

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM
CHOICE BASED CREDIT SYSTEM (CBCS)
SCHEME OF TEACHING AND EXAMINATION 2015-2016

B.E. CIVIL ENGINEERING

(Common to _____)

III SEMESTER

| Sl. No | Subject Code | Title | Teaching Hours / Week | | Examination | | | Credits | |
|--------------|--------------|---------------------------------------|-----------------------|-----------------------|-------------|-------------------------------|---------------|------------|-------------|
| | | | Theory | Practical/ Drawing | Duration | Theory/ Practical Marks | I.A. Marks | | Total Marks |
| 1 | 15CV31 | Engineering Mathematics – III | 04 | | 03 | 80 | 20 | 100 | 4 |
| 2 | 15CV32 | Strength of Materials | 04 | | 03 | 80 | 20 | 100 | 4 |
| 3 | 15CV33 | Fluid Mechanics | 04 | | 03 | 80 | 20 | 100 | 4 |
| 4 | 15CV34 | Basic Surveying | 04 | | 03 | 80 | 20 | 100 | 4 |
| 5 | 15CV35 | Engineering Geology | 04 | | 03 | 80 | 20 | 100 | 4 |
| 6 | 15CV36 | Building Materials and Construction | 04 | | 03 | 80 | 20 | 100 | 4 |
| 7 | 15CVL37 | Building Materials Testing Laboratory | | 11+2P | 03 | 80 | 20 | 100 | 2 |
| 8 | 15CVL38 | Basic Surveying Practice | | 11+2P | 03 | 80 | 20 | 100 | 2 |
| TOTAL | | | 24 | 6 | 24 | 640 | 160 | 800 | 28 |

Note:

| | |
|-----------------------------------|---|
| <i>Core Subjects:</i> | <i>15CV31, 15CV32, 15CV33, 15CV34, 15CV35, 15CV36</i> |
| <i>Laboratory & Practice:</i> | <i>15CVL37, 15CVL38</i> |

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(Common to _____)

IV SEMESTER

| Sl. No | Subject Code | Title | Teaching Hours / Week | | Examination | | | | Credits |
|--------------|--------------|---|-----------------------|---------------------|-------------|-------------------------|------------|-------------|-----------|
| | | | Theory | Practical / Drawing | Duration | Theory/ Practical Marks | I.A. Marks | Total Marks | |
| 1 | 15CV 41 | Engineering Mathematics – IV | 04 | | 03 | 80 | 20 | 100 | 4 |
| 2 | 15CV42 | Analysis of Determinate Structures | 04 | | 03 | 80 | 20 | 100 | 4 |
| 3 | 15CV43 | Applied Hydraulics | 04 | | 03 | 80 | 20 | 100 | 4 |
| 4 | 15CV 44 | Concrete Technology | 04 | | 03 | 80 | 20 | 100 | 4 |
| 5 | 15CV45 | Basic Geotechnical Engineering | 04 | | 03 | 80 | 20 | 100 | 4 |
| 6 | 15CV46 | Advanced Surveying | 04 | | 03 | 80 | 20 | 100 | 4 |
| 7 | 15CVL47 | Fluid Mechanics and Hydraulic Machines Laboratory | | 11+2P | 03 | 80 | 20 | 100 | 2 |
| 8 | 15CVL48 | Engineering Geology Laboratory | | 11+2P | 03 | 80 | 20 | 100 | 2 |
| TOTAL | | | 24 | 06 | 24 | 640 | 160 | 800 | 28 |

Note:

| | |
|-----------------------------------|--|
| <i>Core Subjects:</i> | 15CV 41, 15CV42, 15CV43, 15CV 44, 15CV45, 15CV46 |
| <i>Laboratory & Practice:</i> | 15CVL47, 15CVL48 |

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V SEMESTER

| Sl. No. | Subject Code | Title | Teaching Hours /Week | | Examination | | | Credits | |
|--------------|--------------|--|----------------------|-----------------------|-------------|-------------------------------|---------------|------------|----------------|
| | | | Theory | Practical/ Drawing | Duration | Theory/ Practical Marks | I.A. Marks | | Total Marks |
| 1 | 15CV51 | Design of RC Structural Elements | 04 | | 03 | 80 | 20 | 100 | 4 |
| 2 | 15CV52 | Analysis of Indeterminate Structures | 04 | | 03 | 80 | 20 | 100 | 4 |
| 3 | 15CV53 | Applied Geotechnical Engineering | 04 | | 03 | 80 | 20 | 100 | 4 |
| 4 | 15CV54 | Computer Aided Building Planning and Drawing | 01 | 3D | 03 | 80 | 20 | 100 | 4 |
| 5 | 15CV55X | Professional Elective-1 | 03 | | 03 | 80 | 20 | 100 | 3 |
| 6 | 15CV56X | Open Elective-1 | 03 | | 03 | 80 | 20 | 100 | 3 |
| 7 | 15CVL57 | Geotechnical Engineering Laboratory | | 1I+2P | 03 | 80 | 20 | 100 | 2 |
| 8 | 15CVL58 | Concrete and Highway Materials Laboratory | | 1I+2P | 03 | 80 | 20 | 100 | 2 |
| TOTAL | | | 19 | 09 | 24 | 640 | 160 | 800 | 26 |

| Professional Elective 1 | | Open Elective 1 | |
|-------------------------|--|-----------------|--|
| 15CV551 | Air pollution and Control | 15CV561 | Traffic Engineering |
| 15CV552 | Railways, Harbours, tunneling and Airports | 15CV562 | Sustainability Concepts in Engineering |
| 15CV553 | Masonry Structures | 15CV563 | Remote Sensing and GIS |
| 15CV554 | Theory of Elasticity | 15CV564 | Occupational Health and Safety |
| | | 15NC565 | NCC |

1. **Professional Elective:** Elective relevant to chosen specialization/ branch
2. **Open Elective:** Electives from other technical and/or emerging subject areas

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VI SEMESTER

| Sl. No. | Subject Code | Title | Teaching Hours /Week | | Examination | | | | Credits |
|--------------|--------------|--|----------------------|-----------------------|-------------|-------------------------------|---------------|----------------|-----------|
| | | | Theory | Practical/ Drawing | Duration | Theory/ Practical Marks | I.A. Marks | Total Marks | |
| 1 | 15CV61 | Construction Management and Entrepreneurship | 04 | | 03 | 80 | 20 | 100 | 4 |
| 2 | 15CV62 | Design of Steel Structural Elements | 04 | | 03 | 80 | 20 | 100 | 4 |
| 3 | 15CV63 | Highway Engineering | 04 | | 03 | 80 | 20 | 100 | 4 |
| 4 | 15CV64 | Water Supply and Treatment Engineering | 04 | | 03 | 80 | 20 | 100 | 4 |
| 5 | 15CV65X | Professional Elective 2 | 03 | | 03 | 80 | 20 | 100 | 3 |
| 6 | 15CV66X | Open Elective 2 | 03 | | 03 | 80 | 20 | 100 | 3 |
| 7 | 15CVL67 | Software Application Lab | | 11+2P | 03 | 80 | 20 | 100 | 2 |
| 8 | 15CVP68 | Extensive Survey Project /Camp | | 11+2P | 03 | 80 | 20 | 100 | 2 |
| TOTAL | | | 22 | 6 | 24 | 640 | 160 | 800 | 26 |

| Professional Elective-2 | | Open Elective-2 | |
|-------------------------|--------------------------------------|-----------------|---|
| 15CV651 | Solid Waste Management | 15CV661 | Water Resource Management |
| 15CV652 | Matrix Method of Structural Analysis | 15CV662 | Environmental Protection and Management |
| 15CV653 | Alternative Building Materials | 15CV663 | Numerical Methods and applications |
| 15CV654 | Ground Improvement Techniques | 15CV664 | Finite Element Analysis |

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VII SEMESTER

| Sl. No. | Subject Code | Title | Teaching Hours /Week | | Examination | | | | Credits |
|--------------|--------------|--|----------------------|-----------------------|-------------|------------|----------------------------|-------------|-----------|
| | | | Theory | Practical/ Drawing | Duration | I.A. Marks | Theory/ Practical Marks | Total Marks | |
| 1 | 15CV71 | Municipal and Industrial Waste Water Engineering | 04 | | 03 | 20 | 80 | 100 | 4 |
| 2 | 15CV72 | Design of RCC and Steel Structures | 04 | | 03 | 20 | 80 | 100 | 4 |
| 3 | 15CV73 | Hydrology and Irrigation Engineering | 04 | | 03 | 20 | 80 | 100 | 4 |
| 4 | 15CV74X | Professional Elective 3 | 03 | | 03 | 20 | 80 | 100 | 3 |
| 5 | 15CV75X | Professional Elective 4 | 03 | | 03 | 20 | 80 | 100 | 3 |
| 6 | 15CVL76 | Environmental Engineering Laboratory | | 1I+2P | 03 | 20 | 80 | 100 | 2 |
| 7 | 15CVL77 | Computer Aided Detailing of Structures | | 1I+2D | 03 | 20 | 80 | 100 | 2 |
| 8 | 15CVP78 | Project Phase I +Project Seminar | | 3 | | 100 | | 100 | 2 |
| TOTAL | | | 18 | 9 | 21 | 240 | 560 | 800 | 24 |

| Professional Elective 3 | | Professional Elective 4 | |
|-------------------------|-------------------------------------|-------------------------|---|
| 15CV741 | Design of Bridges | 15CV751 | Urban Transportation and Planning |
| 15CV742 | Ground Water & Hydraulics | 15CV752 | Prefabricated Structures |
| 15CV743 | Design Concept of Building Services | 15CV753 | Rehabilitation and Retrofitting of Structures |
| 15CV744 | Structural Dynamics | 15CV754 | Reinforced Earth Structures |

1. Project Phase-I + Seminar: Literature Survey, Problem Identification, objectives and Methodology, Submission of synopsis and seminar

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VIII SEMESTER

| Sl. No. | Subject Code | Title | Teaching Hours /Week | | Examination | | | | Credits |
|--------------|--------------|---|----------------------|-----------------------|-------------|------------|----------------------------|-------------|-----------|
| | | | Theory | Practical/ Drawing | Duration | I.A. Marks | Theory/ Practical Marks | Total Marks | |
| 1 | 15CV81 | Quantity Surveying and Contracts Management | 4 | - | 3 | 20 | 80 | 100 | 4 |
| 2 | 15CV82 | Design of Pre Stressed Concrete Elements | 4 | - | 3 | 20 | 80 | 100 | 4 |
| 3 | 15CV83X | Professional Elective 5 | 3 | - | 3 | 20 | 80 | 100 | 3 |
| 4 | 15CV84 | Internship/Professional Practice | Industry Oriented | | 3 | 50 | 50 | 100 | 2 |
| 5 | 15CVP85 | Project Work | - | 6 | 3 | 100 | 100 | 200 | 6 |
| 6 | 15CVS86 | Seminar on current trends in Engineering and Technology | - | 4 | - | 100 | - | 100 | 1 |
| TOTAL | | | 11 | 10 | 15 | 310 | 390 | 700 | 20 |

| Professional Elective 5 | |
|--------------------------------|----------------------------|
| 15CV831 | Earthquake Engineering |
| 15CV832 | Hydraulic Structures |
| 15CV833 | Pavement Design |
| 15CV834 | Advanced Foundation Design |