



ALBERTIAN INSTITUTE OF SCIENCE AND TECHNOLOGY
(AUTONOMOUS)

B. Tech
Curriculum (2026)
Semester I to VIII
Civil Engineering
Branch Code: CE

FIRST SEMESTER (July-December)														
45 Hrs Compulsory Induction Program and UHV														
Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	Credit Structure				SS	Total Marks		Credits	Hrs./Week
						L	T	P	R		CIA	ESE		
1	A	A101MAT01	BSC	GC	Mathematics for Physical Science-1	3	0	0	0	4.5	40	60	3	3
2	B	A101PHT02	BSC	GC	Physics for Physical Science	3	0	2	0	5.5	40	60	4	5
3	C	A101EST03	ESC	GC	Engineering Mechanics	3	0	0	0	4.5	40	60	3	3
4	D	A101EST04	ESC	GC	Introduction to Mechanical Engineering & Civil Engineering (Part1: Mechanical Engineering)	2	0	0	0	3	20	30	2+2=4	4
					(Part 2: Civil Engineering)	2	0	0	0	3	20	30		
5	E	A101EST05	ESC	IC	Algorithmic Thinking with Python	3	0	2	0	5.5	40	60	4	5
6	I*	A101HWT06	HWP	IC	Health and wellness	1	0	1	0	2	50	0	1	2
7	L	A101ESL07	ESC	GC	Engineering Workshop	0	0	2	0	1	50	50	1	2
8	G	A101SED08	SEC	IC	Skill Enhancement Course: AI for Professionals	Online Course*				3			1	
Total										32			21	24
Bridge Course (Mathematics)*:										Total 15 Hrs.				

SECOND SEMESTER (January-June)														
Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	Credit Structure				SS	Total Marks		Credits	Hrs./Week
						L	T	P	R		CIA	ESE		
1	A	A201MAT01	BSC	GC	Mathematics for Physical Science-2	3	0	0	0	4.5	40	60	3	3
2	B	A201CYT02	BSC	GC	Chemistry for Physical Science	3	0	2	0	5.5	40	60	4	5
3	C	A201EST03	ESC	GC	Engineering Graphics and Computer Aided Drawing	2	0	2	0	4	40	60	3	4
4	D	A201EST04	ESC	GC	Basic Electrical & Electronics Engineering (Part 1: Electrical Engineering)	2	0	0	0	3	20	30	2+2=4	4
					(Part 2: Electronics Engineering)	2	0	0	0	3	20	30		
5	E	A201PCT05	PC	PC	Mechanics of Solids	3	1	0	0	5	40	60	4	4
6	F	A201EST06	ESC	IC	Engineering Entrepreneurship & IPR	3	0	0	0	4.5	60	40	3	3
7	I*	A201HMT07	HMC	IC	Life Skills and Professional Communication	2	0	1	0	3.5	100	0	1	3
8	L	A201ESL08	ESC	GC	Civil Engineering Drafting lab	0	0	2	0	1	50	50	1	2
Total										34			23	27

*No Grade Points will be awarded for the Online course and I slot course.

- L-T-P-R: Lecture-Tutorial-Practical-Project
- SS (Self Study) Hours= 1.5L+0.5 T+0.5P+R
- CIA: Continuous Internal Assessment, ESE: End Semester Examination

THIRD SEMESTER (July-December)														
Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	Credit Structure				SS	Total Marks		Credits	Hrs./ Week
						L	T	P	R		CIA	ESE		
1	A	A301MAT01	BSC	GC	Mathematics for Physical Science-3	3	0	0	0	4.5	40	60	3	3
2	B	A301PCT02	PC	PC	Fluid mechanics	3	1	0	0	5	40	60	4	4
3	C	A301PCT03	PC	PC	Structural analysis-I	3	1	0	0	5	40	60	4	4
4	D	A301PBT04	PC-PB L	PB	Surveying & Geomatics	3	0	0	1	5.5	60	40	4	4
5	E	A301EST05	ESC	GC	Introduction to Artificial Intelligence and Data Science	3	1	0	0	5	40	60	4	4
6	F	A301HMT06	HMC	IC	Engineering Ethics and Sustainable Development	2	0	0	0	3	50	50	2	2
7	L	A301PCL07	PCL	PC	Survey Lab	0	0	3	0	1.5	50	50	2	3
8	Q	A301PCL08	PCL	PC	Fluid Mechanics Lab	0	0	3	0	1.5	50	50	2	3
9	R/M		VAC		Remedial/minor/course	3	1	0	0	5			4*	4*
Total										31/36			25/29*	27/31*

FOURTH SEMESTER (January-June)														
Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	Credit Structure				SS	Total Marks		Credits	Hrs./ Week
						L	T	P	R		CIA	ES E		
1	A	A401MAT01	BSC	GC	Mathematics for Physical Science-4	3	0	0	0	4.5	40	60	3	3
2	B	A401PCT02	PC	PC	Soil Mechanics	3	1	0	0	5	40	60	4	4
3	C	A401PCT03	PC	PC	Structural Analysis-II	3	1	0	0	5	40	60	4	4
4	D	A401PBT04	PC-PBL	PB	Design of Concrete Structures	3	0	0	1	5.5	60	40	4	4
5	E	A401PET1X	PE	PE	Program Elective 01	3	0	0	0	4.5	40	60	3	3
6	F	A401HMT05	HMC	IC	Economics for Engineers	2	0	0	0	3	50	50	2	2
7	L	A401PCL06	PC	PC	Materials Testing lab	0	0	3	0	1.5	50	50	2	3
8	Q	A401PCL07	PC	PC	Civil Engineering Modelling Lab	0	0	3	0	1.5	50	50	2	3
9	R/M/H		VAC		Remedial/Minor/Honours Course	3	1	0	0	5			4*	4*
Total										31/36			24/28*	26/30*

PROGRAM ELECTIVE I: A401PET1X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	A401PET11	Advanced Solid Mechanics	3-0-0-0	3	3
	A401PET12	Concrete Technology	3-0-0-0		3
	A401PET13	Mechanics of Fluid Flow	3-0-0-0		3
	A401PET14	Cartography and GIS	3-0-0-0		3
	A401PET15	Engineering Geology	3-0-0-0		3
	A401PET16	Numerical methods for Engineers	3-0-0-0		3
	A401PET17	Environmental law and Policy	3-0-0-0		3
	A401PET18	Architectural Engineering	3-0-0-0		5/3

Note : Level 5 courses in the B. Tech curriculum carry a total of 5 credits, consisting of 3 credits for the Programme Elective and 2 additional credits. The additional 2 credits shall be awarded only if the student meets the eligibility conditions specified in the B. Tech. 2026 regulations. If those conditions are not fulfilled, the student will receive only 3 credits for the course.

FIFTH SEMESTER (July-December)														
Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	Credit Structure				SS	Total Marks		Credits	Hrs./ Week
						L	T	P	R		CIA	ESE		
1	A	A501PCT01	PC	PC	Hydrology & Water Resources Engineering	3	1	0	0	5	40	60	4	4
2	B	A501PCT02	PC	PC	Transportation Engineering	3	1	0	0	5	40	60	4	4
3	C	A501PCT03	PC	PC	Environmental Engineering	3	0	0	0	4.5	40	60	3	3
4	D	A501PBT04	PC-PBL	PB	Foundation Engineering	3	0	0	1	5.5	60	40	4	4
5	E	A501PET2X	PE	PE	Program Elective 02	3	0	0	0	4.5	40	60	3	3
6	I*	A501HUD05	HMC	IC	Constitution of India (MOOC)	-	-	-	-	2	-	-	1	-
7	L	A501PCL06	PC	PC	Geotechnical Engineering Lab	0	0	3	0	1.5	50	50	2	3
8	Q	A501PCL07	PC	PC	Concrete Lab (MT-2)	0	0	3	0	1.5	50	50	2	3
9	R/M /H		VAC		Remedial/Minor/Honours Course	3	1	0	0	5			4*	4*
	S ₅ / S ₆	Industrial Visit (Maximum 12 Days are permitted, Not Exceeding more than 6 Working Days) /Industrial Training												
Total										30 / 35			23/27*	24/28*

***No Grade Points will be awarded for the MOOC course and I slot course.**

PROGRAM ELECTIVE 2: A501PET2X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	A501PET21	Advanced Structural Analysis	3-0-0-0	3	3
	A501PET22	Modern Construction Technology	3-0-0-0		3
	A501PET23	Open Channel Hydraulics	3-0-0-0		3
	A501PET24	Disaster management	3-0-0-0		3
	A501PET25	Applied hydrology and climatology	3-0-0-0		3
	A501PET26	Town Planning	3-0-0-0		3
	A501PET27	Optimization techniques and operations research for Civil Engineers	3-0-0-0		3
	A501PET28	Design of Prestressed concrete	3-0-0-0		5/3

SIXTH SEMESTER (January-June)														
Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	Credit Structure				SS	Total Marks		Credits	Hrs/ Week
						L	T	P	R		CIA	ESE		
1	A	A601PCT01	PC	PC	Quantity Surveying & Valuation	3	0	0	0	4.5	40	60	3	3
2	B	A601PCT02	PC	PC	Design of Steel Structures	3	0	0	0	4.5	40	60	3	3
3	C	A601PET3X	PE	PE	Program Elective 03	3	0	0	0	4.5	40	60	3	3
4	D	A601PBT03	PC-PBL	PB	Construction Project Management	3	0	0	1	5.5	60	40	4	4
5	E	A601EST04	ESC	GC	Design Thinking and Product Development (Physical Science)	2	0	0	0	3	40	60	2	2
6	F	A601OET1X/ A601IET1X	OE/IL E	OE/IL E	OE/ILE-1	3	0	0	0	4.5	40	60	3	3
7	P	A601PWQ05	PWS	PC	Mini Project: Socially Relevant Project	0	0	0	3	3	50	50	2	3
8	L	A601PCL06	PC	PC	Transportation Engineering lab	0	0	3	0	1.5	50	50	2	3
9	Q	A601PCL07	PC	PC	Environmental Engineering lab	0	0	2	0	1	50	50	1	2
	R/ M/ H		VAC		Remedial/Minor/Honours Course	3	0	0	0	5			3*	3*
	S5 / S6	Industrial Visit (Maximum 12 Days are permitted, Not Exceeding more than 6 Working Days) /Industrial Training												
Total										32 / 37			23/26*	26/29*

Note: Open Electives are such courses which will be offered by other departments. Like CSE department students have to opt open electives from ECE/ME/EEE etc. departments.

PROGRAM ELECTIVE 3: A601PET3X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
C	A601PET31	Advanced Design of Concrete Structures	3-0-0-0	3	3
	A601PET32	Irrigation and Drainage Engineering	3-0-0-0		3
	A601PET33	Ground Improvement Techniques	3-0-0-0		3
	A601PET34	Repair and rehabilitation of structures	3-0-0-0		3
	A601PET35	Solid and Hazardous Waste Management	3-0-0-0		3
	A601PET36	Traffic Engineering and Management	3-0-0-0		3
	A601PET37	Advanced foundation Engineering	3-0-0-0		5/3

OPEN ELECTIVE 1: A601OET1X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
F	A601OET11	Introduction to Construction Engineering	3-0-0-0	3	3
	A601OET12	Environmental Laws and Policy	3-0-0-0		3
	A601OET13	Disaster Management	3-0-0-0		3
	A601OET14	Environmental Impact Assessment	3-0-0-0		3
	A601OET15	Structural Geology	3-0-0-0		3
	A601OET16	Applied Earth Systems	3-0-0-0		3

SEVENTH SEMESTER (July-December)														
Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	Credit Structure				SS	Total Marks		Credits	Hrs/ Week
						L	T	P	R		CIA	ESE		
1	A	A701PET4X/ A701SED4X	PE	PE	Program Elective 04 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
2	B	A701PET5X/ A701SED5X	PE	PE	Program Elective 05 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
3	C	A701OET2X/ A701IET2X/ A701SED2X	OE/ ILE	OE/ ILE	OE/ILE-2 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
4	I*	A701HET1X/ A701SED1X	HMC	IE	Elective (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	2	0	0	0	3	50	50	2	2
5	S	A701PWS05	PWS	PC	Seminar	0	0	3	0	1.5	50	0	2	3
6	P	A701PWP06/ A701PWK06	PWS	PC	Option 1: Major Project Option 2: Internship (4-6 Months)	0	0	0	12	12	100	0	4	8
7	R/H		VAC		Remedial/Honours Course	3	0	0	0	4.5			3*	3*
Total										26/ 31			17/20*	22/25*

*No Grade Points will be awarded for the I slot courses

*The students can take the internship option either in 7th or in 8th semester.

* Option 1: Work on a Project in the institute/department under the mentorship of faculty members.

Option 2: Full semester Internship in Industry/organization (7th or 8th semester)

Note: Open Electives are such courses which will be offered by other departments.

PROGRAM ELECTIVE 4: A701PET4X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	A701PET41	Structural Dynamics	3-0-0-0	3	3
	A701PET42	Formwork Engineering	3-0-0-0		3
	A701PET43	Environmental Geotechnology	3-0-0-0		3
	A701PET44	Airport Planning and Design	3-0-0-0		3
	A701PET45	Highway Material & Design	3-0-0-0		3
	A701PET46	River Engineering	3-0-0-0		3
	A701PET47	Pavement Design and Construction	3-0-0-0		5/3

PROGRAM ELECTIVE 5: A701PET5X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
B	A701PET51	Groundwater Engineering	3-0-0-0	3	3
	A701PET52	Sustainable Construction Practices	3-0-0-0		3
	A701PET53	Advanced Geotechnical Investigation	3-0-0-0		3
	A701PET54	Railway, Port and Harbor Engineering	3-0-0-0		3
	A701PET55	Air and Noise Pollution Control Engineering	3-0-0-0		3
	A701PET56	Finite element method	3-0-0-0		3
	A701PET57	Design of hydraulic structures	3-0-0-0		5/3

OPEN ELECTIVE 2: A701OET2X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
C	A701OET21	Intelligent Transportation Systems	3-0-0-0	3	3
	A701OET22	Environment Health and Safety	3-0-0-0		3
	A701OET23	Watershed Conservation and Management	3-0-0-0		3
	A701OET24	Forensic Engineering	3-0-0-0		3
	A701OET25	Finance for Engineers	3-0-0-0		3

SL. No	Course Code	Slot I: HMC Elective A701HET1X
1	A701HET11	Project Management: Planning, Execution, Evaluation and Control
2	A701HET12	Proficiency course in French. (MOOC) (B1 level)
3	A701HET13	Proficiency Course in German (B1 Level). (MOOC)
4	A701HET14	Proficiency Course in Spanish (B1 Level) (MOOC)
5	A701HET15	Introduction to Japanese Language and Culture (N5 level). (MOOC)

EIGHTH SEMESTER (January-June)														
Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	Credit Structure				SS	Total Marks		Credits	Hrs/Week
						L	T	P	R		CI A	ES E		
1	A	A801PET6X/ A801SED6X	PE	PE	Program Elective 06 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
2	B	A801OET3X/ A801IET3X A801SED3X	OE/ ILE	OE/ ILE	OE/ILE-3 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
3	I*	A801HMT03 / A801SED4X	HMC	IC	Organizational Behavior and Business Communication (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	2	0	0	0	3	50	50	1	2
4	P	A801PWP04/ A801PWK04/ A801PWJ04	PWS	PC	Option 1: Major Project Option 2: Internship (4-6 Months) Option 3: Major Project Phase -II (For the students who have not opted for internship in S7/S8)	0	0	0	8	12	100	0	4	8
Total										20			11	16

*No Grade Points will be awarded for the I slot courses

* Option 2: Full semester Internship in Industry/organization (7th or 8th semester)

PROGRAM ELECTIVE 6: A801PET6X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	A801PET61	Water and air quality management	3-0-0-0	3	3
	A801PET62	Valuation of Real Properties	3-0-0-0		3
	A801PET63	Contracts Management	3-0-0-0		3
	A801PET64	Advanced Design of steel Structures	3-0-0-0		3
	A801PET65	Urban Transportation Planning.	3-0-0-0		3
	A801PET66	Rural Water Supply and Onsite Sanitation Systems	3-0-0-0		3
	A801PET67	Design of Earthquake Resistant Structures	3-0-0-0		5/3

OPEN ELECTIVE 3: A801OET3X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
B	A801OET31	Waste management	3-0-0-0	3	3
	A801OET32	Rainwater harvesting	3-0-0-0		3
	A801OET33	Public Transportation Systems	3-0-0-0		3
	A801OET34	Fundamentals of building planning	3-0-0-0		3
	A801OET35	Hydrogeology	3-0-0-0		3