LESSON PLAN				
Discipline: **Metallurgical Engineering**			Semester: **6th semester**	Name of the Teaching Faculty: **Ms Sitanjali khuntia**
Subject: **Corrosion engineering** Sub code: **Th- 04**			No of days /week class allotted:**04**	Semester from Date: **14-02-2023 to 23-05-2023** No of weeks :**16**
Month	**Week**	**No of periods available**	**Class Day**	**Theory topics**
Feb	1st	03P	14-02-2023	Define corrosion
			15-02-2023	Explain cost of corrosion, direct and Indirect losses
			17-02-2023	State the importance of corrosion studies
	2nd	04P	20-02-2023	Classify different types of corrosion
			21-02-2023	Differentiate between electrochemical corrosion and chemical corrosion
			22-02-2023	State the corrosion rate expression
			24-02-2023	State the corrosion rate expression and solve some problems
	3rd	02P	27-02-2023	Corrosion principles: Explain the electrochemical principle of corrosion
			28-02-2023	Corrosion principles: Explain the electrochemical principle of corrosion
Mar	4th	02P	01-03-2023	Concept of single electrode potential
			03-03-2023	Explaining emf series
	5th	02P	06-03-2023	Explaining galvanic series
			10-03-2023	State the Faraday's law and its causes and its deviation
	6th	02P	13-03-2023	State the Faraday's law and its causes and its deviation
			14-03-2023	Explanation of electrochemical corrosion
			15-03-2023	Types of electrochemical cells, Discuss in details galvanic cell
			17-03-2023	Discuss in details concentration cell, Discuss in details electrolytic cell
	7th	04P	20-03-2023	Define electrode potential Electrode potential: State its significance
			21-03-2023	State its significance without experimental measurement
			22-03-2023	Discuss in details electromotive force
			24-03-2023	Discus emf series and applications
	8th	04P	27-03-2023	Galvanic series and their application in corrosion
			28-03-2023	Their application with reference to corrosion and protection
			29-03-2023	Polarization, passivity
			31-03-2023	Different forms of corrosion, Explain in details about factors affecting mechanism and prevention of following corrosion: Atmospheric corrosion

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Apr	9th	03P	03-04-2023	Intergranular corrosion: cause and characteristics
			04-04-2023	Prevention of intergranular corrosion
			05-04-2023	Pitting corrosion: cause characteristics, types, preventions
	10th	03P	10-04-2023	Galvanic corrosion: introduction, cause
		02P	11-04-2023	Galvanic corrosion: cause, characteristics, preventions
			12-04-2023	Cavitation corrosion: introduction, cause or mechanisms
	11th	04P	17-04-2023	Cavitation corrosion: characteristics, preventions
			18-04-2023	Erosion corrosion: introduction, cause, characteristics, mechanism and preventions
			19-04-2023	Fretting corrosion: introduction, cause
			21-04-2023	Fretting corrosion: characteristics, preventions
	12th	04P	24-04-2023	Crevice corrosion: introduction, cause
			25-04-2023	Crevice corrosion: characteristics, preventions
			26-04-2023	Dealloying corrosion (dezincification corrosion): introduction, cause
			28-04-2023	Dealloying corrosion: characteristics, preventions
May	13th	03P	01-05-2023	Intergranular corrosion: introduction, cause, weld decay, kinfe line attack
			02-05-2023	Intergranular corrosion: characteristics, preventions
			03-05-2023	Corrosion fatigue, High temperature corrosion
	14th	04P	08-05-2023	Stray current corrosion
			09-05-2023	Stress corrosion cracking, Hydrogen embrittlement
			10-05-2023	Corrosion Prevention by different methods, Study the physical, mechanical and chemical characteristics of protective coating
			12-05-2023	Metallic coating, Nonmetallic coating
	15th	03P	15-05-2023	Explain corrosion prevention by inhibition and passivation by control of Environment
			16-05-2023	Changing geometrical design, Proper selection of metal, Modification of environment
			17-05-2023	Discuss the cathodic protection, Discuss Anodic protection
	16th	02P	22-05-2023	Coating and design consideration
			23-05-2023	Corrosion testing methods

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