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. The class will run three full days. Please bring a laptop to the class with the ROS-I training Virtual Machine pre-installed. This 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 ROS skills/Advanced Topics (Details Below). Day 2 will examine motion planning using MoveIt!, as well as the Descartes planner and perception concepts. Day 3 offers a lab programming exercise with a choice of Pick-and-Place Application, Perception, or Descartes Application.

Agenda

		Basic	Advanced
Day 1 Classroom	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, Catkin, Installing Packages	Intro to ROS2
	1015-1030	Break	Break
	1030-1200	Creating Packages/Nodes, Topics, Messages	ROS2 build system and operations
	1200-1300	Lunch (Provided) – SwRI Overview Presentation	Lunch (Provided) – SwRI Overview Presentation
	1300-1430	Services, Actions	Porting ROS1 applications to ROS2
	1430-1445	Break	Break
	1445-1700	Launch Files, Parameters	Porting ROS1 applications to ROS2 (cont.) ROS1 to ROS2 bridge
	1720	Wrap-up	Wrap-up
Day 2 Classroom	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	
Day 3 Lab	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	

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:

Southwest Research Institute
6220 Culebra Rd., San Antonio, TX 78238

Accommodations:

Courtyard by Marriot SeaWorld/Westover Hills
11605 TX-151, San Antonio, Texas 78251
(Block Reserved under ROS-I, Transportation to and from SwRI included!)

For more information, please contact:

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