

**Maulana Abul Kalam Azad University of Technology, West Bengal**

*(Formerly West Bengal University of Technology)*

**Syllabus for B. Tech in Civil & Environmental Engineering**

(Applicable from the academic session 2018-2019)

**Curriculum Structure**

SECOND YEAR - THIRD SEMESTER							
THEORY							
Sl. No.	Code	Theory	Contact hours/wk				Credit point
			L	T	P	Total	
1.	HU301	Values and Ethics in Profession	1	0	0	1	1
2.	CH(CHE)302	Chemistry-2	3	2	0	5	3
3.	CH(FT) 301	Basic Environmental Engineering and Elementary Biology	3	0	0	3	3
4.	FT301	Thermodynamics & Kinetics	2	0	0	2	2
5.	CE302	Surveying	2	1	0	3	2
6.	CE303A	Building Material & Construction	3	2	0	5	3
<b>Total of Theory</b>						19	14
PRACTICAL							
7.	CH391	Environmental Engineering Lab	0	0	3	3	2
8.	CH392	Chemistry-2 Lab	0	0	3	3	2
9.	CE392	Surveying Practice-I	0	0	3	3	2
10.	CE393	Building Design & Drawing	0	0	3	3	2
<b>Total of Practical</b>						12	08
<b>Total of Semester</b>						<b>31</b>	<b>22</b>

SECOND YEAR - FOURTH SEMESTER							
THEORY							
Sl. No.	Code	Theory	Contact hours/wk				Credit point
			L	T	P	Total	
1.	M(CS)401	Numerical Methods	2	1	0	3	2
2.	CHE414	Unit Operation of chemical Engineering-I	2	0	0	2	2
3.	M402	Mathematics-3	2	1	0	3	2
4.	CE402A	Structural Analysis-A	2	1	0	3	2
5.	CE402B	Structural Analysis-B	2	1	0	3	2
6.	CE403A	Soil mechanics-A	2	1	0	3	2
7.	CE403B	Soil mechanics-B	2	1	0	3	2
<b>Total of Theory</b>						20	14
PRACTICAL							
8.	HU481	Tech. Writing/Lang. Lab	0	0	3	3	2
9.	M(CS)491	Numerical Methods	0	0	2	2	1
10.	CE492	Surveying Practice - II	0	0	3	3	2
11.	CE493	Soil Mechanics Lab-I	0	0	3	3	2
12.	CHE484	Unit Operation Lab -I	0	0	3	3	2
<b>Total of Practical</b>						14	9
<b>Total of Semester</b>						<b>34</b>	<b>23</b>

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<b>THIRD YEAR - FIFTH SEMESTER</b>							
<b>THEORY</b>							
Sl. No.	Code	Theory	Contact hours/wk				Credit point
			L	T	P	Total	
1.	HU501	Economics for Engineers	1	0	0	1	1
2	CHE514	Unit Operation of Chemical Engineering-II	2	1	0	3	2
3.	CE502A	Design of RC Structures-A	2	1	0	3	2
4.	CE502B	Design of RC Structures-B	2	1	0	3	2
5.	CE503A	Concrete Technology-A	2	0	0	2	2
6.	CE503B	Concrete Technology-B	2	0	0	2	2
7.	CE504A	Engineering Geology-A	2	0	0	2	2
8.	CE504B	Engineering Geology-B	2	0	0	2	2
<b>Total of Theory</b>						18	15
<b>PRACTICAL</b>							
6.	CE591	Soil Mechanics Lab-II	0	0	3	3	2
7.	CE592	Concrete Lab	0	0	3	3	2
8.	CE593	Quantity Surveying , Specification and Valuation	0	0	3	3	2
9.	CE594	Engineering Geology Laboratory	0	0	3	3	2
<b>Total of Practical</b>						12	8
<b>Total of Semester</b>						<b>30</b>	<b>23</b>

<b>THIRD YEAR - SIXTH SEMESTER</b>							
<b>THEORY</b>							
Sl. No.	Code	Theory	Contact hours/wk				Credit point
			L	T	P	Total	
1.	HU601	Principles of Management	2	0	0	2	2
2	FT604	Microbial Tech & Biotechnology	3	0	0	3	3
3.	CE602	Design of Steel Structure	3	0	0	3	3
4.	CE603	Construction Planning & Management	3	0	0	3	3
5	CVE601	Professional Elective-I	3	0	0	3	3
6.	CVE602	Free Elective- I	3	0	0	3	3
<b>Total of Theory</b>						17	17
<b>PRACTICAL</b>							
7.	CVE 691	Environmental Chemistry Lab	0	0	3	3	2
8.	FT692	Microbial Tech Lab	0	0	4	4	2
9.	CVE681	Seminar	0	0	3	3	2
<b>Total of Practical</b>						10	6
<b>Total of Semester</b>						<b>27</b>	<b>23</b>

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**Professional Elective-I**

1. CVE601A: Solid & Hazardous Waste Treatment
2. CVE601B: Industrial Waste Treatment

**Free Elective –I**

1. CVE 602A : Operations Research (M)
2. CVE 602B : Human Resource Management (HSS)
3. CVE 602C : Materials Handling (ME)

<b>FOURTH YEAR - SEVENTH SEMESTER</b>							
<b>THEORY</b>							
Sl. No.	Code	Theory	Contact hours/wk				Credit point
			L	T	P	Total	
1.	CE701	Environmental Engineering	2	0	0	2	2
2.	CE702	Water Resource Engineering	2	0	0	2	2
3.	CVE701	Professional Elective-II	1	0	0	1	1
4.	CVE702	Professional Elective-III	1	0	0	1	1
5.	CVE703	Free Elective- II	1	0	0	1	1
<b>Total of Theory</b>						7	7
<b>PRACTICAL</b>							
6.	CVE791	Environmental Engineering & Design Lab	0	0	3	3	2
7.	CVE792	Free Elective Laboratory	0	0	3	3	2
8.	CVE781	Industrial Training	4 weeks duration during 6 <sup>th</sup> -7 <sup>th</sup> Semester break				2
9.	CVE782	Project Part I				6	2
<b>Total of Practical</b>						12	8
<b>Total of Semester</b>						19	15

**Professional Elective –II**

1. CVE701A: Soil Stabilization and Ground Improvement Techniques
2. CVE701B: Advanced Highway and Transportation Engineering

**Profession Elective –III**

1. CVE702A: Advanced Structural Analysis
2. CVE702B: Hydraulic Structures

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3. CVE702C: Climate & Ocean Currents

**Free Elective –II**

1. CVE703A : Engineering Materials (ME)
2. CVE703B : Electrical and Electronic

Measurement (EE) **Free Elective Laboratory**

1. CVE792A : Material Testing Lab (ME)
2. CVE792B : Electrical and Electronic Measurement Laboratory (EE)
3. CVE792C: Climate & Ocean Currents Lab

FOURTH YEAR – EIGHTH SEMESTER

THEORY							
Sl. No.	Code	Theory	Contact hours/wk				Credit point
			L	T	P	Total	
1.	HU801A HU801B	Organizational Behavior/Project Management	2	0	0	2	2
2.	CVE801	Professional Elective-IV	2	0	0	2	2
3.	CVE802	Professional Elective-V	2	0	0	2	2
4.	CVE803	Natural Resources : Renewable and Non-renewable Resources	2	0	0	2	2
5.	CVE804	Cost Effective Effluent Treatment	2	0	0	2	2
<b>Total of Theory</b>						10	10
PRACTICAL							
5.	CVE881	Project Part II	0	0	12	12	4
6.	CVE882	Grand Viva					2
<b>Total of Practical</b>						12	6
<b>Total of Semester</b>						22	16

**Professional Elective –IV**

1. CVE801A: Environment Pollution and Control (CE)
2. CVE801B: Water Resource Management and Planning (CE)
3. CVE801C: Remote Sensing and

GIS (CE) **Professional Elective –V**

1. CVE802A: Finite Element Method (CE)
2. CVE802B: Pavement Design (CE)