Course plan

Bachelor of Engineering Program

Robotics and Automation System Engineering (International Program)

1st Academic year

First Semester		Credits (Lecture Lab-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(
03600013	Essential Computer Tools and Skills	1(0-3-2)
03603101	Introduction to Computer Programming	3(2-3-6)
03604281	Workshop Practice	1(0-3-2)
03607151	Robotics Exploration	3(3-0-6)
	Foreign Languages	3(- -)
	Total	**20(- -)**

Second Semester		Credits (Lecture Lab-Self Study)
01417168	Engineering Mathematics II	3(3-06-)
03600014	Creative Problem Solving and Critical Thinking Skills	3(3-06-)
03601211	Electric Circuit Analysis I	3(3-06-)
03604111	Engineering Drawing	3(2-3-6)
03607131	Computer Programming for Robotic Applications	3(2-3-6)
01175xxx	Physical Education Activities	1(0-2-1)
	Wellness	2(- -)
	Total	**18(- -)**

2nd Academic year

First Semester		Credits (Lecture Lab-Self Study)
01417267	Engineering Mathematics III	3(3-06-)
03600012	Green Technology	3(3-06-)
03601213	Electric Circuit Laboratory	1(0-3-2)
03601232	Digital Circuits and Logic Design	3(3-0-6)
03602212	Computer-Aided Design	3(2-3-6)
03604201	Basic Principles of Engineering Mechanics	3(3-0-6)
	Foreign Languages	3(- -)
	Total	**19(- -)**

Second Semester		Credits (Lecture Lab-Self Study)
01999021	Thai Language for Communication	3(3-06-)
03601332	Microprocessors	3(3-0-6)
03602201	Introduction to Materials and Manufacturing Processes	3(3-0-6)
03602417	Computer-aided Engineering and Manufact	3(3-0-6)
03604261	Mechanics of Material	3(3-0-6)
03604323	Engineering Measurement	3(3-0-6)
03607299	Engineering Project for Robotics and Automation System I	1(0-3-2)
	Total	**19(- -)**

3rd Academic year

First Semester		Credits (Lecture Lab-Self Study)
03607311	Robot Structure and Machinery Design	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)
	Foreign Languages	3(- -)
	Thai Citizen and Global Citizen	<u>3(- -)</u>
	Total	**<u>18(- -)</u>**

Second Semester		Credits (Lecture Lab-Self Study)
03607312	Fundamentals of Robotics	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)
	Entrepreneurship	3(- -)
	Free Electives	<u>3(- -)</u>
	Total	**<u>20(- -)</u>**

4th Academic year

First Semester		Credits (Lecture Lab-Self Study)
03600490	Co-operative Education	<u>6</u>
	Total	<u>**6**</u>

Second Semester		Credits (Lecture Lab-Self Study)
03607499	Engineering Project for Robotics and Automation System III	3(0-9-6)
	Technical Electives	9(- -)
	Free Electives	<u>3(- -)</u>
	Total	<u>**15(- -)**</u>