

**Department of Computer Science**  
**Rollwala Computer Centre**  
**Gujarat University**  
**Teaching Scheme (With effect From June, 2017)**  
**M. Sc. (Artificial Intelligence & Machine Learning)**

Subject Code	SUBJECT	Hours per week			Credits
		Theory	Tutorial	Lab	
<b>Semester – I M. Sc. (AI &amp; ML)</b>					
<b>MSCAI 111</b>	Mathematical Foundation	3	1	0	4
<b>MSCAI 112</b>	Introduction to Programming with Python	4	-	4	8
<b>MSCAI 113</b>	Introduction to Artificial Intelligence	3	1	0	4
<b>MSCAI 114</b>	Object Oriented Concepts & Programming using C++	4	-	4	8
<b>MSCAI 115</b>	Project - I	-	-	6	6
<b>Total</b>		<b>14</b>	<b>2</b>	<b>14</b>	<b>30</b>
<b>Semester – II M. Sc. (AI &amp; ML)</b>					
<b>MSCAI 121</b>	Numerical Optimization	3	1	-	4
<b>MSCAI 122</b>	Advanced Python	4	-	4	8
<b>MSCAI 123</b>	Introduction to Machine Learning	4	0	4	8
<b>MSCAI 124</b>	Introduction to Computer Vision	3	1	-	4
<b>MSCAI 125</b>	Project - II	-	-	6	6
<b>Total</b>		<b>14</b>	<b>2</b>	<b>14</b>	<b>30</b>
<b>Semester – III M. Sc. (AI &amp; ML)</b>					
<b>MSCAI 211</b>	Deep Learning Fundamentals	3	1		4
<b>MSCAI 212</b>	Introduction to Reinforcement Learning	3	1	-	4
<b>MSCAI 213</b>	Elective*	4	-	4	8
<b>MSCAI 214</b>	Major Project-Phase I (Ideation and Literature Review)	-	-	14	14
<b>Total</b>		<b>10</b>	<b>2</b>	<b>18</b>	<b>30</b>
<b>Semester – IV M. Sc. (AI &amp; ML)</b>					
<b>MSCAI 221</b>	Major Project –Phase II	-	-	30	30
<b>Total</b>		<b>-</b>	<b>-</b>	<b>30</b>	<b>30</b>

\*Elective

- (i) Deep Learning for Computer Vision
- (ii) Natural Language Processing