

## DEPARTMENT OF CIVIL ENGINEERING

### BoS Members Composition

| S. No | Position | Composition                                  | Name   |
|-------|----------|--|--|
| 1     | Chairman | Professor & Head, Civil Engineering, CMR CET | Prof. A. Krishna Rao<br><a href="mailto:hodcivil@cmrcet.ac.in">hodcivil@cmrcet.ac.in</a>   |
| 2     | Member   | Expert nominated by Vice Chancellor, JNTUH   | Dr. G. K. Viswanadh, Professor & Director, UGC-HRDC, DCE, JNTUH, Hyderabad – 500 085, Cell No: 9849163875, Email - <a href="mailto:gkviswanadh@jntuh.ac.in">gkviswanadh@jntuh.ac.in</a>            |
| 3     | Member   | Expert nominated by Academic Council         | Dr.K.Manjulavani, Professor, DCE,JNTUH, Hyderabad – 500 085, Cell No:9493973821, Email - <a href="mailto:ronilekha@gmail.com">ronilekha@gmail.com</a>  |
| 4     | Member   | Expert nominated by Academic Council         | Prof. M .Gopal Naik, Professor, Department of Civil Engineering, Hyderabad – 500 085 Cell No-9490685098, Email: <a href="mailto:mgnaik@gmail.com">mgnaik@gmail.com</a>                             |
| 5     | Member   | Alumni PG Student                            | Er. A. Kashiram, AKR Associates, Chief Consultant, Koti, Hyderabad, Cell No-9849601428<br>Email - <a href="mailto:kashiadepu@gmail.com">kashiadepu@gmail.com</a>                                   |
| 6     | Member   | Expert from Industry / R & D                 | Damera Ramachander<br>Managing Partner,<br>Sree Ramachandra Constructions,<br>Moula Ali, Hyderabad-500040<br>Ph. 9441113196<br>Email: <a href="mailto:srdccivil@gmail.com">srdccivil@gmail.com</a> |
| 7     | Member   | Professor, DCE, CMRCET                       | Dr. Bollini Prasad,<br>Email: <a href="mailto:bolliniprasad@cmrcet.ac.in">bolliniprasad@cmrcet.ac.in</a>   |
| 8     | Member   | Professor, DCE, CMRCET                       | Dr. M.Venkateshwarlu,<br>Email: <a href="mailto:drmvenkateshwarlu@cmrcet.ac.in">drmvenkateshwarlu@cmrcet.ac.in</a>   |
| 9     | Member   | Professor, DCE, CMRCET                       | Dr. K. Mohan Das<br>Email <a href="mailto:drkmohandas@cmrcet.ac.in">drkmohandas@cmrcet.ac.in</a>   |
| 10    | Member   | Senior faculty, DCE, CMRCET                  | Mr. A. P. Ravichandra,<br>Email <a href="mailto:ravichandra@cmrcet.ac.in">ravichandra@cmrcet.ac.in</a>   |




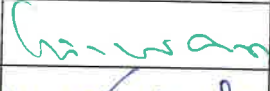
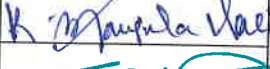


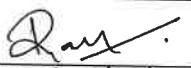

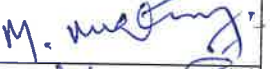
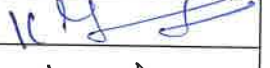
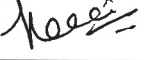

**Principal**

CMR COLLEGE OF ENGG. & TECH.  
Kandlakoya (V), Medchal Road,  
Hyderabad-501401.

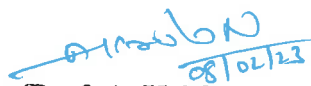
## DEPARTMENT OF CIVIL ENGINEERING

Minutes of meeting of Board of Studies (BoS), Held on, 8<sup>th</sup> February 2023 at 10.30. AM.

The following are members present for the meeting

| S. No | Position | Composition                                  | Name                   | Signature   |
|-------|----------|--|------------------------|---|
| S. No | Position | Composition                                  | Name                   |   |
| 1     | Chairman | Professor & Head, Civil Engineering, CMR CET | Prof. A. Krishna Rao   |    |
| 2     | Member   | Expert nominated by Vice Chancellor, JNTUH   | Dr. G. K. Viswanadh,   |    |
| 3     | Member   | Expert nominated by Academic Council         | Dr. K. Manjulavani,    |    |
| 4     | Member   | Expert nominated by Academic Council         | Prof. M. Gopal Naik,   |   |
| 5     | Member   | Alumni PG Student                            | Er. A. Kashiram        |   |
| 6     | Member   | Expert from Industry / R & D                 | Damera. Ramachander    |  |
| 7     | Member   | Professor, DCE, CMR CET                      | Dr. B. Prasad          |  |
| 8     | Member   | Professor, DCE, CMR CET                      | Dr. M. Venkateshwarlu  |  |
| 9     | Member   | Professor, DCE, CMR CET                      | Dr. K. Mohan Das       |  |
| 10    | Member   | Senior faculty, DCE, CMR CET                 | Mr. A. P. Ravichandra, |  |

Members on leave or absence:








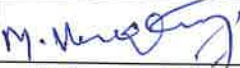
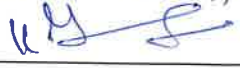

  
(Prof. A. Krishna Rao)  
Head, Department of CE

Head  
Department of Civil Engineering  
CMR College of Engg. & Technology  
Kandlakoya, Medchal, Hyderabad-501401.

## DEPARTMENT OF CIVIL ENGINEERING

Minutes of meeting of Board of Studies (BoS), Held on, 8<sup>th</sup> February 2023 at 10. 30. AM.

The following are members present for the meeting

| S. No | Position | Composition                                  | Name   | Signature   |
|-------|----------|--|--|---|
| 1     | Chairman | Professor & Head, Civil Engineering, CMR CET | Prof. A. Krishna Rao<br>hodcivil@cmrcet.ac.in  |    |
| 2     | Member   | Expert nominated by Vice Chancellor, JNTUH   | Dr. G. K. Viswanadh, Professor & Director, UGC-HRDC, DCE, JNTUH, Hyderabad – 500 085, Cell No: 9849163875, Email - gkviswanadh@jntuh.ac.in |    |
| 3     | Member   | Expert nominated by Academic Council         | Dr.K.Manjulavani, Professor, DCE,JNTUH, Hyderabad – 500 085, Cell No:9493973821, Email - ronilekha@gmail.com                               |   |
| 4     | Member   | Expert nominated by Academic Council         | Prof. M .Gopal Naik, Professor, Department of Civil Engineering, Hyderabad – 500 085 Cell No-9490685098, Email: mgnaik@gmail.com           |  |
| 5     | Member   | Alumni PG Student                            | Er. A. Kashiram, AKR Associates, Chief Consultant, Koti, Hyderabad, Cell No-9849601428 Email - kashiadepu@gmail.com                        |  |
| 6     | Member   | Expert from Industry / R & D                 | Damera Ramachander Managing Partner, Sree Ramachandra Constructions, Moula Ali, Hyderabad-500040 Ph. 9441113196                            |  |
| 7     | Member   | Professor, DCE, CMR CET                      | Dr.B.Prasad, Email: bolliniprasad@cmrcet.ac.in   |  |
| 8     | Member   | Professor, DCE, CMR CET                      | Dr.M.Venkateswarlu, Email: drmvenkateswhwarlu@cmrcet.ac.in   |  |
| 9     | Member   | Professor, DCE, CMR CET                      | Dr. K. Mohan Das drkmohandas@cmrcet.ac.in  |  |
| 10    | Member   | Senior faculty, DCE, CMR CET                 | Mr. A. P. Ravichandra, Email-ravichandra@cmrcet.ac.in  |  |

Members on leave of absence:

  
(Prof. A. Krishna Rao)  
Head, Department of CE

Head  
Department of Civil Engineering  
CMR College of Engg. & Technology

File No.BOS /CE/2022-23

Date: 08.02.2023

## Minutes of Meeting - Board of Studies – February - 2023

Board of Studies meeting was held on, 08<sup>th</sup> February - 2023 to finalize B.Tech Civil Engineering (CE) R22 regulations Course Structure for four years and detailed syllabus of I to IV semesters and M.Tech (Structural Engineering-SE) R22 regulations Course Structure and detailed syllabus.

The following dignitaries were attended the meeting.

1. Prof. A. Krishna Rao, Professor & Head, Civil Engineering, CMRCET.
2. Dr. G. K. Viswanadh, Professor & Director, UGC-HRDC, DCE, JNTUH, Expert nominated by Vice Chancellor, JNTUH.
3. Dr. K. Manjulavani, Professor, DCE,JNTUH, Hyderabad, Expert nominated by Academic Council.
4. Prof. M .Gopal Naik, Professor, Department of Civil Engineering, Hyderabad, Expert nominated by Academic Council.
5. Er. A. Kashiram, AKR Associates, Chief Consultant, Koti, Hyderabad, Alumni PG Student.
6. D. Ramachander, Managing Partner, Sree Ramachandra Constructions, Moula Ali, Hyderabad.
7. Dr. Bollini Prasad, Professor, DCE, CMRCET
8. Dr. M. Venkateswarlu, Professor, DCE, CMRCET
9. Dr. K. Mohan Das, Professor, DCE, CMRCET
10. Mr. A. P. Ravichandra, Senior faculty, DCE, CMRCET

### Agenda Points:

1. Review of R22 regulations and finalization of R22 Course Structure, syllabi for B.Tech- CE Programme from I semester to IV Semester with effect from A.Y 2022-23
2. Review of R22 regulations and finalization of R22 Course Structure and syllabi for M. Tech Programme (SE) with effect from A.Y 2022-23.
3. Review and finalization of substitute subjects for R18 Regulation students readmitted into R22 Regulations up to IV Semester.
4. Approval of open electives course and syllabi offered by Civil Engineering department to other B.Tech Programs.
5. Approval of the service courses and syllabi for Mechanical and EEE branches.
6. Any other points with the Permission of Chair.

## PROCEEDINGS

Chairman welcomed all the members for the Board of Studies meeting and expressed gratitude to the previous BoS members for their suggestions for successful implementation of R18 regulations syllabus. He also conveyed that the common BoS was held on 12.10.2022 and the detailed syllabus for I and II semesters was approved by the members in common BoS.

**Agenda # 1).** Review of R22 regulations and finalization of R22 Course Structure, syllabi for B.Tech-CE Programme from I semester to IV Semester with effect from A.Y 2022-23.

Discussion:

The committee reviewed the Course Structure & Syllabus of B.Tech (CE) program of first four semesters.

Suggestions:

- Text books and reference books must be in line with the JNUTH syllabus and also for all the subjects.

Resolution:

- As per JNTUH surveying laboratory is being conducted as surveying laboratory 1 & 2 in two semesters. As per CMRCET course structure, surveying laboratory will be conducted in single semester i.e., in III semester and addition of one experiment on Auto level.
- Agenda 1 is approved by BoS members.
- Discussions and suggestions are amended.

**Agenda # 2).** Review of R22 regulations and finalization of R22 Course Structure and syllabi for M. Tech Programme (SE) with effect from A.Y 2022-23.

Discussion:

The committee reviewed the Course Structure & Syllabus of M. Tech (SE) program for all semesters.

Resolution:

- As per JNTUH R22 syllabi, Rapid Chloride Permeability Test and Half-cell potential test in Structural Engineering Laboratory have been replaced by Absorption test and Sulphate attack test in CMRCET syllabi.
- Agenda 2 is approved by BoS members.
- Discussions and suggestions are amended.

**Agenda # 3)** Review and finalization of substitute subjects and equivalent courses/subjects for R18 Regulation students readmitted into R22 Regulations.

Discussion:

The above agenda has been reviewed by the committee members.

Suggestions:

BoS members suggested the appropriate substitute and equivalence courses/ subjects for the re-admitted students from R18 regulations to R22 regulations in I, II, III and IV semesters.

Resolution: The Committee members approved the substitute and equivalent courses/subjects for readmitted student from R18 regulations to R22 regulations in I, II, III and IV semesters.

1. A student re-admitted in II semester has to register for Additional course(s) to earn the credits as per R22 Regulations.

| Credits of I semester in R18 | Credits from II to VIII semester in R22 | Additional Credits Required | Total credits |
|------------------------------|---|-----------------------------|---------------|
| 18.5                         | 140                                     | 1.5                         | 160           |

Additional Course(s) of the semester as per R22 Regulations

| S.No | Course Name          | Credits |
|------|----------------------|---------|
| 1    | Engineering Workshop | 2.5     |

Substitute Course(s) for repeated Courses/subjects of the semester in R22 Regulations

| S.No | Repeated subject(s) of R22 with code (credits) if any studied by the student in R18 Regulation | Recommended Substitute subject(S) with code (credits) in place of Repeated Subjects                                       |
|------|--|---|
| 1    | Engineering Graphics- A403202 (2.5 Credits)  | 1. English Skill Enhancement- A400101 (2 Credits)<br>2. English Language and Communication Skills Lab – A400503 (1Credit) |

2. A student re-admitted from R18 to R22 in III semester has to register for Additional course(s) to earn the credits as per R22 Regulations

| Credits up to II semester in R18 | Credits from III to VIII semester in R22 | Additional Credits Required | Total credits |
|----------------------------------|--|-----------------------------|---------------|
| 38                               | 120                                      | 2                           | 160           |

Additional Course(s) of the semester as per R22 Regulations

| S.No | Course name                                   | Credits |
|------|---|---------|
| 1    | Building Materials, Construction and Planning | 3       |

Substitute Course(s) for repeated Courses/subjects of the semester in R22 Regulations

| S.No | Repeated subject(s) of R22 with code (credits) if any studied by the student in R18 Regulation | Recommended Substitute subject(S) with code (credits) in place of Repeated Subjects |
|------|--|---|
| 1    | NIL  | NIL   |

3. A student re-admitted from R18 to R22 in IV semester has to register for Additional course(s) to earn the credits as per R22 Regulations

| Credits up to III semester in R18 | Credits from IV to VIII semester in R22 | Additional Credits Required | Total credits |
|-----------------------------------|---|-----------------------------|---------------|
| 59                                | 100                                     | 1                           | 160           |

Additional Course(s) of the semester as per R22 Regulations

| S.No | Course name                   | Credits |
|------|-------------------------------|---------|
| 1    | Elements of Civil Engineering | 1       |

Substitute Course(s) for repeated Courses/subjects of the semester in R22 Regulations

| S.No | Repeated subject(s) of R22 with code (credits) if any studied by the student in R18 Regulation | Recommended Substitute subject(S) with code (credits) in place of Repeated Subjects |
|------|--|---|
| 1    | Social Innovation in Practice (1Credit)  | Computer Aided Drafting Laboratory (1Credit)  |
| 2    | Environmental Science (0 Credit)   | Gender Sensitization (0 Credit)   |

**Agenda #-4: Review and finalization of open electives courses offered by CE department to other departments**

Discussion:

The above agenda has been reviewed by the committee members.

Suggestions:

BoS members suggested putting up courses which increases the scope of Civil Engineering without any prerequisite.

Resolution:

Agenda 4 is approved by BoS members

**Agenda #-5: Approval of the service courses and syllabi for Mechanical and EEE branches.**

Discussion:

The above agenda has been reviewed by the committee members.

Resolution:

Agenda 5 is approved by BoS members

The chairman thanked all the members for giving their valuable suggestions.



**Prof. A. Krishna Rao**

**(Chairman)**

**HOD-CE**

**Head**

Department of Civil Engineering  
CMR College of Engg. & Technology  
Kandlakoya, Medchal, Hyderabad-501401.

**Enclosures:**

1. Course structure of B.Tech & M. Tech for A.Y: 2022-23.
2. Approved list of open electives.

**CMR COLLEGE OF ENGINEERING & TECHNOLOGY**

(UGC AUTONOMOUS)

**B. Tech- Civil Engineering**

CBCS & OUTCOME BASED I-YEAR COURSE STRUCTURE & SYLLABUS

*(Effective for the students admitted into I year from the Academic Year 2022-23)*

| SEMESTER - I                |             |  |          |                |   |    |         |               |     |
|-----------------------------|-------------|--|----------|----------------|---|----|---------|---------------|-----|
| S. No                       | Course Code | Course Title   | Category | Hours per Week |   |    | Credits | Maximum Marks |     |
|                             |             |  |          | L              | T | P  |         | CIE           | SEE |
| 1                           | A400101     | English for Skill Enhancement                        | HSMC     | 2              | 0 | 0  | 2       | 40            | 60  |
| 2                           | A400001     | Matrices and Calculus                                | BSC      | 3              | 1 | 0  | 4       | 40            | 60  |
| 3                           | A400008     | Applied Physics                                      | BSC      | 3              | 1 | 0  | 4       | 40            | 60  |
| 4                           | A401501     | Elements of Civil Engineering                        | ESC      | 0              | 0 | 2  | 1       | 50            | -   |
| 5                           | A403201     | Engineering Mechanics                                | ESC      | 3              | 0 | 0  | 3       | 40            | 60  |
| 6                           | A400503     | English Language and Communication Skills Laboratory | HSMC     | 0              | 0 | 2  | 1       | 40            | 60  |
| 7                           | A400501     | Applied Physics Laboratory                           | BSC      | 0              | 0 | 3  | 1.5     | 40            | 60  |
| 8                           | A403503     | Engineering Workshop                                 | ESC      | 0              | 1 | 3  | 2.5     | 40            | 60  |
| 9                           | A400505     | Introduction to Social Innovation                    | HSMC     | 0              | 0 | 2  | 1       | 40            | 60  |
| 10                          | A400704     | Universal Human Values                               | MC       | 2              | 0 | 0  | 0       | -             | -   |
| Total:                      |             |  |          | 13             | 3 | 12 | 20      |               |     |
| Total hours per Week:       |             |  |          | 28             |   |    |         |               |     |
| SEMESTER - II               |             |  |          |                |   |    |         |               |     |
| S. No                       | Course Code | Course Title   | Category | Hours per Week |   |    | Credits | Maximum Marks |     |
|                             |             |  |          | L              | T | P  |         | CIE           | SEE |
| 1                           | A400009     | Engineering Chemistry                                | BSC      | 3              | 1 | 0  | 4       | 40            | 60  |
| 2                           | A400002     | Ordinary Differential Equations and Vector Calculus  | BSC      | 3              | 1 | 0  | 4       | 40            | 60  |
| 3                           | A401301     | Building Materials, Construction and Planning        | PCC      | 3              | 0 | 0  | 3       | 40            | 60  |
| 4                           | A405202     | C Programming and Data Structures                    | ESC      | 3              | 0 | 0  | 3       | 40            | 60  |
| 5                           | A403202     | Engineering Graphics                                 | ESC      | 1              | 0 | 3  | 2.5     | 40            | 60  |
| 6                           | A400502     | Engineering Chemistry Laboratory                     | BSC      | 0              | 0 | 2  | 1       | 40            | 60  |
| 7                           | A405503     | C Programming and Data Structures Laboratory         | ESC      | 0              | 0 | 2  | 1       | 40            | 60  |
| 8                           | A400506     | Engineering Exploration & Practice                   | HMSC     | 0              | 0 | 3  | 1.5     | 40            | 60  |
| 9                           | A400703     | Constitution of India                                | MC       | 2              | 0 | 0  | 0       | -             | -   |
| Total:                      |             |  |          | 15             | 2 | 10 | 20      |               |     |
| Total hours per Week:       |             |  |          | 27             |   |    |         |               |     |
| Total Credits in I Year: 40 |             |  |          |                |   |    |         |               |     |



| SEMESTER - III                     |             |   |          |                |          |           |           |               |     |  |
|------------------------------------|-------------|---|----------|----------------|----------|-----------|-----------|---------------|-----|--|
| S. No                              | Course Code | Course Title  | Category | Hours per Week |          |           | Credits   | Maximum Marks |     |  |
|                                    |             |   |          | L              | T        | P         |           | CIE           | SEE |  |
| 1                                  | A401302     | Strength of Materials-I                               | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |  |
| 2                                  | A401303     | Engineering Geology                                   | PCC      | 2              | 0        | 0         | 2         | 40            | 60  |  |
| 3                                  | A401304     | Surveying   | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |  |
| 4                                  | A401305     | Fluid Mechanics                                       | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |  |
| 5                                  |             | Basic Electrical and Electronics Engineering          | ESC      | 3              | 0        | 0         | 3         | 40            | 60  |  |
| 6                                  |             | Python Programming Laboratory                         | ESC      | 0              | 1        | 2         | 2         | 40            | 60  |  |
| 7                                  | A401502     | Surveying Laboratory                                  | PCC      | 0              | 0        | 2         | 1         | 40            | 60  |  |
| 8                                  | A401503     | Strength of Materials Laboratory                      | PCC      | 0              | 0        | 2         | 1         | 40            | 60  |  |
| 9                                  |             | Basic Electrical & Electronics Engineering Laboratory | ESC      | 0              | 0        | 2         | 1         | 40            | 60  |  |
| 10                                 | A401504     | Computer Aided Drafting Laboratory                    | PCC      | 0              | 0        | 2         | 1         | 40            | 60  |  |
| 11                                 |             | Gender Sensitization                                  | MC       | 2              | 0        | 0         | 0         | -             | -   |  |
| <b>Total:</b>                      |             |   |          | <b>16</b>      | <b>1</b> | <b>10</b> | <b>20</b> |               |     |  |
| <b>Total hours per Week:</b>       |             |   |          | <b>27</b>      |          |           |           |               |     |  |
| SEMESTER - IV                      |             |   |          |                |          |           |           |               |     |  |
| S. No                              | Course Code | Course Title  | Category | Hours per Week |          |           | Credits   | Maximum Marks |     |  |
|                                    |             |   |          | L              | T        | P         |           | CIE           | SEE |  |
| 1                                  |             | Probability & Statistics                              | BSC      | 3              | 1        | 0         | 4         | 40            | 60  |  |
| 2                                  | A401306     | Concrete Technology                                   | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |  |
| 3                                  | A401307     | Strength of Materials - II                            | PCC      | 2              | 0        | 0         | 2         | 40            | 60  |  |
| 4                                  | A401308     | Hydraulics and Hydraulics Machinery                   | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |  |
| 5                                  | A401309     | Structural Analysis - I                               | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |  |
| 6                                  | A401505     | Concrete Technology Lab                               | PCC      | 0              | 0        | 2         | 1         | 40            | 60  |  |
| 7                                  | A401506     | Fluid Mechanics and Hydraulics Machinery              | PCC      | 0              | 0        | 2         | 1         | 40            | 60  |  |
| 8                                  |             | Social Innovation in Practice                         | HSMC     | 0              | 0        | 2         | 1         | 40            | 60  |  |
| 9                                  | A401801     | Real-time Research Project/ Field-Based Project       | PROJ     | 0              | 0        | 4         | 2         | 50            | -   |  |
|                                    |             | Environmental Science                                 | MC       | 2              | 0        | 0         | 0         | -             | -   |  |
| <b>Total:</b>                      |             |   |          | <b>16</b>      | <b>1</b> | <b>10</b> | <b>20</b> |               |     |  |
| <b>Total hours per Week</b>        |             |   |          | <b>28</b>      |          |           |           |               |     |  |
| <b>Total Credits in I Year: 40</b> |             |   |          |                |          |           |           |               |     |  |

| SEMESTER - V                         |  |          |                |          |           |           |               |     |
|--------------------------------------|--|----------|----------------|----------|-----------|-----------|---------------|-----|
| Course Code                          | Course Title                                     | Category | Hours per Week |          |           | Credits   | Maximum Marks |     |
|                                      |  |          | L              | T        | P         |           | CIE           | SEE |
| A401310                              | Structural Analysis - II                         | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A401311                              | Geotechnical Engineering                         | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A401312                              | Structural Engineering -I (RCC)                  | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |
|                                      | Professional Elective - I                        | PEC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A401313                              | Professional Course Core                         | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A401314                              | Project Management                               | PCC      | 2              | 0        | 0         | 2         | 40            | 60  |
| A401507                              | Professional Core Laboratory                     | PCC      | 0              | 0        | 2         | 1         | 40            | 60  |
| A401508                              | Professional Core Laboratory                     | PCC      | 0              | 0        | 2         | 1         | 40            | 60  |
|                                      | Advanced English Communication Skills Laboratory | HSMC     | 0              | 0        | 2         | 1         | 40            | 60  |
| <b>Total:</b>                        |  |          | <b>17</b>      | <b>0</b> | <b>6</b>  | <b>20</b> |               |     |
| <b>Total hours per Week:</b>         |  |          | <b>23</b>      |          |           |           |               |     |
| SEMESTER - VI                        |  |          |                |          |           |           |               |     |
| Course Code                          | Course Title                                     | Category | Hours per Week |          |           | Credits   | Maximum Marks |     |
|                                      |  |          | L              | T        | P         |           | CIE           | SEE |
| A401315                              | Environmental Engineering                        | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A401316                              | Foundation Engineering                           | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A401317                              | Professional Course Core                         | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A401318                              | Professional Course Core                         | PCC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A4XX404                              | Professional Elective - II                       | PEC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A401509                              | Professional Core Laboratory                     | PCC      | 0              | 0        | 2         | 1         | 40            | 60  |
| A401510                              | Professional Core Laboratory                     | PCC      | 0              | 0        | 2         | 1         | 40            | 60  |
| A401511                              | Professional Core Laboratory                     | PCC      | 0              | 0        | 2         | 1         | 40            | 60  |
| A401802                              | Industrial Oriented Mini Project / Internship    | PROJ     | 0              | 0        | 4         | 2         | -             | 100 |
|                                      | Intellectual property rights                     | MC       | 2              | 0        | 0         | 0         | -             | -   |
| <b>Total:</b>                        |  |          | <b>17</b>      | <b>0</b> | <b>10</b> | <b>20</b> |               |     |
| <b>Total hours per Week</b>          |  |          | <b>27</b>      |          |           |           |               |     |
| <b>Total Credits in III Year: 40</b> |  |          |                |          |           |           |               |     |

| SEMESTER - VII                      |  |          |                |          |           |           |               |     |
|-------------------------------------|--|----------|----------------|----------|-----------|-----------|---------------|-----|
| Course Code                         | Course Title                             | Category | Hours per Week |          |           | Credits   | Maximum Marks |     |
|                                     |  |          | L              | T        | P         |           | CIE           | SEE |
| A401319                             | Professional Course Core                 | PCC      | 2              | 0        | 0         | 2         | 40            | 60  |
| A4XX407                             | Professional Elective - III              | PEC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A4XX410                             | Professional Elective - IV               | PEC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A4XX413                             | Professional Elective - V                | PEC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A4XX601                             | Open Elective - I                        | OEC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A4XX604                             | Open Elective - II                       | OEC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A401803                             | Project Stage -I                         | PROJ     | 0              | 0        | 6         | 3         | 40            | 60  |
| <b>Total:</b>                       |  |          | <b>17</b>      | <b>0</b> | <b>6</b>  | <b>20</b> |               |     |
| <b>Total hours per Week:</b>        |  |          | <b>23</b>      |          |           |           |               |     |
| SEMESTER - VIII                     |  |          |                |          |           |           |               |     |
| Course Code                         | Course Title                             | Category | Hours per Week |          |           | Credits   | Maximum Marks |     |
|                                     |  |          | L              | T        | P         |           | CIE           | SEE |
| A4XX416                             | Professional Elective - VI               | PEC      | 3              | 0        | 0         | 3         | 40            | 60  |
| A4XX607                             | Open Elective - III                      | OEC      | 3              | 0        | 0         | 3         | 40            | 60  |
|                                     | Business Management & Financial Analysis | HSMC     | 3              | 0        | 0         | 3         | 40            | 60  |
| A401804                             | Project Stage -II                        | PROJ     | 0              | 0        | 20        | 9         | 40            | 60  |
| A401805                             | Technical Seminar                        | PROJ     | 0              | 0        | 4         | 2         | -             | 100 |
| <b>Total:</b>                       |  |          | <b>9</b>       | <b>0</b> | <b>24</b> | <b>20</b> |               |     |
| <b>Total hours per Week</b>         |  |          | <b>33</b>      |          |           |           |               |     |
| <b>Total Credits in IV Year: 40</b> |  |          |                |          |           |           |               |     |