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| Image result for nit meghalaya logo | | | | **National Institute of Technology Meghalaya**  An Institute of National Importance | | | | | | | | | | | | | | | | | | | | | | | **CURRICULUM** | | | | | |
| Programme | | | | **Bachelor of Technology in Civil Engineering** | | | | | | | | | | | | | Year of Regulation | | | | | | | | | | **2020-21** | | | | | |
| Department | | | | **Department of Civil Engineering** | | | | | | | | | | | | | Semester | | | | | | | | | | **IV** | | | | | |
| Course  Code | | Course Name | | | | | | | | **Pre requisite** | | | | Credit Structure | | | | | | | | Marks Distribution | | | | | | | | | | |
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| **CE 272** | | **Basic Civil Engineering** | | | | | | | | **Nil** | | | | **2** | | **0** | | | **0** | **2** | | **50** | | | **50** | | | **100** | | | **200** | |
| Course  Objectives | | **To inculcate the essentials of Civil Engineering field to the students of all branches of Engineering.** | | | | | | | | | | Course Outcomes | | | | CO1 | | | **To describe the role of engineer in the development of the society and explain relationship of civil engineering with other branches of engineering and technology** | | | | | | | | | | | | | |
| **To provide the students an illustration of the significance of the Civil Engineering Profession in satisfying** | | | | | | | | | | CO2 | | | **The students will be able to plan and perform building drawings** | | | | | | | | | | | | | |
|  | | | | | | | | | | CO3 | | | **Able to perform basic surveying and related calculations** | | | | | | | | | | | | | |
|  | | | | | | | | | | CO4 | | | **To discuss types of buildings and select materials of constructions** | | | | | | | | | | | | | |
|  | | | | | | | | | | CO5 | | | **Get knowledge on various building components/finishes and other structural aspects of civil engineering.** | | | | | | | | | | | | | |
|  | | | | | | | | | | CO6 | | |  | | | | | | | | | | | | | |
|  | | | | | | | | | |
| No. | COs | | Mapping with Program Outcomes (POs) | | | | | | | | | | | | | | | | | | | | | | | Mapping with PSOs | | | | | | |
| PO1 | | PO2 | PO3 | PO4 | PO5 | PO6 | | PO7 | | PO8 | | PO9 | | | PO10 | | | PO11 | | PO12 | | | PSO1 | | | PSO2 | | | PSO3 |
| 1 | CO1 | | **0** | | **1** | **0** | **0** | **0** | **0** | | **3** | | **0** | | **1** | | | **0** | | | **0** | | **1** | | | **0** | | | **0** | | | **1** |
| 2 | CO2 | | **1** | | **2** | **0** | **0** | **0** | **0** | | **1** | | **0** | | **1** | | | **0** | | | **0** | | **1** | | | **3** | | | **0** | | | **0** |
| 3 | CO3 | | **2** | | **2** | **1** | **0** | **2** | **0** | | **1** | | **0** | | **1** | | | **0** | | | **0** | | **1** | | | **3** | | | **0** | | | **0** |
| 4 | CO4 | | **0** | | **1** | **0** | **0** | **0** | **0** | | **1** | | **0** | | **1** | | | **0** | | | **0** | | **1** | | | **0** | | | **1** | | | **0** |
| 5 | CO5 | | **0** | | **1** | **0** | **0** | **0** | **0** | | **1** | | **0** | | **1** | | | **0** | | | **0** | | **1** | | | **0** | | | **1** | | | **0** |
| 6 | CO6 | |  | |  |  |  |  |  | |  | |  | |  | | |  | | |  | |  | | |  | | |  | | |  |
| SYLLABUS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. | Content | | | | | | | | | | | | | | | | | | | | | | | Hours | | | | | | Cos | | |
| I | **General introduction to Civil Engineering**  Introduction to types of buildings, Components of a residential building, Introduction to industrial buildings; Introduction to planning of residential buildings - Simple building plans; Introduction to the various building area terms; Setting out of a building; | | | | | | | | | | | | | | | | | | | | | | | **6** | | | | | | **CO1, CO2** | | |
| II | **Surveying**  Principles, Objectives, Horizontal measurements with tapes, Ranging; Levelling – Instruments, Reduction of levels; Modern surveying instruments. | | | | | | | | | | | | | | | | | | | | | | | **6** | | | | | | **CO3** | | |
| III | **Building Materials**  Bricks, cement blocks, Cement, Cement mortar, Steel; Building construction. | | | | | | | | | | | | | | | | | | | | | | | **6** | | | | | | **CO4** | | |
| IV | **Brief Study on**  Foundations, Brick masonry, Roofs, Floors, Decorative finishes, Plastering, Paints and Painting; Basic infrastructure and services – Elevators, Escalators, Ramps, Air conditioning, Sound proofing, Towers, Chimneys, Water Tanks; Intelligent buildings | | | | | | | | | | | | | | | | | | | | | | | **6** | | | | | | **CO5** | | |
| Total Hours | | | | | | | | | | | | | | | | | | | | | | | | **24** | | | | | |  | | |
| **Essential Readings** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Shetty, M.S., Concrete Technology (Theory & Practice), S.Chand and Co, Revised edition, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Gambhir, M.L., Concrete Technology, Tata McGraw Hill, fifth edition, 2013. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Basak NN. “Surveying & Levelling, McGraw Hill, second edition, 2014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Supplementary Readings** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. R. Chudley and r. Greeno, building construction handbook, addisonwesley, longman group, England, 6th edition, 2006 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. M. S. Mamlouk, and J. P. Zaniewski, Materials for Civil and Construction Engineers, Pearson, Prentice Hall, 2nd Edn., 2006. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. N N Basak, Surveying and Levelling, Mccrawhill publications. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |