



Program Structure

Bachelor of Computer Applications (Artificial Intelligence)

Duration: 04 Years

Batch: 2026-30

School of Artificial Intelligence

RTH

**Proposed Outline of Course Curriculum and Credit Framework for UG Programmes
in-line with NEP 2020 & NCrF/NHEQF/FYUP etc with Multiple Entry and Multiple
Exit (MEME) options**

Semester-I

S.No	Type of Course	Subject	Course Code	L	T	P	E	Credits
1	CORE	Mathematics for Computing-I	2026MATH111	2	1	0	0	3
2	CORE	Signal Processing Fundamentals	2026AINT111	2	0	2	0	3
3	CORE	Fundamental of Computer and Programming in C	2026PROG111	1	0	4	0	3
4	CORE	Digital Logic Design	2026COMP111	2	0	2	0	3
5	DSE	Linux System Administration/ Evolution of AI & ML	2026AINT112/ 2026AINT101	3	0	2	0	4
6	MDC	Biology for Engineers	2026BIOT100	3	0	0	0	3
7	SEC	Exploration & Seminars in AI	2026AINT103	1	0	2	0	2
8	VAC	Source Code Management using GitHub	2026AINT104	1	0	2	0	2
Total				15	1	14	0	23

Semester-II

S.No	Type of Course	Subject	Course Code	L	T	P	E	Credits
1	CORE	Mathematics for Computing-II	2026MATH161	2	1	0	0	3
2	CORE	Object-Oriented Programming (OOPS)	2026PROG152	2	0	2	0	3
3	CORE	Probability and Statistics	2026MATH162	2	1	0	0	3
4	CORE	Python for AI/ML	2026PROG151	2	0	2	0	3
5	AEC	Environment & Sustainability-I	2026BIOT151	2	0	0	0	2
6	DSE	Entropy & Information / Digital Signal Processing	2026AINT101/ 2026AINT102	3	0	2	0	4
7	MDC	Physics	2026PHYS151	3	0	0	0	3
8	VAC	Advanced Prompt Engineering	2026AINT154	1	0	2	0	2
Total				17	2	8	0	23

Students exiting the programme after securing 40 credits will be awarded UG Certificate in the relevant Discipline /Subject provided they secure 4 credits in work based /vocational courses (internship also) offered during summer term or internship / Apprenticeship. These students are allowed to re-enter the degree programme within THREE years and complete the degree programme within the stipulated maximum period of SEVEN years.

Semester-III								
S.No	Type of Course	Subject	Course Code	L	T	P	E	Credits
1	CORE	Fundamentals of Machine Learning	2026AINT211	3	0	2	0	4
2	CORE	Data Structures and Algorithms	2026COMP211	3	1	2	0	5
3	CORE	AI-Driven Database Management	2026AINT212	2	0	2	0	3
4	Audit	Communication skills	2026COMM200	0	0	0	1	0
5	DSE	Theory of Computation/ Microprocessor & Computer Architecture	2026COMP201/ 2026COMP202	2	0	2	0	3
6	MDC	Mobile App Development	2026COMP203	2	0	2	0	3
7	SEC	ML Ops	2026AINT202	1	0	2	0	2
8	VAC	Entrepreneurship & IP	2026EINP200	2	0	0	0	2
Total				15	1	12	1	22

Semester-IV								
S.No	Type of Course	Subject	Course Code	L	T	P	E	Credits
1	CORE	Introduction to Deep Learning	2026AINT261	2	0	2	0	3
2	CORE	Fundamentals of Optimization Techniques	2026AINT262	2	0	2	0	3
3	CORE	Digital Image Processing	2026AINT264	2	0	2	0	3
4	CORE	Operating and Embedded Systems	2026AINT254	3	0	2	0	4
5	CORE	Full Stack Development using React & Node .js	2026COMP261	2	0	2	0	3
6	DSE	Data Science and Analytics/ Compiler Design/ Quantum Computing	2026AINT263/ 2026COMP252/ 2026AINT257	2	0	2	0	3
7	AEC	Scientific Writing Skill	2026AINT258	2	0	0	0	2
Total				15	0	12	0	21

Students exiting the programme after securing 80 credits will be awarded UG Diploma in the relevant Discipline /Subject provided they secure additional 4 credit in skill based/vocational courses (internship also) offered during first year or second year summer term. These students are allowed to re-enter the degree programme within THREE years and complete the degree programme within the stipulated maximum period of SEVEN years.

Semester-V								
S.No	Type of Course	Subject	Course Code	L	T	P	E	Credits
1	CORE	IoT Architecture & Applications	2026AINT311	2	0	2	0	3
2	CORE	GenAI: Concepts and Practice	2026AINT312	2	0	2	0	3
3	CORE	Data Communications	2026AINT313	2	0	2	0	3
4	CORE	Visual Computing for AI Applications	2026AINT302	2	0	2	0	3
5	DSE	Specialization Elective I	2026CBOT300/ 2026INCS300/ 2026PSAI300/ 2026HEAI300	2	0	2	0	3
6	Internship	Internship Evaluation	2026AINT303	0	0	0	3	1
7	SEC	Competitive Coding-I	2026COMP300	0	0	2	0	1
8	AEC	Indian Knowledge System	2026PSIR300	2	0	0	0	2
Total				12	0	12	3	19

Semester-VI								
S.No	Type of Course	Subject	Course Code	L	T	P	E	Credits
1	CORE	Cloud Architecture and Computing	2026CSET351	2	0	2	0	3
2	CORE	AI Agent and Automation Applications	2026AINT361	2	0	2	0	3
3	CORE	Cyber Security and Risk Management	2026CSET360	2	0	2	0	3
4	CORE	Software Testing and Quality Assurance	2026CSET355	2	0	2	0	3
5	DSE	Specialization Elective II	2026CBOT351/ 2026INCS351/ 2026PSAI351/ 2026HEAI351	2	0	2	0	3
6	DSE	Specialization Elective III	2026CBOT352/ 2026INCS352/ 2026PSAI352/ 2026HEAI352	2	0	2	0	3
7	SEC	Competitive Coding-II	2026COMP352	0	0	4	0	2

Total				12	0	16	0	20
Students who want to undertake 3-year UG programme will be awarded UG Degree in the relevant Discipline /Subject upon securing 120 credits.								

Semester-VII								
S.No	Type of Course	Subject	Course Code	L	T	P	E	Credits
1	CORE	NLP and LLMS	2026AINT410	3	0	2	0	4
2	DSE	Specialization Elective IV	2026CBOT400/ 2026INCS400/ 2026PSAI400/ 2026HEAI400	2	0	2	0	3
3	DSE	Specialization Elective V	2026CBOT401/ 2026INCS401/ 2026PSAI401/ 2026HEAI401	2	0	2	0	3
4	SEC	AI Design & Innovation	2026AINT401	0	1	2	0	2
5	AEC	General Aptitude and Personality Development	2026TPOC401	2	0	0	0	2
6	VAC	AI GRC (Governance, Risk and Compliance)	2026AINT403	2	0	0	0	2
7	Internship	Internship Evaluation	2026AINT404	0	0	0	6	2
Total				9	1	8	6	18

Semester-VIII								
S.No	Type of Course	Subject	Course Code	L	T	P	E	Credits
1	DSE	Specialization Elective VI	2026CBOT451/ 2026INCS451/ 2026PSAI451/ 2026HEAI451	2	0	2	0	3
2	AEC	Scientific Presentation & Communication Skills	2026AINT451	2	0	0	0	2
3	Dissertation	Major Project	2026AINT452	0	0	0	36	12
Total				4	0	2	36	17