



ALBERTIAN INSTITUTE OF SCIENCE AND TECHNOLOGY
(AUTONOMOUS)

B. Tech Curriculum-2026

Semester I to VIII

Computer Science and Engineering (AI & ML)

Branch Code: AM

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	A106MAT01	BSC	GC	Mathematics for Information Science-1	3	0	0	0	4.5	40	60	3	3
2	B	A106CYT02	BSC	GC	Chemistry for Information Science	3	0	2	0	5.5	40	60	4	5
3	C	A106EST03	ESC	GC	Engineering Graphics and Computer Aided Drawing.	2	0	2	0	4	40	60	3	4
4	D	A106EST04	ESC	GC	Introduction to 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	A106EST05	ESC	IC	Algorithmic Thinking with Python	3	0	2	0	5.5	40	60	4	5
6	I*	A106HWT06	HM C	IC	Life Skills and Professional Communication	2	0	1	0	3.5	100	0	1	3
7	L	A106ESL07	ESC	GC	Basic Electrical and Electronics Engineering Workshop	0	0	2	0	1	50	50*	1	2
8	G	A106SED08	SEC	IC	Skill Enhancement Course : AI for Professionals	Online Course *				3			1	
Total										30/33			21	26
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	A206MAT01	BSC	GC	Mathematics for Information Science-2	3	0	0	0	4.5	40	60	3	3
2	B	A206PHT02	BSC	GC	Physics for Information Science	3	0	2	0	5.5	40	60	4	5
3	C	A206EST03	ESC	GC	Foundations of Computing: From Hardware Essentials to Web Design	3	0	0	0	4.5	40	60	3	3
4	D	A206EST04	ESC	GC	Programming in C	3	0	2	0	5.5	40	60	4	5
5	E	A206PCT05	PC	PC	Discrete Mathematics	3	1	0	0	5	40	60	4	4
6	F	A206EST06	ESC	IC	Engineering Entrepreneurship & IPR	3	0	0	0	4.5	60	40	3	3
7	I*	A206HWT07	HW P	IC	Health and Wellness	1	0	1	0	0	50	0	1	2
8	L	A206ESL08	ESC	GC	IT Workshop	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 courses

● **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	A306MAT01	BSC	GC	Mathematics for Information Science - 3	3	0	0	0	4.5	40	60	3	3
2	B	A306 PCT02	PC	PC	Theory of Computation	3	1	0	0	5	40	60	4	4
3	C	A306PCT03	PC	PC	Data Structures and Algorithms	3	1	0	0	5	40	60	4	4
4	D	A306PBT04	PC-PBL	PB	Concepts in Machine Learning	3	0	0	1	5.5	60	40	4	4
5	E	A306EST05	ESC	GC	Digital Electronics & Logic Design	3	1	0	0	5	40	60	4	4
6	F	A306HMT06	HMC	IC	Engineering Ethics and Sustainable Development	2	0	0	0	3	50	50	2	2
7	L	A306PCL07	PCL	PC	Data Structures Lab	0	0	3	0	1.5	50	50	2	3
8	Q	A306PCL08	PCL	PC	Digital Lab	0	0	3	0	1.5	50	50	2	3
9	R/M		VA C		Remedial/Minor Course	3	1	0	0	5			4*	4*
Total										31/36			25/29*	27/31*
Bridge Course for Lateral Entry Students:						Total 15 Hrs.								

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	ESE		
1	A	A406MAT01	BSC	GC	Mathematics for Information Science - 4	3	0	0	0	4.5	40	60	3	3
2	B	A406PCT02	PC	PC	Fundamentals of Artificial Intelligence	3	1	0	0	5	40	60	4	4
3	C	A406PCT03	PC	PC	Operating Systems	3	1	0	0	5	40	60	4	4
4	D	A406PBT04	PC-PBL	PB	Database Systems	3	0	0	1	5.5	60	40	4	4
5	E	A406PET1X	PE	PE	PE-1	3	0	0	0	4.5	40	60	3	3
6	F	A406HMT05	HMC	IC	Economics for Engineers	2	0	0	0	3	50	50	2	2
7	L	A406PCL06	PCL	PC	Operating Systems Lab	0	0	3	0	1.5	50	50	2	3
8	Q	A406PCL07	PCL	PC	Artificial Intelligence 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: A406PET1X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	A406PET11	Software Engineering	3-0-0-0	3	3
	A406PET12	Pattern Recognition	3-0-0-0		3
	A406PET13	Functional Programming	3-0-0-0		3
	A406PET14	Coding Theory	3-0-0-0		3
	A406PET15	Soft Computing	3-0-0-0		3
	A406PET16	Computational Geometry	3-0-0-0		3
	A406PET17	Cyber Ethics, Privacy and Legal Issues	3-0-0-0		3
	A406PET18	Computer Organization	3-0-0-0		5/3
	A406PET19	Advanced Data Structures	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	A506PCT01	PC	PC	Computer Networks	3	1	0	0	5	40	60	4	4
2	B	A506PCT02	PC	PC	Design and Analysis of Algorithms	3	1	0	0	5	40	60	4	4
3	C	A506PCT03	PC	PC	Deep Learning Concepts	3	0	0	0	4.5	40	60	3	3
4	D	A506PBT04	PC-PBL	PB	Introduction to Computer Vision	3	0	0	1	5.5	60	40	4	4
5	E	A506PET2X	PE	PE	PE-2	3	0	0	0	4.5	40	60	3	3
6	I*	A506HUD05	HMC	IC	Constitution of India (MOOC)	-	-	-	-	2	-	-	1	-
7	L	A506PCL06	PCL	PC	Networks Lab	0	0	3	0	1.5	50	50	2	3
8	Q	A506PCL07	PCL	PC	Deep Learning 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*
	S5/ S6	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.*

Industrial Training:

Students who are not participating in the industrial visit must attend industrial training during that period.

PROGRAM ELECTIVE 2: A506PET2X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	A506PET21	Software Project Management	3-0-0-0	3	3
	A506PET22	Expert Systems	3-0-0-0		3
	A506PET23	Fuzzy Systems	3-0-0-0		3
	A506PET24	Data Compression	3-0-0-0		3
	A506PET25	Introduction to Compiler Design	3-0-0-0		3
	A506PET26	Concepts in Social Network Analysis	3-0-0-0		3
	A506PET27	Data Mining	3-0-0-0		5/3
	A506PET28	Object Oriented Programming Concepts	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	A606PCT01	PC	PC	Introduction to Natural Language Processing	3	1	0	0	5	40	60	4	4
2	B	A606PCT02	PC	PC	Generative AI	3	0	0	0	4.5	40	60	3	3
3	C	A606PET3X	PE	PE	PE-3	3	0	0	0	4.5	40	60	3	3
4	D	A606PBT03	PC-PBL	PB	Concepts in Data Analytics	3	0	0	1	5.5	60	40	4	4
5	E	A606EST04	ESC	GC	Design Thinking and Product Development (Information Science)	2	0	0	0	3	40	60	2	2
6	F	A606OET1X /A606IET1X	OE/ILE	OE/ILE	OE/ILE-1	3	0	0	0	4.5	40	60	3	3
7	P	A606PWQ05	PWS	PC	Mini Project: Socially Relevant Project	0	0	0	3	3	50	50	2	3
8	L	A606PCL06	PCL	PC	Natural Language Processing Lab	0	0	3	0	1.5	50	50	2	3
9	R/M/H		VAC		Remedial/Minor/Honours Course	3	0	0	0	4.5			3*	3*
	S5/S6	Industrial Visit (Maximum of 12 Days are permitted, Not Exceeding more than 6 Working Days) /Industrial Training									PC			
Total										32/36			23/26*	PC

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.

Industrial Training:

Students who are not participating in the industrial visit must attend industrial training during that period.

PROGRAM ELECTIVE 3: A606PET3X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
C	A606PET31	Software Testing	3-0-0-0	3	3
	A606PET32	Topics in Computing Systems	3-0-0-0		3
	A606PET33	Wireless & Mobile Computing	3-0-0-0		3
	A606PET34	Advanced Database Systems	3-0-0-0		3
	A606PET35	Digital Image Processing	3-0-0-0		3
	A606PET36	Fundamentals Of Cryptography	3-0-0-0		3
	A606PET37	Quantum Computing	3-0-0-0		3
	A606PET38	Cloud Computing	3-0-0-0		5/3
	A606PET39	Data Handling and Visualization	3-0-0-0		5/3

OPEN ELECTIVE 1: A606OET1X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
F	A606OET11	Data Structures	3-0-0-0	3	3
	A606OET12	Data Communication	3-0-0-0		3
	A606OET13	Foundations of Cryptography	3-0-0-0		3
	A606OET14	Machine Learning for Engineers	3-0-0-0		3
	A606OET15	Artificial Intelligence	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	A706PET4X/ A706SED4X	PE	PE	PE-4 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
2	B	A706PET5X/ A706SED5X	PE	PE	PE-5 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
3	C	A706OET2X/ A706IET2X/ A706SED2X	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*	A706HET1X/ A706SED1X	HM C	IE	Elective (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	2	0	0	0	3	50	50	2	2
5	S	A706PWS05	PWS	PC	Seminar	0	0	3	0	1.5	50	0	2	3
6	P	A706PWP06/ A706PWK06	PWS	PC	Option 1: Major Project Option 2: Internship (4-6 Months)	0	0	0	8	8	100	0	4	8
7	R/H		VAC		Remedial/Honours Course	3	0	0	0	4.5			3*	3*
Total										26			17	22

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

*Students can opt for the internship either in the 7th or 8th semester.

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

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

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

PROGRAM ELECTIVE 4: A706PET4X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	A706PET41	Formal Methods in Software Engineering	3-0-0-0	3	3
	A706PET42	Web Programming	3-0-0-0		3
	A706PET43	Bioinformatics	3-0-0-0		3
	A706PET44	Information Security	3-0-0-0		3
	A706PET45	Blockchain and Cryptocurrencies	3-0-0-0		3
	A706PET46	Real Time Systems	3-0-0-0		3
	A7062PET47	Approximation Algorithms	3-0-0-0		3
	A706PET48	Reinforcement Learning	3-0-0-0		5/3
	A706PET49	Topics in Theoretical Computer Science	3-0-0-0		5/3

PROGRAM ELECTIVE 5: A706PET5X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
B	A706PET51	Advanced Computer Networks	3-0-0-0	3	3
	A706PET52	Responsible Artificial Intelligence	3-0-0-0		3
	A706PET53	Computational Linguistics	3-0-0-0		3
	A706PET54	Digital Forensics	3-0-0-0		3
	A706PET55	Game Theory and Mechanism Design	3-0-0-0		3
	A706PET56	High Performance Computing	3-0-0-0		3
	A706PET57	Programming Languages	3-0-0-0		3
	A706PET58	Internet of Things	3-0-0-0		5/3
	A706PET59	Algorithms For Data Science	3-0-0-0		5/3

OPEN ELECTIVE 2: A706OET2X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
C	A706OET21	Cyber Security	3-0-0-0	3	3
	A706OET22	Cloud Computing	3-0-0-0		3
	A706OET23	Software Engineering	3-0-0-0		3
	A706OET24	Computer Networks	3-0-0-0		3
	A706OET25	Mobile Application Development	3-0-0-0		3

Slot I: HMC Elective A706HET1X		
1	A706HET11	Project Management: Planning, Execution, Evaluation and Control
2	A706HET12	Proficiency course in French. (MOOC) (B1 level)
3	A706HET13	Proficiency Course in German (B1 Level). (MOOC)
4	A706HET14	Proficiency Course in Spanish (B1 Level) (MOOC)
5	A706HET15	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		CIA	ESE		
1	A	A806PET6X/ A806SED6X	PE	PE	PE-6 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
2	B	A806OET3X/ A806IET3X/ A806SED3X	OE/I LE	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*	A806HMT03/ A806SED4X	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	A806PWP04/ A806PWK04 / A806PWJ04	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	8	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 an Industry/organization (7th or 8th semester)

PROGRAM ELECTIVE 6: A806PET6X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	A806PET61	Software Architectures	3-0-0-0	3	3
	A806PET62	Large Language Models	3-0-0-0		3
	A806PET63	Topics in Security	3-0-0-0		3
	A806PET64	Computational Complexity	3-0-0-0		3
	A806PET65	Speech and Audio Processing	3-0-0-0		3
	A806PET66	Storage Systems	3-0-0-0		3
	A806PET67	Prompt Engineering	3-0-0-0		3
	A806PET68	Computational Number Theory	3-0-0-0		3
	A806PET69	Next Generation Interaction Design	3-0-0-0		5/3

OPEN ELECTIVE 3: A806OET3X					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
B	A806OET31	Introduction to Algorithms	3-0-0-0	3	3
	A806OET32	Web Programming	3-0-0-0		3
	A806OET33	Software Testing	3-0-0-0		3
	A806OET34	Internet of Things	3-0-0-0		3
	A806OET35	Computer Graphics	3-0-0-0		3