Course Overview

Class 1 Introduction to Java/Programming

- Creating a Class
- Variables
- Basic arithmetic
- Commenting
- Creating Methods

Class 2 Control Logic and Conditionals

- "for" loop
- "while" loop
- "if" and "else" statements

Class 3 Classes

- Importing classes
- Expanding classes
- More in depth info about methods
- Using classes in code

Class 4 Git/GitHub and Review

- What is GitHub and we use it
- Making an account
- Learning to use git (terminal + application)
- Answering questions about Java over the past 2 weeks
- Begin to talk about the FTC Libraries and begin looking at them

Class 5 Learning to use the FTC Libraries

- Making simple code (turn a motor when button pushed)

Class 6 Learning about Android + FTC Together

- Building our own op modes
- Setting up the phones
- Writing more complex code on the level of production code

Class 7 Overview/Final Class

- Wrap-up of everything we've done
- Begin working on final FTC robot code

Homework

I think homework needs to be assigned between classes to ensure that the students are learning as much as possible. Just coming to class won't really help them learn everything, they need practice and individual assignments is the best way to give them that practice. I think the homework shouldn't be more than two hours a week (completely negotiable depending on outside input) but I haven't decided on whether to assign multiple short problems or a single slightly more involved problem.

Materials

- Projector (for all classes)
- A fully working + wired up drive train to test code on (Class 4+)
- Internet access (not absolutely necessary but would be nice)

Logistics

I think each class would be around 2.5 hours. The first 1.5 hours would be for teaching and the rest of the time would be for students to start working on the homework with us being there to help them if they have any problems.