

FIRSTFare Seminar Schedule October 30th, 2010

Seminar	Presenter	Room	Time	Track
Welcome	Rob Cohee Autodesk, Deb Mumm-Hill FIRST Regional Director, Presenters	Cabell	10:00AM	All
Fundraising/Marketing Your Team	Deb Mumm-Hill (FIRST Regional Director)	Cabell	10:30AM	All
AutoCAD Inventor Overview	Justin Hoey, George Cook, AutoDesk	Gerlinger	10:30AM	Mech
Intro to programming Java	Andrew Merrill (1540 Software Mentor)	MS	10:30AM - 12:00PM	SW
Drive Trains for FIRST Robots	Dale Yocum (1540 Head Coach)	Cabell	11:30AM	Mech
Project Management	Ejvin Berry,& Chris Imondi, Boeing	Gerlinger	11:30AM	Mgr
Grant Writing Tips	Deb Mumm-Hill (FIRST Regional Director)	Library Classroom	11:30AM	Grant
Java Beta Update	Andrew Merrill (1540 SW Mentor)	MS	12:00PM- 12:30PM	SW
Lunch	Bring your lunch or buy Pizza. Girls should bring their lunch to Girl's Generation below.		12:30PM- 12:50PM	All
BunnyBot Q&A	Dale Yocum (1540 Head Coach, BunnyBot event organizer)	Library Classroom	12:30PM	All
Girls Generation	Rohisha Adke, Lynne Stracovsky, (1540 Girls Generation organizers)	MS	12:30PM	All
Pneumatics for FIRST Robots	Craig Boezwinkle (WIT engineer and 2811 Mentor)	Cabell	1:00PM	Mech
People Management	Bob Hendel (1510, 2898 Head Coach)	Gerlinger	1:00PM	Mgr
LabVIEW Overview	Dennis Erickson (1510/2898 Mentor)	MS	1:00PM	SW
Sensors FRC Robots	Daniel Bramblett (1510 Student Programmer)	MS	2:00PM	SW
Chairman's Award	Rohisha Adke, 1540 Chairman's mgr	Gerlinger	2:00PM	All
Website 101 for FRC Teams	Bob Goetz (OregonFirst webmaster)	Library Classroom	2:00PM	SW
Robot design, Brainstorming and Rapid Prototyping	Rohan Jhunhunwala (1540 Design mgr)	Cabell	2:00PM	Mech
Effectively Using the FRC Camera	Amy Wiegand (2915 Student Programmer)	MS	3:00PM	SW
Scouting & Competitive Analysis	Henry Gordon (Competitive Analysis Mgr, 1540)	Cabell	3:00PM	All
FRC Radios and Communication	Faith Baynes (Catlin Gabel System Administrator, FRC Field Admin)	Gerlinger	3:00PM	Elec
Creating Custom Dashboards	Dennis Erickson (1510/2898 Mentor)	MS	4:00PM	SW

Marketing Your Team for Successful Fundraising

Learn how to create your team image and story so that your fundraising efforts are successful. Included will be tips on how to partner with industry, tactics for getting students in front of an audience plus giving an effective presentation. Topics will include messaging, marketing materials, elevator pitch, budget clarity and how to find sponsors as well as grants. Deb Mumm-Hill, FIRST Regional Director

AutoCAD Inventor Overview

See what all this AutoCAD Inventor fuss is all about. This breezy introduction will give you a sense for what the program can do and, hopefully, inspire you to try it for designing parts of your robot. Presenters: Justin Hoey & George Cook from Autodesk Inc.

Introduction to Java

If you've never programmed in Java before or need a refresher, this session will give you a high level idea of what the language looks like and what this object orientation stuff is all about. This is a 1.5 hour talk followed by the latest on the Java Beta. Andrew Merrill, Computer Science Instructor at Catlin Gabel School and software mentor for team 1540.

Drive Trains for FIRST Robots

The drive train is the most important part of your robot yet many teams make some basic mistakes in their design and construction. This session compares 2 wheel, 4 wheel, 6 wheel, Mecanums, treads, and some of the unusual ones. We'll look at the various transmissions and motors available to FIRST Teams. Vendors such as IFI, Skyway, and AndyMark will be discussed and audience members will share their experiences. Presenter: Dale Yocum. Robotics Program Director, Catlin Gabel School Team 1540.

Project Management

Project management is the organization, planning and management of group resources toward a specific, time-based goal; a discipline which many organizations fail to use effectively. Project leaders will learn to use concepts employed by Project Managers such as work breakdown structure, task dependencies and critical path. Following these and other concepts will not only allow teams more time and energy to complete the design and build process, but will allow a greater share of resources for necessary support functions like fundraising, sponsor relations, community outreach and earning awards. Presenters: Ejvin Berry & Chris Imondi Boeing Corporation.

Grant Writing Tips

Everything you need to know about writing grant applications to NASA, Platt and how to look for other grant opportunities. Deb Mumm-Hill, FIRST Regional Director

Java Beta Update

Team 1540, was chosen as the NW team to beta test Java this year. Hear their insights about this new version of the language and what they've found so far. 30 minutes. Presenters: Andrew Merrill, Computer Science Instructor for Catlin Gabel School and mentor team 1540.

BunnyBot Q&A

Those taking part in the Dec 18th BunnyBot Scrimmage can meet, share ideas, and get questions answered about this friendly competition. The various field pieces will be on display. See what those Bunnies look like! What's a widget and what's not? Dale Yocum, Head Coach of Team 1540, and host of the scrimmage, will be on hand.

Girls Generation

November 13th we'll be hosting a one-day FRC competition for girls only. Only girls can be on the drive teams, and only girls and their mentors are allowed in the pits. Female team members (and their mentors) are invited to bring their lunch to the middle school to share ideas and hear what we're planning. Rohisha Adke, Lynne Stracovsky, of Team 1540, organizers of the event.

Pneumatics for FIRST Robots

An introduction to the pneumatic parts used on FRC robots, engineering challenges and possible solutions. Calculations related to pressure, cylinder, compressor and force and torque needs will be introduced. Presenter: Craig Boezwinkle, Mechanical Engineer, Western Integrated Technologies and mentor to team 2811. WIT is a distributor, manufacturer, and integrator of Pneumatic and Hydraulic systems.

People Management

There's little more important than effective management and leadership of your team and its departments. This talk focuses on how to get the most from people, have them feel their time was well spent, and make it fun being involved. For student leaders and mentors. Bob Hendel, 1510, 2898 Head Coach and Woodie Flowers award winner.

LabVIEW Overview

For those who want to know more about the programming language LabVIEW, this presentation offers an overview. It will discuss the salient features of the language which includes its being a graphical interface, its ability to create virtual world that can surround code to test that code, and that it is self-documenting. Also discussed is the fact that it is one of the very few "dataflow" languages which significantly aids in preventing ambiguous instruction paths which leads to efficient and rapid programming. By Dennis Erickson, 1510/2898 Mentor.

Sensors for FRC Robots

It seems that each year the use of sensors on the robot brings more to the game including the experience gained by students in integrating them. Working with the wide variety of sensors available becomes easier due to the ability to test and calibrate them using charts and graphs that is intrinsic with LabVIEW programming. Couple this with the ability to transfer real-time data to the dashboard, allows for a more realistic view of real world robotics. Daniel Bramblett, 1510 Student Programmer.

Chairman's Award

The Chairman's Award is the highest award bestowed to a FIRST Robotics team at the Regional and Championship competitions. It is based off of how a team demonstrates FIRST's ideals through community service, recruitment, mentoring, and gracious professionalism, along with other great team attributes. Discussion will include an introduction to the award, activities teams do to win the award, essay writing style, presentation tips, and sample questions. Rohisha Adke, Team 1540's Chairman's Manager. Team 1540 won the Chairman's award in 2010 and 2007, and the Engineering Inspiration award in 2008 and 2009.

Website 101 for FRC Teams

Get the word out about your team in a high impact way. See what you need to do to win a FIRST Web Site award, basic design principles and how to setup and manage a website. Some of the talk will focus on general website design and some will concern the use of WordPress as a content management system. Presenter: Bob Goetz, webmaster for www.oregonfirst.org.

Robot Design, Brainstorming and Rapid Prototyping with 80/20 and QuickFrame

Learn how at least one team, 1540 the Flaming Chickens, designs their robot. From prototyping suggestions to appropriate use of robotic components, this seminar will provide you will all the know-how you need to make the idea in your head become reality. It will also cover the proper usage of 80/20 and Quickframe, a lightweight aluminum framing system that will allow your prototyping to be done efficiently and with less effort. Come see what designing a robot is all about! Presenter: Rohan Jhunjunwala, Manager of Design, Team 1540

Effectively Using the FRC Camera

Using the camera both in the Autonomous and the TeleOp modes is becoming more exiting each year due to the relative ease in programming and managing video cameras. This presentation will review the last two year's video approaches including masking (capturing a scene and displaying only the target and its characteristics) and pattern recognition (viewing a scene and identifying a predefined mathematical object) using LabVIEW. Both approaches would return the distance the target is away, its direction relative to the robot and how many targets are in the camera's view. Amy Wiegand, 2915 Student Programmer.

Scouting & Competitive Analysis

Scouting can make or break a competition. It can propel a team to victory, and can also spell defeat for an otherwise strong alliance. Regardless of your robot's performance, competitive analysis and strategy development are key for the success of any robotics program. This talk will cover the basics including: system development, management at the competition, strategy development and data interpretation, as well as the basic scouting resources that all teams should know. Following that, we'll explore more advanced topics like Offensive Power Rankings and more formulaic ranking systems. Henry Gordon, Competitive Analysis Manager and 2010 Dean's List Finalist, Team 1540

FRC Radios and Communication

This presentation will explore how the robot talks to the field during a match. We'll talk about tech specifics on the game adapters, the network communications as we understand them, how to avoid some common problems, and troubleshooting utilities. Faith Baynes, Catlin Gabel School System Administrator, FRC Field Admin.

Creating Custom Dashboards

The real-time dashboard in LabVIEW is one of the most exciting features to be included in the game. It provides status information on the robot itself as well as returns any or all sensor data for use in enhancing the driver's ability to make decisions during the game. With the inclusion of a video feed to the dashboard, the driver can have "eyes" just in front (or back) of the robot to help guide or in special cases have the robot seek on its own during the Autonomous or even in TeleOp sessions. Dennis Erickson, 1510/2898 Mentor