

**Department of Civil Engineering**  
**Curriculum**  
**Under**  
**Autonomy**  
**Implemented from Academic Year**  
**2018-2019**

*Revised Curriculum Structure  
(to be effective from 2018-19 admission batch)*

**Department: Civil Engineering**

**Curriculum for B.Tech**

<b>1<sup>st</sup> Semester</b>							
SI No	Paper Code	Theory	Contact Hours /Week				Credit Points
			L	T	P	Total	
<b>A. THEORY</b>							
1	M 101	Mathematics -I	3	1	0	4	4
2	PH 101	Physics - I	3	0	0	3	3
3	EC 101	Basic Electronics Engineering	3	0	0	3	3
4	HU 101	English	2	0	0	2	2
<b>Total of Theory</b>						<b>12</b>	<b>12</b>
<b>B. PRACTICAL</b>							
5	PH191	Physics-I Lab	0	0	3	3	1.5
6	EC 191	Basic Electronics Engineering Lab	0	0	3	3	1.5
7	ME 192	Workshop/Manufacturing Practices	0	0	3	3	1.5
<b>C. SESSIONAL</b>							
8	XC181	Extra-Curricular Activity I	0	0	0	0	2 units
<b>D.PROJECT*</b>							
9	<b>Project Code</b>	<b>Project Name</b>	<b>Contact Hours /Week</b>				<b>Credit Points</b>
	M 151	Mathematics Project	1				0.5
	HU 151	English Project	1				0.5
	PH 151	Physics Project	1				0.5
	EC 151	Basic Electronics Project	1				0.5
<b>Total of Theory, Practical, Sessional &amp; Project</b>			<b>23</b>				<b>16.5+1 =17.5</b>

\* Student need to select any two projects (Total Credit: 0.5+0.5=1)

2 <sup>nd</sup> Semester							
Sl No	Paper Code	Theory	Contact Hours /Week				Credit Points
			L	T	P	Total	
<b>A. THEORY</b>							
1	M 201	Mathematics -II	3	1	0	4	4
2	CH 201	Chemistry-I	3	0	0	3	3
3	EE 201	Basic Electrical Engineering	3	0	0	3	3
4	CS 201	Programming for Problem Solving	3	0	0	3	3
5	ME 201	Engineering Mechanics	3	0	0	3	3
<b>Total of Theory</b>						<b>16</b>	<b>16</b>
<b>B. PRACTICAL</b>							
6	CS291	Programming for Problem Solving Lab	0	0	3	3	1.5
7	CH 291	Chemistry I Lab	0	0	3	3	1.5
8	EE 291	Basic Electrical Engineering Lab	0	0	3	3	1.5
9	ME 191	Engineering Graphics & Design	0	0	3	3	1.5
10	HU 291	Language Lab and Seminar Presentation	0	0	2	2	1
<b>C.SESSIONAL</b>							
11	XC281	Extra-Curricular Activity II	0	0	0	0	2 Units
<b>D.PROJECT*</b>							
12	<b>Project Code</b>	<b>Project Name</b>	<b>Contact Hours /Week</b>				<b>Credit Points</b>
	M 251	Mathematics Project	1				0.5
	CS 251	Programming for Problem Solving Project	1				0.5
	ME 251	Engineering Mechanics Project	1				0.5
	CH 251	Chemistry Project	1				0.5
	EE 251	Basic Electrical Project	1				0.5
<b>Total of Theory, Practical, Sessional&amp; Project</b>			<b>32</b>				<b>23+1=24</b>

\* Student need to select any two projects (Total Credit: 0.5+0.5=1)

3 <sup>rd</sup> Semester							
Sl No	Paper Code	Theory	Contact Hours /Week				Credit Points
			L	T	P	Total	
<b>A. THEORY</b>							
ES	M(CS)301	Numerical Methods	3	0	0	3	3
BS	PH(CE)301	Physics - II	2	2	0	4	3
PC	CE301	Surveying	2	1	0	3	3
PC	CE302	Strength of Material	2	1	0	3	3
PC	CE303	Building Material and Construction	2	1	0	3	3
PC	CE304	Engineering Geology	2	1	0	3	2.5
<b>Total of Theory</b>						<b>19</b>	<b>17.5</b>
<b>B. PRACTICAL</b>							
ES	M(CS)391	Numerical Methods Lab	0	0	3	3	1.5
PC	CE391	Engineering Geology Lab	0	0	2	2	1
PC	CE392	Surveying Practice	0	0	3	3	1.5
BS	PH (CE)391	Physics-II Lab	0	0	2	2	1
<b>C.SESSIONAL</b>							
MC	MC381	Technical Skill Development	0	0	2	2	2 Units
<b>D.PROJECT*</b>							
1.	<b>Project Code</b>	<b>Project Name</b>	<b>Contact Hours /Week</b>				<b>Credit Points</b>
PW	M(CS)351	Numerical Methods	1				0.5
	PH(CE)351	Physics - II	1				0.5
	CE351	Surveying	1				0.5
	CE352	Strength of Material	1				0.5
	CE353	Building Material and Construction	1				0.5
	CE354	Engineering Geology	1				0.5
<b>Total of Theory, Practical, Sessional &amp; Project</b>			<b>35</b>				<b>22.5+2 =24.5</b>

\* Student need to select any four projects (Total Credit: 0.5 x4=2)

4 <sup>th</sup> Semester							
Sl No	Paper Code	Theory	Contact Hours /Week				Credit Points
			L	T	P	Total	
<b>A. THEORY</b>							
BS	M401	Mathematics III	3	1	0	4	4
HS	HU402	Values & Ethics in Profession	2	0	0	2	2
PC	CE401	Structural Analysis	2	2	0	4	3
PC	CE402	Concrete Technology	2	1	0	3	3
PC	CE403	Soil Mechanics	2	2	0	4	3
<b>Total of Theory</b>						<b>17</b>	<b>15</b>
<b>B. PRACTICAL</b>							
PC	CE491	Building Planning And Drawing	0	0	3	3	1.5
PC	CE492	Concrete Lab	0	0	3	3	1.5
PC	CE493	Soil Mechanics Lab-I	0	0	3	3	1.5
PC	CE494	Quantity Surveying, Specifications and Valuation	0	0	3	3	1.5
<b>C. SESSIONAL</b>							
MC	HU481	Technical Report Writing & Language Practice	0	0	2	2	2 Units
MC	XC 481	Environmental Science	2	0	0	2	2 Units
<b>D. PROJECT*</b>							
1.	<b>Project Code</b>	<b>Project Name</b>	<b>Contact Hours /Week</b>				<b>Credit Points</b>
PW	M451	Mathematics III	1				0.5
	HU452	Values & Ethics in Profession	1				0.5
	CE451	Structural Analysis	1				0.5
	CE452	Concrete Technology	1				0.5
	CE453	Soil Mechanics	1				0.5
<b>Total of Theory, Practical, Sessional &amp; Project</b>			<b>37</b>				<b>21+2=23</b>

\* Student need to select any four projects (Total Credit: 0.5 x4=2)

5 <sup>th</sup> Semester							
Sl No	Paper Code	Theory	Contact Hours /Week				Credit Points
			L	T	P	Total	
<b>A. THEORY</b>							
HS	HU503	Economics for Engineers	2	1	0	3	3
PC	CE501	Structural Design-I	2	2	0	4	3
PC	CE502	Foundation Engineering	2	2	0	4	3
PE	CE503A	Hydraulics	2	1	0	3	3
	CE503B	Water Supply and Plumbing					
	CE503C	Waste Water and Treatment					
PC	CE504	Transportation Engineering	2	1	0	3	3
<b>Total of Theory</b>						<b>17</b>	<b>15</b>
<b>B. PRACTICAL</b>							
PC	CE591	Transportation and Highway Engineering Lab	0	0	3	3	1.5
PC	CE592	Soil Mechanics Lab-II	0	0	3	3	1.5
PC	CE593	Civil Engineering Lab	0	0	3	3	1.5
<b>C. SESSIONAL</b>							
MC	XC581	Extra curricular activity	0	0	0	0	2Units
MC	XC582	Seminar Presentation	0	0	0	0	2Units
<b>D. PROJECT*</b>							
1	Project Code	Project Name	Contact Hours /Week				Credit Points
PW	HU553	Economics for Engineers	1				0.5
	CE551	Structural Design-I	1				0.5
	CE552	Foundation Engineering	1				0.5
	CE553A	Hydraulics	1				0.5
	CE553B	Water Supply and Plumbing	1				0.5
	CE553C	Waste Water and Treatment	1				0.5
<b>Total of Theory, Practical, Sessional &amp; Project</b>						<b>30</b>	<b>19.5+2=21.5</b>

\* Student need to select any four projects (Total Credit: 0.5 x4=2)

SI No	Paper Code	Theory	Contact Hours /Week				Credit Points
			L	T	P	Total	
<b>A. THEORY</b>							
PC	CE601	Structural Design – II	2	2	0	4	3
PC	CE602	Construction Planning And Management	2	1	0	3	3
OE	M(CE)604A	Operations Research	2	0	0	2	2
	HU(CE)604B	Human Resource Management					
	ME(CE)604C	Studies On Six Sigma					
PE	CE605A	Bridge Engineering	3	1	0	4	4
	CE605B	Pre stressed Concrete					
	CE605C	Structural Dynamics and Earthquake Engineering					
<b>Total of Theory</b>						<b>13</b>	<b>12</b>
<b>B. PRACTICAL</b>							
ES	CS691	Advanced Programming for Problem solving	0	0	3	3	1.5
PC	CE691	Computer Aided Design and Drafting	0	0	3	3	1.5
PC	CE681	Mini Project	0	0	3	3	1.5
PC	CE682	Structural Design And Detailing	0	0	3	3	1.5
<b>C. SESSIONAL</b>							
MC	XC681	Technical Seminar Presentation	0	0	0	3	2 Units
MC	XC682	Extra Curricular Activity	0	0	0	0	2 Units
<b>D. PROJECT*</b>							
1	<b>Project Code</b>	<b>Project Name</b>	<b>Contact Hours /Week</b>				<b>Credit Points</b>
PW	CE651	Structural Design – II	1				0.5
	CE652	Construction Planning And Management	1				0.5
	CE653	Transportation Engineering	1				0.5
	M(CE)654A	Operations Research	1				0.5
	HU(CE)654B	Human Resource Management	1				0.5
	ME(CE)654C	Studies On Six Sigma	1				0.5
	CE655A	Bridge Engineering	1				0.5
	CE655B	Pre stressed Concrete	1				0.5
	CE655C	Structural Dynamics and Earthquake Engineering	1				0.5
<b>Total of Theory, Practical, Sessional &amp; Project</b>						<b>32</b>	<b>18+2=20</b>

\* Student need to select any four projects (Total Credit: 0.5 x4=2)

7 <sup>th</sup> Semester							
SI No	Paper Code	Theory	Contact Hours /Week				Credit Points
			L	T	P	Total	
<b>A. THEORY</b>							
PC	CE701	Water Resource And Irrigation Engineering	2	1	0	3	2.5
PC	CE702	Environmental Engineering	2	1	0	3	2.5
PE	CE703A	Ground Improvement & Technique	3	1	0	4	3.5
	CE703B	Urban Planning					
	CE703C	Traffic Engineering & Planning					
OE	ME(CE)704A	Engineering Materials	3	0	0	3	3
	EE(CE)704B	Electrical And Electronics Measurement					
	ME(CE)704C	Material Handling					
<b>Total of Theory</b>						<b>13</b>	<b>11.5</b>
<b>B. PRACTICAL</b>							
PC	CE791	Environmental Engineering Lab	0	0	3	3	1.5
OE	ME(CE)794A	Material Testing Lab	0	0	3	3	1.5
	EE(CE)794B	Electrical and Electronic Measurement Laboratory					
	ME(CE)794C	Material Handling Laboratory					
<b>C. SESSIONAL</b>							
PW	CE781	Project-I	0	0	4	4	2
	CE782	Civil Engineering Practice Sessional	0	0	3	3	1.5
	CE783	Industrial Training /Internship	0	0	0	0	1
	XC781	Co –curricular Activity	0	0	0	0	2 Units
	XC782	Seminar	0	0	3	3	2 Units
<b>Total of Theory, Practical &amp; Sessional</b>						<b>29</b>	<b>19</b>

8 <sup>th</sup> Semester							
SI No	Paper Code	Theory	Contact Hours /Week				Credit Points
			L	T	P	Total	
<b>A. THEORY</b>							
PE	CE801A	Dynamics of Soil & Foundation	2	2	0	4	3
	CE801B	Finite Element Analysis					
	CE801C	Advanced Structural Analysis					
PE	CE802A	Advanced Foundation Engineering	2	2	0	4	3
	CE802B	Advanced Transportation Engineering					
	CE802C	Pavement Design					
OE	CE803A	Water Resource Management And Planning	2	1	0	3	2.5
	CE803B	Air & Noise Pollution And Control					
	CE803C	Remote Sensing And GIS					
HS	HU806	Project Management	2	0	0	2	2
<b>Total of Theory</b>						<b>13</b>	<b>10.5</b>
<b>B. PRACTICAL</b>							
PW	CE881	Project-II	0	0	6	6	3
PW	CE882	Grand Viva	0	0	0	0	2
<b>C. SESSIONAL</b>							
MC	XC881	Technical Report Writing & Group Discussion	0	0	2	2	2 Units
MC	XC882	Extra curricular Activity	0	0	0	0	2 Units
<b>Total of Theory, Practical &amp; Sessional</b>						<b>21</b>	<b>15.5</b>

**Mandatory Credit Point=165 +10 (Project Based Learning)**

**For Honors additional 10 Credit Point is to be earned (1<sup>st</sup> Sem to 8<sup>th</sup> Sem) through MOOCs courses. All the Certificates received by the students across all semester for MOOCs Courses from approved organization (Listed by AICTE / MAKAUT) is to be submitted to CoE office prior to 8<sup>th</sup> Semester Examination and the Credit earned through MOOCs courses will be reflected in their DGPA.**

**Credit Distribution Ratio:**

<b>Category</b>	<b>Total Credit Allocation</b>	<b>Credit Allocation As per Autonomy</b>	<b>Credit Allocation As per AICTE</b>
Basic Sciences	25	15.15%	15 to 20%
Humanities & Social Sciences	10	6.06%	5 to 10%
Engineering Sciences and Skills	25.5	15.45%	15 to 20%
Professional Core	58.5	35.45%	30 to 40%
Professional Electives	16.5	10.00%	10 to 15%
Open Elective	8.5	5.15%	5 to 10%
Project work, seminar, internship	21	12.72%	10 to 15%
Environmental Science, Co & extracurricular activities			Non-credited

**Implementation Scheme of Mandatory Project Work:**

Semester	Credit	Number of papers to be assessed under mandatory project
1 <sup>st</sup>	1	Two (0.5 Credit per paper)
2 <sup>nd</sup>	2	Two (0.5 Credit per paper)
3 <sup>rd</sup>	2	Four (0.5 Credit per paper)
4 <sup>th</sup>	2	Four (0.5 Credit per paper)
5 <sup>th</sup>	2	Four (0.5 Credit per paper)
6 <sup>th</sup>	2	Four (0.5 Credit per paper)
Total	10	

**Mandatory Project Work**  
**For B.Tech Students from AY 2018-19**  
(1<sup>st</sup> semester to 6<sup>th</sup> Semester)

Semester	Total Credit Point	No. of Project to be carried out (Choice Based)	Marks allocation in each project	Total Marks allocated in Project Works
<b>1<sup>st</sup> Year</b>				
1 <sup>st</sup> Semester	2x0.5=1.0	2	100	200
2 <sup>nd</sup> Semester	2x0.5=1.0	2	100	200
<b>2<sup>nd</sup> Year</b>				
3 <sup>rd</sup> Semester	4x0.5=2.0	4	100	400
4 <sup>th</sup> Semester	4x0.5=2.0	4	100	400
<b>3<sup>rd</sup> Year</b>				
5 <sup>th</sup> Semester	4x0.5=2.0	4	100	400
6 <sup>th</sup> Semester	4x0.5=2.0	4	100	400
<b>Total Credit</b>	<b>10</b>			

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# MOOCs Courses

## For B.Tech Students for AY 2018-19

(1<sup>st</sup> Semester to 8<sup>th</sup> Semester)

Total Credit for MOOCs Subjects will be 10.

### List of websites which offers online certification Courses

List of Websites which offers online certification courses:

1. Swayam- <https://swayam.gov.in/>
2. NPTEL- <https://onlinecourses.nptel.ac.in/>
3. Mooc- <http://mooc.org/>
4. Edx - <https://www.edx.org/>
5. Coursera- <https://www.coursera.org/>
6. Udacity - <https://in.udacity.com/>
7. Udemy - <https://www.udemy.com/>
8. Khanacademy - <https://www.khanacademy.org/>
9. Skillsahre - <https://www.skillshare.com/>
10. Harvard University - <https://online-learning.harvard.edu/>
11. Ted - <https://ed.ted.com/>
12. Alison - <https://alison.com/>
- 13.Futurelearn - <https://www.futurelearn.com/>
- 14.Web Development - <https://digitaldefynd.com/best-free-web-development-courses-tutorials-certification/>
- 15.Digital Marketing - <https://digitaldefynd.com/best-free-digital-marketing-certifications/>
- 16.ios app development - <https://digitaldefynd.com/best-ios-app-development-course-tutorial/>
- 17.Open Learn - <http://www.open.edu/openlearn/>
18. Future Learn - <https://www.futurelearn.com/>
19. Tuts Plus - <https://tutsplus.com/>
20. Open Culture - <http://www.openculture.com/>

**For Honors additional 10 Credit Point is to be earned (1<sup>st</sup> Sem to 8<sup>th</sup> Sem) through MOOCs courses. All the Certificates received by the students across all semester for MOOCs Courses from approved organization (Listed by AICTE / MAKAUT) is to be submitted to CoE office prior to 8<sup>th</sup> Semester Examination and the Credit earned through MOOCs courses will be reflected in their DGPA.**

MaulanaAbul KalamAzadUniversityof Technology,WestBengal  
CommonRecordsheetofActivitiesforMandatoryAdditionalRequirementapplicableforallUGProgrammes

Annexure-  
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CollegeCodeandname:				Course:										
StudentName:			UniversityRollNo:				RegistrationNo:							
TotalnumberofSemesters:			Points	Max.P ointsAll owed	PointsEarned									
SI No	Activity	Sem1			Sem2	Sem3	Sem4	Sem5	Sem6	Sem7	Sem8	Sem9	Sem10	Total
1	MOOCS(SWAYAM/NPTEL/SpokenTutorial)percourse													
	For12 weeksduration	20	40											
	For8 weeksduration	16												
2	Tech Fest/Fest/TeachersDay/FreshersWelcome													
	Organizer	5	10											
	Participant	3	6											
3	RuralReporting	5	10											
4	TreePlantationandupkeeping(per tree)	1	10											
5	ParticipationinReliefCamps	20	40											
6	ParticipationinDebate/GroupDiscussion/Techquiz/Quiz	10	20											
7	PublicationofWallmagazineininstitutionallevel(ma gazine/article/internet)													
	Editor	10	20											
	Writer	6	12											
8	PublicationinNewsPaper,Magazine&Blogs	10	20											
9	ResearchPublication(perpublication)	15	30											
10	InnovativeProjects(otherthancoursecurriculum)	30	60											
11	Blooddonation	8	16											
	BlooddonationcampOrganization	10	20											

MaulanaAbul KalamAzadUniversityof Technology,WestBengal  
CommonRecordsheetofActivitiesforMandatoryAdditionalRequirementapplicableforallUGProgrammes

Annexure-  
I

TotalnumberofSemesters:		Points	Max.P oints/Al owed	PointsEarned										Total
SI No	Activity			Sem1	Sem2	Sem3	Sem4	Sem5	Sem6	Sem7	Sem8	Sem9	Sem10	
12	ParticipationinSports/Games													
	Collegelevel	5	10											
	UniversityLevel	10	20											
	DistrictLevel	12	24											
	StateLevel	15	30											
	National/InternationalLevel	20	20											
13	CulturalProgramme(Dance,Drama,Elocution,Musicetc.)	10	20											
14	MemberofProfessionalSociety	10	20											
15	StudentChapter	10	20											
16	RelevantIndustryVisit&Report	10	20											
17	PhotographyactivitiesindifferentClub(Photographyclub,CineClub,Gitisansad)	5	10											
18	ParticipationinYogaCamp(Certificatetobesubmitted)	5	10											
19	Self-EntrepreneurshipProgramme	20	20											
20	AdventureSportswithCertification	10	20											
21	Trainingtounderprivileged/DifferentlyAble	15	30											
22	CommunityService&AlliedActivities	10	20											
<b>TotalPoints</b>														
<b>SignatureofMentor</b>														
<b>SignatureofHOD</b>														

\*PleaseabidestrictlytotheNotesattheendoftheNoticeofMAKAUT,WB regardingMandatoryAdditionalRequirementforearningUGDegree

\*Annexure-I istoberetainedintheInstituterecordswithalldocumentaryproofsofactivities(tobe verifiedby the Universityas andwhen required).

