

# **Department of Civil Engineering** (Accredited by NBA, New Delhi. Validity 01.07.2019 to 30.06.2022)



#### COURSE MODULES OF THE SUBJECT TAUGHT FOR THE SESSION SEP - DEC 2024-25 (ODD SEM)

# Course Syllabi with CO's

| Faculty Name: SHRU   | ГНІ Н G  | Academic Year: 2024-2025   |                                     |     |        |       |             |  |  |  |  |  |
|----------------------|--|--|-------------------------------------|-----|--------|-------|-------------|--|--|--|--|--|
| Department: CIVIL EN | IGINEERING   |  |                                     |     |        |       |             |  |  |  |  |  |
| Course Code          | Course Title   | Carra /Ella a4   | D                                   | Con | tact 1 | Hours | Total Hrs./ |  |  |  |  |  |
|                      |  | Core/Elective  | Prerequisite                        | L   | T      | P     | Sessions    |  |  |  |  |  |
| BCV501               | Construction Management and Entrepreneurship                       | Core   | Building Materials and Construction | 3   | ı      | -     | 40          |  |  |  |  |  |
| Objectives           | <ul><li>To go through the</li><li>To explain the control</li></ul> | <ol> <li>To go through the Statutory and regulatory requirements in construction</li> <li>To explain the concept of procurement and contract management</li> </ol> |                                     |     |        |       |             |  |  |  |  |  |
|                      | 5. To identify the i   | 5. To identify the risks and its management.   |                                     |     |        |       |             |  |  |  |  |  |

## Topics Covered as per Syllabus

#### Module-1

Planning and Scheduling Construction project formulation – construction management, define scope – scope management, types of project planning and its management, Statutory and regulatory requirements- layout and building plan approval, contract, Fire and Safety, Quality, Environmental, commencement certificate, legal and public policies. Schedule management – WBS, Bar Charts, Sequencing and Dependency, Network Diagram, Activity Duration, Critical Path Method, PERT, Case study. Cost Management - Creating schedules, Assigning Resources, Cost, Evaluation, Optimization and Tracking

#### Module-2

**Resource Management:** Basic concepts of resource management, class of lab our, Wages & statutory requirement, Labour Production rate or Productivity, Factors affecting labour output or productivity.

#### Module-3

Contract and Procurement management Procurement – procurement types, planning, stages – procurement execution – sustainable procurement management Construction contract –formation, types, essential elements, contract law – tendering processcontract award – Documentation – contractor and sub-contractor management –claims – disputescompensation – breach of contract – project completion and project closure.

### **Module-4**

Quality, Safety and Risk Management Quality Management - Occupational Health, Safety and Environment, Barriers, Quality Management System - Chart and tools. Safety management - safety requirements, Safety and Health codes. Risk management - Process, Terminology, Identification, Analysis and Response Strategy Completion certificate, occupancy certificate, Facilities management.

## **Module-5**

Introduction to Entrepreneurship – Characteristics of a Successful Entrepreneur, Understand the entrepreneurial journey, different entrepreneurial styles, personality traits, strengths, and weaknesses. 5M Model, Communication skills: communication breakdown- miscommunication and poor listening, rectification.

Business Planning Process: Business planning process, marketing plan, financial plan, project report and feasibility study, guidelines for preparation of model project report for starting a new venture. Introduction to international entrepreneurship opportunities, entry into international business, exporting, direct foreign investment, venture capital.



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#### List of Text Books

- 1. P C Tripathi and P N Reddy, "Principles of Management", Tata McGraw-Hill Education
- 2. Chitkara, K.K, "Construction Project Management: Planning Scheduling and Control", Tata McGraw Hill Publishing Company, New Delhi.
- 3. Poornima M. Charantimath, "Entrepreneurship Development and Small Business Enterprise", Dorling Kindersley (India) Pvt. Ltd., Licensees of Pearson Education
- 4. Dr. U.K. Shrivastava "Construction Planning and Management", Galgotia publications Pvt. Ltd. New Delhi.
- 5. Bureau of Indian standards IS 7272 (Part-1)- 1974: Recommendations for labour output constant for building works:
- 6. Engineering Economy, Riggs J.L., 5th Edition, Tata McGraw Hill, ISBN 0-07-058670-5
- 7. Engineering Economics, R Panneerselvam, Eastern Economy Edition 2001, PHI, ISBN 81- 203-1743-2. 7. Cost Accounting, Khan M Y, 2nd Edition, 2000, Tata McGraw-Hill, ISBN 0070402248
- 8. Mechanical Estimating & Costing, T.R.Banga, S.C.Sharma, 16th Edition, 2011, Khanna Publishers, ISBN 8174091009.

# Course Outcomes

At the end of the course the student will be able to:

- 1. Develop WBS and estimate the resource requirements
- 2. Analyse the cost control monitoring and accounting methods for a project
- 3. Understand the Statutory and legal requirements for a construction
- 4. Prepare the plan for procurement management and Risk mitigation.
- 5. Understand the concept of entrepreneurship and business planning.

Internal Assessment Marks: 30 + 10 (3 Session Tests are conducted during the semester and marks allotted based on average of 3 test and assignment performances).

The Correlation of Course Outcomes (CO's) and Program Outcomes (PO's)

| Subject<br>Code:   | BCV502           | TI  | TITLE: Construction Management &Entrepreneurship |     |     |     |     |     |     |      | Faculty Name: Shruthi H G |      |      |      |  |  |
|--------------------|------------------|-----|--|-----|-----|-----|-----|-----|-----|------|---------------------------|------|------|------|--|--|
| List of            | Program Outcomes |     |  |     |     |     |     |     |     |      |                           |      |      |      |  |  |
| Course<br>Outcomes | PO1              | PO2 | PO3  | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11                      | PO12 | PSO1 | PSO2 |  |  |
| CO-1               | 2                | 2   | 2  | -   | 1   | 1   | -   | 1   | -   | 2    | -                         | 1    | 1    | -    |  |  |
| CO-2               | 1                | 2   | 1  | -   | -   | -   | -   | -   | -   | 2    | 1                         | 1    | 1    | -    |  |  |
| CO-3               | 1                | 1   | -  | -   | -   | 1   | 1   | -   | -   | 1    | -                         | 1    | 1    | -    |  |  |
| CO-4               | 1                | 1   | 1  | -   | -   | 1   | 1   | 1   | 1   | 1    | 1                         | 1    | 1    | -    |  |  |
| CO-5               | 2                | -   | -  | -   | -   | 1   | -   | 1   | 1   | 1    | 1                         | 1    | 1    | -    |  |  |

**Note:** 3 = Strong Contribution 2= Average Contribution 1 = Weak Contribution -= No Contribution