Girls of Steel FIRST FRC Team 3504, 2015-2016

Job Description: Design Leader

Term: June 15 2015 – June 15 2016

Time Commitment:
Summer: 2 hours/week
Pre-preseason: 8 hours/week
Pre-Season: 15 hours/week
Build Season: 20 hours/week
Competition Season: 15 hours/week
Postseason: 2 hours/week

The Design Team Leader will work with the Technical Project Manager and mentors. Her primary area of responsibility is to lead and manage all aspects of robot design and development during the build and competition season. She will also contribute to the leadership council year-round and assist with the general running of the team. This leader will also be able to ask the Design Team Mentor for advice and should work directly with this mentor to solve any issues that this leader may face during the year.

Specific responsibilities include:

Summer (June 15 – August 15):
• Participate in monthly leadership council meetings
  o Provide agenda items and prep material as requested by Business Project Manager
  o Attend meetings
• Work with Technical Project Manager and mentors to define and document technical goals relevant to design for preseason

Prepreseason (August 15 – September 30):
• Attend weekly leadership council meetings, Mondays 4:30-6:30pm
  o Provide agenda items and quad chart slide to Business Project Manager by requested deadline
  o Participate in meetings
• Work with Technical Project Manager and mentors to define schedule and plans for training, research and prototyping goals during preseason.

Preseason (October 1 – January 3):
• Participate in weekly all-hands meeting during the preseason, Tuesdays 4:30-8:30pm
  o Provide presentation materials as requested by Business Project Manager
  o Participate in meeting and assist with meeting logistics as necessary
• Participate in weekly leadership council meetings, Saturdays 10-11am
  o Provide agenda items and quad chart slide to Business Project Manager by requested deadline
  o Participate in meetings
• Participate in monthly design team brainstorming sessions, second Thursday of each month, 5:30-8:30pm
• Support mentors in their development and execution of preseason technical training activities.
• Prepare for build season:
  o Participate in definition of design team organization and membership
  o Begin CAD training and internship for design team members
  o Plan and implement any preseason design and prototyping goals such as a new chassis or other design challenges.
  o Work with Technical Project manager and other technical leaders to develop detailed build season schedule with weekly milestones for mechanical, electronics, and programming activities.
  o Define task board protocol, and communicate intended task board procedures to other technical leaders.

Build Season (January 4 – February 18):

• Participate in weekly all-hands meeting, Tuesdays 4:30-8:30pm
  o Provide presentation materials as requested by Technical Project Manager
  o Present weekly update on robot build status and weekly plans
  o Participate in meeting and assist with meeting logistics as necessary
• Participate in weekly leadership council meetings, Saturdays 9-10am
  o Provide agenda items and quad chart slide to Technical Project Manager by requested deadline
  o Participate in meetings
• Manage and track progress of robot design:
  o Maintain detailed build season schedule and update as necessary
  o Participate in milestone review meetings and assist Technical Project Manager in making go/no-go decisions on planned subsystems based on schedule.
  o Hold and lead a weekly integration meeting attended by technical leaders and task leads to communicate and track robot development progress.
  o Manage hand-off of CAD designs from design team to mechanical team.
  o Manage task board and work with other technical leaders to make sure tasks are assigned and tracked according to protocol.
  o Work with Electronics Leader to create port map and wiring diagrams
  o Work with Drive Team Leader to create testing protocol
  o Communicate with Technical Project Manager, Mechanical Leader, Electronics Leader, and Programming Leader on a daily basis to make sure all of the parts will fit together.
  o Arrange ad-hoc meetings between technical leaders in order to resolve specific ambiguities and discrepancies as needed.
  o Ensure open communication of technical plans, designs, and status in electronica media and by posting of physical design documents in team spaces.
• Assist Technical Project Manager in managing decision making during design process by providing input on the relative merits of proposed designs.

Competition Season (February 19 – April 30):
• Participate in weekly all-hands meeting, Tuesdays 4:30-8:30pm
  o Provide presentation materials as requested by Technical Project Manager
  o Present weekly update on robot repairs and redesign work
  o Participate in meeting and assist with meeting logistics as necessary
• Participate in weekly leadership council meetings, Saturdays 9-10am
  o Provide agenda items and quad chart slide to Technical Project Manager by requested deadline
  o Participate in meetings
• Manage and track progress of any robot design:
  o Identify improvements that can be implemented inside withholding allowance
  o Coordinate between Mechanical, Electrical, Programming and Drive teams to update and test new robot components
  o Arrange ad-hoc meetings between technical leaders in order to resolve specific ambiguities and discrepancies as needed.

Postseason (April 30 – June 15):
• Attend all-hands wrap-up meeting
• Assist with leadership selection for next season as requested by mentors