

**Dr. Ambedkar Institute of Technology
Department of Civil Engineering**

Minutes of the 7th BOS meeting held on 18.06.2016

The meeting commenced at 9.00 AM on 18-06-2016 in the M Tech class room of the Silver jubilee building, Dr. AIT under the chairmanship of Dr. B. Shivakumaraswamy, HOD Civil Engineering Department. The Chairman welcomed all the members of BOS to the meeting and presented the scheme and syllabus of BE (Civil) for the approval. The following dignitaries of BOS attended the meeting

1. Dr. B. Shivakumaraswamy, Professor & Head, Dr. AIT. Bangalore
2. Dr. N.S. Kumar, VTU Nominee, Professor of Civil Engg. CED, GCE, Ramanagaram.
3. Dr. Chandrakishen, Professor of Civil Engineering, IISc, Bangalore.
4. Dr. Ganagadhar, S. Professor of Civil Engineering, CED, UVCE, Bangalore.
5. Dr. Udayashankar, Professor of Civil Engineering, CED, RVCE, Bangalore.
6. Dr. Nataraj, Professor of Civil Engineering, CED, SJCE, Mysuru.
7. Dr. K. Shantharaju, Project Head, PSC India Infrastructure Pvt Ltd, Pune
Maharashtra State
8. Ms. Mamatha ME, (PhD) Asst. Prof. EWIT, Bangalore
9. Dr. M.N. Hegde, Professor, CED, Dr. AIT. Bangalore
10. Dr. K.V.Lokesh, Professor, CED, Dr. AIT. Bangalore
11. Dr. S. Vijaya, Professor, CED, Dr. AIT. Bangalore
12. Dr. S.D. Venkataraj mohan, Professor, CED, Dr. AIT. Bangalore
13. Dr. S.G. Ramachandraiah, Associate Professor, CED, Dr. AIT. Bangalore
14. Dr. K.V. Manjunatha, Associate Professor, CED, Dr. AIT. Bangalore
15. Mr. R. Madhusudhan, Asst. Professor, CED, Dr. AIT. Bangalore
16. Mr. M. R. Suresh, Associate Professor, CED, Dr. AIT. Bangalore
17. Mr. T. Chandrashekariah, Associate Professor, CED, Dr. AIT. Bangalore
18. Mr. H.R.Srinivas, Asst. Prof. CED, Dr. AIT. Bangalore
19. Mr. H. Anantharam, Associate Professor, CED, Dr. AIT. Bangalore
20. Mr. G.P. Manjunath, Associate Professor, CED, Dr. AIT. Bangalore
21. Mr. M. Krishnamurthy, Associate Professor, CED, Dr. AIT. Bangalore
22. Mr. Ankesh, S.B, Asst. Professor, CED, Dr. AIT. Bangalore
23. Mr. Dharshan M.K, Asst. Professor, CED, Dr. AIT. Bangalore
24. Mrs. Poornima Biranagi, Asst. Professor, CED, Dr. AIT. Bangalore
25. Ms. Vaibhavi, Asst. Professor, CED, Dr. AIT. Bangalore
26. Mrs. Kavya,H.K Asst. Professor, CED, Dr. AIT. Bangalore

Agenda


- Review and approval of the proposed Scheme of Study and Syllabus from I Semester to VIII Semester BE Civil Engineering courses to be introduced for the Academic year 2016-17.

- The BOS Chairman presented the proposed Curriculum design, the Scheme and Syllabus of BE Civil Engineering courses to be introduced for the academic year 2016-17 through power point. The hard copies of the proposed Scheme and Syllabus from I Semester to VIII semester BE Civil Engineering courses also distributed to all the members of BOS for a detailed review and sought their opinion with regard to any addition / correction / deletion / modification in the proposed syllabus and accordingly all the members of BOS after a thorough review and discussion made the following suggestions / corrections / modification as detailed below:
 1. Dr. Chandrakishen, Professor IISc, Bengaluru, suggested shifting analysis of trusses from unit 2 to unit 1 and deflection of beams (moment area method and conjugate beam method) from unit 1 to unit 2. Also suggested to change the title of the unit 5 as Analysis of indeterminate arches.
 2. In addition to the study of kinematics of rectilinear motion, Projectiles and kinetics of rigid bodies, the super elevation and banking portion is introduced in ECE and Engg. Mechanics of I Sem. BE for all branches of Engineering as per the decision taken in the departmental BOS meeting. The Board has accepted to include the suggestions.
 3. Dr. Chandrakishen, Professor IISc / BOS has suggested to modify the title of the subject CV31 Building Materials and Construction instead of Building Materials and Construction Technology and the suggestion has been incorporated.
 4. Dr. N S Kumar, member of VTU nominee has suggested including derivation of equations for thick and thin cylinders in addition to application in unit 4 in Strength of Materials.
 5. Dr. Udayashankar, Prof. of RVCE has suggested to give more credit to Structures subject but the members expressed to give maximum of 4 credits per subject.
 6. Dr. Nataraj has suggested to change the title of unit 4 in Fluid Mechanics as flow through pipes and suggested some reference books and the BOS has accepted.
 7. Dr. Chandrakishen, Professor IISc / Dr. K. Shantharaju / Dr. Gangadhar have advised to change load for footing as Proportioning of footing for equal settlement and the suggestion has been incorporated.

8. The Chairman proposed to introduce computer Aided RC drawing (Part-A) and Part-B, the design as per IS: 456-2000 in Design and drawing of RC Structures (CV61) as discussed in the department board meeting and the Board has accepted the proposal.
9. Dr. Nataraju. Professor of Civil Engg. SJCE proposed to incorporate Arch dams in Unit 2 of Hydraulic structures & irrigation design – drawing and the board has accepted to incorporate the same.
10. Dr. Nataraju. Professor of Civil Engg. SJCE / Dr. Udayashankar / Mamatha. A, Alumni representative advised to increase the credit for the Extensive Survey Project in VI Sem. BE but the board has not accepted.
11. Mr. T chandrasekaraiah, Associate Professor asked for more credit for Transportation Engineering-I, but the board suggested to keep the same credit and increase the number of hours of teaching.
12. The members of BOS suggested carrying out New Tank Project and Old Tank Project surveying at SS Ghati using Total Station and the chairman accepted the suggestion and incorporated.
13. Dr. N S Kumar, member of VTU nominee has suggested to remove tubular connection in welded joints in the subject Cv71, Design of Steel Structures and the BOS members agreed for the suggestion.
14. The Chairman proposed to introduce computer Aided steel drawing (Part-A) and Part-B, the design as per IS: 800-2007 in Design and drawing of Steel Structures (CV81) as discussed in the department board meeting and the Board has accepted the proposal.
15. Dr. N S Kumar, member of VTU nominee has suggested. to remove the design of bolted plate girder in the subject design and drawing of Steel Structures of VIII Sem. BE but the board rejected the proposal and to retain the same in the syllabus.
16. Dr. K.V. Lokesh suggested to incorporate Indoor Air Pollution in the subject CV755, Air Pollution and control (Unit 4) and the board has accepted to incorporate.
17. Dr. K. Shantharaju, Industrial Expert advised to include Construction Project Management (CV758) as Core subject instead of Elective but the board has not come to any conclusion because of credit allotment in the core subjects.

18. Dr. Udayashankar B.C. Prof of RVCE, suggested adding code books in the subject CV834, Advanced design of Steel Structures and the same is incorporated.
19. Dr. SDV / HAR / Dr. K.V. Lokesh suggested including environmental impact due to the construction activities in Highway project in the subject CV836, Environmental Impact Assessment as discussed in the department meeting and the board has accepted to incorporate the same in Unit 5.
20. Dr. Chandrakishen, Professor IISc / Dr. K. Shantharaju, Industrial Expert advised to include Repair and Rehabilitation of Structures as Elective and the board has accepted to include the subject in VI Semester electives.
21. The BOS members have suggested including NDT in concrete laboratory syllabus for 7th semester B. E. Since, the equipments required are procured under VTU research grants for the project "Health monitoring, repair and rehabilitation of structures" the suggestion is considered and implemented.
22. As per the suggestions of BOS members, the Advanced concrete Technology subject has been introduced in VI Sem. BE instead of VIII Sem. because to give more time for the students to carry out their main Project.
23. The BOS members suggested to procure latest licensed version soft ware's such as Auto CAD, STAAD Pro, E-Tabs, ANSYS etc for academic purpose.

With the long discussion, all the members are agreed to make changes and modification in the syllabus for the academic year 2016-17. With this, meeting was concluded with vote of thanks to the chair by Dr. K.V. Manjunath.


(Dr. B. Shivakumara swamy)
Chairman, BOS,
Prof. & Head, Dept. of Civil Engineering
Dr. AIT, Bangalore- 56.

W/c to Copy:

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**Dr. Ambedkar Institute of Technology
Department of Civil Engineering**

Minutes of the 7th BOS meeting held on 25.03.2017

The meeting commenced at 10.00AM on 25-03-2017 in the M Tech class room of the Silver jubilee building, Dr. AIT under the chairmanship of Dr. B. Shivakumaraswamy, HOD Civil Engineering Department. The Chairman welcomed all the members of BOS to the meeting and presented the scheme and syllabus of BE (Civil) and M Tech (CSE) for the approval. The following dignitaries of BOS attended the meeting

1. Dr. B. Shivakumaraswamy, Professor & Head, Dr. AIT. Bangalore
2. Dr. Chandrakishen, Professor of Civil Engineering, IISc, Bangalore.
3. Dr. Renukadevi, VTU Nominee, Professor of Civil Engg. CED, RVCE, Bengaluru
(23/03/2017).
4. Dr. Ravikumar A. S. Professor of Civil Engineering, CED, UVCE, Bangalore.
5. Dr. Mayanaik, Professor and Head, Civil Engineering, CED, BMSCE, Bangalore.
6. Prof. S. Bhavanishankar Professor of Civil Engineering, CED, UVCE, Bangalore.
7. Sri. Chinnasomaiah, Chief Engineer (Civil), KPC, Bengaluru
8. Mr. Rajagopal R.S, Scientist E, NAL, Bengaluru
9. Mr. Arunkumar ME, (PhD) Asst. Prof. EWIT, Bangalore
10. Dr. S. Vijaya, Professor, CED, Dr. AIT. Bangalore
11. Dr. S.D. Venkataraj mohan, Professor, CED, Dr. AIT. Bangalore
12. Dr. S.G. Ramachandraiah, Associate Professor, CED, Dr. AIT. Bangalore
13. Mr. R. Madhusudhan, Asst. Professor, CED, Dr. AIT. Bangalore
14. Mr. H.R. Srinivas, Associate. Prof. CED, Dr. AIT. Bangalore
15. Mr. M. R. Suresh, Associate Professor, CED, Dr. AIT. Bangalore
16. Dr. Chandraashekar, Associate. Prof. CED, Dr. AIT. Bangalore
17. Mr. T. Chandrashekariah, Associate Professor, CED, Dr. AIT. Bangalore
18. Dr. K.V. Lokesh, Professor, CED, Dr. AIT. Bangalore
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23. Mr. Ankesh, Asst. Professor, CED, Dr. AIT. Bangalore
24. Mr. Darshan M.K, Asst. Professor, CED, Dr. AIT. Bangalore
25. Miss Poornima, Asst. Professor, CED, Dr. AIT. Bangalore
26. Smt. Kavya H.K, Asst. Professor, CED, Dr. AIT. Bangalore
27. Smt. Vaibhavi B.D, Asst. Professor, CED, Dr. AIT. Bangalore
28. Smt. Supritha, Asst. Professor, CED, Dr. AIT. Bangalore

Agenda

- Review and approval of the proposed Scheme of Study and Syllabus from I Semester to VIII Semester BE Civil Engineering courses to be introduced for the Academic year 2017 - 18.

- Review and approval of the proposed Scheme of Study and Syllabus from I Semester to IV Semester M Tech structural Engineering courses to be introduced for the Academic year 2017 - 18.
- The BOS Chairman presented the proposed Curriculum design, the Scheme and Syllabus of BE Civil Engineering courses and also M Tech (Structural Engineering) to be introduced for the academic year 2017-18 through power point. The hard copies of the proposed Scheme and Syllabus from I Semester to VIII semester BE Civil Engineering courses also distributed to all the members of BOS for a detailed review and sought their opinion with regard to any addition / correction / deletion / modification in the proposed syllabus and accordingly all the members of BOS after a thorough review and discussion made the following suggestions / corrections / modification as detailed below:
 1. Dr. Chandrakishen, Professor of Civil Engineering, IISc suggested to introduce numerical problems in D'Alembert's Principle in the subject ECE and Engineering. Mechanics of I Sem. BE for all branches of Engineering (common subject for I year). The Board has accepted to include the suggestions.
 2. Prof. S. Bhavanishankar suggested to incorporate Cement Concrete blocks, Stabilized mud blocks, Sizes requirement of good blocks, Mortar- types and requirements content in the I unit of Building materials and Construction. Timber chapter is included in unit 3 which consists of doors and windows. The Board has accepted the suggestion.
 3. Dr. Ravikumar suggested to include the measurement of fluid flow through Venturi flume in the Fluid mechanics theory and the Board has accepted the suggestion.
 4. In the Surveying Practice-II syllabus, the contents such as difference in elevation between two points and gradient, Distance between two inaccessible points using Total Station is introduced as per the suggestion made by Chinnasomaiah, Industrial expert and the Board also accepted the same.
 5. Mr. M. R. Suresh expressed to include X-ray diffraction technique of identification of clay minerals, confined and un confined aquifer in unit 3 of Geotechnical engineering -I of V Sem BE, The Board has accepted after discussion.
 6. Dr. Ravikumar and Dr. Chandrakishen have suggested to introduce study of performance of Multi-stage centrifugal pump and Performance characteristics of

Francis Turbine in Fluid mechanics Lab since the equipments are available and the Board has accepted.

7. Description of Mano rail to introduce in transportation engineering –I has been accepted by the board as per the suggestion made by Mr. R. S Rajagopal Scientist E, NAL.
8. Dr. Chandrakishen, Professor IISc advised to include two reference books for Strength of Materials and Structural Analysis by Hibbeler.
9. Pile foundation unit is modified as per the advice of Internal and External BOS members in Geotechnical engineering II subject and the board has accepted the modifications.
10. The relative density for sand and determination of free swell and differential swell for soils, and assessing SBC of soil has been introduced in the subject Geotechnical engineering lab as per the discussion held in the meeting and the board has accepted.
11. The BOS members have suggested to have four CO's in the subject CV62 Transportation Engineering-II and the same is considered.
12. The syllabus content of the mini project has been discussed and accepted by the board.
13. DESIGN AND COMPUTER AIDED DRAWING OF STEEL STRUCTURES for VIII Sem. BE (Civil) has been introduced in place of Design and drawing of steel Structures. Here Part-A, Drawing shall be done using CAD and Practical examination is to be conducted separately for 40 marks. Part-B Design and drawing as per IS:800-2007 and Theory examination shall be conducted separately for 60 marks in 3 hours, the Board has accepted the modification.
14. The syllabus content of main project and seminar has been discussed in detail for VIII Sem. BE and accepted by the board.
15. The subject Advanced concrete Technology is shifted from VIII sem. BE to VII Sem. BE of 2014-15 batch to reduce the number of credits in VIII sem. BE as per the suggestions by the BOS members.
16. Dr. Renukadevi suggested one reference book "Engineering Mechanics by Ferdinand Singer for I semester BE Civil and it is incorporated.
17. Dr. Chandrakishen, suggested to have Advanced Design of Steel Structures as core subject than Design of Plates and shells in M Tech Second semester. The board has accepted the suggestion.

18. The board members discussed the syllabus content of mini project work and also main Project for M Tech (CSE) and accepted the same.
19. Dr. Chandrakishen and Sri. Chinnasomaiah have suggested to include Derivation of fourth order differential equation, relationship between moment and curvature and deflection and Raleigh-Ritz .method in design of Plates and Shells of II Semester M Tech and the board has accepted after thorough discussion.
20. Dr. Renukadevi Opined that Project Management and maintenance subject is essential for M Tech students and is to be incorporated in the syllabus. The BOS members agreed for the suggestion and it will be incorporated in the next academic year.
21. The BOS members suggested to procure latest Licensed version soft ware's such as Auto CAD, STAAD Pro, E-Tabs, Ansys etc for academic purpose. The BOS members expressed their happiness for having Research Methodology and Thesis writing in II Sem. M Tech (CSE).

With the long discussion, all the members are agreed to make changes and modification in the syllabus for the academic year 2017-18. With this, meeting was concluded with vote of thanks to the chair.



(Dr. B. Shivakumara swamy)
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**ADr. Ambedkar Institute of Technology
Department of Civil Engineering**

Minutes of the 8th BOS meeting held on 25.06.2018

The meeting commenced at 9.30AM on 25-06-2018 in the M Tech class room of the Silver jubilee building, Dr. AIT under the chairmanship of Dr. B. Shivakumaraswamy, HOD Civil Engineering Department. The Chairman welcomed all the members of BOS to the meeting and presented the scheme and syllabus of BE (Civil) and M Tech (CSE) for the approval. The following dignitaries of BOS attended the meeting

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11. Dr. S.G. Ramachandraiah, Associate Professor, CED, Dr. AIT. Bangalore
12. Mr. H.R. Srinivas, Associate. Prof. CED, Dr. AIT. Bangalore
13. Mr. M. R. Suresh, Associate Professor, CED, Dr. AIT. Bangalore
14. Mr. T. Chandrashekariah, Associate Professor, CED, Dr. AIT. Bangalore
15. Dr. K.V. Manjunatha, Associate Professor, CED, Dr. AIT. Bangalore

Agenda

- Review and approval of the proposed Scheme of Study and Syllabus from I Semester to VIII Semester BE Civil Engineering courses to be introduced for the Academic year 2018 – 19.
- Review and approval of the proposed Scheme of Study and Syllabus from I Semester to IV Semester M Tech Structural Engineering courses to be introduced for the Academic year 2018 - 19.
- The BOS Chairman presented the proposed Curriculum design, the Scheme and Syllabus of BE Civil Engineering courses and also M Tech (Structural Engineering) to be introduced for the academic year 2018-19 through power point. The hard copies of the proposed Scheme and Syllabus from I Semester to VIII semester BE Civil Engineering courses and M Tech also distributed to all the members of BOS for a detailed review as per AICTE / VTU guide lines and sought their opinion with regard to any addition / correction / deletion / modification in the proposed syllabus and accordingly all the members of BOS after a thorough review and discussion made the following suggestions / corrections / modification as detailed below:

1. The chairman draw the attention of BOS members regarding the limitations of credits and number of subjects as per the AICTE/VTU guide lines and emphasized on change of credits for few subjects in the benefit of students to introduce new syllabus.
2. As per the discussion in the college council meeting to reduce number of credits from 150 to 135 for Civil engineering courses (III Sem. to VIII Sem. BE) and 100 to 88 for M Tech (CSE) from the academic year 2018 – 19 onwards, the chairman presented and sought their approval.
3. The title of the some of the courses from existing scheme was re-named/changed and they are presented in the scheme of study.
4. Some of the existing courses are merged and made it as a single course / subject as presented in the scheme of study.
5. The scheme and syllabus for first/second semester common to students of all branches, 18CV14 / 24 Civil engineering and mechanics for three credits was discussed and got approval.
6. Dr. Renukadevi suggested to include applications in third unit of 18CV14/24 and it was approved also suggested one reference book “Engineering Mechanics by Ferdinand Singer it is incorporated..
7. In the present curriculum (2018-19) HS01 Environmental studies is introduced in third and fourth semester of BE for all branches.
8. Prof. S. Bhavanishankar suggested incorporating construction chemicals and new materials of construction in the subject 18CV31. Though it is relevant considering the advancement in the technology, but some of the members after going through the syllabus content opined that it is voluminous hence it is not included. He also suggested to include self compacting concrete (SCC) in the subject 18CV41 and the board has accepted.
9. Dr. K V Manjunath suggested shifting unit 1 of 18CV41 to 18CV31 and the board has not accepted.
10. Chinnasomaiah, Industrial expert suggested to change the teaching methodology from conventional to computer aided (Auto CAD) for the course Building planning and drawing and the board has accepted and the subject is renamed as computer Aided Building planning and drawing for the same credit for the students admitted to 2018-19.
11. Concrete and Highway materials lab is allotted to IV Sem. BE civil curriculum as per the suggestion of BOS members.

12. The extensive survey was converted as Advanced survey practice as a non credited course in the VI Sem. BE.
13. The course Hydraulic structures and Irrigation drawing is made it as departmental elective due to shortage of credits. However, Dr. Ravikumar suggested to include Reservoir planning in the core course Hydrology and Irrigation and the board has accepted.
14. The Electives in the various groups are discussed and one of the BOS member Sri Rajagopal R S suggested to keep Advanced Pre-stressed concrete Structure in group 5 and the board has accepted.
15. Prof. S. Bhavanishankar suggested incorporating, the assessment of residual strength of distressed structural elements in the main project of BE and M Tech and the board has accepted.
16. The board members suggested to give seminar / mini project topics from the important units of electives and the board has accepted.
17. Description of Mano rail in the course Railway, Airport and Harbour engineering has been accepted by the board as per the suggestion made by Mr. R. S Rajagopal Scientist E, NAL.
18. The BOS members are suggested to procure equipments for the structural engineering lab,(M Tech) to measure natural period, frequency and mode shapes and the board has accepted. The BOS members expressed their happiness for having Research Methodology and Thesis writing in II Sem. M Tech (CSE).
19. The BOS members expressed their views to modify the syllabus content of newly introduced subject Design of composite Structural Elements as an elective in IV Sem. M Tech. and Dr. Renukadevi suggested to keep Advanced Structural Analysis instead of the above subject.
20. The BOS members suggested to send M Tech students to CPRI Bengaluru or SERC Chennai to do their M Tech projects on transmission towers and advanced research and the board has accepted. Also The BOS members suggested to procure latest Licensed version soft ware's such as STAAD Pro, NASTRON (Analysis software) etc for academic purpose.

With the long discussion, all the members are agreed to make changes and modification in the syllabus for the academic year 2018-19. With this, meeting was concluded with vote of thanks to the chair.



(Dr. B. Shivakumara swamy)
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Dr. Ambedkar Institute of Technology
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Minutes of the 8th BOS meeting held on 25.05.2019

The meeting commenced at 9.30AM on 25-05-2019 in the Seminar hall of the Silver jubilee building, Dr. AIT under the chairmanship of Dr. B. Shivakumaraswamy, HOD Civil Engineering Department. The Chairman welcomed all the members of BOS to the meeting and presented the scheme and syllabus of BE (Civil) and M Tech (CSE) for the approval. The following dignitaries of BOS attended the meeting

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2. Dr. Chandrakishan, Professor, IISc, Bengaluru
3. Dr. Krishnaiah, VTU Nominee, Professor of Civil Engg. CED, MCE, Hassan
4. Dr. Renukadevi, Professor of Civil Engg. CED, RVCE, Bengaluru
5. Dr. Ramaraj, Professor and head of Civil Engineering, CED, DSCE, Bengaluru
6. Dr. M N Hegde, Professor, CED, Dr. AIT. Bengaluru
7. Dr. S. Vijaya, Professor, CED, Dr. AIT. Bengaluru
8. Dr. S.D. Venkataraj mohan, Professor, CED, Dr. AIT. Bengaluru
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11. Mr. T. Chandrashekariah, Associate Professor, CED, Dr. AIT. Bengaluru
12. Dr. K.V. Manjunatha, Associate Professor, CED, Dr. AIT. Bengaluru
13. Dr. Chandrashekar, Associate Professor, CED, Dr. AIT. Bengaluru
14. Dr. Raghunathan, Scientist E, SERC, Tower Testing research Centre
15. Sri. Chinnasomaiah, Chief Engineer (Civil), KPC, Bengaluru
16. Mrs. Nagashree MTech, (PhD), Asst. Prof. MSRIT, Bengaluru

Agenda

- Review and approval of the proposed Scheme of Study and Syllabus from I Semester to VIII Semester BE Civil Engineering courses to be introduced for the Academic year 2019-20
- Review and approval of the proposed Scheme of Study and Syllabus from I Semester to IV Semester M Tech Structural Engineering courses to be introduced for the Academic year 2019-20.
- Review of curriculum as per the guide lines of AICTE/VTU.
- The BOS Chairman presented the proposed Curriculum design, the Scheme and Syllabus of BE Civil Engineering courses and also M Tech (Structural Engineering) to be introduced for the academic year 2019-20 through power point. The hard copies of the proposed Scheme and Syllabus from I Semester to VIII semester BE Civil Engineering courses and M Tech also distributed to all the members of BOS for a detailed review as per AICTE / VTU guide lines and sought their opinion with regard to any addition / correction / deletion / modification in the proposed syllabus and

accordingly all the members of BOS after a thorough review and discussion made the following suggestions / corrections / modification as detailed below:

1. The chairman draw the attention of BOS members regarding the reduction of credits and number of subjects as per the AICTE/VTU guide lines and emphasized on change of credits for few subjects in the benefit of students to introduce new syllabus.
2. The Curriculum design for BE Civil engineering courses (III Sem. to VIII Sem. BE) from 150 to 135 credits and M Tech (CSE) from 100 to 88 from the academic year 2019–20 onwards was presented by the chairman and sought their approval.
3. The syllabus content of few courses are merged and made it as a single course / subject as presented in the scheme of study.
4. The subject title of some of the courses from existing scheme was re-named and they are presented in the scheme of study.
5. The scheme and syllabus for first/second semester common to students of all branches, 18CV14/24 Civil engineering and mechanics for three credits was discussed and got approval.
6. Dr. Chandrakishen, Profesor IISc, Bengaluru has suggested to incorporate video clips during lecture hour in the class related to force system, cetroid, MI and friction in engineering mechanics course.
7. Chinnasomaiah, Industrial expert suggested to incorporate leadership in energy efficient design of components in Building material and construction course.
8. Mrs. Nagashree Alumni of Dr. AIT suggested including contents on re-use of building materials in CV31 course.
9. Dr. Chandrakishen, Profesor IISc, suggested reducing the syllabus in CV32 (SOM) by removing Merchant-Rankine's formula and Mohr's circle of strain.
10. Dr. Ramaraju & Dr. Chandrakishen, Profesor IISc suggested to remove chain / tape surveying, Compass surveying in Survey theory and to include the same in Surveying practice has self study component/demonstration. Also they have suggested to have one unit specially on Total Station.
11. The Internal and External members are agreed to combine Geology theory and Lab in order to reduce the number of credits as per the guide lines.
12. Dr. Chandrasekar sought to removal of EIA in HS01 subject and the members accepted the same.
13. Dr. Ramaraju suggested to include topic on method of determining the ground water quantity in the course water supply engineering

14. Dr. Renukadevi and Dr. K V Manjunath suggested to modify the contents of Unit 4 &5 of the subject Hydrology and Irrigation and the Board has accepted the same.
15. Dr. Chandrakishen and Dr. Raghunathan suggested including the knowledge curve in determining the strength parameters in Concrete technology.
16. Chinnasomaiah, Dr. Ramaraju suggested to introduce the Advanced Sequential Batch Reactor (ASBR) technology in Wastewater Treatment and Disposal subject.
17. Dr. Chandrakishen, Dr. Raghunathan, Nagashree and Dr. Renukadevi suggested to include plastic analysis instead of Kani's method in the subject Structural Analysis.
18. Dr. Chandrakishen & Chinnasomaiah, has suggested to include Metro rail system in one of the unit in the subject Transportation Engg II.
19. Dr. Ramaraju has suggested to include Radioactive solid waste in SWM & A case study on land fill liners in ISWM subject.
20. Dr. S D Venkataraj mohan & Dr. Raghunathan, suggested to include guide lines of Real Estate Regulation Act (RERA) in Estimating and costing subject
21. Dr. Ramaraju has suggested including experiments using high volume sampler in environmental Engineering Lab.
22. Chinnasomaiah, Dr. Ramaraju & Dr. S D Venkataraj mohan have suggested to include zero level discharge industrial wastewater in Unit IV of IWWT.
23. Dr. Ramaraju & Dr. S D Venkataraj mohan suggested to include ecology contents in CVE03 subject.
24. Dr. Raghunathan, suggested to include skill based design and fabrication in the design of Steel Structure.
25. Dr. Krishnaiah suggested to register Mooc / swayam online courses for final year students and staffs of the department.
26. Dr. Raghunathan has suggested to change the title of the course Structural engg Lab II as Computational Mechanics Lab and the Board has accepted.
27. One of the BOS members suggested to keep only Stiffness matrix method in Computational Structural Mechanics and the board has not accepted.
28. Dr. Chandrakishen, Dr. Raghunathan, has suggested to include design of Strut and Tie members in Advanced design of Steel Structure.
29. Dr. Renukadevi has suggested to change the title of unit V as continuous system in 18CSE13 Mechanics of deformable bodies.
30. Dr. Raghunathan and Chinnasomaiah, has suggested to include Geopolymer concrete in unit I of Special concrete.

31. Nagashree has suggested to incorporate micro structure of concrete using SEM and the board has accepted.
32. Dr. Chandrakishen, Dr. Raghunathan and Nagashree have suggested Design of Precast and composite Structure as one of the elective in any one of the Semester.
33. Dr. Raghunathan has suggested to include prefabrication of Buildings in the elective.
34. Dr. Raghunathan and Chinnasomaiah, has suggested to include Reliability and Risk Analysis in the course Reliability analysis of Structures.
35. Dr. Chandrakishen, has suggested to include concept of Pre-engineered structural components in the subject Advanced design of structures.
36. Dr. Chandrakishen, has suggested inclusion of non-linear analysis of structures in the course Finite element Analysis.
37. Dr. Raghunathan has suggested inclusion of topic Transmission Towers in Design of Tall Structures.
38. Dr. M N Hegde suggested to include MAT Lab, Eigen Value in the Structural Engg Lab -II.
39. Dr. Chandrakishen, has suggested inclusion transver girders in III unit of Design of Tall Structures.
40. Dr. Raghunathan and Nagashree have suggested to introduce Chapters on Patents and Intellectual Property rights in Research methodology course.

With the long discussion, all the members are agreed to make changes and modification in the syllabus for the academic year 2019-20. With this, meeting was concluded with vote of thanks to the chair.



(Dr. B. Shivakumara swamy)
Chairman, BOS,
Prof.& Head, Dept. of Civil Engineering
Dr. AIT, Bangalore- 56.

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DEPARTMENT OF CIVIL ENGINEERING

No. CV/200/BOS/2020-21

Dated: August 14, 2020

FINAL BOARD of STUDIES (BOS) MEETING NOTIFICATION for UG and PG PROGRAMME

Subject: - Revision in the Existing Syllabus of I, II (common subject for both semester) and IV Semester and Syllabus Proposal for the V and VI Semester and also proposal for PG I & II semester (Structural Engineering) Reg.,

The internal Board of Studies (BOS) meetings held on Jul 09, 2020 considered the recommendations of the Department Academic Program Committee (DAPC) for the changes in the existing syllabus of I, II, III and IV Semester and proposal for the V and VI semester syllabus of the upcoming Odd Semester 2020-21.

The internal BOS committee decided as under for **UG Program:**

Sl. No.	Semester	Unit	Existing Portion of the Syllabus	Modified Portion of the Syllabus	Remarks
1	I & II (18CV14 / 24)	I	Force systems in 3-D analysis	Excluded in the upcoming syllabus	It is a common subject for all branches and it is find to be difficult to complete the syllabus in stipulated time.
2		III	Screw Jacks and different Screw Jacks analysis in Friction	Excluded in the upcoming syllabus	
3		IV	Mass Moment of Inertia of Circular, Plates, Cylinders, Cone, Sphere and Hook	Excluded in the upcoming syllabus	
4		V	Curvilinear Motion, Super Elevation, D'Alembert's Principle and its application in plane motion and connected bodies	Excluded in the upcoming syllabus	
5	IV (18CVL46)	II	Introduced drawing, editing, modifying and other advanced AutoCAD tools.	Which was not include in the earlier Syllabus	Which is essential to use AutoCAD applications in Civil Engineering works.

the modifications mentioned in the above table is for your kind review and approval.

The Proposed syllabus for V & VI Semester UG for the academic year 2020-21 is attached with this for your kind reference, review and approval.

The proposed syllabus for I & II semester PG Programme for the academic year 2020-21 is attached with this for your kind reference, review and approval.

Ms. Suma B. P bearing USN **1DA16CV123** has taken change of college from Govt., Engineering College, Kushalanagara to Dr. AIT in the year 2017-18. She falls 2 credits shortage to complete required 200 credits. Internal BOS committee proposed a project based course (CVPM78 – Minor project) for 2 credits to fulfill this and she completed the course in the academic year 2019-20.

Ms. Veena T A bearing USN **1DA15CV129** has taken change of college from Govt., Engineering College, Raichur to Dr. AIT in the year 2017-18. She falls 0.5 credits shortage to complete required 200 credits. Internal BOS committee proposed a seminar course (subject code yet to finalize) for 0.5 credits to fulfill this.

In this regard the BOS approval is required for the above students. Hence I request you all to go through the matter and give the approval.

Thanking you

Yours sincerely

 14/8/2020

Professor and Head
Department of civil Engineering
(Arnbedkar Institute of Technology)
Bangalore - 560 056.

**Dr. Ambedkar Institute of Technology
Department of Civil Engineering**

17/08/2020

Minutes of the Board of Studies (BOS) Meeting.

The online Board of Studies (BOS) meeting was held on 17-08-2020 at 11.00AM through Google Meet platform under the chairmanship of Dr. S Vijaya, Professor and Head of the Department, Department of Civil Engineering, Dr.Ambedkar Institute of Technology, Bengaluru - 56. The Chairman welcomed all committee members to the meeting. As per the meeting agenda the Chairman presented the scheme and syllabus of both UG & PG for the academic year 2020-21 for the approval and approval for the students (taken change from other VTU colleges) facing shortage of credits to fulfill the requirement to award the degree as per Autonomous norms.

The following members were present during the online meeting.

1. Dr. S. Vijaya, Professor & Head, Dr. AIT, Bengaluru
2. Dr. J. M Chandrakishan, Professor, IISc, Bengaluru
3. Dr. Renukadevi, Professor and Dean, RVCE, Bengaluru
4. Dr. Ramaraj, Professor & Head, DSCE, Bengaluru
5. Dr. H C Muddaraju, Asst professor, UVCE, Bengaluru
6. Dr. Raghunathan M. D, Scientist-E, SERC, Tower Testing Research Centre, Chennai
7. Sri. Chinnasomaiah, Chief Engineer (Civil), KPC, Bengaluru
8. Mrs. Nagashree, M.Tech, (Ph.D), Asst Professor, MSRIT, Bengaluru
9. Er. Amit Singh, Invitee Member, Professor & Head, IET, Ayodhya.
10. Dr. S. G. Ramachandraiah, Professor, CED, Dr. AIT, Bengaluru
11. Dr. S. D. Venkataraj Mohan, Professor, CED, Dr. AIT, Bengaluru
12. Dr. Chandrasekar, Associate Professor, CED, Dr. AIT, Bengaluru
13. Mr. S. B. Ankesh, Asst., Professor, CED, Dr. AIT, Bengaluru
14. Mr. Shreyas K, Asst., Professor, CED, Dr .AIT, Bengaluru
15. Mr. M. Naveen Kumar, Asst., Professor, CED, Dr. AIT, Bengaluru
16. Mr. M. K. Darshan, Asst., Professor, CED, Dr. AIT, Bengaluru
17. Mrs. Kavya H. K, Asst., Professor, CED, Dr. AIT, Bengaluru

The following 2 Members have sent the mail with their feedback and suggestions.

1. Dr. Krishnaiah A. J, VTU Nominee, Professor & Head, MCE, Hassan
2. Dr. L. R. Manjunatha, Chairman, ICI, Bengaluru Centre.



The meeting started with condolence for the misfortune demise of our beloved Professor Dr. B. Shivakumaraswamy, Professor & Dean, Department of Civil Engineering, Dr. AIT.

The chairman presented Power Point Presentation (PPT) with following contents:

1. Scheme and syllabus of UG
2. Scheme and syllabus of PG and
3. Compensating Credit for students taken transfer from other colleges.

1. Scheme and syllabus of UG

The meeting started by revised contents in I and II year UG syllabus for the approval and with a detailed discussion the board given approval for the same.

Further, there was a detailed discussion regarding the proposed scheme and syllabus for III year UG (IV and V semester) for the academic year 2020-21, which has been mailed in advance to all members and a detailed review took place in the meeting as follows:

- Sri. Chinnasomaiah, Chief Engineer (Civil), KPC, Bengaluru suggested to conduct the Extensive Survey project (CVP68) **for a minimum period of two weeks** and it was supported by Dr. J M Chandrakishen, Professor, IISc, Bangalore further Chairman conveyed to the committee that with in the college policy limitations it may be considered.
- Dr. J M Chandrakishen, Professor, IISc, Bengaluru discussed about the way of learning of the blended learning portions. Chairman elaborated the way of learning of the said portion to the committee and the members accepted it for implementation.
- Dr. Ramaraju, Professor & Head, DSCE, Bengaluru advised to make paper publication should be compulsory for VIII semester BE students. The Chairman conveyed that it is already in the system and it may be made it compulsory for the coming batches.

2. Scheme and syllabus of PG

- Dr. Renukadevi, Professor and Dean, RVCE, Bengaluru and Dr. J M Chandrakishan, Professor, IISc questioned the necessity of Project Phase I, in II semester and the Chairman clarified by giving practical necessity in the system for the PG project evaluation.
- Mrs. Nagashree, M.Tech, (Ph.D), Asst Professor, MSRIT, Bengaluru has suggested to make Design of Plates and Shells as a core subject. The Chairman considered the suggestion for implementation in the future.

3. Compensating Credit for the students taken transfer from other colleges

- Sri. Chinnasomaiah, Chief Engineer (Civil), KPC, Bengaluru suggested to manage the credits by NTPL or SWAYAM courses and Dr. J M Chandrakishan, Professor, IISc discussed about the limitations and impact of credits allotment in NTPL or SWAYAM courses. The Chairman conveyed to the committee about the limitations in the Autonomous examination system and the committee accepted for the same.

By the end of the meeting the committee approved the I and II year UG syllabus (with minor modification done) and proposed III year syllabus for the implementation in the academic year 2020-21 and also for the method applied for compensating the credits for the students taken transfer from other college.

The Chairman concluded the meeting by extending the vote of thanks to all committee members with due respect.


(Dr. S. Vijaya)

Chairman, BOS,

Prof. and Head, Dept. of Civil Engineering

Dr.AIT, Bangalore-560056

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Department of Civil Engineering,

Minutes of Board of Studies meeting (online) held on Friday, 26.11.2021 at 11.00 am to discuss the scheme and syllabus of 1st year UG courses as per NEP 2020 for the academic year 2021-22.

Members Present

Category	Name of Person
Chairman	Dr. S Vijaya, Professor and HOD, CED, Dr. AIT, Bengaluru.
External Subject Experts	1. Dr. J M Chandrakishen, Professor, IISc, Bengaluru. 2. Dr. M C Nataraj, Professor and Head, CED, MSRIT, Bengaluru. 3. Dr. Anjaneyappa, Professor, CED, RVCE, Bengaluru. 4. Dr. Maheshprabhu, Professor, CED, GEC, Ramanagar.
VTU Nominee	Dr. Balakrishna, VTU Nominee, Professor & Head, CED, BIT, Bengaluru.
Industry Representative	1. Sri. Nagesh Puttaswamy, Zonal Head, WT & RMDT, Ultra Tech Cement Ltd. Bengaluru. 2. Dr. M S Sudarshan, Director, Strendant Testing & Proof Checking, Bengaluru. 3. Sri. H R Girish, CEO & MD, Girish Ventures, Strategic Consultants in Construction & Infrastructure Sector – India and Middle East, Bengaluru.
Alumni with P G Degree	Mr. Bhyravraj B, M.Tech, SSS Consultant, Nagarabhavi, Bengaluru.
Internal Faculty Members with various specialization (UG + PG).	Dr. C Nanjundaswamy, Professor, CED, Dr.AIT, Bengaluru Dr. S D Venkataraja Mohan, Professor, CED, Dr.AIT, Bengaluru Dr. S S Honnanagouder, Profesor, CED, Dr.AIT, Bengaluru Dr. Chandrasekar, Associate Professor, CED, Dr.AIT, Bengaluru. Dr. M N Hegde, Adjunct Faculty, CED, Dr.AIT, Bengaluru (PG) Mr. S B Ankesh, Asst Professor, CED, Dr.AIT, Bengaluru Mr. M K Darshan, Asst. Professor, CED, Dr.AIT, Bengaluru Mrs. Purnima K Biranagi, Asst Professor, CED, Dr.AIT, Bengaluru Mrs. Supritha R M, Asst. Professor, CED, Dr.AIT, Bengaluru Mr. Shreyas K, Asst Professor, CED, Dr.AIT, Bengaluru Mr. M Naveen Kumar, Asst Professor, CED, Dr.AIT, Bengaluru
Department Academic Program committee	Dr. S Vijaya, Professor and Head Dr. C Najundaswamy, Professor Dr. S D Venkataraja Mohan, Professor Dr. Chandrasekar, Associate Professor Dr. S Honnanagoudar, Professor

<p>Mr. S B Ankesh, Assistant Professor Mr. M K Darshan, Assistant Professor Mrs. Purnima K Biranagi, Assistant Professor Mrs. Sowmya M, Assistant Professor Mrs. Supriya R M, Assistant Professor Ms. Sphoorthy S M, Assistant Professor Ms. Mary Bhagya Jyothi J, Assistant Professor Mr. Shreyas K, Assistant Professor Mr. Naveen Kumar M, Assistant Professor Mr. Sharath B, Assistant Professor Mr. Ashwin C A, Assistant Professor Dr. Rakesh C, Assistant Professor Ms. Sneha S D, Assistant Professor Mrs. Rajeshwari B, Assistant Professor Mrs. Madhu K S, Assistant Professor Mr. Tilak T N, Assistant Professor Mrs. Tejaswini B R, Assistant Professor Prof. B S Suresh Chandra, Adjunct Faculty Dr. R Madhusudhan, Adjunct Faculty Dr. H R Srinivas, Adjunct Faculty Dr. K V Manjunath, Adjunct Faculty Dr. M N Hegde, Adjunct Faculty Prof. G P Manjunath, Adjunct Faculty</p>

The online meeting was held on 26-11-2021 at 11.00AM through Google Meet platform under the chairmanship of Dr. S Vijaya, Professor and HOD, Department of Civil Engineering, Dr.AIT, Bengaluru - 56.


The Chairman welcomed all the members of BoS and faculty of the department to the meeting and presented the scheme and syllabus of 1st year UG courses as per NEP 2020 for the academic year 2021-22 for approval.

The meeting proceeded with PPT presentation and members have offered suggestions as under.

- **Dr. M C Nataraj**, suggested that assignment has to be given more importance in evaluation procedure and it should be out of text books. And this suggestion has been endorsed by **Dr. Chandrakishen**. Other members suggested to reduce the content of dynamics and asked to justify the title of the Civil Engineering and mechanics subject.
- **Dr. M C Nataraj**, also suggested to check how many CO's can be given. If number of CO's is equal for all the subjects then it would be easy to map. And verify the words of CO's.
- **Dr. M C Nataraj**, suggested to justify the role of the teacher in Unit 5 (Blended learning). He mentioned that tutorials and lecture hours should be clearly mentioned and to relook into it.
- **Dr. Chandrakishen** suggested that, in Unit 4 teaching hours is only of 10hrs but this unit has to be given more importance, hence it is better to reduce the number of teaching hours in Unit 1 and 2 and can increase the number of teaching hours for unit 4.

- **Dr. Anjaneyappa**, suggested to replace the word 'determine' in CO's and asked to modify CO2.
- **Dr. Sudarshan**, suggested that more importance should be given to Elements of Civil Engineering part than mechanics part.
- **Dr. Nataraj**, mentioned that first unit is of basic civil engineering but remaining is all about mechanics. So it has to be verified.
- **Mr. Girish H R**, suggested to give more importance on practical applications of Rural Development course (1st year Ability Enhancement Course). He also suggested that there should be 50 marks guaranteed questions in Rural Development, so that students will learn inevitably. Also suggested to include hygienic and sustainability part.
- **Dr Anjeneyappa**, suggested if possible adding solar panels in energy contents. Remove the word 'technique' and 'modern', in unit 4. Content has to be reduced as the course is for 1 credit. Site visit can be carried out instead of videos and ppts.
- **Dr. Balakrishna**, also suggested to look into the content of Rural Development course, as it seems to be more for one credit.

The HOD has informed the members that, their suggestions will be considered wherever possible and thanked all the external and internal BoS members for their kind suggestions and discussion and the meeting was concluded.



(Dr. S. Vijaya)

Chairman, BOS,

Prof. and Head, Dept. of Civil Engineering


Dr.AIT, Bangalore-560056

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Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION
B.E (Civil Engineering)
Batch 2017 - 2018
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)


Sl No	Course and Course code	Course Title	Teaching Dependent	Teaching Hours/Week			Examination				Credits
				Theory Lecture	Tutorial	Practical/Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	MA11	Engineering Mathematics - I	Hu	4	--	--	03	50	50	100	4
2	PH12	Engineering Physics	BS	4	--	--	03	50	50	100	4
3	CV13	Elements of Civil Engineering & Engineering Mechanics	CV	4	--	--	03	50	50	100	4
4	MEL14	Computer Aided Engineering Drawing	CV	--	--	3	03	50	50	100	4
5	EE15	Basic Electrical Engineering	CV	4	--	--	03	50	50	100	4
6	MEL16	Workshop Practice Lab	CV	--	--	3	03	50	50	100	1.5
7	PHL17	Engineering Physics Lab	CV	--	--	3	03	50	50	100	1.5
8	HS02	Constitution of India & Professional Ethics	CV	2	--	--	03	50	50	100	2
9	KA19	Kannada	CV	2	--	--	03	50	50	100	PP/NP
TOTAL											25


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UG-2017-18

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
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Batch 2017 - 2018
B.E. (Civil Engineering)
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

II SEMESTER		Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing P	Duration in hours	CIE Marks	SEE Marks		Total Marks
1	MA21	Engineering Mathematics - II	Hu	4	--	--	03	50	50	100	4	
2	CH22	Engineering Chemistry	BS	4	--	--	03	50	50	100	4	
3	CS23	Computer Concepts & C Programming	CV	4	--	--	03	50	50	100	4	
4	ME24	Elements of Mechanical Engineering	CV	4	--	--	03	50	50	100	4	
5	EC25	Basic Electronics	CV	4	--	--	03	50	50	100	4	
6	CSL26	Computer Concepts & C Programming Lab	CV	3	--	03	03	50	50	100	1.5	
7	CHL27	Engineering Chemistry Lab	CV	3	--	03	03	50	50	100	1.5	
8	HS01	Environmental Studies	CV	2	--	--	03	50	50	100	2	
9	EN29	English	CV	2	--	--	03	50	50	100	PP/NP	
TOTAL											25	



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B.E (Civil Engineering)
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III SEMESTER

Sl No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Duration in hours	Examination			Credits
				Theory Lecture	Tutorial	Practical/ Drawing		CIE Marks	SEE Marks	Total Marks	
1	MA31	Engineering Mathematics - III	BS	4	--	--	3	50	50	100	4
2	CV31	Building Materials & Construction	CV	3	--	--	3	50	50	100	3
3	CV32	Strength of Materials	CV	4	--	--	3	50	50	100	4
4	CV33	Surveying - I	CV	3	--	--	3	50	50	100	3
5	CV34	Fluid Mechanics	CV	4	--	--	3	50	50	100	4
6	CV35	Applied Engineering Geology	CV	--	--	3	3	50	50	100	1.5
7	CVL36	Civil Engineering Material Testing Lab	CV	--	--	3	3	50	50	100	1.5
8	CVL37	Surveying Practice - I	CV	--	--	3	3	50	50	100	1.5
9	EN39	Soft Skills	CV	2	--	--	3	50	--	50	PP/NP
TOTAL											24



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SCHEME OF TEACHING AND EXAMINATION

B.E (Civil Engineering)
Batch 2017 - 2018


Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Sl No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
				Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
1	MA41	Engineering Mathematics - IV	BS	4	--	--	3	50	50	100	4
2	CV41	Concrete Technology	CV	3	--	--	3	50	50	100	3
3	CV42	Structural Analysis - I	CV	4	--	--	3	50	50	100	4
4	CV43	Surveying - II	CV	3	--	--	3	50	50	100	3
5	CV44	Hydraulics & Hydraulic Machines	CV	4	--	--	3	50	50	100	4
6	CV45	Water Supply Engineering	CV	3	--	3	3	50	50	100	3
7	CV46	Building Planning & Drawing	CV	1	--	3	3	50	50	100	2
8	CVL47	Surveying Practice - II	CV	--	--	3	3	50	50	100	1.5
9	CVL48	Applied Engineering Geology		--	--	3	3	50	50	100	1.5
10	EN49	Employability Skills	CV	2	--	--	3	50	--	50	PP/NP
TOTAL											26


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V SEMESTER		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
Sl. No	Course and Course code			Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
1	CV51	Wastewater Treatment & Disposal	4	--	--	3	50	50	100	4	
2	CV52	Design of RCC Structural Elements	4	--	--	3	50	50	100	4	
3	CV53	Structural Analysis - II	4	--	--	3	50	50	100	4	
4	CV54	Geotechnical Engineering - I	3	--	--	3	50	50	100	3	
5	CV55	Hydrology & Irrigation Engineering	3	--	--	3	50	50	100	3	
6	CV56	Transportation Engineering - I	3	--	3	3	50	50	100	3	
7	CVL57	Hydraulics & Hydraulic Machinery Lab	--	--	3	3	50	50	100	1.5	
8	CVL58	Computer Aided Design Lab	--	--	3	3	50	50	100	1.5	
10	19HSS1	Aptitude & Verbal Ability Skills	2	--	--	3	50	--	50	PP/NP	
TOTAL										23	


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SCHEME OF TEACHING AND EXAMINATION


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B.E (Civil Engineering)

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

V SEMESTER

Sl No	Course and Course code	Course Title	Teaching Dependent	Teaching Hours /Week			Examination			Credits	
				Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
1	CV51	Wastewater Treatment & Disposal	BS	4	--	--	3	50	50	100	4
2	CV52	Design of RCC Structural Elements	CV	4	--	--	3	50	50	100	4
3	CV53	Structural Analysis - II	CV	4	--	--	3	50	50	100	4
4	CV54	Geotechnical Engineering - I	CV	3	--	--	3	50	50	100	3
5	CV55	Hydrology & Irrigation Engineering	CV	3	--	--	3	50	50	100	3
6	CV56	Transportation Engineering - I	CV	3	--	3	3	50	50	100	3
7	CVL57	Hydraulics & Hydraulic Machinery Lab	CV	--	--	3	3	50	50	100	1.5
8	CVL58	Computer Aided Design Lab	CV	--	--	3	3	50	50	100	1.5
10	19HS51	Aptitude & Verbal Ability Skills	CV	2	--	--	3	50	--	50	PP/NP
TOTAL											23


Professor and Head
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Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION
Batch 2017 - 2018

B.E (Civil Engineering)

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

VI SEMESTER

Sl No	Course and Course code	Course Title	Teaching Dependent	Teaching Hours /Week			Duration in hours	Examination			Credits
				Theory Lecture	Tutorial	Practical/ Drawing		CIE Marks	SEE Marks	Total Marks	
1	HS03	Management and Entrepreneurship	BS	4	--	--	3	50	50	100	4
2	CV61	Design & Computer Aided Drawing of RCC Structures	CV	1	--	--	3	50	50	100	2
3	CV62	Transportation Engineering - II	CV	3	--	--	3	50	50	100	3
4	CV63	Geotechnical Engineering - II	CV	3	--	--	3	50	50	100	3
5	CV64	Hydraulic Structures & Irrigation Design Drawing	CV	2	--	--	3	50	50	100	3
6	CV65	Advanced Concrete Technology	CV	3	--	--	3	50	50	100	3
7	CV66X	Professional Elective - I	CV	3	--	--	3	50	50	100	3
8	CVL67	Geotechnical Engineering Laboratory	CV	--	--	3	3	50	50	100	1.5
9	CVL68	Extensive Survey Project	CV	--	--	3	3	50	50	100	1.5
10	CVP69	Mini Project Work	CV	--	--	3	3	50	50	100	2
11	19HS61	Analytical & Reasoning Skills	HS	2	--	--	3	50	--	50	PP/NP
TOTAL											26

Professional Elective - I

Subject Code	Title of the Subject	Subject Code	Title of the Subject
CV661	Theory of Elasticity	CV665	Ground Water Hydrology

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CV662	Alternate Building materials & Technologies	CV666	Solid Waste Management
CV663	Ground Improvement Techniques	CV667	Traffic Engineering
CV664	Advanced Surveying	CV668	Repair & Rehabilitation of Structures

Dr


Professor and Head
Department of civil Engineering
Y. Ambedkar Institute of Technology
Bangalore - 560 056.

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION
Batch 2017 - 2018
B.E (Civil Engineering)
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
VII SEMESTER

Sl. No.	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Duration in hours	Examination			Credits
				Theory Lecture	Tutorials	Practical/ Drawing		CIE Marks	SEE Marks	Total Marks	
1	CV71	Design of Steel Structures	BS	4	--	--	3	50	50	100	4
2	CV72	Estimation and Valuation	CV	2	2	--	3	50	50	100	3
3	CV73	Design of Prestressed Concrete Structures	CV	3	--	--	3	50	50	100	3
4	CV74X	Professional Elective - II	CV	3	--	--	3	50	50	100	3
5	CV75X	Professional Elective - III	CV	3	--	--	3	50	50	100	3
6	CVL76	Environmental Engineering Lab	CV	--	--	3	3	50	50	100	3
7	CVL77	Concrete and Highway Materials Lab	CV	--	--	3	3	50	50	100	1.5
8	CVEXX	Interdepartmental Elective - I	CV	4	--	--	3	50	50	100	1.5
9	CVP78	Project work Phase - I	CV								4
TOTAL											23


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Professional Elective - II		Professional Elective - III		Interdepartmental Elective	
Subject Code	Title of the Subject	Subject Code	Title of the Subject	Subject Code	Title of the Subject
CV741	Matrix Method of Structural Analysis	CV751	Numerical methods in Civil Engineering	CVE01	Integrated Solid Waste Management
CV742	Advanced Design of RC Structures	CV752	Rock Mechanics	CVE02	Air Pollution and Control methods
CV743	Design of Masonry Structures	CV753	Pavement Materials and Construction		
CV744	Earth and Earth Retaining Structures	CV754	Photogrammetry and Remote Sensing		
CV745	Highway Geometric Design	CV755	Air Pollution and Control		
CV746	Open Channel Hydraulics	CV756	Design and Drawing of Bridges.		
CV747	Rural Water Supply and Sanitation Engineering	CV757	Structural Dynamics		
		CV758	Construction Project Management		



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SCHEME OF TEACHING AND EXAMINATION
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B.E (Civil Engineering)
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

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Dr. Ambedkar Institute of Technology
Bengaluru - 560 056.

VIII SEMESTER

Sl No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
				Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	HS04	Intellectual Property Rights	HSS	2	--	--	3	50	50	100	2
2	CV81	Design and Computer Aided Drawing of Steel Structures	CV	--	1	3	3	50	50	100	2
3	CV82X	Professional Elective - IV	CV	3	--	--	3	50	50	100	3
4	CV83X	Professional Elective - V	CV	3	--	--	3	50	50	100	3
5	CVEXX	Interdepartmental Elective - II	CV	4	--	--	3	50	50	100	4
6	CVP84	Project work Phase - II	CV	--	--	3	3	50	50	100	12
7	CVS85	Seminar	CV	--	4	--	3	50	50	100	2
TOTAL											28

Professional Elective


Interdepartmental Elective

Professional Elective - IV

Professional Elective - V


Interdepartmental Elective - II

Subject Code	Title of the Subject	Subject Code	Title of the Subject	Subject Code	Title of the Subject
CV821	Advanced Pre-stressed Concrete Structures	CV831	Finite Element Analysis	CVE03	Ecology and Environmental Impact Assessment
CV822	Advanced Foundation Design	CV832	Reinforced Earth Structures	CVE04	Remote Sensing and Geographic Information System
CV823	Pavement Design	CV833	Urban Transport Planning		
CV824	Earthquake Resistant Design of Structures	CV834	Advanced Design of Steel Structures		
CV825	Industrial Waste Water Treatment	CV835	Water Resources Engineering		
CV826	Quality Management System in Civil Engineering	CV836	Environmental Impact Assessment		
CV827	Remote Sensing and Geographic Information System	CV837	Infrastructure Development		


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Dr. Ambedkar Institute of Technology, Bengaluru – 560 056
Scheme of Teaching and Examination from the Academic Year 2018-19
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
I SEMESTER B.E (PHYSICS GROUP)

Sl. No	Course and Course Code	Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Duration in hours	Examination			Credits
					L	T	P		CIE Marks	SEE Marks	Total Marks	
1	BC 18MA11	Calculus and Linear Algebra	Mathematics	Science	3	2	--	03	50	50	100	4
2	BC 18PH12	Engineering Physics	Physics	Science	4	--	--	03	50	50	100	4
3	ES 18EE13	Basic Electrical Engineering	E and E Engineering	E and E Engineering	2	2	--	03	50	50	100	3
4	ES 18CV14	Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	2	2	--	03	50	50	100	3
5	ES 18MEL15	Engineering Graphics and Design	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	--	2	03	50	50	100	3
6	BC 18PHL16	Engineering Physics Laboratory	Physics	Science	--	--	2	03	50	50	100	1
7	ES 18EEL17	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	--	--	2	03	50	50	100	1
8	Hu 18HS11/ 18HS12	English/ Kannada	Humanities	Humanities	1	--	2	02	50	50	100	1
TOTAL					13	06	08	21	350	350	700	20


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Ug- 2018-19

Dr. Ambedkar Institute of Technology, Bengaluru – 560 056
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Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
II SEMESTER B.E (CHEMISTRY GROUP)

Sl. No	Course and Course Code	Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Examination				Credits
					L	T	P	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	BC 18MA21	Advanced Calculus and Numerical Methods	Mathematics	Science	3	2	--	03	50	50	100	4
2	BC 18CH22	Engineering Chemistry	Chemistry	Science	4	--	--	03	50	50	100	4
3	ES 18CS23	C Programming for Problem Solving	Computer Science and Engineering	Computer Science and Engineering	2	2	--	03	50	50	100	3
4	ES 18ELN24	Basic Electronics	ECE/E and I/ TC	E and C Engineering	2	2	--	03	50	50	100	3
5	ES 18ME25	Elements of Mechanical Engineering	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	2	--	03	50	50	100	3
6	BC 18CHL26	Engineering Chemistry Laboratory	Chemistry	Science	--	--	2	03	50	50	100	1
7	ES 18CSL27	Computer Programming Laboratory	Computer Science and Engineering	Computer Science and Engineering	--	--	2	03	50	50	100	1
8	Hu 18HSS21/ 18HSS22	English /Kannada	Humanities	Humanities	1	--	2	02	50	50	100	1
TOTAL					13	08	06	23	400	400	800	20

Note: BC: Science Course, ES: Engineering Science, Hu: Humanity and Social Science.

Professor



Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2018-19
B.E (Civil Engineering)
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Sl. No		Course and Course Code	Course Title	Teaching Department	Teaching Hours /Week			Duration in hours	Examination			Credits
					L	T	P		CIE Marks	SEE Marks	Total Marks	
1	BC	18MA31	Transform calculus and Special functions	Mathematics	2	2	--	03	50	50	100	3
2	PC	18CV31	Building Materials and Construction	CV	3	---	---	03	50	50	100	3
3	PC	18CV32	Strength of Materials	CV	4	---	---	03	50	50	100	4
4	PC	18CV33	Surveying	CV	4	---	---	03	50	50	100	4
5	PC	18CV34	Fluid Mechanics	CV	4	---	---	03	50	50	100	3
6	PC	18CV35	Applied Engineering Geology	CV	3	---	---	03	50	50	100	1
7	PC	18CVL36	Civil Engg. Material Testing Laboratory	CV	---	---	2	03	50	50	100	1
8	PC	18CVL37	Surveying Practice	CV	---	---	3	03	50	50	100	1
9	HS	18HS31/32	Constitution of India Professional Ethics and Human Rights/ Environmental Science	HS/CV	1	--	--	02	50	50	100	1
10	MC	18HS33	Soft skills (MC)	Humanities	04	-	--	03	50	-	50	0
TOTAL					19	02	05	29	500	450	950	24
Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs												
11	MC	18MAD31	Basic Engg Mathematics - I	Mathematics	02	01	--	03	50		50	0

Note: BC: Science Course, PC: Professional Core. Hu: Humanities, MC: Mandatory Course.

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2018-19
B.E (Civil Engineering)
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

IV SEMESTER

Sl. No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Duration in hours	Examination			Credits
				L	T	P		CC Marks	SE Marks	Total Marks	
1	BC 18MA41	Numerical methods and Probability	Mathematics	2	2	--	03	50	50	100	3
2	PC 18CV41	Water Supply Engineering	CV	3	---	---	03	50	50	100	3
3	PC 18CV42	Analysis of Determinate Structures	CV	4	---	---	03	50	50	100	4
4	PC 18CV43	Hydraulics and Hydraulic Machines	CV	4	---	---	03	50	50	100	4
5	PC 18CV44	Hydrology and Irrigation Engineering	CV	3	---	---	03	50	50	100	3
6	PC 18CV45	Concrete Technology	CV	4	---	---	03	50	50	100	4
7	PC 18CVL46	Computer Aided Building Planning and Drawing	CV	---	1	3	03	50	50	100	1
8	PC 18CVL47	Concrete & Highway materials Lab	CV	---	---	2	03	50	50	100	1
9	HS 18HS41/42	Constitution of India Professional Ethics and Human Rights/ Environmental Science	HS/CV	1	--	--	02	50	50	100	1
10	MC 18HS43	Employability skills (MC)	Humanities	04	-	--	03	50	-	50	0
TOTAL				25	03	05	29	500	450	950	24

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs

MC	18MAD41	Basic Engg Mathematics - II	Mathematics	02	01	--	03	50		50	0
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Note: BC: Science Course, PC: Professional Core, Hu: Humanities, NCMC: Non-Credit Mandatory Course.
 ENV: Environmental Studies, CIP: Constitution of India Professional Ethics and Human Rights

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2018-19
B.E (Civil Engineering)
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

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

V SEMESTER

Sl. No.	Course and Code	Course Description	Department	Teaching Hours /Week				Duration in Semesters	Examination			Credits
				L	T	P	Assessment		Internal Marks	Terminal Marks	Total Marks	
1	HS 18HS51/52	M&E / IPR (title as per BOS decision)	Hu	3	--	--	--	03	50	50	100	3
2	PC 18CV51	Wastewater Treatment and Disposal	CV	3	--	--	--	03	50	50	100	3
3	PC 18CV52	Design of RCC Structural Elements	CV	4	--	--	--	03	50	50	100	4
4	PC 18CV53	Analysis of Indeterminate Structures	CV	4	--	--	--	03	50	50	100	4
5	PC 18CV54	Geotechnical Engineering	CV	2	2	--	--	03	50	50	100	3
6	PE 18CV55X	Professional Elective - 1	CV	3	--	--	--	03	50	50	100	3
7	OE 18CV56X	Open Elective - A	CV	3	--	--	--	03	50	50	100	3
8	PC 18CVL57	Hydraulics and Hydraulic Machinery Laboratory	CV	--	--	2	--	03	50	50	100	1
9	PC 18CVL58	Computer Aided Design Laboratory	CV	--	--	2	--	03	50	50	100	1
10	HS 18HS55	Placement Training	Hu	2	--	--	--	03	50	--	50	PP/NP
TOTAL				25	--	4	--	30	500	450	950	25

Electives

Professional Electives - 1

18CV551	Transportation Engineering
18CV552	Theory of Elasticity
18CV553	Ground Improvement Techniques
18CV554	Advanced Surveying
18CV555	Ground Water Hydrology

OPEN ELECTIVE - A

18CV561	Air Pollution and Control
18CV562	Integrated Solid Waste Management

Students can select any one of the open electives (Please refer to consolidated list of Dr. AIT for open electives) offered by any Department.

Selection of an open elective is not allowed provided:

- The candidate has studied the same course during the previous semesters of the programme.
- The syllabus content of open elective is similar to that of Departmental core courses or professional electives.

- A similar course, under any category, is prescribed in the higher semesters of the programme.
- Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.

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SCHEME OF TEACHING AND EXAMINATION from Academic Year 2018-19
B.E (Civil Engineering)
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Professor and Head
Department of Civil Engineering
Dr. Ambedkar Institute of Technology
Bangalore - 560 056

VI SEMESTER

Sl. No	Course and Code	Course Title	Exam. Type	Teaching Hours/Week				Duration in hours	Examination			Credits
				L	T	P	Th		SEE Marks	COE Marks	Total Marks	
1	HS 18HS61/62	M&E/IPR	Hu	3	--	--	--	03	50	50	100	3
2	PC 18CV61	Design of Steel Structures	CV	3	2	--	--	03	50	50	100	4
3	PC 18CV62	Railways, Airport, Tunnel and Harbour Engineering	CV	3	--	--	--	03	50	50	100	3
4	PC 18CV63	Foundation Engineering	CV	2	2	--	--	03	50	50	100	3
5	PE 18CV64X	Professional Elective - 2	CV	3	--	--	--	03	50	50	100	3
6	OE 18CV65X	Open Elective - B	CV	3	--	--	--	03	50	50	100	3
7	PC 18CVL66	Computer Aided Drawing of RC and Steel structures	CV	--	--	2	2	03	50	50	100	1
8	PC 18CVL67	Geotechnical Engineering Laboratory	CV	--	--	2	2	03	50	50	100	1
9	M 18CVM68	Mini-Project						03	50	50	100	2
10	PC 18CVL69	Extensive Survey Project	CV	--	--	2	2	03	50	50	100	1
11	HS 18HS66	Placement Training	Hu	2	--	--	--	03	50	--	50	PP/NP
TOTAL				20	2	2	6	33	550	500	1050	24

Note: PC: Professional Core, PE: Professional Elective, OE: Open Elective, MP: Mini-Project, INT: Internship.

Internship: All the students admitted to III year of BE have to undergo mandatory internship of 4 weeks during the vacations of VI and VII semesters and /or VII and VIII semesters.

A University examination will be conducted during VIII semester and prescribed credit are added to VIII semester.

Internship is considered as a head of passing and is considered for the award of degree. Those, who do not take-up/complete the internship will be declared as failed and have to complete during subsequent University examination after satisfy the internship requirements.


Course code	Professional Electives - 2		Electives	Open Elective - B	
	18CV641	18CV642		18CV643	18CV643
	Pre-Stressed Concrete	Alternate Building Materials and Technologies	Traffic Engineering		
<p>Students can select any one of the open electives (Please refer to consolidated list of Dr. AIT for open electives) offered by any Department.</p> <p>Selection of an open elective is not allowed provided.</p>					

18CV644	Open Channel Hydraulics	<ul style="list-style-type: none"> • The candidate has studied the same course during the previous semesters of the programme. • The syllabus content of open elective is similar to that of Departmental core courses or professional electives. • A similar course, under any category, is prescribed in the higher semesters of the programme. Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.
18CV645	Earth and Earth Retaining Structures	
Open Elective - B		
18CV651	Integrated Solid Waste Management	
18CV652	Photogrammetry and Remote Sensing	



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BE (Civil Engineering)
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Professor and Head

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

VII SEMESTER

Sl. No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Duration in hours	Examination			Credits	
				L	T	P		CIE Marks	SEE Marks	Total Marks		
1	MC 18HS71/72	CMEP / OSHA	IM/CV	2	--	--	03	50	50	100	2	
2	PC 18CV71	Design of RC & Steel Structures .	CV	4	--	--	03	50.	50	100	4	
3	PC 18CV72	Estimation and Valuation	CV	4	--	--	03	50	50	100	4	
4	PE 18CV73X	Professional Elective - 3	CV	3	--	--	03	50	50	100	3	
5	PE 18CV74X	Professional Elective - 4	CV	3	--	--	03	50	50	100	3	
6	OE 18CV75X	Open Elective - C	CV	3	--	--	03	50	50	100	3	
7	PC 18CVL76	Environmental Engg. Laboratory.	CV	---	---	2	03	50	50	100	1	
8	PC 18CVL77	Advanced Civil Engg. Laboratory	CV	---	---	2	03	50	50	100	1	
8	Project 18CVP78	Project Work Phase - I	CV	--	--	2	03	50	50	100	2	
9	INT 18CV179	Internship	(If not completed after VI semester examinations, it has to be carried out during the intervening vacations of VII and VIII semesters)									--
TOTAL				19	--	6	27	450	450	900	23	

Note:
 PC: Professional Core, PE: Professional Elective, OE: Open Elective, INT: Internship, MC: Mandatory Course
 CMEP: Cost Management of Engineering Projects, OSHA: Occupational Safety and Health Administration

Internship:
 All the students admitted to III year of BE have to undergo mandatory internship of 4 weeks during the vacations of VI and VII semesters and /or VII and VIII semesters.
 A SEE examination will be conducted during VIII semester and prescribed credits shall be added to VIII semester.
 Internship is considered as a head of passing and is considered for the award of degree. Those, who do not take-up/complete the internship will be declared as failed and have to complete during subsequent SEE examination after satisfy the internship requirements.

Course code	Professional Electives - 3	Open Elective - B
18CV731	Pavement Materials and Construction	


18CV732	Photogrammetry and Remote Sensing	Students can select any one of the open electives (Please refer to consolidated list of Dr. AIT for open electives) offered by any Department. Selection of an open elective is not allowed provided, ✓ The candidate has studied the same course during the previous semesters of the programme. ✓ The syllabus content of open elective is similar to that of Departmental core courses or professional electives. ✓ A similar course, under any category, is prescribed in the higher semesters of the programme. ✓ Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.
18CV733	Environmental Impact Assessment	
18CV734	Design of Bridges	
18CV735	Structural Dynamics	
18CV736	Construction Project Management	
18CV737	Reinforced Earth Structures	

Electives : 4

Course code	Professional Elective
18CV741	Water Resources Engineering
18CV742	Advanced Foundation Design
18CV743	Pavement Design
18CV744	Earthquake Resistant Design of Structures
18CV745	Solid Waste Management
18CV746	Quality Management System in Civil Engineering
18CV747	Hydraulic Structures & Irrigation drawing

Electives : B

Course code	Open Elective - C
18CV751	Ecology and Environmental Impact Assessment
18CV752	Urban Transport Planning
18CV753	Photo Geology and Remote Sensing


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VIII SEMESTER												
Sl. No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Examination					Credits
				L	T	P	Duration in hours	CIE Marks	SEE Marks	Total Marks		
1	MC 18HS81/82	CMEP / OSHA	IM / CV	2	--	--	03	50	50	100	2	
2	Project 18CVP81	Project Work Phase - II	CV	--	--	2	03	50	50	100	10	
3	Seminar 18CVS82	Technical Seminar	CV	--	--	2	03	50	50	100	1	
4	INT 18CV183	Internship	(Completed during the intervening vacations of VI and VII semesters and /or VII and VIII semesters.)				03	50	50	100	2	
TOTAL				02	--	4	12	200	200	400	15	

Note:

PC: Professional Core, PE: Professional Elective, OE: Open Elective, INT: Internship, MC: Mandatory Course
 CMEP: Cost Management of Engineering Projects, OSHA: Occupational Safety and Health Administration

Internship:


Those, who have not pursued /completed the internship will be declared as failed and have to complete during subsequent SEE examination after they satisfy the internship requirements.

Total 175 Credit Distributions for all semester B.E. (Civil Engineering) Programme.

Semester	I	II	III	IV	V	VI	VII	VIII	Total Credits
Credits	20	20	24	24	25	24	23	15	175

Dr. Ambedkar Institute of Technology, Bengaluru - 560 056
Scheme of Teaching and Examination from the Academic Year 2019-20
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
I SEMESTER B.E (PHYSICS GROUP)

Sl. No	Course and Course Code	Course Title	Teaching Department	Paper Setting Board	Teaching Hours/Week			Duration in hours	Examination			Credits
					L	T	P		CIE Marks	SEE Marks	Total Marks	
1	BC 18MA11	Calculus and Linear Algebra	Mathematics	Science	3	2	--	03	50	50	100	4
2	BC 18PH12	Engineering Physics	Physics	Science	4	--	--	03	50	50	100	4
3	ES 18EE13	Basic Electrical Engineering	E and E Engineering	E and E Engineering	2	2	--	03	50	50	100	3
4	ES 18CV14	Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	2	2	--	03	50	50	100	3
5	ES 18MEL15	Engineering Graphics and Design	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	--	2	03	50	50	100	3
6	BC 18PHL16	Engineering Physics Laboratory	Physics	Science	--	--	2	03	50	50	100	1
7	ES 18EEL17	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	--	--	2	03	50	50	100	1
8	Hu 18HS11/ 18HS12	English/ Kannada	Humanities	Humanities	1	--	2	02	50	50	100	1
TOTAL					13	06	08	21	350	350	700	20


Professor and Head
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UG - 2019-20

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Scheme of Teaching and Examination from the Academic Year 2019-20
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
II SEMESTER B.E (CHEMISTRY GROUP)

Sl. No	Course and Course Code	Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Examination				Credits
					L	T	P	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	BC 18MA21	Advanced Calculus and Numerical Methods	Mathematics	Science	3	2	--	03	50	50	100	4
2	BC 18CH22	Engineering Chemistry	Chemistry	Science	4	--	--	03	50	50	100	4
3	ES 18CS23	C Programming for Problem Solving	Computer Science and Engineering	Computer Science and Engineering	2	2	--	03	50	50	100	3
4	ES 18ELN24	Basic Electronics	ECE/E and I/ TC	E and C Engineering	2	2	--	03	50	50	100	3
5	ES 18ME25	Elements of Mechanical Engineering	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	2	--	03	50	50	100	3
6	BC 18CHL26	Engineering Chemistry Laboratory	Chemistry	Science	--	--	2	03	50	50	100	1
7	ES 18CSL27	Computer Programming Laboratory	Computer Science and Engineering	Computer Science and Engineering	--	--	2	03	50	50	100	1
8	Hu 18HS21/ 18HS22	English /Kannada	Humanities	Humanities	1	--	2	02	50	50	100	1
TOTAL					13	08	06	23	400	400	800	20

Note: BC: Science Course, ES: Engineering Science, Hu: Humanity and Social Science.

A

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2019-20
B.E (Civil Engineering)
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

III SEMESTER											
Sl. No	Course and Course Code	Course Title	Teaching Department	Teaching Hours /Week			Duration in hours	Examination			
				L	T	P		CIE Marks	SEE Marks	Total Marks	Credits
1	BC 18MA31	Transform calculus and Special functions	Mathematics	2	2	--	03	50	50	100		3
2	PC 18CV31	Building Materials and Construction	CV	3	---	---	03	50	50	100	3
3	PC 18CV32	Strength of Materials	CV	4	---	---	03	50	50	100	4
4	PC 18CV33	Surveying	CV	4	---	---	03	50	50	100	4
5	PC 18CV34	Fluid Mechanics	CV	4	---	---	03	50	50	100	4
6	PC 18CV35	Applied Engineering Geology	CV	3	---	---	03	50	50	100	3
7	PC 18CVL36	Civil Engg. Material Testing Laboratory	CV	---	---	2	03	50	50	100	1
8	PC 18CVL37	Surveying Practice	CV	---	---	3	03	50	50	100	1
9	HS 18HS31/32	Constitution of India Professional Ethics and Human Rights/ Environmental Science	HS/CV	1	--	--	02	50	50	100	1
10	MC 18HS33	Soft skills (MC)	Humanities	04	-	--	03	50	-	50	0
TOTAL				19	02	05	29	500	450	950	24
Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs											
11	MC 18MAD31	Basic Engg Mathematics - I	Mathematics	02	01	--	03	50		50	0

Note: BC: Science Course, PC: Professional Core, Hu: Humanities, MC: Mandatory Course.



Dr. Ambedkar Institute of Technology, Bengaluru-560 056
 SCHEME OF TEACHING AND EXAMINATION from Academic Year 2019-20
 B.E (Civil Engineering)
 Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

IV SEMESTER

Sl. No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Duration in hours	Examination			Credits
				Theory Lectur L	Tutori al T	Practical/ Drawing P		CIE Marks	SEE Marks	Total Marks	
1	BC 18MA41	Numerical methods and Probability	Mathematics	2	2	--	03	50	50	100	3
2	PC 18CV41	Water Supply Engineering	CV	3	---	---	03	50	50	100	3
3	PC 18CV42	Analysis of Determinate Structures	CV	4	---	---	03	50	50	100	4
4	PC 18CV43	Hydraulics and Hydraulic Machines	CV	4	---	---	03	50	50	100	4
5	PC 18CV44	Hydrology and Irrigation Engineering	CV	3	---	---	03	50	50	100	3
6	PC 18CV45	Concrete Technology	CV	4	---	---	03	50	50	100	4
7	PC 18CVL46	Computer Aided Building Planning and Drawing	CV	---	1	3	03	50	50	100	1
8	PC 18CVL47	Concrete & Highway materials Lab	CV	---	---	2	03	50	50	100	1
9	HS 18HS41/42	Constitution of India Professional Ethics and Human Rights/ Environmental Science	HS/CV	1	--	--	02	50	50	100	1
10	MC 18HS43	Employability skills (MC)	Humanities	04	-	--	03	50	-	50	0
TOTAL				25	03	05	29	500	450	950	24

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs

MC	18MAD41	Basic Engg Mathematics - II	Mathematics	02	01	--	03	50		50	0
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Note: BC: Science Course, PC: Professional Core, Hu: Humanities, NCMC: Non-Credit Mandatory Course.
 ENV: Environmental Studies, CIP: Constitution of India Professional Ethics and Human Rights

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

V SEMESTER

Sl. No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Duration in hours	Examination			Credits
				Theory Lectur e	Tutori al	Practic al/ Drawi		CIE Marks	SEE Marks	Total Marks	
1	HS 18HS51/52	M&E / IPR (title as per BOS decision)	Hu	3	--	--	03	50	50	100	3
2	PC 18CV51	Wastewater Treatment and Disposal	CV	3	--	--	03	50	50	100	3
3	PC 18CV52	Design of RCC Structural Elements	CV	4	--	--	03	50	50	100	4
4	PC 18CV53	Analysis of Indeterminate Structures	CV	4	--	--	03	50	50	100	4
5	PC 18CV54	Geotechnical Engineering	CV	2	--	--	03	50	50	100	3
6	PE 18CV55X	Professional Elective - 1	CV	3	--	--	03	50	50	100	3
7	OE 18CV56X	Open Elective - A	CV	3	--	--	03	50	50	100	3
8	PC 18CVL57	Hydraulics and Hydraulic Machinery Laboratory	CV	--	--	2	03	50	50	100	1
9	PC 18CVL58	Computer Aided Design Laboratory	CV	--	--	2	03	50	50	100	1
10	HS 18HS55	Placement Training	Hu	2	--	--	03	50	--	50	PP/NP
TOTAL				25	--	4	30	500	450	950	25

Electives

Professional Electives - 1

18CV551	Transportation Engineering
18CV552	Theory of Elasticity
18CV553	Ground Improvement Techniques
18CV554	Advanced Surveying
18CV555	Ground Water Hydrology

OPEN ELECTIVE - A

18CV561	Air Pollution and Control
18CV562	Integrated Solid Waste Management

Students can select any one of the open electives (Please refer to consolidated list of Dr. AIT for open electives) offered by any Department.
 Selection of an open elective is not allowed provided:

- The candidate has studied the same course during the previous semesters of the programme.
- The syllabus content of open elective is similar to that of Departmental core courses or professional electives.

• A similar course, under any category, is prescribed in the higher semesters of the programme. Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.

VI SEMESTER

Sl. No	Course and Course code	Course Title	Teaching Department	Teaching Hours / Week			Duration in hours	Examination			Credits
				L	T	P		CIE Marks	SEE Marks	Total Marks	
1	HS 18HS61/62	M&E/IPR	Hu	3	--	--	03	50	50	100	3
2	PC 18CV61	Design of Steel Structures	CV	3	2	--	03	50	50	100	4
3	PC 18CV62	Railways, Airport, Tunnel and Harbour Engineering	CV	3	--	--	03	50	50	100	3
4	PC 18CV63	Foundation Engineering	CV	2	2	--	03	50	50	100	3
5	PE 18CV64X	Professional Elective - 2	CV	3	--	--	03	50	50	100	3
6	OE 18CV65X	Open Elective - B	CV	3	--	--	03	50	50	100	3
7	PC 18CVL66	Computer Aided Drawing of RC and Steel structures	CV	--	--	2	03	50	50	100	1
8	PC 18CVL67	Geotechnical Engineering Laboratory	CV	--	--	2	03	50	50	100	1
9	M 18CVM68	Mini-Project					03	50	50	100	2
10	PC 18CVL69	Extensive Survey Project	CV	--	--	2	03	50	50	100	1
11	HS 18HS66	Placement Training	Hu	2	--	--	03	50	--	50	PP/NP
TOTAL				20	2	6	33	550	500	1050	24

Note: PC: Professional Core, PE: Professional Elective, OE: Open Elective, MP: Mini-Project, INT: Internship.

Internship: All the students admitted to III year of BE have to undergo mandatory internship of 4 weeks during the vacations of VI and VII semesters and /or VII and VIII semesters.

A University examination will be conducted during VIII semester and prescribed credit are added to VIII semester.

Internship is considered as a head of passing and is considered for the award of degree. Those, who do not take-up/complete the internship will be declared as failed and have to complete during subsequent University examination after satisfy the internship requirements.

Electives

Course code	Professional Electives - 2	Open Elective - B
18CV641	Pre-Stressed Concrete	Students can select any one of the open electives (Please refer to consolidated list of Dr. AIT for open electives) offered by any Department. Selection of an open elective is not allowed provided.
18CV642	Alternate Building Materials and Technologies	
18CV643	Traffic Engineering	

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2019-20
B.E (Civil Engineering)
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

VIII SEMESTER												
Sl. No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Duration in hours	Examination			Credits	
				Theory Lecture	Tutorial	Practical / Drawing		CIE Marks	SEE Marks	Total Marks		
1	MC 18HS81/82	CMEP / OSHA	IM / CV	L 2	T --	P --	03	50	50	100	2	
2	Project 18CV/P81	Project Work Phase - II	CV	--	--	2	03	50	50	100	10	
3	Seminar 18CV/S82	Technical Seminar	CV	--	--	2	03	50	50	100	1	
4	INT 18CV/183	Internship	(Completed during the intervening vacations of VI and VII semesters and /or VII and VIII semesters.)	--	--	4	03	50	50	100	2	
TOTAL				02	--	4	12	200	200	400	15	

Note:

PC: Professional Core, PE: Professional Elective, OE: Open Elective, INT: Internship, MC: Mandatory Course
 CMEP: Cost Management of Engineering Projects, OSHA: Occupational Safety and Health Administration

Internship:

Those, who have not pursued /completed the internship will be declared as failed and have to complete during subsequent SEE examination after they satisfy the internship requirements.

Total 175 Credit Distributions for all semester B.E. (Civil Engineering) Programme.

Semester	I	II	III	IV	V	VI	VII	VIII	Total Credits
Credits	20	20	24	24	25	24	23	15	175

Professor and Head

Department of Civil Engineering,
Dr. Ambedkar Institute of Technology
Bangalore - 560 036.

Dr. Ambedkar Institute of Technology, Bengaluru-560 056

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2019-20

B.E (Civil Engineering)

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

VII SEMESTER

Sl. No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week					Examination				Credits
				Theory	Tutorial	Practical	Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks		
												L		T	P
1	MC 18HS71/72	CMEP / OSHA	IM/CV	2	--	--	--	03	50	50	100	2	
2	PC 18CV71	Design of RC & Steel Structures	CV	4	---	---	---	03	50	50	100	4	
3	PC 18CV72	Estimation and Valuation	CV	4	---	---	---	03	50	50	100	4	
4	PE 18CV73X	Professional Elective - 3	CV	3	---	---	---	03	50	50	100	3	
5	PE 18CV74X	Professional Elective - 4	CV	3	--	--	--	03	50	50	100	3	
6	OE 18CV75X	Open Elective - C	CV	3	--	--	--	03	50	50	100	3	
7	PC 18CVL76	Environmental Engg. Laboratory	CV	---	---	2	2	03	50	50	100	1	
8	PC 18CVL77	Advanced Civil Engg. Laboratory	CV	---	---	2	2	03	50	50	100	1	
8	Project 18CVP78	Project Work Phase - I	CV	--	--	2	2	03	50	50	100	2	
9	INT 18CVI79	Internship	(If not completed after VI semester examinations, it has to be carried out during the intervening vacations of VII and VIII semesters)						19	--	--	900	--
TOTAL								27	450	450	900	23	

Note:

PC: Professional Core, PE: Professional Elective, OE: Open Elective, INT: Internship, MC: Mandatory Course

CMEP: Cost Management of Engineering Projects, OSHA: Occupational Safety and Health Administration

Internship:

All the students admitted to III year of BE have to undergo mandatory internship of 4 weeks during the vacations of VI and VII semesters and /or VII and VIII semesters.

A SEE examination will be conducted during VIII semester and prescribed credits shall be added to VIII semester.

Internship is considered as a head of passing and is considered for the award of degree. Those, who do not take-up/complete the internship will be declared as failed and have to complete during subsequent SEE examination after satisfy the internship requirements.

Electives

Course code	Professional Electives - 3	Open Elective - B
18CV731	Pavement Materials and Construction	

18CV732	Photogrammetry and Remote Sensing	<p>Students can select any one of the open electives (Please refer to consolidated list of Dr. AIT for open electives) offered by any Department.</p> <p>Selection of an open elective is not allowed provided,</p> <ul style="list-style-type: none"> ✓ The candidate has studied the same course during the previous semesters of the programme. ✓ The syllabus content of open elective is similar to that of Departmental core courses or professional electives. ✓ A similar course, under any category, is prescribed in the higher semesters of the programme. ✓ Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.
18CV733	Environmental Impact Assessment	
18CV734	Design of Bridges	
18CV735	Structural Dynamics	
18CV736	Construction Project Management	
18CV737	Reinforced Earth Structures	

Electives : 4

Course code	Professional Elective
18CV741	Water Resources Engineering
18CV742	Advanced Foundation Design
18CV743	Pavement Design
18CV744	Earthquake Resistant Design of Structures
18CV745	Solid Waste Management
18CV746	Quality Management System in Civil Engineering
18CV747	Hydraulic Structures & Irrigation drawing

Electives : B

Course code	Open Elective - C
18CV751	Ecology and Environmental Impact Assessment
18CV752	Urban Transport Planning
18CV753	Photo Geology and Remote Sensing



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I SEMESTER B.E (PHYSICS GROUP)

Sl. No.	Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week		Examination					Credits
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	BC	18MA11	Calculus and Linear Algebra	Mathematics	Science	3	2	--	03	50	50	100	4
2	BC	18PH12	Engineering Physics	Physics	Science	4	--	--	03	50	50	100	4
3	ES	18EE13	Basic Electrical Engineering	E and E Engineering	E and E Engineering	2	2	--	03	50	50	100	3
4	ES	18CV14	Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	2	2	--	03	50	50	100	3
5	ES	18MEL15	Engineering Graphics and Design	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	--	2	03	50	50	100	3
6	BC	18PHL16	Engineering Physics Laboratory	Physics	Science	--	--	2	03	50	50	100	1
7	ES	18EEL17	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	--	--	2	03	50	50	100	1
8	Hu	18HS11/ 18HS12	English/ Kannada	Humanities	Humanities	1	--	2	02	50	50	100	1
TOTAL						13	06	08	21	350	350	700	20

II SEMESTER B.E (CHEMISTRY GROUP)

Sl. No.	Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week		Examination					Credits
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	BC	18MA21	Advanced Calculus and Numerical Methods	Mathematics	Science	3	2	--	03	50	50	100	4
2	BC	18CH22	Engineering Chemistry	Chemistry	Science	4	--	--	03	50	50	100	4
3	ES	18CS23	C Programming for Problem Solving	Computer Science and Engineering	Computer Science and Engineering	2	2	--	03	50	50	100	3
4	ES	18ELN24	Basic Electronics	ECE/E and I/ TC	E and C Engineering	2	2	--	03	50	50	100	3
5	ES	18ME25	Elements of Mechanical Engineering	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	2	--	03	50	50	100	3
6	BC	18CHL26	Engineering Chemistry Laboratory	Chemistry	Science	--	--	2	03	50	50	100	1
7	ES	18CSL27	Computer Programming Laboratory	Computer Science and Engineering	Computer Science and Engineering	--	--	2	03	50	50	100	1
8	Hu	18HS21/ 18HS22	English /Kannada	Humanities	Humanities	1	--	2	02	50	50	100	1
TOTAL						13	08	06	23	400	400	800	20

Note: BC: Science Course, ES: Engineering Science, Hu: Humanity and Social Science.

Definition of Credit:
1 hour Lecture (L) per week per semester = 1 Credit
2 hour Tutorial (T) per week per semester = 1 Credit
2 hour Practical/Laboratory/Drawing (P) per week per semester = 1 Credit.

**Scheme of Teaching and Examination from the Academic Year 2020-21
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)**

I SEMESTER B.E (CHEMISTRY GROUP)


Sl. No	Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week		Examination					Credits
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	BC	18MA11	Calculus and Linear Algebra	Mathematics	Science	3	2	--	03	50	50	100	4
2	BC	18CH12	Engineering Chemistry	Chemistry	Science	4	--	--	03	50	50	100	4
3	ES	18CS13	C Programming for Problem Solving	Computer Science and Engineering	Computer Science and Engineering	2	2	--	03	50	50	100	3
4	ES	18EC14	Basic Electronics	ECE/E and I/ TC	E and C Engineering	2	2	--	03	50	50	100	3
5	ES	18ME15	Elements of Mechanical Engineering	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	2	--	03	50	50	100	3
6	BC	18CHL16	Engineering Chemistry Laboratory	Chemistry	Science	--	--	2	03	50	50	100	1
7	ES	18CSL17	Computer Programming Laboratory	Computer Science and Engineering	Computer Science and Engineering	--	--	2	03	50	50	100	1
8	HS	18HS11/ 18HS12	English/ Kannada	Humanities	Humanities	1	--	2	02	50	50	100	1
TOTAL						13	08	06	23	350	350	700	20

II SEMESTER B.E (PHYSICS GROUP)

Sl. No	Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week		Examination					Credits
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	BC	18MA21	Advanced Calculus and Numerical Methods	Mathematics	Science	3	2	--	03	50	50	100	4
2	BC	18PH22	Engineering Physics	Physics	Science	4	--	--	03	50	50	100	4
3	ES	18EE23	Basic Electrical Engineering	E and E Engineering	E and E Engineering	2	2	--	03	50	50	100	3
4	ES	18CV24	Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	2	2	--	03	50	50	100	3
5	ES	18MEL25	Engineering Graphics and Design	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	--	2	03	50	50	100	3
6	BC	18PHL26	Engineering Physics Laboratory	Physics	Science	--	--	2	03	50	50	100	1
7	ES	18EEL27	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	--	--	2	03	50	50	100	1
8	HS	18HS21/ 18HS22	English/ Kannada	Humanities	Humanities	1	--	2	02	50	50	100	1
TOTAL						13	06	08	23	400	400	800	20

Note: BS: Science Course, ES: Engineering Science, Hu: Humanity and Social Science.

Definition of Credit: 1 hour Lecture (L) per week per semester =1 Credit
2 hour Tutorial (T) per week per semester =1 Credit
2 hour Practical/Laboratory/Drawing (P) per week per semester =1 Credit.


Professor and Head
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SCHEME OF TEACHING AND EXAMINATION from Academic Year 2020-21
B.E (Civil Engineering)

Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
III SEMESTER

Sl. No	Course and Course Code	Course Title	Teaching Department	Teaching Hours /Week				Examination				Credits
				Theory	Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks		
											L		T	P
1	BC 18MA31	Mathematics (Title as per the decision of BoS in Sciences)	Mathematics	2	2	--	03	50	50	100	3	
2	PC 18CV31	Building Materials and Construction	Civil	3	--	--	03	50	50	100	3	
3	PC 18CV32	Strength of Materials	Civil	4	--	--	03	50	50	100	4	
4	PC 18CV33	Surveying	Civil	4	--	--	03	50	50	100	4	
5	PC 18CV34	Fluid Mechanics	Civil	4	--	--	03	50	50	100	3	
6	PC 18CV35	Applied Engineering Geology	Civil	3	--	--	03	50	50	100	1	
7	PC 18CVL36	Civil Engineering Material Testing Laboratory	Civil	--	--	2	03	50	50	100	1	
8	PC 18CVL37	Surveying Practice	Civil	--	--	2	03	50	50	100	1	
9	HS 18HS31/32	Constitution of India Professional Ethics and Human Rights / Environmental Science	Humanities /Civil	1	--	--	02	50	50	100	1	
10	MC 18HS33	Soft skills	Humanities	4	--	--	03	50	--	50	PP/NP	
TOTAL				25	02	04	29	500	450	950	24	

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs		Mathematics		Mathematics		Mathematics		Mathematics		Mathematics	
11	MC 18MAD31	Advance Mathematics - I	02	01	--	03	50	50	50	50	PP/NP

Note:

HODs are informed to accommodate one more laboratory in addition to the above courses if needed, without altering the total number of credits (TOTAL: 24).

(a) The mandatory non - credit courses Advance Mathematics I and II prescribed at III and IV semesters respectively, to lateral entry Diploma holders admitted to III semester of BE programs, are to be completed to secure shall compulsorily be registered during respective semesters to complete all the formalities of the course and appear for SEE examination.

(b) The mandatory non - credit courses Advance Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III semester of BE programs, are to be completed to secure eligibility to VII semester. However, they are not considered for vertical progression from II year to III year of the programme but considered as head of passing along with credit courses of the programme to eligibility to VII semester.

Note: BC: Science Course, PC: Professional Core, Hu: Humanities, MC: Mandatory Course.

Professor Anil K. S.
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IV SEMESTER

Sl. No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
				Theory	Tutorial	Practical/ Drawing	CIE Marks	SEE Marks	Total Marks	Duration in hours	
1	BC 18MA41	Mathematics (Title as per the decision of BoS in Sciences)	Mathematics	2	2	--	03	50	50	100	3
2	PC 18CV41	Water Supply Engineering	Civil	3	--	--	03	50	50	100	3
3	PC 18CV42	Analysis of Determinate Structures	Civil	4	--	--	03	50	50	100	4
4	PC 18CV43	Hydraulics and Hydraulic Machines	Civil	4	--	--	03	50	50	100	4
5	PC 18CV44	Hydrology and Irrigation Engineering	Civil	3	--	--	03	50	50	100	3
6	PC 18CV45	Concrete Technology	Civil	4	--	--	03	50	50	100	4
7	PC 18CVL46	Computer Aided Building Planning and Drawing	Civil	--	1	3	03	50	50	100	1
8	PC 18CVL47	Concrete and Highway materials Laboratory	Civil	--	--	2	03	50	50	100	1
9	HS 18HS41/42	Constitution of India Professional Ethics and Human Rights/ Environmental Science	Humanities / Civil	1	--	--	02	50	50	100	1
10	MC 18HS43	Employability skills	Humanities	4	--	--	03	50	-	50	PP/NP
TOTAL				24	03	05	29	500	450	950	24

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs		Mathematics	02	01	--	03	50	--	50	PP/NP
11	MC 18MAD41	Advance Mathematics - II	02	01	--	03	50	--	50	PP/NP

Note: HODs are informed to accommodate one more laboratory in addition to the above courses if needed, without altering the total number of credits (TOTAL: 24).
 (a) The mandatory non - credit courses Advance Mathematics I and II prescribed at III and IV semesters respectively, to lateral entrant Diploma holders admitted to III semester of BE programs shall compulsorily be registered during respective semesters to complete all the formalities of the course and appear for SEE examination.
 (b) The mandatory non - credit courses Advance Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III semester of BE programs, are to be completed to secure eligibility to VII semester. However, they are not considered for vertical progression from II year to III year of the programme but considered as head of passing along with credit courses of the programme to eligibility to VII semester.

Note: BC: Science Course, PC: Professional Core, Hu: Humanities, NCMC: Non-Credit Mandatory Course
 ENV: Environmental Studies, CIP: Constitution of India Professional Ethics and Human Rights



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Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2020-21
B.E (Civil Engineering)
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)

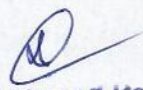
V SEMESTER

Course and Course code	Course Title	Teaching Department	Teaching Hours /Week				Examination				Credits
			Theory Lecture	Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks		
			L	T	P						
S 18HS51/52	M&E / IPR (title as per BOS decision)	Hu	3	--	--	03	50	50	100	3	
C 18CV51	Wastewater Treatment and Disposal	Civil	3	--	--	03	50	50	100	3	
C 18CV52	Design of RCC Structural Elements	Civil	4	--	--	03	50	50	100	4	
C 18CV53	Analysis of Indeterminate Structures	Civil	4	--	--	03	50	50	100	4	
PC 18CV54	Geotechnical Engineering	Civil	2	2	--	03	50	50	100	3	
PE 18CV55X	Professional Elective -1	Civil	3	--	--	03	50	50	100	3	
OE 18CVEXX	Open Elective -A	Civil	3	--	--	03	50	50	100	3	
PC 18CVL56	Hydraulics and Hydraulic Machinery Laboratory	Civil	--	--	2	03	50	50	100	1	
PC 18CVL57	Computer Aided Design Laboratory	Civil	--	--	2	03	50	50	100	1	
TOTAL			22	2	4	27	450	450	900	25	

Note: Hu: Humanities, PC: Professional Core, MC: Mandatory Course,

Electives

Course Code	Professional Electives -1	Open Elective -A
CV551	Transportation Engineering	<p>Students can select any one of the open electives (Please refer to consolidated list of Dr. AIT for open electives) offered by any Department.</p> <p>Selection of an open elective is not allowed provided:</p> <ul style="list-style-type: none"> The candidate has studied the same course during the previous semesters of the programme. The syllabus content of open elective is similar to that of Departmental core courses or professional electives. A similar course, under any category, is prescribed in the higher semesters of the programme. <p>Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.</p>
CV552	Theory of Elasticity	
CV553	Ground Improvement Techniques	
CV554	Advanced Surveying	
CV555	Ground Water Hydrology	
OPEN ELECTIVE-A		
CVE01	Air Pollution and Control	
CVE02	Solid Waste Management	


Professor and Head
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Bangalore - 560 056.

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2020-21
B.E (Civil Engineering)
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

VI SEMESTER

Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
			Theory Lecture	Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
			L	T	P					
HS 18HS61/62	M&E/IPR	Hu	3	--	--	03	50	50	100	3
PC 18CV61	Design of Steel Structures	Civil	3	2	--	03	50	50	100	4
PC 18CV62	Railways, Airport, Tunnel and Harbour Engineering	Civil	3	--	--	03	50	50	100	3
PC 18CV63	Foundation Engineering	Civil	3	--	--	03	50	50	100	3
PE 18CV64X	Professional Elective - 2	Civil	3	--	--	03	50	50	100	3
OE 18CVEXX	Open Elective - B	Civil	3	--	--	03	50	50	100	3
PC 18CVL66	Computer Aided Drawing of RC and Steel structures	Civil	--	--	2	03	50	50	100	1
PC 18CVL67	Geotechnical Engineering Laboratory	Civil	--	--	2	03	50	50	100	1
MP 18CVP68	Mini-Project				2	03	50	50	100	2
PC 18CVL68	Extensive Survey Project	Civil	--	--	2	03	50	50	100	1
INT 18CVI69	Industry Internship	(To be carried out during the intervening vacations of VI and VII semesters)				--	--	--	--	--
TOTAL			18	2	6	30	500	500	1000	24


Professional Core, PE: Professional Elective, OE: Open Elective, MP: Mini-Project, INT: Internship.

Internship:

All students admitted to III year of B.E. have to undergo mandatory internship of 4 weeks during the vacations of VI and VII semesters and / or VII and VIII semesters. A University examination will be conducted during VIII semester and prescribed credit are added to VIII semester. Internship is considered as a head of passing and is considered for the award of degree. Those, who do not complete the internship will be declared as failed and have to complete during subsequent University examination after satisfy the internship requirements.

Electives

Course Code	Professional Electives - 2	Open Elective - B
V641	Pre-Stressed Concrete	Students can select any one of the open electives (Please refer to consolidated list of Dr. AIT for open electives) offered by any Department. Selection of an open elective is not allowed provided, <ul style="list-style-type: none"> The candidate has studied the same course during the previous semesters of the programme. The syllabus content of open elective is similar to that of Departmental core courses or professional electives. A similar course, under any category, is prescribed in the higher semesters of the programme. Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.
V642	Alternate Building Materials and Technologies	
V643	Traffic Engineering	
V644	Open Channel Hydraulics	
V645	Earth and Earth Retaining Structures	
Open Elective - B		
EVE03	Integrated Solid Waste Management	
EVE04	Photogrammetry and Remote Sensing	


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SCHEME AND CREDITS FOR V TO VIII SEMESTER BE CIVIL ENGINEERING OF DR. A I T, B'LORE
SCHEME OF TEACHING AND CREDITS
B.E. CIVIL ENGINEERING
VII SEMESTER (2015-16 Batch)

Sl. No.	Subject Code	Title of the Subject	Teaching Dept.	Teaching Hrs / Week			Credits
				L	T	P	
1	CV 71	Design of Steel Structures	Civil	04	---	---	4
2	CV 72	Estimation and Valuation	Civil	02	02	---	3
3	CV 73	Design of Pre Stressed Concrete Structures	Civil	03	---	---	3
4	CV 74X	Elective-II (Group B)	Civil	03	---	---	3
5	CV 75X	Elective-III (Group C)	Civil	03	---	---	3
6	CVL 76	Environmental Engineering. Lab	Civil	---	03	---	1.5
7	CVL 77	Concrete and Highway Materials lab.	Civil	---	03	---	1.5
8		Interdepartmental Elective		04	---	---	04
9	CVP84	Project work Phase I	Civil	---	---	---	---
TOTAL				20	04	06	23

Elective-II (Group B)		Elective-III (Group C)	
Subject Code	Title of the Subject	Subject Code	Title of the Subject
CV 741	Matrix Method of Structural Analysis	CV 751	Numerical methods in Civil Engineering
CV 742	Advanced Design of RC Structures	CV 752	Rock Mechanics
CV 743	Design of Masonry Structures	CV 753	Pavement Materials and Construction
CV 744	Earth and Earth Retaining Structures	CV 754	Photogrammetry and Remote Sensing
CV 745	Highway Geometric Design	CV 755	Air Pollution and Control
CV 746	Open Channel Hydraulics	CV 756	Design and Drawing of Bridges.: * (2 Hrs of Theory + 3 Hrs of Drawing) * (Exam Duration : 4 Hrs)
CV 747	Rural Water Supply and Sanitation Engineering	CV 757	Structural Dynamics
		CV 758	Construction Project Management
CVE01	Integrated Solid Waste Management (IDE)	CVE02	Air Pollution and Control methods (IDE)

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Professor and Head
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Dr. Ambedkar Institute of Technology, Bengaluru-560 056
 SCHEME OF TEACHING AND EXAMINATION from Academic Year 2020-21
 B.E (Civil Engineering)
 Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

VIII SEMESTER

Sl. No	Course and Course code	Course Title	Teaching Department	Teaching Hours /Week			Duration in hours	Examination			Credits
				Theory	Tutorial	Practical / Drawing		CIE Marks	SEE Marks	Total Marks	
1	MC 18HS81/82	CMEP / OSHA	IM / CV	L 2	T --	P --	03	50	50	100	2
2	Project 18CVP81	Project Work Phase - II	CV	--	--	2	03	50	50	100	10
3	Seminar 18CVS82	Technical Seminar	CV	--	--	2	03	50	50	100	1
4	INT 18CVI83	Internship	(Completed during the intervening vacations of VI and VII semesters and /or VII and VIII semesters.)	--	--	--	03	50	50	100	2
TOTAL				02	--	4	12	200	200	400	15

Note:

PC: Professional Core, PE: Professional Elective, OE: Open Elective, INT: Internship, MC: Mandatory Course
 CMEP: Cost Management of Engineering Projects, OSHA: Occupational Safety and Health Administration

Internship:

Those, who have not pursued /completed the internship will be declared as failed and have to complete during subsequent SEE examination after they satisfy the internship requirements.

Total 175 Credit Distributions for all semester B.E. (Civil Engineering) Programme.

Semester	I	II	III	IV	V	VI	VII	VIII	Total Credits
Credits	20	20	24	24	25	24	23	15	175

Professor in Charge
 Department of Civil Engineering
 Dr. Ambedkar Institute of Technology
 Bangalore - 560 056.

SCHEME AND CREDITS FOR V TO VIII SEMESTER BE CIVIL ENGINEERING OF DR. A I T, B'LORE
SCHEME OF TEACHING AND CREDITS
B.E. CIVIL ENGINEERING
VIII SEMESTER (2015-16 Batch)

Sl. No.	Subject Code	Title of the Subject	Teaching Dept.	Teaching Hrs / Week			Credits
				L	T	P	
2	CV 81	Design and Computer Aided Drawing of Steel Structures	Civil	---	01	03	02
3	CV 82X	Elective - IV (Group D)	Civil	03	---	---	3
4	CV 83X	Elective - V (Group E)	Civil	03	---	---	3
5	CVP 84	Project work Phase II	Civil	---	---	24	12
6	CVS 85	Seminar	Civil	---	04	---	2
7	HS 04	Intellectual Property Rights	Humanities	02	---	---	02
8	CVE XX	Interdepartmental Elective		04	---	---	04
TOTAL				12	05	27	28

Elective-IV (Group D)			Elective-V (Group E)		
Subject Code	Title of the Subject	Subject Code	Title of the Subject		
CV 821	Advanced Pre-stressed Concrete Structures	CV 831	Finite Element Analysis		
CV 822	Advanced Foundation Design	CV 832	Reinforced Earth Structures		
CV 823	Pavement Design	CV 833	Urban Transport Planning		
CV 824	Earthquake Resistant Design of Structures	CV 834	Advanced Design of Steel Structures		
CV 825	Industrial Waste Water Treatment	CV 835	Water Resources Engineering		
CV 826	Quality Management System in Civil Engineering	CV 836	Environmental Impact Assessment		
CV 827	Remote Sensing and Geographic Information System	CV 837	Infrastructure Development		
CVE 03	Ecology and Environmental Impact Assessment (IDE)	CVE 04	Remote Sensing and Geographic Information System (IDE)		

Note: Project Work shall be 12 Credits in VIII Sem. BE

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Professor and Head
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Scheme of Teaching and Examination for I /II Semester B.E., (Common to all B.E. Programmes) Academic Year:2021-22

Chemistry Cycle: I/II Semester

Sl. No.	Course Category	Course Code	Course Title	Teaching Department	Teaching Hrs/ Week					Total	Duration (Hrs)	Examination			Credits
					L	T	P	S	Total			CIE Marks	SEE Marks	Total Marks	
1	BS	21MAT101	Calculus and Linear Algebra	Mathematics	3	2	0	0	5	3	50	50	100	4	
2	BS	21MAT201	Advanced Calculus and Numerical methods	Mathematics	3	2	0	0	5	3	50	50	100	4	
3	ES	21CHT102/ 21CHT202	Engineering Chemistry	Chemistry	3	0	0	0	3	3	50	50	100	3	
4	ES	21CST103/ 21CST203	Problem solving through Programming	Computer Science	2	2	0	0	4	3	50	50	100	3	
5	ES	21EET104/ 21EET204	Basic Electronics and Communication Engineering	Electronics	2	2	0	0	4	3	50	50	100	3	
6	BS	21MET105/ 21MET205	Elements of Mechanical Engineering	Mechanical	2	2	0	0	4	3	50	50	100	3	
7	ES	21CHL106/ 21CHL206	Engineering Chemistry Laboratory	Chemistry	0	0	2	0	2	3	50	50	100	1	
8	HS	21CSL107/ 21CSL207	Computer Programming Laboratory	Computer Science	0	0	2	0	2	3	50	50	100	1	
9	AE	21HST108	Communicative English	Humanities	1	0	1*	0	2	2	50	50	100	1	
9	AE	21HST208	Professional writing skills in English	Humanities	1	0	1*	0	2	2	50	50	100	1	
		21CVT109	Rural Development	Civil	1	0	1*	0	2	2	50	50	100	1	
10	MC	21HST209	Health and Wellness	Humanities	1	0	1*	0	2	2	50	50	100	1	
		21HSN110	Career Development skill-I	Humanities	1	0	1*	0	2	2	50	50	100	1	
					Total					30	500	450	900	20	

Note: BS: Basic Science Course, ES: Engineering Science Course, HS: Humanities & Social Science Course, AE: Ability Enhancement Course, MC: Mandatory Course, * No practical evaluation, L: Lecture, T: Tutorial, P: Practical/drawing, S: Self study, CIE: Continuous Internal Evaluation, SEE: Semester End Examination

Note -At the end of the second-semester summer internship shall be carried out - based on inter/intra institutional activities credited in the third semester. University /Institutions may swap few courses between a FIRST and SECOND semester to balance the workload teaching and laboratory schedule

Summer Internship - I: All the students admitted shall have to undergo a mandatory summer internship of 03 weeks during the vacation of II semesters. Summer Internship shall include Inter / Intra Institutional activities. Internship A University Viva-voce examination shall be conducted during III semesters and the prescribed credit shall be included in III semesters. The 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 the internship shall be declared fail and shall have to complete during subsequent University examination after satisfying the internship requirements

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UG - 2021 - 2022

Dr. Ambedkar Institute of Technology, Bengaluru-560056

Outcome Based Education(OBE) and Choice Based Credit System (CBCS) (As per NEP2020)

Scheme of Teaching and Examination for I/II Semester B.E., (Common to all B.E. Programmes) Academic Year:2021-22

Sl. No.	Course Category	Course Code	Course Title	Teaching Department	Teaching Hours/ Week					Total	Examination			Credits
					L	T	P	S	Duration (Hrs)		CIE Marks	SEE Marks	Total Marks	
1	BS	21MAT101	Calculus and Linear Algebra	Mathematics	3	2	0	0	5	3	50	50	100	4
		21MAT201	Advanced Calculus and Numerical methods											
2	BS	21PHT102/	Engineering Physics	Physics	3	0	0	0	3	3	50	50	100	3
		21PHT202												
3	ES	21EET103/	Basic Electrical Engineering	Electrical	2	2	0	0	4	3	50	50	100	3
		21EET203												
4	ES	21CVT104/	Elements of Civil Engineering & Mechanics	Civil	3	0	0	0	3	3	50	50	100	3
		21CVT204												
5	ES	21MED105/	Computer aided Engineering Drawing	Mechanical	2	0	2	0	4	3	50	50	100	3
		21MED205												
6	BS	21PHL106/	Engineering Physics Lab	Physics	0	0	2	0	2	3	50	50	100	1
		21PHL206												
7	ES	21EEL107/	Basic Electrical lab	Electrical	0	0	2	0	2	3	50	50	100	1
		21EEL207												
8	HS	21HST108	Communicative English	Humanities	1	0	1*	0	2	2	50	50	100	1
		21HST208	Professional writing skills in English											
9	AE	21HST109	Health and Wellness	Humanities	1	0	1*	0	2	2	50	50	100	1
		21CVT209	Rural Development											
10	MC	21HSN110	Career Development skill-I	Humanities	1	0	1*	0	2	2	50	-	PP/NP	0
		21HSN210	Career Development skill-II											
					Total					29	500	450	900	20

Note: BS: Basic Science Course,

AE: Ability Enhancement Course, ES: Engineering Science Course,

L: Lecture, T:Tutorial, P:Practical/drawing, S:Self study, CIE: Continuous Internal Evaluation, SEE: Semester End Examination

MC: Mandatory Course, HS: Humanities & Social Science Course, * No practical evaluation,

Professor and Head

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Dr. Ambedkar Institute of Technology

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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 - 1	....	4	-	-	50	50	100	3
6.	CSEL16	Structural Engineering Lab - 1	....	-	-	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	50	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

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Dr. Ambedkar Institute of Technology

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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 take up/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 - 1	.....				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.
- 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
- 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.


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Dr. Ambedkar Institute of Technology
SCHEME OF TEACHING AND EXAMINATION (Autonomous) 2017-18
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	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		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.

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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

II Semester M TECH

Professor and Head
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Bangalore - 560 086.

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 se 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/comp internship shall be declared as failed and have to complete during the subsequent University examination after satisfying the internship requirements.

III Semester M TECH

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.

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	18CSE35	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-I:** 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 requirement. 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 base 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.

(Signature)
Professor and Head
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Bangalore - 562 056.

Dr. Ambedkar Institute of Technology

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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


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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

Professor and Head
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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 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
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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	18CSE35	Technical Seminar	.....				50	-	50	2
6.	18CSEP36	Project phase - 1	.....	-	-	-	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:**
1. **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
 2. **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
 3. 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.


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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 | Ambedkar Institute of Technology
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D.
Professor and Head
Department of Civil Engineering
Ambedkar Institute of Technology
Bengaluru - 560 056.

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

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Dr. Ambedkar Institute of Technology

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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
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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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Dr. Ambedkar Institute of Technology

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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				



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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

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Professor and Head

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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

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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	20CSESS33	Technical Seminar		-	4	-	50	-	50	2	
4	20CSEPP34	Evaluation of Project Work Phase I		-	-	12	50	50	100	6	
Total							200	150	350	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

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Dr. Ambedkar Institute of Technology

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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										
Grand Total (I to IV Semester) :				2300 Marks ; 88 Credits						

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