# B. Voc.in – Robotics & Artificial Intelligence

# Semester I

<b>Course Code</b>	Title of the course	Credit
BVR101	Programming for Problem Solving	4
BVR102	Programming for Problem Solving Lab	2
BVR103	Mathematics-I	4
BVR104	Communication Skills	4
BVR105	Communication Skills Lab	1
BVR106	Basics of Robotics & Artificial Intelligence and Machine Learning	4
BVR107	Fundamental of Computer and Information Technology Lab	1

# **Semester II**

<b>Course Code</b>	Title of the course	Credit
BVR201	Mathematics-II	4
BVR202	Object Oriented Programming Using C++	3
BVR203	Web Technology	3
BVR204	Data Structure & Algorithms	4
BVR205	Digital Electronics	4
BVR206	Web Technology Lab	1
BVR207	Object Oriented Programming Using C++ Lab	1
BVR208	Environmental Science	2

### **Semester III**

<b>Course Code</b>	Title of the course	Credit
BVR301	Discrete Mathematics	4
BVR302	Operating System	4
BVR303	Design & Analysis of Algorithms	4
BVR304	Computer Organization & Architecture	4
BVR305	Operating System Lab	2
BVR306	Design & Analysis of Algorithms Lab	2
BVR307	Data ware housing & Data Mining(Elective)	3
BVR308	Big Data(Elective)	3
BVR309	Introduction to Artificial Intelligence & Machine Learning	2

# **Semester IV**

<b>Course Code</b>	Title of the course	Credit
BVR401	Introduction to Machine Learning with Python	4
BVR402	Java Programming	4
BVR403	Relational Database Management System	4
BVR404	Introduction to Robotics	4
BVR405	Relational Database Management System Lab	1
BVR406	Introduction to Machine Learning with Python Lab	2
BVR407	Java Programming Lab	1
BVR499	xxx(MOOC)	3
BVR408	Mobile Robots(Elective)	3
BVR409	IoT and Automation(Elective)	3

# **Semester V**

<b>Course Code</b>	Title of the course	Credit
BVR501	Formal Language & Automata Theory	4
BVR502	Computer Networks	4
BVR503	Deep Learning	4
BVR504	Deep Learning Lab	2
BVR505	Project-1	2
BVR506	Optimization Techniques in AI& ML	4
BVR599	xxx(MOOC)	3
BVR507	Cognitive Robotics(Elective)	3
BVR508	Cyber Ethics in AI(Elective)	3

# **Semester VI**

<b>Course Code</b>	Title of the course	Credit
BVR601	Speech and Language Processing	4
BVR602	Autonomous Drones	4
BVR603	Data and Visual analytics in AI	4
BVR604	Game Programming using AI	4
BVR605	Project-II	2
BVR606	Advanced Machine Learning Lab	2
BVR699	xxx(MOOC)	3
BVR607	Graph Theory Algorithms for Robotics	3
BVR608	Robot Operating System(Elective)	3
BVR609	Personality Development programme(Elective)	2