Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY BANGALORE - 36

Date: 23.08.2010

Minutes of the 1st Academic Council meeting held on 21st August 2010 at 10.30 am in the Board room of Dr. AIT

Members Present

Meml	pers Present		
· SI ·	Constitution	Nature	Name
No			, , , , , , , , , , , , , , , , , , ,
1	The Principal of the	Chairperson	Dr P.Martin Jebaraj
ik.	College	CHAILPELBOIL	Dr P. Martin Jedaraj
2			
[~	1	Members	Dr C.Nanjunda Swamy
, -	Department in the		Dr B.M.Nandeeshalah
·\	College		Dr B.V.Sumangala
!	, , , , , , , , , , , , , , , , , , ,	, , .,	Dr Meenakshi
Ì			Dr Shivakumar
			Prof Siddaraju
(511)			Dr Rajendra
	į	,	Prof Prabha
	,	, . <u>.</u> ,	Prof Manjunath.A.P.
`.			Dr K.L.Savitramma
1 .			Dr V.Bheemaraju
· ·	<u>.</u>		
3	Four teachers of the	Members	Dr Sooryanarayana Rao
\	1	Mennets	1)Dr Manjunath Hegde
1 '			2)Dr T.Sreenivasulu Reddy
. • -			3)Prof O.Devaraju
	teaching staff by rotation		4)Smt Loons Clid
[· `·	on the basis of seniority		Výzuplastomi Patil
	of service in the college,		0 /
1	to be nominated by the	}	
	Principal		
. 4	Not less than four experts	Members	1) Dr S. Seetharamu
	from outside the college		Additional Director
	representing such areas		CPRI, Bangalore
	as industry, R and D		2) Dr G.R.Nagabhushana
	labs, Technical		Former Chairman
	Education,	1	HVE, IISc, Bangalore
į			3) Mr Rajendra Prasad
√·-		*** ***	Vice President
Ι,		A. C. C.	Blectro Systems Associates Pvt
		, , , , , ,	Ltd, Bangalore
	a e		
1 - 3		, lac	4) Mr B.N.Satyesh
/			Senior Vice-president
-		1	Tejas Network Ltd
<u> </u>	The state of the s		Bangalore

5	Three nominees of the	Members	1.Dr T.V.Govindaraju
	University,	-	Principal
	<i>©</i>	-	Shirdi Sal Engg College
			2.Dr H.R. Yashavanth
			Principal, SEACE
			Bangalore
		*	3.Dr V.R.Manjunath
		•	Principal
			Sapthagiri College of Engg
			Bangalore
6	A faculty member,	Member	Dean (Academic)
	nominated by the	Secrotary	Dr B.V.Sumangala
	Principal	l j	· · · · · · · · · · · · · · · · · · ·

Members Absent

- 1. Dr. G.R. Nagabhushana
- 2. Dr. Yeshovanth

Principal welcomed all the members of the committee and they were introduced. He explained about the constitution of the committee, tenure of the committee and the duties and responsibilities. He also explained about the courses of the institution going for autonomy and briefed about the various procedures followed to make the institution prepare for the implementation of academic autonomy.

Principal explained the various issues related to academic structure of autonomy at Dr. AIT with reference to the guidelines by VTU. The details of the deliberation made by experts are as follows:-

Agenda 1:

Recommendations of guidelines to all UG programmes - Autonomy structure, a) Credit system, b) Grading system, c) Eligibility criteria etc.

The following resolutions were made by the committee and the regulations are recommended and was proposed to place in GOVERNING BODY for approval.

a. Credit System

The committee recommended the following credits structure based on VTU guidelines

- BE Degree Programme Entry in I year
 - 200 Credits
- BE Degree Programme Entry in II year
 - Lateral Entry
 - 150 Credits (with bridge course Mathematics)

b. Academic Calendar

The major events with the corresponding period for execution are:-

Main Semester (Odd)

: 19 Weeks

Recess

: 2 Weeks

Main Semester (Even)

: 19 Weeks

Recess

%: 2 Weeks

Supplementary Semester: 8 Weeks

Recess

: 2 Weeks

Total

: 52 Weeks.

Make-up examination after the Semester End Examinations (SEE) as per notification.

c. Evaluation Methodology

The evaluation consists of two components

1. Continuous Internal Evaluation - CIE for 50 Marks

2. End Semester Evaluation - SEE for 50 Marks - It is essential to obtain minimum requirement is 40 % in both CIE and SEE to qualify for appearing for examination and to get pass grade in a subject respectively.

d. Grading Methodology

The absolute grading system is adopted in our case. The various grades are generated based on the examination rules out of 100 and is shown in table. These grades are then converted to grade points and the SEPA is determined.

Level .	Out- standing	Excellent	Very Good	. Good	Averlage	Poor	Fail
Grade	s	A	В	С	D	E	F
Grade Points	10	09	80	07	05	04	. 00
Score (Marks) Range (%)	90-100	75-89	60-74	50-59	45-49	40-44	<40

Grades

- W Withdrawal of any course
- I Not writing SEE for a genuine reason
- X Scoring >80% in CIE but getting F (fail) grade in SEE

e. Eligibility Criteria

A student can carry 4 subjects at the end of any even semester which includes

- Failed subjects and
- 'Not Eligible' subjects to write SEE due to shortage of marks in CIE(< 20 marks) or shortage of attendance (< 85%)

Agenda 2. Recommendation of BOS committees for various Departments

The Board of Studies for all the 13 Departments were formed and placed in GB for approval

Agenda 3: Recommendations for common BOE for I year It was proposed to have a common Board of Examiners for I year.

Agenda 4 : Recommendations for all rules and regulations pertaining to Examination After fully going through the document the examination rules and regulations are recommended by Academic Council

Agenda 5: Any Other subject

Dr Govindaraju suggested to increase the minimum requirement for CIE for practicals.

DEAN (ACADEMIC)

Principal Dr. Amhedkar Institute of Technology

Bangalore-560 056

B.E (Civil Engineering) Batch 2017 - 2018

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

SI	Course		Teac	Teachin	g Hours	Week		Exam	ination		
: N 0	Course and Course code	Course Title	hing Depa rtme nt	Theory Lecture	Tuto rial	Practi cal/Dr awing	Durati on in hours	CIE Mar ks	SEE Mark s	Total Marks	Cred its
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 -	-2		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
	WHATE		TOTAL						de ma		25

Professor and Head
Department of civil Engineerin

1. Amirectkar institute of Technology
Bangelore - 560 05

UG-2017-18

Batch 2017 - 2018

B.E (Civil Engineering)

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

				Teaching	Hours	Week		Exam	ination		
SI N o	Course and Course code	Course Title	Teachi ng Depart ment	Theory Lectur e	Tut ori al	Pract ical/ Draw ing	Durati on in hours	CIE Mar ks	SEE Marks	Total Mark s	Credit s
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
	LEADER !		TOTAL								25

Professor and Head
Department of civil Engineeric

2. Ambedkar Institute of Technologian
Bangelore - 560 (56)

Batch 2017 - 2018

B.E (Civil Engineering)

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

SI	Course		Tanahi	Teachi	ng Hour	s /Week		Examin	ation		
N o	and Course code	Course Title	Teachi ng Depart ment	Theory Lecture	Tut ori al	Practical/ Drawing	Duration in hours	CIE Mark s	SEE Mar ks	Total Marks	Cre dits
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	277		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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Bangalore - 569 058

Batch 2017 - 2018

B.E (Civil Engineering)

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

SI	Course			Teachin	g Hours	/Week		Exami	nation		
N o	and Course code	Course Title	Teaching Department	Theor y Lectur e L	Tut oria I	Pract ical/ Draw ing P	Durat ion in hours	CIE Mark s	SEE Mar ks	Total Marks	Cre
1	MA41	Engineering Mathematics - IV	BS	4			3	50	50	100	4
2	CV41	Concrete Technology	CV	3			3	50	50	100	
3	CV42	Structural Analysis - I	CV	4			3				3
4	CV43	Surveying - II	CV	3		-		50	50	100	4
5	CV44	Hydraulics & Hydraulic Machines	CV	4			3	50	50	100	3
6	CV45	Water Supply Engineering	CV	3		3	3	50	50	100	4
7	CV46	Building Planning & Drawing	CV	1		3	3	50	50	100	3
8	CVL47	Surveying Practice - II	CV	1			3	50	50	100	2
9	CVL48	Applied Engineering Geology	CV			3	3	50	50	100	1.5
10	EN49	Employability Skills	CV	2		3	3	50	50	100	1.5 PP/NP
			TOTAL			7		30			26

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Batch 2017 - 2018

B.E (Civil Engineering)

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

SI	Сопис		Teac	Teachin	g Hours	/Week		Exami	nation		
N o	Course and Course code	Course Title	hing Depa rtme nt	Theor y Lectur e L	Tut oria 1	Pract ical/ Draw ing	Durat ion in hours	CIE Mark s	SEE Mar ks	Total Marks	Cre dits
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	1		3	50		50	PP/NP
			TOTAL						1233		23

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B.E (Civil Engineering)

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

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SI	Course		Teac	Teachin	g Hours	Week		Exami	nation		
V	and Course code	Course Title	hing Depa rtme nt	Theor y Lectur	Tut oria	Pract ical/ Draw ing	Durat ion in hours	CIE Mark s	SEE Mar ks	Total Marks	Cre
1	CV51	Wastewater Treatment & Disposal	BS	4	-		3	50	50	100	4
	CV52	Design of RCC Structural Elements	CV	4			3				-
	CV53	Structural Analysis - II	CV	4				50	50	100	4
	CV54	Geotechnical Engineering - I					3	50	50	100	4
	CV55	Hydrology & Irrigation Engineering	CV	3			3	50	50	100	3
	CV56	Transportation Engineering - I	CV	3			3	50	50	100	3
,	CVL57	Lydrodica 6 II 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CV	3		3	3	50	50	100	3
1	CVL58	Hydraulics & Hydraulic Machinery Lab	CV			3	3	50	50	100	1.5
		Computer Aided Design Lab	CV			3	3	50	50	100	1.5
)	19HS51	Aptitude & Verbal Ability Skills	CV	2	W F		3	50		50	PP/NP
			TOTAL		2013						23

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Batch 2017 - 2018

B.E (Civil Engineering)

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

SI	Course		Teac	Teachin	g Hours	/Week		Exami	nation		
N o	and Course code	Course Title	hing Depa rtme nt	Theor y Lectur e L	Tut oria l	Pract ical/ Draw ing P	Durat ion in hours	CIE Mark s	SEE Mar ks	Total Marks	Cre dits
1	HS03	Management and Entrepreneurship	BS	4	1		3	50	50	100	
2	CV61	Design & Computer Aided Drawing of RCC Structures	CV	1			3	50	50	100	2
3	CV62	Transportation Engineering - II	CV	3							
4	CV63	Geotechnical Engineering - II	CV				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							
7	CV66X	Professional Elective - I	CV	3			3	50	50	100	3
8	CVL67	Geotechnical Engineering Laboratory	CV				3	50	50	100	3
9	CVL68	Extensive Survey Project	CV			3	3	50	50	100	1.5
0	CVP69	Mini Project Work				3	3	50	50	100	1.5
1	19HS61	Analytical & Reasoning Skills	CV			3	3	50	50	100	2
		James Accusoning Skills	HS	2			3	50		50	PP/NP
			TOTAL								26

	Profess	ional 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 Worte Manage
CVICCO			Solid Waste Management
CV663	Ground Improvement Techniques	CV667	Traffic Engineering
CV664	Advanced Surveying		
	- Marveying	CV668	Repair & Rehabilitation of Structures

Professor and Head Department of civil Engineering Ambedikar Institute of Technology Bangeture - 560 056.

Batch 2017 - 2018

B.E (Civil Engineering)

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

SI	Course and		Teachi		ng Hours	/Week		Exam	ination		I
N o	Course code	Course Title	ng Depart ment	Theor y Lectur e	Tut oria l	Pract ical/ Draw ing	Durat ion in hours	CIE Mark s	SEE Mar ks	Total Marks	Cre
1	CV71	Design of Steel Structures		L	T	P			KS		
		of Steel Structures	BS	4			3	50	50	100	1
2	CV72	Estimation and Valuation	CV	2	0				30	. 100	4
3	CVIZZ	Design of Prestressed Concrete	CV	2	2		3	50	50	100	3
3	CV73	Structures	CV	3			3	50	50	100	
4	CV74X	Professional Elective - II	OV					30	50	100	3
5	CV75X	Professional Elective - III	CV	3			3	50	50	100	3
5	CVL76		CV	. 3			3	50	50	100	3
		Environmental Engineering Lab	CV		22-	3	3	50	50		
7	CVL77	Concrete and Highway Materials Lab	CV		-	3				100	1.5
3	CVEXX	Interdepartmental Elective - I	CV			3	3	50	50	100	1.5
	CVD70	Project work Phase - I	CV	4	-	-	3	50	50	100	4
	CVP78	J-1- WORK I Habe - I	CV								PP / NP
			TOTAL								INP

Department of civil Engineerin Ambediar Institute of Technology Bangalore - 560 0%.

	Profession	al Elective			Interdepartmental Elective
F	Professional Elective - II	Pi	rofessional Elective - III	1	Interdepartmental Elective - I
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	C <mark>V757</mark>	Structural Dynamics		Y Y
		CV758	Construction Project Management		

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Batch 2017 - 2018

B.E (Civil Engineering)

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

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CI				Teachi	ng Hours /\	Veek		Exami	nation		
SI N o	Course and Course code	Course Title	Teach ing Depar tment	Theory Lecture	Tutori al	Practic al/ Drawi ng	Durat ion in hours	CIE Mark s	SEE Mar ks	Total Marks	Cre dits
				L	T	P					
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	-	4 - 1	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

Profession	al 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 WasteWater 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		

Department of civil Engineering
3. Ambedkar Institute of Technology
Bangalore - 560 056

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)

				TER B.E (PH			Teaching Hours /Week		Ex	aminati		
ourse and ourse Code		Course Title	Teaching	Paper Setting Board	Theory Lecture	Tutorial	Practica V U Drawin	Duration in hours	CIE	SEE Marks	Total Marks	Credits
					L	T	P					
18MA11	BC 1	Calculus and Linear Algebra	Mathematics	Science	3	2	-	03	50	50	100	4
18PH12	BC 1	Engineering Physics	Physics	Science	4			03	50	50	100	4
1,8EE13		Basic Electrical Engineering	E and E Engineering	E and E Engineering	2	2	-	03	50 .	50	100	3
18CV14	ES 1	Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	2	2	-	03	50	50	100	3
18MEL15	ES 18	Engineering Graphics	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	-	2	03	50	50	100	3
18PHL16	BC 1	Engineering Physics Laboratory	Physics	Science	-		2	03	50	50	100	1
18EEL17	ES 1	Basic Electrical	E and E Engineering	E and E Engineering		-	2	03	50	50	100	1
18HS11/ 18HS12	1.111	English/ Kannada	Humanities	Humanities	1		2	02	50	50	100	20
		18HS11/	18EEL17 Engineering Laboratory 18HS11/ English/Kannada	18EEL17 Basic Electrical Engineering Laboratory Engineering 18HS11/ English/Kannada Humanities	18EEL17 Basic Electrical Engineering Laboratory Engineering Engineering 18HS11/ English/Kannada Humanities Humanities	18EEL17 Basic Electrical Engineering Laboratory Engineering Engineering 18HS11/ 18HS12 English/ Kannada Humanities Humanities 1	18EEL17 Basic Electrical Engineering Laboratory Engineering Engineering 18HS11/ 18HS12 English/ Kannada Humanities Humanities 1	18EEL17 Basic Electrical Engineering Laboratory Engineering Engineering 2 18HS11/18HS12 English/ Kannada Humanities Humanities 1 2	18EEL17 Basic Electrical Engineering Laboratory Engineering Engineering 2 03 18HS11/18HS12 English/ Kannada Humanities Humanities 1 2 02	18EEL17 Basic Electrical Engineering Laboratory Engineering Engineering 2 03 50 18HS11/18HS12 English/ Kannada Humanities Humanities 1 2 02 50	18EEL17 Basic Electrical Engineering Laboratory Engineering Engineering 2 03 50 50 18HS11/18HS12 English/ Kannada Humanities Humanities 1 2 02 50 50	18EEL17 Basic Electrical Engineering Laboratory Engineering Engineering 2 03 50 50 100 18HS11/18HS12 English/ Kannada Humanities Humanities 1 2 02 50 50 100

Professor end : :d

Department of civil Engine end

Ambedkar Institute of Technology

Bangalore - 560 056.

UG- 2018-19

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)

II SEMESTER B.E (CHEMISTRY GROUP)

				ig ent	fing _	Hou /We	irs		Exa	minatio	n		its
SI. No	1	urse and irse Code	Course Title	Teaching Department	Paper Setting Board	Theory Lecture	Tutoria I	Practic al/ Drawin	Duration in hours	CIE	SEE Marks	Total Marks	Credits
						L	T	P	Q :-				72.514
1	ВС	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	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	ВС	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	50 400	100 800	20
		320 100 200			TOTAL	13	08	06	23	400	400	000	20

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

Department of civil E. . . . ering

Ambedkar Institute of schnology
Bangalore - 560 656.

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)

SE	MESTE	R			Teachin	g Hour	s /Week		Examin	nation		
i.		arse and	Course Title	Teaching Department	Theory	Tutorial	Practica I/ Drawing	Duration in hours	E Marks	SEE Marks	Total Marks	Credits
.0				De	L	T	P	Dn	CIE	SI	T	
,	D.C.	18MA31	Transform calculus and Special	Mathematics	2	2		03	50	50	100	3
1	BC	TOWAST	functions	CV	3			03	50	50	100	3
2	PC	18CV31	Building Materials and Construction	CV	4			03	50	50	100	4
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	3			03	50	50	100	3
6	PC	18CV35	Applied Engineering Geology Civil Engg. Material Testing	CV			2	03	50	50	100	1
7	PC	18CVL36	Laboratory	CXI			3	03	50	50	100	1
8	PC	18CVL37	Surveying Practice	CV								
9	HS	18HS31/32	Constitution of India Professional Ethics and Human Rights/	HS/CV	1	-	-	02	50	50	100	1
			Environmental Science	TTition	04	-		03	50	-	50	0
0	MC	18HS33	Soft skills (MC)	Humanities TOTAL		02	05	29	500	450	950	24
200			urse prescribed to lateral entry Diplom	a halders admitt	ed to III s	semeste	er of Engir	eering	progran	ns		84.97
		Co	urse prescribed to lateral entry Diplom	Mathamatica	02	01		03	50		50	(
1	MC	18MAD31	Basic Engg Mathematics - I	Mathematics	02	01				dist up		
			PC: Professional Core. Hu: Humanities	MC · Mandator	v Course						1	

Department of civil Engineering Ambedkar Institute of Technology Bangaiore - 560 056.

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)

V SEM	IESTEI	2		at		hing H /Week			Exam	ination		S
FJ. No.		urse and	Course Tide	7. hing De, retment	T. ory L. tur	E	Prical/ Dr.wing	Dus son in basers	C : Marks	Si 2 Mariks	Total	Credits
					L	T	P		50	50	100	3
	BC	18MA41	Numerical methods and Probability	Mathematics	2	2		03	50	50	100	3
1		1007741	W. to Comply Engineering	CV	3			03	50	50		4
2	PC	18CV41	Water Supply Engineering Analysis of Determinate Structures	CV	4			03	50	50	100	4
3	PC	18CV42	Hydraulics and Hydraulic Machines	CV	4			03	50	50	100	3
4	PC	18CV43	Hydraulics and Hydraulic Machines	CV	3			03	50	50	100	4
5	PC	18CV44	Hydrology and Irrigation Engineering	CV	4			03	50	50	100	
6 7	PC PC	18CV45 18CVL46	Concrete Technology Computer Aided Building Planning and	CV		1	3	03	50	50	100	1
			Drawing O III I am materials I ab	CV			2	03	50	50	100	1
9	PC HS	18CVL47 18HS41/42	Concrete & Highway materials Lab 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
10	IVIC	1011515	Zimproy	TOTAL	25	03	05	29	500	450	950	24
				-1dams admitted	to III se	mester	of Engir	neering	progran	ns	25, 3, 6	La trija
		Cor	urse prescribed to lateral entry Diploma h	loiders admitted	10 111 50	01	1 2	03	50		50	0
	MC	1 . 03 . C . D . 41	Basic Engg Mathematics - II	Mathematics	02	01		03	1 30			

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 Hand Department of civil Engineering Ambedkar Institute of inchnolog Bangalore - 560 056.

Professor and Head

Department of civil Engineering

Ambedkar Institute of Technology

Bangalore - 560 056.

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)

VOL	EMEST	Tork		1	Teachi	ng Hours	/Week		Exami	ination		
SI.	C	ourse a nd	C 4	hing		Ę.	. tite			S:	Switte	Cadits
				F 4	L L	T	P	Du	N.C.	S	T.	
1	HS	18HS51/52	M&E / IPR (title as per BOS decision)	Hu	3	-	8,-10	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
			6	TOTAL	25	-	4	30	500	450	950	25

Electives

Course code	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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Dr. Ambedkar Institute of Technology, Bengaluru-560 056 SCHEME OF TEACHING AND EXAMINATION from Academic Year 2018-19

Department of civil Engineering

Ambedkar Institute of Chrology

Bangalore - 560 (C

B.E (Civil Engineering)

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

C)				=	Teach	ing Hou	rs /Week		Exam	ination		
SI.	1	ourse and	Course Title	hing	cory tur	(ori	awi	ion	.; ·	Syli	tal rks	edits
Canada		•		1. 2	L	T	P	ā =	-	1		J
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		1	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	2000000	1 1
0	PC	18CVL69	Extensive Survey Project	CV			2	03	50		100	2
1	HS	18HS66	Placement Training	Hu	2		2	03	50	50	100	DDAID
T 4	D.C.		Cara DE: Duofossional Election OE O	TOTAL	20	2	6	33	550	500	50 1050	PP/NP 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
code	CV641 Pre-Stressed Concrete	Open Elective - B
18CV641	Pre-Stressed Concrete	Students can select any one of the open elections (Discourse of th
18CV642	The state of the s	Students can select any one of the open electives (Please refer to consolidated list of Dr. AIT for open electives) offered by any Department.
18CV643	Traffic Engineering	Selection of an open elective is not allowed provided,

18CV644	Open Channel Hydraulics	 The candidate has studied the same course during the previous semesters of the programme.
18CV645	Earth and Earth Retaining Structures	• The syllabus content of open elective is similar to that of Departmental core courses or
	Open Elective - B	professional electives.
18CV651	Integrated Solid Waste Management	• A similar course, under any category, is prescribed in the higher semesters of the
18CV652	Photogrammetry and Remote Sensing	programme.
		Registration to electives shall be documented under the guidance of Programme Coordinator/
		Mentor.

Professor and Head
Department of civil Empiry-ering
Ambedkar Institute of rechnology
Bangalore - 560 65c

t Ambedkar Institute of Tachnology Bangalore - 560 016.

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)

	T			Teaching	Teach	ing Hou	rs /Week						
SI. No	Course and Course code		Course Little		Theory	Tutorial	Practica // Drawin	Duration in hours	CIE	SEE Marks	Total Marks	Credits	
				-	L	T	P				100		
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	18CVI79	Internship	(If not	completed	after VI	semester exi	amination of VII a	s, it has to	be carri	ied out		
			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.

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

18CV732	Photogrammetry and Remote Sensing
18CV733	Environmental Impact Assessment
18CV734	Design of Bridges
18CV735	Structural Dynamics
18CV736	Construction Project Management
18CV737	
	Reinforced Earth Structures

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.

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
10CV/31	Assessment
18CV752	Urban Transport Planning
18CV753	Photo Geology and Remote Sensing

Professor and the Department of civil English envis.

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Bangalore - 560 cub.

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)

7 2 2 2	SEMESTER				Teach	ing Hours	/Week			Party.		
SI. No		rse and se code	Course Title	Teaching Department	Theory	Tutorial	Practical / Drawing	uration in hours	CIE	SEE Marks	Total Marks	Credits
					L	T	P	Ď		SI		1 64
1	MC	18HS81/82	CMEP / OSHA	IM /CV	2	-		03	50	50	100	2
2	Project	18CVP81	Project Work Phase - Iİ	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.)			rs and /or	03	50	50	100	2
		T	OTAL		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
L Ambedkar Institute of Technology
Bangalore - 560 Cob.

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 R.F. (PHYSICS GROUP)

					TER B.E (PH)	Bres		Teaching Hours /Week		Exa	Examination		
SI. No	200000000000000000000000000000000000000	urse and	Course Title	Teaching Department	Paper Setting Board	Theory	Tutorial	Practica // Drawin g	Duration in hours	CIE	SEE Marks	Total Marks	Credits
				_	a a	L	T	P				100	4
-			Calculus and Linear	Mathematics	Science	3	2		03	50	50	100	
1	BC	18MA11	Algebra		Caianaa	.4			03	50	50	100	4
2	BC	18PH12	Engineering Physics	Physics	Science E and E		1		03	50	50	100	3
3	ES	18EE13	Basic Electrical Engineering	E and E Engineering	Engineering	2	2		- 03			100	3
		18CV14	Civil Engineering and	Civil	Civil Engineering	2	2	-	03	50	50	100	3
5	ES	18CV14	Mechanics Engineering Graphics and Design	Engineering ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	2	-	2	03	50	50	100	3
6	ВС	18PHL16	Engineering Physics	Physics	Science	-		2	03	50	50	100	1
7	ES	18EEL17	Laboratory Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	-		2	03	50	50	100	1
	**	18HS11/	English/ Kannada	Humanities	Humanities	1		2	02	50	50	100	1
8	Hu	18HS12	English Kalmada		TOTAL	13	06	08	21	350	350	700	20

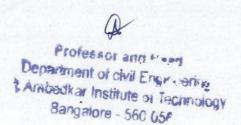
Professor and Head
Department of civil Engineers
t Armbedkar Institute of Technology
Bangalore - 560 056.

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)

II SEMESTER B.E (CHEMISTRY GROUP)

				ng ent	ting	Teaching Hours /Week		Examination					
SI. No		ourse and urse Code	Course Title	Teaching Department	Paper Setting Board	Theory Lecture	Tutoria	Practic al/ Drawin	Duration in hours	CIE	SEE Marks	Total Marks	Credits
1						L	T	P	ı				
1	ВС	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	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	ВС	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	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.



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)

				Teachir	ng Hou	rs /Week		Exami	ination		
	multiplication of the second o	Course Title	eaching	Theory	Tutorial	Practica // Drawing	ration in hours	E Marks	E Marks	al Marks	Credits
			Ď	L		P	Du	СП	SE	Tot	
BC .	18MA31	Transform calculus and Special functions	Mathematics	2	2		03	50	50	100	3
PC	18CV31	Building Materials and Construction	CV	3			03			7	3
			CV	4			03	100000			4
			CV	4			03				4
			CV	4			03				4
			CV	3			03	50	50	77.75.25	3
PC	18CVL36	Civil Engg. Material Testing	CV			2	03	50	50		1
PC	18CVL37		CV			3	03	50	. 50	100	1
HS	18HS31/32	Constitution of India Professional Ethics and Human Rights/ Environmental Science	HS/CV	1	-	-	02	50	50	100	1
MC	18HS33	Soft skills (MC)	Humanities	04	-					200000000	0
			TOTAL	19	02	05	29	500	450	950	24
	Com	rea prescribed to lateral entry Diploma	holders admitte	d to III s	emeste	er of Engine	eering 1	prograi	ns		
MC	18MAD31	Basic Engg Mathematics - I	Mathematics	02	01		03	50		50	0
	BC PC PC PC PC HS	PC 18CV31 PC 18CV32 PC 18CV33 PC 18CV34 PC 18CV35 PC 18CVL36 PC 18CVL36 PC 18CVL37 HS 18HS31/32 MC 18HS33	Course Code Course Title Course and Course Title BC 18MA31 Transform calculus and Special functions PC 18CV31 Building Materials and Construction CV PC 18CV32 Strength of Materials PC 18CV33 Surveying CV PC 18CV34 Fluid Mechanics PC 18CV35 Applied Engineering Geology PC 18CV35 Applied Engineering Geology PC 18CVL36 Civil Engg. Material Testing Laboratory PC 18CVL37 Surveying Practice PC 18CVL37 Surveying Practice Constitution of India Professional Ethics and Human Rights/ Environmental Science MC 18HS33 Soft skills (MC) Humanities TOTAL Course prescribed to lateral entry Diploma holders admittee	Course and Course Title Course Title	Course and Course Code Course Title Eng. Mathematics CV 3 CV 4 CV 1 CV CV 1 CV CV CV	Course and Course Code Course Title Course Ti	Course and Course Code Course Title Course Title Course Code Course Title Course Title Title Title Course Title	Course and Course Code Course Title Course Title Title Course Title Title Course Title Title Course Title Course Title Title Course Title Title Course Title Title Course Title Title Title Course Title Ti	Course and Course Code Course Title Course Title Title Title Course Title Title Title Course Title Ti	Course and Course Code Course Title Course Title Title Title Title Course Title Ti	

Professor and Head Department of civil Engineeris: Ambedkar institute of Technology Bangalore - 560 056.

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)

				. at	Tea	ching H /Week			Exam	ination		
Sl. No		Course and ourse code	Course Title	Teaching	Theory	Tutori	Practical/ Drawing	Duration in hours	CIE	SEE Marks	Total Marks	Credits
		1			L	T	P	O ii				
1	BC	18MA41	Numerical methods and Probability	Mathematics	2	2		03	50	50	100	3
2 1	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
		Cour	rse prescribed to lateral entry Diploma ho	olders admitted to	o III sen	nester o	f Engine	eering n	rogram	S		
	MC	18MAD41	Basic Engg Mathematics - II	Mathematics	02	01		03	50		50	0

ENV: Environmental Studies, CIP: Constitution of India Professional Ethics and Human Rights

Department of civil Engrager

Ambedicar Institute of Technology Bangalore - 560 056.

Professor and Head

Department of civil Engineers

Ambedkar Institute of chnology

Bangalore - 560 G56.

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)

				nt nt	Teaching Hours /Week							
SI. No		ourse and ourse code	Course Title	Teaching Department	Theory Lectur e	Tutori	Practic al/ Drawi	Duration in hours	CIE	SEE Marks	Total Marks	Credits
					L	T	P	Q :=				
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

Course code Professional Electives - 1 Students can select

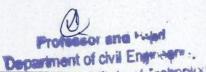
18CV551 Transportation Engineering
18CV552 Theory of Elasticity
18CV553 Ground Improvement Techniques
18CV554 Advanced Surveying
18CV555 Ground Water Hydrology

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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Bangalore - 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)

				=	Teach	ing Hour	s/Week		Exami	nation		
SI N	2000	ourse and ourse code	Course Title	Teaching Department	Theory Lectur	Tutori al	Practic al/ Drawi	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
v				D	L	T	P	O :				
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	-1	-	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
18CV642	Alternate Building Materials and Technologies	for open electives) offered by any Department.
18CV643	Traffic Engineering	Selection of an open elective is not allowed provided,

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)

					Teachi	ng Hour	s/Week		Examin	ation	10000	
SI. No		rse and rse code	Course Title	Teaching	Theory	Tutorial	Practical / / Drawing	rration in hours	CIE	SEE Marks	Total Marks	Credits
100				-	L	T	P	Ã		SE		
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		eted during of VI and VI			03	50	50	100	2

VII and VIII semesters.)

02

12

4

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:

VIII SEMESTER

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.

TOTAL

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

Department of civil Engineering 7. Ambedkar Institute of Technology Bangelore - 560 058.

Professor and Head

Department of civil Engineering

t Ambedkar Institute of Tachnology

Bangalore - 560 056.

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

					Teach	ning Hour	s /Week		Exami	nation		
SI. No		urse and arse code	Course Title	Teaching	Theory	Tutorial	Practica // Drawin	Duration in hours	CIE	SEE Marks	Total Marks	Credits
					L	T	P					
1	MC	18HS71/72	CMEP / OSHA	IM/CV	2	-		03	50	50	100	2
2	PC	18CV:71	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	18CVI79	Internship	(If not	completed during the	d after VI interveni	semester exa	amination of VII ar	s, it has to	be carri	ed out	
200	7-1032		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.

Ele	
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		Electives	
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
18CV733	Environmental Impact Assessment	open electives) offered by any Department.
18CV734	Design of Bridges	Selection of an open elective is not allowed provided,
18CV735	Structural Dynamics	 ✓ 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
18CV736	Construction Project Management	professional electives.
18CV737	Reinforced Earth Structures	 ✓ 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.

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

4

Department of civil Engineering

Ambedkar Institute of Technology

Bangalore - 560 056.

SI. No•	Course and Course Code		Course Title	Teaching Department	Paper Setting Board Board	Teaching Hours /Week		Examination					
						Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
						L	T	P					
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	Physics	Science	-		2	-03	50	50	100	-
7	ES	- 18EEL17	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	-	-	2	03	50	50	100	
. 8	Hu	18HS11/ 18HS12	English/ Kannada	Humanities	Humanities			2	02	50	50		1
-	1				TOTAL	13	06	08	21	350	350	700	20

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

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.

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	V 20 12 1-1		I SEMES	nd Examination (OBE) and C	HEMISTKI	0	-			minat	tion	NEW N			1
						Teach Hot	irs		Exv	Imma					-
	Cour	rse and se Code	Course Title	Teaching Department	Paper Setting Board	Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	ore Marks	SEE THE S	Total Marks	Credits	
				Mathematics	Science	1 3	T 2		03	50		50	100	4	
B	C	18MA11	Calculus and Linear Algebra		Science	4			03	50	0	50	100	4	
В	C	18CH12	Engineering Chemistry	Chemistry	Computer	1 2	2		03	51	0	50	100	3	
I	ES	18CS13	C Programming for Problem Solving	Computer Science and	Science and Engineering							50	100	3	
		18EC14	Basic Electronics	Engineering ECE/E and I/	E and C Engineering	2	2	-			50		100		-
	ES	18EC14	Elements of	ME, Auto, IP,	Mechanical Engineering	2	2		03		50	50	100		
	ES	18ME13	Mechanical Engineering	IEM, Mfg Engineering	Science	-	-	-	2 0	3	50	50	100)	1
+	BC	18CHL16	Engineering Chemistry Laboratory	Chemistry	Computer	-	-		2 0	3	50	50	10	0	1
1	ES	18CSL17	Computer Programming	Computer Science and Engineering	Science an					1	50	50	10	00	1
		18HS11/	Laboratory	Humanities	Humaniti		1		2	02	30	1			
	HS	18HS12	English/ Kannada		TOTA	AL.	13	08	06	23	350	350	7	00	20
	1					To the same of	DOU	D)							
			11.3	SEMESTER	B.E (PHYS)	CSG	Teachi			Ex	amina	tion			
1.		Course and Course Code	Course Title	Teaching	Paper Setting Board	-	Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SFE Marks		Total Marks	Credits
				Tea	Pape					Durat	CIE	SEE	3	Tota	0
				Mathemat	ics Science			T 2	P	03	5	0	50	100	
i	BO	18MA21	Advanced Calculus and Numerical	Mathemat						03	1	50	50	100	-
		C 18PH22	Methods Engineering Physi	cs Physics	Science E and	-	4	2	-	03	-	50	50	100	
	2 B		- t rit-stringl	E and E		eering				03	1	50	50	100	1
	3 E	S 18EE23	Engineering	Engineer and Civil	Civil	-	2	2		1 03	,	20			1

1				L Q	a.			-		no l	0	S	F		
1						L	T		P		50	50	10	00	4
			LG L due	Mathematics	Science	3	2	1	-	03	30	20			
1	3C	18MA21	Advanced Calculus and Numerical	Marie						03	50	50	1	00	4
1			Methods	Physics	Science	4				7.0	50	50		00	3
+	BC	18PH22	Engineering Physics	E and E	E and E	2	2			03	30	1 30			
+	ES	18EE23	Basic Electrical Engineering	Engineering	Engineering Civil	2	2	+		03	50	50)	100	3
+	ES	18CV24	Civil Engineering and	Civil Engineering	Engineering	1 2	+-	+	2	93	50	5	0	100	3
1		171.05	Mechanics Engineering Graphics	ME, Auto, IP,	Mechanical Engineering					1					
	ES	18MEL25	and Design	IEM, Mfg Engineering		-	+	-	2	03	50	1	0	100	1
			Engineering Physics	Physics	Science		1	-		- 02	50	1	50	100	1
6	BC	18PHL26	Laboratory	E and E	E and E		-		2	03	1 30	1			
7	ES	18EEL27	Basic Electrical Engineering	Engineering	Engineering	8				03	5 1 5	0	50	100	1
	1345		Laboratory	Humanities	Humanitie	S I	1		2	10.	4	"			
8	HS	18HS21/	English/ Kannada	Hamaner			-		0.0	1 2	3 4	00	400	800	2
0	1	18HS22			TOTA	L	13	06	08	2	0				em .

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

1 hour Lecture (L) per week per semester =1 Credit Definition of Credit:

2 hour Tutorial (T) per week per semester =1 Credit
2 hour Practical/Laboratory/Drawing (P) per week per semester =1 Credit.

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Dr. Ambedkar Institute of Technology, Bengaluru-200 020

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2020-21

B.E (Civil Engineering)

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

			Outcome Based Educat	III SEMESTE	R Teaching H	lours /We	ek		ation			
1.	Cou	rse and	Course Title	ching rtment reory		Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
0	Cou	rse Code		7	L	T	P	0.2	50	50	100	3
				Mathematics	2	2		03		50	100	3
-		1034421	Mathematics (Title as per the decision of BoS in Sciences)		3			03	50 50	50	100	4
1	BC	18MA31	Building Materials and Construction	Civil Civil	4		-	03	50	50	100	4
2	PC	18CV31	Strength of Materials	Civil	4			03	50	50	100	4
3	PC	18CV32		Civil	4		-	03	50	50	100	3
4	PC	18CV33	Surveying Fluid Mechanics	Civil	3			03	50	50	100	1
5	PC	18CV34		Civil	-		2	03	50	50	100	1
6	PC	18CV35 18CVL36	Civil Engineering Material Testing	Civil	-		2		50	50	100	1
7	PC	18CVL37		Humanities /Civil	1	-	-	02			50	PP/NP
8	PC		- Fladia Projessional December		1			03	50		950	24
9	HS	18HS31/32	Human Rights / Environmental Services	Humanities	25	02	04	29	500	450	950	
10	MC	18HS33	Soft skills	TOTAL								
10				Di I holders ad	mitted to II	I semester	of Engineer	ing progra	ms			
			Course prescribed to lateral entr	y Diploma nonders ad	02	01	-	03	50		50	PP/NI
11	MC	18MAD31	Advance Mathematics - I	Mathematics				" (TOT	AL: 24).			

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). HODs are informed to accommodate one more laboratory in addition to the above coalests infected, without anothing the total number of decide (101AL, 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

(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 shall compulsorily be registered during respective semesters to complete all the formalities of the course and appear for SEE examination. (b) The manuatory non - creut courses Advance France France and A, prostrict to late and a specific of the programme but considered as head of passing along with credit courses of the 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 and " " Department of civil Eight veri . t Ambedkar Institute of : .ehnolu. Bangalere - 560 US6.

B.E (Civil Engineering)

	B.E (CIVII Engineer in	5) CDCC
	Choice B	ased Credit System (CBCS)
Outcome Rased Educa	tion(OBE) and Choice B.	ased Credit System (CBCS)
Outcome bas-		

		usu salah		V SEMESTER	Touching	Hours /V	Veek		Examin	ation		
Sl.		rse and	Course Title	Teaching Department	Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
10					L	T	P					
			Mathematics (D. G.: Spiencer)	Mathematics	2	2	_	03	50	50	100	3
1	BC	18MA41	(Title as per the decision of BoS in Sciences)		3		_	03	50	50	100	3
		1007741	Water Supply Engineering	Civil	4			03	50	50	100	4
2	PC	18CV41	Analysis of Determinate Structures	Civil				03	50	50	100	4
3	PC	18CV42	Hydraulics and Hydraulic Machines	Civil	4			03	50	50	100	3
4	PC	18CV43	Hydrology and Irrigation Engineering	Civil	3			03	50	50	100	4
5	PC	18CV44		Civil	4				50	50	100	1
6	PC	18CV45	Concrete Technology	Civil	-	1	3	03				1
7	PC	18CVL46	Computer Aided Building Planning and Drawing	Civil			2	03	50	50	100	-
0	PC	18CVL47	Concrete and Highway materials Laboratory	Civil				02	50	50	100	1
8	PC		Constitution of India Professional Ethics and Human	Humanities / Civil	1	-	-	02				
9	HS	18HS41/42	Rights/ Environmental Science		4			03	50	-	50	PP/NI
-		1071542	Employability skills	Humanities	4 4 4	03 /	05	29	500	450	950	24
10	MC	18HS43	Employaciney	TOTAL	24		-	programs		197 19		
			Course prescribed to lateral entry Diplon	a holders admitted to	III semeste	er of Engi	neering	programs	50	1	50	PP/N
				Mathamatics	1 02	1 01				24)		
-11	MC	18MAD41	Advance Mathematics - II	Mathematics	hout alterir	og the total	number	of credits	(TOTAL:	24).	ander of F	E progra

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.

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
3. Ambedkar Institute of Technology Bangalore - 560 038.

⁽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.

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)

SE	v	8 81.	83

			+		hing H /Week			Exami	nation		
	urse and irse code	Course Title	Teaching Department	Theory	Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
				L	T	P	Q	0	S		
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	3
C	18CV54	Geotechnical Engineering	Civil	2	2		03	50	50	100	
-	18CV55X	Professional Elective -1	Civil	3			03	50	50	100	3
E DE	18CVEXX	Open Elective -A	Civil	3			03	50	50	100	3
PC 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		27	450	450	900	25

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

Electives

urse	171 44-00 1	Open Elective -A
ode	Professional Electives -1	Students can select any one of the open electives (Please refer to consolidated
V551	Transportation Engineering	list of Dr. AIT for open electives) offered by any Department.
V552	Theory of Elasticity	g to the effort open elective is not allowed provided:
V553	Ground Improvement Techniques	The candidate has studied the same course during the previous semesters of
V554	Advanced Surveying	
V555	Ground Water Hydrology	 the programme. The syllabus content of open elective is similar to that of Departmental core
	OPEN ELECTIVE-A	
CVE01	Air Pollution and Control	A similar course, under any category, is prescribed in the higher semesters
CVE02	Solid Waste Management	of the programme. Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.

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)

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	ATT 3 4	TO CITE	TELES
VI	SEM	H.S	B.K

	T			Teachir	ig Hour	s /Week	1	Examin	ation		
	irse and irse code	Course Title	Teaching	Theory	Tutorial	Practica V Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
				L	T	P	100		50	100	3
HS	18HS61/62	M&E/IPR	Hu	3			03	50	50	100	4
PC	18CV61	Design of Steel Structures	Civil	3	2		03	50	30	100	
PC	18CV62	Railways, Airport, Tunnel and Harbour Engineering	Civil	3			03	50	50	100	3
	1003763	Foundation Engineering	Civil	3		•	03	50	50	100	3
PC	18CV63	Professional Elective - 2	Civil	3			03	50	50	100	3
PE	18CV64X	The state of the s	Civil	3			03	50	50	100	3
OE	18CVEXX	Open Elective – B				-	03	50	50	100	1
PC	18CVL66	Computer Aided Drawing of RC and Steel structures	Civil			2	03	- 30			
PC	18CVL67	Geotechnical Engineering	Civil		-	2	03	50	50	100	1
		Laboratory		1			03	50	50	100	2
MP	18CVP68	Mini-Project	Civil	T	T	2	03	50	50	100	1
PC	18CVL68	Extensive Survey Project			d out di	ring the					
INT	18CVI69	Industry Internship	interv	ening va	cations emesters	of VI and					24
			TOTAL	18	2	6	30	500	500	1000	24

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

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

ode	Professional Electives - 2	
V641	Pre-Stressed Concrete	1
V642	Alternate Building Materials and	
	Technologies	1
:V643	Traffic Engineering	1
V644	Open Channel Hydraulics	-
CV645	Earth and Earth Retaining Structures	-
77015	Open Elective - B	-
OVE03	Integrated Solid Waste Management	-
TVE04	Photogrammetry and Remote Sensing	_
- T Jan 0		

Electives Open Elective - B

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

Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.

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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 EINGINEERING VII SEMESTER (2015-16 Batch)

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

	Elective-II (Group B)		Elective-III (Group C)
	Title of the Subject	Subject Code	Title of the Subject
Subject Code	Matrix Method of Structural Analysis	CV 751	Numerical methods in Civil Engineering
CV 741	Advanced Design of RC Structures	CV 752	Rock Mechanics
CV 742	Advanced Design of RC Structures	CV 753	Pavement Materials and Construction
CV 743	. Design of Masonry Structures	CV 754	Photogrammetry and Remote Sensing
CV 744	Earth and Earth Retaining Structures	CV 755	Air Pollution and Control
CV 745 CV 746	Highway Geometric Design 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	CV 757	Structural Dynamics
	Engineering	CV758	Construction Project Management
CVE01	Integrated Solid Waste Management (IDE)	CVE02	Air Pollution and Control methods (IDE)

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7. Ambedkar Institute of Fachnology
Bangalore - 560 655.

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 SE	MESTER				Teach	ing Hours	/Week		Examin	ation	- 6 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4	
Sl. No		rse and se code	Course Title	Teaching	Theory	Tutorial	Practical / Drawing	Duration in hours	TE Marks	SEE Marks	Total Marks	Credits
					L	T	P	A	0	S		
1	MC	18HS81/82	CMEP / OSHA	IM /CV	2	47 47		03	50	50	100	2
2			Project Work Phase - II	CV		-	2	03	50	50	100	10
	Project	18CVP81		CV		_	2	03	50	50	100	1
3	Seminar	18CVS82	Technical Seminar	(Completed	Justine the in	toruening	vacations of					
4	INT	18CVI83	Internship	VI and V	II semesters a semest	and /or VII	and VIII	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

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.

Total 1/5 Cr	r	II	III	IV	V	VI	VII	VIII	Total Credits
Semester	1	11	111		25	24	22	15	175
Credits	20	20	24	24	25	24	23	13	1/3

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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 EINGINEERING

VIII SEMESTER (2015-16 Batch)

			Teaching	Teach	ing Hrs/	Week	Credits
Sl.	Subject	Title of the Subject	Dept.	L	T	P	Credits
No.	Code		Civil		01	03	02
2	CV 81	Design and Computer Aided Drawing of Steel Structures		02			3
3	CV 82X	Elective - IV (Group D)	Civil	03			2
3		Elective - V (Group E)	Civil	03			3
4	CV 83X		Civil			24	12
5	CVP 84	Project work Phase II			04		2
6	CVS 85	Seminar	Civil		04		02
-	HS 04	Intellectual Property Rights	Humanities	02			02
1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		04			04
8	CVE XX	Interdepartmental Elective		12	05	27	28
		TOTAL		12	03		1

	Elective-IV (Group D)		Elective-V (Group E)
	Title of the Subject	Subject Code	Title of the Subject
Subject Code	Advanced Pre-stressed Concrete Structures	CV 831	Finite Element Analysis
CV 821		CV 832	Reinforced Earth Structures
CV 822	Advanced Foundation Design	CV 833	Urban Transport Planning
CV 823	Pavement Design	CV 834	Advanced Design of Steel Structures
CV 824	Earthquake Resistant Design of Structures	VIII CONTRACTOR OF THE PROPERTY OF THE PROPERT	Water Resources Engineering
CV 825	Industrial Waste Water Treatment	CV 835	Environmental Impact Assessment
CV 826	Quality Management System in Civil Engineering	CV 836	The state of the s
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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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

21MAT101		Teaching		Teac	hing H	rs/Week			Exam	ination		Credits
21MA1101		Department	L	T	P	S	Total	Duration (Hrs)	CIE	SEE	Total	Credits
	Calculus and Linear Algebra	Mathematics						(Hrs)	Marks	Marks	Marks	
21MAT201	Advanced Calculus and Numerical methods		3	2	0	0	5	3	50	50	100	4
21CHT102/ 21CHT202	Engineering Chemistry	Chemistry	3	0	0	0	3	3	50	50	100	,
21CST103/ 21CST203	Problem solving through Programming	Computer Science	2	2	0	0	4	3	50	50	100	3
21ECT104/ 21ECT204	Basic Electronics and Communication Engineering	Electronics	2	2	0	0	4	3	50	50	100	3
21MET105/ 21MET205	Elements of Mechanical Engineering	Mechanical	2	2	0	0	4	3	50	50		
21CHL106/ 21CHL206	Engineering Chemistry Laboratory	Chemistry	0	0	2	0	2	3	50	50	100	3
21CSL107/ 21CSL207	Computer Programming Laboratory	Computer Science	0	0	2	0	2	3	50	50	100	1
21HST108	Communicative English								50	30	100	1
21HST208	Professional writing skills in English	Humanities	1	0	1*	0	2	2	50	50	100	1
21CVT109	Rural Development	Civil										
21HST209	Health and Wellness	Humanities	1	0	1*	0	2	2	50	50	100	1
21HSN110	Career Development skill-I		-	-					11111111			
21HSN210	Career Development skill-II	Humanities	1	0	1*	0	2		50	_	PP/NP	0
21H	SN110 SN210	ISN110 Career Development skill-I SN210 Career Development skill-II	ISN110 Career Development skill-II Humanities Career Development skill-II Humanities	ISN110 Career Development skill-II SN210 Career Development skill-II Career Development skill-II Humanities 1	ISN110 Career Development skill-I SN210 Career Development skill-II Career Development skill-II Humanities 1 0	ISN110 Career Development skill-II Humanities 1 0 1*	ISN110 Career Development skill-I Humanities 1 0 1* 0 SN210 Career Development skill-II Humanities 1 0 1* 0	ISN110 Career Development skill-I Humanities 1 0 1* 0 2 Career Development skill-II Humanities 1 0 1* 0 2 Total 30	ISN110 Career Development skill-II Humanities 1 0 1* 0 2 Total 30	SN210 Career Development skill-II Humanities 1 0 1* 0 2 50	Humanities Hum	Humanities 1 0 1 0 2 2 50 50 100

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:Titorial, 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 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

Prefessor and Head
Department of civil Engineering
3. Ambedkar Institute of Technology
Bandalore - 560 0c*

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

Physics Cycle:	I/II Semester
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SI. No.	Course Category		Course Title	Teaching		Teachi	ing Hou	rs/ We	ek		Evam	ination		
				Department	L	T	P	S	Total	Duration (Hrs)	CIE	SEE	Total	Credi
1	BS	21MAT101	Calculus and Linear Algebra	Mathematics	-		-	-		(nrs)	Marks	Marks	Marks	
-		21MAT201		Mathematics	3	2	0	0	5	3	50	50	100	
2	BS	21PHT102/ 21PHT202	Engineering Physics	Physics	3	0	0	0	2					4
3	ES	21EET103/ 21EET203	Basic Electrical Engineering	Electrical	2	-			3	3	50	50	100	3
4	ES	21CVT104/ 21CVT204	Elements of Civil Engineering & Mechanics	Civil		2	0	0	4	3 .	50	50	100	3
5	ES	21MED105/	Computer aided Engineering Drawing	Mechanical	3	0	0	0	3	3	50	50	100	
6	DC	21MED205			2	0	2	0	4	3	50	50	100	3
	BS	21PHL106/ 21PHL206	Engineering Physics Lab	Physics	0	0	2	0	2	3				
7	ES	21EEL107/ 21EEL207	Basic Electrical lab	Electrical	0	0	2	0	2	3	50	50	100	1
8	HS	21HST108	Communicative English	Humanities						3	30	50	100	1
		21HST208	Professional writing skills in English	Administres .	1	0	1*	0	2	2	50	50	100	
9	AE	21HST109	Health and Wellness	Humanities						-	30	30	100	1
		21CVT209	Rural Development	Civil	1	0	1*	0	2	2	50	50	100	1
0	MC -	21HSN110	Career Development skill-I		-								A STATE OF THE STA	
		21HSN210		Humanities	1	0	1*	0	2	-	50	-	PP/NP	0
e RC.	Pagia Cai	nce Course,		1			T	otal	29		700		7	
. DO.	Dasic Sciel	nce Course.	ES: Engineering Science Course,	The Court of the C	-	ICH MARKET HE	The State of Building	Utal	49		500	450	900	20

ES: Engineering Science Course,

HS: Humanities & Social Science Course,

AE: Ability Enhancement Course, MC: Mandatory Course,

L: Lecture, T:Titorial, P:Practical/drawing, S:Self study, CIE: Continuous Internal Evaluation, SEE: Semester End Examination * No practical evaluation,

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Outcome Based Eduction (OBE) and Choice Based Credit System (Copps) (Asper NEP 2020)

Name of the Programme: B. E. (CIVIL ENGINEERING)

Scheme of Teaching and Examination Effective from the Academic Year: 2021 - 2022.

-				III Sem	ester									
			T		Tea	chin	g Ho	urs / V	Veek		Examina	tions		
SI No.	Course Category	Course Code	Course Title	Teaching Department		Т	P	S	Tot al	Duration (Hrs)	CIE Marks	SEE Marks	Tota l Mar ks	Credit s
1	BSC	21MAT301CV	Mathematics - III	Maths	3	0	0	0	3	03	50	50	100	3
2	IPCC	21CVT302	Strength of Materials	Civil	3 ·	0	2	0	5	03	50	50	100	4
3	IPCC	21CVT303	Surveying	Civil	3	0	2	0	5	03	50	50	100	4
4	PCC	21CVT304	Geology and Construction Materials	Civil	3	0	0	0	3	03	50	50	100	3
5	PCC	21CVL305	Construction Materials Lab	Civil	0	0	2	0	2	03	50	50	100	1
6	UHV	21HST306	Social Connect and Responsibility	Civil	0	0	1	0	. 1	01	50	50	100	1
7	HSSC	21HST3S07 21HST3B07	Samskrutika Kannada / Balake Kannada OR	HSS	1	0	0	1	2	01	50	50	100	1
		21HST307	Constitution of India & Professional Ethics (CIP)											
			Ability Enhancement	a	If of		as Thurse	neory 0	1	01	50	50	100	1
	AEC	21CVT308X	Course – III	Civil	If o	Con 0	d as l arse	Lab 0	2	02	30	30	100	
+	HSSC	21HSN309	Professional Skills	HSS	1	0	1	0		02	50		PP/ NP	0
	11000								-	Total	400	400	800	18

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Ospartment of civil Engineering

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	Schedul	21HSNS803	(NSS)	NSS
	ed activitie	21HSN803	Physical Boxcation (PE) (Sports and Athletics)	PE
10	s for III to VIII Semest er	21HSN803	Yoga	Yoga

Service Scheme Chysical Education (PE) (Sports and Athletics), and Yoga with the concerned coordinator of the course during the first week of III semester. The activities shall be carried out between III semesters to VIII semester (for 5 semesters). SEE in the above courses shall be conducted during VIII semester examinations and the accumulated CIE marks shall be added to the SEE marks. Successful completion of the registered course is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities.

		Course prescribed to	lateral entry Diploma h	olders admi	tted to	III sen	lester B	F. progr	rams	, und I	/ga acti	VICIOS.
11	21MA D310	Additional Mathematics - I	Mathematics	02	02				50		50	PP/NP
** ·										1		

Note:

BSC: Basic Science Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, INT: Internship, HSSC: Humanity and Social Science Courses, AEC: Ability Enhancement Courses, UHV: Universal Human Value Course.

L-Lecture, T-Tutorial, P-Practical/Drawing, S-Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination. TD-Teaching Department, PSB: Paper Setting department.

21HST3S07/4S07 Samskrutika Kannada is for students who speak, read and write Kannada and 21HST3B07/21HST4B07 Balake Kannada is for non-Kannada speaking, reading, and writing students.

Integrated Professional Core Course (IPCC):

Refers to Professional Theory Core Course Integrated with practical of the same course. Credit for IPCC can be 04 and its Teaching-Learning hours (L: T: P) can be considered as (3:0:2) or (2:2:2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of IPCC shall be Included in these question paper.

21CVI410 Inter/Intra Institutional Internship:

All the students admitted to engineering programs under the lateral entry category shall have to undergo a mandatory 21CVI410 Inter/Intra Institutional Internship of 03 weeks during the intervening period of III and IV semesters. The internship shall be slated for CIE only and will not have SEE. The letter grade earned through CIE shall be included in the IV semester grade card. The internship shall be considered as a head of passing and shall be considered for vertical progression and for the award of degree. Those, who do not take up/complete the internship shall be declared fail and shall have to complete subsequently after satisfying the internship requirements. The faculty coordinator or mentor shall monitor the students 'internship progress and interact with them for the successful completion of the internship.

Non-credit mandatory courses (NCMC):

(A) Additional Mathematics I and II:

(1) These courses are prescribed for III and IV semesters respectively to lateral entry Diploma holders admitted to III semester of B.E./B.Tech. Programs. They shall attend the classes during the respective semesters to complete all the formalities of the course and appear for the Continuous Internal

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deemed to have secured an F grade. In such a case, the student has to fulfill the course requirements during subsequent semester/s to earn the qualifying CIE marks. These courses are slated for CIE v and have no SEE.

(2) Additional Mathematics I and II shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of degree.

(3) Successful completion of the courses Additional Mathematics I and II shall be indicated as NP/PP in the grade card. Non-completion of the courses Additional Mathematics I and II shall be indicated as unsatisfactory.

(B)Placement Training: These courses are prescribed for I and VI semesters respectively to the students of B.E. programs. They shall attend the classes during the respective semesters to complete all the formalities of the course and appear for the Continuous Internal Evaluation (CIE). In case, any student fails to register for the said course/fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have secured an NP (not pass) grade. In such a case, the student has to fulfill the course requirements during subsequent semester/s to earn the qualifying CIE marks. These courses are slated for CIE only and have no SEE.

National Service Scheme / Physical Education (Sport and Athletics) / Yoga:

(1) Securing 40% or more in CIE, 35% or more marks in SEE and 40% or more in the sum total of CIE + SEE leads to successful completion of the registered course.

(2) In case, students fail to secure 35% marks in SEE, they have to appear for SEE during the subsequent examinations conducted by the University.

(3) In case, any student fails to register for NSS, PE or Yoga/fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have not completed the requirements of the course. In such a case, the student has to fulfill the course requirements during subsequent semester/s to earn the qualifying CIE marks.

(4) Successful completion of the course shall be indicated as satisfactory in the grade card. Non-completion of the course shall be indicated as

Unsatisfactory.

(5) These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of a degree.

	Ability Enhancement Course - III
21CVT3081	Photogrammetry and Remote Sensing
21CVT3082	Sustainable Materials and Green Buildings
21CVT3083	Fire safety in Buildings
21CVT3084	Pavement Materials and Construction

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Outcome Based Edusetion (OBE) and Choice Based Credit System (GCS) (Asper NEP 2020) Name of the Programme: B. E. (CIVIL ENGINEERING)

Scheme of Teaching and Examination Effective from the Academic Year: 2021 – 2022

				IV Ser	mester	•								1
SI	Course			Tanahina	Te	achir	ng Ho	ours /	Week		Examir	nations		_
No	Category	Course Code	Course Title	Teaching Department	L	T	P	S	Tota l	Duration (Hrs)	CIE Marks	SEE Marks	Total Marks	Cre dits
1	BSC	21MAT401CV	Mathematics - IV	Mathematics	3	0	0	0	3	03	50	50	100	3
2	IPCC	21CVT402	Water Supply and Sanitary Engineering	Civil	3	0	2	0	5	03	50	50	100	4
. 3	IPCC	21CVT403	Fluid Mechanics and Machinery	Civil	3	0	2	0	5	03	50	50	100	4
4	PCC	21CVT404	Structural Analysis	Civil	3	0	0	0	3	03	50	50	100	3
5	PCC	21CVL405	Computer Aided Building Planning and Drawing	Civil	0	0	2	0	2	03	50	50	100	1
6	AEC	21HST406	Biology for Engineers	ML	2	0	0	0	2	02	50	50	100	2
7	HSSC	21HST4S07 21HST4B07	Samskrutika Kannada / Balake Kannada OR	HSS	1	0	0	0	2	01	50	50	100	
		21HST407	Constitution of India & Professional Ethics (CIP)	1155	1				2	01	50	30	100	1
8	AEC	21CVT408X	Ability Enhancement	Civil	1	Cour 0	0	0	1	01	50	50	100	1
0	AEC	210 V 1406X	Course - IV	CIVII	If or	ffered Cour	as La	ab 0	2	02	30	30	100	1
9	HSSC	21HSN411	Professional Skills	HSS	1	0	1	0	2	02	50]	PP/NP	0
10	UHV	21HST409	Universal Human Values	Civil	1	0 .	0	0	1	01	50	50	100	1
11	INT	21CVI410	Inter / Intra Institutional Internship	Evaluation by the	Comp interve III se	ening	perio		State of the state	03	50	The state of the s	100	2

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		and	authornies			d n	ring the					
							y Lateral					
		•		0.00	stud emest		dmitted to	•				
								Total	550	450	1000	22
	Cours	e prescribed to lateral er	itry Diploma h	olders	admit	ted to	III semester	B.E pro	grams			
12	21MAD411	Additional Mathematics - I	Maths	2	2				100	PP/NP	100	0
Note:											L	

Note:

BSC: Basic Science Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, AEC: Ability Enhancement Courses HSSC: Humanity and Social Science Courses, UHV: Universal Human Value Courses.

L-Lecture, T-Tutorial, P - Practical/Drawing, S-Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

21HST3S07/4S07 Samskrutika Kannada is for students who speak, read and write Kannada and

21HST3B07/4B07 Balake Kannada is for non-Kannada speaking, reading, and writing students.

Integrated Professional Core Course (IPCC):

Refers to Professional Theory Core Course Integrated with Practical of the same course.

Credit for IPCC can be 04 and its Teaching-Learning hours (L: T: P) can be considered as (3:0:2) or (2:2:2).

The theory part of the IPCC shall be evaluated both by CIE and SEE.

The practical part shall be evaluated by only CIE (no SEE).

However, questions from the practical part of IPCC shall be included in the SEE question paper.

Non-credit mandatory course(NCMC):

(A)Additional Mathematics -II:

- (1) Lateral entry Diploma holders admitted to III semester of B.E./B.Tech.., shall attend the classes during the IV semester to complete all the formalities of the course and appear for the Continuous Internal Evaluation (CIE). In case, any student fails to register for the said course/fails to secure the minimum 40% of the prescribed CIE marks, he/she shall be deemed to have secured an F grade. In such a case, the student has to fulfill the course requirements during subsequent semester/s to earn the qualifying CIE marks. These courses are slated for CIE only and have no SEE.
- (2) Additional Mathematics I and II shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion
- of the courses shall be mandatory for the award of degree. Successful completion of the course Additional Mathematics-II shall be indicated as satisfactory in the grade card. Non-completion of the courses

Additional Mathematics-II shall be indicated as Unsatisfactory.

(B)Placement Training: These courses are prescribed for I and VI semesters respectively to the students of all B.E. programs. They shall attend the classes during the respective semesters to complete all the formalities of the course and appear for the Continuous Internal Evaluation (CIE). In case, any student fails to register for the said course/fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have secured

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Ceparament of civil Engineering i, workedkar institute of Technology Bangalore - 560 056

marks. These courses are slated for CIE only and have no SEE.

Internship of 04 weeks during the intervening period of IV and V semesters;

21CVI410 Innovation/Entrepreneurship/Societal based Internship.

(1) All the students shall have to undergo a mandatory internship of 04 weeks during the intervening period of IV and V semesters. The internship shall be slated for CIE only and will not have SEE. The letter grade earned through CIE shall be included in the VI semester grade card. The internship shall be considered as a head of passing and shall be considered for vertical progression and for the award of degree. Those, who do not take up /complete the internship shall be considered under F (fail) grade and shall have to complete during subsequently after satisfying the internship

(2) Innovation/ Entrepreneurship Internship shall be carried out at industry, State and Central Government /Non-government organizations (NGOs), requirements micro, small and medium enterprises (MSME), Innovation centers, or Incubation centers. Innovation need not be a single major breakthrough; it can

also be a series of small or incremental changes. Innovation of any kind can also happen outside of the business world. Entrepreneurship internships offer a chance to gain hands-on experience in the world of entrepreneurship and help to learn what it takes to run a small entrepreneurial business by performing intern duties with an established company. This experience can then be applied to future business endeavors. Start-ups and small companies are a preferred place to learn the business tactics for future entrepreneurs as learning how a small business operates will serve the intern well when he/she manages his/her own company. Entrepreneurship acts as a catalyst to open the minds to creativity and innovation. Entrepreneurship internships can be from several sectors, including technology, small and medium-sized, and the service sector.

(3) Societal or social internship: Urbanization is increasing on a global scale; and yet, half the world's population still resides in rural areas and is devoid of many things that urban population enjoys. The rural internship is a work-based activity in which students will have a chance to solve/reduce

the problems of the rural place for better living.

Al	oility Enhancement Course – IV
21CVT4081	Construction Methods and Equipment
21CVT4082	Soil and Water Conservation Engineering
21CVT4083	Ecology and Environment
21CVT4084	Cartography and GIS Concepts

Bangatore - 560 056

Dr. Ambedkar Institute of Technology, Bangalore-56 Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Asper NIP 2020)

Name of the Programme: B E (CIVIL ENGINEERING)

Tentative Scheme of Teaching and Examination Effective from the Academic Year 2021-22

				VS	emest									
SI					Tea	chin	g Ho	urs/	Week		Examin			Credit
No	Course Category	Course Code	Course Title	Teaching Department	L	Т	P	s	Total	Duration (Hrs)	CIE Marks	SEE Marks	Total Marks	s
1	PCC	21CVT501	Design of RCC Structural Elements	Civil	3	0	0	0	3	3	50	50	100	3
2	IPCC	21CVT502	Concrete Technology	Civil	3	0	2	0	5	3	50	50		3
3	PCC	21CVT503	Highway Engineering	Civil	3	0	0	0	3	3	50	50	100	3
4	PCC	21CVT504	Hydrology and Irrigation Engineering	Civil	3	0	0	0	3	3	50	50	100	3
5	PCC	21CVL505	Computer Aided Analysis and Design Laboratory	Civil	0	0	2	0	2	3	50	50	100	1
6	AEC	21HST506	Research Methodology & Intellectual property rights	TD: Any Department. PSB: As identified by the institute	2	0	0	0	2	2	50	50	100	2
7	HSSC	21CV507	Environmental Studies	TD: Civil / Chemistry PSB: Civil	1	0	0	0	1	1	50	50	100	1
		21CVT508	Ability Enhancement Course - V	Civil			red a Cour		1	1	50	50	100	
8	AEC	X X			If c	ffere	d as I irse		2	2	50	50	100	1
					1	0	2	0						
9	HSSC	21HSN509	Aptitude and Verbal ability skills		1	0	1	0		2	50		PP/NP	0

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Total	450	400	800	18

Note:

BSC: Basic Science Course, PCC: Professional Core Course, IPCC: Integrated Professional Core Course, AEC: Ability Enhancement Course INT: Internship, HSSC: Humanity and Social Science Courses.

L-Lecture, T-Tutorial, P-Practical/Drawing, S-Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

Integrated Professional Core Course (IPCC):

Refers to Professional Theory Core Course Integrated with Practical of the same course. Credit for IPCC can be 04 and its Teaching – Learning hours (L: T: P) can be considered as (3:0:2) or (2:2:2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by CIE only and there shall be no SEE.

Ability Enhancement Course - V
Advanced analysis and Design of RC Building Using STAAD-PRO
Extensive Survey Project
Geotechnical Investigation
Hazardous Waste Management
Highway Geometric Design

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				VIS	Semo	ester								
				Teaching	Т	each	ing H	ours /	Week		Examir	ations		
SI No	Course Category	Course Code	Course Title	Department (TD)/ Paper setting Board(PSB)	_	Т	P	s	Total	Duration (Hrs)	CIE Marks	SEE Marks	Total Marks	Credit s
1	HSSC	21XXT601	This course is to be as per the requirement of the concerned program. However, the title of the course should have the word Management and the syllabus has to have management topic/s	Any Department						3	50	50	100	3
2	IPCC	21CVT602	Geotechnical Engineering	Civil	3	0	2	0	5	3	50	50	100	4
3	PCC	21CVT603	Design of Steel Structures	Civil	3	0	0	0	3	3	50	50	100	3
4	PEC	21CVT604 X	Professional Elective Course - I	Civil	3	0	0	0	3	3	50	50	100	3
5	OEC	21CVT605 X	Open Elective Course	Civil	3	0	0	0	3	3	50	50	100	3
6	PCC	21CVL606	CAD - RC and Steel Structures	Civil	0	0	2	0	2	1	50	50	100	1
7	МР	21CVM607	Mini Project	2 Contact betwee						-	100	1 2	100	2
8	INT	21CVI608	Innovation/ Entrepreneurship/ Societal internship	Completed d of			interv emest		period	-	100	-	100	3

9	HSSC	21HSN609	Analytical	and	Placement	2	0	0	0	2	e -	50	-	PP/NP	0
		2111011007	Reasoning Skills		Cell						Total	550	300	800	22

Note:

BSC: Basic Science Course, PCC: Professional Core Course, IPCC: Integrated Professional Core Course, AEC: Ability Enhancement Course

INT: Internship, HSSC: Humanity and Social Science Courses.

L-Lecture, T-Tutorial, P-Practical/Drawing, S-Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

Integrated Professional Core Course (IPCC):

Refers to Professional Theory Core Course Integrated with Practical of the same course. Credit for IPCC can be 04 and its Teaching - Learning hours (L: T: P) can be considered as (3:0:2) or (2:2:2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by CIE only and there shall be no SEE.

Professional Elective Courses(PEC):

A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering. Each group will provide an option to select one course out of five courses. The minimum student's strength for offering professional electives is 10. However, this conditional shall not be applicable to cases where the admission to the programme is less than 10.

Open Elective Courses:

Students belonging to a particular stream of Engineering and Technology are noted. Title for the open electives offered by their parent Department. However, they can opt an elective offered by other Departments, provided they satisfy the prerequisite condition if any. Registration to open electives shall be documented under the guidance of the Program Coordinator/Advisor/Mentor.

Selection of an open elective shall not be allowed if,

- The candidate has studied the same course during the previous semesters of the program. (i)
- The syllabus content of open electives is similar to that of the Departmental core courses or professional electives. (ii)
- A similar course under any category, is prescribed in the higher semester of the program.

In case, any college is desirous of offering a course (not included in the Open Elective List of the University) from streams such as Law, Business (MBA), Medicine, Arts, Commerce, etc., can seek permission, at least one month before the commencement of the semester, from the University by submitting a copy of the syllabus along with the details of expertise available to teach the same in the college.

The minimum students' strength for offering open electives is10. However, this conditional shall not be applicable to cases where the admission to The programme is less than 10.

Mini-project work:

Mini Project is a laboratory-oriented course which will provide a platform to students to enhance the practical knowledge and skills by the development of small systems/applications.

Based on the ability/abilities of the student/s and recommendations of the mentor, a single discipline or a multidisciplinary Mini-project can be assigned to an individual student or to a group having not morethan4 students.

CIE procedure for Mini-project:

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- (i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.
- (ii) Interdisciplinary: Continuous Internal Evaluation shall be group-wiseatthecollegelevelwiththeparticipationofalltheguidesoftheproject. The CIE marks awarded for the Mini-project, shall be based on the evaluation of project report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

No SEE component for Mini-Project.

	Professional Elective Courses - I								
Course Code	Course Title								
21CVTE6041	Matrix Method of Structural Analysis								
21CVTE6042	Solid Waste Management								
21CVTE6043	Alternate Building Materials and Technology								
21CVTE6044	Traffic Engineering								

	Open Elective Courses - I
Course Code	Course Title
21CVTE6051	Remote sensing and Geographic Information System
21CVTE6052	Air Pollution and Control Methods
21CVTE6053	Integrated Solid Waste Management

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Tentative Scheme of Teaching and Examination Effective from the Academic Year 2021-22

				VIIS	Semes		**		XX/ I-	2	Examir	ations		
SI No	Course Category	Course Code	Course Title	Teaching Department		T	P P	S	Week Total	Duration (Hrs)	CIE Marks	SEE Marks	Total Marks	Credit s
1	PCC	21CVT701	Estimation and Valuation	Civil	3	0	0	0	3	3	50	50	100	3
2	PCC	21CVT702	Prestressed Concrete	Civil	3	0	0	0	3	3	50	50	100	3
3	PEC	21CVT703X	Professional Elective Course - II	Civil	3	0	0	0	3	3	50	50	100	3
4	PEC	21CVT704X	Professional Elective Course – III	Civil	3	0	0	0	3	3	50	50	100	3
5	OEC	21CVT705X	Open Elective - II	Concern Department	3	0	0	0	3	3	50	50	100	3
6	PROJECT	21CVP706	Project Work	Civil		action		veen	Week faculty	3	100	100	200	10
				4			1		Total	-	350	350	700	25

Note:

PCC: Professional Core Course, PEC: Professional Elective Courses, OEC: Open Elective Course, AEC: Ability Enhancement Courses.

L - Lecture, T - Tutorial, P - Practical / Drawing, S - Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

PROJECT WORK (21XXP706): The objective of the Project work is

- 1) To encourage independent learning and the innovative attitude of the students.
- 2) To develop interactive attitude, communication skills, organization, time management, and presentation skills.
- 3) To impart flexibility and adaptability.
- 4) To inspire team working.
- 5) To expand intellectual capacity, credibility, judgment and intuition.

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- 6) To adhere to punctuality, setting and meeting deadlines.
- 7) To install responsibilities to oneself and others.
- 8) To train students to present the topic of project work in a seminar without any fear, face the audience confidently, enhance communication skills, involve in group discussion to present and exchange ideas.

CIE procedure for Project Work:

- 1) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide.
- 2) The CIE marks awarded for the project work shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.
- 3) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. The CIE marks awarded for the project work shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.
- 4) SEE procedure for Project Work: SEE for project work will be conducted by the two examiners appointed by the University. The SEE marks awarded for the project work shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the ratio 50:25:25.

Note:

VII and VIII semesters of IV year of the programme

- Institutions can swap VII and VIII Semester Scheme of Teaching and Examinations to accommodate research internship/ industry internship after the VI semester.
- Credits earned for the courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether VII or VIII semester is completed during the beginning of IV year or later part of IV year of the program.

Professional Elective Courses - II								
Course Code	Course Title							
21CVTE7031	Applied Geotechnical Engineering							
21CVTE7032	Earthquake Resistant Design of Structures							
21CVTE7033	Environmental Impact Assessment							
21CVTE7034	Watershed Management							

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	Professional Elective Courses - III					
Course Code	Course Title					
21CVTE7041	Pavement Design					
21CVTE7042	Design of Concrete bridge Structures					
21CVTE7043	Air Pollution and Control Technologies					
21CVTE7044	Construction Project Management					

Open Elective Courses - II									
Course Code Course Title									
21CVTE7051	Urban Transport Planning								
21CVTE7052	Occupational Safety and Health								
21CVTE7053	Ecology and Environmental Impact Assessment								

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Tentative Scheme of Teaching and Examination Effective from the Academic Year 2021-22

				VIIIS Teaching	emester Teaching Hours / Week				Week	Examinations				
SI No	Course Category	Course Code	Course Title	Department (TD)/ Paper setting Board(PSB)	L	Т	P	S	Total	Duration (Hrs)	CIE Marks	SEE Marks	Total Marks	Credi
1	SEMINAR	21CVS801	Technical Seminar	Civil	One Contact hour/ week for interaction between the faculty and students				een the	-	100	-	100	1
2	INTERNS HIP	21CVI802	Research Internship/ Industry Internship		Two contact hours /week for interaction between the faculty and students.					03 (Batchw ise)	100	100	200	15
3	NCMC	21XX803	National Service Scheme (NSS)	NSS	Completed during the				the					
		21XX803	Physical Education (PE) (Sports And Athletics)	PE	intervening period of III semester to VIII semester.					5	50	50	100	-
		21XX803	Yoga	Yoga	Total				Total	-	250	150	400	16

TECHNICAL SEMINAR (21CVS801):

The objective of the seminar is to inculcate self-learning, present the seminar topic confidently, enhance communication skill, involve in group discussion for exchange of ideas. Each student, under the guidance of a Faculty, shall choose, preferably, a recent topic of his/her interest relevant to the programme of Specialization.

- (i) Carry out literature surveys, systematically organize the content.
- (ii) Prepare the report with your own sentences, avoiding a cut and paste act.
- (iii) Type the matter to acquaint yourself with the use of Microsoft equation and drawing tools or any such facilities.
- (iv) Present the seminar topic orally and/or through PowerPoint slides.
- (v) Answer the queries and involve in debate/discussion.

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- Submit a typed report with a list of references. (vi)
- The participants shall take part in the discussion to foster a friendly and stimulating environment in which the students are motivated to reach (vii) high standards and become self-confident.

Evaluation Procedure:

The CIE marks for the seminar shall be awarded (based on the relevance of the topic, presentation skill, participation in the question and answer session, and quality of report) by the committee constituted for the purpose by the Head of the Department. The committee shall consist of three teachers from the department with the senior-most acting as the Chairman.

Marks distribution for CIE of the course:

Seminar Report: 50 marks Presentation skill: 25 marks

Ouestion and Answer: 25 marks. No SEE component for Technical Seminar

Non - credit mandatory courses (NCMC):

National Service Scheme/Physical Education (Sport and Athletics) / Yoga:

- 1) Securing 40% or more in CIE, 35 % or more marks in SEE and 40 % or more in the sum total of CIE + SEE leads to successful completion of the registered course.
- 2) In case, students fail to secure 35 % marks in SEE, they have to appear for SEE during the subsequent examinations conducted by the University.
- 3) In case, any student fails to register for NSS, PE or Yoga/fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have not completed the requirements of the course. In such a case, the student has to fulfill the course requirements subsequently to earn the qualifying CIE marks subject to the maximum program period.
- 4) Successful completion of the course shall be indicated as pass (PP) in the grade card. Non-completion of the course (NP) shall be indicated as Unsatisfactory.
- 5) These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of degree.

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