

Department of Chemical Engineering
Sant Longowal Institute of Engineering & Technology
Exercise in Lieu of Industrial Training of ICD Second Year (DCT-CPT/2019)
4 Weeks duration (July 1 – 28, 2021)
Faculty Coordinator (Summer Training): Dr. Nikhil Prakash

Due to the present Covid-19 situation, the students are at their respective home places. As per course requirement, the students must complete their respective In-House training, Industrial training and Project work, which is the mandatory course requirement in order to get certificate and Diploma. For this, the department has planned certain topics in the areas of Chemical Engineering and topics related to present Covid-19 scenario. The students have to write report in the prescribed format. The report in the document and pdf format has to be submitted to the concerned Faculty Coordinator (Summer Training) in a time bound manner as per notified by institute.

Objectives: The student must be able to

1. To understand the working of a paper and paper board industry
2. To understand scope and opportunities in paper and paper board industry
3. To know basic working steps of important equipments of paper industry
4. To understand and evaluate skills required by a diploma engineer – Hard skills and soft skills
5. To understand and visualize a Chemical process industry in term of manufacturing process, flow diagrams, materials handling, functioning of various sections of industry.
6. To be able to understand the safety, environment and energy issues in a Chemical industry.
7. To understand & analyze COVID19 situation and lifestyles & measures after lockdown period w.r.t. campus living like academics, hostel etc.
8. Any innovative product development process for handling new challenges due to COVID-19.

S. No.	Topic of Activity	Max. Marks	Report Submission	Days of activity	Report Submission day
1	Online course on Soft/Life Skills for engineers (To be arranged/ explored by department)	115	Daily Report	Day 1-14	Day 15
2	Choose a Chemical Industry and Study in detail on the pattern as described below for Paper Industry:				
	Testing/ Instruments: Enlist the Testing Equipments of Paper Testing Lab. How will you properly run and maintain Pulp and Paper Quality Control Laboratory for different grades of paper?	10	8-10 pages report	Day 4-12	Day 13
	Plant Layout and Process Descriptions: How can you set up a agro waste based pulping and bleaching plant for the production of following (for production capacity of plant is 300 metric tons/day) i) copier paper; ii) packaging grade paper; iii) Filter paper Draw the plant layout and details of different processing units accordingly along with economic considerations. Prepare a detailed report.	20	15-20 pages report	Day 8-22	Day 23
	Description of Equipments Used in Industry: List the name of equipments and explain all the equipments, which can be used in carrying out work in stock preparation and paper machine sections . Write the operating instructions of all the equipments. Give summary of paper finishing equipments.	20	20-25 pages report	Day 18-28	Day 29
	Material Balance: Prepare detailed report for material balance of different ingredients (fiber, fillers, chemicals, water) used in a pulp and paper industry manufacturing 500 tons of O.D. writing and printing paper.	10	6-8 pages report	Day 18-21	Day 22
3	Give your suggestions and ideas in maintaining physical distance in hostel rooms. Identify physical contact points in room, corridor, mess, common places like TV room, reading room, sports room, main gate of hostel etc. Suggest methods to minimize the touch in all these places and preventive measures, which could be taken to prevent the spread of infection. Recommend the means to sanitize these touch points on daily basis. Suggest some innovative product or process to handle the problem of COVID-19?	10	4-6 pages report	Day 7-8	Day 9
4	Mini Project work (Develop a small innovative product/ concept/ program etc. At domestic level related to chemical engineering)	15	10-20 pages report	Day 15-28	Day 29

Note : S.No. 2 is corresponding to Pulp and Paper Industry. The student may opt for any other important Chemical Industry of his/ her choice after discussion with and duly approved by Faculty Mentor/ Supervisor.

Students are advised to refer various websites from the internet for the exercises. Online links and study materials would be shared time to time through Google Classroom by Faculty Coordinator (Summer Training). All students would be required to register on the Google Classroom for Summer Training and will submit objective-wise report into it after getting approved from concerned Faculty mentor/ supervisor (Summer Training) [Communication with concerned faculty mentor/ supervisor (Summer Training) may be made through phone/whatsapp/e-mail]. Late submission will not be accepted for evaluation and zero marks will be awarded for that. Faculty mentors/ supervisors (Summer Training) will evaluate the work/ reports regularly and will return the reports to students in google classroom after giving marks and appropriate comments and the final award sheet in prescribed Performa would be submitted to Faculty Coordinator (Summer Training) at the end of training program. Following will be distribution of the marks to be awarded:

60% of total marks – To be awarded by concerned Faculty mentor/ supervisor (Summer Training) (continuous assessment)

20% of total marks – To be awarded by Faculty Coordinator (Summer Training) (Continuous assessment)

20% of total marks – To be awarded on the basis of final report submission and Viva-voce exam. (To be conducted by Convener)

GUIDELINES FOR SECTIONWISE REPORTS (Soft copy only)

Front page : Task Name, Student Name, Course, Registration No, Institute Logo, Department Name, Institute Name and address, Dates etc.

Body of text of report

References used

GUIDELINES FOR FINAL REPORT (Soft/ Hard copy)

Front page : Task Name, Student Name, Course, Registration No, Institute Logo, Department Name, Institute Name and address, Dates etc.

Second Page: Certificate

Third Page onwards:

Dedication/Acknowledgement

Contents

Body of Report (sectionwise), each section to start with New page

References and Appendix (if Required).

(Format : Font-12 Pt. Arial, 1.5 line spacing, Both Sides printing, Main Heading 14 Bold, Sub Heading 12 Bold)