

Year & Sem	Course Code: CE3608	Course Name: <b>Construction Economics &amp; Finance</b>	No. of Credits: 4	L	T&PS	P
				2	2	0

### **UNIT I: Introduction**

Basic Principles - Time value of money, Quantifying alternatives for decision making, Cash flow diagrams.

### **UNIT II: Time Value of money**

Equivalence- Single payment in the future (P/F, F/P), Present payment compared to uniform series payments (P/A, A/P), Future payment compared to uniform series payments (F/A, A/F), Arithmetic gradient, Geometric gradient.

### **UNIT III: Comparison of Alternatives**

Comparison of alternatives: Present, future and annual worth method of comparing alternatives, Rate of return, Incremental rate of return, Break-even comparisons, Capitalized cost analysis, Benefit-cost analysis.

### **UNIT IV: Depreciation, Inflation and Taxes and Cost – Estimating**

Depreciation, Inflation, Taxes; Types of Estimates, Approximate estimates – Unit estimate, Factor estimate, Cost indexes, Parametric estimate, Life cycle cost.

### **UNIT V: Equipment economics**

Equipment costs, Ownership and operating costs, Buy/Rent/Lease options, Replacement analysis.

### **UNIT VI: Introduction to Financial management**

Construction accounting, Chart of Accounts, Financial statements – Profit and loss, Balance sheets, Financial ratios, Working capital management.

### **References/Text Books:**

1. Peterson, S. J., “Construction Accounting and Financial Management”, Pearson Education, Upper Saddle River, New Jersey, 2005. Ostwald, P. F.,
2. “Construction Cost Analysis and Estimating”, Prentice Hall, Upper Saddle River, New Jersey, 2001.
3. Peterson, S. J., “Construction Accounting and Financial Management”, Pearson Education, Upper Saddle River, New Jersey, 2005.
4. Peurifoy, R. L., Schexnayder, C. J. and Shapira, A., “Construction Planning, Equipment, and Methods, 7th ed., Tata McGraw-Hill, New Delhi, 2010.

**Lecture Plan:** Unit-I & -II syllabus for MID-I, Unit-III & -IV syllabus for MID-II and Unit-V & -VI syllabus for MID-III examinations.

### **Video Lectures (Web Links):**

1. NPTEL
- 2.
- 3.