



VIGNAN'S
Foundation for Science, Technology & Research
UNIVERSITY
(Estd u/s 3 of UGC Act of 1956)

DEPARTMENT OF CIVIL ENGINEERING

Minutes of the Board of Studies Meeting

Dt. 09-04-2016

Minutes of the Meeting of the Board of Studies held on 09.04.2016 in AFF-10, Gallery Hall, First Floor, U Block at Vignan's University, Vadlamudi.

Members Present:

1. Dr. G. Venkatachalam, retd. Professor, Department of Civil Engineering, IIT Bombay.
2. Er. C. Sankaralingam, Vice-President & Task Force Leader, Hyderabad Metro Rail Project, L&T Construction.
3. Dr. Ramachandra Murthy, Scientist-F, CSIR-SERC, Chennai.
4. DR. Almelu M. V. H., Head of the Department, Department of civil Engineering, VFSTR.
5. Mr. Aseem Tigga, Asst. Prof., Department of Civil Engineering, VFSTR.
6. Mr. B. Bhaskar Singh, Asst. Prof., Department of Civil Engineering, VFSTR.
7. Mr. P. Padma Rao, Asst. Prof., Department of Civil Engineering, VFSTR.

The following expressed their inability to attend due to prior commitments

1. Prof. Jayabalan, Professor, NIT Tiruchirapalli
2. Mr. D. Sridhar Murthy, M.D., Samarth Infra Engg., Hyderabad

Agenda

Discussion on R16 Course Structure and Course Syllabi proposed by Department of Civil Engineering.

The Following are the Observation/Remarks by BoS Members on curriculum

1. "Self-Compacting Concrete" and "High Performance Concrete" be include under the heading "Special Concretes" in "Building Materials and Concrete Technology"
2. Only one course of Surveying may be offered, which will contain the essential elements of existing Surveying Surveying II and I.
3. "Engineering Geology" with lab component incorporated may be offered in 2nd year, 2nd semester.



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4. "Transportation Engineering" with lab component incorporated may be offered in 3rd year, 1st semester.
5. Introduce "Railway and Airport Engineering" in 4th year, 1st semester.
6. CADS be merged with CACE under the name CACE
7. Anew introduce course, "Advanced Structural Design" in 4th year 1st semester.
8. A new lab component be added to the course "RS & GIS"
9. In the course "SA III", suitable modification be made to include "Introduction to FEM"
10. Departmental Electives are offered as "Individual Subjects" rather than streams
11. Offering "Urban Infrastructure", "Disaster Management and Mitigation" and "Renewable Energy Resource" as new electives to reflect contemporary requirements.

Outcomes:

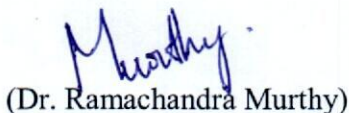
1. BoS members approved the revised curriculum (Structure, Syllabus and regulations) of B.Tech, Civil Engineering with percentage revision of 25% and it follows Choice Based Credit System. Structure is provided in Appendix A.
2. Major restructuring has taken place in the Curriculum with theory courses integrated with laboratory sessions.
3. All the Courses in the Curriculum are designed to fall under either of the domains of employability or skill development or Entrepreneurship. The mapping of the courses with employability or skill development is provided in Appendix B.
4. In all the courses of the revised curriculum (R16) substantial changes are made in the content in addition to the inclusion the list of new courses provided in Appendix C.
5. Stakeholder's feedback is collected, analyzed and given utmost priority while designing the curriculum and their suggestions are implemented.



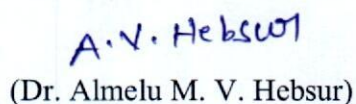
(Dr. G. Venkatachalam)



(Er. C. Sankaralingam)



(Dr. Ramachandra Murthy)



(Dr. Almelu M. V. Hebsur)



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Appendix A Course Structure

I Year I Semester

Sl.No.	Subject	L	T	P	C
1.	Engineering Mathematics-1	3	1	2	5
2.	Engineering Physics	3	-	-	3
3.	Technical EnglishCommunication	3		2	4
4.	Basics of Computers and Internet	3		2	4
5.	Computer Programming	3	1	2	5
6.	Basics of Engineering Products	3	-	2	4
7.	English Proficiency and Communication Skills	0	-	2	1
8.	Engineering Physics Laboratory	-	-	3	2
	Total	18	2	15	28

I Year II Semester

Sl.No.	Subject	L	T	P	C
1.	Engineering Mathematics - II	3	1	2	5
2.	Engineering Chemistry	3	-	-	3
3.	Engineering Graphics	1	-	3	3
4.	Basics of Electrical and Electronics Engg.	3	-	2	4
5.	Engineering Chemistry Laboratory	-	-	3	2
6.	Environmental Science and Technology	2	-	-	2
7.	Engineering Mechanics	3	1	-	4
8.	Workshop Practice	-	-	3	2
	Total	15	2	13	25



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II – Year I Semester

Sl.No.	Subject	L	T	P	C
1.	Probability and Statistics	3	1	-	4
2.	Building Materials and Concrete Technology	3	1	-	4
3.	Fluid Mechanics	3	-	2	4
4.	Solid Mechanics	3	1	-	4
5.	Surveying – I	3	-	2	4
6.	Material Testing Laboratory			3	2
7.	Professional Ethics	2	-	-	2
8.	Employability and Life Skills	-	-	-	1
	Total	17	3	9	25

II – Year I Semester

Sl.No.	Subject	L	T	P	C
1.	Building Construction and Planning	3		2	4
2.	Environmental Engineering - I	3	1	-	4
3.	Hydraulics and Hydraulic Machines	3	-	2	4
4.	Structural Analysis - I	3	1	-	4
5.	Surveying - II	3	-	2	4
6.	Soft Skills Lab	-	-	2	1
7.	Department Elective	3	1	-	4
8.	Open Elective	3	1	-	4
9.	Employability and Life Skills	-	-	-	1
	Total	17	3	9	25



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III Year I Semester

Sl.No.	Subject	L	T	P	C
1.	Environmental Engineering - II	3	-	2	4
2.	Geotechnical Engineering - I	3		2	4
3.	Structural Analysis - II	3	-	-	3
4.	Transportation Engineering - I	3		2	4
5.	Water Resources Engineering - I	3	-	-	3
6.	Department Elective	3		-	3
7.	Open Elective	3	1	-	4
8.	Employability and Life Skills	-	-	-	1
	Total	21	3	06	26

III Year II Semester

Sl.No.	Subject	L	T	P	C
1.	Design of Reinforced Concrete Structures	3	-	-	3
2.	Geo Technical Engineering - II	3		2	4
3.	Structural Analysis - III	3	-	-	3
4.	Water Resources Engineering - II	3	-	-	3
5.	Professional Communication Laboratory	-	-	2	1
6.	Department Elective	3		-	3
7.	Open Elective	3	1	-	4
8.	Employability and Life Skills	-	-	-	1
9.	Modular Course	1			1
	Total	19	1	4	23



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IV Year I Semester

Sl.No.	Subject	L	T	P	C
1.	Design of Steel Structures	3	-	-	3
2.	Engineering Geology	2		2	3
3.	Estimation and Costing	3		2	4
4.	Management Science	3	-	-	3
5.	Computer Applications in Civil Engg.	-	-	3	2
6.	Department Elective	3		-	3
7.	Open Elective	3	1	-	4
8.	Employability and Life Skills	-	-	-	1
	Total	21	1	12	23

IV Year II Semester

Sl.No.	Subject	L	T	P	C
1.	Project Work \ Internship			30	15
	Total			30	15

The courses that are highlighted denote implementation of **Choice Based Credit System (CBCS)**

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Chairman, BoS



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DEPARTMENTAL ELECTIVE STREAMS

S. No	Elective Type	Stream Name	Course Name	Year/Sem
1	Departmental Elective	Earthquake Engineering	Engineering Seismology	II-II
			Structural Dynamics	III-I
			Earthquake Resistant Design of Structures	III-II
			Seismic Evaluation and Retrofitting of Structures	IV-I
		Construction Management	Fundamentals of Construction Methods and Equipment	II-II
			Construction Project Management	III-I
			Housing Planning and Management	III-II
			Construction Techniques and Optimization	IV-I

POOL OF ELECTIVES

S. No	Course Title	Year/SEM
1	Non-Destructive Testing	II-II
2	Urban Infrastructure	II-II
3	Disaster Management and Mitigation	III-II
4	Remote Sensing and GIS Application	III-II
5	Traffic Engineering	III-I
6	Ground Improvement Techniques	III-II
7	Advanced Structural Design	IV-I
8	Soil Dynamics and Machine Foundations	IV-I



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OPEN ELECTIVE STREAMS

Sl.No	Elective Type	Stream Name	Course Name	Year/SEM
1	Open Elective	Environment and Energy Engineering	Renewable Energy Resources	II-II
			Environmental Pollution and Control	III-I
			Principles of industrial Waste Treatment	III-II
			Environmental Impact Assessment	IV-I
		RS&GIS	Fundamentals of Remote Sensing and GIS	II-II
			Processing and Interpretation of RS Data	III-I
			Applications of RS&GIS	III-II
			GIS Technology	IV-I

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APPENDIX – B

List of courses that enable employability or entrepreneurship or skill development in the R-16 B. Tech – civil Engineering

Sl.	Course Name	Nature of course
1.	Building Materials and Concrete Technology	Skill development
2.	Fluid Mechanics	Skill development
3.	Solid Mechanics	Skill development
4.	Surveying - I	Skill development
5.	Material Testing Laboratory	Entrepreneurship
6.	Employability and Life Skills	Employability
7.	Building Construction and Planning	Employability
8.	Environmental Engineering - I	Skill development
9.	Hydraulics and Hydraulic Machines	Skill development
10.	Structural Analysis - I	Skill development
11.	Surveying - II	Skill development
12.	Engineering Seismology	Skill development
13.	Fundamentals of Construction Methods and Equipment	Employability
14.	Renewable Energy Resources	Skill development
15.	Fundamentals of Remote Sensing and GIS	
16.	Non-Destructive Testing	Entrepreneurship
17.	Urban Infrastructure	Skill development
18.	Employability and Life Skills	Employability
19.	Environmental Engineering - II	Employability
20.	Geotechnical Engineering - I	Skill Development
21.	Structural Analysis - II	Skill Development
22.	Transportation Engineering - I	Skill Development
23.	Water Resources Engineering - I	Skill Development
24.	Structural Dynamics	Skill Development



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25.	Construction Project Management	Entrepreneurship
26.	Traffic Engineering	Skill Development
27.	Environmental Pollution and Control	Employability
28.	Processing and Interpretation of RS Data	Employability
29.	Employability and Life Skills	Employability
30.	Design of Reinforced Concrete Structures	Skill Development
31.	Geo Technical Engineering - II	Skill Development
32.	Structural Analysis - III	Skill Development
33.	Water Resources Engineering - II	Skill Development
34.	Earthquake Resistant Design of Structures	Skill development
35.	Housing Planning and Management	Employability
36.	Disaster Management and Mitigation	Employability
37.	Remote Sensing and GIS Application	Employability
38.	Ground Improvement Techniques	Employability
39.	Principles of industrial Waste Treatment	Skill development
40.	Applications of RS&GIS	Employability
41.	Employability and Life Skills	Employability
42.	Modular Course	Employability
43.	Design of Steel Structures	Skill Development
44.	Engineering Geology	Employability
45.	Estimation and Costing	Employability
46.	Computer Applications in Civil Engg.	Entrepreneurship
47.	Seismic Evaluation and Retrofitting of Structures	Skill Development
48.	Construction Techniques and Optimization	Employability
49.	Advanced Structural Design	Skill development
50.	Soil Dynamics and Machine Foundations	Skill development
51.	Environmental Impact Assessment	Employability
52.	GIS Technology	Employability
53.	Employability and Life Skills	Employability
54.	Project Work \ Internship	Entrepreneurship

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APPENDIX - C

List of new courses in the R-16 B. Tech – Civil Engineering

Sl.	Course Name	Year
1.	Building Materials and Concrete Technology	II-I
2.	Fluid Mechanics	II-I
3.	Solid Mechanics	II-I
4.	Surveying – I	II-I
5.	Material Testing Laboratory	II-I
6.	Employability and Life Skills	II-I
7.	Building Construction and Planning	II-II
8.	Environmental Engineering - I	II-II
9.	Hydraulics and Hydraulic Machines	II-II
10.	Structural Analysis - I	II-II
11.	Surveying - II	II-II
12.	Engineering Seismology	II-II
13.	Fundamentals of Construction Methods and Equipment	II-II
14.	Renewable Energy Resources	II-II
15.	Fundamentals of Remote Sensing and GIS	II-II
16.	Non-Destructive Testing	II-II
17.	Urban Infrastructure	II-II
18.	Employability and Life Skills	II-II
19.	Environmental Engineering - II	III-I
20.	Geotechnical Engineering - I	III-I



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21.	Structural Analysis - II	III-I
22.	Transportation Engineering - I	III-I
23.	Water Resources Engineering - I	III-I
24.	Structural Dynamics	III-I
25.	Construction Project Management	III-I
26.	Traffic Engineering	III-I
27.	Environmental Pollution and Control	III-I
28.	Processing and Interpretation of RS Data	III-I
29.	Employability and Life Skills	III-I
30.	Design of Reinforced Concrete Structures	III-II
31.	Geo Technical Engineering - II	III-II
32.	Structural Analysis - III	III-II
33.	Water Resources Engineering - II	III-II
34.	Earthquake Resistant Design of Structures	III-II
35.	Housing Planning and Management	III-II
36.	Disaster Management and Mitigation	III-II
37.	Remote Sensing and GIS Application	III-II
38.	Ground Improvement Techniques	III-II
39.	Principles of industrial Waste Treatment	III-II
40.	Applications of RS&GIS	III-II
41.	Employability and Life Skills	III-II
42.	Modular Course	III-II
43.	Design of Steel Structures	IV-I



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44.	Engineering Geology	IV-I
45.	Estimation and Costing	IV-I
46.	Computer Applications in Civil Engg.	IV-I
47.	Seismic Evaluation and Retrofitting of Structures	IV-I
48.	Construction Techniques and Optimization	IV-I
49.	Advanced Structural Design	IV-I
50.	Soil Dynamics and Machine Foundations	IV-I
51.	Environmental Impact Assessment	IV-I
52.	GIS Technology	IV-I
53.	Employability and Life Skills	IV-I
54.	Project Work \ Internship	IV-II

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