

**Week 4: Implementation: Code-Integrate-Build-Test Cycles****Main Events**

- continue in the code-build-test-evolve cycles from previous week
- this is the main development week; minimal seminar / class time
- surprise challenge

**Key Deliverables**

- status report (progress against plan)
- updated design documentation (version 2 of your design doc)
- current code (end of week) zipped and submitted to Sharein
- working robot
  - should be able to perform some missions completely (focus is on small number completely finished); your goal should probably be to complete a minimum of 4 missions by end of day Thursday

**Evaluation**

- the only gradable component this week is the surprise challenge
- in preparation for the surprise challenge you should ensure that you are able to build and control robots that use the following sensors
  - touch
  - light
  - ultrasonic
- you should be able to build a robot that:
  - follows a line, and/or
  - follows a wall, and/or
  - detects an object and moves toward/away from it
  - drives in a straight line
- you will be given the challenge at the start of your lab session, and have 1:45:00 to complete and demonstrate your solution.
- you will be allowed to use any code that you have on your computer, and you will be allowed to start with your a pre-built robot (if you wish)

**How will this challenge be graded?**

1. Grading is based on results AND teamwork
2. Each student will be assigned a grade out of 10
3. The grade out of 10 will be adjusted +/- 15% based on contribution, using the peer review mechanism described on the WebCT site

**The mission will be graded as:**

10 marks	Successfully completing the challenge on time will always earn full marks
5-9 marks	These grades will only be awarded when a mission is "almost completed", but some anomaly prevents completion. These are assigned at the discretion of the instructor.
0-4 marks	Failure to successfully complete the mission will earn at most 4/10, at the discretion of the instructor.

Teamwork will be graded individually, with marks assigned based on the contribution of each member as well as the cohesiveness of the team,