



ROS-I Developers' Training

The ROS-Industrial Consortium Americas is providing a three-day [ROS-Industrial Developers Training Class](#) with both Basic and Advanced Track Offerings on ROS 2 Foxy. The class will run three full days. The class will run two full days with a Day 3 focused more on exercises/lab type application. This class will be in-person and will be provided via AWS EC2 instance. The class is geared toward individuals with a C++ programming background who seek to learn to compose their own ROS nodes. Day 1 will focus on introductory ROS2 skills (Details Below). Day 2 will examine motion planning using MoveIt2, as well as the Descartes planner and perception concepts. Advanced topic Motion Planning Pipeline on day 1 and hands-on lab with an industrial manipulator on Day 3.

Agenda

The ROS-Industrial *Consortium* is a membership organization. Training is free to dues-paying members (limit three seats per Full member, two seats per Associate member, and one seat per Research member). Others may attend for a fee of \$2,199.

Class Prerequisites:

Basic understanding of programming (C++ preferred), Ubuntu Linux, and Linux command line. If Linux and C++ are new to you, complete [the prerequisites](#) of the online curriculum for background.

Event Location:

Rensselaer Polytechnic Institute
CII (Low Center for Industrial Innovation building),
Room 4050
110 8th St.
Troy, NY 12180

Accommodations:

Hilton Garden Inn in Troy, NY

For more information, please contact:

Tiffany Cappellari
tiffany.cappellari@swri.org
+1 (210) 522-6638

		Basic	Advanced	
Classroom	Day 1	0815	Depart from the hotel	Depart from the hotel
		0835-0900	Sign-in, Introductions, and Agenda	Sign-in, Introductions, and Agenda
		0900-1015	ROS Setup, Colcon, Installing Packages	Intro to Terms/Flow/Connecting to VM
		1015-1030	Break	Break
		1030-1200	Creating Packages/Nodes, Topics, Messages	Implementing Motion Planners
		1200-1300	Lunch (Provided)	Lunch (Provided)
		1300-1430	Services, Actions	Implementing Taskflow
		1430-1445	Break	Break
		1445-1700	Launch Files, Parameters	Planning Profiles and Constraints for Optimization
	1720	Wrap-up	Wrap-up	
Classroom	Day 2	0815	Depart from the hotel	
		0835-0900	Recap and Agenda	
		0900-1015	URDF, Workcell XACRO	
		1015-1030	Break	
		1030-1200	TF, Build a MoveIt! Package	
		1200-1330	Lunch (Provided)	
		1330-1500	Motion Planning Using Rviz, C++	
		1500-1515	Break	
		1515-1700	Introduction to Descartes Path Planning and Perception	
	1720	Wrap-up		
Lab	Day 3	0815	Depart from the hotel	
		0835-0900	Recap and Agenda	
		0900-1030	Lab Introduction, Labs	
		1030-1045	Break	
		1045-1200	Work on Lab Applications	
		1200-1245	Lunch (Provided)	
	1245-1530	Work on Lab Applications		