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Dated : 28-05-2019.

**MINUTES OF BOARD OF STUDIES OF CIVIL ENGINEERING & APPLIED MECHANICS HELD ON 25-05-2019.**

A meeting of Board of Studies of Civil Engineering & Applied Mechanics Board was held in Conference Hall of CE-AMD on 28-05-2019 at 11:30 A.M.

**Following Members are present:**

- |     |                      |   |          |
|-----|----------------------|---|----------|
| 1.  | Dr. V. R. Rode (HOD) | - | Chairman |
| 2.  | Dr. R.K. Shrivastava | - | Member   |
| 3.  | Dr. S.K. Soni        | - | Member   |
| 4.  | Dr. D.J. Killedar    | - | Member   |
| 5.  | Dr. H.K. Mahiyar     | - | Member   |
| 6.  | Dr. (Mrs.) V. Tare   | - | Member   |
| 7.  | Dr. S.M. Narulkar    | - | Member   |
| 8.  | Dr. R.K. Khare       | - | Member   |
| 9.  | Dr. S.B. Ajmera      | - | Member   |
| 10. | Prof. M.K. Laghate   | - | Member   |
| 11. | Prof. H.S. Goliya    | - | Member   |

**The following members could not attend the meeting**

- |    |                       |   |        |
|----|-----------------------|---|--------|
| 1. | Dr. Uttamasha Gupta   | - | Member |
| 2. | Prof. S.K. Ahirwar    | - | Member |
| 3. | Prof. Devendra Dohare | - | Member |

At the outset the Chairman welcomed all the members.

**The deliberations of the meeting are summarised below:**

**1. Item No. 1 :**

**To discuss and finalize the proposed Scheme & Syllabus for II B.E. and III B.E. (Civil) w.e.f. Session 2019-20 and IV B.E. (Civil) w.e.f. Session 2020-21.**

The UG scheme which is akin to the AICTE model curriculum for undergraduate degree courses in civil engineering 2018 is tabled before house for discussion and recommended with effect from 2019-20 for II B.E. & III B. Tech.(Civil Engineering) and 2020-21 for IV B. Tech.(Civil Engineering).

**(Please refer Annexure I/01 to Annexure I/09)**

In the proposed scheme salient features, which are different from the existing scheme, are as under-

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1. Looking to the need of teaching Building planning and Architecture along with subject Material Technology it is proposed to swap subject CE21551 Building Planning and Architecture from IV semester with the subject CE21001 Engineering Geology in III Semester. Thus Building Planning and Architecture is to be taught in III semester and Engineering Geology to be taught in IV semester. (Annexure I/01)
2. In view of latest development & availability of modern equipments such as 'Total Station and GPS', it was discussed in the meeting that there is need to modify the syllabus of Geodesy (CE-21002). In the practical subject field project work has to be inserted. The content of syllabus has been modified to the extent of 10% and the existing & proposed syllabus is attached for approval. (Annexure I/02)
3. In the V semester the subject name Transportation Engineering I CE31001 and Environmental Engineering I CE31002 are proposed to be revised as Transportation Engineering & Environmental Engineering respectively. (Annexure I/03 to I/04)
4. In VI Semester, Transportation Engineering II is proposed to be Elective-I as (i) Advance Highway & Airport Engineering and (ii) Pavement Design Construction and Maintenance Similarly Environmental Engineering II is proposed to be Elective II as (i) Decentralized Waste Water Management and (ii) Environmental Auditing and Management systems. (Annexure I/05 to Annexure I/08)
5. Contents of the subject Design of Advanced RCC Structures CE41001 are proposed to be modified by 10% to accommodate some advanced features of RCC structures in place of design of steel structures component of the syllabus as the name of subject is RCC structures. (Annexure I/09)
6. The existing scheme is having four electives. Now to accommodate AICTE model curriculum it is proposed that two more electives are introduced in VI Semester of B.E. (Civil). In addition to all the electives as per the list provided an option to choose equivalent online subjects like MOOC, SWAYAM, NPTEL, etc. is also permitted. However, these courses will be conducted in the mentorship of

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Departmental Supervisor, ~~However,~~ the examination of these subjects will be taken by the Institute also and credits shall be awarded only after passing the examination at Institute level.

7. Practical credits of Elective-III, Elective-IV, Elective-V and Elective-VI are proposed to be removed and it is recommended to introduce as assignment problems to cover practical aspects mentioning in the syllabi of these subjects.

2. Item No. 2:

Any other matter with the permission of the Chair.

1. Under this item the members reviewed and discussed the proposed scheme and revised the scheme and syllabus of M.E. Structure Engineering and M.E. Transportation Engineering to be adopted w.e.f. 2019-2020. The scheme were discussed & recommended. (Please refer Annexure II/01 for Scheme of M.E. Structural Engineering, Annexure II/02 for Scheme of M.E. Transportation Engineering)

In the proposed scheme salient features, which are different from the existing scheme, are as under-

1. Two months Industrial/summer training is introduced after II Semester with credits.
  2. One term paper introduced in II Semester and laboratory periods of two subjects in second semester are converted to be as minor project so that practical aspects are covered.
  3. Existing scheme is having only two electives therefore two more electives are proposed in the scheme by replacing two compulsory subjects.
  4. Comprehensive examination is not having any credits presently, it is proposed to assign one credit for that.
2. Members also Discussed and reviewed the existing syllabus of Environmental Engineering. The subject (CE59505) Statistic and Computer Programming has been modified and it is now proposed as Applied Statistics and Environmental System Modelling. (ANNEXURE II/03)

*Rode*  
(Dr. V. Rode)

Professor & Head CE-AMD  
Chairman, BOS, CE-AMD Board

**I YEAR B.Tech. (4YDC)**  
Common To All Branches (2019-20)

**PROPOSED**  
Encl. No. \_\_\_\_\_

Semester - A				Hours per Week		Credits		Max Marks					
S. No.	Subject Category	Subject Code	Subject Name	L	T	P	Th	Pr	Theory		Practical		Total
									Th.	CW	SW	Pr.	
1	BSC	MA 10001	Mathematics - I	3	1	0	4	0	70	30	0	0	100
2	BSC	PH 10006	Physics	3	1	2	4	1	70	30	20	30	150
3	ESC	CE 10003	Fundamentals of Civil Engineering & Applied Mechanics	3	0	2	3	1	70	30	20	30	150
4	ESC	ME 10149	Engineering Graphics	2	0	4	2	2	70	30	40	60	200
5	ESC	EE 10005	Fundamentals of Electrical Engineering	3	0	2	3	1	70	30	20	30	150
6	MC	CH 10200*	Environmental Science	0	1	2	-	-	0	0	100	0	100
TOTAL				14	3	12	16	5	350	150	200	150	850

Induction program of 3 week duration in July-Aug 2019

Semester - B				Hours per Week		Credits		Max Marks					
S. No.	Subject Category	Subject Code	Subject Name	L	T	P	Th	Pr	Theory		Practical		Total
									Th.	CW	SW	Pr.	
1	BSC	MA 10501	Mathematics - II	3	1	0	4	0	70	30	0	0	100
2	BSC	CH 10506	Chemistry	3	1	2	4	1	70	30	20	30	150
3	HSMC	HU 10651	Technical English	3	0	2	3	1	70	30	20	30	150
4	ESC	CO 10504	Computer Programming	3	0	2	3	1	70	30	20	30	150
5	ESC	ME 10649	Fundamentals of Mechanical Engineering	3	0	2	3	1	70	30	20	30	150
6	ESC	IP10581	Manufacturing Practices	0	1	4	0	3	0	0	40	60	100
7	MC	HU10700*	Universal Human Values	2 Hrs per week working Saturday				0	0	100	0	100	
TOTAL				15	3	12	17	7	350	150	220	180	900

PASS/FAIL status will appear in Marksheet

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**Semester: III**

S. No.	Subject Code	Subject Name	Hours per Week			Credits		Max Marks				
			L	T	P	Th	Pr	Theory		Practical		Total
								Th.	CW	SW	Pr.	
1	CE	Building Planning and Architecture	3	-	2	3	1	70	30	40	60	200
2	CE21002	Geodesy	3	-	2	3	1	70	30	40	60	200
3	CE21003	Strength of Materials	3	-	2	3	1	70	30	40	60	200
4	CE21004	Material Technology	3	1	-	4	-	70	30	-	-	100
5	MA21006	Mathematics III	0	2	0	0	2	0	0	100	-	100
6	HU21010	Values, Humanity and Professional Ethics	0	2	0	0	2	0	0	100	-	100
		Total	15	4	8	17	6	350	150	260	240	1000
Optional Subject(s)												
7	OC-i	Open Category-I (Audit Only) MOOC/SWAYAM online courses *	-	-	-	-	-	-	-	-	-	-

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**Semester: IV**

S. No.	Subject Code	Subject Name	Hours per Week			Credits		Max Marks				
			L	T	P	Th	Pr	Theory		Practical		Total
								Th.	CW	SW	Pr.	
1	CE21502	Construction Technology-I	3	-	2	3	1	70	30	40	60	200
2	CE21503	Geotechnical Engineering- I	3	-	2	3	1	70	30	40	60	200
3	HU21507	Economics for Engineers	3	-	-	3	-	70	30	-	-	100
4	CE	Engineering Geology	3	-	2	3	1	70	30	40	60	200
5	CE21554	Structural Mechanics	3	-	2	3	1	70	30	40	60	200
6	CE21557	Fluid Mechanics	3	-	2	3	1	70	30	40	60	200
		Total	18	0	10	18	5	420	180	200	300	1100
Optional Subject(s)												
7	OC-II	Open Category-II (Audit Only) MOOC/SWAYAM online courses *	-	-	-	-	-	-	-	-	-	-

\* Students may opt for MOOC/SWAYAM online courses as elective under the supervision of mentor only. Final examination for the online course shall also be conducted in the institute.

III B.E.(4YDC) CIVIL ENGINEERING

PROPOSED

SEMESTER - V

Encl. No. Annexure I/03-08

S. No.	Sub. Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
			L	T	P			Th.	CW	SW	Pr.	Total
1	CE	Transportation Engineering	3	-	2	3	1	70	30	40	60	200
2	CE	Environmental Engg.	3	-	2	3	1	70	30	40	60	200
3	CE31003	Design of RCC Structures	3	-	2	3	1	70	30	40	60	200
4	CE31005	Structural Analysis-I	3	1	-	4	-	70	30	-	-	100
5	CE31010	Water Resource Engineering	3	-	2	3	1	70	30	40	60	200
6	CE31490	Industrial Training / <del>Seminar</del>	-	-	4	-	2			50	-	50
Total			15	1	12	16	6	350	150	210	240	950
Optional Subject(s)												
7	OC-III	Open Category-III ( Audit Only)MOOC/SWAYAM online courses *	-	-	-	-	-	-	-	-	-	-

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SEMESTER - VI

S. No.	Sub. Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
			L	T	P			Th.	CW	SW	Pr.	Total
2	CE31502	Design of Steel Structures	3	-	2	3	1	70	30	40	60	200
4	CE31504	Structural Analysis-II	3	1	-	4	-	70	30	-	-	100
5	CE31506	Construction Technology II	3	-	2	3	1	70	30	40	60	200
1		ELECTIVE I	3	-	2	3	1	70	30	40	60	200
3		ELECTIVE II	3	-	2	3	1	70	30	40	60	200
6	CE31902	Technical Visit <i>Industrial train</i>	-	-	4	0	2	-	-	50	-	50
Total			15	1	12	16	6	350	150	210	240	950
Optional Subject(s)												

**III B.E.(4YDC) CIVIL ENGINEERING**

**List of Electives For Semester VI**

<b>Elective I</b>			<b>Elective II</b>		
S.No.	Sub. Code	Subject	S.No.	Subject Code	Subject
1		<u>Advance Highway and Airport Engineering</u>	1		<u>Decentraliced Waste Water Management</u>
2		<u>Pavement Design Construction and Maintanance</u>	2		<u>Environmental Auditing and Management Systems</u>
3		<u>MOOC/SWAYAM online course *</u>	3		<u>Biological processes for contaminant removal</u>
4			4		<u>MOOC/SWAYAM online course *</u>

\* Students may opt for MOOC/SWAYAM online courses as elective under the supervision of mentor only. Final examination for the online course shall also be conducted in the institute.

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## IV B.E.(4YDC) CIVIL ENGINEERING

**PROPOSED**  
**Encl. No.      Annexure I/09**

**SEMESTER - VII**

S. No.	Sub. Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
			L	T	P			Th.	CW	SW	Pr.	Total
1	CE41006	Design of Hydraulic Structure	3	-	2	3	1	70	30	40	60	200
2	CE41007	Geotechnical Engg. -II	3	-	2	3	1	70	30	40	60	200
3	CE41001	Design of Advanced RCC Structures	3	-	2	3	1	70	30	40	60	200
4		Deptt. Elective - III	3	-	-	3	-	70	30	-	-	100
5		Deptt. Elective - IV	3	-	-	3	-	70	30	-	-	100
6	CE41499	Major Project Phase I	-	4	8	4	4	0	0	40	60	100
Total			15	0	10	15	5	350	150	160	240	900
Optional Subject(s)												
8	OC-V	Open Category-V( Audit Only)	-	-	-	-	-	-	-	-	-	-

**SEMESTER - VIII**

S. No.	Sub. Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
			L	T	P			Th.	CW	SW	Pr.	Total
1		Deptt. Elective V	3	-	-	3	-	70	30	40	60	200
2		Deptt. Elective VI	3	-	-	3	-	70	30	40	60	200
3		Industrial Mentoring	-	-	8	-	4	0	0	100	-	100
4	CE41999	Major Project Phase II		4	8	4	4	-	-	40	60	100
Total			6	4	8	10	4	140	60	220	180	600

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Elective III			Elective IV		
S.No.	Sub. Code	Subject	S.No.	Subject Code	Subject
1		Advanced Analysis of Structures	1		Bridge Engineering
2		Advanced Structural Design(Building)(CE4172)(CE41272)	2		Advanced Construction Planning & Management
3		Advanced Geology & Rock Mechanics	3		Pre-stressed Concrete Design
4		Industrial Waste Water Treatment	4		Instrumentation & Experimental Techniques
5		Transportation Planning	5		System Application to Water Resources
6		Planning and Management of Water Resources	6		Traffic Engineering(CE41301)
7		MOOC/SWAYAM online course *	7		MOOC/SWAYAM online course *

IV B.E.(4YDC) CIVIL ENGINEERING  
List of Electives For Semester VIII

Elective V			Elective VI		
S.No.	Sub. Code	Subject	S.No.	Subject Code	Subject
1		Advanced Transportation Engineering(CE41684)	1		Advanced Fluid Mechanics
2		Design of RCC and Prestressed Bridge(CE41608)	2		Structural Dynamics
3		Remot Sensing and Geodesy	3		Advanced Remot Sensing(CE41783)
4		Air Quality Management	4		Highway Construction Practice
5		Advanced Geotechnical Engineering	5		Municipal Solid Waste Management(CE41701)
6		Advanced Hydrological Analysis	6		Finite Element Methods
7		MOOC/SWAYAM online course *	7		MOOC/SWAYAM online course *

\* Students may opt for MOOC/SWAYAM online courses as elective under the supervision of mentor only. Final examination for the online course shall also be conducted in the institute.

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