EVALUATION SCHEME

OF

B. TECH

OF

IV YEAR

B. TECH. (CBCS)

DEPARTMENT OF CIVIL ENGINEERING

INTEGRAL UNIVERSITY
LUCKNOW

SYLLABUS AND EVALUATION SCHEME
Branch: B. Tech Civil Engineering Program

(w.e.f. 2020-21)

Year – IV, Semester – VII

S. No.	Course Category	Code No	Name of Subject	Periods				Evaluation Scheme				Subject Total	Attributes							United Nations Sustainable Development Goals (SDGs)
				L	T	P	C	Continuous Assessment (CA)			Exam ESE		Employ ability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
								UE	TA	Total										
1	DC	CE401	Environmental Engineering-II	3	1	0	4	40	20	60	40	100	√	√	√		√		√	6
2	DC	CE402	Construction Technology and Management	3	1	0	4	40	20	60	40	100	√	√	√					11
3	DC	CE403	Steel Structure	3	1	0	4	40	20	60	40	100	√	√	√		√		√	9
4	DE	CE404-CE407	Department Elective-III	3	1	0	4	40	20	60	40	100								
5	DE	CE410-CE413	Department Elective-IV	3	1	0	4	40	20	60	40	100								
PRACTICAL / DRAWING / DESIGN																				
6	DC	CE418	Environmental Engineering Lab-II	0	0	2	1	40	20	60	40	100	√	√	√		√		√	6
7	DC	CE419	Structural Detailing Lab	0	0	2	1	40	20	60	40	100	√	√	√				√	
8	DC	CE420	Minor Project	-	-	2	1	-	-	60	40	100	√	√	√		√		√	
9	DC	CE300 *	Industrial Training	-	-	-	0	-	-	-	50	50	√	√	√		√	√	√	
Total				**15**	**5**	**6**	**23**					**850**								

L – Lecture; **T –** Tutorial; **P –** Practical; **C** – Credits; **UE** – Unit Exams; **TA** – Teacher Assessment
Continuous Assessment (CA) = Unit Exams + Teacher Assessment

Subject Total = Continuous Assessment (CA) + End Semester Examination (ESE)

BS – Basic Sciences **DC** – Departmental Core
HM – Humanities **OE** – Open Elective
DE – Departmental Elective **ESA** – Engineering Science & Art (Foundation Course & Engineering Courses)

SYLLABUS AND EVALUATION SCHEME
Branch: B. Tech Civil Engineering Program

(w.e.f. 2020-21)

Year – IV, Semester – VIII

S. No.	Course Category	Code No	Name of Subject	Periods				Evaluation Scheme				Subject Total	Attributes							United Nations Sustainable Development Goals (SDGs)
				L	T	P	C	Continuous Assessment (CA)			Exam ESE		Employ ability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
								UE	TA	Total										
1	OE	-	Open Elective-II	3	1	0	4	40	20	60	40	100								
PRACTICAL / DRAWING / DESIGN																				
2	DC	CE499	B.Tech Project	-	-	-	4	-	-	60	40	100	√	√	√		√		√	
3	DC	CE499	B.Tech Project	-	-	-	4	-	-	60	40	100	√	√	√		√		√	
4	DC	CE499	B.Tech Project	-	-	-	4	-	-	60	40	100	√	√	√		√		√	
5	DC	CE451	Seminar	-	-	-	3	-	-	60	40	100	√	√	√		√		√	
6	DC	CE452	Comprehensive Assessment	-	-	-	2	-	-	100	-	100	√						√	
Total				**3**	**1**	**0**	**21**					**600**								

L – Lecture; **T –** Tutorial; **P –** Practical; **C** – Credits; **UE** – Unit Exams; **TA** – Teacher Assessment
Continuous Assessment (CA) = Unit Exams + Teacher Assessment

Subject Total = Continuous Assessment (CA) + End Semester Examination (ESE)

BS – Basic Sciences **DC** – Departmental Core
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Departmental Elective - I

CE404	Transportation System & Planning
CE405	Advanced Concrete Design
CE406	Environmental Pollution Control
CE407	Design of Waste Water System

Departmental Elective - II

CE410	Earthquake Resistant Design
CE411	Advanced Foundation Design
CE412	Impact of Climate Change for Civil Engineering Projects
CE413	Plastic Design of Steel Structures

INTEGRAL UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING

PROGRAMME: B.TECH

PROGRAM SPECIFIC OUTCOMES (PSO):

PSO-1: Developing employability skills among students so that they are capable of qualifying State and National level competitive examinations in government/ semi-government/private sectors.

PSO-2: Developing Analytical and Design Skills among students in order to make them capable to peruse higher studies as well as have a career as an entrepreneur.

PROGRAM EDUCATIONAL OBJECTIVES (PEO):

PEO-1: Enabling the application of basic and engineering science principles in analysis, design and execution of civil engineering works.

PEO-2: Planning suitable infrastructure as per environmental and societal needs for sustainable development.

PEO-3: Promoting lifelong learning to meet the dynamic professional demands by developing ethical, IT, inter personal and team skills.

PROGRAM OUTCOMES (PO):

PO1- **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2- **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3- **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4- **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5- **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6- **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7- **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8- **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9- **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10- **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11- **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12- **Life-long learning:** 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.