

Robotics Requested Pre-requisites

Join the Google Classroom. Resources are linked, including links to the Boe-Bot Coding handbook, and Compiler.

[Google Classroom Robotics Merit Badge \(Join Link\)](#) Class Code is: o4h33ijv

Have a BSA Robotics MB Pamphlet. Either purchased, downloaded, or downloaded and printed is fine with me.

Review the Pamphlet, including pp. 23-59. We will cover this material during the MBA, but it would be very helpful to have some familiarity ahead of time, since we would be trying to plan and build a robot that will accomplish a task.

Have a couple ideas of what kind of tasks you might want a robot to be able to do, and what steps it would take to do that.

Create an Engineering Notebook (see page 31 of BSA MB pamphlet). I will accept paper or digital notebooks, as long as they have the required sections and are being used as directed in the pamphlet and in the requirements. For whichever mode, ensure the necessary materials are present to use and update the engineering notebook during the session- Paper may be easier, but would require printing and attaching some images. I may also have some handouts that can be inserted into a paper notebook. Paper notebooks should be dedicated to the project, not interlaced within random notes in a pre-existing notebook.

Have a computer with the code compiler on it. (see link in google classroom for Boe-bot compiler)

3. General Knowledge ("find pictures or at least one video" ahead of time if possible- not the video posted right next to this requirement in the MB requirements)

6. Do ONE of the following.

- a) Attend a robotics competition and report to your counselor what you saw and learned about the competition and how teams are organized and managed.
- b) Learn about three youth robotics competitions. Tell your counselor about these, including the type of competition, time commitment, age of the participants, and how many teams are involved.

7. Do ONE of the following:

- a) Identify three career opportunities that would use skills and knowledge in Robotics. Pick one and research the training, education, certification requirements, experience, and expenses associated with entering the field. Research the prospects for employment, starting salary, advancement opportunities and career goals associated with this career. Discuss what you learned with your counselor and whether you might be interested in

this career. *Resources:* [Learn About the Careers of Robotics Technicians \(video\)](#)
[Careers in Robotics \(video\)](#)

- b) Identify how you might use these skills and knowledge in robotics to pursue a personal hobby. Research the additional training required, expenses, and affiliation with organizations that would help you maximize the enjoyment and benefit you might gain from it. Discuss what you learned with your counselor and share what short-term and long-term goals you might have if you pursued this. *Resources:* [How to Make Anything-Learn to Think Like an Engineer \(video\)](#) [Why Try Computer Quilting \(video\)](#) [How I Built a Difference | My Engineering Journey \(video\)](#) [Tertill Weeding Robot Overview \(video\)](#)