CSCI 1106
Animated Computing

The World is Dynamic and Uncertain

• Observations:
  – Our environment is changing.
  – Events occur at any time.
  – Things break or don’t go as planned.

• Yet, we manage to muddle our way through.

• How do computers muddle their way through?
Muddle Through This
Animated Computing in a Nutshell

Computers must Deal with the Real World

Environment

Robotics: Sensors, Actuators, Events, and Uncertainty.

Humans

Game Design: Events, Human Behaviour, Game Playability

- Programming
- Empirical Science
- Fault Tolerance
- Artificial Intelligence

You Learn Best when You

- Learn collaboratively (in small groups)
- Learn by doing (hands-on)
- Learn by figuring things out on your own
- Learn by problem solving
Course Features

• Hands-on introduction to computer science
  – How do computers deal with the real world?
• Two modules: Robotics and Game Design
• In each module you learn a new technology and apply it
• Majority of learning is done in the labs

Labs start on Thursday

The Two Course Modules

• Robotics:
  – Learn how robots deal with their environment
  – Use Mindstorms NXT Robots and NXT-G
  – Create a robot to compete in Robot Olympics
  – Write a technical report describing what you did.

• Game Design:
  – Learn about game design
  – Use Adobe Flash CS4
  – Create a working game of your own design
  – Write a user manual and a user manual
Course Structure: Lectures

- Lectures take place on MW(F) 3:35 – 4:25pm
- Monday and Wednesday
  - Cover material you will need for the labs and give an outlook
- Friday
  - Every second Friday will be an in-class quiz
  - Other Fridays will be either for guest lectures or catch-up lectures (if needed)
  - You will be informed each Wednesday if there will be a quiz or lecture on the following Friday

Course Structure: Labs

- Labs are where you will do most of the hands-on learning
- Three sections:
  - Tuesday / Thursday 9-11am (B01)
  - Tuesday / Thursday 11am-1pm (B02)
  - Tuesday / Thursday 2-4pm (B03)
- You must attend the labs.
- In each module (6 Weeks)
  - First 6 labs are tutorials to learn the technology
  - Next 4-5 labs are project work periods
  - Last lab is project presentation period
- Each team must submit a lab report at end of the lab
  - Except the presentation period
  - All attending team members are noted on the report
Lab Report

Team Work

• Teams are assigned at the start of each module
• Teams comprise three (or four) individuals
• Teams are expected to
  – Establish good communication
  – Share equally in the work involved
  – Use individual strengths to benefit the group
• Teams share the same project grade
• Failure to participate in the team may result in an individual’s grade being reduced
Administrivia

- **Instructor:** Thomas Trappenberg (CS 313)
- **Email:** tt@cs.dal.ca
- **Meeting Times:**
  - Lectures in CS-127: MWF 3:35 – 4:25pm
  - Labs in CS 426 (Teaching Lab 5):
    - Section B01: TR 9:05 – 10:55
    - Section B02: TR 11:05 – 12:55
    - Section B03: TR 14:05 – 15:55
- **Course Website:**
  - [http://projects.cs.dal.ca/hallab/CSCI1106](http://projects.cs.dal.ca/hallab/CSCI1106)

### Evaluation

- **Team Work** (done in teams of 3 or 4)
  - 20%: Robotics Project
    - 50%: Performance in Robot Olympics
    - 50%: Technical Report
  - 20%: Game Design Project
    - 50%: Game Produced
    - 50%: User and Technical Manuals
  - 10%: Lab Reports (due at end of each lab)
- **Individual Work**
  - 20%: Bi-weekly Quizzes: Covering labs and lectures
  - 30%: Final Exam

You must pass the individual component to pass the course.
Classroom Rules

• I promise to start and end classes on time.
• You may come in and leave during class as long as you do not disturb.
• If my writing becomes illegible, let me know and I will happily rewrite it.
• **Please turn cell phone ringers off.**

To Do List

• Make sure your CS account is active.
  — Go to the CS Help Desk on the first floor of the CS building to activate it.
• Get Proximity DalCards to access the lab
  — if you don’t already have one (DalCard office, 1443 Seymour St.).
• Look over the first tutorial for Thursday.
Academic Honesty

• Academic integrity means being honest in the fulfillment of your academic responsibilities thus establishing mutual trust.
• Violations of intellectual honesty are offensive to the entire academic community, not just to the individual faculty member and students in whose class an offense occurs.
  – E.g., cheating on tests, plagiarism, falsification of experimental data, etc.
• All cases of academic misconduct are automatically referred to the Faculty Academic Integrity Officer (Associate Dean).

Avoiding Plagiarism

• Put pencils and pens away when discussing an assignment problem with other people
• Acknowledge any help you received in your assignments
  – State name of person and the help you received
• Write your own code!
  – You may look at other code all you want, but don't cut and paste!