

# TEAM 3667 - MECANUM KNIGHTS



## JOB TITLE:

## ROBOT PROGRAMMER

## GENERAL DESCRIPTION:

Programmers are responsible for breathing life into an inanimate object by writing instructional software code to allow it to complete autonomous (self-driving) and teleoperated (operator controlled) objectives through:

- Creating code using Java in the Eclipse programming environment
- Developing an operator interface to allow the drive team to interact with the robot
- Troubleshooting technical issues with the robot and engaging other team members with fixing the problem or problems
- We need our robot to work, and to that end we need programming... programming, ultimately, makes the robot move and do things

## KEY SKILLS :

Requirements also be learned in this role are:

- Basic keyboarding skills
- Basic computer knowledge
- Have or desire to learn programming skills
- Commitment to the team and the process
- Be respectful to fellow team members
- Have an eye for exquisite detail
- Be willing to collaborate with fellow team members
- Troubleshoot and debug software, electrical and mechanical issues

## DETAILED JOB DESCRIPTION:

### Configure code on the robot

- Image the Robo Rio (robot brain)
- Flash radio with proper firmware
- Configuring IP addresses for the Robo Rio and the radio
- Assigning CAN ID's on the Robo Rio, power distribution board, speed controllers and pneumatic control module

### Develop software for autonomous and teleoperated robot modes

- Creating routines to perform specific tasks

- Assigning functions to buttons on gaming controllers
- Developing visualized plans for autonomous mode execution

### Test software through trial and error

- Running through autonomous mode plans and adjust as needed
- Add or modify functions to achieve desired outcome

POSITION FILLED

PERSON HIRED

DATE HIRED \_\_\_\_/\_\_\_\_/\_\_\_\_

ADDITIONAL COMMENTS