



# KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE

(An Autonomous Institute under Kakatiya University, Warangal)

(Approved by AICTE, New Delhi; Recognised by UGC under 2(f) & 12(B); Sponsored by EKASILA EDUCATION SOCIETY)

Opp : Yerragattu Gutta, Hasanparthy (Mandal), WARANGAL - 506 015, Telangana, INDIA.

కాకతీయ ప్రేక్షాగికి అం విజ్ఞాన సంస్థాన, వరంగల్ - ౫౦౬ ౦౧౫

కాకతీయ సాంకేతిక విజ్ఞాన శాస్త్ర విద్యాలయం, వరంగల్ - ౫౦౬ ౦౧౫

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## VISION OF THE INSTITUTE

- To make our students technologically superior and ethically strong by providing quality education with the help of our dedicated faculty and staff and thus improve the quality of human life

## MISSION OF THE INSTITUTE

- To provide latest technical knowledge, analytical and practical skills, managerial competence and interactive abilities to students, so that their employability is enhanced
- To provide a strong human resource base for catering to the changing needs of the Industry and Commerce
- To inculcate a sense of brotherhood and national integrity

## DEPARTMENT OF CIVIL ENGINEERING

### VISION OF THE DEPARTMENT

- The Vision of the department is to become a leading centre of excellence in producing quality human resource in civil engineering by developing a sustainable technical education system to meet the changing technological needs of the Country. The Department will make significant contributions to the economic development of the state, region and nation.

### MISSION OF THE DEPARTMENT

- The Mission of Civil Engineering Department is to produce outstanding Civil Engineering graduates with highest ethics.
- To impart quality education in civil engineering to raise satisfaction Level of all Stake holders.
- To serve society and the nation by providing professional civil Engineering Leadership to find solution to community, regional and Global problems and accept new challenges in rapidly changing Technology.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

### UG - CIVIL ENGINEERING - CE

| PROGRAM EDUCATIONAL OBJECTIVES (PEOs) | Within first few years after graduation, the CIVIL ENGINEERING graduates will be able to ...  |
|---------------------------------------|---|
| PEO1:<br>Technical Expertise          | Demonstrate professional competency in varied fields of engineering industry and/or pursue higher education by nourishing mathematical scientific and engineering precepts. |
| PEO2:<br>Successful Career            | Investigate, analyze and design solutions to complex civil engineering problems ensuring safety, sustainability and ecological harmony.                                     |

|  |  |
|--|--|
| <b>PEO3:<br/>Soft Skills and Professionalism</b> | <i>Exhibit professionalism by transferring latest technology and understanding societal impacts to protect interests of the public at large.</i> |
| <b>PEO4:<br/>Life Long Learning</b>              | <i>Develop competence by engaging in lifelong learning, in order to integrate ethics, economics and equity.</i>                                  |

| <b>PROGRAM OUTCOMES (POs) &amp; PROGRAM SPECIFIC OUTCOMES (PSOs)</b> |  |
|--|--|
| <b>UG - CIVIL ENGINEERING - CE</b>                                   |  |
| <b>PROGRAM OUTCOMES (POs)</b>  | <b>At the time of graduation, the CIVIL ENGINEERING graduates will be able to ...</b>  |
| <b>PO1: Engineering knowledge</b>                                    | <i>apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems</i>  |
| <b>PO2: Problem analysis</b>   | <i>identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences</i>  |
| <b>PO3: Design/development of solutions</b>                          | <i>design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental Considerations</i>                           |
| <b>PO4: Conduct investigations of complex problems</b>               | <i>use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions</i>   |
| <b>PO5: Modern tool usage</b>  | <i>create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations</i>   |
| <b>PO6: The engineer and society</b>                                 | <i>apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice</i>  |
| <b>PO7: Environment and sustainability</b>                           | <i>understand the impact of the professional engineering solutions in societal and environmental contexts, demonstrate the knowledge of, and need for sustainable development</i>  |
| <b>PO8: Ethics</b>   | <i>apply ethical principles and commit to professional ethics, responsibilities, and norms of the engineering practice</i>   |
| <b>PO9: Individual and team work</b>                                 | <i>function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings</i>  |
| <b>PO10: Communication</b>   | <i>communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions</i> |
| <b>PO11: Project management and finance</b>                          | <i>demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments</i>  |
| <b>PO12: Life-long learning</b>                                      | <i>recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change</i>  |
| <b>PROGRAM SPECIFIC OUTCOMES (PSOs):</b>                             |  |
| <b>PSO1</b>  | <i>Apply fundamental computational methods and elementary analytical techniques in sub-disciplines related to civil engineering</i>  |

|             |   |
|-------------|---|
| <b>PSO2</b> | <i>Design civil engineering structures, component or process to meet desired needs with appropriate consideration for the public health and safety, cultural, societal, sustainability and environmental considerations</i>                                   |
| <b>PSO3</b> | <i>Appreciate professional and ethical responsibility concerning legal, contemporary, environmental &amp; cultural issues and consequent responsibilities relevant to the professional engineering practices and norms of civil engineering practice code</i> |
| <b>PSO4</b> | <i>Appreciate the role of research in civil engineering practice and recognize the need for and to engage in life-long learning in civil engineering and allied domains as relevant to rapidly changing technology</i>  |

## KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE: WARANGAL-15

(An Autonomous Institute under Kakatiya University, Warangal)

### SCHEME OF INSTRUCTIONS & EVALUATION FOR B.TECH. 4-YEAR DEGREE PROGRAMME

**BRANCH : B.Tech. - CE/ EIE/ EEE/ ECE (Stream - II)**

**SEMESTER : FIRST**

| Sl.No        | Course Category | Course Code | Course Name   | Periods/week |          |           | Credits   | Evaluation Scheme |            |            |            |            |
|--------------|-----------------|-------------|---|--------------|----------|-----------|-----------|-------------------|------------|------------|------------|------------|
|              |                 |             |   | L            | T        | P         |           | C                 | CIE        |            |            | ESE        |
|              |                 |             |   |              |          |           | TA        |                   | MSE        | Total      |            |            |
| 1            | BSC             | U18MH101    | Engineering Mathematics - I                         | 3            | 1        | -         | 4         | 10                | 30         | 40         | 60         | 100        |
| 2            | ESC             | U18CS102    | Programming for Problem Solving using C             | 3            | -        | -         | 3         | 10                | 30         | 40         | 60         | 100        |
| 3            | BSC             | U18CH103    | Engineering Chemistry                               | 3            | 1        | -         | 4         | 10                | 30         | 40         | 60         | 100        |
| 4            | ESC             | U18ME104    | Engineering Drawing                                 | 2            | -        | 4         | 4         | 10                | 30         | 40         | 60         | 100        |
| 5            | ESC             | U18CE105    | Engineering Mechanics                               | 3            | 1        | -         | 4         | 10                | 30         | 40         | 60         | 100        |
| 6            | ESC             | U18CS107    | Programming for Problem Solving using C Laboratory  | -            | -        | 2         | 1         | 40                | -          | 40         | 60         | 100        |
| 7            | BSC             | U18CH108    | Engineering Chemistry Laboratory                    | -            | -        | 2         | 1         | 40                | -          | 40         | 60         | 100        |
| 8            | MC              | U18CH109    | Environmental Studies*                              | 2            | -        | -         | -         | 10                | 30         | 40         | 60         | 100        |
| 9            | MC              | U18EA110    | EAA* : Sports/Yoga/NSS                              | -            | -        | 2         | -         | 100               | -          | 100        | -          | 100        |
| 10           | MC              | U18MH111    | Universal Human Values - I<br>(Induction Programme) | -            | -        | -         | -         | -                 | -          | -          | -          | -          |
| <b>Total</b> |                 |             |   | <b>16</b>    | <b>3</b> | <b>10</b> | <b>21</b> | <b>240</b>        | <b>180</b> | <b>420</b> | <b>480</b> | <b>900</b> |

**Note:** L - Lectures; T - Tutorials; P - Practicals; CIE- Continuous Internal Evaluation; TA - Teachers Assessment;

MSE - Mid Semester Examination; ESE- End Semester Examination; EAA - Extra Academic Activity;

\* indicates mandatory non-credit course

**Student Contact Hours / Week : 29 (periods/week)**

**Total Credits (C) : 21 Credits**

## KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE: WARANGAL-15

(An Autonomous Institute under Kakatiya University, Warangal)

### SCHEME OF INSTRUCTIONS & EVALUATION FOR B.TECH. 4-YEAR DEGREE PROGRAMME

**BRANCH : B.Tech. - CE / EIE / EEE / ECE (Stream - II)**

**SEMESTER : SECOND**

| Sl. No       | Course Category | Course Code | Course Name                             | Periods/week |          |           | Credits   | Evaluation Scheme |            |            |            |             |
|--------------|-----------------|-------------|---|--------------|----------|-----------|-----------|-------------------|------------|------------|------------|-------------|
|              |                 |             |   | L            | T        | P         |           | C                 | CIE        |            |            | ESE         |
|              |                 |             |   |              |          |           | TA        |                   | MSE        | Total      |            |             |
| 1            | BSC             | U18MH201    | Engineering Mathematics - II            | 3            | 1        | -         | 4         | 10                | 30         | 40         | 60         | 100         |
| 2            | ESC             | U18CS202    | Data Structures through C               | 3            | -        | -         | 3         | 10                | 30         | 40         | 60         | 100         |
| 3            | BSC             | U18PH203    | Engineering Physics                     | 3            | 1        | -         | 4         | 10                | 30         | 40         | 60         | 100         |
| 4            | HSMC            | U18MH204    | English for Communication               | 2            | -        | 2         | 3         | 10                | 30         | 40         | 60         | 100         |
| 5            | ESC             | U18EE205    | Basic Electrical Engineering            | 3            | 1        | -         | 4         | 10                | 30         | 40         | 60         | 100         |
| 6            | ESC             | U18EE206    | Basic Electrical Engineering Laboratory | -            | -        | 2         | 1         | 40                | -          | 40         | 60         | 100         |
| 7            | ESC             | U18CS207    | Data Structures through C Laboratory    | -            | -        | 2         | 1         | 40                | -          | 40         | 60         | 100         |
| 8            | BSC             | U18PH208    | Engineering Physics Laboratory          | -            | -        | 2         | 1         | 40                | -          | 40         | 60         | 100         |
| 9            | ESC             | U18ME209    | Workshop Practice                       | -            | -        | 2         | 1         | 40                | -          | 40         | 60         | 100         |
| 10           | MC              | U18EA210    | EAA* : Sports/Yoga/NSS                  | -            | -        | 2         | -         | 100               | -          | 100        | -          | 100         |
| <b>Total</b> |                 |             |   | <b>14</b>    | <b>3</b> | <b>12</b> | <b>22</b> | <b>310</b>        | <b>150</b> | <b>460</b> | <b>540</b> | <b>1000</b> |

**Note:** L - Lectures; T - Tutorials; P - Practicals; CIE- Continuous Internal Evaluation; TA - Teachers Assessment;

MSE - Mid Semester Examination; ESE- End Semester Examination; EAA - Extra Academic Activity;

\* indicates mandatory non-credit course

**Student Contact Hours / Week : 29 (periods/week)**

**Total Credits (C) : 22 Credits**

# KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL

(An Autonomous Institute under Kakatiya University, Warangal)

## DEPARTMENT OF CIVIL ENGINEERING

### SCHEME OF INSTRUCTION & EVALUATION

#### III SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME

| Sl. No       | Category | Course Code | Course Title                     | Periods/week |          |          | Credits   | Evaluation scheme |            |            |            |            |
|--------------|----------|-------------|----------------------------------|--------------|----------|----------|-----------|-------------------|------------|------------|------------|------------|
|              |          |             |                                  | L            | T        | P        |           | C                 | CIE        |            |            | ESE        |
|              |          |             |                                  |              |          |          | TA        |                   | MSE        | Total      |            |            |
| 1            | BSC      | U18MH301    | Engineering Mathematics - III    | 3            | 1        | -        | 4         | 10                | 30         | 40         | 60         | 100        |
| 2            | HSMC     | U18TP302    | Soft & Interpersonal Skills      | -            | -        | 2        | 1         | 100               | -          | 100        | -          | 100        |
| 3            | OE       | U18OE303    | Open Elective-I                  | 3            | -        | -        | 3         | 10                | 30         | 40         | 60         | 100        |
| 4            | PCC      | U18CE304    | Fluid Mechanics                  | 3            | -        | -        | 3         | 10                | 30         | 40         | 60         | 100        |
| 5            | PCC      | U18CE305    | Surveying                        | 3            | -        | -        | 3         | 10                | 30         | 40         | 60         | 100        |
| 6            | PCC      | U18CE306    | Construction Materials           | 3            | -        | -        | 3         | 10                | 30         | 40         | 60         | 100        |
| 7            | PCC      | U18CE307    | Concrete Technology Laboratory   | -            | -        | 2        | 1         | 40                | -          | 40         | 60         | 100        |
| 8            | PCC      | U18CE308    | Surveying Field Work-I           | -            | -        | 2        | 1         | 40                | -          | 40         | 60         | 100        |
| 9            | OE       | U18OE311    | Open Elective-I based Laboratory | -            | -        | 2        | 1         | 40                | -          | 40         | 60         | 100        |
| <b>Total</b> |          |             |                                  | <b>15</b>    | <b>1</b> | <b>8</b> | <b>20</b> | <b>270</b>        | <b>150</b> | <b>420</b> | <b>480</b> | <b>900</b> |

[L= Lecture, T = Tutorials, P = Practicals & C = Credits] Stream-I CSE,IT,ME

Stream-II EEE, ECE, EIE,CE

**Total Contact Periods/Week:24**

**Total Credits :20**

|  |   |
|--|---|
| <p><b>Open Elective-I:</b><br/>                 U18OE303A: Object Oriented Programming (CSE)<br/>                 U18OE303B: Fluid Mechanics &amp; Hydraulic Machines (CE)<br/>                 U18OE303C: Fundamentals of Mechatronics (ME)<br/>                 U18OE303D: Web Programming (IT)<br/>                 U18OE303E: Microprocessors (ECE)<br/>                 U18OE303F: Strength of Materials (CE)</p> | <p><b>Open Elective-I based Lab:</b><br/>                 U18OE311A: Object Oriented Programming Lab (CSE)<br/>                 U18OE311B: Fluid Mechanics &amp; Hydraulic Machines Lab (CE)<br/>                 U18OE311C: Mechatronics Lab (ME)<br/>                 U18OE311D: Web Programming Lab (IT)<br/>                 U18OE311E: Microprocessors Lab (ECE)<br/>                 U18OE311F: Strength of Materials Lab(CE)</p> |
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# KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL

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## DEPARTMENT OF CIVIL ENGINEERING

### SCHEME OF INSTRUCTION & EVALUATION

#### IV SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME

| Sl. No        | Category | Course Code | Course Title                                 | Periods/week |          |          | Credits   | Evaluation scheme |            |            |            |            |
|---------------|----------|-------------|--|--------------|----------|----------|-----------|-------------------|------------|------------|------------|------------|
|               |          |             |  | L            | T        | P        |           | C                 | CIE        |            |            | ESE        |
|               |          |             |  |              |          |          | TA        |                   | MSE        | Total      |            |            |
| 1             | OE       | U18OE401    | Open Elective-II                             | 3            | 1        | -        | 4         | 10                | 30         | 40         | 60         | 100        |
| 2             | HSMC     | U18MH402    | Professional English                         | -            | -        | 2        | 1         | 100               | -          | 100        | -          | 100        |
| 3             | PCC      | U18CE403    | Mechanics of Materials                       | 3            | 1        | -        | 4         | 10                | 30         | 40         | 60         | 100        |
| 4             | PCC      | U18CE404    | Hydraulics Engineering                       | 3            | -        | -        | 3         | 10                | 30         | 40         | 60         | 100        |
| 5             | PCC      | U18CE405    | Design of Reinforced Concrete Structures     | 3            | 1        | -        | 4         | 10                | 30         | 40         | 60         | 100        |
| 6             | PCC      | U18CE406    | Engineering Geology                          | 3            | -        | -        | 3         | 10                | 30         | 40         | 60         | 100        |
| 7             | PCC      | U18CE407    | Hydraulic and Hydraulic Machinery Laboratory | -            | -        | 2        | 1         | 40                | -          | 40         | 60         | 100        |
| 8             | PCC      | U18CE408    | Engineering Geology Laboratory               | -            | -        | 2        | 1         | 40                | -          | 40         | 60         | 100        |
| 9             | PCC      | U18CE409    | Surveying Field Work-II                      | -            | -        | 2        | 1         | 40                | -          | 40         | 60         | 100        |
| 10            | MC       | U18MH415    | Essence of Indian Traditional Knowledge      | 2            | -        | -        | -         | 10                | 30         | 40         | 60         | 100        |
| <b>Total:</b> |          |             |  | <b>17</b>    | <b>3</b> | <b>8</b> | <b>22</b> | <b>280</b>        | <b>180</b> | <b>460</b> | <b>540</b> | <b>900</b> |
| 11            | MC       | U18CH416    | Environmental Studies*                       | 2            | -        | -        | -         | 10                | 30         | 40         | 60         | 100        |

[L= Lecture, T = Tutorials, P = Practicals & C = Credits]

Stream-I: CSE, CSN, IT, ME

Stream-II: EEE, ECE, EIE, CE, ECI

**Total Contact Periods/Week : 28**

**Total Credits : 22**

*\*For Lateral entry students only*

#### **Open Elective-II:**

U18OE401A: Applicable Mathematics (MH)

U18OE401B: Basic Electronics Engineering (ECE)

U18OE401C: Elements of Mechanical Engineering (ME)

U18OE401D: Measurements & Instrumentation (EIE)

U18OE401E: Computer Networks (IT)

U18OE401F: Renewable Energy Sources (EEE)

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**DEPARTMENT OF CIVIL ENGINEERING**

**SCHEME OF INSTRUCTION & EVALUATION**

**V SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

| Sl. No  | Category | Course Code | Course Title                             | Periods/week |          |          | Credits     | Evaluation Scheme |            |            |            |             |
|---|----------|-------------|--|--------------|----------|----------|-------------|-------------------|------------|------------|------------|-------------|
|   |          |             |  | L            | T        | P        |             | C                 | CIE        |            |            | ESE         |
|   |          |             |  |              |          |          | TA          |                   | MSE        | Total      |            |             |
| 1   | MC       | U18MH501    | Universal Human Values - II*             | 2            | -        | -        | -           | 10                | 30         | 40         | 60         | 100         |
| 2   | PE       | U18CE502    | Professional Elective - I / MOOC-I       | 3            | -        | -        | 3           | 10                | 30         | 40         | 60         | 100         |
| 3   | PCC      | U18CE503    | Structural Analysis                      | 3            | -        | -        | 3           | 10                | 30         | 40         | 60         | 100         |
| 4   | PCC      | U18CE504    | Environmental Engineering                | 3            | -        | -        | 3           | 10                | 30         | 40         | 60         | 100         |
| 5   | PCC      | U18CE505    | Soil Mechanics                           | 3            | -        | -        | 3           | 10                | 30         | 40         | 60         | 100         |
| 6   | PCC      | U18CE506    | Design of Steel Structures               | 3            | -        | -        | 3           | 10                | 30         | 40         | 60         | 100         |
| 7   | PCC      | U18CE507    | Environmental Engineering Laboratory     | -            | -        | 2        | 1           | 40                | -          | 40         | 60         | 100         |
| 8   | PCC      | U18CE508    | Soil Mechanics Laboratory                | -            | -        | 2        | 1           | 40                | -          | 40         | 60         | 100         |
| 9   | PCC      | U18CE509    | Building Planning and Drawing Laboratory | -            | -        | 2        | 1           | 40                | -          | 40         | 60         | 100         |
| 10  | PROJ     | U18CE510    | Seminar                                  | -            | -        | 2        | 1           | 100               | -          | 100        | --         | 100         |
| <b>Total</b>  |          |             |  | <b>17</b>    | <b>-</b> | <b>8</b> | <b>19</b>   | <b>280</b>        | <b>180</b> | <b>460</b> | <b>540</b> | <b>1000</b> |
| <i>Additional Learning*:Maximum credits allowed for Honours/Minor</i> |          |             |  | -            | -        | -        | <b>7</b>    | -                 | -          | -          | -          | -           |
| <b>Total credits for Honours/Minor students:</b>                      |          |             |  |              |          |          | <b>19+7</b> |                   |            |            |            |             |

- List of courses for additional learning through MOOCs towards Honours/Minor in Engineering shall be prescribed by the department under Honours/Minor Curricula

[L= Lecture, T = Tutorials, P = Practical's & C = Credits]

**Total Contact Periods/Week: 25**

|   |
|---|
| <p><b>Professional Elective-I/MOOC-I:</b><br/>                 U18CE502A: Advanced Concrete Technology<br/>                 U18CE502B: Advanced Surveying<br/>                 U18CE502C: Water shed Management<br/>                 U18CE502M: MOOCs</p> |
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**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL**

*(An Autonomous Institute under Kakatiya University, Warangal)*

**DEPARTMENT OF CIVIL ENGINEERING**

**SCHEME OF INSTRUCTION & EVALUATION**

**VI SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

| Sl. No  | Category | Course Code | Course Title                                | Periods/week |          |          | Credits     | Evaluation Scheme |            |            |            |             |
|---|----------|-------------|---|--------------|----------|----------|-------------|-------------------|------------|------------|------------|-------------|
|   |          |             |   | L            | T        | P        |             | C                 | CIE        |            |            | ESE         |
|   |          |             |   |              |          |          | TA          |                   | MSE        | Total      |            |             |
| 1   | HSMC     | U18TP601    | Quantitative Aptitude & Logical Reasoning   | 2            | -        | -        | 1           | 10                | 30         | 40         | 60         | 100         |
| 2   | HSMC     | U18MH602    | Management Economics and Accountancy        | 3            | -        | -        | 3           | 10                | 30         | 40         | 60         | 100         |
| 3   | PE       | U18CE603    | Professional Elective - II / MOOC -II       | 3            | -        | -        | 3           | 10                | 30         | 40         | 60         | 100         |
| 4   | PCC      | U18CE604    | Estimation and Valuation                    | 1            | 2        | -        | 3           | 10                | 30         | 40         | 60         | 100         |
| 5   | PCC      | U18CE605    | Hydrology and Water Resources Engineering   | 3            | 1        | -        | 4           | 10                | 30         | 40         | 60         | 100         |
| 6   | PCC      | U18CE606    | Construction Management and Equipment       | 3            | -        | -        | 3           | 10                | 30         | 40         | 60         | 100         |
| 7   | ESC      | U18IT611    | Object Oriented Programming through JAVA    | 3            | -        | -        | 3           | 10                | 30         | 40         | 60         | 100         |
| 8   | PCC      | U18CE607    | Structural Engineering Detailing Laboratory | -            | -        | 2        | 1           | 40                | -          | 40         | 60         | 100         |
| 9   | ESC      | U18IT612    | JAVA Programming Laboratory                 | -            | -        | 2        | 1           | 40                | -          | 40         | 60         | 100         |
| 10  | PROJ     | U18CE608    | Mini Project                                | -            | -        | 2        | 1           | 100               | -          | 100        | --         | 100         |
| <b>Total</b>  |          |             |   | <b>18</b>    | <b>3</b> | <b>6</b> | <b>23</b>   | <b>250</b>        | <b>210</b> | <b>460</b> | <b>540</b> | <b>1000</b> |
| <i>Additional Learning*:Maximum credits allowed for Honours/Minor</i> |          |             |   | -            | -        | -        | <b>7</b>    | -                 | -          | -          | -          | -           |
| <b>Total credits for Honours/Minor students:</b>                      |          |             |   | -            | -        | -        | <b>23+7</b> | -                 | -          | -          | -          | -           |

- List of courses for additional learning through MOOCs towards Honours/Minor in Engineering shall be prescribed by the department under Honours/Minor Curricula

[L= Lecture, T = Tutorials, P = Practical's & C = Credits]

**Total Contact Periods/Week: 27**

**Professional Elective-II / MOOC-II:**

U18CE603A: Advanced Analysis of Structures

U18CE603B: Ground Improvement Techniques

U18CE603C: Advanced Environmental Engineering

U18CE603M: MOOCs

# KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL

(An Autonomous Institute under Kakatiya University, Warangal)

## DEPARTMENT OF CIVIL ENGINEERING

### SCHEME OF INSTRUCTION & EVALUATION

#### VII SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME

| Sl. No  | Category | Course Code | Course Title                                       | Periods/week |          |           | Credits<br>C | Evaluation Scheme |            |            |            |             |
|---|----------|-------------|--|--------------|----------|-----------|--------------|-------------------|------------|------------|------------|-------------|
|   |          |             |  | L            | T        | P         |              | CIE               |            |            | ESE        | Total Marks |
|   |          |             |  |              |          |           | TA           | MSE               | Total      |            |            |             |
| 1   | OE       | U18OE701    | Open Elective- III                                 | 3            | -        | -         | 3            | 10                | 30         | 40         | 60         | 100         |
| 2   | PE       | U18CE702    | Professional Elective - III / MOOC -III            | 3            | -        | -         | 3            | 10                | 30         | 40         | 60         | 100         |
| 3   | PE       | U18CE703    | Professional Elective - IV / MOOC -IV              | 3            | -        | -         | 3            | 10                | 30         | 40         | 60         | 100         |
| 4   | PCC      | U18CE704    | Highway Engineering                                | 3            | -        | -         | 3            | 10                | 30         | 40         | 60         | 100         |
| 5   | PCC      | U18CE705    | Highway Engineering Laboratory                     | -            | -        | 2         | 1            | 40                | -          | 40         | 60         | 100         |
| 6   | PCC      | U18CE706    | Civil Engineering Software Applications Laboratory | -            | -        | 2         | 1            | 40                | -          | 40         | 60         | 100         |
| 7   | PROJ     | U18CE707    | Major Project - Phase - I                          | -            | -        | 6         | 3            | 100               | -          | 100        | -          | 100         |
| 8   | MC       | U18CE708    | Internship Evaluation*                             | -            | -        | 2         | -            | 100               | -          | 100        | -          | 100         |
| <b>Total</b>  |          |             |  | <b>12</b>    | <b>-</b> | <b>12</b> | <b>17</b>    | <b>320</b>        | <b>120</b> | <b>440</b> | <b>360</b> | <b>800</b>  |
| <i>Additional Learning*:Maximum credits allowed for Honours/Minor</i> |          |             |  | -            | -        | -         | 7            | -                 | -          | -          | -          | -           |
| <b>Total credits for Honours/Minor students:</b>                      |          |             |  | -            | -        | -         | <b>17+7</b>  | -                 | -          | -          | -          | -           |

- List of courses for additional learning through MOOCs towards Honours/Minor in Engineering shall be prescribed by the department under Honours/Minor Curricula

[L= Lecture, T = Tutorials, P = Practical's & C = Credits]

Total Contact Periods/Week: 24

|  |  |  |
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| <b>Open Elective-III :</b><br>U18OE701A: Disaster Management<br>U18OE701B: Project Management<br>U18OE701C: Professional Ethics in Engineering<br>U18OE701D: Rural Technology and CommunityDevelopment | <b>Professional Elective-III/ MOOC-III :</b><br>U18CE702A: Advanced Structural Design<br>U18CE702B: Hydraulic Structures<br>U18CE702C: Sustainable Materials and Green Buildings<br>U18CE702M: MOOCs | <b>Professional Elective-IV/MOOC-IV :</b><br>U18CE703A: Structural Dynamics<br>U18CE703B: Foundation Engineering<br>U18CE703C: Repair and Rehabilitation of Structures<br>U18CE703M: MOOCs |
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**DEPARTMENT OF CIVIL ENGINEERING**

**SCHEME OF INSTRUCTION & EVALUATION**

**VIII SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

| Sl. No  | Category | Course Code | Course Title                         | Periods/week |          |           | Credits<br>C | Evaluation Scheme |           |            |            |             |
|---|----------|-------------|--------------------------------------|--------------|----------|-----------|--------------|-------------------|-----------|------------|------------|-------------|
|   |          |             |                                      | L            | T        | P         |              | CIE               |           |            | ESE        | Total Marks |
|   |          |             |                                      |              |          |           | TA           | MSE               | Total     |            |            |             |
| 1   | PE       | U18CE801    | Professional Elective - V / MOOC-V   | 3            | -        | -         | 3            | 10                | 30        | 40         | 60         | 100         |
| 2   | PE       | U18CE802    | Professional Elective - VI / MOOC-VI | 3            | -        | -         | 3            | 10                | 30        | 40         | 60         | 100         |
| 3   | OE       | U18OE803    | Open Elective - IV / MOOC-VII        | 3            | -        | -         | 3            | 10                | 30        | 40         | 60         | 100         |
| 4   | PROJ     | U18CE804    | Major Project - Phase - II           | -            | -        | 14        | 7            | 40                | -         | 40         | 60         | 100         |
| <b>Total:</b>   |          |             |                                      | <b>9</b>     | <b>-</b> | <b>14</b> | <b>16</b>    | <b>70</b>         | <b>90</b> | <b>160</b> | <b>240</b> | <b>400</b>  |
| <i>Additional Learning*:Maximum credits allowed for Honours/Minor</i> |          |             |                                      | -            | -        | -         | 7            | -                 | -         | -          | -          | -           |
| <b>Total credits for Honours/Minor students:</b>                      |          |             |                                      | -            | -        | -         | <b>16+7</b>  | -                 | -         | -          | -          | -           |

- List of courses for additional learning through MOOCs towards Honours/Minor in Engineering shall be prescribed by the department under Honours/Minor Curricula

[L= Lecture, T = Tutorials, P = Practical's & C = Credits]

**Total Contact Periods/Week: 23**

**Total Credits : 16**

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| <b>Professional Elective-V / MOOC-V :</b><br>U18CE801A: Prestressed Concrete<br>U18CE801B: Railway and Airport Engineering<br>U18CE801C: Construction Contracts Management<br>U18CE801M: MOOCs | <b>Professional Elective-VI / MOOC-VI :</b><br>U18CE802A: Earthquake Engineering<br>U18CE802B: Earth Retaining Structures<br>U18CE802C: Bridge Engineering<br>U18CE802M: MOOCs | <b>Open Elective-IV / MOOC-VII :</b><br>U18OE803A: Operations Research<br>U18OE803B: Management Information Systems<br>U18OE803C: Entrepreneurship Development<br>U18OE803D: Forex and Foreign Trade<br>U18OE803M: MOOCs |
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**DEPARTMENT OF CIVIL ENGINEERING**

**CONSOLIDATED SEMESTER WISE CREDITS**

| Semester      | No. of Credits |           |          |           |           |           |          |           |            |
|---------------|----------------|-----------|----------|-----------|-----------|-----------|----------|-----------|------------|
|               | BSC            | ESC       | HSMC     | PCC       | PE        | OE        | MC       | PROJ      | Total      |
| I             | 9              | 12        |          |           |           |           | 0        |           | 21         |
| II            | 9              | 10        | 3        |           |           |           | 0        |           | 22         |
| III           | 4              |           | 1        | 11        |           | 4         |          |           | 20         |
| IV            |                |           | 1        | 17        |           | 4         | 0        |           | 22         |
| V             |                |           |          | 15        | 3         |           | 0        | 1         | 19         |
| VI            |                | 4         | 4        | 11        | 3         |           |          | 1         | 23         |
| VII           |                |           |          | 5         | 6         | 3         | 0        | 3         | 17         |
| VIII          |                |           |          |           | 6         | 3         |          | 7         | 16         |
| <b>Total:</b> | <b>22</b>      | <b>26</b> | <b>9</b> | <b>59</b> | <b>18</b> | <b>14</b> | <b>0</b> | <b>12</b> | <b>160</b> |