

Dr. Ambedkar Institute of Technology, Bengaluru
(An Autonomous Institution, Affiliated to VTU, Belgaum)



26.09.2016

Minutes of Academic Council meeting held on 23-09-2016 in Board Room at 11.00 PM

The members present:

| Sl.No | Name | Affiliation | Designation |
|-------|--------------------------|---------------------------|-----------------------------|
| 1 | Dr. M. Mahadeva | Management Invitee | Managing Trustee/Secretary |
| 2 | Dr. C. Nanjundaswamy | Chairman Academic Council | Principal Dr. AIT |
| 3 | Dr. S.G. Gopalkrishna | VTU Nominee | Principal, NCE, |
| 4 | Dr. Mahanth Shetty | Industry Experts | Director, KARMIK,Pvt. Ltd |
| 5 | Dr. V. Ramachandra | Industry Experts | V.P, Ultratech Cement |
| 6 | Sri. Srinivasa Ramanujan | Industry Experts | Head(Academic Solution),TCS |
| 7 | Dr. B. Shivakumarswamy | Member | HOD, CV |
| 8 | Dr. L. Chandrasagar | Member | HOD, ME |
| 9 | Dr. B. V. Sumangala | Member | HOD, EEE |
| 10 | Dr. G. Rajendra | Member | HOD, IEM & COE |
| 11 | Dr. Meenakshi | Member | HOD, EI |
| 12 | Dr. Rajanna K.M | Member | HOD, ECE |
| 13 | Dr. B. Sivakumar | Member | HOD, TCE |
| 14 | Dr. Siddaraju | Member | HOD, CSE |
| 15 | Dr. B.S. Shylaja | Member | HOD, ISE |
| 16 | Dr. Shanthi K.J | Member | HOD, ML |
| 17 | Dr. Veenadevi, | Member | HOD, Chemistry |
| 18 | Dr. Sooryanarayana. B | Member | HOD, Mathematics |
| 19 | Dr. T. S. Reddy | Member | HOD, Physics |
| 20 | Dr. S.G. Ramachandraiah | Member | Assc. Prof, CV |
| 21 | Prasannakumar M | Member | ACOE |
| 22 | Dr. Vijayakumar. M.V | Invitee | Prof. CSE |
| 23 | Dr. M.N. Hegde | Member Secretary | Dean (Academic) |

Leave of Absence:

1. Dr. B. Hanumaiah, Advisor, Dr. AIT, Invitee
2. Dr. Basavarajappa, VTU Nominee
3. Sri. Samath Raman, Industry
4. Dr. S.N. Sridhar, VTU Nominee
5. Dr. Seetharamu, Ex. Director, CPRI
6. Dr. T. R. Shashipriya, HOD, HSS
7. Dr. T. N. Raju, Assc. Prof, ME
8. Dr. V. Arunkumar, Prof. ME

Introduction:

Principal welcomed all the members to the meeting and briefed about the agenda to be discussed and informed Dean (Academic) to continue with the deliberation.

Dr. M. Mahadeva, Managing Trustee/Secretary, has noted the absence of Dr. B. Hanumaiah, Advisor, without official communications during the academic deliberation was not acceptable and mentioned to keep on record his displeasure. He is advised to be present during all academic meetings. The absence of all other internal members without specific official reasons are to be recorded and asked to inform them to be part of the decisions. He has appreciated the participation and contributions of the External members for contributing their academic expertise in bringing the academic excellence for the benefit of the stakeholder. He has also thanked Visvesvaraya Technological University for granting institutional autonomy and Autonomous status to all PG programmes.

Ratification of Minutes of the previous meeting:

Minutes of the previous meeting was read & confirmed with discussion on NFTC cases. All the members agreed that a fair chance shall be given to students and agreed to the modifications made therein.

The Dean explained about the Academic Regulations for Post Graduate courses and MBA and MCA and the proceedings of BOS for PG programmes was placed before Academic Council and sought the Approval for the same.

Dr. Gopal Krishna suggested to have 100 credits to M. Tech programmes, 150 credits for MCA and 100 credits for MBA. He also opined that different weightage for CIE & SEE may be given as in VTU (CIE: SEE = 20:80).

Dr. V. Ramachandra opined that giving 50:50 weightage for CIE and SEE may create an impression that passing in Autonomous system may be easier and also there is no need to give summer semester for the PG students. Summer Semester is required for the UG level students. He also doubted that the students who could not pass in regular semester, may find it difficult to pass in 08 weeks period and other colleges are not adopting Summer Semester for PG courses. It is better to avoid Summer Semester and students can concentrate on internship.

It was resolved to relook into the weightage (50:50) given to CIE + assignments and Semester End Examinations. The Principal informed the members that all HOD will discuss this issue in college council meeting and take appropriate decisions. He also opined that instead of Summer

(2)

Semester, the students may be asked to attend contact classes for subjects, in which the students failed and shall be allowed to appear for the examination.

Academic Regulations (Tentative):

The Dean of Dr. AIT highlighted the features of the Academic Regulations for Post Graduate Programmes, which was prepared for the first time, as a result of the autonomous status given. The Secretary Dr. M. Mahadeva, expressed his opinion to get the information from other Autonomous Colleges, regarding their regulations and instructed the external members to kindly comment on the draft regulations and send their suggestions which can be incorporated and final version will be sent to them again, for their ratification.

The Dean explained the details of teaching and examination of PG programmes for the Academic year 2016-17. Sri. Srinivas Ramanujan, industry expert, opined that there is no need for theory subjects in the fourth semester, after doing internship programme and suggested that final year should be only for internship and project works.

The Principal stated to accommodate all theory and core subjects in I & II semesters, and during III & IV semesters, there will be internship and project respectively.

Dr. Mahanth Shetty opined to keep all core subjects in First semester, and internship in II & III semesters, and Projects in the IV semester. In this module, the students can interact with the faculty members so that students can make use of the benefit of internship to do project in the college and hence there will be knowledge sharing in the college. The College will also be benefitted.

Dr. V. Ramachandra suggested to have R&D or Industry interface courses during the III semester. However he has suggested that since the academic year is on and the classes are started, the major changes can be adopted during the next year. Dr. V. Ramachandra, finally suggested that during I & II semesters, confine the students for class room teaching, during III Semester, students can have industry interaction & internship under the guidance of faculty, and during IV Semester they can do the project work in the College.

PAN Dr. AIT Curriculum:

The Principal and the Dean have explained the features of the curriculum. They also explained that all the three components, Core engineering, Research & Development, and Industry needs are inbuilt in this model, where Core Academic component is covered during I and II Semesters, Industry component during the III Semester and Research & Development

component is covered during the IV Semester. Dr. V. Ramachandra suggested that unit weightage in the syllabus and curriculum on Core Academic as 50%, Research & Development as 25% and Industry needs as 25%.

The decision of teaching an exclusive paper on Research Methodology as part of the curriculum is appreciated by the experts.

It is resolved to accept the suggestion of having industry internship in III semester and carry out some project works at the same time. The main Project can be allowed during the IV semester is under the guidance of a faculty member. All PG departments are asked to go ahead with their scheme and syllabus for this academic year itself.

Sri. Srinivas Ramanujan suggested that TCS will come forward to guide for project works during IV semester and they can also undertake projects and internship for 02 groups of 05 students each. This will help the placement activities of the colleges. At this juncture the secretary has expressed deep sense of gratitude and thanked TCS and Sri Srinivas Ramanujan for taking interest in giving placement to large number of students of our college.

Members expressed their concern over 50:50 weightage for CIE and SEE. A suggestion was made to have 30:70 weightage to CIE and SEE to minimize the teachers' role and encourage students to earn better.

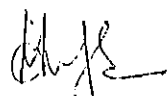
The Committee has accepted the suggestion to adopt 30:70 weightage to CIE and SEE and details of evaluation procedure may be worked out in the HODs and coordinators meeting.

Under any other points:

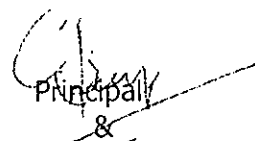
Increase of CIE eligibility marks from 20 to 30 for English subject in first year B.E that for Functional English Course, since there is no final examination, was considered and eligibility marks may be increased from 20 to 30 (i.e., to 60% minimum).

The request of HOD HSS the CIE eligibility marks for English course has been resolved to increase from the current 20 marks to 30 marks & there will be no SEE for this subject.

The Principal has concluded the meeting with vote of thanks



Dean (Academic)



Chairman of Academic Council

Dr. Ambedkar Institute of Technology
 (An Autonomous Institute, Affiliated to VTU, Accredited by NAAC with 'A' grade)
Department of CIVIL ENGINEERING
SCHEME OF TEACHING AND EXAMINATION I SEMESTER (Autonomous) 2017-18
M. Tech in STRUCTURAL ENGINEERING


I Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|---|---------------------|-------------------------|-----------------------------|---------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/Seminar/Assignment | Practical / Project | CIE | SEE | Total | |
| 1. | CSE11 | Computational Structural Mechanics | .... | 4 | - | - | 50 | 50 | 100 | 3 |
| 2. | CSE12 | Advanced Design of RC Structures | .... | 4 | - | - | 50 | 50 | 100 | 3 |
| 3. | CSE13 | Mechanics of Deformable bodies | .... | 4 | - | - | 50 | 50 | 100 | 3 |
| 4. | CSE14 | Structural Dynamics | .... | 4 | - | - | 50 | 50 | 100 | 3 |
| 5. | CSE15X | Elective - I | .... | 4 | - | - | 50 | 50 | 100 | 3 |
| 6. | CSEL16 | Structural Engineering Lab - I | .... | - | - | 3 | 50 | 50 | 100 | 2 |
| 7. | CSE17 | Seminar | .... | - | 2 | - | 50 | - | 50 | 2 |
| 8. | CSE18 | Mini Project /Field work/ Technical visit | .... | - | - | 6 | 50 | - | 50 | 2 |
| Total | | | | | | | 400 | 300 | u % | 21 |


Technical Seminar: Seminar on Advanced topics from refereed journals by each student.

ELECTIVE I

| Sl. No | Name of the Subject | Subject Code |
|--------|---|--------------|
| 1 | Advanced Design of Pre-stresses Concrete Structures | CSE151 |
| 2 | Special Concrete | CSE152 |
| 3 | Design of Pre-cast and Composite Structures | CSE153 |
| 4 | Reliability Analysis of Structures | CSE154 |


Professor and Head
 Department of civil Engineering,
 Dr. Ambedkar Institute of Technology
 Bangalore - 560 077

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Department of CIVIL ENGINEERING
 SCHEME OF TEACHING AND EXAMINATION I SEMESTER (Autonomous) 2017-18
M. Tech in STRUCTURAL ENGINEERING


 Professor and Head
 Department of Civil Engineering
 Dr. Ambedkar Institute of Technology
 Bangalore - 560 056.

II Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|-------------------------------------|---------------------|-------------------------|-----------------------------|-------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/Seminar/Assignment | Practical/Project | CIE | SEE | Total | |
| 1. | CSE21 | Advanced Design of Steel Structures | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 2. | CSE22 | Earthquake Resistant Structures | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 3. | CSE23 | Finite Element Method of Analysis | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 4. | CSE24 | Design Concepts of Sub-structures | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 5. | CSE25X | Elective - II | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 6. | CSEL26 | Structural Engineering Lab - II | ..... | - | - | 3 | 50 | 50 | 100 | 2 |
| 7. | CSES27 | Research Methodology | ..... | - | 2 | - | 50 | 50 | 100 | 2 |
| 8. | CSEM28 | Seminar | ..... | - | - | 6 | 50 | - | 50 | 2 |
| Total | | | | | | | 400 | 350 | 750 | 21 |

ELECTIVE-II

| Sl. No | Name of the Subject | Subject Code |
|--------|---------------------------------------|--------------|
| 1 | Design of Tall Structures | CSE251 |
| 2 | Repair & Rehabilitation of Structures | CSE252 |
| 3 | Stability of Structures | CSE253 |
| 4 | Design of Plates and Shells | CSE254 |

Internship: All the students have to undergo mandatory internship of 6 weeks during the vacation of I and II semesters and/or II and III semesters. A University examination shall be conducted during III semester and the prescribed credit shall be counted for the same semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not takeup/complete the internship shall be declared as failed and have to complete during the subsequent University examination after satisfying the internship requirements.


Dr. Ambedkar Institute of Technology
SCHEME OF TEACHING AND EXAMINATION III SEMESTER (Autonomous) 2017-18
M. Tech in STRUCTURAL ENGINEERING

III Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|---|---------------------|-------------------------|-------------------------------------|------------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Field Work | CIE | SEE | Total | |
| 1. | CSE31 | Seminar/Presentation on Internship (After 8 weeks from the date of commencement) | .... | 04 | - | - | 50 | 50 | 100 | 4 |
| 2. | CSE32 | Report on Internship | ..... | 04 | - | - | 50 | 50 | 100 | 3 |
| 3. | CSE33 | Evaluation and Viva-Voce | ..... | 04 | - | - | 50 | 50 | 100 | 3 |
| 4. | CSE34 | Project Phase - I | ..... |  |  |  | 50 | 50 | 100 | 8 |
| Total | | | | | | | 200 | 200 | 400 | 18 |

Note:

- Technical Seminar:** CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. Participation in the seminar by all postgraduate students of the same and other semesters of the programme shall be mandatory. The CIE marks awarded for Technical Seminar, shall be based on the evaluation of Seminar Report, Presentation skill and Question and Answer session
- Project Phase-1:** Students in consultation with the guide/co-guide if any, shall pursue literature survey and complete the preliminary requirements of selected Project work. Each student shall prepare relevant introductory project document, and present a seminar. CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide if any, and a senior faculty of the department. The CIE marks awarded for project work phase -1, shall be based on the evaluation of Project Report, Project Presentation skill and Question and Answer session
- SEE** as per the norms
- Internship:** Those, who have not pursued /completed the internship shall be declared as failed and have to complete during subsequent SEE examinations after satisfying the internship requirements. Internship SEE shall be as per the norms.


Professor and Head
Department of civil Engineering,
Dr. Ambedkar Institute of Technology
Bangalore - 560 058.

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SCHEME OF TEACHING AND EXAMINATION (Autonomous) 2017-18
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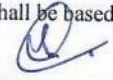
IV Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--|----------|--------------------------------------|---------------------|-------------------------|-------------------------------------|------------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Field Work | CIE | SEE | Total | |
| 1 | CSE41 | Design of Concrete Bridge Structures | ..... | - | - | - | 50 | 50 | 100 | 3 |
| 2 | CSE42X | Elective - III | | | | | 50 | 50 | 100 | 3 |
| | CSE43 | Project Phase - II | | | | | 50 | - | 50 | 2 |
| | CSE44 | Evaluation of Project and Viva-Voce | | | | | 100 | 100 | 200 | 20 |
| Total | | | | | | | 250 | 200 | 450 | 28 |
| Grand Total (I to IV Semester) : 88 Credits | | | | | | | | | | |

| Elective III | | |
|--------------|---|--------------|
| Sl. No | Name of the Subject | Subject Code |
| 1 | Optimization Techniques | CSE421 |
| 2 | Design of Industrial Structures | CSE422 |
| 3 | Theory of Plasticity and Fracture Mechanics | CSE423 |
| 4 | Masonry structures | CSE424 |

1. Project Phase-2:

CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. The CIE marks awarded for project work phase -2, shall be based on the evaluation of Project Report subjected to plagiarism check, Project Presentation skill and Question and Answer session in the ratio 50:25:25.
 SEE shall be at the end of IV semester. Project work evaluation and Viva-Voce examination (SEE), after satisfying the plagiarism check, shall be as per the norms.


 Professor and Head
 Department of Civil Engineering
 Dr. Ambedkar Institute of Technology
 Bangalore - 560 059.

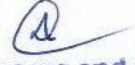
Dr. Ambedkar Institute of Technology

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Department of CIVIL ENGINEERING

SCHEME OF TEACHING AND EXAMINATION I SEMESTER (Autonomous) 2018-19

M. Tech in STRUCTURAL ENGINEERING


 Professor and Head
 Department of Civil Engineering,
 Dr. Ambedkar Institute of Technology,
 Bangalore - 560 056.

II Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|--|---------------------|-------------------------|-----------------------------|---------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/Seminar/Assignment | Practical / Project | CIE | SEE | Total | |
| 1. | 18CSE21 | Advanced Design of Steel Structures | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 2. | 18CSE22 | Earthquake Resistant Structures | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 3. | 18CSE23 | Finite Element Method of Analysis | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 4. | 18CSE24 | Design Concepts of Sub Structures | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 5. | 18CSE25X | ELECTIVE – II | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 6. | 18CSEL26 | Structural Engineering Laboratory - II | ..... | - | - | 3 | 50 | 50 | 100 | 2 |
| 7. | 18RM27 | Research Methodology | ..... | - | 2 | - | 50 | 50 | 100 | 2 |
| 8. | 18CSEM28 | Mini project/ Industry visit/ Field work | ..... | - | - | 6 | 50 | - | 50 | 2 |
| Total | | | | | | | 400 | 350 | 750 | 21 |

ELECTIVE-II

| Sl. No | Name of the Subject | Subject Code |
|--------|---|--------------|
| 1 | Design of Tall Structures | 18 CSE 251 |
| 2 | Repair and Rehabilitation of Structures | 18 CSE 252 |
| 3 | Stability of Structures | 18 CSE 253 |
| 4 | Design of Plates and Shells | 18 CSE 254 |

Internship: All the students have to undergo mandatory internship of 6 weeks during the vacation of I and II semesters and /or II and III semesters. A University examination shall be conducted during III semester and the prescribed credit shall be counted for the same semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take up/complete internship shall be declared as failed and have to complete during the subsequent University examination after satisfying the internship requirements.

Dr. Ambedkar Institute of Technology
SCHEME OF TEACHING AND EXAMINATION III SEMESTER (Autonomous) 2018-19
M. Tech in STRUCTURAL ENGINEERING

Professor and Head
 Department of Civil Engineering
 Dr. Ambedkar Institute of Technology
 Bangalore - 560 056.

III Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|--------------------------------------|---------------------|-------------------------|-------------------------------------|------------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Field Work | CIE | SEE | Total | |
| 1. | 18CSE31 | Design of Concrete Bridge Structures | .... | 04 | - | - | 50 | 50 | 100 | 4 |
| 2. | 18CSE32X | Professional Elective 3 | ..... | 04 | - | - | 50 | 50 | 100 | 3 |
| 3. | 18CSE33X | Professional Elective 4 | ..... | 04 | - | - | 50 | 50 | 100 | 3 |
| 4 | 18CSEI34 | Internship | ..... |  |  |  | 50 | 50 | 100 | 8 |
| 5 | 18CSES35 | Technical Seminar | ..... |  |  |  | 50 | - | 50 | 2 |
| 6. | 18CSEP36 | Project phase - I | ..... | - | - | - | 50 | - | 50 | 2 |
| Total | | | | | | | 300 | 200 | 500 | 22 |

| Professional Elective 3 | | | Professional Elective 4 | | |
|-------------------------|---|--------------|-------------------------|--------------------------------------|--------------|
| Sl.No | Name of the Subject | Subject Code | Sl.No | Name of the Subject | Subject Code |
| 1 | Design of Industrial Structures | 18CSE321 | 1 | Optimization Techniques | 18CSE331 |
| 2 | Theory of Plasticity and Fracture Mechanics | 18CSE322 | 2 | Composites and Smart materials | 18CSE332 |
| 3 | Masonry structures | 18CSE323 | 3 | Advanced Structural Mechanics | 18CSE333 |
| | | 18CSE324 | 4 | Earth and Earth Retaining Structures | 18CSE334 |

Note:

- Technical Seminar:** CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. Participation in the seminar by all postgraduate students of the same and other semesters of the programme shall be mandatory. The CIE marks awarded for Technical Seminar, shall be based on the evaluation of Seminar Report, Presentation skill and Question and Answer session
- Project Phase-1:** Students in consultation with the guide/co-guide if any, shall pursue literature survey and complete the preliminary requirements of selected Project work. Each student shall prep relevant introductory project document, and present a seminar. CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide if any, and a senior faculty of the department. The CIE marks awarded for project work phase -1, shall be based on the evaluation of Project Report, Project Presentation skill and Question and Answer session
- SEE as per the norms

4. **2. Internship:** Those, who have not pursued /completed the internship shall be declared as failed and have to complete during subsequent SEE examinations after satisfying the internship requirements. Internship SEE shall be as per the norms.

Dr. Ambedkar Institute of Technology
SCHEME OF TEACHING AND EXAMINATION (Autonomous) 2018-19
M. Tech in STRUCTURAL ENGINEERING


IV Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--|----------|--|---------------------|-------------------------|-------------------------------------|------------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Field Work | CIE | SEE | Total | |
| 1 | 18CSEP41 | Project Work Phase II – Midterm Internal Evaluation | ..... | - | - | - | 50 | | 50 | 2 |
| 2 | 18CSEP42 | Project work evaluation and viva voce | | | | | 100 | 100 | 200 | 22 |
| Total | | | | | | | 150 | 100 | 250 | 24 |
| Grand Total (I to IV Semester) : 88 Credits | | | | | | | | | | |

1. Project Phase-2:

CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. The CIE marks awarded for project work phase -2, shall be based on the evaluation of Project Report subjected to plagiarism check, Project Presentation skill and Question and Answer session in the ratio 50:25:25.

SEE shall be at the end of IV semester. Project work evaluation and Viva-Voce examination (SEE), after satisfying the plagiarism check, shall be as per the norms.


Professor and Head
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Department of CIVIL ENGINEERING
 SCHEME OF TEACHING AND EXAMINATION I SEMESTER (Autonomous) 2018-19, 2019 - 20
M. Tech in STRUCTURAL ENGINEERING


I Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|---|---------------------|-------------------------|-------------------------------------|------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Project | CIE | SEE | Total | |
| 1. | 18CSE11 | Computational Structural Mechanics | .... | 4 | - | - | 50 | 50 | 100 | 3 |
| 2. | 18CSE12 | Advanced Design of RC Structures | .... | 4 | - | - | 50 | 50 | 100 | 3 |
| 3. | 18CSE13 | Mechanics of Deformable Bodies | .... | 4 | - | - | 50 | 50 | 100 | 3 |
| 4. | 18CSE14 | Structural Dynamics | .... | 4 | - | - | 50 | 50 | 100 | 3 |
| 5. | 18CSE15X | ELECTIVE - I | .... | 4 | - | - | 50 | 50 | 100 | 3 |
| 6. | 18CSEL16 | Structural Engineering Laboratory - I | .... | - | - | 3 | 50 | 50 | 100 | 2 |
| 7. | 18CSES17 | Technical Seminar | .... | - | 2 | - | 50 | - | 50 | 2 |
| 8. | 18CSEM18 | Mini project/ Industry visit/ Field work | .... | - | - | 6 | 50 | - | 50 | 2 |
| Total | | | | | | | 400 | 300 | 700 | 21 |


Technical Seminar: Seminar on Advanced topics from refereed journals by each student.

ELECTIVE I

| Sl.No | Name of the Subject | Subject Code |
|-------|---|--------------|
| 1 | Advanced Design of Pre-stressed Concrete Structures | 18CSE151 |
| 2 | Special Concrete | 18 CSE 152 |
| 3 | Design of Pre-cast and Composite Structures | 18 CSE 153 |
| 4 | Reliability Analysis of Structures | 18 CSE 154 |


 Professor and Head
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Pg - 2019-20


 Professor and Head
 Department of Civil Engineering
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Department of CIVIL ENGINEERING
SCHEME OF TEACHING AND EXAMINATION I SEMESTER (Autonomous) 2018-19, 2019 - 20
M. Tech in STRUCTURAL ENGINEERING

II Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|--|---------------------|-------------------------|-----------------------------|---------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/Seminar/Assignment | Practical / Project | CIE | SEE | Total | |
| 1. | 18CSE21 | Advanced Design of Steel Structures | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 2. | 18CSE22 | Earthquake Resistant Structures | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 3. | 18CSE23 | Finite Element Method of Analysis | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 4. | 18CSE24 | Design Concepts of Sub Structures | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 5. | 18CSE25X | ELECTIVE – II | ..... | 4 | - | - | 50 | 50 | 100 | 3 |
| 6. | 18CSEL26 | Structural Engineering Laboratory - II | ..... | - | - | 3 | 50 | 50 | 100 | 2 |
| 7. | 18RM27 | Research Methodology | ..... | - | 2 | - | 50 | 50 | 100 | 2 |
| 8. | 18CSEM28 | Mini project/ Industry visit/ Field work | ..... | - | - | 6 | 50 | - | 50 | 2 |
| Total | | | | | | | 400 | 350 | 750 | 21 |

ELECTIVE-II

| Sl. No | Name of the Subject | Subject Code |
|--------|---|--------------|
| 1 | Design of Tall Structures | 18 CSE 251 |
| 2 | Repair and Rehabilitation of Structures | 18 CSE 252 |
| 3 | Stability of Structures | 18 CSE 253 |
| 4 | Design of Plates and Shells | 18 CSE 254 |

Internship: All the students have to undergo mandatory internship of 6 weeks during the vacation of I and II semesters and/or II and III semesters. A University examination shall be conducted during III semester and the prescribed credit shall be counted for the same semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not takeup/complete the internship shall be declared as failed and have to complete during the subsequent University examination after satisfying the internship requirements.

Dr. Ambedkar Institute of Technology
SCHEME OF TEACHING AND EXAMINATION III SEMESTER (Autonomous) 2018-19, 2019 - 20
M. Tech in STRUCTURAL ENGINEERING

Professor and Head
Department of civil Engineering
Dr. Ambedkar Institute of Technology
Bangalore - 560 085.

III Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|--------------------------------------|---------------------|-------------------------|-------------------------------------|------------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Field Work | CIE | SEE | Total | |
| 1. | 18CSE31 | Design of Concrete Bridge Structures | .... | 04 | - | - | 50 | 50 | 100 | 4 |
| 2. | 18CSE32X | Professional Elective 3 | ..... | 04 | - | - | 50 | 50 | 100 | 3 |
| 3. | 18CSE33X | Professional Elective 4 | ..... | 04 | - | - | 50 | 50 | 100 | 3 |
| 4 | 18CSEI34 | Internship | ..... |  |  |  | 50 | 50 | 100 | 8 |
| 5 | 18CSES35 | Technical Seminar | ..... |  |  |  | 50 | - | 50 | 2 |
| 6. | 18CSEP36 | Project phase - I | ..... | - | - | - | 50 | - | 50 | 2 |
| Total | | | | | | | 300 | 200 | 500 | 22 |

| Professional Elective 3 | | | Professional Elective 4 | | |
|-------------------------|---|--------------|-------------------------|--------------------------------------|--------------|
| Sl.No | Name of the Subject | Subject Code | Sl.No | Name of the Subject | Subject Code |
| 1 | Design of Industrial Structures | 18CSE321 | 1 | Optimization Techniques | 18CSE331 |
| 2 | Theory of Plasticity and Fracture Mechanics | 18CSE322 | 2 | Composites and Smart materials | 18CSE332 |
| 3 | Masonry structures | 18CSE323 | 3 | Advanced Structural Mechanics | 18CSE333 |
| | | 18CSE324 | 4 | Earth and Earth Retaining Structures | 18CSE334 |

Note:

- Technical Seminar:** CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. Participation in the seminar by all postgraduate students of the same and other semesters of the programme shall be mandatory. The CIE marks awarded for Technical Seminar, shall be based on the evaluation of Seminar Report, Presentation skill and Question and Answer session
- Project Phase-1:** Students in consultation with the guide/co-guide if any, shall pursue literature survey and complete the preliminary requirements of selected Project work. Each student shall prepare relevant introductory project document, and present a seminar. CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide if any, and a senior faculty of the department. The CIE marks awarded for project work phase -1, shall be based on the evaluation of Project Report, Project Presentation skill and Question and Answer session
- SEE as per the norms

4. **2. Internship:** Those, who have not pursued /completed the internship shall be declared as failed and have to complete during subsequent SEE examinations after satisfying the internship requirements. Internship SEE shall be as per the norms.

Dr. Ambedkar Institute of Technology
SCHEME OF TEACHING AND EXAMINATION (Autonomous) 2018-19, 2019 - 20
M. Tech in STRUCTURAL ENGINEERING


IV Semester M TECH

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--|----------|--|---------------------|-------------------------|-------------------------------------|------------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Field Work | CIE | SEE | Total | |
| 1 | 18CSEP41 | Project Work Phase II – Midterm Internal Evaluation | ..... | - | - | - | 50 | | 50 | 2 |
| 2 | 18CSEP42 | Project work evaluation and viva voce | | | | | 100 | 100 | 200 | 22 |
| Total | | | | | | | 150 | 100 | 250 | 24 |
| Grand Total (I to IV Semester) : 88 Credits | | | | | | | | | | |

1. Project Phase-2:

CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. The CIE marks awarded for project work phase -2, shall be based on the evaluation of Project Report subjected to plagiarism check, Project Presentation skill and Question and Answer session in the ratio 50:25:25.

SEE shall be at the end of IV semester. Project work evaluation and Viva-Voce examination (SEE), after satisfying the plagiarism check, shall be as per the norms.


Professor and Head
Department of civil Engineering
& Ambedkar Institute of Technology
Bangalore - 560 058.

Dr. Ambedkar Institute of Technology

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Department of Civil Engineering

SCHEME OF TEACHING AND EXAMINATION I SEMESTER (Autonomous) 2020-21, 2021-22

M. Tech in Structural Engineering

D.
Professor and Head
Department of Civil Engineering
Dr. Ambedkar Institute of Technology
Bangalore - 560 056.

I semester

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|---|---------------------|-------------------------|-------------------------------------|---------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Project | CIE | SEE | Total | |
| 1 | 20CSE11 | Computational Structural Mechanics | | 4 | - | - | 50 | 50 | 100 | 3 |
| 2 | 20CSE12 | Advanced Design of RC Structures | | 4 | - | - | 50 | 50 | 100 | 3 |
| 3 | 20CSE13 | Mechanics of Deformable Bodies | | 4 | - | - | 50 | 50 | 100 | 3 |
| 4 | 20CSE14 | Structural Dynamics | | 4 | - | - | 50 | 50 | 100 | 3 |
| 5 | 20CSE15X | ELECTIVE - I | | 4 | - | - | 50 | 50 | 100 | 3 |
| 6 | 20CSE16X | ELECTIVE - II | | 4 | - | - | 50 | 50 | 100 | 3 |
| 7 | 20CSEL17 | Structural Engineering Laboratory | | - | - | 3 | 50 | 50 | 100 | 2 |
| 8 | 20CSES18 | Technical Seminar* | | - | 4 | - | 50 | - | 50 | 2 |
| 9 | 20CSEM19 | Minor project/ Industry visit/ Field work | | - | - | 6 | 50 | - | 50 | 2 |
| Total | | | | | | | 450 | 350 | 800 | 24 |

*Technical Seminar: Seminar on Advanced topics from refereed journals by each student.

ELECTIVE - I

| Sl. No | Subject Code | Subject title |
|--------|--------------|---|
| 1 | 20CSE151 | Advanced Design of Pre-stressed Concrete Structures |
| 2 | 20CSE152 | Special Concrete |
| 3 | 20CSE153 | Design of Pre-cast and Composite Structures |
| 4 | 20CSE154 | Reliability Analysis of Structures |

ELECTIVE - II

| Sl. No | Subject Code | Subject title |
|--------|--------------|--------------------------------------|
| 1 | 20CSE161 | Optimization Techniques |
| 2 | 20CSE162 | Composites and Smart materials |
| 3 | 20CSE163 | Advanced Structural Mechanics |
| 4 | 20CSE164 | Earth and Earth Retaining Structures |

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Dr. Ambedkar Institute of Technology

(An Autonomous Institute affiliated to VTU, Accredited by NAAC with 'A' grade)

Department of Civil Engineering

SCHEME OF TEACHING AND EXAMINATION II SEMESTER (Autonomous) 2020-21, 2021-22

M. Tech in Structural Engineering

(Signature)
Professor and Head
Department of Civil Engineering
Dr. Ambedkar Institute of Technology
Bangalore - 560 056.

II semester

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|---|---------------------|-------------------------|-------------------------------------|---------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Project | CIE | SEE | Total | |
| 1 | 20CSE21 | Advanced Design of Steel Structures | | 4 | - | - | 50 | 50 | 100 | 3 |
| 2 | 20CSE22 | Earthquake Resistant Structures | | 4 | - | - | 50 | 50 | 100 | 3 |
| 3 | 20CSE23 | Finite Element Method of Analysis | | 4 | - | - | 50 | 50 | 100 | 3 |
| 4 | 20CSE24 | Design Concepts of Substructures | | 4 | - | - | 50 | 50 | 100 | 3 |
| 5 | 20CSE25X | ELECTIVE – III | | 4 | - | - | 50 | 50 | 100 | 3 |
| 6 | 20CSE26X | ELECTIVE – IV | | 4 | - | - | 50 | 50 | 100 | 3 |
| 7 | 20RM27 | Research Methodology | | 2 | -- | - | 50 | 50 | 100 | 2 |
| 8 | 20CSEL28 | Computational Structural Engineering Laboratory | | - | - | 3 | 50 | 50 | 100 | 2 |
| 9 | 20CSEP29 | Project Work Phase – I (Presentation of Synopsis) | | - | - | 6 | 50 | - | 50 | 2 |
| Total | | | | | | | 450 | 400 | 850 | 24 |

ELECTIVE-III

| Sl. No | Subject Code | Subject title |
|--------|--------------|---|
| 1 | 20CSE251 | Design of Tall Structures |
| 2 | 20CSE252 | Repair and Rehabilitation of Structures |
| 3 | 20CSE253 | Stability of Structures |
| 4 | 20CSE254 | Design of Plates and Shells |

ELECTIVE-IV

| Sl. No | Subject Code | Name of the Subject |
|--------|--------------|---|
| 1 | 20CSE261 | Design of Industrial Structures |
| 2 | 20CSE262 | Theory of Plasticity and Fracture Mechanics |
| 3 | 20CSE263 | Masonry structures |
| 4 | 20CSE264 | Design of Concrete Bridge Structures |

Dr. Ambedkar Institute of Technology

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Department of Civil Engineering

SCHEME OF TEACHING AND EXAMINATION III SEMESTER (Autonomous) 2020-21, 2021-22

M. Tech in Structural Engineering

III semester


| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|---|---------------------|-------------------------|-------------------------------------|------------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Field Work | CIE | SEE | Total | |
| 1 | 20CSE31 | Self-Study – Massive Open Online Course (MOOC)* | | -- | 8 | -- | 50 | 50 | 100 | 4 |
| 2 | 20CSEI32 | Internship# | | -- | -- | 16 | 50 | 50 | 100 | 8 |
| 3 | 20CSES33 | Technical Seminar | | - | 4 | - | 50 | - | 50 | 2 |
| 4 | 20CSEP34 | Evaluation of Project Work Phase I | | - | - | 12 | 50 | 50 | 100 | 6 |
| Total | | | | | | | 200 | 150 | 350 | 20 |

* List of Massive Open Online Courses (NPTEL/SWAYAM) shall be decided in the Board of Studies meeting. Students shall register for MOOC during 1st /2nd /3rd semester and shall be completed before the last working day of the 3rd semester. The assignment and examination marks along with certificate should be submitted to the examination section.

The student shall make a midterm presentation of the activities undertaken during the first 8 weeks of internship to a panel comprising Internship Guide, a senior faculty from the department and Head of the Department.

The Department shall facilitate and monitor the student internship program.

The internship report of each student shall be submitted to the Institute.


Professor and Head
Department of Civil Engineering
Dr. Ambedkar Institute of Technology
Bangalore - 560 055.

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Department of Civil Engineering

SCHEME OF TEACHING AND EXAMINATION IV SEMESTER (Autonomous) 2020-21, 2021-22

M. Tech in Structural Engineering

IV semester

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|---|----------|---|---------------------|--------------------------------|-------------------------------------|------------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Field Work | CIE | SEE | Total | |
| 1 | 20CSEP41 | Project Phase – II Midterm Internal Evaluation | | - | - | 8 | 100 | - | 100 | 2 |
| 2 | 20CSEP42 | Project Work Evaluation and Viva Voce | | - | 4 | 24 | 100 | 100 | 200 | 18 |
| Total | | | | | | | 200 | 100 | 300 | 20 |
| Grand Total (I to IV Semester) : | | | | 2300 Marks ; 88 Credits | | | | | | |


Professor and Head
Department of Civil Engineering
Dr. Ambedkar Institute of Technology
Bangalore - 560 056.

Dr. Ambedkar Institute of Technology

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Department of Civil Engineering

SCHEME OF TEACHING AND EXAMINATION I SEMESTER (Autonomous) 2020-21, 2021-22

M. Tech in Structural Engineering

I semester

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|--|---------------------|-------------------------|-------------------------------------|------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Project | CIE | SEE | Total | |
| 1 | 20CSE11 | Computational Structural Mechanics | | 4 | - | - | 50 | 50 | 100 | 3 |
| 2 | 20CSE12 | Advanced Design of RC Structures | | 4 | - | - | 50 | 50 | 100 | 3 |
| 3 | 20CSE13 | Mechanics of Deformable Bodies | | 4 | - | - | 50 | 50 | 100 | 3 |
| 4 | 20CSE14 | Structural Dynamics | | 4 | - | - | 50 | 50 | 100 | 3 |
| 5 | 20CSE15X | ELECTIVE – I | | 4 | - | - | 50 | 50 | 100 | 3 |
| 6 | 20CSE16X | ELECTIVE – II | | 4 | - | - | 50 | 50 | 100 | 3 |
| 7 | 20CSEL17 | Structural Engineering Laboratory | | - | - | 3 | 50 | 50 | 100 | 2 |
| 8 | 20CSES18 | Technical Seminar* | | - | 4 | - | 50 | - | 50 | 2 |
| 9 | 20CSEM19 | Minor project/ Industry visit/ Field work | | - | - | 6 | 50 | - | 50 | 2 |
| Total | | | | | | | 450 | 350 | 800 | 24 |


*Technical Seminar: Seminar on Advanced topics from refereed journals by each student.

ELECTIVE - I

| Sl. No | Subject Code | Subject title |
|--------|--------------|---|
| 1 | 20CSE151 | Advanced Design of Pre-stressed Concrete Structures |
| 2 | 20CSE152 | Special Concrete |
| 3 | 20CSE153 | Design of Pre-cast and Composite Structures |
| 4 | 20CSE154 | Reliability Analysis of Structures |

ELECTIVE - II

| Sl. No | Subject Code | Subject title |
|--------|--------------|--------------------------------------|
| 1 | 20CSE161 | Optimization Techniques |
| 2 | 20CSE162 | Composites and Smart materials |
| 3 | 20CSE163 | Advanced Structural Mechanics |
| 4 | 20CSE164 | Earth and Earth Retaining Structures |


Professor and Head
Department of Civil Engineering
Dr. Ambedkar Institute of Technology
Bangalore - 560 075

PG - 2021-22


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Department of Civil Engineering

SCHEME OF TEACHING AND EXAMINATION II SEMESTER (Autonomous) 2020-21, 2021-22

M. Tech in Structural Engineering


Professor and Head
Department of Civil Engineering
Dr. Ambedkar Institute of Technology
Bangalore - 560 056.

II semester

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|--|---------------------|-------------------------|-------------------------------------|------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Project | CIE | SEE | Total | |
| 1 | 20CSE21 | Advanced Design of Steel Structures | | 4 | - | - | 50 | 50 | 100 | 3 |
| 2 | 20CSE22 | Earthquake Resistant Structures | | 4 | - | - | 50 | 50 | 100 | 3 |
| 3 | 20CSE23 | Finite Element Method of Analysis | | 4 | - | - | 50 | 50 | 100 | 3 |
| 4 | 20CSE24 | Design Concepts of Substructures | | 4 | - | - | 50 | 50 | 100 | 3 |
| 5 | 20CSE25X | ELECTIVE – III | | 4 | - | - | 50 | 50 | 100 | 3 |
| 6 | 20CSE26X | ELECTIVE – IV | | 4 | - | - | 50 | 50 | 100 | 3 |
| 7 | 20RM27 | Research Methodology | | 2 | -- | - | 50 | 50 | 100 | 2 |
| 8 | 20CSEL28 | Computational Structural Engineering Laboratory | | - | - | 3 | 50 | 50 | 100 | 2 |
| 9 | 20CSEP29 | Project Work Phase – I (Presentation of Synopsis) | | - | - | 6 | 50 | - | 50 | 2 |
| Total | | | | | | | 450 | 400 | 850 | 24 |

ELECTIVE-III

| Sl. No | Subject Code | Subject title |
|--------|--------------|---|
| 1 | 20CSE251 | Design of Tall Structures |
| 2 | 20CSE252 | Repair and Rehabilitation of Structures |
| 3 | 20CSE253 | Stability of Structures |
| 4 | 20CSE254 | Design of Plates and Shells |

ELECTIVE-IV

| Sl. No | Subject Code | Name of the Subject |
|--------|--------------|---|
| 1 | 20CSE261 | Design of Industrial Structures |
| 2 | 20CSE262 | Theory of Plasticity and Fracture Mechanics |
| 3 | 20CSE263 | Masonry structures |
| 4 | 20CSE264 | Design of Concrete Bridge Structures |

Dr. Ambedkar Institute of Technology

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Department of Civil Engineering

SCHEME OF TEACHING AND EXAMINATION III SEMESTER (Autonomous) 2020-21, 2021-22

M. Tech in Structural Engineering

III semester


| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|--------------|----------|---|---------------------|-------------------------|-----------------------------|------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/Seminar/Assignment | Practical / Field Work | CIE | SEE | Total | |
| 1 | 20CSE31 | Self-Study – Massive Open Online Course (MOOC)* | | -- | 8 | -- | 50 | 50 | 100 | 4 |
| 2 | 20CSEI32 | Internship# | | -- | -- | 16 | 50 | 50 | 100 | 8 |
| 3 | 20CSES33 | Technical Seminar | | - | 4 | - | 50 | - | 50 | 2 |
| 4 | 20CSEP34 | Evaluation of Project Work Phase I | | - | - | 12 | 50 | 50 | 100 | 6 |
| Total | | | | | | | 200 | 150 | 350 | 20 |

* List of Massive Open Online Courses (NPTEL/SWAYAM) shall be decided in the Board of Studies meeting. Students shall register for MOOC during 1st /2nd /3rd semester and shall be completed before the last working day of the 3rd semester. The assignment and examination marks along with certificate should be submitted to the examination section.

The student shall make a midterm presentation of the activities undertaken during the first 8 weeks of internship to a panel comprising Internship Guide, a senior faculty from the department and Head of the Department.

The Department shall facilitate and monitor the student internship program.

The internship report of each student shall be submitted to the Institute.


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Department of Civil Engineering

SCHEME OF TEACHING AND EXAMINATION IV SEMESTER (Autonomous) 2020-21, 2021-22

M. Tech in Structural Engineering

IV semester

| Sl. No. | Sub Code | Subject Title | Teaching Department | Teaching hours per week | | | Maximum Marks allotted | | | Examination Credits |
|---|----------|---|---------------------|--------------------------------|-------------------------------------|------------------------------|------------------------|------------|------------|---------------------|
| | | | | Lecture | Tutorial/ Seminar/ Assignment | Practical / Field Work | CIE | SEE | Total | |
| 1 | 20CSEP41 | Project Phase – II Midterm Internal Evaluation | | - | - | 8 | 100 | - | 100 | 2 |
| 2 | 20CSEP42 | Project Work Evaluation and Viva Voce | | - | 4 | 24 | 100 | 100 | 200 | 18 |
| Total | | | | | | | 200 | 100 | 300 | 20 |
| Grand Total (I to IV Semester) : | | | | 2300 Marks ; 88 Credits | | | | | | |


Professor and Head
Department of Civil Engineering
Dr. Ambedkar Institute of Technology
Bangalore - 560 055.