NIRMA UNIVERSITY

Institute:	**School of Engineering, Institute of Technology**
Name of Programme:	**M. Tech. in Civil Engineering (Construction Technology and Management)**
Course Code:	6CL204
Course Title:	Construction Practice Studio
Course Type:	(☑ Core/ ☐ Value Added Course/ ☐ Departmental Elective/ ☐ Institute Elective/ ☐ University Elective/(☐ Open Elective ☐ Any other)
Year of Introduction:	**2022-23**

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Course Learning Outcomes (CLOs):

At the end of the course, the students will be able to –

1. develop the knowledge of construction management procedures (BL3) ☑
2. propose planning of construction activities (BL6)
3. solve problems in construction practice by applying engineering & management skills. (BL3)

Syllabus: **Laboratory hours: 120**

Syllabus

Understand the project, identify the role and responsibility of various stakeholders, study of detailed drawings, identifying construction technologies for project, planning of various construction activities, tender documents, bidding procedure, construction contracts, estimating quantity of various items, preparation of bills of quantity and schedule of rates, cost estimation and cash flow, productivity analysis, work break down structure, development of network, resource planning for projects, concrete mix design, evaluation of properties of concrete.

Suggested Readings/ References:

- Mckay, W. B. *Building Construction Metric Vol. I to IV*, Orient Longman.
- Sarkar, S.B. *Construction Technology*, Oxford University Press
- Chudley, R., & Greeno, *Building Construction Handbook*, Butterworth Heinneman
- Punmia, B. C. *Building Construction*, Laxmi Publications.
- Goyal, M. M. *Handbook of building construction: The Essential Source of Construction Practice*, Amrendiya Consultancy.

- Rangwala, S. C. *Building Construction*, Charotar Publication.
- Newman, J and Choo, Ban Sang, *Advanced Concrete Technology-Processes*, Elsevier.

Suggested List of Experiments: Laboratory work based on above syllabus with minimum 06 exercise to be incorporated.

Experimental work may comprise of exercises as given below:

- Establishing contract system for the project
- Prepare Work break down structure
- Estimating quantities for different activities
- Preparing network & estimating project duration
- Resource planning, updating project and earn-value analysis
- Developing concrete and evaluation of its properties

Suggested Case List: -