



**FIRST Tech Challenge (FTC) at a GLANCE (in Oregon)
for students 9th – 12th Grades - 14 – 18 years old.**

*May include 8th grade students 13 and older who are prepared to enter a high-school program.



www.ortop.org/ftc

2009-2010 Timeline for FIRST Tech Challenge Participation

May – November 2009	National FTC Team Registration Opens May 4 th . Online and materials order submitted. A team registration is for a maximum of 10 students. Kits begin to ship in August 2009. Public & private school, community organization, neighborhood teams welcomed.
September 12, 2009	FTC Challenge released - Teams begin to solve FTC 2009 Challenge! FTC Kick-off Event at ORTOP office.
Oct 2009– January 2010	FTC Fests and Mini-Fests for FTC Teams provide collaborative support, mini-workshops & scrimmages.
February 2010	Oregon <i>FIRST</i> Tech Challenge Qualifying and Championship Events
April 2010	Top Oregon <i>FTC</i> Teams advance to <i>FTC</i> World Championship in Atlanta, GA

FREE ORTOP FTC Briefings/ Workshops for Teams

For 2009-2010 season ORTOP will offer mini-fests and fests for coaches, mentors and team members. These sessions will encourage teams to bring their robot, tools, laptops and build/program along with other teams to learn from FTC workshop volunteers and FTC team colleagues. See www.ortop.org/ftc for schedule

Tektrix Try-its for rookies will be offered at the FTC Kick-off Sept. 12 and at early Fests. See www.ortop.org/ftc for details.

FTC Program Elements

As a team of up to ten students work for 10 – 12 weeks to design and build robot with both controlled and autonomous behavior using the FTC Competition Robotics kit to meet the annual *FIRST* Tech Challenge.
Allowable programming languages: NXT-G, RobotC, LabView. ***FTC robot can be disassembled and reused each year.***

At the FTC Tournament teams will work in an alliance with and against other teams to solve the challenge featuring head-to-head competition and the use of alliances. The 2009 game will include tasks that reflect real-world issues faced by robotics designers today. Uneven surfaces, manipulation of objects, and greater use of sensor technology will be featured.

FTC Team creates an Engineering Notebook to document the “journey” the team took as they experienced the engineering design process. Notebook includes strategies, sketches, obstacles faced and lessons learned.

FTC Teams meet with a judging panel at the tournament to discuss their engineering experience. The judging panel accesses the robot’s mechanical engineering and programming, how well the team solved the challenge and their teamwork skills. Awards are given in a variety of categories to acknowledge success.

Program Costs of the FIRST Tech Challenge* based on 2009 Costs

FIRST Tech Challenge National Registration (up to 10 students)	\$275
FIRST Tech Robot Competition Kit includes a full complement of parts including three software platforms, 11 motors, 10 sensors, Bluetooth communications, rechargeable batteries, metal gears, and a complete set of structural components. The kits are reconfigurable and can be used over multiple seasons. (Price includes shipping and handling)	\$1050
Additional Tektrix Parts to design robot to meet the annual challenge	\$150 - \$1000
ORTOP Tournament Program Fee	\$75
<i>Official FIRST Tech Challenge Competition Field (OPTIONAL)</i>	~\$1000
Materials to build a usable full or partial FTC Competition Field from locally obtained construction materials (plywood, pvc pipe)	~\$350
Approximate minimum cost for a first year team	~\$1850
Approximate maximum cost for a first year team	~\$3300
Approximate cost for a returning team in 2009	~\$800

ORTOP Scholarships: Application available at www.ortop.org/ftc

ORTOP provides a limited number of partial scholarships to cover fees, robot kits and tournament materials to schools and community organizations serving students that meet financial aid requirements.

Requirements: At least a two year commitment to the FTC program.

Web Resources

Oregon Robotics Tournament & Outreach Program (at Oregon University System)	http://www.ortop.org/ftc
FIRST TECH Challenge Program	http://www.usfirst.org/what/FTC/
Information about the New FTC Robot System & Challenge	



Oregon & SW Washington Teams participating in 2008

Amity

Amity High School & Amity Middle School

Beaverton

Sunset High School 4-H (3)

Sunset High School

Beaverton area Middle School students

Bend

4-H Marshall HS

Brookings

Brookings High School (2)

Hillsboro

Century High School (2)

Hillsboro High School (3)

Hillsboro area HS student team

Independence

Central High School

Oregon City

Oregon City Robotics

Hera Community School

Portland

Benson Polytechnic High School

Cleveland High School

Jefferson HS/Bethel AME

PSU Robotics for High School Students (2)

Salem

West Salem High School (3)

Salem Middle Schools student team

Springfield

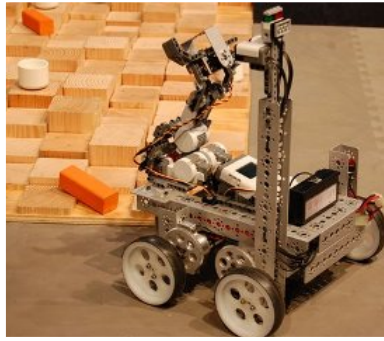
Thurston High School

Tigard

Tigard High School (2)

Vancouver

WSU-Vancouver for HS students



PHOTOS from the ORTOP 2008 FIRST Tech Challenge "Face-Off" Season www.ortop.org/ftc

America graduates less than 8% of the engineers in the world. If we don't design it here, what are the odds that we're going to build it here? If we don't build it here, what will our economy be based on? FTC robotics combines all the disciplines: teamwork, problem solving, electronics, programming, drafting and mechanical engineering. It's a fantastic program for students to be involved in. -Don Domes, Technology Teacher, Hillsboro High School and rookie FTC Coach.

