

Lesson Plan/ Course Break – up
CVE-402-L BRIDGE ENGINEERING

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| Name of the Faculty | : | Mr. Manik Goyal |
| Discipline | : | B.Tech in Civil Engineering |
| Semester | : | VIII (4 th Year) |
| Subject | : | CVE-402-L BRIDGE ENGINEERING |
| Lesson Plan Duration | : | 15 Weeks (from January, 2021 to May, 2021) |
| Work Load (Lecture / Practical) per week (in hrs.) | : | Lectures – 03 |

| Week | Theory | |
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| | Lecture Day | Topic (Including assignment / Test) |
| 1 st | 1 | Definition, components of bridge, classification of bridges. |
| | 2 | Selection of site, economical span. |
| | 3 | Aesthetics consideration, necessary investigations. Essential design data. |
| 2 nd | 4 | Standard Specifications for Roads and Railways Bridges: General, Indian Road Congress Bridge Code, width of carriage way, clearance, |
| | 5 | Various loads to be considered for the design of roads bridges, detailed explanation of IRC standard live loads. |
| | 6 | Various loads to be considered for the design of roads bridges, detailed explanation of IRC standard live loads. |
| 3 rd | 7 | Design Consideration for R. C. C. Bridges: Various types of R.C.C. bridges(brief description of each type) |
| | 8 | Design of R.C.C. culvert bridges. |
| | 9 | Design of R.C.C. culvert bridges. |
| 4 th | 10 | Design of R.C.C. T-beam bridges. |
| | 11 | Design of R.C.C. T-beam bridges. |
| | 12 | Design of R.C.C. T-beam bridges. |
| 5 th | 13 | Design Consideration for Steel Bridges: Various types of steel bridges (brief description of each) |
| | 14 | Various types of steel bridges (brief description of each) |
| | 15 | Design of truss bridges. |
| 6 th | 16 | Design of truss bridges. |
| | 17 | Design of truss bridges. |
| | 18 | Design of truss bridges. |
| 7 th | 1st Minor Test | |
| 8 th | 19 | Design of plate girder bridges. |
| | 20 | Design of plate girder bridges. |
| | 21 | Design of plate girder bridges. |
| 9 th | 22 | Design of plate girder bridges. |
| | 23 | Design of plate girder bridges. |

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| | 24 | Design of plate girder bridges. | |
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| 10 th | 25 | Design of plate girder bridges. | |
| | 26 | Design of plate girder bridges. | |
| | 27 | Hydraulic & Structural Design: Piers | |
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| 11 th | 28 | Hydraulic & Structural Design: Piers | |
| | 29 | Hydraulic & Structural Design: Piers | |
| | 30 | Hydraulic & Structural Design: Abutments | |
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| 12 th | 31 | Hydraulic & Structural Design: Abutments | |
| | 32 | Hydraulic & Structural Design: Abutments | |
| | 33 | Hydraulic & Structural Design: wing-wall and approaches | |
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| 13 th | 34 | Hydraulic & Structural Design: wing-wall and approaches | |
| | 35 | Brief Description: Bearings, joints, articulation and other details. | |
| | 36 | Brief Description: Bearings, joints, articulation and other details. | |
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| 14th | 2nd Minor test | | |
| 15 th | 37 | Bridge Foundation: Various types, Necessary investigations | |
| | 38 | Design criteria of well foundation | |
| | 39 | Design criteria of well foundation | |
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