

Course Plan
Bachelor of Engineering Program
Robotics and Automation System Engineering (International Program)
Revised 2024

1st Academic year

First Semester	Credits (Lecture – Laboratory - Self Study)
01417167 Engineering Mathematics I	3(3-0-6)
01420111 General Physics I	3(3-0-6)
01420113 Laboratory in Physics I	1(0-3-2)
01999111 Knowledge of the Land	2(2-0-4)
03603101 Introduction to Computer Programming	3(2-3-6)
03604281 Workshop Practice	1(0-3-2)
03607151 Robotics Exploration	3(3-0-6)
Foreign Language	3(- -)
General Education	<u>1(- -)</u>
Total	<u>20</u>

Second Semester	Credits (Lecture – Laboratory - Self Study)
01417168 Engineering Mathematics II	3(3-0-6)
03604223 Basic Principles of Engineering Mechanics	3(3-0-6)
03607131 Computer Programming for Robotic Applications	3(2-3-6)
03607161 Computer-Aided Design for Robotic Applications	3(2-3-6)
Foreign Language	3(- -)
General Education	<u>6(- -)</u>
Total	<u>21</u>

2nd Academic year

First Semester	Credits (Lecture – Laboratory - Self Study)
01417267 Engineering Mathematics III	3(3-0-6)
03601211 Electric Circuit Analysis I	3(3-0-6)
03602201 Introduction to Materials and Manufacturing Processes	3(3-0-6)
03602251 Engineering Economy	3(3-0-6)
03607251 Computer-Aided Engineering and Manufacturing for Robotic Applications	3(3-0-6)
General Education	<u>6(- -)</u>
Total	<u>21</u>

Second Semester	Credits (Lecture – Laboratory - Self Study)
03601213 Electric Circuit Laboratory	1(0-3-2)
03607231 Microcontroller for Robotics and Automation System	3(3-0-6)
03607232 Introduction to Electrical System for Automation System	3(3-0-6)
03607261 Engineering Measurements and Mechatronics	3(3-0-6)
03607299 Engineering Project for Robotics and Automation System I	1(0-3-2)
03609231 Industrial Data Communication and Internet of Things	3(3-0-6)
General Education	<u>3(- -)</u>
Total	<u>17</u>

3rd Academic year

First Semester		Credits (Lecture – Laboratory - Self Study)
03607311	Robot Structure and Machinery Design	3(3-0-6)
03607312	Fundamentals of Robotics	3(3-0-6)
03607331	Machine Vision and Applications in Automation System	3(3-0-6)
03607351	Industrial Robot and Applications in Manufacturing Processes	3(2-3-6)
03607361	Industrial Automation System Design	3(2-3-6)
	Free Electives	<u>3(- -)</u>
	Total	<u>18</u>

Second Semester		Credits (Lecture – Laboratory - Self Study)
03601434	Computer Aided Electronic System Development	3(3-0-6)
03607332	Artificial Intelligence for Robot and Machinery	3(3-0-6)
03607341	Control Engineering for Robotics	3(3-0-6)
03607342	Industrial Control and SCADA	3(2-3-6)
03607399	Engineering Project for Robotics and Automation System II	2(0-6-4)
	Free Electives	<u>3(- -)</u>
	Total	<u>17</u>

4th Academic year

First Semester Credits (Lecture – Laboratory - Self Study)

03600490 Co-operative Education 6

Total 6

Second Semester Credits (Lecture – Laboratory - Self Study)

Electives 9(- -)

Total 9(- -)