

**DURGAPUR INSTITUTE OF ADVANCED TECHNOLOGY AND MANAGEMENT
RAJBANDH, DURGAPUR 713212**

LECTURE PLAN

Name of the Faculty: Prabuddha Jyoti Chatterjee

Paper Name: Economics for Engineers

Paper Code: HU-501

Semester: 5th

Session: **July 17-Dec 17**

Branch: IT

Module	Class/Day	Topic
I	1	Overview, Problems, Role, Decision making process
	2	Fixed, Variable, Marginal & Average Costs, Sunk Costs, Opportunity Costs, Recurring And Nonrecurring Costs, Incremental Costs.
	3	Format of Cost Sheet. Solving Problems on Cost sheet
	4	Types Of Estimate, Estimating Models Per unit Model, Segmenting Model, Cost Indexes, Power Sizing Model, Improvement & Learning Curve, Benefits
II	5	Capital budgeting Techniques Cash Flow Analysis, Analysis Periods; Internal Rate Of Return, Net Present Value, Calculating Rate Of Return, Benefit Cost Ratio Analysis.
	6	Solving Problems on Capital Budgeting.
	7	Solving Problems on Capital Budgeting.
	8	Best Alternative Choosing An Analysis Method, Future Worth Analysis, Solving Problems.
	9	Best Alternative Choosing An Analysis Method, Future Worth Analysis, Solving Problems.
	10	Break Even Analysis Theory.
	11	Solving Problems on Break Even Analysis.
	12	Solving Problems on Break Even Analysis.
	13	Solving Problems on Break Even Analysis.
	14	Solving Problems on Break Even Analysis.
III	15	Economic Analysis, Effect of Taxes and solving problems.
	16	Theoretical aspect and solving problems.
	17	Solving Problems of Replacement Analysis
	18	Definition, Types of Inflation.

	19	Causes and Effects, Controlling Policy of Inflation
	20	Definition, Causes and Effects, Controlling policy of Deflation.
IV	21	Ratio Analysis Theory.
	22	Problems on Ratio Analysis
	23	Problems on Ratio Analysis
	24	Balance Sheet, Income Statement,
	25	Solving Problems.
	26	Depreciation Various Methods. Solving Problems.
	27	Depreciation Solving Problems
	28	Cash Flow- Diagrams, Categories & Computation.
	29	Solving problems on computation of Cash flow.
	30	Time Value of Money, Debt repayment, Nominal & Effective Interest.
	31	Estimates And Their Use In Economic Analysis, Range Of Estimates
	32	Probability, Joint Probability Distributions, Expected Value.
	33	Expected Value, Economic Decision Trees, Risk, Risk vs. Return, Simulation, Real Options

Course Outcomes:

On completion of this course, students are able

CO1:- Awareness of Economic Decisions Making process and Engineering Costs & Estimation .

CO2:- Students will get the knowledge of Cash Flow, Interest and Equivalence.

CO3:- Students will get the knowledge of Inflation And Price Change and Economic Decision Trees.

CO4:- Students will get the knowledge of Depreciation, Capital Allowance Methods, Replacement and Cost Accounting.

CO5:- Provide students with economical methods to compare and evaluate alternatives based on present, annual ,rate of return and benefit over cost analysis.

Course Objectives:

To enable the students to apply the knowledge of Economics in various engineering fields by making them

1. To understand the concepts of Economic Decisions Making process and Engineering Costs & Estimation.
2. Student will get the knowledge of Cash Flow, Interest and Equivalence.
3. Students will get the idea of Inflation and Price Change and Economic Decision Trees.
4. Students will know about Depreciation, Capital Allowance Methods, Replacement and Cost Accounting.
5. Provide students with economical methods to compare and evaluate alternatives based on present, annual ,rate of return and benefit over cost analysis

Name of the books and magazines followed by the corresponding teacher(s).

1. James L.Riggs,David D. Bedworth, Sabah U. Randhawa : Economics for Engineers 4e , Tata McGraw-Hill
2. Donald Newnan, Ted Eschembach, Jerome Lavelle : Engineering Economics Analysis, OUP
3. John A. White, Kenneth E.Case,David B.Pratt : Principle of Engineering Economic Analysis, John Wiley.
4. Sullivan and Wicks: Engineering Economy, Pearson
5. R.Paneer Seelvan: Engineering Economics, PHI
6. Michael R Lindeburg : Engineering Economics Analysis, Professional Pub.