Course Plan

Bachelor of Engineering Program

Robotics and Automation System Engineering (International Program)

Academic Year 2024-present

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	1(- -)
	Total	20

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	6(- -)
	Total	21

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	6(- -)
	Total	**21**

First 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	3(- -)
	Total	**17**

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>**

First 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   <u>6</u>

                                        Total   <u>6</u>

Second Semester   **Credits (Lecture – Laboratory - Self Study)**

Electives   <u>9(- -)</u>

                                        Total   <u>9(- -)</u>