



JOY UNIVERSITY
semper paratus

School of Computational Intelligence

**B.Tech. CSE (Artificial Intelligence and Machine Learning)
(In collaboration with Intel and NEC)**

Semester I

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	BTIN 1111	Fundamentals of Computing	3	0	2	5	4
2.	INAM1112	Fundamentals of C Programming with Intel Libraries	3	0	2	5	4
3.	BTIN1113	Mathematics I	3	1	0	4	4
4.	BTIN1114	Physics I	3	1	0	4	4
5.	AEEN1111	Effective Communication	3	0	0	3	3
6.	AUAM1111	Performing Arts/Sports (Non-Graded)	3	0	0	3	0
		TOTAL	18	2	4	24	19

Semester II

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	INAM1121	Python Programming and RASPBERRY PI Fundamentals	3	0	2	5	4
2.	BTIN1122	Probability, Statistics and Stochastic Processes	3	0	0	3	3
3.	BTIN1123	Mathematics II	3	1	0	4	4
4.	BTIN1124	Physics II	3	0	2	5	4
5.	BTIN1125	Discrete Structures for Computer Science	3	0	0	3	3
6.	AEEV1121	Environmental Science	2	0	0	2	2
		TOTAL	17	1	4	22	20

Semester III

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	INAM 1211	Artificial Intelligence	3	0	0	3	3
2.	BTIN1212	Signals and Systems	3	0	0	3	3
3.	BTIN1213	Digital Design	3	0	2	5	4
4.	BTIN1214	Data Structures and Algorithms	3	0	2	5	4
5.	BTIN1215	Object-Oriented Programming	3	0	2	5	4
6.	AEPH 1213	Professional Ethics	2	0	0	2	2
7.	AUAM 1211	Indian Constitution	1	0	0	1	0
TOTAL			18	0	6	24	20

Semester IV

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	INAM 1221	Machine Learning	3	0	2	5	4
2.	BTIN1222	Database Management Systems	3	0	2	5	4
3.	BTIN1223	Design and Analysis of Algorithms	3	0	2	5	4
3.	BTIN1224	Computer organization	3	0	0	3	3
5.	BTIN1225	Operating systems	3	0	0	3	3
6.	BTIN 1226	Engineering Economics and foreign trade	3	0	0	3	3
TOTAL			18	0	6	24	21

Semester V

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	INAM1311	Deep Learning	3	0	2	5	4
2.	BTIN1312	Computer Networks	3	0	2	5	4
3.	BTIN1313	Computer Architecture	3	0	0	3	3
4.	BTIN 1314	Software Engineering	3	0	0	3	3
5	BTIN1315	Programming with Java	3	0	2	5	4
6	BTIN1316	Theory of Computation	3	1	0	4	4
7	BTIN 1317	Principles of Management	3	0	0	3	3
TOTAL			21	1	6	28	25

Semester VI

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	INAM1321	Integrated advanced AI and IoT	3	0	2	5	4
2.	BTIN1322	Compiler Design	3	0	0	3	3
3.	BTIN1323	Cryptography and Network Security	3	0	0	3	3
4.	BTIN1324	Realistic AI	3	0	2	5	4
5.	BTIN1325	Data Visualization	3	0	0	3	3
6.	PEIN132#	Programme Specific Elective I	3	0	0	3	3
7.	GEIN132#	Generic Elective I	3	0	0	3	3
		TOTAL	21	0	6	27	24

Programme Specific Electives I

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	PEIN1411	Applied Artificial Intelligence	3	0	0	3	3
2.	PEIN1412	Applied Machine Learning	3	0	0	3	3
3.	PEIN1413	Scalable Machine Learning	3	0	0	3	3
4.	PEIN1414	Neuromorphic Computing	3	0	0	3	3
5.	PEIN1415	Computer Vision	3	0	0	3	3
6.	PEIN1416	Internet of things	3	0	0	3	3
		TOTAL					

Generic Electives

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	GEIN1321	Continual Learning	3	0	0	3	3
2.	GEIN1322	Social Network Analysis	3	0	0	3	3
3.	GEIN1323	Full Stack Development-DevOps	3	0	0	3	3
4.	GEIN1324	Foundations of Quantum Information Processing	3	0	0	3	3
5.	GEIN1325	Block Chain and its Applications	3	0	0	3	3
6.	GEIN1326	Digital Image Processing	3	0	0	3	3
		TOTAL					

Semester VII

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	INAM1411	High Performance Computing	3	0	2	5	4
2.	BTIN1412	Ethics, Policy, Laws and Standards in AI	3	0	0	3	3
3.	BTIN1413	Web Technology	3	0	2	5	4
4.	BTIN1414	Pattern Recognition	3	0	0	3	3
5.	BTIN3415	Industrial Internship	0	0	0	0	2
6.	GEIN141#	Generic Elective II	3	0	0	3	3
7.	BTIN1415	Systems Engineering	3	0	0	3	3
		TOTAL	18	0	4	22	22

Generic Electives II

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	GEIN1411	Nature Inspired Computing	3	0	0	3	3
2.	GEIN1412	Fuzzy sets, Logics and Systems	3	0	0	3	3
3.	GEIN1413	Full Stack Development-UI/UX	3	0	0	3	3
4.	GEIN1414	Cognitive Computing	3	0	0	3	3
5.	GEIN1415	Six Sigma	3	0	0	3	3
6.	GEIN1416	Computational and Systems Biology	3	0	0	3	3
		TOTAL					

Semester VIII

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits
1.	INAM 3421	Intel Capstone Project	0	0	0	0	15
2.	PEIN 142#	Programme Specific Elective II	3	0	0	3	3
3.	PEIN 142#	Programme Specific Elective III	3	0	0	3	3
		TOTAL	9	0	0	9	21

Programme Specific Electives II

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/ Wk	Credits
1.	PEIN1421	Game Theory for Machine Learning	3	0	0	3	3
2.	PEIN1422	Semantic Web Technology	3	0	0	3	3
3.	PEIN1423	Resource Constrained Artificial Intelligence	3	0	0	3	3
4.	PEIN1424	Web data Mining	3	0	0	3	3
5.	PEIN1425	GPU Computing	3	0	0	3	3
6.	PEIN1426	Approximation Algorithms	3	0	0	3	3
		TOTAL					

Programme Specific Electives III

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs/ Wk	Credits
1.	PEIN1426	Evolutionary Computation	3	0	0	3	3
2.	PEIN1427	Advanced Python- Object Oriented Programming	3	0	0	3	3
3.	PEIN1428	Generative AI	3	0	0	3	3
4.	PEIN1429	Digital Marketing	3	0	0	3	3
5.	PEIN1420	Augmented Intelligence	3	0	0	3	3
6.		TOTAL					

Credit Summary

Semesters	Credits
Semester-I	19
Semester-II	20
Semester-III	20
Semester-IV	21
Semester-V	25
Semester-VI	24
Semester-VII	22
Semester VIII	21
Total	172