

**SETHU INSTITUTE OF TECHNOLOGY, PULLOOR, KARIAPATTI- 626 115**

(An Autonomous Institution)

**DEPARTMENT OF CIVIL ENGINEERING**

**MINUTES OF 6<sup>th</sup> MEETING OF BOARD OF STUDIES HELD ON 04.08.2018**

The Sixth meeting of Board of Studies was held on **04.08.2018** in the Seminar Hall of Department of Civil Engineering at Sethu Institute of Technology.

The following Members were present:

<b>S.No.</b>	<b>Name of the Member</b>	<b>Position</b>
1.	Dr.R.Kumutha	<b>Chairperson- BOS</b>
2.	Dr.R.Senthil	<b>University Nominee</b> Prof/Civil Engg., CEG Campus, Anna University,Chennai.
3.	Dr.S.Nagan	<b>Member – Academia</b> Associate Prof/Civil Engg., TCE,Madurai.
4.	Dr.P.Vincent	<b>Member – Academia</b> Prof/Civil Engg., MSEC,Sivakasi.
5.	Er.L.Balaji	<b>Member – Industry</b> Proprietor-M/s Balaji & Associates, Madurai.
6.	Ms.L.Kokila	Member – Alumni
7.	Mr.P.Rajeswaran	Member – Alumni
8.	Dr.K.Vijai	Member – Internal
9.	Ms.K.Pandeeswari	Member – Internal
10.	Mr.M. Suresh	Member – Internal

<b>S.No.</b>	<b>Name of the Member</b>	<b>Position</b>
11.	Ms.K.Dhivya	Member – Internal
12.	Mr.M.Vignesh	Member – Internal
13.	Ms V.Anandhi	Member – Internal
14.	Ms.P.Sasi Rekha	Member – Internal
15.	Ms.M.Jyothi	Member – Internal
16.	Mr.A.M.Arunmohan	Member – Internal
17.	Mr.S.Vignesh Bharathi	Member – Internal
18.	Ms.R.Banu Priya	Member – Internal
19.	Ms.V.Saranya	Member – Internal
20.	Ms.S.Bharathi	Member – Internal
21.	Ms.P.Anitha	Member – Internal
22.	Ms.B.N.Brinila Bright	Member – Internal
23.	Ms.A.Subalakshmi	Member – Internal
24.	Ms.M.Brindha	Member – Internal
25.	Ms.B.H.Ramathilagam	Member – Internal
26.	Ms.K.Padmavathi	Member – Internal
27.	Ms.K.Jeyagandhi	Member – Internal
28.	Ms.G.Vigneswari	Member – Internal
29.	Ms.D.Rebekhal	Member – Internal
30.	Mr.T.G.Ramkumar	Member – Internal
31.	Ms.S.Mani Bharathi	Member – Internal
32.	Mr.M.Nishanth Premhar	Member – Internal
33.	Mr.S.Suresh	Member – Internal
34.	Mr.M.Mohamed Fayyaz	Member – Internal
35.	Mr.M.Selvaraj	Member – Alumni Proprietor-M/s Sai Designers & Builders, Madurai.

- The Chairperson Dr. R. Kumutha welcomed the members of the Board of Studies and initiated the meeting.
- The existing curriculum structure and syllabi for B.E Civil Engineering Program & M.E. Structural Engineering Program under Autonomous Regulations 2015 was presented to all the board members.
- The following points were discussed in the meeting:

## 1. Revision of Mission Statements, Program Outcomes and Program Specific Outcomes

1.1 The existing and the revised Mission statements of the Department were presented by the Chairperson as follows and the members of BOS approved the revised Mission Statements.

Existing	Revised
-	<ul style="list-style-type: none"> <li>• To offer quality undergraduate &amp; post graduate technical education and research guidance in civil engineering and produce engineers, technologists, scientists and citizens who will contribute to the growth and development of the country and to the needs of the industry.</li> </ul>
<ul style="list-style-type: none"> <li>• To provide state-of-art resources that contributes to a congenial learning environment.</li> </ul>	<ul style="list-style-type: none"> <li>• To provide state-of-the art resources that contributes to an excellent learning environment.</li> </ul>
<ul style="list-style-type: none"> <li>• To cultivate moral and ethical values among the students.</li> </ul>	<ul style="list-style-type: none"> <li>• To produce competent practicing civil engineers and entrepreneurs by imparting necessary skills and cultivating moral and ethical values</li> </ul>
<ul style="list-style-type: none"> <li>• To produce leading practicing engineers and entrepreneurs</li> </ul>	
<ul style="list-style-type: none"> <li>• To motivate the students to pursue higher education and take up competitive exams</li> </ul>	<ul style="list-style-type: none"> <li>• To motivate the students to take up competitive exams and pursue higher education</li> </ul>
<ul style="list-style-type: none"> <li>• To establish centers of excellence in emerging areas of research for societal and industrial benefits.</li> </ul>	<ul style="list-style-type: none"> <li>• To establish regular and efficient interaction with industries for the benefit of faculty members and students.</li> <li>• To promote research and development activities in emerging areas of civil engineering and offer services to society and industry through education, research and consultancy activities.</li> </ul>

1.2 The existing and the revised Program Outcomes (POs) of B.E Civil engineering program were also presented as follows and members of BOS approved the revised statements of Program Outcomes.

Existing	Revised
Students in the Civil Engineering program should, at the time of their graduation, be able to	
a. Apply knowledge of mathematics, science and engineering to the solution of complex Civil Engineering problems. <b>(Engineering knowledge)</b>	a. Apply knowledge of mathematics, science, engineering fundamentals and concepts of civil engineering to the solution of complex civil Engineering problems. <b>(Engineering knowledge)</b>
b. Develop a major research or design proposal for a Civil Engineering problem, complete the analysis, prepare and present the results. <b>(Problem analysis)</b>	b. Identify, formulate, review research literature, and analyze complex civil engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences. <b>(Problem analysis)</b>
c. Design, build and evaluate a Civil Engineering structure to satisfy certain client needs as per design specifications and codal provisions. <b>(Design &amp; Development of Solutions)</b>	c. Design solutions for complex civil engineering problems and design system components or processes to satisfy specified client needs as per design specifications and code provisions with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations. <b>(Design &amp; Development of Solutions)</b>
d. Identify and solve technical problems pertaining to civil engineering. <b>(Investigation of Complex Problems)</b>	d. Investigate complex civil engineering problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions. <b>(Conduct investigations of complex problems)</b>
e. Use the techniques, skills, software and modern engineering tools for solving civil engineering problems. <b>(Modern tool usage)</b>	e. Select and apply appropriate techniques, resources, modern engineering tools and software for the analysis and design of complex civil engineering problems with an understanding of their limitations. <b>(Modern tool usage)</b>

Existing	Revised
f. Comprehend and discuss the impact of civil engineering solutions in a global and societal context. <b>(Engineer and society)</b>	f. Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the civil engineering practice. <b>(The engineer and society)</b>
g. Design a Civil Engineering system, component, or process to meet the desired needs in societal and environmental contexts. <b>(Environment &amp; sustainability)</b>	g. Understand the impact of the civil engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. <b>(Environment and sustainability)</b>
h. Apply ethical principles and commit to professional ethics and responsibilities and norms of civil engineering practice. <b>(Ethics)</b>	h. Apply ethical principles and commit to professional ethics and responsibilities and norms of civil engineering practice. <b>(Ethics)</b>
i. Function as a Project member / leader in a civil engineering or multidisciplinary project. <b>(Individual &amp; team work)</b>	i. Function effectively as a member / leader in diverse teams or in multidisciplinary settings in handling civil engineering projects. <b>(Individual &amp; team work)</b>
j. Communicate effectively in both verbal and written forms. <b>(Communication)</b>	j. Communicate effectively with the engineering community and with society at large in both verbal and written forms on complex civil engineering activities. <b>(Communication)</b>
k. Engage in independent and life-long learning in the broadest context of technological change. <b>(Lifelong Learning)</b>	k. Apply civil engineering and management principles in managing construction projects as a member or as a leader in a team, in multidisciplinary environments to achieve efficient and cost-effective solutions. <b>(Project Management &amp; Finance)</b>
l. Apply civil engineering and management principles in construction projects. <b>(Project Management &amp; Finance)</b>	l. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. <b>(Lifelong Learning)</b>

1.3 The existing and the revised Program Specific Outcomes (PSOs) of B.E Civil engineering program were also presented as given below and members of BOS approved the revised Program Specific Outcomes.

Existing	Revised
The Civil Engineering graduates will	
1. Excel in core areas of Civil Engineering such as Structural, Environmental and Water resources engineering with proficiency in mathematics and physical sciences.	1. Excel in core areas of Civil Engineering such as Structural and Environmental engineering with proficiency in mathematics and physical sciences.
2. Function as design consultants in the construction industry for the design of Civil Engineering structures.	2. Plan, analyse, design, execute and maintain civil engineering structures in a cost effective manner without overexploitation of natural resources.

## 2. Interdisciplinary Courses

2.1 The Chairperson presented the syllabi of the following Interdisciplinary courses to the Board for approval :

1. Smart Buildings and
2. Waste to Energy Conversion

It was approved by the members of BOS.

2.2 Dr.R.Senthil, University Nominee & Prof/Civil Engg., CEG Campus suggested to include the Standard Textbooks in the syllabus of the Interdisciplinary Courses and also to identify the faculty members for the respective courses.

2.3 It was suggested by Dr.S.Nagan, Associate Prof/Civil Engg.,TCE to identify an interdisciplinary course on “Electrical Safety Aspects in construction”.

## 3. Electives and their Grouping

3.1 It was suggested by Dr.R.Senthil, University Nominee, Prof/Civil Engg., CEG Campus, to move the Professional Elective 15UCE923-Prestressed Concrete Structures to Professional Core in the next revision of syllabus or atleast one unit on the basic concepts of Prestressed concrete can be introduced in any one of the design oriented courses.

3.2 The Chairperson presented the grouping of all the Professional Elective Courses available in the R2015 curriculum under five major domains as mentioned below to the members of BOS. The Board approved the same.

S.No.	Domain	Course Code	Course Name
1.	Structural Engineering	15UCE902	Concrete Technology
2.		15UCE914	Bridge Structures
3.		15UCE915	Storage Structures
4.		15UCE916	Tall Structures
5.		15UCE917	Prefabricated Structures
6.		15UCE918	Experimental Stress Analysis
7.		15UCE919	Industrial Structures
8.		15UCE920	Finite Element Method
9.		15UCE921	Repair and Rehabilitation of Structures
10.		15UCE922	Advanced Engineering Mechanics
11.		15UCE923	Prestressed Concrete Structures
12.		15UCE913	Ground Improvement Techniques
13.	Environmental Engineering	15UCE909	Environmental Impact Assessment
14.		15UCE910	Industrial Waste Management
15.		15UCE911	Air Pollution Management
16.		15UCE912	Municipal Solid Waste Management
17.	Management	15UCE904	Town Planning and Architecture
18.		15UCE906	Housing Planning and Management
19.		15UCE926	Urban Planning and Development
20.		15UCE931	Disaster Management and Mitigation
21.	Transportation Engineering , Surveying & GIS	15UCE903	Modern Surveying
22.		15UCE905	Traffic Engineering and Management
23.		15UCE908	Pavement Engineering
24.		15UCE924	Airport, Docks and Harbour Engineering
25.		15UCE925	Transportation Planning and Systems
26.		15UCE928	Geoinformatics Applications for Civil Engineers
27.		15UCE929	Cartography
28.		15UCE930	Smart Cities
29.	Water Resources Engineering	15UCE901	Hydrology
30.		15UCE907	Ground Water Engineering
31.		15UCE927	Coastal Engineering

#### **4. Employability Enhancement, Entrepreneurship Development and Skill Development Courses**

The Chairperson presented the list of Employability Enhancement, Entrepreneurship Development and Skill Development Courses identified from the existing curriculum to all the members of BOS as follows and the Board approved the same.

##### **Employability Enhancement Courses**

<b>S.No.</b>	<b>Course Code</b>	<b>Course Name</b>
1.	15UEN201	Business English and Presentation Skills
2.	15UCE208	Computer aided Building Drawing
3.	15UGS431	Reasoning and Quantitative Aptitude
4.	15UGS531	Soft Skills and Communication Laboratory
5.	15UCE608	Technical Project
6.	15UCE702	Estimation, Costing and Valuation Engineering
7.	15UCE707	Software Applications Laboratory
8.	15UCE804	Project Work
9.	15UCE866	Practical Valuation
10.	15UCE867	Design of Multistorey Building – A Practical Approach

##### **Entrepreneurship Development Courses**

<b>S.No.</b>	<b>Course Code</b>	<b>Course Name</b>
1.	15UCE208	Computer aided Building Drawing
2.	15UCE702	Estimation, Costing and Valuation Engineering
3.	15UCE707	Software Applications Laboratory
4.	15UCE866	Practical Valuation
5.	15UCE867	Design of Multistorey Building – A Practical Approach
6.	15UCE608	Technical Project
7.	15UCE804	Project Work

##### **Skill Development Courses**

<b>S.No.</b>	<b>Course Code</b>	<b>Course Name</b>
1.	15UCE608	Technical Project
2.	15UCE804	Project Work



### Other Skill Development Courses

S.No.	Course Name
1.	Internship
2.	Industry Designed Courses
3.	R & D Project – I
4.	R & D Project – II
5.	Self learning Online Courses
6.	Certificate Courses
7.	<b>Mandatory courses</b> <b>Category :Skills Development</b>

### Mandatory Courses

Category	Courses
Personality and Social Development	Sports
	National Service Scheme
	Club Activities (ECO Club, Red Ribbon Club, YRC, Photography Club)
	Extra Curricular Activities
Skills Development	English Proficiency Certificate such as BEC, TOFEL, IELTS
	Foreign Languages
	Soft Skills and Aptitude
	Aptitude Proficiency certificate such as GRE, GMAT, CAT
	Co-Curricular Activities
	Intellectual Property Rights
Value Education	Value Education and Human Rights

### 5. New Courses Introduced

The Chairperson presented the list of New Courses introduced in the proposed R2015 curriculum to the members of BOS as follows and *the members of BOS resolved to approve and recommend the same to the Academic Council.*

S. No.	Course Code	Name of the Course	Credits
1.	15UCE206	Basics of Engineering Mechanics	4
2.	15UCE608	Technical Project	6

3.	15UCE707	Software Applications Laboratory	2
4.	15UCE861	Green Building Concepts	1
5.	15UCE862	Practical Aspects of Architecture	1
6.	15UCE863	Water Conservation Techniques	1
7.	15UCE865	Construction Safety	1
8.	15UCE869	Effluent Treatment Plant	1
9.	15UCE870	Building Planning and Byelaws	1
10.	15UCE872	Special Concretes	1
11.	15UCE873	Health Monitoring of Structures	1
12.	15UCE874	Building Energy Audit	1
13.	15UCE911	Air Pollution and Management	3
14.	15UCE925	Transportation Planning and Systems	3
15.	15UCE926	Urban Planning and Development	3
16.	15UCE930	Smart Cities	3
17.	15UGS531	Soft Skills And Communication Laboratory	2
18.	15UGS431	Reasoning and Quantitative Aptitude	1

#### **6. Mapping of COs with POs and PSOs and Mapping of Curriculum with Programme Specific Criteria**

The Chairperson presented the Mapping of COs with POs and PSOs of R2015 to all the members of BOS and the board approved the same and also the Chairperson presented the Mapping of Curriculum and Syllabi with ASCE Programme Specific Criteria.

#### **7. Analysis of the stakeholders feedback regarding curriculum and syllabi**

The Chairperson presented the Analysis of the stakeholders' feedback regarding curriculum and syllabi of R2015 to all the members of BOS. The members suggested seeing the possibility of incorporating the stakeholders feedback during the next syllabus revision.

#### **8. Assessment Questions and Assessment Pattern for Courses**

The Chairperson presented the Assessment Questions and Assessment Pattern for all the Courses available in R2015 curriculum prepared by the faculty members. The following suggestions were given by the external members of BOS:

### **Suggestions by Dr.R.Senthil, University Nominee**

- 8.1 Being the Under Graduate level, it was suggested to simplify the assessment questions.
- 8.2 It was suggested to follow consistent units for questions involving problems.
- 8.3 It was suggested to give Figure numbers for all the figures given in the questions.

### **Suggestions by Dr. S. Nagan, Associate Prof. / TCE**

- 8.4 It was suggested to give diagrams to the questions wherever possible in problem oriented courses instead of giving statements
- 8.5 It was suggested to include Derivation based Assessment questions in problem oriented courses.

## **9. Panel of Examiners**

The Chairperson presented the Panel of Faculty members for Valuation/Question Paper setting/Scrutiny/Practical Exam Examiners for approval. The Board approved the same. Dr. R.Senthil, University Nominee suggested to include examiners from standard colleges.

## **10. M.E Structural Engineering**

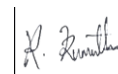
The members of BOS discussed the existing curriculum and syllabi for M.E Structural Engineering under R2015 regulations and the suggested the following:

As two batches under R2015 had passed out, the members of BOS suggested not to make any corrections in the existing curriculum.

## **11. Any Other**

- The members of BOS verified the quality of End Semester Question Papers and also a sample End Semester question paper Review Report.
- It was also suggested to audit all the End Semester Answer Scripts by external panel members

The Board of Studies of Department of Civil Engineering approves and recommends the changes proposed in the Mission statements, Program Outcomes and Program Specific Outcomes and also approves the Grouping of Electives, Interdisciplinary Courses, Assessment Questions and Assessment Pattern of R2015 Curriculum. The Chairperson thanked the members for their contribution and valuable suggestions given by them in various aspects for B.E Civil Engineering Program and M.E Structural Engineering Program under Autonomous Regulations 2015. .



**Chairperson**