Student Organization – RoboForce

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                  │  Team Co-Captain  │      │  Team Co-Captain  │
                  │     (Senior)      │      │     (Junior)      │
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Mechanical Group	Electrical Group	Field Artifact Group	Programming Group	CAD Group	Spirit Group	Web Group

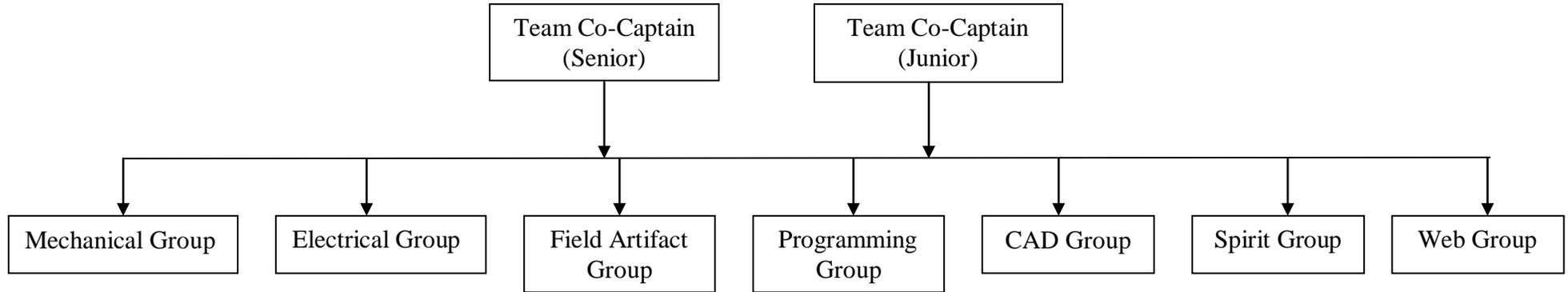## Responsibilities

Team Co-Captain :   Selected by entire team (Thursday, December 1st)
- Speaker for the entire team (e.g. at competitions)
- Inter group liason
- Team updates
- Monitor group cleanup
- Monitor group forum updates

Group Leader :   Selected by individual team members (Thursday, December 15th)
- Monitor group cleanup
- Monitor group forum updates
- Monitor tasks and schedule (update co-captains)
- Monitor weight (update co-captains)
- Create lists of supplies needed (esp. for procurement)
- Monitor group cleanup
- Monitor group forum updates

Mechanical Group:

- Chassis (size, shape, choice of materials)
- 'Arm' (motors, gears, chain, choice of materials)
- Drive Train (transmission, wheels, mounting hardware)
- Pneumatics (choose, specs to Programming and Electrical, mount, connect, order solenoids, actuators, connectors, valves, etc.)
- Update forum

Electrical:

- Sensor (test, document, choose)
- Wiring (choice of types, connectors, labelling)
- Establish layout of electrical components
- Create wiring diagrams
- Wire Pneumatics
- Determine operator control panel specs, components, and wire it
- Provide requirements to Programming Group, and help test
- Update forum

CAD:

- Load FIRST models of kit of parts
- Model basic chassis, incl. motors, wheels, arm, etc.
- Help with location of center of gravity
- Help determine critical stress points
- Update forum

Field Artifacts: (e.g. ramps, pegs, driver station, etc.)

- Print field specifications/drawings
- Develop list of materials
- Cut, drill, (glue), assemble required field artifacts
- Determine 'human player requirements'
- Determine stratebies/practice human player contributions
- Update forum

Programming:

- Collect requirements (electrical/field/human player)
- Design/document programmin logic
- Establish software baseline for development (e.g. labview version)
- Create labview framework for the robot
- Develop VIs for sensors, and motors
- Develop software based on requirements
- Work with electrical and mechanical
- Test new cRio
- Update forum

Spirit:

- Create team t-shirt design
- Coordinate fundraising
- Promote team spirit at competitions
- Design flyers (inschool and at events)
- Plan and run social activities
- Update forum

Web:

- Know FIRST web design competition criteria
- Review other team designs (esp. prior winners)
- Know club requirements (know audiences and their interests)
- Build/modify web design to meet goals
- Update forum