



# **ACTION TAKEN REPORT**

**Department of CIVIL Engineering**

**(School of Engineering & Technology)**

**Academic Year 2021-2022 to 2017-2018**



**DIT UNIVERSITY**

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**DIT University, Dehradun**  
**Department of Civil Engineering**  
**Session-2021-22**  
**Report on Action taken**

**Brief decision of the 6<sup>th</sup> Board of Studies**

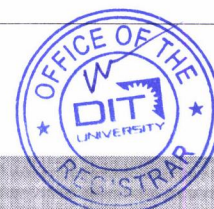
**Action Taken**

<b><u>BOS Action Taken Report 2021-22</u></b>			
<b>Recommendation 1</b>	<b>Item No. 6.4</b> To discuss the credit changes (From 174 credits to 160 credits) in the curriculum of B.Tech. Civil Engineering in Fully Flexible Choice Based Credit System (FFCBCS), as per recommendations of Chairperson, Academic Council  The external experts suggested that 160 credits can be adopted as per AICTE norms. Mr. Ravi Shankar Kumar and Mr. Gaurav Thakur suggested keeping Foundation Engineering and Construction Planning and Management in the departmental core courses instead of departmental electives. However, the external experts suggested that the same can be decided at the departmental level.		
<b>Action(s) taken</b>	The received recommendation(s) of external experts was approved by the Academic Council and further implemented in the curriculum.	<b>Responsibility</b>  HoD and Course coordinator	<b>Target Date</b>  July 2021
<b>Recommendation 2</b>	<b>Item No. 6.5</b> To discuss the updation in course outcomes (COs) in the curriculum of B.Tech. Civil Engineering, CBCS schemes.  The external experts suggested following proper Bloom's Taxonomy norms while writing COs for B.Tech. Civil Engineering curriculum (FFCBCS schemes) and for avoiding redundancy in keywords.		


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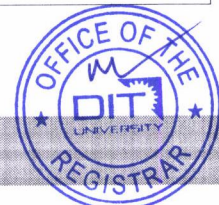


<b>Action(s) taken</b>	The received recommendation(s) of external experts was approved by the Academic Council and further implemented in the curriculum.	<b>Responsibility</b>  HoD and Course coordinator	<b>Target Date</b>  July 2021									
<b>Recommendation 3</b>	<p><b>Item No. 6.6</b></p> <p><b>To present the revised course structure and syllabus of M. Tech Structural Engineering applicable for batch 2021-2023 onwards.</b></p> <p>The learned members suggested the following modifications in the program:</p> <ol style="list-style-type: none"> <li>I. The courses on Advanced Steel Design and Stability of Structures should be kept as core courses.</li> <li>II. Only the Dissertation should be kept in the last two semesters. The last two semesters should be free for the students to carry out their project works.</li> <li>III. The name of the software to be used in the course computer-aided design of structures should be mentioned</li> </ol>											
<b>Action(s) taken</b>	The received recommendation(s) of external experts was approved by the Academic Council and further implemented in the curriculum.	<b>Responsibility</b>  HoD and Course coordinator	<b>Target Date</b>  July 2021									
<b>Recommendation 4</b>	<p><b>Item No. 6.7</b></p> <p><b>To present the revised course structure and syllabus of M. Tech Structural Engineering applicable for batch 2021-2023 onwards.</b></p> <p>Following revisions were recommended in the course contents of M. Tech - Structural Engineering:</p> <table border="1" data-bbox="518 1601 1364 1937"> <thead> <tr> <th>Sl. No.</th> <th>Sub Name</th> <th>Suggestions Received</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Advanced Structural Analysis</td> <td>1. Ms. Sandhya Joshi suggested that the subject should be kept as an elective and replaced by any other core subject like Stability of Structures.</td> </tr> <tr> <td>2.</td> <td>Seismic Design of Structures</td> <td>1. External experts suggested that a book on Geotechnical Engineering by Crammer should be added to the syllabus.</td> </tr> </tbody> </table>			Sl. No.	Sub Name	Suggestions Received	1.	Advanced Structural Analysis	1. Ms. Sandhya Joshi suggested that the subject should be kept as an elective and replaced by any other core subject like Stability of Structures.	2.	Seismic Design of Structures	1. External experts suggested that a book on Geotechnical Engineering by Crammer should be added to the syllabus.
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	<p>3. Finite Element Analysis</p> <p>4. Computer-Aided Design of Structures</p> <p>5. Research Methodology and IPR</p> <p>6. Advanced Foundation Design</p> <p>7. Optimization in Structural Design</p>	<p>2. They also suggested giving more importance to this subject.</p> <p>3. The external experts asked whether the syllabus is covering seismic response of buildings only or not.</p> <p>4. The external experts suggested adding response analysis.</p> <p>1. Mr. Gaurav Thakur suggested incorporating Finite Element Analysis of Plate &amp; Shells.</p> <p>2. Mr. Gaurav Thakur suggested that the details of the software should be there in the syllabus.</p> <p>1. External experts suggested to add topics of innovation and technology.</p> <p>1. External experts suggested to check and make it different than the previous subjects in continuation and a book by Crammer should be added in the syllabus.</p> <p>1. Mr. Gaurav Thakur suggested to include design of experiments topics.</p>				
<p><b>Action(s) taken</b></p>	<p>The recommendation of learned members and various stakeholders was incorporated. Few changes had been made and were put up in front of the Academic council for approval.</p>	<table border="1"> <thead> <tr> <th data-bbox="992 1331 1209 1367">Responsibility</th> <th data-bbox="1217 1331 1388 1367">Target Date</th> </tr> </thead> <tbody> <tr> <td data-bbox="992 1401 1145 1503">HoD and Course coordinator</td> <td data-bbox="1217 1401 1345 1437">July 2021</td> </tr> </tbody> </table>	Responsibility	Target Date	HoD and Course coordinator	July 2021
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**DIT University, Dehradun**  
**Department of Civil Engineering**  
**Session-2020-21**  
**Report on Action taken**

Brief decision of the 5<sup>th</sup> Board of Studies

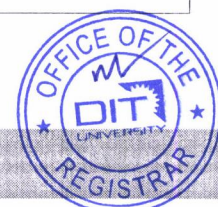
Action Taken

<u>BOS Action Taken Report 2020-21</u>							
<b>Recommendation 1</b>	<p><b>Item No. 5.3</b></p> <p>To confirm the credit and course code distribution of open electives offered in the existing CBCS scheme from the department of Civil Engineering. In this regard, an interim communication was sent to BoS members on 4th January 2020 and no comments were received.</p> <p>Since no comments were received the credits and course code distribution were confirmed unanimously.</p>						
<b>Action(s) taken</b>	<table border="1"><thead><tr><th>Since no recommendation(s) were received from external experts and codes and credits were approved by the Academic Council and further implemented in the curriculum.</th><th>Responsibility</th><th>Target Date</th></tr></thead><tbody><tr><td></td><td>HoD and Course coordinator</td><td>July 2020</td></tr></tbody></table>	Since no recommendation(s) were received from external experts and codes and credits were approved by the Academic Council and further implemented in the curriculum.	Responsibility	Target Date		HoD and Course coordinator	July 2020
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	HoD and Course coordinator	July 2020					
<b>Recommendation 2</b>	<p><b>Item No. 5.4</b></p> <p><b>Discussions on the introduction of 2 credit course on 'Research and Publication Ethics' in Ph.D. course work as suggested by MHRD.</b></p> <p>The members including the external experts, alumni, and student members were informed that the proposed syllabus of 'Research and Publication Ethics' was suggested by MHRD. At the outset, the external experts expressed their concerns that some context should be added in the syllabus as follows:</p>						

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	<p>i. Credit sharing mechanism should be added for the benefit of the Ph.D. scholars. Supporting members of combined research should also be given due credit.</p> <p>ii. History of great Research should also be added to the syllabus</p> <p>iii. SOP of research methodology should be included in the syllabus to carry out good research.</p> <p>iv. Collaborative research is also to be included within this syllabus</p>		
<b>Action(s) taken</b>	<p>The received recommendation(s) of external experts was approved by the Academic Council and further implemented in the curriculum.</p>	<b>Responsibility</b>	<b>Target Date</b>
		HoD and Course coordinator	July 2020
<b>Recommendation 3</b>	<p><b>Item No. 5.5</b></p> <p><b>Discussions on whether modifications are required for the syllabus of existing selective Diploma courses for consideration from the 2020-21 batch onwards.</b></p> <p>The external experts and alumni suggested focusing on some important aspects as follows:</p> <ul style="list-style-type: none"> <li>i. Estimation and Costing should be added which is relevant for all competitive examinations as well as industry, must be retained for the benefit of the students</li> <li>ii. Should Focus more on software courses</li> <li>iii. Field survey and/or activity-based learning should be incorporated within the syllabi.</li> <li>iv. Interest of students in content should be generated at all levels Diploma, UG, and PG.</li> </ul>		
<b>Action(s) taken</b>	<p>The received recommendation(s) of external experts was approved by the Academic Council and further implemented in the curriculum.</p>	<b>Responsibility</b>	<b>Target Date</b>
		HoD and Course coordinator	July 2020

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**Item No. 5.6**

**To present the course curriculum and detailed syllabus of B.Tech. Civil Engineering in the newly proposed Fully Flexible Choice Based Credit System (FFCBCS)**


The learned members suggested the following modifications in the program:

- i. Unit 1 for the subject of Engineering Material should be more related to macro structures rather than microstructure
- ii. The subject named 'Engineering Materials' should be designed in such a manner that the subject becomes more relevant to the Civil Engineers i.e. some topics reflecting the core mechanical engineering domain are required to be removed.
- iii. In the context of a reference book, it should be more standard and free of errors.
- iv. IS codes should be mentioned in reference book list wherever needed.
- v. Pre-requisites of all syllabus should be revised.
- vi. The title of 'Building design, Construction and Drawing should be updated as the construction machinery and methodologies are not there in syllabi.
- vii. Component of Torsion forces should be added in 'Strength of Material'
- viii. In Geomatics Engineering, topic of Tacheometry and Real Time Kinematics of GPS and Geodetic GPS Surveying should be added
- ix. For the course Structural Analysis I, lecture credit should be increased from 2 to 3 List of experiments need to be revised. Also suggested to share experiments in two semesters rather than one.
- x. Book named "Theory of Structures" from Timoshenko was asked to be added.
- xi. Flexural strain considerations were asked to be added in content of Structural Analysis I along with axial strain
- xii. In Hydrology and Irrigation Engineering, Flood modeling software can be introduced in unit 3.
- xiii. The topic of Intelligent Transportation System should be added in Transportation Engineering I
- xiv. In Soil Mechanics the settlement analysis part should be shifted to Foundation Engineering course in unit 2.
- xv. In Foundation Engineering course, different stability methods should be incorporated. Also the term factor of safety and time dependant settlement analysis should be added.
- xvi. Also it was suggested to consider Bishop method, Culmann Graphical method, Taylor's stability method, friction circle method in Foundation Engineering.
- xvii. External experts suggested in keeping both the core courses Transportation Engineering I and II in Discipline Core as both have got high relevance in present industry scenario.
- xviii. Addition of Plastic Analysis as a Unit in Steel Design has been



<p><b>Recommendation 4</b></p>	<p>appreciated by the experts.</p> <p>xix. In design of RCC II, flat slab should be kept in Advanced structure subjects. Also suggested to keep Working stress method.</p> <p>xx. Also suggested to increase the content of matrix method in Structural Analysis II reducing the content of Kani's method. More focus to be given on stiffness method and flexibility method, ILD method can be considered.</p> <p>xxi. Three moment theorem should be added in structure Analysis I</p> <p>xxii. Highway design software MX ROADS to be included in VAT II.</p> <p>xxiii. Some topics in PERT were missing and requested to be added.</p> <p>xxiv. Project planning of township may be considered in syllabus</p> <p>xxv. The image processing part should be added in Unit V in place of Applications in the subject of 'Remote Sensing and Image Processing'</p> <p>xxvi. Rock mechanics portion to be added in Engineering Geology</p> <p>xxvii. Topic on Dams to be incorporated in Environmental Risk and Disaster Management</p> <p>xxviii. List of Books to be modified in Pre Stressed concrete</p> <p>xxix. Dam safety and Liquefaction of soil to be considered either in Geotechnical engineering syllabus or Soil Dynamics syllabus</p> <p>xxx. Sustainable Development Goals 17+ 1 suggested by GOI have to be included in 2 courses having contents related to sustainable growth.</p> <p>xxxi. Two degree freedom to be added in earthquake engineering syllabus</p> <p>xxxii. CWC guidelines to be reflected in syllabus wherever required essentially such as geotechnical engineering and earthquake engineering</p> <p>xxxiii. PGA, Attenuation relationship and return period should be critically added in syllabi wherever required</p> <p>xxxiv. Sustainable development goals to be added in Environmental management sustainable development course</p> <p>xxxv. Return period of flood to be included in Unit 5 in Bridge Engineering.</p> <p>xxvi. Pert CPM portion can be interchanged in Construction planning and management</p> <p>xxvi. Some minor modifications were also suggested in the syllabus of Advanced Highway Engineering</p>		
<p><b>Action(s) taken</b></p>	<p>After a detailed discussion with external experts, the received recommendation(s) were approved by the Academic Council and further implemented in the curriculum.</p>	<p><b>Responsibility</b></p> <p>HoD and Course coordinator</p>	<p><b>Target Date</b></p> <p>July 2020</p>
	<p><b>Item No. 5.7</b></p> <p><b>To have discussions on Open Electives offered in the FFCBCS scheme from the Department of Civil Engineering.</b></p> <p>The experts expressed their approval for all the open elective courses to be offered in Civil Engineering as these courses are applicable to everyone.</p>		



<b>Recommendation 5</b>	<p>However, they suggested:</p> <p>i. Some modifications are required for the subject Environment and Ecology in the ecology portion to be more reflective of applications and technological solutions in society.</p> <p>ii. The title Sustainable growth may be replaced by Sustainable development with necessary changes in the syllabus.</p>		
<b>Action(s) taken</b>	<p>After a detailed discussion with external experts, the received recommendation(s) were approved by the Academic Council and further implemented in the curriculum.</p>	<b>Responsibility</b>  HoD and Course coordinator	<b>Target Date</b>  July 2020
<b>Recommendation 6</b>	<p><b>Item No. 5.8</b></p> <p><b>To decide and seek inputs on any special evaluation scheme in the FFCBCS scheme</b></p> <p>i. Members suggested that for slow learners, credit courses (only electives) should be offered to them as Audit course/ non-credit courses in case of non-fulfillment of passing criteria but the minimum credit requirement to get a degree from a university must be met by the student. They also strongly opposed for any other means of evaluation strategies so that the quality and integrity of education will be maintained.</p> <p>ii. The honorable members suggested the weightage ratio of internal assessment (that includes lab components in courses having lab) and end-term assessment for courses having theory and lab components both should be 70:30. On the other hand, for pure theory courses, the ratio should be 60:40.</p>		
<b>Action(s) taken</b>	<p>After a detailed discussion with external experts, the received recommendation(s) were approved by the Academic Council and further implemented in the curriculum.</p>	<b>Responsibility</b>  HoD and Course coordinator	<b>Target Date</b>  July 2020
	<p><b>Item No. 5.9</b></p> <p><b>Finalizing the feasibility of course structure and syllabus of 'Remote Sensing and GIS' as certificate and PG Diploma course</b></p> <p>The learned members including external experts expressed satisfaction with the course structure and syllabus but according to their suggestions, the course must be offered as M. Tech in 'Remote sensing and GIS' rather than a</p>		

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<b>Recommendation 7</b>	PG diploma or certificate course for the job prospect of Students. In their opinion, an M. Tech degree is dominantly required by employers for design use in GIS and remote sensing fields as compared to PGDM and Certificate courses. They also suggested “UAV remote sensing” as a certificate course which is having high demand by employers in the current scenario		
<b>Action(s) taken</b>	The received recommendation(s) were put up in front of the Academic Council for approval	<b>Responsibility</b>  HoD and Course coordinator	<b>Target Date</b>  July 2020

  
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**Action Taken Report 2019-20**  
**Department of Civil Engineering**

<b>BOS Action Taken Report 2019-20</b>			
<b>Recommendation 1</b>	<p>The members suggested the following recommendations in the B.Tech. program:</p> <p>i) An elective course on slope stability should be included in the program. It was then pointed out that one full unit has already been devoted to it in the course Foundation Engineering (CE304). (Item no. 4.3.(i))</p> <p>ii) One elective on data mining should be offered. (Item no. 4.3.(iii))</p> <p>iii) The course GPS should be renamed as GNS which is the Indian version of GPS. (Item no. 4.3.(iv))</p> <p>iv) The course Disaster Management should include contents as per the norms laid down by various Govt. regulatory agencies. (Item no. 4.3.(v))</p> <p>v). Hill slope hydrology should be included in the course Hydrology. (Item no. 4.3.(vi))</p> <p>vi) In the course Hydrology, some modelling software pertaining to flood should be included in the syllabus. (Item no. 4.3.(vii))</p> <p>vii) The final year should have fewer courses with lesser credit so that students may devote. (Item no. 4.3.(viii))</p>		
<b>Action(s) taken</b>	It was taken for consideration and deliberation.	<b>Responsibility</b> Course Coordinator	<b>Target Date</b> July 2019
<b>Recommendation 2</b>	<p>The members suggested the following recommendations in the Diploma in Civil Engineering program:</p> <p>i) Erosion Control and Slope Stability should be included in the program. (Item no. 4.4.(i))</p> <p>ii) The courses Solid Mechanics and Theory of Structures should be suitably renamed. (Item no. 4.4.(ii))</p> <p>iii) The course named Strength of Material should be suitably revised. (Item no. 4.4.(iii))</p>		



*(Signature)*

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	<p>iv) Some component of green building concept to be included in the program. (Item no. 4.4.(iv))</p> <p>v) In the course Environmental Pollution Control, content should be related to Civil Engineering. (Item no. 4.4.(v))</p>		
<b>Action(s) taken</b>	It was taken into consideration and changes were made as per the requirement and feasibility.	<b>Responsibility</b> Course Coordinator	<b>Target Date</b> July 2019
<b>Recommendation 3</b>	<p>Regarding Ph.D. following courses are to be offered as course works for the program.</p> <p>i. Earthquake Resistant Design ii. Slope Stability iii. Land Slide Some courses on GA and AI should also be offered. (Item no. 4.5)</p>		
<b>Action(s) taken</b>	It was taken into consideration and few changes were made.	<b>Responsibility</b> Course Coordinator	<b>Target Date</b> July 2019
<b>Recommendation 4</b>	<p>The experts suggested that the 2<sup>nd</sup> year of the M.Tech. Program should be devoted solely to the dissertation so that the students may get greater exposure to the higher learning of Structural Engineering and accordingly, the courses offered in the 3<sup>rd</sup> and 4<sup>th</sup> semesters of the program should be shifted to 1<sup>st</sup> year of the program. (Item no. 4.6)</p>		
<b>Action(s) taken</b>	Necessary changes were made.	<b>Responsibility</b> Course Coordinator	<b>Target Date</b> July 2019



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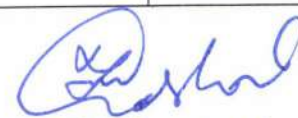
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## Action Taken Report 2018-19 Department of Civil Engineering

BOS Action Taken Report 2018-19			
<b>Recommendation 1</b>	The external experts took note of the course Estimation and Costing proposed to be offered as an elective in the seventh semester under CBCS scheme. However, they suggested that this course should be offered as a core course either in seventh or eighth semester itself. The board agrees to explore the possibility of doing so. (Item no. 3.1)		
<b>Action(s) taken</b>	It was taken for consideration and deliberation would be made in the next BOS.	<b>Responsibility</b> Course Coordinator	<b>Target Date</b> July 2018
<b>Recommendation 2</b>	Regarding B.Tech in Civil Engineering graduate with specialization in Geoinformatics and Disaster Mitigations the members suggested to offer the program with either of the following two alternatives: a. Dual degree B.Tech (Civil Engineering + M.Tech (Geoinformatics and Disaster Mitigations) which may be a five years program b. B.Tech Civil Engineering with Honour's in Geoinformatics and Disaster Mitigations  (Item no. 3.1)		
<b>Action(s) taken</b>	It was taken into consideration for further deliberation and discussion.	<b>Responsibility</b> Course Coordinator	<b>Target Date</b> July 2018
<b>Recommendation 3</b>	They suggested for further more deliberations in UG/PG academic committee meeting and academic council regarding the necessary electives for the course B.Tech Civil Engineering with specializations in Geoinformatics and Disaster Mitigations in order to intact the importance of core Civil Engineering. (Item no. 3.1)		
<b>Action(s) taken</b>	It was taken into consideration and necessary changes were made.	<b>Responsibility</b> Course Coordinator	<b>Target Date</b> July 2018





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<b>Recommendation 4</b>	The external experts express their expressions about offering diploma Programs. The university is supposed to offer Degree Programs of higher with emphasis on research and development. (Item no. 3.2)		
<b>Action(s) taken</b>	One of the learned members pointed out that in the present day job market scenario, there is a greater demand of trained Blue color machine man fitters and mechanics etc. hence introduction of these diploma Programs was justified, as majority of the workers on the shop floors and worksites are trained Diploma holders only. The board then accepted the proposal of introducing about Diploma Programs.	<b>Responsibility</b> Course Coordinator	<b>Target Date</b> July 2018



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