



JOY UNIVERSITY  
semper paratus

## School of Computational Intelligence

Department of Computing & Information Systems

### B.Tech CSE (Artificial Intelligence & Data Science)– I Semester

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTAI1111	Fundamentals of Computing	3	1	0	4	4
2.	BTAI1112	Mathematics I	3	1	0	4	4
3.	BTAI1113	Physics	3	1	0	4	4
4.	AEEN1111	Effective Communication	2	0	2	4	3
5.	BTAI2111	Performing Arts	0	0	4	4	2
<b>TOTAL</b>			<b>11</b>	<b>3</b>	<b>6</b>	<b>20</b>	<b>17</b>

### B.Tech CSE (Artificial Intelligence & Data Science) – II Semester

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTAI1121	Mathematics II	3	1	0	4	4
2.	AEEV1121	Environmental Science	2	0	0	2	2
3.	BTAI1122	Introduction to Artificial Intelligence	3	0	0	3	3
4.	BTAI1123	Fundamentals of Programming	3	0	2	5	4
5.	BTAI1124	Personality Development and Soft skills	1	0	2	3	2
6.	BTAI2121	Engineering Physics Laboratory	0	0	4	4	2
7.	BTAI2122	Artificial Intelligence Laboratory	0	0	2	2	1
8.	BTAI2123	Practical Approach of Engineering Realization	0	0	4	4	2
<b>TOTAL</b>			<b>12</b>	<b>1</b>	<b>14</b>	<b>27</b>	<b>20</b>

### B.Tech CSE (Artificial Intelligence & Data Science) – III Semester

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	AEPH1213	Professional Ethics	2	0	0	2	2
2.	BTAI1211	Probability, Statistics and Stochastic Processes	3	1	0	4	4
3.	BTAI1212	Signals and Systems	3	1	0	4	4
4.	BTAI1213	Foundations of Quantum Information Processing	3	0	0	3	3
5.	BTAI1214	Data Structure and Algorithm	3	0	2	5	4
6.	BTAI1215	Maths for Computing	3	1	0	4	4
7.	BTAI1216	Communication Skills II	2	0	0	2	2
<b>TOTAL</b>			<b>19</b>	<b>3</b>	<b>2</b>	<b>24</b>	<b>23</b>

### B.Tech CSE (Artificial Intelligence & Data Science) – IV Semester

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTAI1221	Pattern Recognition and Machine Learning	3	0	2	5	4
2.	BTAI1222	Principles of Computer Systems I (Compilers and CA)	3	0	2	5	4
3.	BTAI1223	Data Engineering	3	1	0	4	4
4.	BTAI2221	Human-Machine Interaction	0	0	4	4	2
5.	BTAI1224	Digital Design	2	0	2	4	3
6.	BTAI1225	Humanities I	3	0	0	3	3
<b>TOTAL</b>			<b>14</b>	<b>1</b>	<b>10</b>	<b>25</b>	<b>20</b>

### B.Tech CSE (Artificial Intelligence & Data Science) – V Semester

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTAI1311	Computer Architecture	3	0	0	3	3
2.	BTAI1312	Introduction to Data Science	3	0	2	5	4
3.	BTAI1313	Design and Analysis of Algorithms	3	1	0	4	4
4.	BTAI1314	Principles of Computer Systems II/ Programming Languages	3	0	0	3	3
5.	PEAI131#	PSE I	3	0	0	3	3
6.	GE	Generic Elective I	3	0	0	3	3
7.	BTAI1315	Humanities II	3	0	0	3	3
<b>TOTAL</b>			<b>21</b>	<b>1</b>	<b>2</b>	<b>24</b>	<b>23</b>

### B.Tech CSE (Artificial Intelligence & Data Science) – VI Semester

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTAI1321	Data Visualization	3	0	2	5	4
2.	BTAI1322	Operating Systems	3	0	2	5	4
3.	BTAI1323	Artificial Intelligence and Machine Learning	3	0	2	5	4
4.	BTAI2321	Digital Systems Lab	0	0	2	2	1
5.	BTAI1324	Ethics, Policy, Law and Regulations in AI	3	0	0	3	3
6.	GE	Generic Elective II	3	0	0	3	3
7.	PEAI132#	PSE II	3	0	0	3	3
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>8</b>	<b>26</b>	<b>22</b>

### B.Tech CSE (Artificial Intelligence & Data Science) – VII Semester

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTAI1411	Deep Learning and Neural Network	3	0	2	5	4
2.	BTAI1412	Web Data Mining	3	0	0	3	3
3.	PEAI141#	PSE III	3	0	0	3	3
4.	BTAI1413	Humanities III	3	0	0	3	3
5.	BTAI3411	Project I	#	#	#	#	4
<b>TOTAL</b>			<b>12</b>	<b>0</b>	<b>2</b>	<b>14</b>	<b>17</b>

### B.Tech CSE (Artificial Intelligence & Data Science) – VIII Semester

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTAI1421	Analysing, Visualizing and Applying Data Science with Python	3	0	2	5	4
2.	PEAI142#	PSE IV	3	0	0	3	3
3.	BTAI1422	Humanities IV	3	0	0	3	3
4.	BTAI3421	Project II	#	#	#	#	8
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>2</b>	<b>11</b>	<b>18</b>

### List of Programme Specific Electives

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	PEAI1311	Distributed Databases Concepts	3	0	0	3	3
2.	PEAI1312	Information Retrieval	3	0	0	3	3
3.	PEAI1321	Digital Image Processing,	3	0	0	3	3
4.	PEAI1322	Graph Theory and Algorithms	3	0	0	3	3
5.	PEAI1411	Computational Complexity	3	0	0	3	3
6.	PEAI1412	Quantum Computing	3	0	0	3	3

7.	PEAI1421	Digital Signal Processing	3	0	0	3	3
8.	PEAI1422	Optimization	3	0	0	3	3

### Credit Summary

<b>Semesters</b>	<b>Credits</b>
Semester- I	17
Semester- II	20
Semester- III	23
Semester- IV	20
Semester- V	23
Semester- VI	22
Semester- VII	17
Semester VIII	18
<b>Total</b>	161