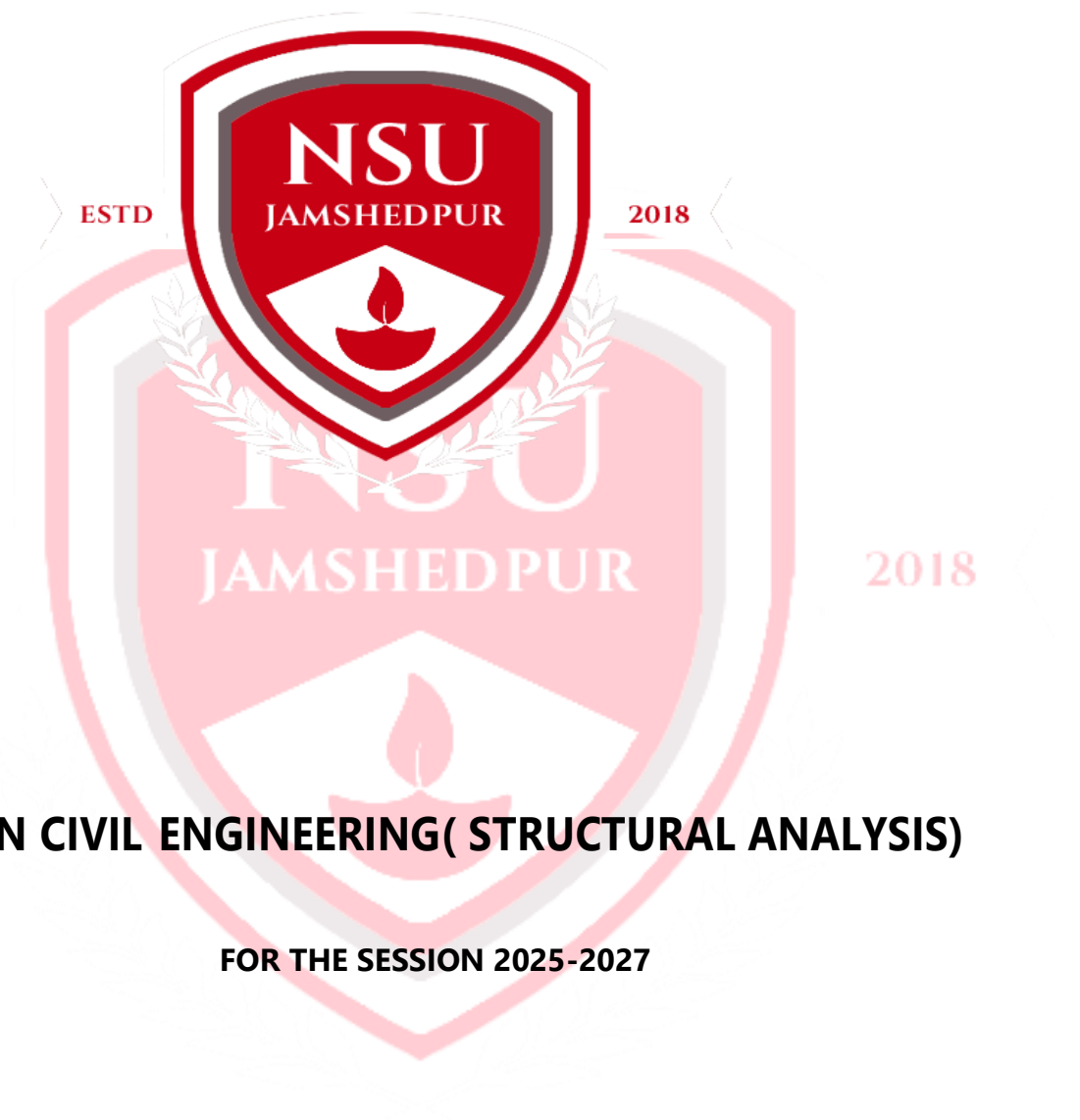


# **NETAJI SUBHAS UNIVERSITY**

## **POKHARI, JHARKHAND**



**M.TECH IN CIVIL ENGINEERING( STRUCTURAL ANALYSIS)**

**FOR THE SESSION 2025-2027**

**DEPARTMENT OF CIVIL ENGINEERING**  
**COURSE STRUCTURE & DETAILED SYLLABUS**  
**FOR M. TECH. (STRUCTURAL ENGINEERING)**

| Sl. No.                      | Subject Code | Name of the Subject                                     | L | T | P | C  |
|------------------------------|--------------|---------------------------------------------------------|---|---|---|----|
| <b>SEMESTER I</b>            |              |                                                         |   |   |   |    |
| 1                            | CE101        | Advanced Numerical Analysis & Computer Programming      | 4 | 0 | 0 | 4  |
| 2                            | CE102        | Advanced Structure Analysis                             | 4 | 0 | 0 | 4  |
| 3                            | CE103        | Advanced Reinforced Concrete Design                     | 4 | 0 | 0 | 4  |
| 4                            | CE104        | Elective I                                              | 4 | 0 | 0 | 4  |
| 5                            | CE105        | Elective II                                             | 4 | 0 | 0 | 4  |
| 6                            | CE106L       | Structural Engineering Laboratory                       | 0 | 0 | 2 | 1  |
| <b>SEMESTER II</b>           |              |                                                         |   |   |   |    |
| 1                            | CE201        | Finite Element Method                                   | 4 | 0 | 0 | 4  |
| 2                            | CE202        | Structural Dynamics and Earthquake Resistant Design     | 4 | 0 | 0 | 4  |
| 3                            | CE203        | Advance Steel Design                                    | 4 | 0 | 0 | 4  |
| 4                            | CE204        | Elective III                                            | 4 | 0 | 0 | 4  |
| 5                            | CE205        | Elective IV                                             | 4 | 0 | 0 | 4  |
| 6                            | CE206L       | Structural Engineering Design Practice Laboratory       | 0 | 0 | 2 | 1  |
| <b>SEMESTER III &amp; IV</b> |              |                                                         |   |   |   |    |
| 1                            | CE301        | Seminar                                                 |   |   |   | 4  |
| 1                            | CE301        | Dissertation Module - I (to be continued next Semester) |   |   |   | 16 |
| 2                            | CE401        | Dissertation Module - II (contd. from III Semester)     |   |   |   | 20 |

**Total Credits: 82**

**Elective Subjects: I & II**

| Sl. No. | Subject Code | Name of the Subject                              | L | T | P | C |
|---------|--------------|--------------------------------------------------|---|---|---|---|
| 1       | CE1041       | Applied Elasticity and Plasticity                | 4 | 0 | 0 | 4 |
| 2       | CE1042       | Soil Structure Interaction                       | 4 | 0 | 0 | 4 |
| 3       | CE1043       | Advanced Concrete Technology                     | 4 | 0 | 0 | 4 |
| 4       | CE1044       | Prestressed Concrete Design                      | 4 | 0 | 0 | 4 |
| 5       | CE1045       | Bridge Engineering                               | 4 | 0 | 0 | 4 |
| 6       | CE1051       | Continuum Mechanics                              | 4 | 0 | 0 | 4 |
| 7       | CE1052       | Management of Quality and Safety in Construction | 4 | 0 | 0 | 4 |
| 8       | CE1053       | Construction Engineering Practices               | 4 | 0 | 0 | 4 |
| 9       | CE1054       | Project Planning and Control                     | 4 | 0 | 0 | 4 |

|    |        |                    |   |   |   |   |
|----|--------|--------------------|---|---|---|---|
| 10 | CE1055 | Structures in Fire | 4 | 0 | 0 | 4 |
|----|--------|--------------------|---|---|---|---|



### Elective Subjects: III & IV

| Sl. No. | Subject Code | Name of the Subject                                     | L | T | P | C |
|---------|--------------|---------------------------------------------------------|---|---|---|---|
| 1       | CE2041       | Structural Connections and Composite Structures         | 4 | 0 | 0 | 4 |
| 2       | CE2042       | Structural Optimization                                 | 4 | 0 | 0 | 4 |
| 3       | CE2043       | High Rise Structures                                    | 4 | 0 | 0 | 4 |
| 4       | CE2044       | Stability of Structures                                 | 4 | 0 | 0 | 4 |
| 5       | CE2044       | Design of Plates and Shells                             | 4 | 0 | 0 | 4 |
| 6       | CE2051       | Reliability Methods in Civil Engineering                | 4 | 0 | 0 | 4 |
| 7       | CE2052       | Performance-Based Seismic Design                        | 4 | 0 | 0 | 4 |
| 8       | CE2053       | Offshore Structures                                     | 4 | 0 | 0 | 4 |
| 9       | CE2054       | Composite material and Structure                        | 4 | 0 | 0 | 4 |
| 10      | CE2055       | Disaster Management Mitigation & Preparedness Programme | 4 | 0 | 0 | 4 |

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