Team Roles and Responsibilities Release Form for:

______________________________________________
(student name)

_________________________________________    _________________________________________
(parent name)      (parent signature)

Overview

A FIRST Robotics Competition (FRC) team requires a diverse set of tasks to be completed by the student-mentor sub-teams. Below is a brief description of the task areas identified by their sub-team and task names. To allow your child to be trained and work in that area, fill in your child's name at the top of this form, check the appropriate box(es) and sign at the bottom of each page that is checked. Students will be required to have explicit parental permission for each activity in which they will be participating. **At a minimum, you need to check the box for the last sub-team, “Sub-team: All”, found at the end of this document.**

During build season, we encourage students and mentors alike to participate as much as their family and work commitments permit when we are "open" (hours to be announced).

Please specify the daily and weekly limit, if any, for your child and sign above:

_____ daily hour limit   ____ weekly hour limit

☐ **Sub-Team: Build   Task: Mechanical Engineering** _________________ (parent initial)

The mechanical engineering sub-team area is responsible for all mechanical aspects of the robot and the remote driver station construction. Students will be trained in the proper and safe use of industrial machine tools, including but not limited to drill press, metal bending/shaping tools, saws, lathes, grinders and computer numerically-controlled (CNC) tools. Students will also use powered and other hand tools like saws, scissors, cutting knives, files and planes, drills, routers, hammers, screwdrivers, and spanners. During the building of the robot, the sub-team members will be handling, cutting, and shaping metal, wood, fabric, and plastic materials. There may be use of paint, epoxy, glue. All of these activities will require the student to pass the appropriate areas of Macquarie University's Occupational Health and Safety training classes which include the proper use of each tool and handling of associated materials. Students will not under any circumstances be allowed to operate any machine tool without mentor supervision. Students will be required to wear safety glasses at all times. Close-toed footwear is required and any long hair must be secured to the top or back of the head or underneath a narrow-brimmed hat. Loose clothing and jewelry are not permitted; rings are bracelets are to be kept to a minimum. Aprons or protective clothing may be required. Computer work may be involved using a 2D or 3D Computer-Aided Design (CAD) software package.
Sub-Team: Build  Task: Controls Engineering - Hardware

The controls engineering hardware sub-team area is responsible for all electrical aspects of the robot and the driver station construction. Students will be trained in the proper and safe use of electronic test and manufacturing equipment, including but not limited to, voltmeters, multi-meters, signal generators, power supplies, oscilloscopes, and soldering irons. Students will also use powered and other hand tools like saws, scissors, cutting knives, files, drills, routers, hammers, screwdrivers, and spanners. During the building of the robot, the sub-team members will be handling, cutting, and shaping wire harnesses and printed circuit boards. Students will handle and recharge sealed lead-acid and metallic rechargeable batteries. Electrical and electronic circuits operating from -12V to 12V drawing 20A or less will be manufactured and tested by the students. There may be the use of paint, epoxy, glue, lead/tin and non-lead/tin solder. All of these activities will require the student to pass the appropriate areas of Macquarie University's Occupational Health and Safety training standards. Students will not under any circumstances be allowed to operate any machine tool without mentor supervision. Students will be required to wear safety glasses at all times. Close-toed footwear is required and any long hair must be secured to the top or back of the head or underneath a narrow-brimmed hat. Ground straps will be used to protect sensitive electronics from static electrical damage. Loose clothing and jewelry are not permitted; rings are bracelets are to be kept to a minimum. Aprons or protective clothing may be required. Computer work may be involved using a 2D or 3D Computer-Aided Design (CAD) software package.

Sub-Teams: Drive Team/Pit Crew  Task: Handling of robot

The drive and pit crew sub-teams area responsible for handling the robot and driver station in robot and game strategy testing and during the competition. The driver station operates with standard 120/240 50/60Hz (mains) electrical service and a single, low current metallic rechargeable battery and communicates with the robot via a standard “wifi” wireless link. The robot operates with a 12V sealed, rechargeable lead-acid battery and draws no more than approximately 20A, communicates via a standard “wifi” wireless link, and weighs approximately 60 Kg or less. Students will be trained in the proper and safe handling of the robot, the driver station, and the batteries including the proper technique for lifting and moving the robot. All of these activities will require the student to pass the appropriate areas of Macquarie University’s Occupational Health and Safety training standards. Students will not under any circumstances be allowed to operate any part of the robot without mentor supervision. Students will be required to wear safety glasses at all times. Close-toed footwear is required and any long hair must be secured to the top or back of the head or underneath a narrow-brimmed hat. Loose clothing and jewelry are not permitted; rings are bracelets are to be kept to a minimum.

Sub-Teams: All  Task: Handling of robot

All sub-teams will in all likelihood be using standard, commercially available computers. All sub-teams at some time will be near the robot and perhaps watch various aspects of its construction. All students will be required to pass the appropriate areas of Macquarie University’s Occupational Health and Safety training standards. All students will be required to pass a team FIRST safety test focused on proper and safe behavior near and around the robot and any use of tools at which time students will be expected to have and wear their own personal safety glasses. Team etiquette and FIRST principles of inclusion, tolerance, and gracious professional will be reviewed with all team members. Repeated failure to follow proper team etiquette and safety procedures are grounds for dismissal from the team.