

**B.Tech. (Artificial Intelligence and Data Science) Curriculum**

Minimum Credits to be Earned: 165

Semester I								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
<b>THEORY</b>								
1	23SEN101	Heritage of Tamils	HS	1	1	0	0	1
2	23SEN103	Technical English – I	HS	4	3	1	0	4
3	23SMA101	Matrices and Calculus	BS	4	3	1	0	4
4	23SCH115	Environmental Science for Engineers	BS	3	3	0	0	3
5	23ADR101	Object Oriented Programming with Python	ES	3	3	0	0	3
6	23CSR101	Computer Fundamentals and Communications	ES	4	3	1	0	4
7	23ADR102	Fundamentals of Data Science	ES	4	3	1	0	4
<b>LABORATORY</b>								
8	23ADR104	Object Oriented Programming with Python Laboratory	ES	2	0	0	2	1
<b>TOTAL</b>				<b>25</b>	<b>19</b>	<b>4</b>	<b>2</b>	<b>24</b>

Semester II								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
<b>THEORY</b>								
1	23SEN202	Tamils and Technology	HS	1	1	0	0	1
2	23SEN205	Technical English – II	HS	3	3	0	0	3
3	23SMA202	Graph Theory	BS	4	3	1	0	4
4	23SPH214	Physics for Computer Science Engineering	BS	3	3	0	0	3
5	23ITR201	Fundamentals of Web Design	ES	3	3	0	0	3
6	23ADR203	Data Structures Design	ES	3	3	0	0	3
<b>LABORATORY</b>								
7	23SEN217	Communication Skills Laboratory	HS	2	0	0	2	1
8	23SPH121	Physical Sciences Laboratory	BS	2	0	0	2	1
9	23ITR203	Web Design Laboratory	ES	2	0	0	2	1
10	23ADR205	Data Structures Design Laboratory	ES	2	0	0	2	1
<b>TOTAL</b>				<b>25</b>	<b>16</b>	<b>1</b>	<b>8</b>	<b>21</b>

Semester III								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
<b>THEORY</b>								
1	23SMA305	Discrete Mathematics	BS	4	3	1	0	4
2	23SMA306	Numerical Linear Algebra	BS	4	3	1	0	4
3	23ADR301	Machine Learning Techniques	PC	3	3	0	0	3
4	23ADR302	Structure Query Language for Data Science	PC	3	3	0	0	3
5	23ADR303	Analysis of Algorithms	PC	3	3	0	0	3
6	23MXC301	Indian Constitution	MC	1	1	0	0	0
<b>LABORATORY</b>								
7	23ADR313	Machine Learning Techniques Laboratory	PC	2	0	0	2	1
8	23ADR314	Structure Query Language for Data Science Laboratory	PC	2	0	0	2	1
9	23ADR315	Analysis of Algorithms Laboratory	PC	2	0	0	2	1
10	23EXC301	Life Skills - I	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>26</b>	<b>16</b>	<b>2</b>	<b>8</b>	<b>21</b>

Semester IV								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
<b>THEORY</b>								
1	23SMA408	Statistical and Optimization Technique	BS	4	3	1	0	4
2	23CTR401	Operating Systems	PC	3	3	0	0	3
3	23ADR404	Scripting Frameworks	PC	3	3	0	0	3
4	23ADR405	Streaming Analytics	PC	3	3	0	0	3
5	23ADR406	Deep Learning	PC	3	3	0	0	3
7	23EXC411	Design Thinking	EEC	1	0	0	1	1
8	23SMXC402	Essence of Indian Traditional Knowledge	MC	1	1	0	0	0
<b>LABORATORY</b>								
9	23CTR405	Operating Systems Laboratory	PC	2	0	0	2	1
10	23ADR416	Scripting Frameworks Laboratory	PC	2	0	0	2	1
11	23ADR417	Streaming Analytics Laboratory	PC	2	0	0	2	1
12	23ADR518	Deep Learning Laboratory	PC	2	0	0	2	1
13	23EXC402	Life Skills - II	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>28</b>	<b>16</b>	<b>1</b>	<b>11</b>	<b>22</b>

Semester V								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
<b>THEORY</b>								
1	23CYR502	Network Architecture and Security	PC	3	3	0	0	3
2	23ADR507	DevOps	PC	3	3	0	0	3
3	23ADR508	Natural Language Processing	PC	3	3	0	0	3
4	23ADR509	Augmented Reality and Virtual Reality	PC	4	3	1	0	4
5	23ADPXXX	Professional Elective - I	PE	3	3	0	0	3
6	23ADPXXX	Professional Elective - II	PE	3	3	0	0	3
7	23XXOXXX	Open Elective - I	OE	3	3	0	0	3
<b>LABORATORY</b>								
8	23ADR519	DevOps Laboratory	PC	2	0	0	2	1
9	23ADR520	Natural Language Processing Laboratory	PC	2	0	0	2	1
10	23CYR511	Network Architecture and Security Laboratory	PC	2	0	0	2	1
11	23EXC503	Life Skills - III	EEC	2	0	0	2	1
12	23EXCXXX	Internship – I/Mini Project - I	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>32</b>	<b>21</b>	<b>1</b>	<b>10</b>	<b>27</b>

Semester VI								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
<b>THEORY</b>								
1	23ADR610	Image and Video Analytics	PC	3	3	0	0	3
2	23ADR611	Pattern Recognition	PC	4	3	1	0	4
3	23ADPXXX	Professional Elective - III	PE	3	3	0	0	3
4	23ADPXXX	Professional Elective - IV	PE	3	3	0	0	3
5	23XXOXXX	Open Elective - II	OE	3	3	0	0	3
6	23XXOXXX	Open Elective - III	OE	3	3	0	0	3
<b>LABORATORY</b>								
7	23ADR621	Image and Video Analytics Laboratory	PC	2	0	0	2	1
8	23EXCXXX	Internship – II/Mini Project -II	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>23</b>	<b>18</b>	<b>1</b>	<b>4</b>	<b>21</b>

Semester VII								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
<b>THEORY</b>								
1	23SGE713	Principles of Management and Engineering Ethics	HS	3	3	0	0	3
2	23ADPXXX	Professional Elective - V	PE	3	3	0	0	3
3	23ADPXXX	Professional Elective - VI	PE	3	3	0	0	3
4	23XXOXXX	Open Elective - IV	OE	3	3	0	0	3
5	23XXOXXX	Open Elective - V	OE	3	3	0	0	3
6	23XXOXXX	Open Elective - VI	OE	3	3	0	0	3
<b>LABORATORY</b>								
7	23EX709	Project Work - Phase I	EEC	4	0	0	4	2
<b>TOTAL</b>				<b>22</b>	<b>18</b>	<b>0</b>	<b>4</b>	<b>20</b>

Semester VIII								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
<b>LABORATORY</b>								
1	23EX810	Project Work – Phase II	EEC	20	0	0	20	10
<b>TOTAL</b>				<b>20</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>10</b>

<b>Total Credits</b>	<b>166</b>
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