

**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY**

**(AUTONOMOUS)**

**DEPARTMENT OF CIVIL ENGINEERING**

**B.E. CIVIL ENGINEERING**

**ATTAINMENTS OF BATCH 2017-2021**

Code	TITLE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
16MTC05	Engg. Mathematics-I	2.50	1.92	0.96	---	0.96	---	---	---	---	---	0.97	0.96	0.96	---	0.96	---
	Target Level	1.95	1.48	0.74	---	0.73	---	---	---	---	---	0.75	0.74	0.74	---	0.74	---
16MBC01	Engineering Econom	1.25	1.65	1.24	1.36	1.13	0.85	1.09	1.21	0.86	0.82	1.72	0.86	1.16	1.04	1.29	---
	Target Level	1.15	1.57	1.28	1.32	1.03	0.80	1.07	1.08	0.81	0.79	1.75	0.82	1.21	1.13	1.34	---
16CEC03	Surveying	1.24	1.22	1.15	0.93	1.01	---	---	0.65	---	---	---	1.10	1.10	0.78	1.00	---
	Target Level	1.08	1.08	1.08	0.81	1.08	---	---	0.54	---	---	---	1.08	0.81	0.72	0.95	---
16CEC04	Building Materials P	1.84	1.47	2.20	1.83	---	1.33	1.83	---	0.92	0.92	---	0.96	1.32	1.47	1.90	1.16
	Target Level	2.52	1.86	2.79	1.98	---	1.80	1.98	---	0.99	0.99	---	1.36	1.72	1.86	2.46	1.53
16CEC05	Strength of Materials	2.06	1.38	---	---	---	---	---	---	---	---	---	0.69	2.06	1.38	---	---
	Target Level	2.63	1.75	---	---	---	---	---	---	---	---	---	0.88	2.63	1.75	---	---
16CEC06	Engineering Geology	2.19	1.79	1.99	0.99	1.00	2.19	0.99	---	1.19	0.99	---	0.99	2.38	1.79	2.19	1.00
	Target Level	2.17	1.78	1.98	0.99	0.99	2.18	0.99	---	1.19	0.99	---	0.99	2.37	1.78	2.18	0.99
16CEC07	Surveying Lab - I	3.00	2.00	1.50	---	1.00	1.00	---	---	1.80	---	---	---	1.00	1.00	1.00	---
	Target Level	2.92	1.95	1.46	---	0.97	0.97	---	---	1.75	---	---	---	0.97	0.97	0.97	---
16CEC08	Engg. Geology Lab	2.59	2.19	1.99	1.00	3.00	1.79	1.00	---	1.00	0.99	---	1.00	2.19	1.99	1.99	---
	Target Level	2.60	2.20	2.00	1.00	3.00	1.80	1.00	---	1.00	1.00	---	1.00	2.20	2.00	2.00	---
16CEC09	CAD Lab	2.00	1.33	2.00	---	3.00	---	---	---	---	2.33	---	1.00	2.40	2.50	1.00	1.00
	Target Level	2.00	1.33	2.00	---	3.00	---	---	---	---	2.33	---	1.00	2.40	2.50	1.00	1.00
16CE C10	Transportation Engin	1.47	0.98	0.73	0.44	---	---	---	---	---	---	0.64	0.32	0.44	0.48	0.88	---
	Target Level	2.64	1.55	2.22	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.47	0.88	1.33	1.53	---
16CE C11	Construction Manag	1.04	---	---	1.10	1.65	---	0.87	1.18	---	---	1.39	---	---	1.33	1.44	---



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	Target Level	2.59	—	—	1.83	2.75	—	1.27	1.87	—	—	2.22	—	—	2.21	2.18	—
16CE C12	Water & Waster Wat	1.94	1.73	2.59	—	—	1.28	1.70	—	—	0.84	—	—	0.86	1.72	—	—
	Target Level	2.06	1.84	2.75	—	—	0.96	—	—	—	0.87	—	—	0.92	1.84	—	—
16CE C13	Strength of Materials	2.36	1.58	—	—	—	—	—	—	—	—	—	—	2.36	1.58	—	—
	Target Level	2.59	1.73	—	—	—	—	—	—	—	—	—	—	2.59	1.73	—	—
16CE C14	Fluid Mechanics - I	2.51	1.67	0.84	—	—	—	—	—	—	—	—	—	0.84	—	—	—
	Target Level	2.76	1.84	0.92	—	—	—	—	—	—	—	—	—	0.92	—	—	—
16CE C15	Strength of Materials	3.00	2.00	1.00	2.00	1.00	1.00	—	1.00	1.00	1.00	1.00	1.00	3.00	2.00	1.00	—
	Target Level	3.00	2.00	1.00	2.00	1.00	1.00	—	1.00	1.00	1.00	1.00	1.00	3.00	2.00	1.00	—
16CE C16	Survey Lab - II	3.00	2.00	2.00	—	1.00	1.00	—	—	2.00	—	—	—	1.00	1.00	1.00	—
	Target Level	2.37	1.58	1.58	—	0.79	0.79	—	—	1.58	—	—	—	0.79	0.79	0.79	—
16EG C03	Soft Skills & Employ	—	—	—	—	—	—	—	0.99	0.99	0.99	—	—	0.99	0.99	0.99	0.99
	Target Level	—	—	—	—	—	—	—	0.99	0.99	0.99	—	—	0.99	0.99	0.99	0.99
16CE C17	Survey Camp	2.82	2.82	2.82	1.88	0.94	1.88	0.94	1.88	0.94	0.94	0.94	0.94	2.06	2.64	0.94	0.94
	Target Level	2.71	2.71	2.71	1.81	0.90	1.81	0.90	1.81	0.90	0.90	0.90	0.90	2.00	2.53	0.90	0.90
16CE C18	Reinforced Concrete	2.88	0.97	0.92	0.99	0.92	—	—	—	—	—	—	—	0.93	1.94	2.90	—
	Target Level	2.63	0.88	0.88	0.88	0.88	—	—	—	—	—	—	—	0.88	1.75	2.63	—
16CE C19	Soil Mechanics	2.25	1.50	—	—	—	—	—	—	—	—	—	—	0.75	2.25	1.50	—
	Target Level	2.80	1.86	—	—	—	—	—	—	—	—	—	—	0.93	2.80	1.86	—
16CE C20	Theory of Structures	2.81	1.87	1.50	0.96	—	—	—	—	—	—	—	—	0.94	—	—	—
	Target Level	2.31	0.77	0.77	0.77	—	—	—	—	0.77	—	—	—	—	—	—	—
16CE C21	Concrete Technology	2.81	1.87	1.50	0.96	—	—	—	—	—	—	—	—	1.54	—	1.15	—
	Target Level	2.34	1.56	1.26	0.90	—	—	—	—	—	—	—	—	0.94	—	—	—
16CE C22	Fluid Mechanics - II	2.34	0.78	0.68	0.72	—	—	—	—	0.95	—	—	—	0.78	—	—	—
	Target Level	2.31	0.77	0.77	0.77	—	—	—	—	0.77	—	—	—	1.51	—	1.16	—
16CE E02	Advanced Survey	1.47	0.99	1.29	1.04	2.06	—	—	—	0.81	—	0.81	1.28	0.73	0.77	0.92	—
	Target Level	1.08	0.73	1.08	0.81	1.63	—	—	—	0.54	—	0.54	0.98	0.54	0.54	0.67	—
16CE E03	Advanced Strength o	2.61	1.74	1.74	1.74	1.93	—	—	—	—	—	—	—	1.74	1.74	—	—

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	Target Level	2.58	1.72	1.72	1.72	1.91	---	---	---	---	---	---	---	1.72	1.72	---	---
16CE C23	Fluid Mechanics Lab	3.00	---	1.00	---	---	---	---	---	2.00	1.00	---	---	2.00	---	---	---
	Target Level	3.00	---	1.00	---	---	---	---	---	2.00	1.00	---	---	2.00	---	---	---
16CE C24	Environmental Engg.	2.00	---	2.00	---	---	---	---	---	2.00	1.20	---	---	1.00	---	---	2.00
	Target Level	2.00	---	2.00	---	---	---	---	---	2.00	1.20	---	---	1.00	---	---	2.00
16CE C25	Concrete Lab	2.00	1.00	1.00	1.00	1.00	---	---	---	1.00	1.00	---	1.00	1.25	1.25	1.00	1.00
	Target Level	2.00	1.00	1.00	1.00	1.00	---	---	---	1.00	1.00	---	1.00	1.25	1.25	1.00	1.00
16CE C26	Theory of Structures	2.63	1.75	---	---	---	---	---	---	---	---	---	0.88	2.63	1.75	---	---
	Target Level	2.46	1.64	---	---	---	---	---	---	---	---	---	0.82	2.46	1.64	---	---
16CE C27	Reinforced Concrete	2.70	1.80	2.70	1.80	0.90	0.90	0.90	1.80	0.90	2.70	0.90	0.90	1.80	2.70	0.90	0.90
	Target Level	2.57	1.71	2.57	1.71	0.86	0.86	0.86	1.71	0.86	2.57	0.86	0.86	1.71	2.57	0.86	0.86
16CE C28	Water Resources Eng	1.32	0.70	0.62	0.44	---	---	---	---	---	---	---	0.44	0.88	0.44	---	---
	Target Level	2.86	1.52	1.33	0.98	---	---	---	---	---	---	---	0.96	1.91	0.94	---	---
16CE C29	Foundation Engineer	2.45	0.82	0.77	0.68	---	---	---	---	0.71	---	---	---	0.68	1.64	1.63	---
	Target Level	2.93	0.98	0.99	0.98	---	---	---	---	0.96	---	---	---	0.98	1.97	1.93	---
16CE E04	Finite Element Meth	2.97	1.98	---	---	---	---	---	---	---	---	---	0.99	2.97	1.98	---	0.99
	Target Level	2.40	1.60	---	---	---	---	---	---	---	---	---	0.80	2.40	1.60	---	0.80
16CE E05	GIS & Remote Sensi	1.17	1.20	1.19	1.19	0.92	---	---	---	0.55	0.82	0.82	0.82	---	0.95	0.59	---
	Target Level	1.83	1.82	1.82	1.82	1.24	---	---	---	0.87	1.24	1.24	1.24	---	1.61	0.92	---
16CE C30	Soil Mechanics Labo	2.25	2.00	2.25	1.50	2.60	---	1.00	---	---	---	1.00	---	---	1.00	1.00	---
	Target Level	1.83	1.62	1.83	1.22	2.11	---	0.81	---	---	---	0.81	---	---	0.81	0.81	---
16CE C31	Hydraulics & Hydraul	3.00	1.00	1.00	---	1.00	---	---	---	---	---	---	---	2.00	---	2.00	---
	Target Level	3.00	1.00	1.00	---	1.00	---	---	---	---	---	---	---	2.00	---	2.00	---
16CE C32	Transportation Engin	2.85	---	0.95	---	0.80	---	---	---	1.90	0.95	---	---	1.90	---	---	---
	Target Level	2.99	---	1.00	---	1.00	---	---	---	2.00	1.00	---	---	2.00	---	---	---
16CE C34	Water Resources En	3.00	2.50	2.00	3.00	---	---	---	---	---	---	---	---	1.00	1.00	2.00	---
	Target Level	3.00	2.50	2.00	3.00	---	---	---	---	---	---	---	---	1.00	1.00	2.00	---
16CE C35	Design of Steel Struc	3.00	1.60	1.40	---	---	---	---	---	---	---	---	---	1.00	2.00	2.00	---

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	Target Level	2.39	1.27	1.11	---	---	---	---	---	---	---	---	0.80	1.59	1.59	---	---
16CE C36	Estimation and Speci	2.72	2.72	2.72	1.61	---	---	---	---	---	---	---	0.91	1.81	0.91	0.00	1.81
	Target Level																
16CE E07	Advanced Reinforce	3.00	1.00	---	---	---	---	---	---	---	---	---	1.00	3.00	---	---	1.00
	Target Level	2.91	1.00	---	---	---	---	---	---	---	---	---	0.97	2.91	---	---	0.97
16CE E08	Advanced Environm	2.30	1.50	1.49	---	---	1.62	2.10	1.00	0.76	0.76	0.76	---	0.99	---	0.76	1.51
	Target Level	2.27	1.45	1.43	---	---	1.67	2.44	0.96	0.99	0.99	0.99	---	0.96	---	0.99	1.97
16CE E09	Ground Improvemen	2.72	2.92	2.72	2.72	2.52	0.97	---	---	---	---	---	0.97	2.72	2.12	1.95	---
	Target Level	2.19	2.34	2.19	2.19	2.03	0.78	---	---	---	---	---	0.78	2.19	1.72	1.56	---
16CE E10	Elements of Earthqu	1.50	---	---	1.00	---	---	1.25	1.20	2.00	2.40	2.40	3.00	---	---	---	1.00
	Target Level	1.50	---	---	1.00	---	---	1.25	1.20	1.99	2.39	2.39	2.99	---	---	---	1.00
16ME O01	Enterpreneurship	2.00	3.00	3.00	1.00	3.00	1.00	---	---	1.00	---	---	1.00	2.00	3.00	1.00	1.00
	Target Level	2.00	3.00	3.00	1.00	3.00	1.00	---	---	1.00	---	---	1.00	2.00	3.00	1.00	1.00
16EG O01	Technical Writing Sk	2.40	3.00	3.00	3.00	1.80	1.00	1.00	2.00	3.00	3.00	3.00	---	1.00	2.00	---	---
	Target Level	2.40	3.00	3.00	3.00	1.80	1.00	1.00	2.00	3.00	3.00	3.00	---	1.00	2.00	---	---
16EE O02	Energy Management	2.49	2.49	2.49	1.66	---	---	---	---	---	---	---	0.83	1.66	0.83	---	1.66
	Target Level	3.00	3.00	3.00	2.00	---	---	---	---	---	---	---	1.00	2.00	1.00	---	2.00
16CE C37	Computer Applicatio	0.72	0.53	~	~	0.27	0.28	~	0.24	~	~	~	~	~	~	~	~
	Target Level																
16CE C38	Project Seminar																
	Target Level																
16CE E13	Design of Steel Struc	2.99	1.99	1.39	1.00	---	1.00	1.00	---	---	---	---	---	1.00	---	---	---
	Target Level	2.97	1.98	1.38	1.00	---	1.00	1.00	---	---	---	---	---	0.99	---	---	---
16ME O04	Intellectual Property	1.99	1.00	2.19	1.19	0.99	0.99	1.00	---	---	---	---	0.99	0.99	1.99	1.99	0.99
	Target Level	1.95	0.98	2.16	1.17	0.97	0.98	0.95	---	---	---	---	0.97	0.97	1.95	1.95	0.97
16CE E16	Health Monitoring &	2.40	3.00	3.00	3.00	1.80	1.00	1.00	2.00	3.00	3.00	3.00	---	1.00	2.00	---	---
	Target Level	2.40	3.00	3.00	3.00	1.80	1.00	1.00	2.00	3.00	3.00	3.00	---	1.00	2.00	---	---
16CE E17	Ground Water Hydro	2.39	2.99	2.99	2.99	1.79	0.99	0.99	2.00	3.00	3.00	2.98	---	1.00	2.39	2.99	---
	Target Level	2.39	2.99	2.99	2.99	1.79	0.99	0.99	2.00	3.00	3.00	2.99	---	1.00	2.39	2.99	---


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Student Exit Survey	2.19	2.26	2.19	2.29	2.28	2.29	2.29	2.41	2.29	2.28	2.21	2.28	2.45	2.29	2.26	2.26	
Employer Survey	3	2.67	2.67	3	3	1	2	3	3	2.67	1	1	3	2	2	1	
Indirect Attainment	2.6	2.47	2.43	2.65	2.64	1.65	2.15	2.71	2.65	2.48	1.61	1.64	2.73	2.15	2.13	1.63	
Direct Attainment	2.28	1.7	1.75	1.53	1.52	1.3	1.26	1.39	1.39	1.39	1.53	1.01	1.52	1.56	1.37	1.16	
Final Attainment	2.34	1.85	1.88	1.75	1.75	1.37	1.43	1.65	1.64	1.61	1.55	1.13	1.76	1.68	1.52	1.25	
Traget	2.4	1.75	1.87	1.63	1.64	1.29	1.32	1.34	1.41	1.37	1.61	1.08	1.59	1.67	1.41	1.13	

  
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COMMITTED TO  
RESEARCH,  
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EDUCATION

**43**  
years

Name of the Department: CIVIL ENGINEERING

Academic Year: 2020-21 (Batch 2017-21 Passed Out)

UG Program

Program Outcomes	Target Fixed	Target Achieved	Observation(Attained/Not Attained)	Actions Taken		
				A1	A2	A3
PO1	2.40	2.34	Not Attained	Increased use of ICT tools for teaching-learning and assessment	<b>It is proposed to give assignments</b> <b>Proposed for more remedial classes</b>	To make video lectures available through Learning Management System (LMS) developed by institute
PO2	1.75	1.85	Attained	It is proposed to give assignments which address higher Blooms Taxonomy levels	In the subsequent curriculum revision, a freshman course (engineering exploration) is introduced so that in	To suggest Mathematics and Basic Sciences BoS to amend the syllabus in the subsequent

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					the first year itself students can identify an engineering problem and acquire knowledge that can be applied to the identified problem	curriculum revision, so that program specific applications / Contents will be included in the Mathematics and Basic Sciences
PO3	1.87	1.88	Attained	To increase the use of ICT tools for teaching-learning so that visualization of concepts related to complex engineering problem can be enhanced and students are motivated to take up mini and major projects to provide the solution to complex engineering problems.	To encourage students to take part in project exhibition hackathon, MSME projects and similar activities	To give assignments which address higher Blooms Taxonomy levels
PO4	1.63	1.75	Attained	To give assignments which address higher Blooms Taxonomy levels such that student can develop an ability to solve open-ended problems	Proposed to introduce course end project along with assignments as a part of Continuous internal evaluation (CIE) in core engineering lab courses	To enter into more MoUs with industries to establish industry-based labs and activities which facilitate experiential learning to students

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PO5	1.64	1.75	Attained	To make lab experiment's demonstration videos available through Learning Management System (LMS), so that students can understand the concept better and demonstrate well in the subsequent lab classes	To increase the use of simulation tool in lab courses (where ever possible) to demonstrate the concept before going to the work bench	To encourage the usage of programme specific simulation tools for analytical projects
PO6	1.29	1.37	Attained	To introduce more number of professional electives to address the regulations, codes and standards of international level relevant to the Civil Engineering discipline	<p>To encourage the students to actively participate in activities organized by various professional societies and clubs of the institute like</p> <p>Road Safety week, Haritha Haram and Swachhta Pakhwada</p> <p>Health camps- NSS</p> <p>Rural development - Engineers without borders</p>	


  
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PO7			Attained	To introduce the mandatory courses which address the management techniques for sustainable development	To encourage the students to participate in social activity related to environment like “Tree plantation in the campus and nearby villages” as part of the activities of NSS under the new initiative “Haritha Haram” by State government	To encourage the students to actively participate in product exhibitions related to environment and sustainable development
	1.32	1.43				
PO8			Attained	To introduce a new course on ethics titled “UHV-2, Understanding of Harmony” as recommended by AICTE	To encourage students to practice ethical values and have self-exploration.	To train more number of faculty (20:1 student faculty ratio) on UHV through AICTE FDP so that faculty can handle the universal human values -1 during the student induction programme.
	1.34	1.65				
PO9			Attained	To encourage students to work as teams for activities conducted by various clubs of CBIT during Sudhee & Sruthi, which is a “Techno-Sport-Cultural” fest.	To introduce activity-based courses like community engagement, engineering exploration in the first-year level itself, so that the spirit of	To motivate students to work in multidisciplinary projects.
	1.41	1.64				


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					individual and team work can be inculcated better.	
PO10			Attained	To suggest for introduction of more topics related to communication skills in the soft skills courses offered.	To revise the rubrics used to evaluate the CIE of mini projects, seminars and major projects so that more focus is given to performance indicator related to ability of comprehending (literature review), written communication (report writing), oral communication (presentation skills) and summarization (conclusion)	Arranging seminars/ Group discussions to students regularly to improve the oral and written communication skills
	1.37	1.61				
PO11			Not Attained	To invite more industry experts to take part in curriculum revision, delivery of lectures, project guidance and assessments.	To encourage the students to present their IDEAS at MSME Incubation Centre of CBIT	To encourage students take up the construction based projects to acquire exposure in preparation of budgetary proposals for submission to the institute and other funding agencies.
	1.61	1.55				

  
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PO12	1.08	1.13	Attained	To introduce the credit transfer to the courses pursued via MOOCs (e.g. Swayam NPTEL, Coursera, MSME etc.) to encourage self-learning.	To introduce the e-portfolio to promote students participation in Co- curricular and extra- curricular activities which nurture the key interest towards life-long learning	
PSO1	1.59	1.76	Attained	To revise the syllabus in the subsequent curriculum revision, so that program specific applications / Contents will be included in the Mathematics and Basic Sciences, applicable to realistic problems	In the subsequent curriculum revision, a freshman course (engineering exploration) is introduced so that in the first year itself students can identify an engineering problem and acquire knowledge that can be applied to the identified problem	
PSO2	1.67	1.68	Attained	To encourage the students to do Industry based internships/ projects to achieve proficiency in designing with due consideration for environment safety and sustainability.	Taking students for site visits so the student can understand the sustainable construction practices in a better way.	

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PSO3			Attained	To encourage students to take up societal problems (live projects) and work for the solution.	To invite more industry experts to take part in curriculum revision, delivery of lectures, project guidance and assessments so as to enrich student with practical knowledge in different sub fields of Civil Engineering.	To encourage students to carry out projects in emerging areas and their applications to all allied fields of civil engineering
PSO4	1.41	1.52	Attained	To involve students in the Research Projects/ Consultancy projects of the department to give practical exposure to the students.	To encourage the students to participate in the workshops and conferences to develop research orientation.	
	1.13	1.25				

#### Evidences:

1. Drive Link for CO PO mapping Sheets Semester wise:  
<https://docs.google.com/spreadsheets/d/1hwkzUqjibUnKwG13yyIs8vo6FzXGQG0I/edit?usp=sharing&ouid=110042519639809537493&rtpof=true&sd=true>
2. Complete PO attainment table for 2017 batch (AY: 2020-21) hard copy endorsed by head of the department.

  
In-Charge



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