

ENGINEERING SYSTEMS
Individual Skill Requirements
Preliminary Botball Competition

Learning Requirements. This paper is provided to help you identify the nine abilities that you as an individual must demonstrate that you have mastered successfully by the end of this class project and robotics competition.

The student will be able to:

1. Explain how a class team should be organized to ensure that the team members learn a significant subset of the project, a competitive robotic system is constructed, and all members stay busy during the class time allotted for the project.
2. Describe the details of the game board, the point structure, and how the game is conducted from game start to game finish.
3. Develop a game strategy for the team robot that will allow it to do a few things well and gain a competitive number of points.
4. Identify a set of sensors (minimum of three) and the electronics needed to be included in a robot to carry out the game strategy, and explain how each sensor fits into the strategy.
5. Select either the XBC or the HandyBoard that is used to power the robot, and be able to explain how it works.
6. Prepare a list of the correct number of motors and servos that will be needed to make the robot and sensors you select work effectively, and be able to identify where each of the sensors, motors and servos are plugged into the XBC or HandyBoard.
7. Write a program to operate one of the sensors selected for the robot, using the Botball reference materials.
8. Describe how the tournament is carried out on tournament day.
9. Identify what information needs to be included in the team website's eleven sections.