courses					
List of Courses where this course will be Prerequisite					
Profession career					
Description of relevance of this course in the B. Tech. (Dyestuff Technology) Programme					
This course enables students to integrate all the subjects that they have learnt and design plants / processes from Chemical Technology and Engineering Principles					
Sr. No.	Course Contents (Topics and Subtopics)				Required Hours
1	<p>There would be two submissions: (i) Report , (ii) PowerPoint presentation</p> <p>Work done in Semester VII will be studied in detail by extrapolating further.</p> <p>The submissions will be presented to a panel of faculty members / examiners. The submissions would be given a weightage of 50 marks. There will be a weightage of 60% for the submissions and 40% for the presentation. Final report of the Project -II would be given a weightage of 50 marks. There will be a viva-voce after the submission of the report. The weightage for the viva-voce would be 50 marks. Additional details may be given to the students from time to time by the Coordinator</p> <p>The reference and bibliography section should be in accordance with either ACS or RSC format, and the DOI numbers of all the papers referred to in making the report should be given.</p>				
Total					60
List of Text Books/Reference Books					
Course Outcomes (students will be able to.....)					

CO1	<i>Perform</i> experiments & troubleshoot to generate reliable data (K5)														
CO2	<i>Apply</i> different statistical tools for scientific data analysis (K4)														
CO3	<i>Evaluate</i> critically the experimental data and draw meaningful inferences (K5)														
CO4	<i>Develop</i> skills to communicate the research outcome effectively (K6)														
CO5	Develop skills for writing a complete document on the project work (K6)														
Mapping of Course Outcomes (COs) with Programme Outcomes (POs)															
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
		K3	K4	K6	K5	K6	K3	K3+S	K3	K3+A	K2+A	K3	K6+A+S	K3	K4
CO1	K5	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO2	K4	3	3	2	3	2	3	3	3	2	3	3	2	3	3
CO3	K5	3	3	3	3	3	0	3	3	3	3	3	3	3	3
CO4	K6	3	3	3	3	3	3	1	3	3	3	3	2	3	3
CO5	K6	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Course	K6	3	3	3	3	3	3	3	3	3	3	3	3	3	3

3, Strong Contribution; 2, Moderate Contribution; 1, Low Contribution; 0, No Contribution
K, Knowledge level from cognitive domain; A, Affective domain; P, Psychomotor domain

Rubrics for grading

A: Report (60% weightage)	Assessment criteria	Max marks allotted
	Introduction	5
	Literature search	5
	Critical analysis (Data based reasoning and interpretation)	5
	Work done and Report writing	25
	Grammar and spelling	5
	Formatting (Text alignment, proper referencing, use of ChemDraw or other software)	5
Plant flow diagram (justification for the MOC and cost calculation)	10	
Total		60
B: Presentation (40% weightage)	Delivery of the content	10
	Content organization and topic knowledge	5
	Results and Outcome of the project	20
	Quality of the slides	5
Total		40
Total (A + B)		100

