

# Robotics Course – Syllabus (DIYguru)

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## **Fundamentals**

Basic Concepts of Physics  
Understanding of Computer  
Math Fundamentals  
MATLAB  
C / C++  
Robot Kinematics  
Kinematic Path Planning

## **Intermediate**

Vision Intelligence  
Machine Learning  
Probability & Statistics  
SVM and Object Recognition  
Robotics Dynamics & Control  
Rigid Body Dynamics  
Stability Theory  
Trajectory Generation

## **Advanced**

Planning and Control of Quadrotor  
Locomotion Engineering  
Design, build, and program dynamical, legged robots

## **Course Materials**

Available on <https://courses.diyguru.org>