



**SETHU INSTITUTE OF TECHNOLOGY**  
An Autonomous Institution | Accredited By NAAC with 'A' Grade  
Pulloor, Kariapatti –Taulk. Virudhunagar Dist-626115.  
Re-Accredited By NBA



**REGULATIONS 2021[Batch-2022-2026]**

**CSE(Artificial Intelligence and Machine Learning)**

**OVERALL COURSE STRUCTURE**

<b>Code</b>	<b>Category</b>	<b>Total No. of Courses</b>	<b>Credits</b>	<b>Percentage</b>
BS	Basic Sciences	10	28	17.18
ES	Engineering Sciences	7	15.5	9.51
HSS	Humanities and Social Sciences	5	8.5	5.21
PC	Professional Core (Including Lab Courses)	26	65	39.57
PE	Professional Elective	6	18	11.04
OE	Open Elective	4	12	7.36
PW	Project Work, Seminar & Internship	4	14	8.59
MC	Mandatory Courses	11	2	1.22
	<b>TOTAL</b>	<b>72</b>	<b>163</b>	<b>100</b>

**COURSE CREDITS – SEMESTERWISE**

<b>Branch</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>	<b>VI</b>	<b>VII</b>	<b>VIII</b>	<b>TOTAL</b>
<b>CSE(AI&amp;ML)</b>	<b>21</b>	<b>18</b>	<b>23</b>	<b>22</b>	<b>24</b>	<b>24</b>	<b>17</b>	<b>14</b>	<b>163</b>

**Semester I**

<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>Type of Course</b>
<b>THEORY</b>						
21UEN101	English for Technical Communication (Common to ALL Branches except CSBS)	2	0	0	2	HSS
21UMA102	Matrix and Calculus (Common to ALL Branches except CSBS)	3	1	0	4	BS
21UPH103	Engineering Physics (Common to ALL Branches except CSBS)	3	0	0	3	BS
21UCY105	Applied Chemistry (Common to CSE, ECE, EEE, IT, BME, BT, AIDS,CSD and AIML)	3	0	0	3	BS
21UCS107	Problem Solving and C programming (Common to All Branches)	3	0	0	3	ES
<b>OTHER THEORY COURSES</b>						
21UEE125	Principles of Electrical Engineering (Common to CSBS, AIDS and AIML)	3	0	0	3	ES
<b>PRACTICAL</b>						
21UCS111	Problem Solving and C programming Laboratory (Common to All Branches)	0	0	2	1	ES
21UEE128	Electrical Engineering Laboratory (Common to CSBS,AIDS and AIML)	0	0	2	1	ES
21UGS113	Basic Sciences Laboratory I (Common to All Branches Except CSBS)	0	0	2	1	BS
<b>MANDATORY</b>						
21UGM131	Induction Programme (Common to All Branches)	0	3	0	P/F	MC
	<b>TOTAL</b>	<b>17</b>	<b>4</b>	<b>6</b>	<b>21</b>	
<b>Total No of Credits - 21</b>						

## Semester II

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
21UEN201	Communication Skills for Professionals (Integrated Course) (Common to All Branches except CSBS)	1	0	1	1.5	HSS
21UMA211	Fourier series, Partial Differential Equation and Complex Analysis (Only for AI & ML)	3	1	0	4	BS
21UPH205	Physics for Information Science (Common to CSE, EEE, IT,AIDS,CSD and AIML)	3	0	0	3	BS
<b>OTHER THEORY COURSES</b>						
21UIT206	Programming Fundamentals using Python (Common to CSE, IT,CSD and AIML)	3	0	0	3	ES
21UAD205	Digital Logic and Design (Common to AIDS and AIML )	3	0	0	3	ES
<b>PRACTICAL</b>						
21UGS210	Basic Sciences Laboratory II (Common to All Branches Except CSBS)	0	0	2	1	BS
<b>OTHER PRACTICALS</b>						
21UIT207	Programming Fundamentals using Python Laboratory (Common to CSE, IT,CSD and AIML)	0	0	3	1.5	ES
<b>MANDATORY</b>						
21UGT140	Heritage of Tamil (Common to All Branches)	1	0	0	1	MC
21UGM331	Biology for Engineers (Common to All except BME and BT)	2	0	0	P/F	MC
	<b>TOTAL</b>	<b>16</b>	<b>1</b>	<b>6</b>	<b>18</b>	
<b>Total No of Credits - 18</b>						

### Semester III

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
21UMA329	Computational Statistics And Numerical Methods (Only For AIML)	3	1	0	4	BS
21UIT302	Data Structures (Common to CSE,IT,AI&DS,CSD CSE (AI&ML))	3	0	0	3	PC
21UCS303	Object Oriented Programming using C++ (Integrated Course) (Common to CSE,IT,CSBS,CSD and CSE (AI&ML))	3	0	2	4	PC
21UIT304	Principles of Operating Systems (Common to CSE,IT,AI&DS,CSD and CSE (AI&ML))	3	0	0	3	PC
21UCS305	Computer Organization (Common to CSE,IT,CSBS,AI&DS and CSE (AI&ML))	3	0	0	3	PC
21UCD306	Database system Design (Common to CSE,IT,AI&DS,CSD and CSE (AI&ML))	3	0	0	3	PC
<b>PRACTICAL</b>						
21UIT307	Data Structures Laboratory (Common to CSE,IT,AI&DS,CSD and CSE (AI&ML))	0	0	2	1	PC
21UCD308	Database System Design Laboratory (Common to CSE,IT,AI&DS,CSD and CSE (AI&ML))	0	0	2	1	PC
<b>MANDATORY</b>						
21UGT241	Tamils and Technology (Common to All Branches)	1	0	0	1	MC
21UGM231	Environmental Science (Common to All Branches)	3	0	0	P/F	MC
	<b>TOTAL</b>	<b>22</b>	<b>1</b>	<b>6</b>	<b>23</b>	
<b>Total No of Credits - 23</b>						

### Semester IV

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
21UMA421	Transforms and Discrete Mathematics Common to CSE,IT and AIML)	3	1	0	4	BS
21UAD402	Artificial Intelligence (Common to AI&DS and CSE (AI&ML))	3	0	0	3	PC
21UCS403	Algorithm Analysis (Common to CSE, IT, CSD, AI&DS, CSE (AI&ML))	3	0	0	3	PC
21UIT404	Java Programming (Integrated Course) (Common to CSE, IT, CSD and CSE (AI&ML))	3	0	2	4	PC
21UAM405	Principles of Machine Learning (Only for AIML)	3	0	0	3	PC
21UAM406	Computer Communication Networks	3	0	0	3	PC
<b>PRACTICAL</b>						
21UAM407	Machine Learning Laboratory	0	0	2	1	PC
21UAD408	Artificial Intelligence Laboratory (Common to AI&DS and CSE (AI&ML))	0	0	2	1	PC
<b>MANDATORY</b>						
21UGM431	Gender Equality (Common to all)	1	0	0	P/F	MC
		<b>19</b>	<b>1</b>	<b>6</b>	<b>22</b>	
<b>Total No of Credits -22</b>						

**Semester V**

<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>Type of Course</b>
<b>THEORY</b>						
21UAM501	Intelligent Robots	3	0	0	3	PC
21UAM502	Introduction to Cryptography and Cyber Security	3	0	0	3	PC
21UCS503	Theory of Computation (Common to CSE and CSE (AI&ML))	3	1	0	4	PC
21UAM504	Building Internet of Things	3	0	0	3	PC
PE1	Professional Elective–I	3	0	0	3	PE
OE1	Open Elective–I	3	0	0	3	OE
21UGS531	Reasoning and Aptitude (Common to CSE, ECE, IT, CSBS, AIDS, CSD and AIML )	1	0	0	1	BS
<b>PRACTICAL</b>						
21UAM508	Building Internet of Things Laboratory	0	0	2	1	PC
21UAM509	Intelligent Robots Laboratory	0	0	2	1	PC
21UGS532	Soft Skills Laboratory (Common to CSE, EEE, IT, AGRI, CSBS, AIDS, CSD and AIML)	0	0	2	1	HSS
21UAM507	Creative Thinking and Innovation (for All Branches)	0	0	2	1	PW
	<b>TOTAL</b>	<b>19</b>	<b>1</b>	<b>8</b>	<b>24</b>	
<b>Total No of Credits –24</b>						

**NOTE: Any One of the Six Professional Elective Courses should be replaced by the equivalent NPTEL Course.**

### Semester VI

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
21UAM601	Intelligent Machine Vision	3	0	0	3	PC
21UAM602	Data and Visual Analytics in AI	3	0	0	3	PC
21UAM603	Drone Technology and its Applications	3	0	0	3	PC
PE-II	Professional Elective–II (NPTEL)	3	0	0	3	PE
PE-III	Professional Elective–III	3	0	0	3	PE
OE-II	Open Elective–II	3	0	0	3	OE
<b>PRACTICAL</b>						
21UAM607	Product Development Project	0	0	8	4	PW
21UAM608	Drone Technology Laboratory	0	0	2	1	PC
21UGS633	Interpersonal Skills Development Lab (Common to CSE, EEE, IT, AGRI, CSBS, AIDS and AIML)	0	0	2	1	HSS
<b>MANDATORY</b>						
21UGM631	Indian Constitution (Common to all Branches)	1	0	0	P/F	MC
	<b>TOTAL</b>	<b>19</b>	<b>0</b>	<b>12</b>	<b>24</b>	
<b>Total No of Credits - 24</b>						

**NOTE: Any One of the Six Professional Elective Courses should be replaced by the equivalent NPTEL Course.**

### Semester VII

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
21UME701	Project Management and Finance (Common to All Branches Except CSBS)	3	0	0	3	HSS
21UAD702	Natural Language Processing (Common to AI&DS and CSE (AI&ML))	3	0	0	3	PC
PE-IV	Professional Elective–IV	3	0	0	3	PE
PE-V	Professional Elective –V	3	0	0	3	PE
OE-III	Open Elective–III	3	0	0	3	OE
<b>PRACTICAL</b>						
21UAD708	Natural Language Processing Lab (Common to AI&DS and CSE (AI&ML))	0	0	2	1	PC
<b>MANDATORY</b>						
21UGM731	Sports and Social Development (Common to all Branches)	-	-	-	P/F	MC
21UGM732	Skill Development (Common to all Branches)	-	-	-	P/F	MC
21UAM735	Internship (Common to all Branches)	0	0	0	1	PW
	<b>TOTAL</b>	<b>15</b>	<b>0</b>	<b>2</b>	<b>17</b>	
<b>Total No of Credits - 17</b>						

**NOTE: Any One of the Six Professional Elective Courses should be replaced by the equivalent NPTEL Course.**



### Semester VIII

Course Code	Course Title	L	T	P	C	Type of Course
<b>THEORY</b>						
PE-VI	Professional Elective–VI	3	0	0	3	PE
OE-IV	OpenElective–IV	3	0	0	3	OE
<b>PRACTICAL</b>						
21UAM801	Project work	0	0	16	8	PW
<b>MANDATORY</b>						
21UGM831	Professional Ethics and Human values (Common to all branches)	2	0	0	P/F	MC
	<b>TOTAL</b>	<b>8</b>	<b>0</b>	<b>16</b>	<b>14</b>	
<b>Total No of Credits -14</b>						