**North Texas FLL Coaches Clinics**

**Team Organization**

Dr. Kenneth Berry

ksberry@UTdallas.edu

FISRT LEGO League is a team sport not a group sport

* Team members have responsibilities
* Team members make decisions
* Everyone works together
* Everyone communicates
* Everyone contributes
* Everyone plans
* Everyone is valued
* Everyone leads

**Team composition:** Every team member has responsibility for their area. This means that they make sure they get the resources they need to complete their task and finish their task on time. They make all the decisions regarding their task but they do not do all the work to get their tasks complete.

Coach and Assistant Coach

Captain

Lawyer

Project

Builder

Attachments

Programmer

Field set-up

**Coaches Job**:

Have a successful team: compete the first year whether or not you feel prepared, manage expectations.

Coach is responsible for the hardest part of the Robotics Competition. However, the very best coaches say they don’t do anything. They have successfully delegated and trained their team (this is hard work).

Preparation for the competition: supplies, charge the robot

Get the liability release signed ASAP to CYA

Team registration

Team organization

Team safety

Paperwork

Time Management

Teamwork

Communications

Keep up the momentum—project cycle, manage the team’s emotions

Logistics

Finance

T-shirts

Computers

**Do not forget the project!**

**Captain**

Characteristics: Nice, helpful, organized, positive, servant leader

Responsibilities: Is responsible for everything and nothing. This person needs to be the most capable person on your team. They need to be able to identify where they are needed most and help get things done on time, hold people to their responsibilities, keep communications going, prioritize time and resources so that everything is finished on time. Captain needs to manage the master schedule and team meetings. Captain needs to be a leader.

**Lawyer**

Characteristics: Detail person, planner, thoughtful, creative

Responsibilities: Responsible for the rules, and loopholes in the rules. Web searches for team strategies, updates to rules, FLL Forum. Develop game strategy, and project strategy.

**Chief Builder**

Characteristics: mechanical engineer, likes to put the robot together, much also like to take the robot apart and rebuild the robot often, not easily frustrated, not attached to a single chassis design, open to many ideas.

Responsibilities: Chief builder is responsible for the chassis design of the robot, the two drive motors, the brick placement and sensor placements. Chief builder usually oversees chassis brainstorming session, then two or three building teams to find the better chassis design, and ongoing modification of the chassis to do more and work better.

**Project Lead**

Characteristics: organized detail person, good Communication skills, good writing skills, creative, and outgoing, young captain.

Responsibilities: Organize the project. Brainstorm the project, prepare the team journal, organize the props, organize the actors, organize the costumes, and electronics.

**Chief Programmer**

Characteristics:Computer Science engineer**,** likes programming, self starter, can work on his/her own early, logical thinker, can break down problems into parts, good at math, can handle pressure.

Responsibilities: Robotics programming is embedded programming. It must work with the hardware of the robot. The programmer must understand how the robot works mechanically to program it properly. He/she must understand the programming, understand the strategy, program the robot, understand the sequence of tasks on the field. Help everyone early on to do everything else. Understand how the sensors work and how to get numbers from the sensors. Understand what the numbers mean. Understand the sensors.

**Attachments Lead**

Characteristics: mechanical engineer, must be willing to work with the chassis builder, work well with others, creative builder, willing to build and rebuild, creative with materials.

Responsibilities: Building with the third motor, creative use of rubber bands, string, gears, wheels, weights. Chassis gets the robot places, the attachment does stuff like lift, release, capture, push, etc.

**Strategy**

All activities are equal points

First things first

All easy tasks are a must: Do not get focused on attractive nuisance

Close to base

Big target

Straight line from base

Hard tasks are gravy

Far from base

Small target

Trouble shooting

Break tasks into small chunks

Troubleshoot each chunk: Do not try to do it all at once

Consistency is important: Once is luck, twice is good, three time in a row is success.