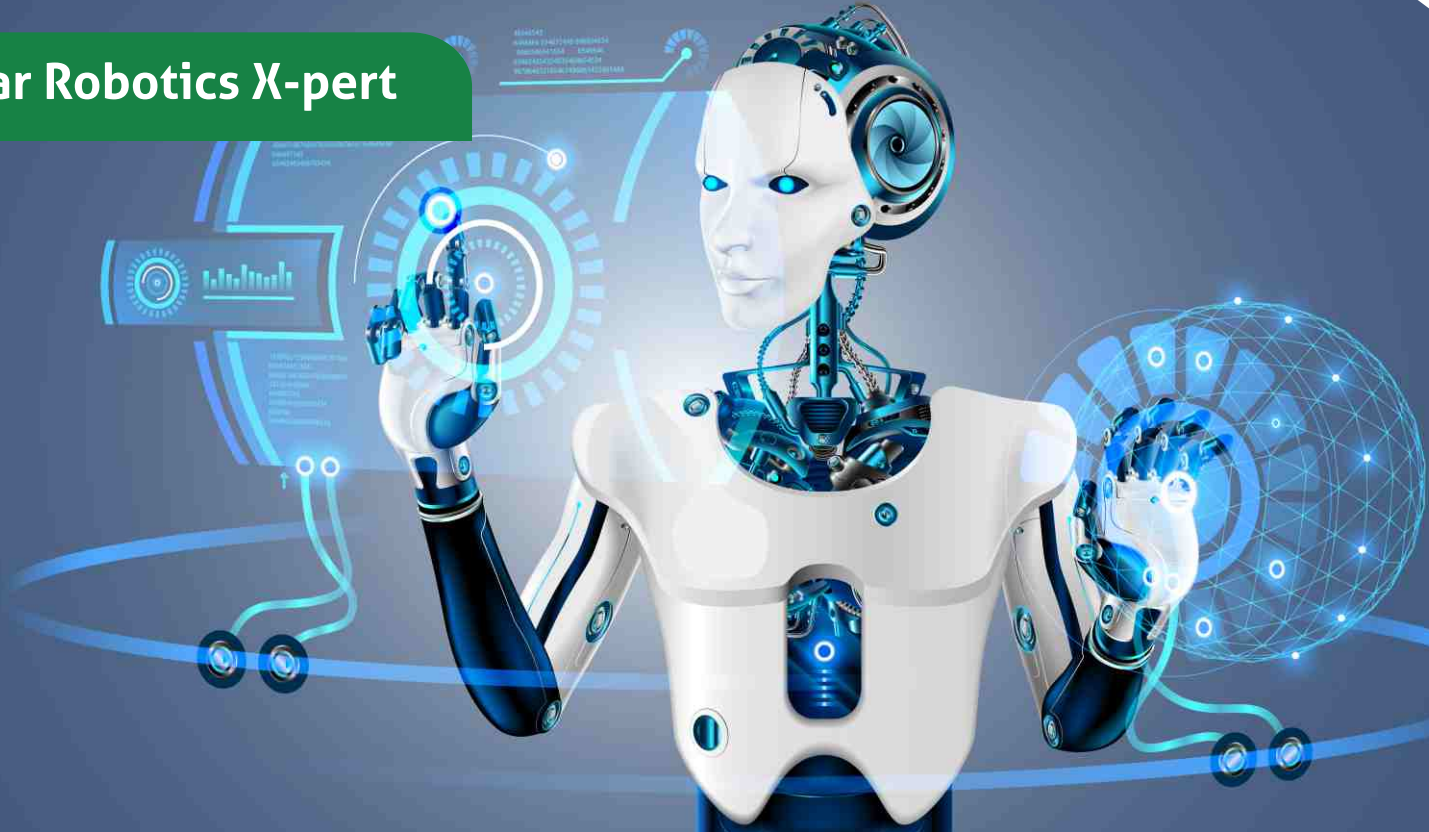




Vendor-Neutral Global IT Certifications

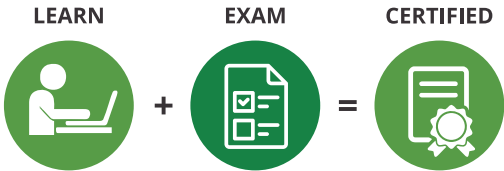
Star Robotics X-pert



GRADUATE IN AUTOMATION



Exam Code: S08-516



www.starcertification.org
info@starcertification.org

Star Robotics X-pert

There's a lot of buzz around robotics technologies at the moment. As a scientific field, robotics helps us build devices that can physically interact with their environment. For example, robots that work alongside us and seemingly omniscient digital assistants that we increasingly rely on to perform different tasks. The need for robotics engineer exists across industries like healthcare, transportation, insurance, logistics and even customer service.

Star Robotics X-Pert is a foundation-level certification program that aims to help learners acquire a fundamental understanding of all the aspects of robotics including designing, prototyping, analysis, basic coding, electronic circuitry, control systems, etc. The program covers everything robotics starting from history of robotics, to classification of robots, to sensors, actuators, drivers and control systems, further to mechanical design of robots and robot operating system (ROS), and more.

The purpose of this certification program is to build the interest of the learners in this immensely lucrative field of robotics where there is an increasing requirement for robotics engineers. With this certification candidates get an opportunity to work in the field of robotics and later if they want to learn advance skills, then they can opt for the advanced-level course, which is Star Robotics Specialist.

Audience: Star Robotics X-Pert certification assumes that the learner is new to the robotics discipline and wants to make a career in this futuristic field. Mathematics plays a key role in robotics and having a good understanding of math is required for aspiring candidates. Basic programming skills is preferred.

Course Objectives:

In this course, you will learn about:

- Basics of robots and robotics
- Classification of robots and their applications
- Components of a robot – sensors, actuators, control systems, etc.
- Mechanical design of a robot
- ROS, its architecture and concepts
- Creating ROS programs

Course Outcome :

After completing this course, you will be able to:

- Explain robotics as a discipline and how it's changing the world
- Identify different types of robots and their applications
- Deconstruct a robot –sensors, actuators, control systems, etc.
- Understand the mechanical design of a robot
- Understand ROS and its architecture
- Develop programs in ROS

Course Outline :

Section 1: Introductions to Robotics and Robots

1. History of Robots and Robotics
2. Components of a Robot
3. Classification of Robots
4. Exploring Solar Robots and Robots having Wheels
5. Exploring Water and Art Robots
6. Exploring Web-interacting Robots

Section 2. Understanding Hardware of a Robot

7. Exploring Actuators and Sensors in a Robot
8. Exploring Drivers and Control Systems in a Robot
9. Mechanical Design of a Robot

Section 3. Introduction to ROS

10. Getting Started with ROS
11. ROS Architecture and Concepts
12. Creating ROS Programs

Exam Information:

Exam Code : S08-516
Exam Duration : 2 Hrs
Passing Score : 70%

Exam Pattern : Multiple Choice
Exam Delivery : AEPTC (ACADEMIC EDUCATION & PROFESSIONAL TESTING CENTER)

Course Duration : 40 Hrs

