

Maulana Abul Kalam Azad University of Technology, West Bengal*(Formerly West Bengal University of Technology)***Syllabus for B. Tech in Civil Engineering**

(Applicable from the academic session 2018-2019)

Semester V (Third year]

Sl. No.	Category	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Professional Core courses	CE(PC)501	Design of RC Structures	2	1	0	3
2	Professional Core courses	CE(PC)502	Engineering Hydrology	2	1	0	3
3	Professional Core courses	CE(PC)503	Structural Analysis – I	2	1	0	3
4	Professional Core courses	CE(PC)504	Soil Mechanics – II	2	1	0	3
5	Professional Core courses	CE(PC)505	Environmental Engineering – II	2	1	0	3
6	Professional Core courses	CE(PC)506	Transportation Engineering	2	1	0	3
7	Mandatory courses (non-credit)	CE(MC)501	Constitution of India/ Essence of Indian Knowledge Tradition	-	-	-	0
Theory credits							18
Practical/ Sessional							
1	Professional core courses	CE(PC)591	RC Design Sessional	0	0	2	1
2	Professional core courses	CE(PC)594	Soil Mechanics Laboratory	0	0	2	1
3	Professional core courses	CE(PC)595	Environmental Engineering Laboratory	0	0	2	1
4	Professional core courses	CE(PC)596	Transportation Engineering Laboratory	0	0	2	1
5	Professional core courses	CE(PC)597	Computer Application in CE	0	0	2	1
Practical credits							5
Total credits							23

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3.	B-spline curves, end conditions for periodic B-spline curves, rational B-spline curves. Hidden surfaces [3L]: Depth comparison, Z-buffer algorithm, Back face detection, BSP tree method, the Painter's algorithm, scan-line algorithm; Hidden line elimination, wire frame methods, fractal - geometry. Color & shading models [2L]: Light & color model; interpolative shading model; Texture. Introduction to Ray-tracing: [3L] Human vision and color, Lighting, Reflection and transmission models.	6	
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Text book and Reference books:

1. Hearn, Baker – “Computer Graphics (C version 2nd Ed.)” – Pearson education
2. Z. Xiang, R. Plastock – “Schaum's outlines Computer Graphics (2nd Ed.)” – TMH
3. D. F. Rogers, J. A. Adams – “Mathematical Elements for Computer Graphics (2nd Ed.)” – TMH

Constitution of India

Code: MC-CS501

Contacts: 3L

Name of the Course:	Constitution of India		
Course Code: MC-CS501	Semester: V		
Duration: 6 months	Maximum Marks:100		
Teaching Scheme		Examination Scheme	
Theory:		Mid Semester exam: 15	
Tutorial: NIL		Assignment and Quiz: 10 marks	
Practical: NIL		Attendance : 5 marks	
Credit Points:	0		

Unit	Content	Hrs/Unit	Marks/Unit
1	Introduction: Constitution' meaning of the term,, Indian Constitution: Sources and constitutional history, Features: Citizenship, Preamble, Fundamental Rights and Duties, Directive Principles of State Policy	3	
2	Union Government and its Administration : Structure of the Indian Union: Federalism, Centre- State relationship, President: Role, power and position, PM and Council of ministers, Cabinet and Central Secretariat, Lok Sabha, Rajya Sabha	6	

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3.	State Government and its Administration Governor: Role and Position, CM and Council of ministers, State Secretariat: Organisation, Structure and Functions	6	
4.	Local Administration District's Administration head: Role and Importance, Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation, Pachayati raj: Introduction, PRI: Zila Pachayat, Elected officials and their roles, CEO Zila Pachayat: Position and role, Block level: Organizational Hierarchy (Different 4.departments), Village level: Role of Elected and Appointed officials, Importance of grass root democracy	8	
5.	Election Commission Election Commission: Role and Functioning, Chief Election Commissioner and Election Commissioners, State Election Commission: Role and Functioning, Institute and Bodies for the welfare of SC/ST/OBC and women		

Text book and Reference books:

1. 'Indian Polity' by Laxmikanth
2. 'Indian Administration' by Subhash Kashyap
3. 'Indian Constitution' by D.D. Basu
4. 'Indian Administration' by Avasti and Avasti

PRACTICAL SYLLABUS

Software Engineering Lab Code:

ESC591

Contact: 4P

Name of the Course:	Software Engineering Lab
Course Code: ESC591	Semester:V
Duration:6 months	Maximum Marks:100
Teaching Scheme:	
Theory: hrs./week	Continuous Internal Assessment
Tutorial: NIL	External Assesement:60
Practical: 4 hrs./week	Distribution of marks:40
Credit Points:	2
Course Outcomes:	
1	To understand the software engineering methodologies involved in the phases for project development.
2	To gain knowledge about open source tools used for implementing software engineering methods.
3	To exercise developing product-startups implementing software engineering methods.
4	Learn simple optimization techniques
Pre-Requisite:	

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Syllabus for B. Tech in Electrical Engineering
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Name of the course		INDIAN CONSTOTUTION	
Course Code: MC-EE 301		Semester: 3rd	
Duration: 6 months		Maximum Marks: 100	
Teaching Scheme		Examination Scheme	
Theory: 3 hrs/week		Mid Semester Exam: 15 Marks	
Tutorial: 0 hr/week		Assignment & Quiz: 10 Marks	
Practical: 0 hrs/week		Attendance: 05 Marks	
Credit Points: 0		End Semester Exam: 70 Marks	
Objective:			
1.	To have basic knowledge about Indian Constitution.		
2.	To understand the structure and functioning of union, state and local self-government.		
3.	To understand the structure, jurisdiction and function of Indian judiciary.		
Pre-Requisite			
1.	NIL		
Unit	Content	Hrs	Marks
1	Indian Constitution: Sources and constitutional history, Features: Citizenship, Preamble, Fundamental Rights and Duties, Directive Principles of State Policy	5	
2	Union government and its administration: Structure of the Indian Union: Federalism, Centre- State relationship, President: Role, power and position, PM and Council of ministers, Cabinet and Central Secretariat, Lok Sabha, Rajya Sabha. State government and its administration: Governor: Role and Position, CM and Council of ministers, State Secretariat: Organisation, Structure and Functions	10	
3	Supreme court: Organization of supreme court, procedure of the court, independence of the court, jurisdiction and power of supreme court. High court: Organization of high court, procedure of the court, independence of the court, jurisdiction and power of supreme court. Subordinate courts: constitutional provision, structure and jurisdiction. National legal services authority, Lok adalats, family courts, gram nyayalays. Public interest litigation (PIL): meaning of PIL, features of PIL, scope of PIL, principle of PIL, guidelines for admitting PIL	10	
4	Local Administration:	10	

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	District's Administration head: Role and Importance, Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation, Pachayati raj: Introduction, PRI: Zila Pachayat, Elected officials and their roles, CEO Zila Pachayat: Position and role, Block level: Organizational Hierarchy (Different departments), Village level: Role of Elected and Appointed officials, Importance of grass root democracy.		
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Text books:

1. Indian polity, M, Laxmikanth, MC Graw Hill education, 5th Edition.

Reference books

1. DD Basu, " Introduction to the constitution of India", 21st Edition, Lexis Nexis Books Publication Ltd, India

Course Outcome: After completion of this course, the learners will be able to

1. describe
 - different features of Indian constitution..
 - power and functioning of Union, state and local self-government.
 - structure, jurisdiction and function of Indian Judiciary.
 - basics of PIL and guideline for admission of PIL.
 - Functioning of local administration starting from block to Municipal Corporation.
2. identify authority to redress a problem in the profession and in the society.

Special Remarks:

The above mentioned outcomes are not limited. Institute may redefine outcomes based their program educational objective.

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3.	<p>Curves [3L]: Curve representation, surfaces, designs, Bezier curves, B-spline curves, end conditions for periodic B-spline curves, rational B-spline curves.</p> <p>Hidden surfaces [3L]: Depth comparison, Z-buffer algorithm, Back face detection, BSP tree method, the Painter’s algorithm, scan-line algorithm; Hidden line elimination, wire frame methods , fractal - geometry.</p> <p>Color & shading models [2L]: Light & color model; interpolative shading model; Texture.</p> <p>Introduction to Ray-tracing: [3L] Human vision and color, Lighting, Reflection and transmission models.</p>	6	
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3. D. F. Rogers, J. A. Adams – “Mathematical Elements for Computer Graphics (2nd Ed.)” – TMH

Constitution of India
Code: MC-IT501
Contacts: 3L

Name of the Course:	Constitution of India		
Course Code: MC-IT501	Semester: V		
Duration: 6 months	Maximum Marks:100		
Teaching Scheme		Examination Scheme	
Theory:		Mid Semester exam: 15	
Tutorial: NIL		Assignment and Quiz: 10 marks	
		Attendance : 5 marks	
Practical: NIL			
Credit Points:	0		

Unit	Content	Hrs/Unit	Marks/Unit
1	Introduction: Constitution’ meaning of the term,, Indian Constitution: Sources and constitutional history, Features: Citizenship, Preamble, Fundamental Rights and Duties, Directive Principles of State Policy	3	
2	Union Government and its Administration : Structure of the Indian Union: Federalism, Centre- State relationship,	6	

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	President: Role, power and position, PM and Council of ministers, Cabinet and Central Secretariat, Lok Sabha, Rajya Sabha		
3.	State Government and its Administration Governor: Role and Position, CM and Council of ministers, State Secretariat: Organisation, Structure and Functions	6	
4.	Local Administration District's Administration head: Role and Importance, Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation, Pachayati raj: Introduction, PRI: Zila Pachayat, Elected officials and their roles, CEO Zila Pachayat: Position and role, Block level: Organizational Hierarchy (Different 4.departments), Village level: Role of Elected and Appointed officials, Importance of grass root democracy	8	
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PRACTICAL SYLLABUS

Software Engineering Lab

Code: ESC591

Contact: 4P

Name of the Course:	Software Engineering Lab
Course Code: ESC591	Semester:V
Duration:6 months	Maximum Marks:100
Teaching Scheme:	
Theory: hrs./week	Continuous Internal Assessment
Tutorial: NIL	External Assesement:60
Practical: 4 hrs./week	Distribution of marks:40
Credit Points:	2
Course Outcomes:	
1	To understand the software engineering methodologies involved in the phases for project development.
2	To gain knowledge about open source tools used for implementing software engineering methods.

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

MBA PROGRAMME

(Revised Curriculum - 2018)

Objective

To conduct business and industry - oriented MBA Programme following AICTE Model Curriculum for Management (MBA & PGDM), 2018.

Course

- Two - Year full-time MBA course (Four - Semester).
- Minimum number of class room contact teaching for MBA/PGDM programme should be 96 credits (one credit equals 10 hours) and Internship / Project should be 06 credits i.e., Total 96 + 06 = 102 credits.
- Specialization: Students can opt for any two functional specializations (One Major Area and one Minor Area) from Marketing, Finance, HRM, Operations Management, Healthcare Management, MIS and Business Analytics
- Each Paper = 4 credits (40 contact hours), 6 Papers / Semester
- Marks per paper: 100 (70 - University, 30 - College)

Course Structure

➤ Regular Course

Semester	Paper	Credit (1=4 credit)	Contact Hrs. (1 = 10 hrs.)
I (C*)	6	24	240
II (C*)	6	24	240
III (2 C*+4 E**)	6	24	240
Internship/Project #	2	6	60
IV (6 E**)	6	24	240
Course Total	26	102	1020

(# Project: Project Paper + Presentation + Viva)

(C*: CORE PAPERS/E**: ELECTIVE PAPERS)

- **On - Line Courses** (Non-credit, Paper & Marks to be mentioned in the Mark sheet)
 - Total : 4(1/Semester)
 - Weightage : 4 Credits / Paper = 04 X 4 = 16 credits
 - Courses (any 4): Environment Sciences, Indian Society & Culture, **Indian Constitution**, Entrepreneurship, English Communication, Data Mining, E-Commerce, Agri-Business, Hospitality Management, Small Business Management, Corporate Social Responsibility.

- **Total Credits:**

Regular	:	102
On-Line (Non-Credit)	:	16

Session

- July – December (Odd Semesters / 1st& 3rd)
- January – June (Even semesters / 2nd& 4th)
- Class / Day : 5 hrs / Day (5 days week)
- Project Work : after 2ndSem Examination, June & July (8 Weeks)

Examination System (Semester – Wise)

- Total Marks = 100 (University – 70, College – 30)
- Internal (College level) : Weightage : 30 (20-Class Test, 10-Presentation & Viva)
- Paperwise Class Test = 2 Tests / every Six weeks
- Average of 2 internal tests (2 components – Test, Presentation& Viva)
- External (University Level) : 70 (20 = MCQ, 20 = Short Q, 30 = Analytical Q and Cases)
- Semester Grade Point Average : SGPA
- Yearly Grade Point Average: YGPA
- Degree Grade Point Average : DGPA
- Odd Semester (1st& 3rd) Examination : 1st Week of December
- Even Semester (2nd& 4th) Examination : 1st Week of May
- Project Marks (100) : Project Report (50), Presentation (30), Viva (20)
- Passmarks : 40 per paper, 50% aggregate

Teaching Methodology

Lecture, Discussion, Presentation, Case Studies, Group Task, Assignments, Projects, Special Lectures by industry professionals.

Internship / Project

Six to Eight weeks Internship Project in industry. Students will be required to submit a Project Report on any area of Elective courses (**Finance, Marketing, HRM, Operations Management, Business Analytics, MIS, Healthcare Management**) under the Faculty guidance. The Project will be examined on Project Report, Presentation and Viva.